

DISCLOSURE AND CEO TURNOVER

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To my loving wife, Michelle, without whose love, support, encouragement, and patience
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Abstract: This paper examines the influence of firm disclosure on CEO turnover. Two competing theoretical views motivate my inquiry. One view is that an expanded disclosure policy improves firm information environment and hence allows for greater monitoring. Greater monitoring, in turn, constrains managers from undertaking actions that are contrary to shareholder interest. As such, this view anticipates a negative relation between disclosure and CEO turnover. A contrary view is that an expanded disclosure policy limits managerial ability to manipulate performance metrics such as a firm's earnings. Consequently, managers have limited ability to conceal poor firm performance. Greater disclosure is also argued to improve board ability to assess managerial talent. Both these arguments point to a positive association between firm disclosure policy and CEO turnover. In my dissertation, I evaluate the empirical validity of these two competing views. Following prior research, I evaluate disclosure based on firm management earnings guidance policy. In general, I find a positive association between involuntary CEO turnover and disclosure quality. This finding is supportive of the view that an expanded disclosure policy limits managerial ability to conceal bad news and improves board ability to assess CEO talent. I further probe this relation in several ways. First, I evaluate the argument that disclosure plays a prominent role when the board has limited knowledge about CEO ability. Consistent with this argument, I find disclosure has a bigger impact on firms with shorter-tenured CEOs. Second, I examine how the

impact of disclosure varies across firms with different corporate governance and find the impact of disclosure is more pronounced for firms with a more independent board in place, a larger board, greater institutional ownership, and lower CEO ownership. These findings highlight the complementary role between governance structures and firm disclosure policy, in that disclosure is more effective when a CEO is less entrenched. Third, I examine how the impact of disclosure varies across firms with different earnings quality and find the impact of disclosure is only found in firms with high quality earnings. The results suggest the information disclosed is only relied upon by monitors when the information being reported is likely of high quality. Fourth, I examine how the relation between disclosure and CEO turnover varies before and after the Sarbanes Oxley Act of 2002 and find the increased likelihood of turnover associated with higher quality disclosure is only present prior to SOX. This finding is consistent with the increased penalties for managers associated with misleading investors in the post-SOX period. Last, I document the effect of disclosure is robust to including additional control variables, using alternative measures of firm disclosure policy, and estimating the models on rolling three year periods within my sample. The exception to the robustness tests is that the effect of disclosure is not significant in the three year periods following SOX. Overall, my study highlights the influence of disclosure policy on CEO succession.

Chapter 1

Introduction

CEO turnover has received considerable attention because of its large impact on firm direction. Weisbach (1995) notes that this attention is not misplaced in that “management changes are important events for corporations because they lead to reversals of poor prior decisions.” CEO turnovers also herald in changes in future policy reflective of the “differing viewpoints and abilities of the new management” (Weisbach, 1995). Given the significance of CEO succession, it is not surprising that considerable attention has been paid on understanding the factors that contribute to this event.¹ I complement and extend this inquiry by examining the influence of firm disclosure policy on CEO turnover. Gomes et al. (2007) point out that voluntary disclosure represents one of the limited ways through which firm-specific information flows into the market.² While prior research has largely emphasized the role of disclosure in mitigating information asymmetry (e.g., Lang and Lundholm, 1996; Botosan, 1997; Leuz and Verrecchia, 2000), a number of recent studies highlight the governance role of disclosure (e.g., Kanodia and Lee, 1998; Bushman and Smith, 2001). My dissertation can be viewed as contributing to the latter line of inquiry.

¹ Appendix 2 contains a list of papers that examine CEO turnover and the factors identified by these studies as contributing to CEO turnover.

² Gomes et al (2007) identify four other mechanisms through which firm-specific information enters the market: mandatory disclosure, selective disclosure, sell side analyst reports to investors, and private information gathering and trading.

Two competing views on the CEO turnover-disclosure relation motivate my inquiry. First, Bushman and Smith (2001) point out that disclosure improves the flow of firm-specific information and consequently affords greater external monitoring. This enhanced external monitoring, in turn, constrains managers from undertaking actions that are contrary to shareholder interest. To be specific, managers have limited ability to divert firm resources towards obtaining private benefits. An implication of this argument is that firm performance will improve due to the efficient use of firm resources and, as a result, will reduce the likelihood of a firm's CEO being fired. Furthermore, Weisbach (1995) argues and finds that one of the key duties of incoming CEOs is to undo some of the decisions made by prior CEOs. Specifically, he finds CEOs undertake divestment of investments undertaken by the former CEO. However, to the extent that disclosure limits managers from undertaking sup-optimal investments, it also reduces the need to replace CEOs to overturn their decisions.

A contrary view is that disclosure will increase the likelihood of CEO turnover. There are two reasons that support this prediction. First, greater disclosure limits managerial ability to manipulate firm performance. For example, Jo and Kim (2007) find higher disclosure frequency reduces the level of earnings management. The implication of this argument is that managers will have limited ability to conceal poor performance. Kothari et al. (2009) recently documented evidence that managers are prone to delay the disclosure of bad news. Previously, Healy et al. (1999, p. 512) had noted that a less expansive disclosure policy allows managers "to conceal poor performance from stockholders." Jo and Kim's (2007) findings are consistent with this argument.

A second reason why disclosure may increase the likelihood of CEO turnover is offered by Hermalin and Weisbach (2009). They note that information is critical for the proper functioning of corporate governance mechanisms, such as a firm's board of directors. Within their framework, an expanded disclosure policy acts as a "double-edge sword," in that firms benefit from the capital market impact of greater disclosure, yet CEOs bear a greater career risk. For example, disclosure has been shown to reduce information asymmetry (Coller and Yohn, 1997), lower the cost of debt (Francis et al., 2005; Sengupta, 1998), and lower the cost of equity (Francis et al., 2005; Lang and Lundholm, 2000; Rakow and Baginski, 2008). At the same time, however, disclosure also increases the ability of capital and labor markets to effectively monitor and discipline managers (Shleifer and Vishny, 1989). Specifically, disclosure provides the board with greater information to better gauge CEO ability. This improvement in measurement of CEO ability increases the likelihood of CEO turnover (Hermalin and Weisbach 2009).³ Besides CEO turnover, an additional, albeit indirect, implication of this view is that disclosure will result in higher CEO compensation to adjust for the higher risk of turnover borne by CEOs (Nagar et al., 2003). In this dissertation, I depart from prior research in that I directly assess the relation between disclosure and CEO turnover. In light of the conflicting theoretical predictions, the disclosure-CEO turnover relation is largely an empirical issue.

My empirical analysis focuses on three predictions suggested by theory. First, I examine the relation between firm disclosure policy and CEO turnover. In exploring the

³ See Section 2.3 for a discussion of how more information increases CEO turnover risk.

relation between disclosure policy and CEO turnover, it is important to note at the outset that theory largely focuses on the impact of disclosure on involuntary termination of CEOs. To this end, I manually distinguish between voluntary and involuntary CEO turnovers. For each CEO turnover, I read the press releases and the related news articles to determine whether a CEO was fired or if she voluntarily resigned or retired. My analysis largely focuses on involuntary CEO turnover. Second, I examine the influence of CEO tenure on the disclosure-CEO turnover relation. To the extent that disclosure of firm-specific information allows a firm's directors to better gauge CEO ability, disclosure should have a more pronounced impact on the termination decisions of CEOs where directors have less precise estimates of CEO ability. Holmstrom (1999) argues that boards can evaluate CEO ability with greater precision as CEO tenure increases.⁴ Thus, I expect the effect of disclosure on CEO turnover to be stronger for shorter-tenured CEOs. Third, I examine the influence of corporate governance attributes on the disclosure-CEO turnover relation. Prior research has argued that CEOs are more entrenched and may dominate boards when the board structure in place largely comprises of corporate insiders (Weisbach 1988). If weak boards are in place, greater information flow may not impact director decisions even though it indicates poor managerial ability. Thus, I examine how the impact of firm disclosure varies with board independence. Similarly, Jensen (1993) argues that boards are likely to be ineffective when they are either too large or when the CEO is also the chairman of the board. Thus, I examine how the impact of disclosure varies with board size and CEO/chairman duality. I also examine how CEO ownership

⁴ The argument here is that CEO ability can be gauged from CEO performance over time. A longer time period provides additional observations that can be used to better infer CEO ability.

affects the relation between disclosure and CEO turnover. Although CEO ownership is argued to reduce the agency conflict between managers and shareholders by better aligning their interests (Jensen and Meckling, 1976), some studies suggest that higher CEO ownership allows managers to become entrenched and hence avoid board discipline. For example, Morck, Shleifer and Vishny (1989) suggest that the likelihood of management turnover following a takeover is lower for managers who have more ownership in the company. In addition to examining the impact of internal governance through board independence and managerial ownership, I investigate the impact of external governance by examining the impact of institutional investor ownership on CEO turnover sensitivity to disclosure.

To carry out my analysis, I gather data from several databases. I obtain CEO turnover information from the Execucomp database. As noted above, I use hand-collected information to verify whether a CEO departure is involuntary or otherwise. The test variable evaluating firm disclosure policy is based on the management earnings forecast data contained in the First Call database. To construct additional control variables, I use data from the COMPUSTAT, CRSP, Thomson Financial's Institutional Holdings (13F), and Risk Metrics (formerly IRRC) databases. The final sample involves 9,127 firm-year observations covering the years 1998 through 2007.

Turning to my results, I find a robust positive relation between disclosure and CEO turnover. This finding is consistent with Hermalin and Weisbach's (2009) theoretical prediction that disclosure is contrary to CEO interest in that it increases the likelihood of CEO turnover. It supports their argument that disclosure improves board

effectiveness, in that greater information flow helps better evaluate managerial ability. My evidence is also consistent with Healy et al. (1999) who argue increased disclosure limits managers' ability to conceal poor performance.

I next carry out additional tests to further evaluate the CEO turnover-disclosure relation. First, I examine the impact of CEO tenure on this relation. I find CEO tenure negatively impacts the CEO turnover-disclosure relation, suggesting the impact of disclosure is greater when it involves firms with less information about their CEOs. Second, I distinguish between firms based on their level of board independence, board size, CEO duality, CEO ownership, and institutional investor ownership and find the sensitivity of CEO turnover to disclosure tends to be stronger for the better governance subsamples. These findings suggest that while disclosure improves the flow of information to monitors, it may have a limited effect in settings where the board of directors is less effective and the CEO is more entrenched. Third, I examine how the relation between disclosure and CEO turnover varies across firms with different earnings quality. The results indicate disclosure has a greater impact when the underlying accounting information is of better quality, which is consistent with monitors relying more heavily on disclosure that is trustworthy. Fourth, I examine whether the increased penalties attributable to CEOs for misleading investors and monitors in the post-SOX period had an effect on the relation between disclosure and CEO turnover. Consistent with the notion that managers are less likely to hide poor performance in the post-SOX period because of potential penalties, I find no significant relation between disclosure and CEO turnover in the post-SOX period.

I also carry out several additional robustness tests to verify the relation between CEO turnover and firm disclosure policy. In addition to the composite score of disclosure policy I use in the main analyses, I evaluate firm disclosure policy based on whether or not firms issue management earnings forecasts, the frequency of these management earnings forecasts, and the average precision of the forecasts provided over the previous three years. I also use a measure based on analyst ratings and published by the Association for Investment Management and Research (AIMR). My results remain qualitatively similar across all these disclosure measures. Finally, I examine whether my results are robust to estimating the sensitivity of CEO turnover to disclosure over rolling three year time periods, the inclusion of earnings properties, whether or not CEOs recently missed their earnings forecast, and the use of alternative measures of accounting and stock based firm performance. Most results are the similar, although the impact of disclosure on the likelihood of CEO turnover is not significant in the shorter periods following the Sarbanes-Oxley Act.

My study contributes to the literature in two ways. First, I contribute to the research on firm disclosure policy. Prior studies have largely examined the impact of disclosure on firm information environment and its resulting capital market effects (e.g., Lang and Lundholm, 1996; Kim and Verrecchia, 1994). My study departs from these studies in that it focuses on the growing research which examines the governance role of firm disclosure policy (e.g., Lobo and Zhou, 2001). My study finds disclosure increases the likelihood of CEO turnover. This is supportive of the argument that disclosure limits

CEO ability to conceal poor firm performance and provides relevant information for boards to gauge CEO ability more effectively.

Second, I contribute to the literature on CEO turnover. Prior research has found poor firm performance increases the likelihood of CEO turnover (Coughlan and Schmidt, 1985; Warner et al., 1988; Murphy and Zimmerman, 1993). Furthermore, CEO turnover is found to positively improve firm performance following a CEO turnover (Denis and Denis, 1995; Huson et al., 2004). This evidence highlights the importance of CEO turnover. Besides firm performance, other factors identified to impact CEO turnover include firm corporate governance (Weisbach, 1988), firm size (Zhou, 2000), CEO age (e.g., Engel et al., 2003), product market competition (DeFond and Park, 1999), and accounting properties (Engel et al., 2003). A few studies also document the effects of CEO choices on the likelihood of CEO turnover. For example, managers are found to be more likely to be fired following poor acquisitions (Lehn and Zhao 2006), when they lose credibility with the stock market by failing to meet their own earnings forecasts (Lee et al., 2008), and when they cut dividends (Parrino et al., 2003). I extend this literature by focusing on the role disclosure has on CEO turnover.

The rest of the paper is organized as follows: section 2 describes the related literature and develops my testable hypothesis, section 3 discusses the data and details the empirical methods, section 4 presents the results, section 5 provides robustness analyses, and section 6 summarizes and concludes the paper.

Chapter 2

Related Literature and Hypothesis Development

This paper examines the influence of firm disclosure on CEO turnover. Before turning to the specific predictions pursued in this paper, I first discuss the background literature on CEO turnover and firm disclosure policy.

2.1 CEO turnover

A corporate setting is characterized by the separation of ownership and control. While shareholders provide firms with funds, a corporation's resources are managed by its CEO and her subordinates. Consequently, a firm's performance is critically determined by the decisions and actions of a CEO. This separation leads to conflicts of interest, in the sense that managers may undertake actions which are contrary to shareholder interests. For example, a manager may undertake sup-optimal investments such as "empire building" projects by acquiring targets to increase firm scale but not maximize shareholder value (Jensen, 1993).⁵ Although several methods of aligning the interests of managers with shareholders exist, one of the strongest methods is the threat of replacement (Fama, 1980). In the event that CEO performance is lacking, the owners of a firm have the option of replacing the CEO.

⁵ Other examples of the principal-agent conflict include managers withholding excess cash in the absence of profitable investment opportunities (Jensen, 1986) and entrenching themselves against termination due to poor performance (Shleifer and Vishny, 1989).

The literature to date on CEO turnover has largely focused on two inter-related issues: what factors affect CEO turnover and what are the resulting effects of CEO turnover. The early literature on the effects of CEO turnover largely involved examining the market reaction to CEO succession announcements. The evidence here is quite mixed. While studies such as Weisbach (1988), Denis and Denis (1995), and Huson, Malatesta and Parrino (2004) document positive stock market responses to CEO succession announcements, Reinganum (1985) and Warner, Watts and Wruck (1988) find relatively muted responses to these announcements. The lack of a stock market response could be due to conflicting implications in this setting. Specifically, the news of CEO turnover may signal an improvement in firm value but at the same time convey negative information about the current management and investment strategies.

In contrast to the focus on market reaction, subsequent research examined the real effects associated with CEO turnover. For instance, Weisbach (1995) found firms are more likely to undertake divestments following a CEO turnover. The implication here is CEO turnover serves the function of over-turning suboptimal investments undertaken by the prior CEO. Hotchkiss (1995), Denis and Denis (1995), and Huson et al. (2004) examine the relation between turnover and subsequent changes in operating performance. Their evidence suggests CEO turnover is beneficial to firms. Hotchkiss (1995) finds firms emerging with the same CEO that they entered bankruptcy with are more likely to file for a second bankruptcy and have negative operating income following the reorganization. The implication here is that CEO turnover relates to better future performance for poorly performing firms. Denis and Denis (1995) examine post-turnover

operating performance and find significant improvements for both involuntary and voluntary turnovers. Further, both samples of turnovers exhibit a large amount of corporate restructuring (e.g., asset sales, employee layoffs, cost-cutting, etc) in the two years following a CEO change. Huson et al. (2004) also examine how CEO turnover affects firms' future performance and find significant improvements in operating performance. They also show that the degree of improvement depends on the current governance of the firm and whether the new CEO is an insider or otherwise.

More germane to my study is the literature that examines the various forces which impact CEO turnover. A key determinant identified by this literature is firm performance, measured either through stock returns or accounting variables. Coughlan and Schmidt (1985) and Warner et al. (1988) find the likelihood of CEO turnover to be negatively impacted by stock performance. Separately, Weisbach (1988) and Murphy and Zimmerman (1993) find a lower likelihood of CEO turnover for firms with larger positive changes in earnings. Typically, the industry median performance is used as a benchmark to assess firm performance (e.g., Kaplan, 1994); however, Farrell and Whidbee (2003) show boards also use analyst forecasts as benchmarks.

Probing the CEO turnover-firm performance relation further, prior research has noted that this relation can be influenced by several factors. The primary focus of this literature has been on the impact of corporate governance on CEO turnover. For example, Weisbach (1988) finds that firms with greater board independence exhibit stronger associations between CEO turnover and firm performance. Furthermore, studies have shown institutional investors serve an important role in affecting CEO changes. For

example, Del Guercio et al. (2008) find institutional shareholder activism increases the rate at which boards fire their CEOs. Also, Parrino et al. (2003) argue, and find supporting evidence, that in addition to shareholder activism, institutional investors put pressure on boards to replace their CEO by selling large portions of their stock. Other studies have shown managers are less likely to be fired when they are more entrenched (e.g., Goyal and Park, 2002; Dahya et al., 1998). The consensus from this literature is that corporate governance is an important factor in determining CEO turnover.

A number of studies have also examined how accounting quality affects boards' CEO turnover decisions. For example, research shows executives are more likely to be fired following accounting restatements. To be specific, Desai et al. (2006) find that 60% of the firms issuing restatements in their sample have a CEO turnover within the subsequent 24 months. Additionally, Karpoff et al. (2008) examine a comprehensive list of individuals identified by the SEC and the Department of Justice enforcement actions as responsible parties for financial misrepresentations from 1978 through 2006 and find that 93% of the executives identified lose their jobs by the end of the regulatory enforcement period. Apart from accounting restatements, accounting quality is also found to affect CEO retention decisions by impacting the weight placed on accounting performance measures. For example, Engel et al. (2003) find accounting performance has a larger impact on CEO turnover decisions when it is less volatile and timelier. Conversely, they find stock performance is a more important factor when earnings are less timely and contain more noise. The conclusion is that boards focus on whichever performance measure contains less noise. Bushman et al. (2009) extend this analysis by

examining how performance risk affects CEOs' likelihood of termination. They conjecture and find supporting evidence that the information revealed through performance metrics is increasing with a firm's idiosyncratic risk and decreasing with its systematic risk. This finding supports the notion that managers are more likely to be fired when their performance is more easily observed. My study contributes to this literature by testing whether firm disclosure policy has the same impact on CEO turnover. Although greater disclosure policies also increase monitors' ability to assess CEO talent (Trueman, 1986; Bushman and Smith, 2001), disclosure may encourage the managers to perform better. As argued later, managers may alter their behavior when they are aware of increased monitoring. Hence, the impact of firm disclosure policy on CEO turnover is not intuitively clear. My study contributes to this area by examining the relation between disclosure and CEO turnover in an effort to further understand how the flow of information affects corporate behavior.

2.2 Disclosure

To date, a significant portion of prior research on disclosure focuses on its capital market effects. For example, Lang and Lundholm (1996), Coller and Yohn (1997), and Kim and Verrecchia (1994) emphasize the ability of better disclosure to reduce information asymmetry by improving the flow of firm-specific information. Diamond and Verrecchia (1991), Botosan and Plumlee (2002), Francis et al. (2005), and Rakow and Baginski (2008) show that better disclosure results in lower cost of capital.⁶ Also,

⁶ Although studies typically find a negative relation between disclosure quality and cost of capital, Francis et al. (2008) and Botosan and Plumlee (2002) find conflicting results. Though they find an inverse relation between disclosure quality and cost of capital, the effect varies depending on which measure of disclosure quality is used, or for what time-period it is measured.

Welker (1995), Healy et al. (1999), and Leuz and Verrecchia (2000) all find evidence that better disclosure improves stock liquidity. In addition to analyzing the market consequences of expanded disclosure, recent theory asserts that disclosure also serves as a corporate governance mechanism.

Within the corporate governance literature, Stiglitz and Weiss (1981) point out the ability of greater information flow to reduce the principal-agent problem, in turn improving resource allocation. Additionally, Bushman and Smith (2001 and 2003) argue disclosure improves firm performance through a better flow of information to investors and boards of directors. They suggest the improved information flow disciplines managers to abandon poorly performing investments sooner and reduces the amount of wealth expropriated from shareholders by increasing managers' incentives to perform well. Kanodia and Lee (1998) further describe the governance role of increased disclosure by analytically showing why managers curb overinvestment when they disclose firm performance to investors more frequently. In their model, managers overinvest to send a misleading signal to shareholders that the firm has better investment opportunities than it really does. When managers have to disclose their performance frequently, however, shareholders are better able to reassess the value of the firm based on these disclosures, decreasing the benefit of sending misleading signals. Therefore, greater disclosure acts as a governance mechanism by reducing costly overinvestment. Hermalin and Weisbach (2009) also analytically examine the governance role of disclosure. They show the resulting increased flow of information allows boards to make better personnel decisions by more precisely estimating their ability. Lastly, Adams and

Ferreira (2007) contend that boards will monitor executives more effectively in the presence of more information. This argument is consistent with Shleifer and Vishny (1989), who state that “an imperfectly informed board of directors is often unwilling to second-guess the CEO’s decision.”

Empirical evidence further supports the governance role of disclosure. For example, Jin and Myers (2006) find international evidence that better information environments reduce managers’ ability to expropriate wealth from owners by reducing their ability to conceal cash flows. Along the same line, Jo and Kim (2007) find higher disclosure frequency decreases earnings management.⁷ Additionally, firms with better disclosure policy were less affected during the East Asian Crisis (Mitton, 2002), an event that has frequently been blamed on weak corporate governance (e.g., Stiglitz, 1998; Harvey and Roper, 1999). Given this evidence, it becomes clear that firm-specific information environment serves an important and complementary governance function.

Related to my study, Lee et al. (2008) examine the relation between management earnings forecasts and CEO turnover. Their study examines how changes in manager credibility affect the likelihood of CEO turnover and uses management earnings forecast outcomes to proxy for changes in manager credibility. Specifically, they assert that managers’ credibility suffers when they either opportunistically issue an overly pessimistic earnings forecast and beat it, or when the earnings forecast is issued too high and the manager subsequently fails to meet it. The results indicate firms are more likely

⁷ Earnings management is typically viewed in a negative light. For example, Healy and Wahlen (1999) say earnings management is used “to either mislead some stakeholders about the underlying economic performance of the company, or to influence contractual outcomes that depend on reported accounting numbers.” As such, the finding that firms with better disclosure policies manipulate earnings less further supports the governance role of disclosure.

to experience a CEO turnover following declines in CEO credibility. Similar to Lee et al. (2008), my study also focuses on management earnings forecast. However, our studies differ in that I use earnings forecasts to gauge a firm's overall disclosure policy by examining the occurrence, frequency, and precision of managerial earnings forecasts over a three year period.⁸

2.3 Disclosure Quality and CEO Turnover

Theoretically, the effect of disclosure policy on CEO turnover is subject to competing predictions. One view follows Bushman and Smith (2001, 2003), who conjecture greater disclosure improves firm performance. They argue that disclosure improves the flow of information, which thereby “contributes directly to economic performance from the more efficient management of assets in place (for example, timely abandonment of losing projects), better project selection, and reduced expropriation of investors’ wealth by the managers” (Bushman and Smith, 2003, p. 68). Given the strong negative relation between performance and CEO turnover (Weisbach, 1988; Murphy and Zimmerman, 1993; Denis and Denis, 1995; Engel et al., 2003), managers of firms with better disclosure policies may perform better and be less likely to be fired. This view has three supporting points.

First, disclosure is argued to increase firm performance by reducing agency costs through improved external monitoring (Bushman and Smith, 2001). With better external monitoring, managers are less likely to consume corporate resources for private benefits. For example, Hope and Thomas (2008) document an increase in empire building for

⁸ An additional difference is that I distinguish between voluntary and involuntary turnovers, whereas Lee et al. (2008) include both types of turnovers.

firms that discontinue disclosing geographic segment information following SFAS 131. Similarly, Berger and Hann (2007) find firms with strong agency costs tend to hide poorly performing international segment data following SFAS 131. Second, Adams and Ferreira (2007) investigate the advising role of boards and conclude boards are better able to advise CEOs in the project selection process when they have better information. To the extent that voluntary public disclosure is proportional to private disclosure, CEOs of firms with better disclosure policies should receive better advice from their boards, resulting in better project selection and improved firm performance. Last, disclosure may improve firm performance by reducing firms' cost of capital (Myers and Majluf, 1984; Diamond and Verrecchia, 1991). Although findings are mixed, several studies document a negative relation between disclosure and the cost of capital. For example, Francis et al. (2005) examine disclosure policies internationally and find better disclosure results in cheaper equity and debt financing. Sengupta (1998) finds that firms with higher disclosure scores measured by analysts benefit by obtaining cheaper debt financing within the United States. Furthermore, Lang and Lundholm (2000) find evidence that firms that increase their disclosure prior to equity offerings enjoy higher stock prices for their equity issuance. Last, Rakow and Baginski (2008) find a significant inverse relationship between disclosure and cost of capital using management earnings forecasts. A lower cost of capital is beneficial to firms because it allows their managers to pursue more positive net-present-value projects, resulting in greater firm performance. The strong negative relation between firm performance and CEO turnover, combined with the three points above lead to the following testable prediction:

H_{1a}: Higher disclosure quality negatively impacts the likelihood of CEO turnover.

A contrary view, however, is that disclosure will increase the likelihood of CEO turnover. Two reasons support this view. First, disclosure reduces managers' ability to manipulate performance metrics, such as earnings.⁹ For example, Jo and Kim (2007) find higher disclosure frequency reduces the level of earnings management, and Lobo and Zhou (2001) find that firms with higher AIMR scores manage earnings less. The implication of this argument is that managers will have limited ability to conceal poor performance under enhanced disclosure policies. Kothari et al. (2009) recently document evidence that managers are prone to delay the disclosure of bad news. Previously, Healy et al. (1999, p. 512) had noted that a less expansive disclosure policy allows managers "to conceal poor performance from stockholders," which is consistent with the findings of Jo and Kim (2007) and Lobo and Zhou (2001).

A second reason to expect an increased turnover risk under better disclosure is provided in Hermalin and Weisbach (2009). They note that information is critical for the proper functioning of corporate governance mechanisms, such as a firm's board of directors. Within their framework, an expanded disclosure policy provides the board with greater information to better gauge CEO ability. As CEOs provide more information, boards can more precisely estimate CEO ability, thereby decreasing board uncertainty and increasing the risk of CEO turnover. Hermalin and Weisbach (2009) contend that

⁹ As noted in Schipper (1989, p. 95), "an additional condition which must be met for earnings management to exist in an analytical model is that the asymmetry in information persists." Several studies document disclosure's ability to reduce information asymmetry (e.g., Coller and Yohn, 1997), implying firm disclosure decreases the capacity for earnings management.

greater disclosure will increase the likelihood of CEO turnover. In this sense, they argue disclosure acts as a “double-edged sword,” in that it provides benefits to the firm (such as those described under the Bushman and Smith argument), yet exposes managers to a higher risk of being fired.

To understand this conclusion, consider the case where no new information is disclosed, or where the information disclosed is completely imprecise. In this setting, the CEO faces no risk of termination if the board has previously concluded she is capable of doing the job. As no new useful information is disclosed, the board must rely upon its previous assessment of CEO ability, which is high enough for the CEO to maintain her position. On the other hand, consider the case where information is disclosed in a manner that perfectly reveals CEO ability. In this setting, a board’s updated assessment of CEO ability is completely precise. As a result, the board’s new estimate of CEO ability will play a larger role in deciding whether the CEO is retained, and the previous estimates of CEO ability will have less importance. Empirically, this view leads to the following hypothesis:

H_{1b}: Higher disclosure quality positively impacts the likelihood of CEO turnover.

The relation between CEO turnover and disclosure policy, however, is likely to differ between firms. Specifically, I expect the sensitivity of CEO turnover to disclosure to be stronger either when the board has less information about the CEO’s ability, or when the CEO has less influence over the board. When a board has more information about CEO ability, there is less new information about ability that can be revealed through greater disclosure. To find a setting where the board likely has less information

about the CEO, I turn to existing theory. In particular, Holmstrom (1999) argues that boards gather information about their CEO over time. As CEO tenure increases, the board gains additional observations that help them draw inferences about CEO ability. The implication here is that disclosure will play a more prominent role in revealing CEO ability early in a CEO's tenure because the board has fewer prior observations on which to gauge the CEO's ability. This leads to the following prediction:

H₂: The relation between CEO turnover and disclosure quality is more pronounced for short-tenured CEOs.

To support hypotheses one and two, I next examine whether the relation between disclosure quality and CEO turnover varies across firms with different corporate governance qualities. Prior research asserts that only firms with effective governance in place will make decisions that are congruent with shareholder interests (Shleifer and Vishny, 1997). I therefore expect the impact of disclosure to have a stronger impact when CEOs have less influence over the board. In particular, I examine how the sensitivity of CEO turnover to disclosure varies between firms with different levels of the following measures of firm governance: board composition of independent directors, board size, CEO duality, CEO ownership, and institutional ownership. Prior literature has shown links between each of these measures and the degree to which firms act in shareholders' interests. For example, Rosenstein and Wyatt (1997) find CEOs are more prone to become entrenched and dominate boards when they are filled with non-independent directors. Similarly, Dahya et al. (1998) find that managers are less likely to be fired in the presence of poor financial performance when they have higher levels of

ownership. To the extent that firms with stronger corporate governance are more capable of acting on information revealed by the greater flow of firm-specific information, I expect the CEO turnover-disclosure relation to be stronger for firms with better governance in place.

Chapter 3

Sample and Variable Construction

3.1 Sample Construction

To empirically examine how disclosure policy affects CEO turnover, I begin by gathering CEO data from Standard and Poors' Execucomp database. Although Execucomp provides data from 1992, I restrict my sample to the years 1998 through 2007 because of missing information from the First Call dataset. Specifically, the management earnings forecast data necessary for calculating my disclosure quality variable is very sparse prior to 1995 and the variable construction process requires three prior years of data. Table 1 describes the sample construction process. The sample construction process begins with 18,378 firm-year observations from Execucomp. At this stage, I measure CEO turnover and other control variables available on Execucomp. I attribute the CEO turnover variable to the most recent fiscal year in which the CEO served at least 183 days (the majority of the most recent fiscal year). For example, if a CEO is fired on March 8th, 2003 and the firm's fiscal year ends on December 31st, the turnover will be coded '1' for 2002. Alternatively, if the CEO was fired in November and the firm's fiscal year end is December, the turnover would be attributed to 2003. I measure the test and control variables based on the fiscal year prior to the CEO turnover. This is to ensure that my variables are not affected by policy changes implemented by the incoming CEO. The sample is reduced to 15,317 after merging my CEO turnover data with the needed data from Compustat. The sample is further reduced due to 1,848

missing data in CRSP. The resulting sample involves 13,469 observations. I next delete 2,333 firm-year observations related to those from the financial and utility industries (i.e., firms with SIC codes 4900-4949 and 6000-6999). These are highly regulated industries and prior research has found these firms to issue more earnings forecasts (Patell, 1976). I then merge the remaining sample with Risk Metrics which provides board independence and CEO duality information. The resulting sample consists of 1,587 firms, 9,127 firm-year observations and 1,049 CEO turnovers. For this sample, I obtain management earnings forecast data from Thomson's First Call database. If management earnings forecast is not available on the First Call database, I assume the firm did not provide guidance for that particular time period. Recent research has found that CEO turnover is more likely following a restatement. To control for firm restatement, I use the sample described in Hennes, Leone, and Miller (2008). Hennes et al. (2008) use GAO data and distinguish between accounting errors and irregularities to show that the irregularities are viewed much more severely by monitors.¹⁰ As such, I include an indicator variable that equals one when a firm restated earnings due to an accounting irregularity in the year prior to the year in which I measure CEO turnover. To avoid the undue influence of outliers, I winsorize all variables at the 1st and 99th percentiles.

[Insert Table 1]

In this study, distinguishing between voluntary and involuntary turnover is particularly important. To begin with, my study focuses on the governance role of

¹⁰ Hennes et al. (2008) describe a restatement as an irregularity if any one of the following are met: 1) the word irregularity or fraud is mentioned in the press release, 2) the firm announces its own internal investigation, or 3) the firm announces an SEC or Department of Justice investigation.

disclosure. As such, I am concerned with involuntary CEO turnover wherein disclosure reduces the likelihood of CEO turnover due to better monitoring or increases the likelihood of CEO turnover due to constraints on managerial ability to manipulate firm performance or by providing a better gauge of CEO ability.¹¹ An additional reason for distinguishing between involuntary and voluntary turnover is that disclosure can be used by a CEO to signal his ability to the job market and hence improve his chances of attracting alternative employment offers. Specifically, Trueman (1986) suggests that earnings forecasts convey information to the market beyond future earnings. He argues that if forecasts only convey information to the market about future earnings, then managers would be indifferent to providing guidance because the end of period market value will be the same after earnings are reported. Rather than issuing forecasts to offer guidance as to what future earnings will be, Trueman contends that managers issue forecasts to reveal to the market their ability to detect changes in the current economic environment. The market values this information because managers' ability to observe changes in the current economic environment is directly related to their ability to choose the optimal level of firm production. As such, the information provided to the market about the manager results in a higher end of period market value than if no disclosure had been given. To this end, managers who provide voluntary disclosure will be viewed as having greater ability, thereby leading to potentially better future job prospects. For the reasons noted above, I distinguish between voluntary and involuntary turnover.

¹¹ Typically, studies involving voluntary turnovers examine executive incentives, such as those associated with pensions and option repricing (e.g., Sundaram and Yermack, 2007).

To determine whether a CEO turnover is involuntary, I search Lexis-Nexis for newspaper articles and business press releases related to the 1,049 CEO turnovers identified in the Execucomp database. All turnovers for which the press releases indicate the turnover happened under questionable circumstances (e.g., impending lawsuits, irreconcilable policy differences with the board, accounting fraud, or external pressure) were coded as involuntary. For the remaining turnover observations, I follow the process described in Huson et al. (2001) to classify whether a CEO turnover is voluntary or involuntary. Specifically, the turnover is classified as involuntary if the departing CEO is under the age of 60 and the announcement of the succession: (1) does not report the reason for the departure as involving death, poor health, or the acceptance of another position (elsewhere or within the firm), or (2) reports that the CEO is retiring, but does not announce the retirement at least six months prior to the succession. Based on this classification process, I identify 243 involuntary CEO turnovers and 806 voluntary turnovers.

Table 2 shows the industry composition of the sample and the relative percentage of the involuntary CEO turnovers to the total number of involuntary turnover. Overall, the distribution of turnovers between industries seems to be consistent with the distribution of the number of observations between the industries. For example, the Chemicals industry represents 859, or 9.4%, of the 9,127 total observations in my sample. The Chemical industry also has 20 CEO turnover observations, or 8.2%, of the 243 total CEO turnover sample. Only three industries capture a portion of CEO turnovers that differs by more than 2% of their portion of the overall sample.

[Insert Table 2]

3.2 Empirical Model and Variable Definition

3.2.1 Measurement of Firm Disclosure

Following extant literature (e.g., King, Pownall, and Waymire, 1990; Frankel et al., 1995; Nagar et al., 2003), I use management earnings forecasts to proxy for firm disclosure policy. Management earnings forecasts convey useful information to the public. Typically, they not only contain estimates about future earnings, but they also contain relevant information about corporate changes, restructurings, foreign currency fluctuations, and other supplementary information relevant to future firm performance (Waymire, 1985; Hutton, Miller, and Skinner, 2003; Baginski, Hassell, and Kimbrough, 2004).

One of the issues concerning voluntary disclosure is whether it is credible. Afterall, voluntary disclosure involves managerial discretion and managers may use this discretion to make self serving disclosures. Healy and Palepu (2001) note that several countervailing forces serve to constrain this managerial opportunism and increase the credibility of managerial earnings forecast. First, third-party intermediaries such as financial analysts provide earnings forecasts which can be used to gauge the credibility of managerial earnings forecasts. Second, management earnings forecast can be compared and evaluated against actual earnings realizations. Finally, misleading disclosures can subject managers to penalties enacted through either the legal system or board actions.

Additionally, studies have shown that earnings forecasts contain new information and have significant market effects. For example, Coller and Yohn (1997) empirically

show that management earnings forecasts reduce information asymmetry. They find firms issuing guidance typically have larger bid-ask spreads than non-issuers prior to the forecast, a difference which goes away after the guidance is issued. Studies have also found evidence that managers issue guidance to avoid litigation (Skinner, 1994) and realign the market's expectations (Ajinkya and Gift, 1984). Empirical evidence also suggests analysts revise their forecasts after management earnings forecasts (Waymire, 1986). As such, management earnings forecasts are argued to be relevant sources of inside information and a valid measure of firm disclosure policy.

To create a measure of firm disclosure policy, I gather management earnings forecast data from the First Call Company Issued Guidance database. I then follow Rakow and Baginski (2008) and estimate a proxy for disclosure quality by combining measures of three underlying disclosure properties. The first input, MEF, is an indicator variable that equals one only if a company provided at least one earnings guidance within the three prior years. The second input, MEF_FREQ, measures how many quarterly earnings forecasts a firm issued over the same three year window. The last input, MEF_PREC, measures how precise earnings guidance was over the same three year period. To measure precision, I follow Baginski et al. (1993), Baginski and Hassell (1997), and Bamber and Cheon (1998) and assign a value of 1 to qualitative guidance, 2 to those that had a range of values, and 3 if the guidance had a point estimate. MEF_PREC then equals the average of all precision measures for a firm over the same three year window. The resulting disclosure quality variable is the product of the three: $Discl = MEF * MEF_FREQ * MEF_PRECISION$. I use the natural logarithm of $(Discl +$

1) for my empirical analyses, where higher values relate to more expanded disclosure policies. The benefit of using this method to measure disclosure policy is that it considers disclosure decisions made over a number of years prior to the turnover.¹² By measuring over three years, I minimize the influence of sporadic disclosures relating to transitory incentives by CEOs¹³.

3.2.2 Testing H_1

To test hypothesis 1 and evaluate the influence of disclosure on CEO turnover, I estimate the following model:

$$\begin{aligned} \text{CEO TURNOVER}_{i,t} = & \beta_0 + \beta_1 \text{Disclosure Quality}_{i,t-1} + \beta_2 \text{Accounting} \\ & \text{Performance}_{i,t-1} + \beta_3 \text{Stock Return}_{i,t-1} + \beta_4 \text{Restatement}_{t-1} + \beta_5 \text{Ln(Assets)}_{i,t-1} + \\ & \beta_6 \text{Debt/Asset}_{i,t-1} + \beta_7 \text{Industry Median MB}_{i,t-1} + \beta_8 \text{HHI}_{i-1} + \beta_9 \text{CEO Tenure}_{i,t-1} + \\ & \beta_{10} \text{CEO Age}_{i,t-1} + \beta_{11} \text{Ln(Compensation)}_{i,t-1} + \beta_{12} \text{CEO Ownership}_{i,t-1} + \beta_{12} \text{Board} \\ & \text{Size}_{i,t-1} + \beta_{13} \% \text{Independent}_{i,t-1} + \beta_{14} \text{CEO duality}_{i,t-1} + \beta_{15} \text{Institutional} \\ & \text{Ownership}_{i,t-1} + \text{Year fixed effects} + \text{Industry fixed effects} \quad (1) \end{aligned}$$

where:

CEO TURNOVER	= 1 in the year of an involuntary CEO change
Disclosure Quality	= natural logarithm of Discl +1
Accounting Performance	= industry-adjusted return-on-assets, or industry-adjusted sales growth, for the previous fiscal year
Stock Return	= industry-adjusted 12-month compounded stock return for the previous fiscal year
Restatement	= 1 if the firm restated earnings in the previous year

¹² I exclude disclosures that take place prior to a CEO's appointment to office in the event that her tenure is less than three years.

¹³ Although I industry adjust firm performance measures, I do not industry adjust disclosure quality measures because the theory is based on information revealed through disclosure, not the benefits and costs of disclosing more than competitors.

Ln(Assets)	= natural logarithm of total assets for the previous fiscal year
Debt/Asset	= ratio of current and long-term debt to assets for the previous fiscal year
Industry Median MB	= ratio of market value to book value for the previous fiscal year
HHI	= Herfindahl Index for the previous fiscal year
CEO Tenure	= number of years the CEO has been the company's CEO
CEO Age	= natural logarithm of the age of the CEO for the previous fiscal year
Ln(Compensation)	= natural logarithm of CEO's total compensation for the previous fiscal year
CEO Ownership	= percentage of a firm's equity held by the CEO
Board Size	= number of total directors
% Independent	= proportion of outside directors on a board to the total number of board members during the previous fiscal year
CEO duality	= 1 if the CEO was also the Chairman of the board during the previous year
Institutional Ownership	= percentage of a firm's equity held by institutional investors

The coefficient on the variable *Disclosure quality*, β_1 , is the parameter of interest in Equation (1). If an expanded disclosure policy decreases the likelihood of CEO turnover through better monitoring, as suggested by Bushman and Smith (2003) and Adams and Ferreira (2007), then β_1 should be negative. If, however, an expanded disclosure policy increases the likelihood of CEO turnover by decreasing manager ability to hide poor performance and allowing boards to better assess CEO ability, as suggested

by Healy et al. (1999) and Hermalin and Weisbach (2009), then β_I should be positive. Given the competing views on the effect of disclosure policy, I make no prediction on the direction of β_I .

In addition to examining the impact of disclosure on CEO turnover, I also control for firm, industry, and CEO characteristics that prior research has found to be important factors affecting the likelihood of CEO turnover. First, I include accounting and stock performance measures because prior literature has documented a strong negative relation between recent firm performance and CEO turnover. Consistent with prior literature I use industry-adjusted ROA (e.g., Huson et al., 2001) and industry-adjusted sales growth (e.g., Kaplan, 1994) as accounting performance measures. When studying CEO turnover decisions, adjusting performance by the industry median is important because boards are expected to consider not only the current CEO's performance, but also the expected performance of a replacement CEO. Since studies have also found recent firm stock performance to be negatively related to the likelihood of CEO turnover (e.g., Coughlan and Schmidt, 1985), I include it as well. I compound stock returns over the 12 months of the fiscal year ending prior to the CEO turnover.¹⁴ Annual returns are also adjusted by subtracting the corresponding two digit industry median stock return. In addition to market and accounting measures of performance, I include a dummy variable to indicate whether a firm restated earnings in the previous year due to an accounting irregularity. Prior research has found an increased likelihood of executive turnover following restatements (Desai et al., 2006; Karpoff et al., 2008).

¹⁴ Robustness tests show my results do not differ if returns are measured over the most recent 12 months prior to a CEO change.

In addition to differences in firm performance, I include control variables identified by prior studies as relevant. Larger firms have a greater ability to draw on internal markets to replace CEOs. As such, prior research has found the likelihood of CEO turnover is increasing with firm size (e.g., Zhou, 2000; Offenbergh, 2008). Hence, I control for firm size by including the natural logarithm of assets. Firm capital structure is also argued to affect the likelihood of CEO turnover to the extent that it exposes a firm to financial distress (Harrison et al., 1988). As such, I include a firm's debt-to-asset ratio. I further include two industry level measures. Following DeFond and Park (1999), I include a firm's two-digit SIC industry median market-to-book ratio to control for a firm's investment opportunity set. Firms with greater investment opportunities have more to lose by not replacing a poorly performing CEO. So I expect the effect of *Industry Median MB* to positively affect the likelihood of CEO turnover. The Herfindahl Index, *HHI*, is included to control for the amount of product market competition faced by the firm. Specifically, I calculate *HHI* for each firm-year as the sum of the squares of the market shares of the firms in the industry, where market share is defined as firm sales divided by total industry sales. Because higher values of *HHI* correspond with more concentration and lower competition, I expect the estimated effect of *HHI*, β_8 , to be negative (DeFond and Park, 1999).

Equation 1 also includes CEO specific characteristics that affect the likelihood of turnover. The first CEO variable I include is CEO Tenure. Brookman and Thistle (2009) find the likelihood of CEO termination increases until the manager has about thirteen years of tenure before declining. The next variable included is CEO Age. Previous

research finds CEO age to be one of the most important determinants of CEO turnover (Brickley, 2003). CEOs over the age of 64 are 30% more likely to be turned over than younger CEOs. Typically, CEO turnover studies include both a variable to capture the CEO age and a dummy variable to indicate whether a CEO is at a retirement age to capture voluntary CEO turnover. However, I do not include a retirement variable in my analysis because I focus on involuntary CEO turnovers. Consistent with Engel et al. (2003), I expect younger CEOs to be more likely to be fired either because they may have less experience, or because the cost associated with not replacing them is greater due to the considerable time before voluntary retirement.

I also include CEO compensation, as prior literature suggests higher compensation is generally reflective of greater ability (e.g., Core and Guay, 1999). I expect CEO compensation to be negatively related to CEO turnover, because managers with more ability are less likely to be fired. I measure CEO compensation as the natural logarithm of a CEO's total compensation.¹⁵ I include the percentage of a firm owned by a CEO for two reasons. First, Dahya et al. (1998) and Shivdasani and Yermack (1999) find CEOs have more influence over their boards when they own more of the company's stock. In this case, managers will be less likely to be fired because the board will have a harder time overcoming her influence. Second, Jensen and Meckling (1976) show the extent to which managers' interests are aligned with their shareholders increases with CEO ownership. The effect of this impact is managers will be less likely to be fired

¹⁵ Total compensation consists of salary, bonus, other annual, restricted stock grants, LTIP payouts, all other, and the value of option grants, as measured from Standard & Poor's Execucomp database.

because they will make decisions more in line with their shareholders' desires. Under both situations, the likelihood of a CEO being fired is decreasing with her ownership.

The last set of control variables pertains to firm governance. Prior literature has shown the likelihood of CEO turnover increases with the quality of a firm's corporate governance (e.g., Weisbach, 1988). Additionally, research also shows firms with better governance are more likely to issue earnings forecasts (e.g., Karamanou and Vafeas, 2005). Thus, to alleviate concerns that omitted governance characteristics are driving any relation between firm disclosure and CEO turnover, I include four common components of corporate governance. First, I include the size of a firm's board of directors. Jensen (1993) argues that small boards are more effective than larger boards. Supportive of this argument, Yermack (1996) provides evidence that firms with smaller boards tend to have better performance. Presumably, small boards take a larger role in monitoring managers' activities, whereas larger boards suffer from a free rider problem due to the dispersion of responsibility. Second, prior research has shown managerial entrenchment is less likely when a board has a higher proportion of independent directors (Rosenstein and Wyatt, 1997). Hence I include the percentage of independent directors on a firm's board and expect it to increase the likelihood of CEO turnover. Third, I determine whether the CEO also occupies the chairman of the board position because CEO turnover is less likely for firms when the CEO occupies both roles (Kini et al., 2004). Last of all, I include the percentage of shares held by institutional investors to capture the increased level of monitoring by investors that own large portions of the company (e.g., Parrino et al., 2003; Del Guercio et al., 2008). I expect the likelihood of turnover to increase with the

percentage of shares owned by institutional investors. In addition to these control variables, I also include year and industry fixed effects, and cluster standard errors at the firm level.

Chapter 4

Empirical Results

4.1 Descriptive Statistics

Table 3 provides the sample statistics for the variables included in the main analysis of this study. Involuntary CEO turnover is a relatively infrequent event. In my sample, involuntary CEO turnover occurs only in 2.6% (243 out of the 9,127) of the total firm-year observations. This is similar to the 2.1% reported by Farrell and Whidbee (2003). Kaplan and Minton (2008), document an increasing trend in overall CEO turnover after 1998. Although they do not distinguish between voluntary and involuntary turnovers, they observe an average of 101 total CEO turnovers a year from 1998 to 2005 and note that forced CEO turnover typically accounts for 15-25% of all turnovers. Their finding is consistent with my sample average of 24 involuntary turnovers a year. Turning to firm disclosure, 51% of observations disclose at least one quarterly earnings forecast within the past three years. Excluding observations of firms that provide no guidance in the previous three years, the average firm issues between five and six forecasts during the three previous years and at least half of all disclosures provide a range or point estimate of future earnings. After performing a logarithm transformation, the composite disclosure score, *Disclosure quality*, has a mean value of 1.13 and a median of 0.69, which is slightly less than Huang (2009). The lower average disclosure score in my sample reflects the exclusion of forecasts made prior to the date a CEO took office.

[Insert Table 3]

Table 3 also provides descriptive statistics for the control variables. On average, firms in my sample perform better than their industry medians, with mean values for industry-adjusted ROA and stock returns of 0.05 and 0.11, respectively. In addition to performing better than average, only 1% of the firms in my sample restate earnings because of an accounting irregularity. Firms in my sample are relatively larger, having nearly \$1.5 billion in assets. In part, this is due to the coverage of Execucomp of firms that have been in the S&P 1500 at some time since 1992. Hence, the firm size for my sample is comparable to prior studies which have relied on the Execucomp database. The average Debt/Asset ratio, industry median MB, and Herfindahl index are 0.22, 1.59, and 0.07, respectively. These values are consistent with prior studies (e.g., DeFond and Park, 1999; Coles et al., 2006). Turning to the CEO variables, the mean CEO is 56 years. The average CEO tenure for my sample is 8 years with a mean compensation of just over \$2.75 million. On average, CEOs own 2.2% of their companies' stock. Additionally, 79% of CEO observations in my sample hold the office of chairman of the board. The average board has nine members, 66% of which are independent directors. Lastly, the mean institutional holding of firm stock is 45%. Overall, the sample statistics provided in Table 3 are consistent with prior research.

Table 4 separates the sample into observations with and without involuntary CEO turnovers to determine whether the test and control variables are different between the two subsamples. The last two columns in Table 4 report the difference in means and the corresponding p-values. The involuntary turnover subsample has higher values for all four measures of disclosure quality, although only the difference in composite scores is

statistically significant. A higher disclosure score for the CEO turnover sample is consistent with the view that managers face greater turnover risk under more enhanced disclosure policies, either through a constrained ability to hide poor performance or through improvements in boards' ability to assess CEO talent (Healy et al., 1999; Hermalin and Weisbach, 2009). In addition to the difference in disclosure quality, observations in the turnover sample also have worse performance across all three measures of performance, and are more likely to have issued a restatement within the past year. The CEOs in the turnover subsample have shorter tenures, are younger, are paid less, own less company stock, and are less likely to be the chairman of the board. These differences are consistent with the predictions in section 3.2.2, although the remaining control variables are not significantly different between the partitions.

[Insert Table 4]

Table 5 shows the Pearson correlations between the variables used in the tests in section 4. The variable of interest, *Disclosure quality*, is positive and significantly correlated with CEO turnover with a p-value of 0.08, which is consistent with the difference in means test in Table 4. Furthermore, the correlations between CEO turnover and the control variables are consistent with the differences between the two sample partitions reported previously in Table 4. Excluding the correlations between the disclosure measures, the only correlation above 0.35 is between $\ln(Comp)$ and $\ln(Assets)$, which is 0.62. Multicollinearity, however, is not a concern because the highest variance inflation factor is only 3.18. Furthermore, the results reported later in section 4 are similar with each variable removed from the models. The high positive correlation

between $\ln(Comp)$ and $\ln(Assets)$ is consistent with Core and Guay (1999), who argue the optimal level of executive compensation increases with firm size. Together, the univariate analyses reported in Tables 4 and 5 provide some evidence that disclosure may increase CEOs' risk of being fired, consistent with the view that greater disclosure reduces managers' ability to hide poor performance (Healy et al., 1999) and allows boards to better assess CEO ability (Hermalin and Weisbach, 2009). Having found a positive relation between *Disclosure quality* and the likelihood of CEO turnover, I now turn to multivariate logistic analysis.

[Insert Table 5]

4.2 Multivariate Regression Results

4.2.1 Test of Hypothesis 1

To evaluate the effect of disclosure policy on involuntary CEO turnover, I examine the independent variable *Disclosure quality*. Table 6 reports the results of a logistic regression of Equation (1) with each column using different measures of firm performance. Specifically, Columns 1, 2, and 3 use industry-adjusted ROA, industry-adjusted sales growth, and industry-adjusted stock returns to measure firm performance, respectively. Columns 4 and 5 include both an accounting measure and the market of firm performance in the same model. Results are similar across all five columns, so I only discuss Columns 4 and 5 for brevity. In both models, *Disclosure quality* positively affects the likelihood of CEO turnover and is statistically significant at least at the 0.01 level. This relation suggests managers bear more turnover risk when they disclose greater

amounts of firm specific information, consistent with Healy et al. (1999) and Hermalin and Weisbach (2009).

[Insert Table 6]

Turning to the control variables, many of the coefficients are consistent with predictions and in line with prior research. Specifically, CEO turnover is more likely to occur in larger firms, in firms with poor recent performance, and in firms that have recently restated earnings due to an accounting irregularity. Of the CEO variables, CEO compensation, ownership, and duality all reduce the likelihood of a manager being fired. Managers of firms with greater institutional ownership are also less likely to be fired. The pseudo R^2 for the models, McFadden's likelihood ratio index, is slightly lower when sales growth is used to measure performance rather than ROA, which suggests sales growth is a less relevant factor when deciding whether to retain a CEO. Overall, Table 6 provides evidence that CEOs of firms with better disclosure policies bear more turnover risk, which is consistent with the role of disclosure as a governance mechanism pointed out in Healy et al. (1999) and Hermalin and Weisbach (2009).

4.2.2 Test of Individual Components of Disclosure Policy

To ensure the results displayed in Table 6 are not driven by the construction of the disclosure quality variable, I reanalyze Equation (1) using each of the individual components of *Disclosure quality* in place of the composite measure. For the sake of brevity, Table 7 presents only the results of the models that include the measures of accounting and market performance measures together. As columns 1-6 show, the

positive relation between CEO turnover and disclosure is not driven by any one input. Rather, the estimated effects of all six components of *Disclosure quality* are positively related to CEO turnover and statistically significant. Once again, the data indicates managers bear more turnover risk under greater disclosure policies. This finding suggests the increase in turnover risk resulting from greater monitoring (Hermalin and Weisbach, 2009) and the inability to hide poor performance (Healy et al., 1999) overshadows any decrease in turnover risk conjectured to arise because of the benefits of disclosure (Bushman and Smith, 2001).

[Insert Table 7]

4.3 Disclosure quality, CEO tenure, and CEO turnover

In this section, I seek to provide supporting evidence that the disclosure of information increases the likelihood of CEO turnover by allowing boards to better assess CEO ability, as argued by Hermalin and Weisbach (2009). I do this by examining the effect of disclosure in a setting where the board has less information about the CEO. If an expanded disclosure policy increases the likelihood of a CEO being fired from a firm by allowing the board of directors to better assess CEO ability, then the relation should be stronger in settings where directors have less prior knowledge about a CEO's ability. Although I cannot directly test for differences in directors' knowledge of their CEOs, Holmstrom (1999) describes owners' knowledge of CEO ability as increasing over time, such that the board's estimate of managerial ability is less precise early in a CEO's tenure and becomes better as time passes and more outcomes are observed. If disclosure quality

serves to improve directors' knowledge of CEO ability, it should have a stronger effect early in their careers rather than in the later years when the board has already assessed their ability. To empirically test this hypothesis, I sort firms into two groups based on the median value of CEO tenure for each fiscal year. Firms above the median are classified as the long tenure sample, and firms below the median make up the short tenure sample. The average tenures for CEOs in my sample are 13.1 and 2.74 years for the long and short tenure samples, respectively. For the sake of brevity, Table 8 only displays estimates for tests including both accounting and market performance, although the results are similar for each measure individually.

[Insert Table 8]

Columns 1 and 2 of Table 8 report the results for short and long CEO tenure firms using industry-adjusted ROA to measure accounting performance, while Columns 3 and 4 use industry-adjusted sales growth. For both sets of models, the likelihood of involuntary CEO turnover is increasing with *Disclosure quality* in the short tenure subsample and insignificant in the long tenure subsample. Though not reported, the difference is weakly statistically significant with p-values of 0.094 and 0.104 for the models using ROA and sales growth, respectively. With only a few exceptions, the estimated coefficients for the control variables are largely in the same direction as those in Tables 6 and 7. Overall, the evidence suggests disclosure plays a larger role in revealing CEO ability and exposing managers to risk when they are early in their tenure and boards have less prior information about their ability, which is consistent with the models of Hermalin and Weisbach (2009) and Holmstrom (1999).

4.4 Disclosure quality, corporate governance, and CEO turnover

A second factor that may cause the effect of disclosure quality to vary across firms is corporate governance. To the extent that firms with better corporate governance mechanisms in place are more willing to replace the CEO when the information available suggests that decision is optimal, the information conveyed through an enhanced disclosure policy should result in more turnovers for firms with better governance mechanisms. In this section, I further probe the relation between involuntary CEO turnover and *Disclosure quality* by examining how it varies across several settings where the CEO likely has more influence over the board. First, prior research has argued that certain board characteristics allow CEOs to dominate the boards and be entrenched. Within this literature, research has identified board independence, board size, and CEO duality as key characteristics that affect how well the board can monitor the CEO (Weisbach, 1988; Jensen, 1993; Goyal and Park, 2002). Specifically, independent and outside directors are less likely to have personal connections to the manager. As such, greater board independence is argued to increase the degree to which the board will monitor the CEO. In addition to board independence, Jensen (1993) argues that the effectiveness of boards is also decreasing with board size because larger boards suffer more severely from the free-rider problem. Along this line, Yermack (1996) finds evidence that firms with smaller boards have higher market values. The last board governance measure I use is whether the CEO is also the chairman of the board. In this setting, researchers have found CEOs are more resistant to being fired when they are also chairmen. Across the three board governance measures, I expect the disclosure to have a

larger impact when boards are more independent, smaller, and have a chairman of the board who is not also the CEO.

The second component of corporate governance that may affect how disclosure impacts the likelihood of CEO turnover is the structure of firm ownership. Research suggests CEOs are more likely to be entrenched when they own a larger portion of their firm. Specifically, they are more likely to be involved in the director appointment process and are less likely to be fired when they have higher company stock ownership (Dahya et al., 1998; Shivdasani and Yermack, 1999). A separate component of firm ownership structure is the portion of a firm held by institutional investors. Corporate finance emphasizes the role of institutional investors as strong monitors. The argument for stronger governance under greater institutional ownership is that the benefits of monitoring overcome the associated costs as the stake held in a company becomes larger. Boards of companies with large blocks of shares held by institutional investors face greater pressure to monitor the CEO (Grossman and Hart, 1980; Shleifer and Vishny, 1989). Thus, I expect disclosure to have a stronger impact on firms when the CEO owns less company stock or when institutional investors own more stock.

To empirically examine how disclosure affects the likelihood of CEO turnover across different corporate governance levels, I sort firms into high and low governance groups based on whether their respective governance measure is above or below the median value of that variable for the fiscal year. For each measure, I re-estimate Equation (1) for the two groups, while excluding the sorting variable from the control variables. I then use a chi-squared test to determine whether the estimated effects are different

between the two groups. The results in most of the tables are consistent with the prediction that the effect of disclosure is stronger when governance is greater.

Table 9 reports the regression results for subsamples of governance based on board characteristics. Panel A examines differences across the levels of board independence and reports that the sensitivity of involuntary CEO turnover to *Disclosure quality* is significant and positive only in firms with a high percentage of independent directors. The impact of disclosure on CEO turnover is not significantly different from zero in firms with a low percentage of independent directors. The differences between corporate governance subsamples are statistically significant with p-values of 0.07 for both regressions. Despite the previous evidence that suggests disclosure increases the risk of CEO turnover risks, Panel A of Table 9 shows the effect of disclosure is positive and statistically significant only when accompanied by a more independent board. Panel B of Table 9 reports the impact of disclosure on CEO turnover for samples based on large and small board sizes. Contrary to the findings in Panel A, the effect of disclosure is positive and significant for firms with large boards, but insignificant for firms with small boards. The difference between the two estimated effects of disclosure is significant at the 0.01 level for both models. The conflicting results between Panel A and B reveal the importance of examining multiple measures of corporate governance. Panel C of Table 9 provides the results of estimations based on firms separated by whether their CEO was also the chairman of the board. The results reported in Panel C indicate disclosure has a positive and statistically significant impact on the likelihood of CEO turnover for firms with CEOs who also hold the chairman position, but no significant effect on CEOs who

do not hold both positions. Despite the significance of disclosure only for observations with dual roles, the differences in estimates are not statistically significant across either model (p-values of 0.87 and 0.78). To be sure, the results provided in Table 9 are mixed. The model estimates indicate the impact of disclosure increases managers' likelihood of being fired more in firms with a higher percentage of independent boards and in firms with large boards.

[Insert Table 9]

Turning to the difference in ownership structures, Panels A and B of Table 10 provide more consistent results. Using the differences in CEO ownership as a measure of CEO influence over the board, the tests in Panel A of Table 10 report that *Disclosure quality* increases the likelihood of involuntary turnover for the low ownership group, while not significantly affecting the likelihood of CEO turnover for the high ownership group. The difference between the estimated coefficients is statistically significant at the 0.01 level for both models. The final governance subsample analysis is based on partitions of the sample into firms with high and low institutional ownership. Arguably, an investor's incentive to monitor a firm's board and CEO is increasing with the amount invested in the company. Typically, institutional investors are viewed as strong monitors because of the large share holdings they acquire. As such, disclosure should impact the likelihood of CEO turnover more in firms with greater institutional ownership. Panel B of Table 10 provides evidence consistent with this prediction. In particular, *Disclosure quality* positively affects the likelihood of involuntary CEO turnover for the sample of firms with high institutional ownership, but has no significant effect on the firms with

low institutional ownership. The differences are significant at the 0.06 and 0.04 levels for the industry-adjusted ROA and sales growth models, respectively.

[Insert Table 10]

Overall, the evidence presented in this section continues to support the view that one effect of disclosure is a higher likelihood of involuntary CEO turnover. Again, this view is consistent with Hermalin and Weisbach (2009) and Healy et al. (1999). Furthermore, the finding in Tables 9 and 10 that disclosure has a stronger impact on the likelihood of CEO turnover under better corporate governance stresses the importance of having a strong corporate governance system in place to compliment a greater disclosure policy. To recap, this section provides evidence that enhanced disclosure policies increase the likelihood of CEO turnover when boards are larger or more independent, when CEOs have less ownership, and when institutional investors have greater ownership.

Chapter 5

Robustness Tests and Alternative Measures

The evidence so far supports the view that enhanced disclosure increases CEO turnover risk by decreasing managers' ability to hide poor performance and allowing boards to better observe manager ability. To gain further confidence in my results, I perform a range of robustness tests in this section that serve to provide additional evidence on the sensitivity of CEO turnover to disclosure.

5.1 Disclosure Quality Measured by AIMR Scores

In the previous sections, I document a strong positive relation between the likelihood of CEO and firm disclosure quality using management earnings forecasts. To provide an alternate measure of firm disclosure policy, I use a measure based on analyst ratings of overall firm disclosure policy provided by the AIMR.¹⁶ To rate firms' disclosure policies, AIMR first formed subcommittees of analysts to evaluate groups of specific industries. Each subcommittee was composed of analysts that specialized in the industries involved. The subcommittees then evaluated firms' quarterly and annual financial reports, proxy statements, and information disclosed through conference calls and press releases. Each subcommittee assessed the overall quality of disclosure for the firms in their specific groups based on criteria provided by AIMR. To use AIMR as my measure of disclosure quality, I follow prior research and rank firms' AIMR scores within each industry-year and then divide the rank by the total number of observations

¹⁶ Shawn Huang graciously shared his AIMR scores with me.

within the industry-year group (e.g., Healy et al., 1999; Botosan and Plumlee, 2002). This process creates disclosure scores that range from 0 to 1, with higher values corresponding to higher quality disclosure.

The benefit of using AIMR scores is that it provides an alternative measure of disclosure quality to evaluate CEO turnover against. The downside is that the last year of AIMR data created was 1995. To avoid errors in measurement induced by using disclosure quality scores from 1995 while my turnover sample runs from 1998 to 2007, I use CEO turnover data from Huson et al. (2001).¹⁷ The sample is constructed by identifying CEO changes from *Forbes* annual compensation surveys from 1971 to 1994, resulting in 1,316 CEO turnovers, excluding takeovers and deaths. After merging the data with AIMR scores, I have 3,034 firm-year observations with 129 turnovers between 1981 and 1994. I lose 222 observations and 4 turnover events due to further data requirements from CRSP and Compustat. Of the resulting 125 turnovers, only 11 are involuntary. As a result, I use the combination of involuntary and voluntary turnovers to test the relation between disclosure and CEO turnover. I recognize the potential problems associated with this method, however, this test is used only to provide additional support for the results already documented in Chapter 4. In addition to using voluntary and involuntary CEO turnovers, I am also unable to include several control variables because of data limitations. Specifically, I drop board and CEO characteristics, institutional ownership, and earnings restatements, resulting in the following model:

¹⁷ Robert Parrino graciously provided his CEO turnover data.

$$\begin{aligned} \text{CEO TURNOVER}_{i,t} = & \beta_0 + \beta_1 \text{AIMR Score}_{i,t-1} + \beta_2 \text{Accounting Performance}_{i,t-1} + \\ & \beta_3 \text{Stock Return}_{i,t-1} + \beta_4 \text{Ln(Assets)}_{i,t-1} + \beta_5 \text{Debt/Asset}_{i,t-1} + \beta_6 \text{Industry Median} \\ & \text{MB}_{i,t-1} + \beta_8 \text{HHI}_{i,t-1} + \text{Year fixed effects} + \text{Industry fixed effects} \quad (2) \end{aligned}$$

The results of the AIMR based disclosure tests are reported in Table 11. Consistent with the results described in section 4.2, *Disclosure quality* increases the likelihood CEO turnover and is statistically significant in each model. However, the results in Table 11 are not as statistically significant as those reported earlier. In particular, although the AIMR disclosure score is significant at the 0.10 value in each model, the best level of significance of all five models is only 0.08. Nonetheless, these results provide additional evidence that greater disclosure increases the likelihood of CEO turnover.

[Insert Table 11]

5.2 Endogeneity of Disclosure

Although earlier work viewed disclosure as an exogenous variable (e.g., Botosan, 1997), several recent papers view disclosure as an endogenously chosen variable. Having an endogenous independent variable can result in biased estimates and test statistics. To address the concern that corporate disclosure policy may be an endogenously determined firm choice, I follow prior literature and use a two-stage least squares estimation approach to evaluate the impact of a firm's disclosure policy on the likelihood of CEO turnover. I additionally perform model specification tests to verify the validity of my model. In the first stage, I estimate the level of firm disclosure based on previously identified instrumental variables. Specifically, I estimate the following model:

$$\begin{aligned} \text{Disclosure quality} = & \beta_0 + \beta_1 \text{Firm age}_i + \beta_2 \text{Shareholders}_i + \beta_3 \text{Institutional} \\ & \text{ownership}_i + \beta_4 \text{Analyst dispersion}_i + \beta_5 \ln(\text{Assets}_i) + \beta_6 \text{Sales growth}_i + \beta_7 \text{Capital} \\ & \text{intensity}_i + \beta_8 \text{HHI}_i + \beta_9 \text{Offer}_i + \beta_{10} \ln(\text{stock volatility}_i) + \beta_{11} \text{Hightech}_i \\ & + \beta_{12} \text{SignROA}_i + \beta_{13} \text{Earnings volatility}_i + \beta_{14} \text{Equity compensation}_i + \beta_{15} \text{Wealth}_i + \\ & \text{industry fixed effects} + \text{year fixed effects} \end{aligned} \quad (3)$$

Where:

Disclosure quality	= the natural logarithm of the composite disclosure score
Firm age	= the number of years between a firm's first appearance in the CRSP or COMPUSTAT databases and year t
Shareholders	= the natural logarithm of the average number of common shareholders
Institutional own	= percentage of a firm's equity held by institutional investors
Analyst dispersion	= analyst forecast dispersion at the end of fiscal year
Ln(Asset)	= the natural logarithm of a firm's average total assets
Sales growth	= sales growth rate
Capital Intensity	= the ratio of total assets less current assets over total assets
HHI	= industry median Herfindahl Index
Offer	= the percentage change in common shares adjusted for stock splits
Ln(stock volatility)	= the natural logarithm of annualized daily stock return variance
Hightech	= 1 for high-tech industries, 0 otherwise
SignROA	= 1 for positive ROA, 0 otherwise
Earnings volatility	= standard deviation of quarterly EPS for previous 16 quarters
Equity compensation	= three year average annual ratio of stock-price based compensation to total compensation
Wealth	= dollar value of the CEO's shareholdings

Due to the three year window for which *Disclosure quality* is measured, I average the independent variables over the same three year period. The explanatory variables in the model of *Disclosure quality* can be segmented into investor demand for disclosure and firm incentives to disclose. To capture the various demands for disclosure, I include measures of firm age, the number of shareholders, the amount of institutional ownership, and analyst forecast dispersion. With a short history of public appearance, young firms

are typically more opaque than old firms, and hence investors have greater demand for firm disclosure (Barton and Waymire, 2004). The ownership structure of a firm can also influence the demand for disclosure. To the extent that a firm's ownership structure is more dispersed, shareholders may suffer from the free rider's problem and thus, not demand higher quality disclosure (Bushee and Noe, 2000; Bushee et al, 2003). To control for ownership structure, I use the number of shareholders and the percentage of shares held by institutional owners. I expect firms to have greater disclosure policies when they have fewer shareholders and a larger percentage of their firms are held by institutions. Investors also have less demand for public information disclosure when they have more private information. Following Brown and Hillegeist (2007), I include analyst forecast dispersion to proxy for private information and expect lower quality disclosure in the presence of higher dispersion.

In addition to different demands for disclosure, various firm characteristics can affect the extent to which firms are willing to disclose information. In this regard, Diamond (1985) argues that larger firms are more willing to disclose information because the costs incurred to prepare and distribute information are relatively low compared to the benefits of the disclosure. I use the natural logarithm of total assets to capture firm size. Also, firms with high growth opportunities are less likely to disclose information in an effort to protect their private information (Cohen, 2005), so I include sales growth to proxy for growth opportunities in the estimation of disclosure. I also include capital intensity and firms' Herfindahl indices in the estimation to control for the effect of barriers to entry on releasing proprietary information. Firms in industries with higher

capital intensities and Herfindahl indices are viewed to have more barriers of entry and are more willing to disclose information (Piotroski, 2003; Rakow and Baginski, 2008). Firms that rely more heavily upon equity financing are more likely to have better disclosure policies in order to take advantage of the reduced cost of capital associated with better disclosure (Botosan, 1997). I use the percentage change in common shares to measure firm dependence on equity financing. Firms with greater litigation risks are also more likely to disclose information to reduce their risk of being sued (Skinner, 1994), so I include annualized daily stock return volatility and an indicator for firms in high tech industries. More volatile stock returns increase the chance of a lawsuit being filed due to large short term decreases in stock price, while high tech firms are more likely to be sued because of their higher inherent risk (Kasznik and Lev, 1995). I code Hightech as 1 for high tech firms and 0 otherwise, where high-tech firms are in the following SICs: 2833-2836, 3570-3577, 3600-3674, 7371-7379, 8731-8734.

Firm disclosure is also related to performance. I include SignROA, which equals 1 when ROA is positive and 0 otherwise, because profitable firms are more willing to expend the costs associated with disclosing information to the public (e.g. Dye 1985; Lang and Lundholm 1993). I include earnings volatility because firms with more volatile earnings are also less likely to issue earnings guidance due to the greater difficulty in forecasting earnings (e.g., Waymire, 1985). Earnings volatility is measured as the standard deviation of quarterly earnings forecasts over the previous 16 quarters. Last, I include two measures intended to capture the wealth incentives CEOs have to issue voluntary disclosure because Nagar et al. (2003) find evidence that managers are more

likely to provide voluntary disclosure when more of their compensation is equity based. Following Nagar et al. (2003), I include the ratio of stock price-based compensation to total compensation¹⁸, and the total dollar value of the CEO's stock holdings of the firm. In addition to these firm-specific variables, I also include year and industry fixed effects.

After including additional instrument variables for the first stage regression, the sample decreases to 6,835 firm year observations and 177 involuntary turnovers. To provide further evidence of the relation between disclosure and CEO turnover, I first re-estimate Equation (1) based on the smaller sample size prior to presenting the two-stage regression results. The results are reported in Panel A of Table 12. Consistent with the previous sections, *Disclosure quality* significantly increases the likelihood of CEO turnover for both models. After obtaining similar results with the smaller sample, I estimate the first stage of the two-stage regression. The results of the first stage regression are presented in Panel B of Table 12 and are used to calculate a predicted measure of *Disclosure quality* for the second stage analysis. In addition to using an ordinary least squares regression (OLS) to estimate *Disclosure quality*, I also use a Tobit regression to control for the continuous disclosure variable that clusters on zero. The results indicate several significant relations between disclosure quality and the explanatory variables. Consistent with predictions, disclosure quality is higher for younger firms, those with more institutional ownership, firms with less analyst dispersion, larger firms, more profitable firms, those with fewer growth opportunities,

¹⁸ This ratio is defined as the sum of restricted stock grants and the Black-Scholes value of stock options awarded, divided by the sum of the CEO's salary, bonus, restricted stock grants, LTIP payouts, value of option grants, and all other compensation, as defined by Execucomp's variable TDC1.

firms with higher barriers of entry, and those with CEOs that have greater equity-based compensation. The first stage estimation of disclosure quality has an R^2 of 0.233, which suggests the model is fairly well specified. Larcker and Rusticus (2010) point out that the use of instrument variables may lead to biased results when the instruments are only weakly correlated with the endogenous variable. To determine whether the first stage is weak, they refer to Stock et al. (2002), who develop F-test benchmarks for the first stage. Given my number of exogenous variables, an F-statistic higher than 21 implies the model is not weak. The F-statistic for my first stage regression is 33. Thus, the first stage variables are not weak.

[Insert Table 12]

Turning to the second stage of the two-stage analysis, Table 13 shows the relation between the predicted disclosure variable and the likelihood of CEO turnover. Columns 1 and 2 of the table use the predicted disclosure variable from OLS, while Columns 3 and 4 use the predicted disclosure variable calculated with a Tobit regression. The results are similar when using either predicted measure of disclosure. Consistent with the earlier analysis that used the observed disclosure variable, the results here indicate the effect of disclosure quality remains positive and statistically significant. This finding reiterates the results presented earlier and further supports the view that greater disclosure increases the amount of turnover risk managers bear.

[Insert Table 13]

One potential problem with two-stage regressions highlighted by Larcker and Rusticus (2010) is that the first instrument variables may not truly be exogenous. In

order to verify the exogeneity of the first stage estimators, I follow Larcker and Rusticus (2010) and conduct an over-identification test by estimating the residuals of the second stage regression as a function of the exogenous variables from the first stage. If the model explains a significant amount of the error, then the first stage is said to be over-identified. In that case, one or more variables from the first stage need to be included in the second stage. The results of this estimation are provided in Table 14. The p-values corresponding to the models' ability to explain the residual are not significant, which implies the first stage regression is valid.

[Insert Table 14]

After verifying the strength and exogeneity of the first stage instrument variables, I perform a Hausman test in order to determine whether the estimated disclosure variable is preferred over the regular disclosure variable used in the previous models. The Hausman test is conducted by including the predicted disclosure and the original disclosure measure in the same model. If the predicted disclosure variable is statistically significant, the Hausman test rejects the null hypothesis of no endogeneity (Larcker and Rusticus, 2010). The results of this estimation are in Table 15. Consistent with the previous analyses, *Disclosure Quality* continues to be significantly positive. The estimated coefficient on *Predicted Disclosure Quality*, however, is statistically insignificant in all models except the model based on the Tobit regression using Industry-adjusted ROA. This suggests the predicted disclosure value is no more desirable than the original variable.

[Insert Table 15]

5.3 Test of Disclosure Policy on Voluntary Turnover

The previous tables document a strong positive impact of disclosure on involuntary CEO turnover. The argument has been that disclosure prevents managers from hiding poor performance and allows boards to more effectively infer managerial ability. To provide additional evidence that the increased likelihood of involuntary CEO turnover under more enhanced disclosure policies is capturing the governance role of disclosure, I examine whether disclosure policy increases the likelihood of voluntary turnover. I expect to find a weaker result for involuntary turnovers. The results of this analysis are provided in Table 16. As indicated in Columns 1 through 5, the estimated coefficient for *Disclosure quality* is not statistically significant in any of the estimated models. This finding provides further support that the positive relation between *Disclosure quality* and involuntary CEO turnover documented in earlier tables is the result of the governance role of disclosure.

[Insert Table 16]

5.4 CEO Turnover Controlling for Missed Earnings Guidance

As mentioned earlier, Lee et al. (2008) examine the relation between management earnings forecasts and CEO turnover in a study similar to mine. Their results indicate managers who either provide overly pessimistic earnings forecasts and beat them, or forecast earnings too high and subsequently fail to meet their own guidance, are more likely to be separated from their firm. Although our studies are similar, they also differ in what the two studies use disclosure to capture. Specifically, my measure of disclosure is

intended to capture firms' general policies about providing information over a longer period of time, whereas their measure captures the specific outcome of each earnings guidance. Nonetheless, to ensure my results are not driven by firms that miss their own guidance, I rerun my analysis while including an indicator variable for observations that missed their earnings guidance in the most recent quarter.

[Insert Table 17]

The results of the tests controlling for earnings forecasts misses are presented in Table 17. Columns 1, 2, 4, and 5 show the models with each measure of disclosure included separately, while Columns 3 and 6 include both measures together. Columns 1 and 4 repeat the results from earlier, but are provided for ease of comparison. Columns 2 and 5 show positive and statistically significant estimates of *Missed forecast*, indicating CEOs are more likely to be fired in the quarter immediately following a missed earnings forecast. This finding is consistent with Lee et al. (2008). I next include *Missed forecast* and *Disclosure quality* in the same model and report the results in Columns 3 and 6. The results indicate both *Disclosure quality* and *Missed forecast* remain positive, but only *Disclosure quality* remains statistically significant at the 0.10 level. The results presented in Table 16 provide evidence that more enhanced firm disclosure policies contribute to CEO turnover beyond the increased risk of missing their own forecast. Again, these findings are consistent with the views that disclosure prevents managers from hiding poor performance (Healy et al., 1999) and allows boards to better observe CEO ability (Hermalin and Weisbach, 2009), thereby increasing managers' risk of being fired.

5.5 CEO Turnover Controlling for Earnings Timeliness

Engel et al. (2003) examine the relation between CEO turnover and earnings timeliness. Their results indicate CEOs of firms that have more timely earnings are more likely to be fired. Given that prior research has shown disclosure and earnings timeliness are related (e.g., Shaw, 2003), I reexamine the relation between CEO turnover and disclosure after controlling for earnings timeliness.¹⁹ Following Engel et al. (2003), I measure earnings timeliness as the R^2 of a firm-specific reverse regression of annual earnings on contemporaneous stock returns. Specifically, I estimate the following model:

$$EARN_t = a_0 + a_1 NEG_t + b_1 RET_t + b_2 NEG_t * RET_t + e_t,$$

where, EARN is earnings before extraordinary items, discontinued items, and special items, deflated by the beginning of year market value. RET is the 15 month stock return ending 3 months after the end of the fiscal year, and NEG is a dummy variable that equals 1 when RET is negative. I estimate the model for the most recent 10 years and require at least 8 observations to calculate the timeliness of earnings. After calculating the timeliness variable, I reexamine the relation between *Disclosure quality* and CEO turnover while including the earnings timeliness variable. The results of this analysis are presented in Table 18. The sample is reduced to 6,038 firm-year observations and 159 involuntary CEO turnovers. Consistent with Engel et al. (2003), the timeliness of earnings is statistically significant and positive, indicating a heightened risk of turnover

¹⁹ I also examined several measures of accrual quality, but they remain unreported because they had no effect on my analysis and were not statistically significant.

when earnings better reflect economic performance. Nonetheless, the impact of *Disclosure quality* on CEO turnover remains positive and statistically significant at the 0.01 level for all five models. Thus, the result of disclosure is robust to including information timeliness in the model. I exclude timeliness from the analyses in Chapter 4 to preserve sample size.

[Insert Table 18]

5.6 Effect of Disclosure on CEO Turnover: Accounting Quality Subsamples

Financial statement reporting represents an important source of information. This supply of information may impact how disclosure affects the likelihood of CEO turnover. As such, I examine how the quality of earnings affect the relation between disclosure policy and CEO turnover. Ex ante, the manner in which earnings properties affect the relationship between disclosure quality and CEO turnover is unclear. One line of theory suggests voluntary disclosure is more useful when greater information asymmetry exists (Grossman and Hart, 1980; Verrecchia, 1983). In the event that the properties of earnings are of poor quality, disclosure may supplement the financial statements by providing more information about a firm's operations. In this case, disclosure is more important in revealing information about the manager to monitors and in preventing her from concealing poor performance. As a result, disclosure should lead to a greater likelihood of CEO turnover moreso when earnings are of poor quality than when earnings are of good quality. However, the opposite relation may also be true. In particular, an alternative outcome may result because the information content of voluntary disclosures

is dependent upon underlying accounting information. In this case, voluntary disclosures may only be as useful as the information that the disclosure comes from, resulting in monitors only relying on disclosure when earnings are of good quality (e.g., Verrecchia, 1990). In this event, CEO turnover should be more sensitive to disclosure when earnings are of good quality than when earnings are of poor quality.

To determine whether earnings properties affect the relation between disclosure and CEO turnover, I sort firms into high and low earnings quality groups based on whether their measure of quality is above or below the median earnings quality value for each fiscal year. For this analysis, I focus on the Dechow and Dichev (2002) measure of accounting quality, which shows how well accruals map into last-period, current-period, and future-period cash flows. In order to preserve the number of observations for the regression, I follow Ashbaugh-Skaife et al. (2008) and estimate the regression by industry-year. Specifically, I estimate the following model for each industry-year,

$$WCA_{j,t} = \alpha_{0,i} + \alpha_{1,i} CFO_{j,t-1} + \alpha_{2,i} CFO_{j,t} + \alpha_{3,i} CFO_{j,t+1} + u_{j,t} ,$$

where WCA is net income before extraordinary items plus depreciation and amortization minus cash flows from operations scaled by total assets, and CFO is cash flow from operations scaled by total assets. I require each industry to have at least 20 observations based on 2-digit SIC codes to be used in the analysis. I then calculate the firm specific residual from this model for the prior three to five years. Firm accounting quality is then calculated as the standard deviation of these residuals and multiplied by negative one so that it is increasing with accounting quality. Consistent with Francis et al. (2005), I

measure innate accounting quality by regressing the above measures of accounting quality on innate firm characteristics. Specifically, I estimate the following model:

$$AQ = \beta_0 ASSET + \beta_1 \sigma CFO + \beta_2 \sigma SALES + \beta_3 OCYCLE + \beta_4 NEG_EARN + \beta_5 Int_Intensity + \beta_6 Int_Dummy + \beta_7 Cap_Intensity + \varepsilon$$

Where:

<i>ASSET</i>	= natural logarithm of total assets;
σCFO	= standard deviation of the firm's prior 10 years' cash flows from operations;
$\sigma SALES$	= standard deviation of the firm's prior 10 years' sales revenues;
<i>OCYCLE</i>	= natural logarithm of the sum of the firm's days accounts receivable and days inventory;
<i>NEG_EARN</i>	= proportion of losses over the prior 10 years;
<i>Int_Intensity</i>	= the sum of the firm's reported R&D and advertising expense as a proportion of their sales revenues;
<i>Int_Dummy</i>	= 1 if <i>Int_Intensity</i> is equal to 0, and 0 otherwise;
<i>Cap_Intensity</i>	= the ratio of the net book value of PP&E to total assets.

The predicted accrual quality from this model captures a firm's innate accrual quality (Francis et al., 2005). The increased data requirement reduces the sample to 7,048 firm-year observations and 178 CEO turnovers. After creating the earnings quality measure, I then reexamine the sensitivity of CEO turnover to disclosure quality on the two partitions of firms based on whether they have low innate accruals quality or high innate accruals quality. The results are reported in Table 19. Consistent with Verrecchia (1990) and Francis et al (2008), I find *Disclosure quality* and earnings quality to complement one another. In particular, disclosure only increases the likelihood of CEO turnover when firms have high innate accrual quality. This finding implies disclosure is more useful for monitoring managers when the underlying accounting information can be effectively verified.

[Insert Table 19]

5.7 Effect of Disclosure on CEO Turnover: Pre/post-SOX

In response to the large wave of corporate scandals that hit the market in the early 2000s (e.g., Tyco, Enron, WorldCom, HealthSouth), Congress passed the Sarbanes Oxley Act of 2002 (SOX). SOX contained two provisions aimed at decreasing managers' incentives to manipulate earnings. The first provision mandated the CEO and CFO to sign-off on the financial statements and implemented legal consequences of up to \$5 million in fines and 20 years in prison for intentionally misreporting or misleading investors or auditors (Cunningham, 2003). The second provision, the so-called 'clawback' provision, implemented civil consequences for CEOs and CFOs by requiring them to pay back any compensation they received as a result of manipulating earnings (Laux, 2010). The result of these increased penalties is that managers' incentives to manipulate performance metrics decreased in the post-SOX regime. To the extent that the increase in potential cost of misleading investors and monitors reduced managers' likelihood of participating in such activities, I expect the sensitivity of CEO turnover to voluntary disclosure to be lower following SOX. To empirically evaluate how SOX affected the relation between disclosure and CEO turnover, I classify firms with fiscal years prior to 2002 as pre-SOX and those with fiscal years after 2003 as post-SOX. I exclude observations from 2002 and 2003 because they are transition years when not all sections of SOX were in effect.

Table 20 shows the relation between disclosure and the likelihood of CEO turnover. Columns 1 and 3 examine the pre-SOX period and Columns 2 and 4 examine

the post-SOX period. As Table 20 shows, the impact of disclosure is significant and positive in Columns 1 and 3, but not statistically significant in Columns 2 and 4. The insignificant relation following SOX suggests voluntary disclosure policy is no longer associated with an increase in the likelihood of CEO turnover. The insignificant relation is consistent with managers being less willing to hide their poor performance regardless of disclosure policy in the post-SOX period.

[Insert Table 20]

5.8 Effect of Disclosure on CEO Turnover: Three-year Windows

The previous tables have established a strong positive relation between the quality of firms' disclosure policies and the likelihood of CEO turnover. This section examines whether the relation varies across time or if it is concentrated in certain years. To examine the distribution of the effect of disclosure on the likelihood of CEO turnover, I estimate Equation (1) for three-year intervals beginning with 1998-2000 and ending with 2005-2007. The results are presented in Table 21. Panel A of Table 21 uses industry-adjusted ROA as the measure of accounting performance and Panel B uses industry-adjusted sales growth. The results are similar across both panels, in that disclosure significantly increases the likelihood of CEO turnover for each sub-period except during the 2004-2006 and 2005-2007 periods, which is consistent with the pre/post-SOX analysis. The significant impact of disclosure for six of the eight sub-periods analyzed in Table 21 provides evidence that the sensitivity of involuntary CEO turnover to *Disclosure quality* is not driven by only a few years' data.

[Insert Table 21]

5.9 Analyst Forecasts as a Measure of Accounting Performance

Several studies document a negative relation between accounting performance and CEO turnover (e.g., Coughlan and Schmidt, 1985). Although research in this area typically measures firm performance against the industry median to obtain a relative benchmark, analyst forecasts have also been used to capture the expected level of performance (Farrell and Whidbee, 2003). In order to verify my results are robust to including the alternate benchmark for firm performance, I rerun the analyses conducted in Chapter 4 while including the extent to which a firm meets, or fails to meet, analysts' earnings forecasts. The results are not tabulated, but the extent to which a firm fails to meet analyst forecasts increases the likelihood of CEO turnover. Additionally, the likelihood of CEO turnover continues to increase with higher levels of *Disclosure quality*. Once again, the results reiterate the increased turnover risk CEOs bear under enhanced disclosure.

5.9 Stock Returns Over the Prior 12 Months

Another area where studies differ is in the window of which they measure stock returns. Specifically, some studies measure stock performance over the 12 months immediately preceding a CEO turnover (e.g., Goyal and Park, 2002). In order to verify my disclosure measure is not capturing information that would be contained in the most recent months of a firm's stock returns, I rerun the analyses of Chapter 4 while measuring stock performance as the industry-adjusted cumulative stock returns for the 12 months

prior to a CEO turnover. Although not reported, the results are qualitatively similar to those reported in Chapter 4.

Chapter 6

Conclusion

In this paper I examine the relation between firm disclosure policy and the likelihood of CEO turnover. Two conflicting views motivate my study. The first view comes from Bushman and Smith (2001), who point out that disclosure improves the flow of firm-specific information and consequently allows for greater external monitoring. In light of this greater external monitoring, they argue managers have limited ability to divert firm resources towards obtaining private benefits. An implication of this argument is that firm performance will improve due to the efficient use of firm resources, and this in turn should reduce the likelihood of CEO turnover. A contrary view notes that disclosure adversely affects managerial ability to manipulate performance metrics, such as firm earnings (Jo and Kim, 2007). As a result, managers are less able to conceal poor performance (Healy et al., 1999). Greater disclosure is also argued to enhance boards' ability to more effectively assess CEO talent (Hermalin and Weisbach, 2009). Both of these factors increase the likelihood of CEO turnover. My dissertation contributes to this literature by empirically examining whether enhanced disclosure policies increase or decrease the likelihood of CEO turnover.

Following prior research, I evaluate firm disclosure policy based on the properties of managerial earnings forecast. Specifically, I focus on the occurrence, frequency, and precision of managerial earnings forecasts and compute a composite disclosure measure based on these attributes. In general, my evidence is supportive of the latter view:

disclosure positively impacts the likelihood of CEO turnover. This finding remains robust after controlling for industry, firm, and CEO characteristics, as well as measures of corporate governance. Additionally, the relation is more pronounced for settings wherein the board has limited knowledge about CEO ability, as measured by shorter CEO tenure. The impact of disclosure is also greater when a firm has better governance structures in place and when firm earnings are of high quality. My findings remain qualitatively identical when using analysts' ranking of firms' disclosure quality as contained in the AIMR database, when taking into account the endogeneity of firm disclosure policy, and when using rolling three year windows to create subsamples. The only time period that greater disclosure does not increase the likelihood of CEO turnover is during the years after SOX.

My dissertation contributes to the extant literature in two ways. First, it contributes to the research on voluntary disclosure. Prior studies have largely examined the impact of disclosure on firm information environment and its resulting capital market effects (e.g., Lang and Lundholm, 1996; Kim and Verrecchia, 1994). My dissertation departs from these studies in that it examines the governance role of firm disclosure policy. Specifically, I investigate the impact of disclosure on CEO turnover. Second, I contribute to research examining the determinants of involuntary CEO turnover. My evidence is supportive of the view that disclosure positively impacts the likelihood of CEO turnover by limiting managerial ability to manipulate firm performance measures and by allowing boards of directors to more effectively assess managerial ability. Overall, my study highlights the importance of information for the proper functioning of

governance mechanisms and documents the risk CEOs bear when firms disclose more information.

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Appendix 1

Variable Definitions and Data Sources

Dependant variable:

Turnover – Indicator variable equal to one if the current CEO was fired in the previous year.

Test variables:

MEF – Indicator variable equal to one if a firm provided earnings guidance for at least one quarter within the previous three years.

MEF_FREQ – The number of quarterly earnings guidance provided within the previous three years.

MEF_PREC – Average precision of a firm's earnings guidance over the previous three years, where the precision of each disclosure is measured as follows: 1 if qualitative only, 2 if a range estimate is given, and 3 if a point estimate is given.

Disclosure Quality – Composite score of the three previous earnings guidance measure, specifically, the natural logarithm of $(1 + \text{MEF} * \text{MEF_FREQ} * \text{MEF_PREC})$.

Control variables:

Industry-adjusted ROA – Return on assets for the year prior to Turnover construction, adjusted by 2 digit SIC median ROA. $(\text{EBIT}_t / \text{AT}_{t-1})$, where $\text{EBIT} = \text{XINT} + \text{TXT} + \text{IB}$

Industry-adjusted Sales growth – Change in the natural logarithm of Sales between the year prior to Turnover construction and the year prior to that year, less the two digit SIC median Sales growth. $(\ln(\text{SALE}_t) - \ln(\text{SALE}_{t-1}))$

Ind. Adj. Stock return – Twelve month compounded stock return for the fiscal year ending prior to Turnover construction, less the two digit SIC median compounded stock return.

Restatement – Indicator variable equal to one if the firm restated earnings in the previous year and the restatement was due to an accounting irregularity.

Ln(Assets) – Natural logarithm of assets in the year prior to Turnover construction.

Debt/Asset – The ratio of short and long term debt to assets, measured in the year prior to Turnover construction. $(\sum(DLC_t, DLTT_t) / AT_t)$

Industry Median MB – Two-digit SIC median market to book ratio for the year prior to Turnover construction. $(AT_t - CEQ_t + (CSHO_t * PRCC_F_t)) / AT_t)$

HHI – Two-digit SIC sum of the squares of the market shares of the firms in the industry, where market share is defined as firm sales divided by total industry sales

CEO Age – Length of time CEO has been CEO at company, as provided by Execucomp

CEO Age – CEO's age in the year before Turnover construction, as provided by Execucomp

Ln(Comp) – Natural logarithm of the CEO's total compensation (Salary + Bonus + Other Annual + Restricted Stock Grants + LTIP Payouts + All Other + Value of Option Grants), measures in the year prior to Turnover construction (TDC1)

% CEO Ownership – Percentage of the owned by the CEO.

% Independent – Total number of board members, per Risk Metrics database (formerly IRRC).

% Independent – Percentage of the board that is defined as an insider, per Risk Metrics database

CEO duality – Indicator variable that equals one when the CEO is also the Chairman of the Board.

Institutional Ownership – Percentage of the owned by the institutional investors, as provided by Thomson Reuters.

Appendix 2

Causes of CEO Turnover

Author	Year	Title	Factor
Coughlan and Schmidt	1985	Executive compensation, management turnover, and firm performance: An empirical investigation	Performance
Harrison, Torres, and Kukalis	1988	The Changing of the Guard: Turnover and Structural Change in the Top-Management	Governance, performance
Weisbach	1988	Outside Directors and CEO turnover	Governance, performance
Warner, Watts, and Wruck	1988	Stock prices and top management changes	Performance
Gilson	1989	Management turnover and financial distress	Performance
DeAngelo and DeAngelo	1989	Proxy contests and the governance of publicly held corporations	Governance
Fizel and Louie	1990	CEO Retention, Firm Performance and Corporate Governance	Governance, performance
Barro and Barro	1990	Pay, Performance, and Turnover of Bank CEOs	Performance
Puffer and Weintrop	1991	Corporate Performance and CEO Turnover: The Role of Performance Expectations	Performance
Martin and McConnell	1991	Corporate performance, corporate takeovers, and management turnover	Governance, performance
Alexander, Fennell, and Halpern	1993	Leadership Instability in Hospitals: The Influence of Board-CEO Relations and Organizational Growth and Decline	Governance, performance
Ofek	1993	Capital structure and firm response to poor performance: An empirical analysis	Governance, performance
Brickley and Weisbach	1994	Accounting information and internal performance evaluation: Evidence from Texas banks	Performance
Daily and Dalton	1995	CEO and Director Turnover in Failing Firms: An Illusion of Change?	Governance, performance
Hubbard and Palia	1995	Executive pay and performance Evidence from the U.S. banking industry	Performance
Kang and Shivdasani	1995	Firm performance, corporate governance, and top executive turnover in Japan	Governance, performance
Khorana	1996	Top management turnover: an empirical investigation of mutual fund managers	Performance
Denis and Serrano	1996	Active investors and management turnover following unsuccessful control contests	Governance, performance
Parrino	1997	CEO turnover and outside succession A cross-sectional analysis	Performance
Denis, Denis, and Sarin	1997	Ownership structure and top executive turnover	Governance, performance

Appendix 2 Continued

Causes of CEO Turnover

Author	Year	Title	Factor
Mikkelsen and Partch	1997	The decline of takeovers and disciplinary managerial turnover	Governance, performance
Lehn and Makhija	1997	EVA, Accounting Profits, and CEO Turnover: An Empirical Examination, 1985 - 1994	Performance
Agrawal, Jaffe, and Karpoff	1999	Management Turnover and Governance Changes Following the Revelation of Fraud	Performance
DeFond and Park	1999	The Effect of Competition on CEO Turnover	Performance
Safieddine and Titman	1999	Leverage and Corporate Performance: Evidence from Unsuccessful Takeovers	Performance
Vafeas	1999	Board meeting frequency and firm performance	Governance
Beneish	1999	Incentives and penalties related to earnings overstatements that violate GAAP	Governance
Niehaus and Roth	1999	Insider trading, equity issues, and CEO turnover in firms subject to securities class action	Governance
Zhou	2000	CEO Pay, Firm Size, and Corporate Performance: Evidence from Canada	Performance
 Denis and Kruse	2000	Managerial discipline and corporate restructuring following performance declines	Performance
Huson, Parrino, and Starks	2001	Internal Monitoring Mechanisms and CEO Turnover: A Long-Term Perspective	Governance, performance
Dahya, McConnell, and Travlos	2002	The Cadbury Committee, Corporate Performance, and Top Management Turnover	Governance, performance
Hadlock, Lee, and Parrino	2002	Chief Executive Officer Careers in Regulated Environments: Evidence from Electric and Gas	Ability
Brickley and Van Horn	2002	Managerial Incentives in Nonprofit Organizations: Evidence from Hospitals	Performance
Engel, Gordon, and Hayes	2002	The Roles of Performance Measures and Monitoring in Annual Governance Decisions in Entrepreneurial Firms	Performance
Shen Cannella	2002	Revisiting the Performance Consequences of CEO Succession: The Impacts of Successor Type, Postsuccession Senior Executive Turnover, and Departing CEO Tenure	Governance, performance
Goyal and Park	2002	Board leadership structure and CEO turnover	Governance, performance
Farrell and Whidbee	2002	Monitoring by the financial press and forced CEO turnover	Governance
Volpin	2002	Governance with poor investor protection: evidence from top executive turnover in Italy	Governance, performance

Appendix 2 Continued
Causes of CEO Turnover

Author	Year	Title	Factor
Gibson	2003	Is Corporate Governance Ineffective in Emerging Markets?	Governance, performance
Farrell and Whidbee	2003	Impact of firm performance expectations on CEO turnover and replacement decisions	Performance
Parrino, Sias, and Starks	2003	Voting with their feet: institutional ownership changes around forced CEO turnover	Governance
Chidambaran and Prabhala	2003	Executive stock option repricing, internal governance mechanisms, and management turnover	Governance
Engel, Hayes, and Wang	2003	CEO turnover and properties of accounting information	Performance
Kini, Kracaw, and Mian	2004	The Nature of Discipline by Corporate Takeovers	Governance
Chen	2004	Executive Option Repricing, Incentives, and Retention	Voluntary
DeFond and Hung	2004	Investor Protection and Corporate Governance: Evidence from Worldwide CEO Turnover	Governance, performance
Wu	2004	The impact of public opinion on board structure changes, director career progression, and CEO turnover: evidence from CalPERS' corporate governance program	Governance
Huson, Malatesta, and Parrino	2004	Managerial succession and firm performance	Performance
Faleye	2004	Cash and Corporate Control	Governance
Fee and Hadlock	2004	Management turnover across the corporate hierarchy	Performance
Lennox	2005	Audit quality and executive officers' affiliations with CPA firms	Performance
Kato and Long	2006	Executive Turnover and Firm Performance in China	Governance, performance
Lehn and Zhao	2006	CEO Turnover after Acquisitions: Are Bad Bidders Fired?	Performance
Fich and Shivdasani	2006	Are Busy Boards Effective Monitors?	Governance, performance
Garvey and Milbourn	2006	Asymmetric benchmarking in compensation: Executives are rewarded for good luck but not penalized for bad	Performance

Appendix 2 Continued

Causes of CEO Turnover

Author	Year	Title	Factor
Desai, Hogan, and Wilkins	2006	The reputational penalty for aggressive accounting: Earnings restatements and management turnover	Governance
Berry, Bizjak, Lemmon, and Naveen	2006	Organizational complexity and CEO labor markets: Evidence from diversified firms	Performance
Sundaram and Yermack	2007	Pay Me Later: Inside Debt and Its Role in Managerial Compensation	Voluntary
Faleye	2007	Classified boards, firm value, and managerial entrenchment	Governance, performance
Davila and Foster	2007	Management Control Systems in Early-Stage Startup Companies	Ability
Balsam and Miharjo	2007	The effect of equity compensation on voluntary executive turnover	Voluntary
Karpoff, Lee, and Martin	2008	The Consequences to Managers for Financial Misrepresentation	Governance
Kaplan and Minton	2008	How has CEO Turnover Changed? Increasingly Performance Sensitive Boards and Increasingly Uneasy CEOs	Governance, performance
Brav, Jiang, Partnoy, and Thomas	2008	Hedge Fund Activism, Corporate Governance, and Firm Performance	Governance
Del Guercio, Seery, and Woidtke	2008	Do boards pay attention when institutional investor activists "just vote no"?	Governance
Core, Guay, and Larcker	2008	The power of the pen and executive compensation	Governance
Bizjack, Lemmon, and Naveen	2008	Does the use of peer groups contribute to higher pay and less efficient compensation?	Ability
Miller and Lel	2008	International Cross-listing, Firm Performance and Top Management Turnover: A Test of the Bonding Hypothesis	Governance, performance
Cai, Garner, and Walking	2008	Electing Directors	Governance
Bates, Becher, and Lemmon	2008	Board classification and managerial entrenchment: Evidence from the market for corporate control	Governance
Hennes, Leone, and Miller	2008	The importance of distinguishing errors from irregularities in restatement research: the case of restatements and CEO/CFO turnover	Governance
Smart, Thirumalai, and Zutter	2008	What's in a vote? The short- and long-run impact of dual-class equity on IPO firm values	Governance, performance

Appendix 2 Continued
Causes of CEO Turnover

Author	Year	Title	Factor
Sabac	2008	Dynamic incentives and retirement	Voluntary
Hwang and Kim	2009	It pays to have friends	Governance, performance
Adams and Ferreira	2009	Women in the boardroom and their impact on governance and performance	Governance, performance
Fischer, Gramlich, Miller, and White	2009	Investor perceptions of board performance: Evidence from uncontested director elections	Governance
Hazarika, Karpoff, and Nahata	2009	Internal corporate governance, CEO turnover, and earnings management	Governance
Mergenthaler, Rajgopal, and Srinivasan	2009	CEO and CFO career penalties to missing quarterly analyst forecasts	Performance

Table 1
Sample Selection

	#Firms	#Firm- Years
Execucomp sample over the years 1998-2007	2,664	18,378
Less: Missing Compustat data	-352	-3,061
	2,312	15,317
Missing CRSP data	-189	-1,848
	2,123	13,469
Financial and utilities	-335	-2,333
	1,788	11,136
Missing governance data	-225	-2,009
Final sample	1,563	9,127

*Management earnings forecast data comes from First Call. If a firm-year observation from my sample is not listed in the First Call database, I assume the firm did not provide guidance for that particular time. By design, I lose no observations during this step. In a similar fashion, I obtain restatement data from Hennes, Leone, and Miller (2008). If a firm-year observation from my sample is not listed in their GAO data, I assume the firm did not file a restatement during that time. This step also does not reduce the sample.

Table 2: Industry Composition

Industry SIC	#	# Fired	% Fired	Ind. % Pop.	Industry SIC	# Obs.	# Fired	% Fired	Ind. % Pop.
Ag. Crops	11		0.00%	0.12%	Railroad	52	1	0.41%	0.57%
Ag. Services	2		0.00%	0.02%	Road Psnger Transport	1		0.00%	0.01%
Metal Mining	37		0.00%	0.41%	Freight Transport	91	2	0.82%	1.00%
Coal Mining	6		0.00%	0.07%	Water Transport	44		0.00%	0.48%
Oil/Gas Extraction	304	6	2.47%	3.33%	Air Transport	56	2	0.82%	0.61%
Other Mining	28	1	0.41%	0.31%	Transportation Services	34		0.00%	0.37%
Building Construction.	69	1	0.41%	0.76%	Communication	106	3	1.23%	1.16%
Other Heavy Const.	40	2	0.82%	0.44%	Wholesale Durable	218	3	1.23%	2.39%
Special Construction	6		0.00%	0.07%	Wholesale Non-durable	93	6	2.47%	1.02%
Food	263	7	2.88%	2.88%	Hardware	40		0.00%	0.44%
Tobacco	20		0.00%	0.22%	General Merchandise	93	2	0.82%	1.02%
Textile	61	1	0.41%	0.67%	Food	52		0.00%	0.57%
Apparel	96	1	0.41%	1.05%	Auto Dealer	55	3	1.23%	0.60%
Lumber	66	1	0.41%	0.72%	Apparel Dealer	145	5	2.06%	1.59%
Furniture	73	1	0.41%	0.80%	Furniture Store	37	1	0.41%	0.41%
Paper	167	3	1.23%	1.83%	Restaurant	181	4	1.65%	1.98%
Print/Publish	211	6	2.47%	2.31%	Misc. Retail	131	7	2.88%	1.44%
Chemicals	754	17	7.00%	8.26%	Hotel/Lodging	14		0.00%	0.15%
Petroleum Refinery	113		0.00%	1.24%	Personal Services	55	1	0.41%	0.60%
Rubber	85	4	1.65%	0.93%	Business Services	675	26	10.70%	7.40%
Leather	48		0.00%	0.53%	Auto Services	24	1	0.41%	0.26%
Ceramic	33		0.00%	0.36%	Motion Pictures	12		0.00%	0.13%
Primary Metal	177	4	1.65%	1.94%	Amusement	44	3	1.23%	0.48%
Fabricated Metal	181	4	1.65%	1.98%	Health Services	122	3	1.23%	1.34%
Machinery/Computers	545	23	9.47%	5.97%	Educational	21		0.00%	0.23%
Other Electronics	672	20	8.23%	7.36%	Social Services	4		0.00%	0.04%
Transport. Equipment	284	7	2.88%	3.11%	Eng/Acct/Res/Mngmt.	66	2	0.82%	0.72%
Measuring Devices	474	8	3.29%	5.19%	Non-classifiable	20		0.00%	0.22%
Misc. Manufacturing	89	3	1.23%	0.98%					

Table 3
Descriptive Statistics of Firm Characteristics (1998-2007)

Dependent Variable	N	Mean	Std Dev	25th Pctl	Median	75th Pctl
Forced	9,127	0.03	0.16	0.00	0.00	0.00
Disclosure Variables						
MEF	9,127	0.51	0.50	0.00	1.00	1.00
MEF_FREQ	4,681	5.48	5.20	2.00	3.00	8.00
MEF_PREC	4,681	2.19	0.50	2.00	2.00	2.50
Disclosure Quality	9,127	1.13	1.26	0.00	0.69	2.20
Control Variables						
Ind. Adj. ROA	9,127	0.05	0.14	-0.01	0.04	0.11
Ind. Adj. Sales growth	9,127	0.00	0.21	-0.08	-0.01	0.08
Ind. Adj. Stock Return	9,127	0.11	0.55	-0.18	0.02	0.27
Restatement	9,127	0.01	0.11	0.00	0.00	0.00
ln(Assets)	9,127	7.31	1.44	6.27	7.16	8.24
Debt/Asset	9,127	0.22	0.18	0.07	0.21	0.33
Industry MB	9,127	1.59	0.42	1.26	1.51	1.80
HHI	9,127	0.07	0.06	0.04	0.05	0.07
CEO Tenure	9,127	7.92	7.37	2.65	5.50	10.92
CEO Age	9,127	55.52	7.24	51.00	56.00	60.00
ln(Comp)	9,127	7.93	1.08	7.17	7.92	8.65
% CEO Ownership	9,127	2.21	5.74	0.00	0.05	1.26
Board Size	9,127	9.11	2.46	7.00	9.00	11.00
% Independent	9,127	0.66	0.17	0.56	0.67	0.80
CEO duality	9,127	0.79	0.41	1.00	1.00	1.00
Institutional Own	9,127	0.45	0.39	0.00	0.57	0.80

Table 4
Descriptive Statistics of Firm Characteristics (1998-2007)

	Partitioned on Forced CEO Turnover				Diff	P value
	Turnover =1 N=243		Turnover = 0 N =8884			
	Mean	Std Dev	Mean	Std Dev		
Disclosure Variables						
MEF	0.56	0.50	0.51	0.50	0.05	0.177
MEF_FREQ	3.12	4.53	2.80	4.62	0.32	0.293
MEF_PREC	1.18	1.14	1.12	1.15	0.06	0.405
Disclosure Quality	1.26	1.29	1.12	1.26	0.14	0.084
Control Variables						
Ind. Adj. ROA	-0.03	0.17	0.05	0.14	-0.08	<.0001
Ind. Adj. Sales growth	-0.06	0.22	0.00	0.21	-0.06	<.0001
Ind. Adj. Stock Return	-0.10	0.57	0.11	0.55	-0.21	<.0001
Restatement	0.05	0.22	0.01	0.10	0.04	<.0001
ln(Assets)	7.34	1.55	7.31	1.44	0.03	0.777
Debt/Asset	0.24	0.20	0.22	0.18	0.02	0.102
Industy MB	1.60	0.43	1.59	0.42	0.01	0.713
HHI	0.06	0.05	0.07	0.06	-0.01	0.253
CEO Tenure	6.15	5.98	7.97	7.40	-1.82	<.0001
CEO Age	54.20	5.98	55.56	7.27	-1.36	0.004
ln(Comp)	7.68	1.15	7.93	1.08	-0.25	<.0001
% CEO Ownership	0.82	3.07	2.25	5.79	-1.43	<.0001
Board Size	9.07	2.43	9.11	2.46	-0.04	0.817
% Independent	0.67	0.17	0.66	0.17	0.01	0.519
CEO duality	0.67	0.47	0.79	0.41	-0.12	<.0001
Institutional Own	0.42	0.38	0.45	0.39	-0.03	0.307

Table 5
Pearson Correlation Matrix

	1	2	3	4	5	6	7	8	9	10
1, Forced	1									
2, MEF	0.014	1								
3, Frequency	0.177		1							
4, Avg. Precision	0.011	0.593		1						
5, Disclosure Quality	0.293	<.0001	0.578	<.0001	1					
6, Industry adjusted ROA	0.009	0.95	<.0001	0.866	<.0001	1				
7, Ind. Adj. Sales Growth	0.405	<.0001	0.879	<.0001	0.038	<.0001	1			
8, Stock Return	0.018	0.869	<.0001	0.047	<.0001	0.216	1			
9, Restatement	0.084	<.0001	0.036	<.0001	<.0001	<.0001	0.198	1		
10, ln(Assets)	-0.093	0.024	0.012	<.0001	<.0001	<.0001	<.0001	<.0001	1	
11, Debt/Assets	<.0001	0.02	0.012	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	1
	-0.044	-0.022	0.24	0.969	0.99	0.99	0.171	0.004	0.043	0.215
	<.0001	0.037	-0.065	-0.041	-0.061	0.198	0.028	-0.046	0.026	<.0001
	-0.063	-0.042	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	0.014	<.0001
	<.0001	<.0001	0.003	-0.007	-0.001	-0.058	-0.043	-0.03	<.0001	<.0001
	0.059	-0.003	0.755	0.492	0.898	<.0001	<.0001	0.004	0.026	0.215
	<.0001	0.792	0.139	0.104	0.137	0.036	0.028	-0.046	0.014	<.0001
	0.003	0.111	<.0001	<.0001	<.0001	0.001	0.008	<.0001	0.026	<.0001
	0.777	<.0001	-0.057	-0.011	-0.04	-0.189	-0.008	-0.084	0.014	<.0001
	0.017	-0.011	<.0001	0.282	<.0001	<.0001	0.459	<.0001	0.014	<.0001
	0.102	0.306	<.0001	0.282	<.0001	<.0001	0.459	<.0001	0.014	<.0001

Table 5
Pearson Correlation Matrix Continued

	1	2	3	4	5	6	7	8	9	10
12, Ind. Median MB	0.004	-0.032	0.044	-0.023	0.008	0.157	-0.006	0.041	0.016	-0.036
13, Herfindahl Index	0.713	0.002	<.0001	0.031	0.431	<.0001	0.595	<.0001	0.126	0.001
	-0.012	0.001	0.07	0.011	0.037	-0.043	0.019	-0.037	-0.015	0.05
14, CEO Tenure	0.253	0.933	<.0001	0.279	<.0001	<.0001	0.073	0.001	0.141	<.0001
	-0.04	0.01	0.029	0.012	0.018	0.059	0.062	0.015	-0.03	-0.097
	<.0001	0.345	0.007	0.263	0.081	<.0001	<.0001	0.143	0.005	<.0001
15, CEO Age	-0.03	0.006	-0.008	0.007	-0.004	0.036	-0.026	-0.025	-0.039	0.112
	0.004	0.574	0.444	0.509	0.681	0.001	0.014	0.016	<.0001	<.0001
16, ln(Comp.)	-0.037	0.11	0.152	0.115	0.15	0.139	0.066	0.06	0.018	0.622
	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	0.086	<.0001
17, % CEO Ownership	-0.04	-0.067	-0.062	-0.065	-0.074	0.035	0.038	0.027	0.002	-0.17
	<.0001	<.0001	<.0001	<.0001	<.0001	0.001	<.0001	0.009	0.818	<.0001
18, Board Size	-0.002	0.058	0.055	0.061	0.06	0.001	-0.035	-0.058	0.003	0.564
	0.817	<.0001	<.0001	<.0001	<.0001	0.955	0.001	<.0001	0.78	<.0001
19, % Insiders	0.007	0.082	0.112	0.074	0.109	-0.029	-0.064	-0.047	0.014	0.176
	0.519	<.0001	<.0001	<.0001	<.0001	0.006	<.0001	<.0001	0.196	<.0001
20, CEO Duality	-0.047	0.075	0.052	0.073	0.072	0.005	0.002	-0.012	-0.005	0.198
	<.0001	<.0001	<.0001	<.0001	<.0001	0.614	0.843	0.24	0.652	<.0001
21, Institutional Own	-0.011	0.274	0.209	0.259	0.275	0.076	0.022	-0.007	-0.002	0.082
	0.307	<.0001	<.0001	<.0001	<.0001	<.0001	0.038	0.499	0.815	<.0001

Table 5
Pearson Correlation Matrix Continued

	11	12	13	14	15	16	17	18	19	20
11, Debt/Assets	1									
12, Ind. Median MB	-0.156 <.0001	1								
13, Herfindahl Index	0.023 0.028	-0.283 <.0001	1							
14, CEO Tenure	-0.069 <.0001	-0.014 0.188	0.028 0.008	1						
15, CEO Age	0.047 <.0001	-0.059 <.0001	0.055 <.0001	0.404 <.0001	1					
16, ln(Comp.)	0.069 <.0001	0.103 <.0001	-0.043 <.0001	-0.108 <.0001	0.006 0.546	1				
17, % CEO Ownership	-0.082 <.0001	-0.063 <.0001	0.063 <.0001	0.402 <.0001	0.125 <.0001	-0.259 <.0001	1			
18, Board Size	0.189 <.0001	-0.087 <.0001	0.049 <.0001	-0.086 <.0001	0.138 <.0001	0.326 <.0001	-0.161 <.0001	1		
19, % Insiders	0.019 0.068	0.083 <.0001	-0.008 0.442	-0.183 <.0001	-0.021 0.048	0.206 <.0001	-0.267 <.0001	0.079 <.0001	1	
20, CEO Duality	0.073 <.0001	-0.045 <.0001	-0.007 0.49	0.159 <.0001	0.173 <.0001	0.152 <.0001	0.066 <.0001	0.123 <.0001	0.115 <.0001	1
21, Institutional Own	0.007 0.492	0.067 <.0001	-0.058 <.0001	-0.018 0.09	0.032 0.002	0.088 <.0001	-0.098 <.0001	-0.015 0.145	0.137 <.0001	0.026 0.014

Table 6
Logistic Analysis of the Effect of Disclosure on CEO Turnovers

Model : $CEO\ TURNOVER_{i,t} = \beta_0 + \beta_1 Disclosure\ Quality_{i,t-1} + \beta_2 Accounting\ Performance_{i,t-1} + \beta_3 Stock\ Return_{i,t-1} + \beta_4 Restate_{i,t-1} + \beta_5 Ln(Assets_{i,t-1}) + \beta_6 Debt/Asset_{i,t-1} + \beta_7 Industry\ Median\ MB_{i,t-1} + \beta_8 HHI_{i,t-1} + \beta_9 CEO\ Tenure_{i,t-1} + \beta_{10} CEO\ Age_{i,t-1} + \beta_{11} Ln(Comp_{i,t-1}) + \beta_{12} \% CEO\ Ownership_{i,t-1} + \beta_{13} \% Independent_{i,t-1} + \beta_{14} Board\ Size_{i,t-1} + \beta_{15} CEO\ duality_{i,t-1} + \beta_{16} Institutional\ Own_{i,t-1} + Year\ fixed\ effects + Ind.\ fixed\ effects$

	(1) Ind. Adj. ROA	(2) Ind. Adj. Sales Growth	(3)) Ind. Adj. Stock Returns	(4)) Ind. Adj. ROA	(5)) Ind. Adj. Sales Growth
Intercept	-1.822** (-2.23)	-0.932 (-1.17)	-1.063 (-1.35)	-1.89** (-2.33)	-1.03 (-1.32)
Disclosure Quality	0.184*** (3.16)	0.177*** (3.09)	0.157*** (2.77)	0.167*** (2.88)	0.158*** (2.77)
Accounting Perf.	-3.127*** (-8.05)	-1.012*** (-3.37)		-2.668*** (-6.08)	-0.728** (-2.32)
Stock Return			-1.278*** (-3.5)	-0.962*** (-2.77)	-1.223*** (-3.33)
Restatement	1.174*** (3.47)	1.285*** (4.04)	1.198*** (3.58)	1.045*** (3.00)	1.147*** (3.44)
ln(Assets)	0.229*** (3.31)	0.207*** (3.02)	0.198*** (2.85)	0.229*** (3.27)	0.208*** (3.00)
Debt/Assets	0.252 (0.70)	0.67** (1.97)	0.362 (1.00)	0.104 (0.29)	0.347 (0.96)
Ind. Median MB	-0.065 (-0.25)	-0.104 (-0.42)	-0.23 (-0.81)	-0.135 (-0.48)	-0.26 (-0.92)
Herfindahl Index	-1.174 (-0.87)	-1.22 (-0.89)	-1.30 (-0.93)	-1.058 (-0.78)	-1.192 (-0.85)
CEO Tenure	-0.013 (-0.95)	-0.011 (-0.81)	-0.013 (-0.97)	-0.013 (-0.93)	-0.011 (-0.83)
CEO Age	-0.001 (-0.15)	-0.007 (-0.87)	-0.005 (-0.66)	-0.002 (-0.24)	-0.007 (-0.82)
ln(Comp.)	-0.46*** (-4.74)	-0.485*** (-4.98)	-0.436*** (-4.5)	-0.42*** (-4.33)	-0.434*** (-4.46)
% CEO Ownership	-0.107*** (-2.8)	-0.102** (-2.57)	-0.104*** (-2.58)	-0.104*** (-2.63)	-0.103** (-2.57)
Board Size	0.012 (0.37)	-0.008 (-0.25)	-0.006 (-0.19)	0.009 (0.27)	-0.008 (-0.25)
% Insiders	0.198 (0.48)	0.093 (0.23)	0.147 (0.36)	0.162 (0.39)	0.09 (0.22)
CEO Duality	-0.548*** (-3.54)	-0.512*** (-3.28)	-0.542*** (-3.49)	-0.576*** (-3.72)	-0.547*** (-3.52)

Institutional Own	-0.307* (-1.71)	-0.384** (-2.18)	-0.318* (-1.77)	-0.251 (-1.37)	-0.31* (-1.72)
Pseudo R ²	0.092	0.071	0.088	0.105	0.091
N	9,127	9,127	9,127	9,127	9,127

Significant p-values of <0.01, 0.05, and 0.10 are denoted by ***, **, and * respectively.

Table 7
Logistic Analysis of the Impact of Disclosure Components on CEO Turnovers

Model : $CEO\ TURNOVER_{i,t} = \beta_0 + \beta_1 Disclosure\ Quality_{i,t-1} + \beta_2 Accounting\ Performance_{i,t-1} + \beta_3 Stock\ Return_{i,t-1} + \beta_4 Restate_{i,t-1} + \beta_5 Ln(Assets_{i,t-1}) + \beta_6 Debt/Asset_{i,t-1} + \beta_7 Industry\ Median\ MB_{i,t-1} + \beta_8 HHI_{i,t-1} + \beta_9 CEO\ Tenure_{i,t-1} + \beta_{10} CEO\ Age_{i,t-1} + \beta_{11} Ln(Comp_{i,t-1}) + \beta_{12} \% CEO\ Ownership_{i,t-1} + \beta_{13} \% Independent_{i,t-1} + \beta_{14} Board\ Size_{i,t-1} + \beta_{15} CEO\ duality_{i,t-1} + \beta_{16} Institutional\ Own_{i,t-1} + Year\ fixed\ effects + Ind.\ fixed\ effects$

	MEF		MEF Frequency		MEF Precision	
	(1) Ind. Adj. ROA	(2) Ind. Adj. Sales Growth	(3) Ind. Adj. ROA	(4) Ind. Adj. Sales Growth	(5) Ind. Adj. ROA	(6) Ind. Adj. Sales Growth
Intercept	-1.958** (-2.42)	-1.104 (-1.41)	-1.842** (-2.29)	-1.001 (-1.28)	-1.932** (-2.39)	-1.077 (-1.38)
Disclosure Quality	0.285** (2.05)	0.275** (2.01)	0.034** (2.38)	0.031** (2.24)	0.105* (1.80)	0.095* (1.65)
Accounting Perf.	-2.644*** (-6.05)	-0.717** (-2.31)	-2.653*** (-6.16)	-0.723** (-2.35)	-2.658*** (-6.13)	-0.729** (-2.36)
Stock Return	-0.968*** (-2.79)	-1.226*** (-3.35)	-0.973*** (-2.8)	-1.232*** (-3.36)	-0.974*** (-2.8)	-1.235*** (-3.37)
Restatement	1.031*** (2.95)	1.134*** (3.41)	1.035*** (2.99)	1.139*** (3.44)	1.032*** (2.96)	1.133*** (3.41)
ln(Assets)	0.234*** (3.33)	0.212*** (3.06)	0.232*** (3.34)	0.212*** (3.06)	0.236*** (3.36)	0.215*** (3.09)
Debt/Assets	0.084 (0.23)	0.326 (0.9)	0.081 (0.23)	0.327 (0.92)	0.068 (0.19)	0.312 (0.87)
Ind. Median MB	-0.124 (-0.44)	-0.247 (-0.88)	-0.147 (-0.52)	-0.266 (-0.94)	-0.132 (-0.47)	-0.256 (-0.91)
Herfindahl Index	-0.856 (-0.64)	-1.00 (-0.73)	-1.082 (-0.79)	-1.203 (-0.86)	-0.858 (-0.64)	-0.996 (-0.73)
CEO Tenure	-0.011 (-0.82)	-0.009 (-0.73)	-0.012 (-0.91)	-0.011 (-0.81)	-0.011 (-0.8)	-0.009 (-0.71)
CEO Age	-0.003 (-0.33)	-0.008 (-0.92)	-0.002 (-0.26)	-0.007 (-0.85)	-0.003 (-0.35)	-0.008 (-0.94)
ln(Comp.)	-0.413*** (-4.28)	-0.427*** (-4.42)	-0.417*** (-4.31)	-0.43*** (-4.44)	-0.412*** (-4.27)	-0.425*** (-4.41)
% CEO Ownership	-0.105*** (-2.65)	-0.103*** (-2.58)	-0.103*** (-2.63)	-0.102*** (-2.58)	-0.105*** (-2.64)	-0.103*** (-2.58)
Board Size	0.009 (0.26)	-0.008 (-0.24)	0.01 (0.3)	-0.007 (-0.22)	0.009 (0.27)	-0.007 (-0.23)
% Insiders	0.167 (0.4)	0.089 (0.22)	0.195 (0.47)	0.121 (0.29)	0.169 (0.4)	0.093 (0.23)

CEO Duality	-0.565*** (-3.66)	-0.536*** (-3.46)	-0.575*** (-3.71)	-0.544*** (-3.5)	-0.564*** (-3.65)	-0.534*** (-3.44)
Institutional Own	-0.219 (-1.2)	-0.282 (-1.57)	-0.186 (-1.03)	-0.249 (-1.4)	-0.202 (-1.11)	-0.261 (-1.45)
Pseudo R ²	0.103	0.089	0.103	0.089	0.102	0.088
N	9,127	9,127	9,127	9,127	9,127	9,127

Significant p-values of <0.01, 0.05, and 0.10 are denoted by ***, **, and * respectively.

Table 8
Effect of Disclosure on CEO Turnovers: Tenure Differences

Model : $CEO\ TURNOVER_{i,t} = \beta_0 + \beta_1 Disclosure\ Quality_{i,t-1} + \beta_2 Accounting\ Performance_{i,t-1} + \beta_3 Stock\ Return_{i,t-1} + \beta_4 Restate_{i,t-1} + \beta_5 Ln(Assets_{i,t-1}) + \beta_6 Debt/Asset_{i,t-1} + \beta_7 Industry\ Median\ MB_{i,t-1} + \beta_8 HHI_{i,t-1} + \beta_9 CEO\ Age_{i,t-1} + \beta_{10} Ln(Comp_{i,t-1}) + \beta_{11} \%CEO\ Ownership_{i,t-1} + \beta_{12} \%Independent_{i,t-1} + \beta_{13} Board\ Size_{i,t-1} + \beta_{14} CEO\ duality_{i,t-1} + \beta_{15} Institutional\ Own_{i,t-1} + Year\ fixed\ effects + Ind.\ fixed\ effects$

	Ind. Adj. ROA		Ind. Adj. Sales Growth	
	Long Tenure	Short Tenure	Long Tenure	Short Tenure
Intercept	-2.002 (-1.5)	-1.64 (-1.5)	-0.777 (-0.6)	-1.184 (-1.11)
Disclosure Quality	0.042 (0.47)	0.232*** (2.97)	0.031 (0.35)	0.221*** (2.9)
Accounting Perf.	-2.96*** (-4.03)	-2.24*** (-4.3)	-1.22*** (-2.58)	-0.508 (-1.23)
Stock Return	-0.568 (-1.02)	-1.324*** (-3.31)	-0.754 (-1.19)	-1.578*** (-3.89)
Restatement	0.43 (0.46)	1.31*** (3.48)	0.676 (0.86)	1.372*** (3.64)
ln(Assets)	0.34*** (2.75)	0.171** (1.99)	0.358*** (3.02)	0.135 (1.58)
Debt/Assets	0.568 (1.06)	-0.16 (-0.34)	0.814 (1.52)	0.07 (0.15)
Ind. Median MB	0.207 (0.54)	-0.102 (-0.23)	0.08 (0.21)	-0.227 (-0.54)
Herfindahl Index	-0.738 (-0.34)	-1.09 (-0.59)	-0.888 (-0.41)	-1.268 (-0.67)
CEO Age	-0.013 (-0.82)	0.005 (0.42)	-0.021 (-1.39)	0.002 (0.2)
ln(Comp.)	-0.586*** (-3.97)	-0.339*** (-2.86)	-0.651*** (-4.43)	-0.311*** (-2.65)
% CEO Ownership	-0.111** (-2.11)	-0.087 (-1.5)	-0.118** (-2.28)	-0.078 (-1.38)
Board Size	0.04 (0.76)	-0.013 (-0.32)	0.017 (0.33)	-0.027 (-0.66)
% Insiders	0.951 (1.23)	-0.352 (-0.69)	0.826 (1.08)	-0.403 (-0.81)
CEO Duality	-0.625** (-2.3)	-0.51*** (-2.75)	-0.61** (-2.27)	-0.476** (-2.51)
Institutional Own	-0.069 (-0.23)	-0.235 (-0.95)	-0.111 (-0.37)	-0.308 (-1.28)
Pseudo R ²	0.108	0.107	0.094	0.097
N	4,567	4,560	4,567	4,560
# Turnovers	96	147	96	147

Significant p-values of <0.01, 0.05, and 0.10 are denoted by ***, **, and * respectively.

Table 9: Panel A
The Effect of Disclosure on CEO Turnovers: Board Independence Differences

Model : $CEO\ TURNOVER_{i,t} = \beta_0 + \beta_1 Disclosure\ Quality_{i,t-1} + \beta_2 Accounting\ Performance_{i,t-1} + \beta_3 Stock\ Return_{i,t-1} + \beta_4 Restate_{i,t-1} + \beta_5 Ln(Assets_{i,t-1}) + \beta_6 Debt/Asset_{i,t-1} + \beta_7 Industry\ Median\ MB_{i,t-1} + \beta_8 HHI_{i,t-1} + \beta_9 CEO\ Tenure_{i,t-1} + \beta_{10} CEO\ Age_{i,t-1} + \beta_{11} Ln(Comp_{i,t-1}) + \beta_{12} \%CEO\ Ownership_{i,t-1} + \beta_{13} Board\ Size_{i,t-1} + \beta_{14} CEO\ duality_{i,t-1} + \beta_{15} Institutional\ Own_{i,t-1} + Year\ fixed\ effects + Ind.\ fixed\ effects$

	Industry adjusted ROA		Industry adjusted Sales Growth	
	High Board Independence	Low Board Independence	High Board Independence	Low Board Independence
Intercept	-2.234* (-1.74)	-1.576 (-1.57)	-1.412 (-1.15)	-0.761 (-0.75)
Disclosure Quality	0.286*** (3.37)	0.07 (0.85)	0.275*** (3.29)	0.062 (0.77)
Accounting Perf.	-3.049*** (-4.67)	-2.479*** (-4.40)	-1.08** (-2.26)	-0.392 (-0.92)
Stock return	-0.527 (-1.13)	-1.426*** (-3.26)	-0.734 (-1.38)	-1.722*** (-3.92)
Restatement	1.179*** (2.67)	0.899 (1.55)	1.194*** (2.66)	1.122** (2.08)
ln(Assets)	0.27** (2.53)	0.22** (2.34)	0.248** (2.34)	0.189** (2.00)
Debt/Assets	0.214 (0.43)	-0.195 (-0.37)	0.399 (0.81)	0.079 (0.15)
Ind. Median MB	0.291 (0.75)	-0.336 (-0.97)	0.162 (0.41)	-0.436 (-1.29)
Herfindahl Index	-1.891 (-1.00)	-0.874 (-0.45)	-1.884 (-0.98)	-1.103 (-0.55)
CEO Tenure	-0.011 (-0.58)	-0.011 (-0.6)	-0.006 (-0.31)	-0.01 (-0.56)
CEO Age	0.005 (0.41)	-0.01 (-0.91)	0.001 (0.09)	-0.015 (-1.4)
ln(Comp.)	-0.461*** (-3.11)	-0.368*** (-2.98)	-0.473*** (-3.16)	-0.384*** (-3.09)
% CEO Ownership	-0.292* (-1.76)	-0.074* (-1.92)	-0.294* (-1.81)	-0.079** (-2.08)
Board Size	-0.089* (-1.67)	0.06 (1.42)	-0.111** (-2.11)	0.051 (1.22)
CEO Duality	-0.388 (-1.59)	-0.694*** (-3.51)	-0.401 (-1.64)	-0.632*** (-3.21)
Institutional Own	-0.46* (-1.72)	-0.093 (-0.36)	-0.501* (-1.89)	-0.176 (-0.70)
Pseudo R ²	0.097	0.129	0.085	0.114
N	4,543	4,584	4,543	4,584
# Turnovers	118	125	118	125

Table 9: Panel B
The Effect of Disclosure on CEO Turnovers: Board Size Differences

Model : $CEO\ TURNOVER_{i,t} = \beta_0 + \beta_1 Disclosure\ Quality_{i,t-1} + \beta_2 Accounting\ Performance_{i,t-1} + \beta_3 Stock\ Return_{i,t-1} + \beta_4 Restate_{i,t-1} + \beta_5 Ln(Assets_{i,t-1}) + \beta_6 Debt/Asset_{i,t-1} + \beta_7 Industry\ Median\ MB_{i,t-1} + \beta_8 HHI_{i,t-1} + \beta_9 CEO\ Tenure_{i,t-1} + \beta_{10} CEO\ Age_{i,t-1} + \beta_{11} Ln(Comp_{i,t-1}) + \beta_{12} \%CEO\ Ownership_{i,t-1} + \beta_{13} \%Independent_{i,t-1} + \beta_{14} CEO\ duality_{i,t-1} + \beta_{15} Institutional\ Own_{i,t-1} + Year\ fixed\ effects + Ind.\ fixed\ effects$

	Ind. Adj. ROA		Ind. Adj. Sales Growth	
	Large Boards	Small Boards	Large Boards	Small Boards
Intercept	-2.964** (-2.47)	-1.665 (-1.49)	-2.238* (-1.78)	-0.599 (-0.53)
Disclosure Quality	0.309*** (3.56)	0.023 (0.27)	0.279*** (3.26)	0.03 (0.36)
Accounting Perf.	-3.484*** (-4.29)	-2.593*** (-4.82)	-0.965** (-2.18)	-0.604 (-1.36)
Stock Return	-1.079** (-2.23)	-0.867* (-1.94)	-1.367*** (-2.71)	-1.125** (-2.37)
Restatement	1.263*** (2.77)	0.986* (1.73)	1.295*** (2.92)	1.169** (2.26)
ln(Assets)	0.255*** (2.74)	0.227** (2.21)	0.249*** (2.58)	0.17 (1.59)
Debt/Assets	0.996* (1.82)	-0.469 (-0.97)	1.063* (1.71)	-0.132 (-0.26)
Ind. Median MB	0.223 (0.8)	-0.157 (-0.48)	0.009 (0.03)	-0.201 (-0.63)
Herfindahl Index	-1.788 (-1.09)	0.844 (0.40)	-1.787 (-1.02)	0.234 (0.10)
CEO Tenure	-0.008 (-0.42)	-0.017 (-0.87)	-0.005 (-0.26)	-0.016 (-0.86)
CEO Age	0.004 (0.33)	-0.012 (-1.11)	0.00 (0.02)	-0.019* (-1.76)
ln(Comp.)	-0.423*** (-2.83)	-0.398*** (-3.31)	-0.434*** (-2.78)	-0.426*** (-3.69)
%CEO Ownership	-0.092 (-1.29)	-0.098** (-2.16)	-0.101 (-1.42)	-0.094** (-2.06)
% Insiders	-0.338 (-0.61)	0.838 (1.35)	-0.529 (-0.91)	0.786 (1.27)
CEO Duality	-0.435* (-1.71)	-0.664*** (-3.2)	-0.413 (-1.54)	-0.623*** (-3.03)
Institutional Own	-0.177 (-0.61)	-0.256 (-1.05)	-0.195 (-0.66)	-0.34 (-1.38)
Pseudo R ²	0.1	0.122	0.088	0.103
N	4,627	4,500	4,627	4,500
# Turnovers	121	122	121	122

Table 9: Panel C
The Effect of Disclosure on CEO Turnovers: CEO Duality

Model : $CEO\ TURNOVER_{i,t} = \beta_0 + \beta_1 Disclosure\ Quality_{i,t-1} + \beta_2 Accounting\ Performance_{i,t-1} + \beta_3 Stock\ Return_{i,t-1} + \beta_4 Restate_{i,t-1} + \beta_5 Ln(Assets_{i,t-1}) + \beta_6 Debt/Asset_{i,t-1} + \beta_7 Industry\ Median\ MB_{i,t-1} + \beta_8 HHI_{i,t-1} + \beta_9 CEO\ Tenure_{i,t-1} + \beta_{10} CEO\ Age_{i,t-1} + \beta_{11} Ln(Comp_{i,t-1}) + \beta_{12} \%CEO\ Ownership_{i,t-1} + \beta_{13} \%Independent_{i,t-1} + \beta_{14} Board\ Size_{i,t-1} + \beta_{15} Institutional\ Own_{i,t-1} + Year\ fixed\ effects + Ind.\ fixed\ effects$

	Industry adjusted ROA		Industry adjusted Sales Growth	
	CEO/Chairman Same	CEO/Chairman Different	CEO/Chairman Same	CEO/Chairman Different
Intercept	-2.688*** (-2.70)	-1.166 (-0.76)	-1.898* (-1.96)	-0.316 (-0.21)
Disclosure Quality	0.182*** (2.58)	0.153 (1.44)	0.168** (2.43)	0.154 (1.47)
Accounting Perf.	-2.507*** (-4.72)	-2.932*** (-3.27)	-0.618 (-1.61)	-1.077* (-1.93)
Stock Return	-1.157*** (-3.09)	-0.61 (-0.97)	-1.447*** (-3.73)	-0.795 (-1.18)
Restatement	1.262*** (2.99)	0.539 (0.61)	1.372*** (3.42)	0.569 (0.65)
ln(Assets)	0.21** (2.45)	0.304** (2.28)	0.185** (2.14)	0.316*** (2.71)
Debt/Assets	0.39 (0.88)	-0.721 (-1.07)	0.611 (1.35)	-0.487 (-0.79)
Ind. Median MB	-0.149 (-0.46)	0.162 (0.34)	-0.262 (-0.82)	0.045 (0.09)
Herfindahl Index	-0.884 (-0.56)	-3.608 (-1.13)	-0.973 (-0.6)	-3.975 (-1.25)
CEO Tenure	-0.012 (-0.76)	-0.003 (-0.1)	-0.013 (-0.81)	0.008 (0.29)
CEO Age	-0.008 (-0.79)	0.004 (0.28)	-0.011 (-1.07)	-0.004 (-0.27)
ln(Comp.)	-0.395*** (-3.3)	-0.516*** (-2.93)	-0.409*** (-3.42)	-0.532*** (-3.19)
Board Size	-0.095** (-2.29)	-0.171* (-1.94)	-0.089** (-2.18)	-0.197** (-2.2)
% CEO Ownership	0.03 (0.83)	-0.049 (-0.7)	0.02 (0.54)	-0.088 (-1.31)
% Insiders	0.292 (0.55)	0.226 (0.33)	0.211 (0.4)	0.277 (0.44)
Institutional Own	-0.159 (-0.68)	-0.503* (-1.65)	-0.24 (-1.04)	-0.505* (-1.67)

Pseudo R ²	0.107	0.108	0.095	0.092
N	7185	1942	7185	1942
# Turnovers	163	80	163	80

High and low corporate governance groups are based CEO duality. Significant p-values of <0.01, 0.05, and 0.10 are denoted by ***, **, and * respectively.

Table 10: Panel A**The Effect of Disclosure on CEO Turnovers: CEO Ownership Differences**

Model : $CEO\ TURNOVER_{i,t} = \beta_0 + \beta_1 Disclosure\ Quality_{i,t-1} + \beta_2 Accounting\ Performance_{i,t-1} + \beta_3 Stock\ Return_{i,t-1} + \beta_4 Restate_{i,t-1} + \beta_5 Ln(Assets_{i,t-1}) + \beta_6 Debt/Asset_{i,t-1} + \beta_7 Industry\ Median\ MB_{i,t-1} + \beta_8 HHI_{i,t-1} + \beta_9 CEO\ Tenure_{i,t-1} + \beta_{10} CEO\ Age_{i,t-1} + \beta_{11} Ln(Comp_{i,t-1}) + \beta_{12} \% Independent_{i,t-1} + \beta_{13} Board\ Size_{i,t-1} + \beta_{14} CEO\ duality_{i,t-1} + \beta_{15} Institutional\ Own_{i,t-1} + Year\ fixed\ effects + Ind.\ fixed\ effects$

	Ind. Adj. ROA		Ind. Adj. Sales Growth	
	High Ownership	Low Ownership	High Ownership	Low Ownership
Intercept	-2.107 (-1.5)	-2.479** (-2.46)	-0.932 (-0.64)	-1.648* (-1.76)
Disclosure Quality	-0.114 (-1.08)	0.322*** (4.53)	-0.115 (-1.12)	0.314*** (4.45)
Accounting Perf.	-2.949*** (-5.07)	-2.709*** (-4.4)	-0.284 (-0.58)	-0.936** (-2.25)
Stock Return	-2.012*** (-4.77)	-0.521 (-1.34)	-2.416*** (-5.57)	-0.689 (-1.51)
Restatement	1.162 (1.55)	0.904** (2.18)	1.513** (2.35)	0.934** (2.26)
ln(Assets)	0.271** (2.34)	0.114 (1.19)	0.183 (1.51)	0.127 (1.35)
Debt/Assets	-0.32 (-0.61)	0.585 (1.16)	0.131 (0.26)	0.676 (1.35)
Ind. Median MB	-0.375 (-0.89)	0.111 (0.33)	-0.532 (-1.31)	-0.005 (-0.01)
Herfindahl Index	-0.6 (-0.23)	-2.581 (-1.59)	-1.047 (-0.39)	-2.614 (-1.58)
CEO Tenure	-0.006 (-0.34)	-0.021 (-1.18)	-0.009 (-0.52)	-0.018 (-1.08)
CEO Age	-0.017 (-1.33)	0.012 (1.04)	-0.021* (-1.68)	0.005 (0.46)
ln(Comp.)	-0.344*** (-2.66)	-0.384*** (-3.04)	-0.348*** (-2.7)	-0.405*** (-3.17)
Board Size	0.059 (1.08)	-0.02 (-0.5)	0.045 (0.83)	-0.04 (-1.01)
% Insiders	0.148 (0.21)	0.447 (0.85)	0.133 (0.19)	0.358 (0.69)
CEO duality	-1.003*** (-3.93)	-0.354* (-1.76)	-0.916*** (-3.62)	-0.352* (-1.74)
Institutional Own	0.19 (0.51)	-0.378* (-1.68)	0.09 (0.25)	-0.408* (-1.82)
Pseudo R ²	0.16	0.091	0.138	0.08
N	4,496	4,631	4,496	4,631
# Turnovers	83	160	83	160

Table 10: Panel B
The Effect of Disclosure on CEO Turnovers: Institutional Ownership Differences

Model : $CEO\ TURNOVER_{i,t} = \beta_0 + \beta_1 Disclosure\ Quality_{i,t-1} + \beta_2 Accounting\ Performance_{i,t-1} + \beta_3 Stock\ Return_{i,t-1} + \beta_4 Restate_{i,t-1} + \beta_5 Ln(Assets_{i,t-1}) + \beta_6 Debt/Asset_{i,t-1} + \beta_7 Industry\ Median\ MB_{i,t-1} + \beta_8 HHI_{i,t-1} + \beta_9 CEO\ Tenure_{i,t-1} + \beta_{10} CEO\ Age_{i,t-1} + \beta_{11} Ln(Comp_{i,t-1}) + \beta_{12} \% CEO\ Ownership_{i,t-1} + \beta_{13} \% Independent_{i,t-1} + \beta_{14} Board\ Size_{i,t-1} + \beta_{15} CEO\ duality_{i,t-1} + Year\ fixed\ effects + Ind.\ fixed\ effects$

	Industry adjusted ROA		Industry adjusted Sales Growth	
	High Inst. Own	Low Inst. Own	High Inst. Own	Low Inst. Own
Intercept	-1.944 (-1.56)	-2.309** (-2.2)	-0.982 (-0.84)	-1.657 (-1.55)
Disclosure Quality	0.294*** (3.09)	0.061 (0.82)	0.291*** (3.07)	0.053 (0.69)
Accounting Perf.	-2.743*** (-3.47)	-2.57*** (-4.71)	-1.45*** (-3.61)	-0.224 (-0.48)
Stock Return	-1.072 (-1.52)	-0.873** (-2.54)	-1.258* (-1.75)	-1.154*** (-3.16)
Restatement	0.919* (1.84)	1.168*** (2.63)	0.89* (1.71)	1.335*** (3.05)
ln(Assets)	0.259** (2.08)	0.198** (2.27)	0.299** (2.56)	0.138 (1.51)
Debt/Assets	0.414 (0.63)	-0.124 (-0.28)	0.422 (0.64)	0.246 (0.53)
Ind. Median MB	0.021 (0.07)	-0.022 (-0.07)	-0.135 (-0.45)	-0.065 (-0.21)
Herfindahl Index	-2.665 (-1.01)	0.312 (0.21)	-2.841 (-1.06)	0.456 (0.29)
CEO Tenure	-0.018 (-0.91)	-0.005 (-0.26)	-0.009 (-0.51)	-0.006 (-0.33)
CEO Age	-0.009 (-0.7)	0.004 (0.32)	-0.016 (-1.21)	0.00 (0.01)
ln(Comp.)	-0.54*** (-3.26)	-0.335*** (-2.72)	-0.606*** (-3.84)	-0.315*** (-2.71)
% CEO Ownership	-0.164** (-2.39)	-0.095** (-2.2)	-0.179** (-2.55)	-0.093** (-2.16)
Board Size	0.028 (0.54)	-0.009 (-0.21)	0.008 (0.16)	-0.023 (-0.5)
% Insiders	0.675 (1.06)	-0.171 (-0.31)	0.565 (0.9)	-0.252 (-0.44)
CEO Duality	-0.677*** (-2.9)	-0.51** (-2.41)	-0.71*** (-3.01)	-0.431** (-2.03)

Pseudo R ²	0.118	0.103	0.112	0.087
N	4,567	4,560	4,567	4,560
# Turnovers	110	133	110	133

High and low corporate governance groups are based on Institutional ownership median. Significant p-values of <0.01, 0.05, and 0.10 are denoted by ***, **, and * respectively.

Table 11
Logistic Analysis of the Effect of Disclosure on CEO Turnovers: AIMR Scores

Model $CEO\ TURNOVER_{i,t} = \beta_0 + \beta_1 AIMR\ Score + \beta_2 Accounting\ Performance_{i,t-1} + \beta_3 Stock\ Return_{i,t-1} + \beta_4 \ln(Assets_{i,t-1}) + \beta_5 Debt/Asset_{i,t-1} + \beta_6 Industry\ Median\ MB_{i,t-1} + \beta_7 HHI_{i,t-1} + Year\ fixed\ effects + Ind.\ fixed\ effects$

	(1) Ind. Adj. ROA	(2) Ind. Adj. Sales Growth	(3) Ind. Adj. Stock Returns	(4) Ind. Adj. ROA	(5) Ind. Adj. Sales Growth
Intercept	-8.671*** (-8.98)	-8.581*** (-8.87)	-8.711*** (-8.95)	-8.708*** (-8.95)	-7.623*** (-7.29)
AIMR Score	0.576* (1.71)	0.584* (1.73)	0.573* (1.70)	0.572* (1.70)	0.58* (1.71)
Accounting Perf.	-0.061 (-0.05)	-0.783 (-1.16)		-0.147 (-0.12)	-0.815 (-1.10)
Stock return			0.108 (0.29)	0.118 (0.31)	0.214 (0.56)
ln(Assets)	0.64*** (7.01)	0.634*** (6.94)	0.641*** (7.04)	0.64*** (7.02)	0.603*** (6.46)
Debt/Assets	-1.166 (-1.36)	-1.225 (-1.45)	-1.144 (-1.36)	-1.161 (-1.35)	-1.39 (-1.59)
Ind. Median MB	0.07 (0.16)	0.1 (0.24)	0.075 (0.18)	0.087 (0.20)	-0.217 (-0.50)
Herfindahl Index	0.347 (0.20)	0.35 (0.20)	0.338 (0.20)	0.341 (0.20)	-5.513* (-1.70)
Pseudo R ²	0.098	0.100	0.098	0.098	0.110
N	2,812	2,812	2,812	2,812	2,812

Significant p-values of <0.01, 0.05, and 0.10 are denoted by ***, **, and * respectively.

Table 12: Panel A
The Effect of Disclosure on CEO Turnovers: Two-Stage Sample

Model : $CEO\ TURNOVER_{i,t} = \beta_0 + \beta_1 Disclosure\ Quality + \beta_2 Accounting\ Performance_{i,t-1} + \beta_3 Stock\ Return_{i,t-1} + \beta_4 Restate_{i,t-1} + \beta_5 Ln(Assets_{i,t-1}) + \beta_6 Debt/Asset_{i,t-1} + \beta_7 Industry\ Median\ MB_{i,t-1} + \beta_8 HHI_{i,t-1} + \beta_9 CEO\ Tenure_{i,t-1} + \beta_{10} CEO\ Age_{i,t-1} + \beta_{11} Ln(Comp_{i,t-1}) + \beta_{12} \% CEO\ Ownership_{i,t-1} + \beta_{13} \% Independent_{i,t-1} + \beta_{14} Board\ Size_{i,t-1} + \beta_{15} CEO\ duality_{i,t-1} + \beta_{16} Institutional\ Own_{i,t-1} + Year\ fixed\ effects + Ind.\ fixed\ effects$

	(1) Ind. Adj. ROA	(2) Ind. Adj. Sales Growth
Intercept	-1.829* (-1.91)	-1.022 (-1.12)
Disclosure Quality	0.242*** (3.15)	0.238*** (3.12)
Accounting Perf.	-2.512*** (-4.63)	-0.641* (-1.86)
Stock Return	-0.931** (-2.07)	-1.167** (-2.48)
Restatement	0.791* (1.73)	0.911** (2.06)
ln(Assets)	0.262*** (2.87)	0.258*** (2.97)
Debt/Assets	0.578 (1.23)	0.695 (1.48)
Ind. Median MB	-0.007 (-0.02)	-0.113 (-0.34)
Herfindahl Index	-0.534 (-0.34)	-0.823 (-0.51)
CEO Tenure	-0.019 (-1.13)	-0.015 (-0.91)
CEO Age	-0.002 (-0.18)	-0.007 (-0.7)
ln(Comp.)	-0.494*** (-4.12)	-0.516*** (-4.39)
% CEO Ownership	-0.273*** (-3.01)	-0.271*** (-3.13)
Board Size	0.017 (0.42)	-0.002 (-0.05)
% Insiders	-0.015 (-0.03)	-0.044 (-0.09)
CEO Duality	-0.548*** (-2.98)	-0.555*** (-2.99)
Institutional Own	-0.211 (-0.98)	-0.264 (-1.23)
Pseudo R ²	0.108	0.093
N	6,835	6,835

Significant p-values of <0.01, 0.05, and 0.10 are denoted by ***, **, and * respectively.

Table 12: Panel B
First Stage Regression Analysis of Firm Disclosure Policy

Model : $\ln_Discl_i = \beta_0 + \beta_1 \text{Firm Age} + \beta_2 \text{Shareholders} + \beta_3 \text{Institutional ownership} + \beta_4 \text{Analyst dispersion} + \beta_5 \ln(\text{Assets}) + \beta_6 \text{Sales growth} + \beta_7 \text{Capital intensity} + \beta_8 \text{HHI} + \beta_9 \text{Offer} + \beta_{10} \ln(\text{Stock volatility}) + \beta_{11} \text{Hightech} + \beta_{12} \text{SignROA} + \beta_{13} \text{Earnings volatility} + \beta_{14} \text{Equity based compensation} + \beta_{15} \text{Wealth} + \text{Industry fixed effects} + \text{year fixed effects}$

	(1)OLS	(2)Tobit
Intercept	-0.121 (-0.82)	-1.278*** (-6.01)
Firm age	-0.003*** (-2.9)	-0.004*** (-2.8)
Shareholders	-0.005 (-0.47)	0.00 (-0.01)
Institutional ownership	0.148*** (3.71)	0.243*** (3.91)
Analyst dispersion	-12.68*** (-4.85)	-58.1*** (-9.21)
Ln(assets)	0.18*** (11.35)	0.29*** (11.66)
Sales Growth	-0.209*** (-2.7)	-0.777*** (-6.04)
Capital intensity	0.199** (2.01)	-0.489*** (-3.67)
HHI	0.533 (1.21)	1.293*** (3.31)
Offer	-0.054 (-0.27)	-0.124 (-0.38)
Ln(stock volatility)	0.768*** (4.68)	1.715*** (7.2)
High tech	-0.079 (-1.61)	0.004 (0.06)
SignROA	0.279*** (6.08)	0.355*** (4.77)
Earnings volatility	-0.03 (-1.16)	-0.033 (-0.8)
Equity based compensation	0.211*** (3.46)	0.229** (2.35)
Wealth	0.00 (-0.58)	0.00 (0.00)
Adjusted R ²	0.234	
N	6835	6835

***, **, * indicate two-tailed significance at the p-value of less than 0.01, 0.05, and 0.10, respectively.

Table 13
The Effect of Disclosure on CEO Turnovers: Second Stage Results

Model : $CEO\ TURNOVER_{i,t} = \beta_0 + \beta_1 Predicted\ Disclosure + \beta_2 Accounting\ Performance_{i,t-1} + \beta_3 Stock\ Return_{i,t-1} + \beta_4 Restate_{i,t-1} + \beta_5 Ln(Assets_{i,t-1}) + \beta_6 Debt/Asset_{i,t-1} + \beta_7 Industry\ Median\ MB_{i,t-1} + \beta_8 HHI_{i,t-1} + \beta_9 CEO\ Tenure_{i,t-1} + \beta_{10} CEO\ Age_{i,t-1} + \beta_{11} Ln(Comp_{i,t-1}) + \beta_{12} \% CEO\ Ownership_{i,t-1} + \beta_{13} \% Independent_{i,t-1} + \beta_{14} Board\ Size_{i,t-1} + \beta_{15} CEO\ duality_{i,t-1} + \beta_{16} Institutional\ Own_{i,t-1} + Year\ fixed\ effects + Ind.\ fixed\ effects$

	(1) OLS		(2) Tobit	
	(1) Industry Adj. ROA	(2) Industry Adj. Sales Growth	(3) Industry Adj. ROA	(4) Industry Adj. Sales Growth
Intercept	-2.045** (-2.14)	-1.179 (-1.3)	-1.889** (-2)	-1.078 (-1.2)
Predicted Disclosure Quality	0.472** (2.12)	0.358* (1.66)	0.525** (2.4)	0.388* (1.69)
Accounting Performance	-2.63*** (-4.76)	-0.637* (-1.85)	-2.646*** (-4.92)	-0.553 (-1.61)
Stock Return	-0.952** (-2.15)	-1.198** (-2.56)	-0.938** (-2.14)	-1.191** (-2.57)
Restatement	0.773* (1.7)	0.895** (2.04)	0.773* (1.69)	0.898** (2.04)
ln(Assets)	0.23** (2.42)	0.24*** (2.65)	0.204** (2.15)	0.217** (2.33)
Debt/Assets	0.622 (1.34)	0.718 (1.56)	0.639 (1.38)	0.766* (1.66)
Ind. Median MB	0.012 (0.04)	-0.1 (-0.31)	0.002 (0.00)	-0.1 (-0.32)
Herfindahl Index	-0.799 (-0.52)	-0.954 (-0.61)	-0.837 (-0.54)	-0.957 (-0.61)
CEO Tenure	-0.014 (-0.92)	-0.011 (-0.69)	-0.015 (-0.96)	-0.011 (-0.74)
CEO Age	-0.001 (-0.12)	-0.007 (-0.69)	0.00 (0.00)	-0.006 (-0.59)
ln(Comp.)	-0.498*** (-4.14)	-0.514*** (-4.36)	-0.5*** (-4.24)	-0.514*** (-4.37)
% CEO Ownership	-0.268*** (-3.06)	-0.268*** (-3.18)	-0.267*** (-3.03)	-0.266*** (-3.14)
Board Size	0.02 (0.49)	0.001 (0.02)	0.025 (0.61)	0.005 (0.12)
% Insiders	0.059 (0.12)	0.015 (0.03)	0.092 (0.19)	0.053 (0.11)
CEO Duality	-0.525*** (-2.86)	-0.531*** (-2.86)	-0.526*** (-2.87)	-0.53*** (-2.85)
Institutional Own	-0.22 (-1.03)	-0.267 (-1.25)	-0.241 (-1.13)	-0.284 (-1.34)

Pseudo R ²	0.113	0.1	0.114	0.1
N	6,835	6,835	6,835	6,835
# Turnovers	177	177	177	177

Significant p-values of <0.01, 0.05, and 0.10 are denoted by ***, **, and * respectively.

Table 14
Over-identification Test

Second-stage Residual_i = $\beta_0 + \beta_1 \text{Firm Age} + \beta_2 \text{Shareholders} + \beta_3 \text{Analyst dispersion} + \beta_4 \text{Shareholders} + \beta_5 \text{Capital intensity} + \beta_6 \text{Offer} + \beta_7 \text{Ln}(\text{Stock volatility}) + \beta_8 \text{Hightech} + \beta_9 \text{SignROA} + \beta_{10} \text{Earnings volatility} + \beta_{11} \text{Equity based compensation} + \beta_{12} \text{Wealth}$

	OLS	Tobit
Intercept	0.00 (0.04)	0.001 (0.11)
Firm age	0.00 (-1.18)	0.00 (-1.09)
Shareholders	0.003*** (2.58)	0.003** (2.41)
Analyst Dispersion	-0.391 (-1.13)	-0.58* (-1.67)
Capital Intensity	-0.001 (-0.06)	0.001 (0.13)
Offer	0.009 (0.35)	0.014 (0.6)
Ln(stock volatility)	0.034* (1.89)	0.031* (1.76)
High tech	-0.004 (-0.87)	-0.004 (-0.85)
SignROA	-0.008 (-1.26)	-0.009 (-1.41)
Earnings Volatility	0.003 (0.76)	0.004 (1.05)
Equity based compensation	-0.013* (-1.65)	-0.014* (-1.78)
Wealth	0.00 (-0.45)	0.00 (-0.5)
N	6,835	6,835
Adjusted R ²	0.0006	0.0008
F-statistic	1.39	1.48
P-value	0.168	0.13

Significant p-values of <0.01, 0.05, and 0.10 are denoted by ***, **, and * respectively.

Table 15
The Effect of Disclosure on CEO Turnovers: Hausman Test

Model : $CEO\ TURNOVER_{i,t} = \beta_0 + \beta_1 Predicted\ Disclosure + \beta_2 Disclosure + \beta_2 Accounting\ Performance_{i,t-1} + \beta_3 Stock\ Return_{i,t-1} + \beta_4 Restate_{i,t-1} + \beta_5 Ln(Assets_{i,t-1}) + \beta_6 Debt/Asset_{i,t-1} + \beta_7 Industry\ Median\ MB_{i,t-1} + \beta_8 HHI_{i,t-1} + \beta_9 CEO\ Tenure_{i,t-1} + \beta_{10} CEO\ Age_{i,t-1} + \beta_{11} Ln(Comp_{i,t-1}) + \beta_{12} \%CEO\ Ownership_{i,t-1} + \beta_{13} \%Independent_{i,t-1} + \beta_{14} Board\ Size_{i,t-1} + \beta_{15} CEO\ duality_{i,t-1} + \beta_{16} Institutional\ Own_{i,t-1} + Year\ fixed\ effects + Ind.\ fixed\ effects$

	(1) OLS		(2) Tobit	
	(1) Industry Adj. ROA	(2) Industry Adj. Sales Growth	(3) Industry Adj. ROA	(4) Industry Adj. Sales Growth
Intercept	-1.876* (-1.94)	-1.03 (-1.13)	-1.776* (-1.85)	-0.971 (-1.07)
Disclosure Quality	0.217*** (2.67)	0.224*** (2.8)	0.215*** (2.72)	0.221*** (2.83)
Predicted Disclosure Quality	0.259 (1.09)	0.143 (0.62)	0.38* (1.66)	0.231 (0.97)
Accounting Performance	-2.584*** (-4.64)	-0.651* (-1.87)	-2.622*** (-4.8)	-0.608* (-1.74)
Stock Return	-0.924** (-2.07)	-1.166** (-2.48)	-0.91** (-2.07)	-1.161** (-2.48)
Restatement	0.804* (1.75)	0.921** (2.08)	0.804* (1.74)	0.926** (2.08)
ln(Assets)	0.232** (2.43)	0.243*** (2.68)	0.203** (2.12)	0.221** (2.38)
Debt/Assets	0.664 (1.38)	0.74 (1.56)	0.703 (1.47)	0.791* (1.66)
Ind. Median MB	-0.003 (-0.01)	-0.113 (-0.35)	-0.008 (-0.03)	-0.113 (-0.35)
Herfindahl Index	-0.867 (-0.55)	-1.017 (-0.63)	-0.999 (-0.63)	-1.115 (-0.69)
CEO Tenure	-0.018 (-1.08)	-0.014 (-0.87)	-0.019 (-1.11)	-0.015 (-0.89)
CEO Age	-0.001 (-0.14)	-0.007 (-0.68)	0 (0.04)	-0.006 (-0.61)
ln(Comp.)	-0.508*** (-4.18)	-0.525*** (-4.41)	-0.516*** (-4.3)	-0.53*** (-4.45)
% CEO Ownership	-0.273*** (-3.02)	-0.272*** (-3.14)	-0.272*** (-3.01)	-0.272*** (-3.13)
Board Size	0.018 (0.45)	-0.001 (-0.04)	0.022 (0.54)	0.001 (0.03)
% Insiders	-0.011 (-0.02)	-0.044 (-0.09)	0.008 (0.02)	-0.025 (-0.05)
CEO Duality	-0.543*** (-2.96)	-0.554*** (-2.99)	-0.544*** (-2.97)	-0.553*** (-2.98)

Institutional Own	-0.231 (-1.08)	-0.275 (-1.29)	-0.251 (-1.18)	-0.291 (-1.36)
Pseudo R ²	0.118	0.105	0.119	0.106
N	6,835	6,835	6,835	6,835
# Turnovers	177	177	177	177

Significant p-values of <0.01, 0.05, and 0.10 are denoted by ***, **, and * respectively.

Table 16
Logistic Analysis of the Effect of Disclosure on Voluntary CEO Turnovers

Model : Involuntary Voluntary CEO TURNOVER_{i,t} = $\beta_0 + \beta_1$ Disclosure Quality_{i,t-1} + β_2 Accounting Performance_{i,t-1} + β_3 Stock Return_{i,t-1} + β_4 Restate_{i,t-1} + β_5 Ln(Assets_{i,t-1}) + β_6 Debt/Asset_{i,t-1} + β_7 Industry Median MB_{i,t-1} + β_8 HHI_{i,t-1} + β_9 CEO Tenure_{i,t-1} + β_{10} CEO Age_{i,t-1} + β_{11} Ln(Comp_{i,t-1}) + β_{12} %CEO Ownership_{i,t-1} + β_{13} % Independent_{i,t-1} + β_{14} Board Size_{i,t-1} + β_{15} CEO duality_{i,t-1} + β_{16} Institutional Own_{i,t-1} + Year fixed effects + Ind. fixed effects

	(1) Ind. Adj. ROA	(2) Ind. Adj. Sales Growth	(3) Ind. Adj. Stock Returns	(4) Ind. Adj. ROA	(5) Ind. Adj. Sales Growth
Intercept	-9.301*** (-14.72)	-9.159*** (-14.45)	-9.152*** (-14.49)	-9.298*** (-14.7)	-9.16*** (-14.45)
Disclosure Quality	0.041 (1.33)	0.04 (1.29)	0.038 (1.23)	0.04 (1.28)	0.039 (1.25)
Accounting Perf.	-1.004*** (-3.15)	-0.64*** (-3.06)		-0.953*** (-2.96)	-0.604*** (-2.87)
Stock Return			-0.133 (-1.42)	-0.092 (-1.04)	-0.094 (-1.01)
Restatement	0.935*** (2.97)	0.953*** (3.02)	0.987*** (3.13)	0.928*** (2.94)	0.947*** (2.99)
ln(Assets)	0.051 (1.21)	0.053 (1.28)	0.047 (1.13)	0.049 (1.16)	0.051 (1.23)
Debt/Assets	-0.115 (-0.47)	0.018 (0.07)	-0.019 (-0.08)	-0.135 (-0.55)	-0.009 (-0.04)
Ind. Median MB	0.267* (1.77)	0.231 (1.55)	0.24 (1.61)	0.266* (1.77)	0.23 (1.54)
Herfindahl Index	-0.658 (-0.94)	-0.592 (-0.86)	-0.668 (-0.97)	-0.664 (-0.95)	-0.603 (-0.88)
CEO Tenure	-0.001 (-0.19)	-0.001 (-0.19)	-0.002 (-0.31)	-0.001 (-0.19)	-0.001 (-0.19)
CEO Age	0.129*** (16.18)	0.128*** (15.96)	0.129*** (16.16)	0.129*** (16.18)	0.128*** (15.98)
ln(Comp.)	-0.182*** (-3.09)	-0.193*** (-3.29)	-0.192*** (-3.3)	-0.177*** (-3)	-0.187*** (-3.2)
% CEO Ownership	-0.033*** (-3.19)	-0.033*** (-3.23)	-0.034*** (-3.27)	-0.033*** (-3.19)	-0.033*** (-3.23)
Board Size	0.037** (1.99)	0.034* (1.85)	0.036* (1.94)	0.036* (1.95)	0.034* (1.82)
% Insiders	0.367 (1.43)	0.321 (1.24)	0.376 (1.47)	0.361 (1.4)	0.318 (1.23)
CEO Duality	-0.308*** (-2.77)	-0.301*** (-2.69)	-0.304*** (-2.73)	-0.31*** (-2.78)	-0.303*** (-2.71)
Inst. Own	-0.31*** (-2.99)	-0.321*** (-3.1)	-0.328*** (-3.17)	-0.307*** (-2.96)	-0.318*** (-3.07)

Pseudo R ²	0.11	0.11	0.108	0.11	0.11
N	8,884	8,884	8,884	8,884	8,884
# Turnovers	806	806	806	806	806

Significant p-values of <0.01, 0.05, and 0.10 are denoted by ***, **, and * respectively.

Table 17
Logistic Analysis of the Impact of Disclosure on CEO Turnovers Controlling for Missed Management Guidance

Model $CEO\ TURNOVER_{i,t} = \beta_0 + \beta_1 \text{Disclosure Quality} + \beta_2 \text{Missed forecast} + \beta_3 \text{Accounting Performance}_{i,t} + \beta_4 \text{Stock Return}_{i,t} + \beta_5 \text{Restate} + \beta_6 \text{Ln(Assets)} + \beta_7 \text{Debt/Asset}_{i,t} + \beta_8 \text{Industry Median MB}_{i,t} + \beta_9 \text{HHI}_{i,t} + \beta_{10} \text{Age}_{i,t} + \beta_{11} \text{Ln(Comp)} + \beta_{12} \% \text{ CEO Own}_{i,t} + \beta_{13} \% \text{ Independence} + \beta_{14} \text{CEO duality} + \beta_{15} \text{Restate} + \beta_{16} \text{Institutional Own} + \text{Year fixed effects} + \text{Industry fixed effects}$

	Industry Adjusted ROA			Industry Adjusted Sales Growth		
	(1)	(2)	(3)	(4)	(5)	(6)
Intercept	-1.89** (-2.33)	-1.954** (-2.42)	-1.933** (-2.37)	-1.03 (-1.32)	-1.111 (-1.42)	-1.08 (-1.37)
Disclosure Quality	0.167*** (2.88)		0.12* (1.91)	0.158*** (2.77)		0.115* (1.85)
Missed Forecast		0.474** (1.97)	0.339 (1.39)		0.441* (1.85)	0.312 (1.29)
Accounting Perf.	-2.668*** (-6.08)	-2.651*** (-6.21)	-2.669*** (-6.15)	-0.728** (-2.32)	-0.721** (-2.38)	-0.741** (-2.39)
Stock return	-0.962*** (-2.77)	-0.973*** (-2.79)	-0.951*** (-2.73)	-1.223*** (-3.33)	-1.233*** (-3.35)	-1.213*** (-3.29)
Restatement	1.045*** (3)	1.006*** (2.92)	1.028*** (2.98)	1.147*** (3.44)	1.11*** (3.37)	1.131*** (3.43)
ln(Assets)	0.229*** (3.27)	0.239*** (3.43)	0.229*** (3.28)	0.208*** (3)	0.218*** (3.15)	0.209*** (3.03)
Debt/Assets	0.104 (0.29)	0.02 (0.06)	0.067 (0.18)	0.347 (0.96)	0.27 (0.75)	0.31 (0.85)
Ind. Median MB	-0.135 (-0.48)	-0.145 (-0.52)	-0.138 (-0.49)	-0.26 (-0.92)	-0.262 (-0.93)	-0.26 (-0.92)
Herfindahl Index	-1.058 (-0.78)	-0.831 (-0.62)	-1.004 (-0.74)	-1.192 (-0.85)	-0.973 (-0.71)	-1.147 (-0.82)
CEO Tenure	-0.013 (-0.93)	-0.01 (-0.74)	-0.012 (-0.9)	-0.011 (-0.83)	-0.008 (-0.65)	-0.011 (-0.8)
CEO Age	-0.002 (-0.24)	-0.003 (-0.35)	-0.002 (-0.28)	-0.007 (-0.82)	-0.008 (-0.95)	-0.007 (-0.86)
ln(Comp.)	-0.42*** (-4.33)	-0.405*** (-4.24)	-0.417*** (-4.3)	-0.434*** (-4.46)	-0.418*** (-4.37)	-0.431*** (-4.44)
% CEO Ownership	-0.104*** (-2.63)	-0.105*** (-2.64)	-0.105*** (-2.62)	-0.103** (-2.57)	-0.104*** (-2.6)	-0.104*** (-2.58)

Board Size	0.009 (0.27)	0.011 (0.33)	0.011 (0.33)	-0.008 (-0.25)	-0.006 (-0.18)	-0.006 (-0.2)
% Insiders	0.162 (0.39)	0.187 (0.44)	0.151 (0.36)	0.09 (0.22)	0.113 (0.27)	0.082 (0.2)
CEO Duality	-0.576*** (-3.72)	-0.559*** (-3.62)	-0.569*** (-3.69)	-0.547*** (-3.52)	-0.529*** (-3.41)	-0.541*** (-3.49)
Institutional Own	-0.251 (-1.37)	-0.126 (-0.71)	-0.139 (-0.78)	-0.31* (-1.72)	-0.192 (-1.1)	-0.204 (-1.17)
Pseudo R ²	0.105	0.103	0.104	0.091	0.089	0.09
N	9,127	9,127	9,127	9,127	9,127	9,127

Significant p-values of <0.01, 0.05, and 0.10 are denoted by ***, **, and * respectively.

Table 18
Logistic Analysis of the Impact of Disclosure on CEO Turnovers Controlling for
Timeliness of Earnings

Model $CEO\ TURNOVER_{i,t} = \beta_0 + \beta_1 \text{Disclosure Quality} + \beta_2 \text{Timeliness} + \beta_3 \text{Accounting Performance}_{i,t} + \beta_4 \text{Stock Return}_{i,t} + \beta_5 \text{Restate} + \beta_6 \text{Ln(Assets)} + \beta_7 \text{Debt/Asset}_{i,t} + \beta_8 \text{Industry Median MB}_{i,t} + \beta_9 \text{HHI}_{i,t} + \beta_{10} \text{Age}_{i,t} + \beta_{11} \text{Ln(Comp)} + \beta_{12} \% \text{ CEO Own}_{i,t} + \beta_{13} \% \text{ Independence} + \beta_{14} \text{ CEO duality} + \beta_{15} \text{Restate} + \beta_{16} \text{Institutional Own} + \text{Year fixed effects} + \text{Industry fixed effects}$

	(1) Ind. Adj. ROA	(2) Ind. Adj. Sales Growth	(3) Ind. Adj. Stock Returns	(4) Ind. Adj. ROA	(5) Ind. Adj. Sales Growth
Intercept	-2.498** (-2.34)	-1.308 (-1.25)	-1.072 (-1.02)	-2.309** (-2.13)	-1.107 (-1.06)
Disclosure Quality	0.257*** (3.65)	0.231*** (3.38)	0.214*** (3.18)	0.247*** (3.54)	0.222*** (3.27)
Timeliness	0.967** (2.4)	0.981** (2.57)	0.922** (2.42)	0.895** (2.22)	0.913** (2.39)
Accounting Perf.	-4.755*** (-8.18)	-1.313*** (-3.49)		-4.397*** (-7.22)	-1.046*** (-2.67)
Stock return			-1.109** (-2.11)	-0.723 (-1.61)	-1.02** (-1.97)
Restatement	1.607*** (4.37)	1.695*** (4.67)	1.761*** (4.68)	1.587*** (4.28)	1.708*** (4.67)
ln(Assets)	0.23*** (2.74)	0.163* (1.92)	0.148* (1.71)	0.223*** (2.59)	0.16* (1.85)
Debt/Assets	0.035 (0.07)	0.768* (1.75)	0.523 (1.11)	0.007 (0.01)	0.52 (1.11)
Ind. Median MB	0.497* (1.7)	0.363 (1.23)	0.291 (0.85)	0.447 (1.38)	0.236 (0.69)
Herfindahl Index	-2.604 (-1.47)	-2.641 (-1.51)	-2.903 (-1.61)	-2.589 (-1.44)	-2.702 (-1.51)
CEO Tenure	-0.016 (-1.03)	-0.014 (-0.91)	-0.015 (-0.99)	-0.015 (-0.99)	-0.013 (-0.87)
CEO Age	0.007 (0.67)	-0.001 (-0.05)	-0.001 (-0.1)	0.005 (0.5)	-0.002 (-0.19)
ln(Comp.)	-0.61*** (-5.42)	-0.617*** (-5.38)	-0.583*** (-4.91)	-0.585*** (-5.04)	-0.578*** (-4.89)
% CEO Ownership	-0.111* (-1.84)	-0.119* (-1.94)	-0.125* (-1.94)	-0.113* (-1.84)	-0.121* (-1.93)
Board Size	0.055 (1.4)	0.039 (1.01)	0.035 (0.87)	0.051 (1.29)	0.034 (0.85)

% Insiders	-0.015 (-0.02)	-0.125 (-0.22)	-0.066 (-0.11)	-0.063 (-0.11)	-0.143 (-0.25)
CEO Duality	-0.572*** (-2.93)	-0.554*** (-2.8)	-0.561*** (-2.83)	-0.599*** (-3.08)	-0.578*** (-2.92)
Institutional Own	-0.278 (-1.25)	-0.346 (-1.57)	-0.326 (-1.47)	-0.255 (-1.14)	-0.307 (-1.38)
Pseudo R ²	0.127	0.096	0.105	0.135	0.109
N	6,038	6,038	6,038	6,038	6,038
# Turnovers	159	159	159	159	159

Significant p-values of <0.01, 0.05, and 0.10 are denoted by ***, **, and * respectively.

Table 19
Logistic Analysis of the Effect of Disclosure on CEO Turnovers: Innate Accrual Differences

Model : $CEO\ TURNOVER_{i,t} = \beta_0 + \beta_1 Disclosure\ Quality_{i,t-1} + \beta_2 Accounting\ Performance_{i,t-1} + \beta_3 Stock\ Return_{i,t-1} + \beta_4 Restate_{i,t-1} + \beta_5 Ln(Assets_{i,t-1}) + \beta_6 Debt/Asset_{i,t-1} + \beta_7 Industry\ Median\ MB_{i,t-1} + \beta_8 HHI_{i,t-1} + \beta_9 CEO\ Tenure_{i,t-1} + \beta_{10} CEO\ Age_{i,t-1} + \beta_{11} Ln(Comp_{i,t-1}) + \beta_{12} \% CEO\ Ownership_{i,t-1} + \beta_{13} \% Independent_{i,t-1} + \beta_{14} Board\ Size_{i,t-1} + \beta_{15} CEO\ duality_{i,t-1} + \beta_{16} Institutional\ Own_{i,t-1} + Year\ fixed\ effects + Industry\ fixed\ effects$

	Industry Adj. ROA		Industry Adj. Sales Growth	
	Low Innate Quality	High Innate Quality	Low Innate Quality	High Innate Quality
Intercept	-1.214 (-0.92)	-4.155** (-2.31)	-0.552 (-0.43)	-3.529** (-2.05)
Disclosure Quality	0.002 -0.02	0.516*** -4.14	0.015 -0.16	0.501*** -4.11
Accounting Perf.	-3.526*** (-5.54)	-5.808*** (-4.11)	-0.582 (-1.48)	-1.002 (-1.48)
Stock return	-0.701 (-1.38)	-1.569*** (-3.06)	-0.996* (-1.72)	-1.923*** (-3.66)
Restatement	0.85 -1.31	1.364** -2.14	0.942 -1.39	1.517** -2.49
ln(Assets)	0.279** -2.27	0.181 -1.25	0.29** -2.3	0.205 -1.41
Debt/Assets	-0.075 (-0.12)	1.037 -1.34	0.103 -0.17	1.281* -1.72
Ind. Median MB	0.48 -1.14	0.247 -0.51	0.354 -0.83	-0.089 (-0.18)
Herfindahl Index	0.876 -0.4	-6.397*** (-2.87)	-0.003 (-0.00)	-6.043*** (-2.65)
CEO Tenure	0.01 -0.43	-0.036* (-1.73)	0.009 -0.39	-0.036* (-1.7)
CEO Age	-0.011 (-0.82)	0.003 -0.16	-0.012 (-0.93)	0.00 -0.03
ln(Comp.)	-0.607*** (-3.79)	-0.224 (-1.33)	-0.628*** (-3.85)	-0.283 (-1.59)
% CEO Ownership	-0.15** (-2.37)	-0.038 (-0.5)	-0.15** (-2.4)	-0.033 (-0.48)
Board Size	-0.034 (-0.68)	0.003 -0.06	-0.057 (-1.06)	0.003 -0.05
% Insiders	0.658 -0.94	0.112 -0.14	0.633 -0.92	0.146 -0.19
CEO duality	-0.683*** (-2.77)	-0.955*** (-3.1)	-0.632** (-2.51)	-0.904*** (-2.93)
Institutional Own	-0.215 (-0.77)	-0.304 (-0.98)	-0.303 (-1.08)	-0.287 (-0.91)

Pseudo R ²	0.156	0.129	0.139	0.104
N	3521	3527	3521	3527
# Turnovers	79	99	79	99

Significant p-values of <0.01, 0.05, and 0.10 are denoted by ***, **, and * respectively.

Table 20
Logistic Analysis of the Effect of Disclosure on CEO Turnovers: Pre/Post-SOX

Model : $CEO\ TURNOVER_{i,t} = \beta_0 + \beta_1 \text{Disclosure Quality}_{i,t-1} + \beta_2 \text{Accounting Performance}_{i,t-1} + \beta_3 \text{Stock Return}_{i,t-1} + \beta_4 \text{Restate}_{i,t-1} + \beta_5 \ln(\text{Assets}_{i,t-1}) + \beta_6 \text{Debt/Asset}_{i,t-1} + \beta_7 \text{Industry Median MB}_{i,t-1} + \beta_8 \text{HHI}_{i,t-1} + \beta_9 \text{CEO Tenure}_{i,t-1} + \beta_{10} \text{CEO Age}_{i,t-1} + \beta_{11} \ln(\text{Comp}_{i,t-1}) + \beta_{12} \% \text{CEO Ownership}_{i,t-1} + \beta_{13} \% \text{Independent}_{i,t-1} + \beta_{14} \text{Board Size}_{i,t-1} + \beta_{15} \text{CEO duality}_{i,t-1} + \beta_{16} \text{Institutional Own}_{i,t-1} + \text{Year fixed effects} + \text{Ind. fixed effects}$

	Industry adjusted ROA		Industry adjusted Sales Growth	
	Pre-SOX	Post-SOX	Pre-SOX	Post-SOX
Intercept	-1.841 (-1.49)	-0.377 (-0.23)	-0.93 (-0.81)	0.663 (0.42)
Disclosure Quality	0.34*** (2.82)	0.026 (0.31)	0.331*** (2.77)	0.01 (0.12)
Accounting Perf.	-2.819*** (-3.93)	-3.595*** (-5.31)	-1.074** (-2.45)	-1.078 (-1.63)
Stock Return	-0.514 (-1.13)	-0.942*** (-2.99)	-0.685 (-1.3)	-1.136*** (-3.38)
Restatement	1.483** (2.48)	0.864 (1.63)	1.636*** (2.98)	0.881* (1.66)
ln(Assets)	0.355*** (3.47)	0.213* (1.86)	0.348*** (3.71)	0.169 (1.47)
Debt/Assets	0.366 (0.61)	-0.535 (-0.89)	0.487 (0.78)	-0.135 (-0.25)
Ind. Median MB	-0.358 (-0.79)	0.142 (0.28)	-0.425 (-0.91)	0.068 (0.13)
Herfindahl Index	-0.518 (-0.22)	-2.562 (-1.09)	-0.767 (-0.33)	-2.52 (-1.09)
CEO Tenure	-0.022 (-0.94)	0.004 (0.24)	-0.017 (-0.76)	0.004 (0.23)
CEO Age	0.001 (0.04)	-0.013 (-0.85)	-0.006 (-0.46)	-0.019 (-1.29)
ln(Comp.)	-0.418*** (-2.92)	-0.601*** (-3.63)	-0.454*** (-3.28)	-0.627*** (-3.78)
% CEO Ownership	-0.118** (-2.06)	-0.059 (-1.27)	-0.111* (-1.81)	-0.064 (-1.37)
Board Size	-0.048 (-0.92)	0.019 (0.32)	-0.065 (-1.26)	0.006 (0.1)
% Insiders	-0.105 (-0.17)	1.039 (1.2)	-0.154 (-0.26)	0.961 (1.14)
CEO Duality	-0.585** (-2.46)	-0.447* (-1.84)	-0.56** (-2.37)	-0.381 (-1.59)
Institutional Own	0.007 (0.02)	-0.084 (-0.3)	-0.103 (-0.35)	-0.144 (-0.53)
Pseudo R ²	.122	.106	.108	.088
	3556	3596	3556	3596
N	102	92	102	92

Significant p-values of <0.01, 0.05, and 0.10 are denoted by ***, **, and * respectively.

Table 21: Panel A
Logistic Analysis of the Effect of Disclosure on CEO Turnovers: 3 Year Windows

Model : $CEO\ TURNOVER_{i,t} = \beta_0 + \beta_1 Disclosure\ Quality_{i,t-1} + \beta_2 Accounting\ Performance_{i,t-1} + \beta_3 Stock\ Return_{i,t-1} + \beta_4 Restate_{i,t-1} + \beta_5 Ln(Assets_{i,t-1}) + \beta_6 Debt/Asset_{i,t-1} + \beta_7 Industry\ Median\ MB_{i,t-1} + \beta_8 HHI_{i,t-1} + \beta_9 CEO\ Tenure_{i,t-1} + \beta_{10} CEO\ Age_{i,t-1} + \beta_{11} Ln(Comp_{i,t-1}) + \beta_{12} \% CEO\ Ownership_{i,t-1} + \beta_{13} \% Independent_{i,t-1} + \beta_{14} Board\ Size_{i,t-1} + \beta_{15} CEO\ duality_{i,t-1} + \beta_{16} Institutional\ Own_{i,t-1} + Year\ fixed\ effects + Ind.\ fixed\ effects$

Panel A	Industry Adjusted ROA			
	1998 - 2000	1999 - 2001	2000 - 2002	2001 - 2003
Intercept	-0.985 (-0.62)	-0.803 (-0.67)	-2.292** (-2.03)	-3.18** (-2.25)
Disclosure Quality	0.386*** (2.64)	0.312** (2.43)	0.241** (2.12)	0.267** (2.5)
Accounting Performance	-3.57*** (-4.76)	-2.843*** (-3.82)	-1.99*** (-3.27)	-1.414** (-2.27)
Stock Return	-0.239 (-0.64)	-0.557 (-1.14)	-0.791 (-1.34)	-1.986*** (-4.57)
Restatement	1.988*** (3.12)	1.416** (2.13)	0.863 (1.16)	0.802 (1.07)
ln(Assets)	0.485*** (4.16)	0.269** (2.23)	0.117 (1.09)	0.057 (0.46)
Debt/Assets	0.353 (0.5)	-0.019 (-0.03)	0.765 (1.39)	0.574 (0.96)
Ind. Median MB	0.075 (0.15)	-0.229 (-0.49)	-0.002 (-0)	-0.644 (-1.04)
Herfindahl Index	-4.271 (-0.92)	-0.516 (-0.21)	0.555 (0.27)	2.024 (1.12)
CEO Tenure	-0.015 (-0.62)	-0.025 (-0.96)	-0.027 (-0.89)	-0.011 (-0.4)
CEO Age	-0.003 (-0.15)	-0.005 (-0.32)	0.002 (0.16)	0.008 (0.57)
ln(Comp.)	-0.666*** (-3.48)	-0.397*** (-2.67)	-0.245** (-2)	-0.151 (-1.07)
% CEO Ownership	-0.113* (-1.85)	-0.233** (-2.17)	-0.293** (-2.01)	-0.338** (-2.19)
Board Size	-0.076 (-1.24)	-0.007 (-0.13)	0.041 (0.78)	0.087* (1.67)
% Insiders	0.004 (0)	-0.685 (-1.05)	-0.9 (-1.34)	-0.239 (-0.32)
CEO Duality	-0.814*** (-2.88)	-0.66** (-2.51)	-0.468* (-1.69)	-0.648** (-2.18)
Institutional Own	0.285 (0.75)	-0.191 (-0.61)	-0.437 (-1.32)	-0.24 (-0.68)
Pseudo R ²	0.154	0.141	0.129	0.144
N	2609	2713	2841	2922
Turnovers	73	86	81	78

Panel A - Continued	Industry Adjusted ROA			
	2002 - 2004	2003 - 2005	2004 - 2006	2005 - 2007
Intercept	-0.869 (-0.57)	0.818 (0.55)	-0.918 (-0.52)	-0.269 (-0.14)
Disclosure Quality	0.241** (2.25)	0.219** (2.2)	0.067 (0.69)	0.033 (0.36)
Accounting Performance	-2.004*** (-2.89)	-3.245*** (-4.89)	-3.751*** (-4.73)	-3.762*** (-4.13)
Stock Return	-1.885*** (-4.02)	-1.51*** (-4.09)	-1.07*** (-3.1)	-1.224** (-2.35)
Restatement	1.221* (1.93)	1.076* (1.77)	1.129** (2.02)	0.343 (0.42)
ln(Assets)	0.149 (0.98)	0.247 (1.58)	0.221 (1.59)	0.078 (0.63)
Debt/Assets	0.618 (0.96)	0.178 (0.25)	-0.529 (-0.74)	-0.535 (-0.81)
Ind. Median MB	-1.369** (-2.36)	-0.751 (-1.61)	0.603 (1.28)	0.278 (0.39)
Herfindahl Index	-0.724 (-0.27)	-2.766 (-1.06)	-1.481 (-0.6)	-2.828 (-1.02)
CEO Tenure	-0.019 (-0.64)	-0.025 (-1.22)	-0.005 (-0.25)	0.006 (0.29)
CEO Age	0.009 (0.53)	0.00 (0.01)	-0.023 (-1.35)	-0.02 (-1.17)
ln(Comp.)	-0.331* (-1.77)	-0.671*** (-3.37)	-0.561*** (-3.09)	-0.556*** (-2.93)
% CEO Ownership	-0.396*** (-2.87)	-0.444** (-2.39)	-0.04 (-0.82)	-0.038 (-0.89)
Board Size	0.033 (0.51)	-0.009 (-0.12)	0.029 (0.41)	0.102 (1.54)
% Insiders	-0.265 (-0.32)	0.743 (0.86)	0.741 (0.71)	1.024 (1.10)
CEO Duality	-0.865*** (-3)	-0.669** (-2.48)	-0.582** (-2.04)	-0.199 (-0.71)
Institutional Own	-0.055 (-0.15)	0.069 (0.19)	-0.013 (-0.04)	-0.29 (-0.92)
Pseudo R ²	0.159	0.164	0.117	0.111
N	2950	2895	2859	2621
Turnovers	68	71	69	73

Significant p-values of <0.01, 0.05, and 0.10 are denoted by ***, **, and * respectively.

Table 21: Panel B
Logistic Analysis of the Effect of Disclosure on CEO Turnovers: 3 Year Windows

Model : $CEO\ TURNOVER_{i,t} = \beta_0 + \beta_1 Disclosure\ Quality_{i,t-1} + \beta_2 Accounting\ Performance_{i,t-1} + \beta_3 Stock\ Return_{i,t-1} + \beta_4 Restate_{i,t-1} + \beta_5 Ln(Assets_{i,t-1}) + \beta_6 Debt/Asset_{i,t-1} + \beta_7 Industry\ Median\ MB_{i,t-1} + \beta_8 HHI_{i,t-1} + \beta_9 CEO\ Tenure_{i,t-1} + \beta_{10} CEO\ Age_{i,t-1} + \beta_{11} Ln(Comp_{i,t-1}) + \beta_{12} \% CEO\ Ownership_{i,t-1} + \beta_{13} \% Independent_{i,t-1} + \beta_{14} Board\ Size_{i,t-1} + \beta_{15} CEO\ duality_{i,t-1} + \beta_{16} Institutional\ Own_{i,t-1} + Year\ fixed\ effects + Ind.\ fixed\ effects$

Panel B	Industry Adjusted Sales Growth			
	1998 - 2000	1999 - 2001	2000 - 2002	2001 - 2003
Intercept	-0.281 (-0.18)	0.302 (0.27)	-1.516 (-1.34)	-2.825** (-2)
Disclosure Quality	0.377** (2.49)	0.308** (2.42)	0.239** (2.13)	0.266** (2.51)
Accounting Performance	-1.273** (-2.31)	-1.256*** (-2.79)	-0.453 (-0.98)	0.002 (0)
Stock Return	-0.295 (-0.59)	-0.707 (-1.23)	-0.964 (-1.51)	-2.236*** (-5.1)
Restatement	2.125*** (3.36)	1.59*** (2.69)	0.99 (1.39)	0.934 (1.32)
ln(Assets)	0.438*** (3.87)	0.273*** (2.59)	0.103 (0.94)	0.037 (0.28)
Debt/Assets	0.807 (1.18)	0.029 (0.04)	1.002* (1.78)	0.735 (1.2)
Ind. Median MB	-0.046 (-0.09)	-0.317 (-0.64)	-0.126 (-0.28)	-0.676 (-1.08)
Herfindahl Index	-4.607 (-1.02)	-0.748 (-0.29)	0.472 (0.22)	1.976 (1.05)
CEO Tenure	-0.017 (-0.71)	-0.016 (-0.66)	-0.027 (-0.89)	-0.011 (-0.37)
CEO Age	-0.007 (-0.43)	-0.014 (-1)	-0.003 (-0.19)	0.006 (0.4)
ln(Comp.)	-0.665*** (-3.45)	-0.437*** (-3.15)	-0.254** (-1.98)	-0.149 (-1.02)
% CEO Ownership	-0.086 (-1.46)	-0.229** (-2.32)	-0.268** (-2.11)	-0.328** (-2.2)
Board Size	-0.087 (-1.45)	-0.028 (-0.48)	0.021 (0.38)	0.081 (1.53)
% Insiders	0.006 (0.01)	-0.824 (-1.28)	-0.978 (-1.5)	-0.288 (-0.4)
CEO Duality	-0.752*** (-2.64)	-0.652** (-2.51)	-0.428 (-1.52)	-0.643** (-2.15)
Institutional Own	0.159 (0.42)	-0.289 (-0.92)	-0.56* (-1.71)	-0.317 (-0.92)
Pseudo R ²	0.134	0.128	0.117	0.138
N	2609	2713	2841	2922
Turnovers	73	86	81	78

Panel B - Continued		Industry Adjusted Sales Growth			
		2002 - 2004	2003 - 2005	2004 - 2006	2005 - 2007
Intercept		-0.304 (-0.2)	1.638 (1.14)	0.163 (0.1)	0.854 (0.44)
Disclosure Quality		0.23** (2.18)	0.193** (2.02)	0.045 (0.48)	0.02 (0.22)
Accounting Performance		-0.327 (-0.56)	-0.874 (-1.3)	-0.729 (-0.97)	-0.871 (-1.06)
Stock Return		-2.127*** (-4.49)	-1.782*** (-4.65)	-1.282*** (-3.52)	-1.615*** (-2.95)
Restatement		1.311** (2.17)	1.148* (1.9)	1.119* (1.96)	0.344 (0.41)
ln(Assets)		0.13 (0.81)	0.217 (1.38)	0.185 (1.32)	0.032 (0.26)
Debt/Assets		0.867 (1.35)	0.237 (0.34)	-0.087 (-0.13)	-0.177 (-0.3)
Ind. Median MB		-1.491** (-2.55)	-0.85* (-1.78)	0.572 (1.22)	0.098 (0.14)
Herfindahl Index		-0.781 (-0.28)	-2.713 (-1)	-1.549 (-0.63)	-3.001 (-1.08)
CEO Tenure		-0.018 (-0.61)	-0.022 (-1.06)	-0.005 (-0.28)	0.007 (0.35)
CEO Age		0.005 (0.28)	-0.007 (-0.47)	-0.03* (-1.75)	-0.025 (-1.48)
ln(Comp.)		-0.314 (-1.62)	-0.655*** (-3.3)	-0.601*** (-3.31)	-0.585*** (-3.09)
% CEO Ownership		-0.378*** (-2.91)	-0.427*** (-2.62)	-0.045 (-0.91)	-0.042 (-1.01)
Board Size		0.016 (0.25)	-0.025 (-0.37)	0.007 (0.11)	0.093 (1.46)
% Insiders		-0.37 (-0.45)	0.654 (0.78)	0.729 (0.72)	0.968 (1.05)
CEO Duality		-0.87*** (-2.95)	-0.685** (-2.41)	-0.516* (-1.83)	-0.139 (-0.51)
Institutional Own		-0.126 (-0.34)	0.034 (0.1)	-0.092 (-0.28)	-0.335 (-1.09)
Pseudo R ²		0.15	0.145	0.094	0.092
N		2950	2895	2859	2621
Turnovers		68	71	69	73

Significant p-values of <0.01, 0.05, and 0.10 are denoted by ***, **, and * respectively.

Vita

Ryan Peterson was born on October 12th, 1982 in Blythesville, AR. He received his Bachelor of Science in Applied Mathematics in 2005. He joined the Ph.D. program at the University of Missouri at Columbia in 2006 and will be receiving his Ph.D. in Accountancy in 2010. He will join the faculty at the Arkansas State University as an Assistant Professor in Accounting in July, 2010.