The impact of reputation on a firm's financial and non-financial outcomes

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Publication Date:
2019

DOI:

License:

UNIVERSITY OF NEW SOUTH WALES

The Impact of Reputation on a Firm's Financial and Non-Financial Outcomes

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A thesis submitted in fulfilment of the requirements for the degree of

Doctor of Philosophy

Supervised by Professor Gary S. Monroe and Dr Youngdeok Lim

School of Accounting

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Jan 2019

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Abbreviation for degree as give in the University calendar	:	**PhD**
Faculty	:	**UNSW Business School**
School	:	**School of Accounting**
Thesis Title	:	**The Impact of Reputation on a Firm's Financial and Non-Financial Outcomes**

Abstract 350 words maximum: (PLEASE TYPE)

This thesis examines the role of reputation on a firm's financial and non-financial outcomes through three studies. The first study examines whether the reputation incentives of busy audit committee members improve their effectiveness in monitoring the financial reporting process. I find that firms with a larger proportion of audit committee members where the membership is the most prominent are associated with higher financial reporting quality and more effective monitoring of internal control. Additional analyses reveal that my results are driven by audit committee members' reputation incentives rather than independent non-audit committee members' reputation incentives. I conclude that audit committee member reputation is a strong incentive for audit committee members, such that it influences their monitoring effectiveness over the financial reporting process.

The second study explores whether the reputation incentive offered by a firm's directorship has an impact on a firm's CSR performance. I find that firms with a larger proportion of independent directors where the directorship is the most prominent are associated with better CSR performance. The positive effect of independent directors' high reputation incentives on CSR performance is driven by better performance in CSR strengths rather than CSR concerns, and by better performance in both stakeholder CSR and third-party CSR. The effect is more pronounced in an environment where firms face less external pressure to perform CSR, and in firms with a less diverse board. Overall, my results suggest that independent directors have incentives to develop their reputation as a socially responsible director.

The third study investigates the role of corporate reputation in enhancing the timeliness of external audits and earnings announcements. Changes in audit and financial reporting regulations have resulted in longer audit delay, leading to an increase in firms that announce earnings prior to audit completion, both of which have implications on the quality of financial information. I find that corporate reputation is negatively associated with audit report lag and the likelihood of firms announcing earnings after audit completion. I document important benefits in the form of timelier audits and earnings announcements derived from developing and maintaining a good corporate reputation.

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Status	*Published*		*Accepted and In press*		*In progress (submitted)*	**x**
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ACKNOWLEDGEMENT

I owe my deepest gratitude to my parents who have inspired me and encouraged me to go my own way. I thank them for their undivided support. I am also grateful to my sisters Eileen and Ethel, and my partner Kevin, for their love, understanding and support.

ABSTRACT

This thesis examines the role of reputation on a firm's financial and non-financial outcomes through three studies. Specifically, this thesis examines the impact of reputation on a firm's financial reporting quality and internal control systems, as well as a firm's corporate social responsibility (CSR) performance and financial reporting timeliness.

The first study examines whether the reputation incentives of audit committee members improve their effectiveness in monitoring the financial reporting process. Prior research assumes that busy audit committee members allocate their effort proportionately across all memberships that they serve on. However, I find that audit committee members with multiple audit committee memberships tend to focus their attention on the memberships that provide them with the greatest reputation incentives. Specifically, firms with a larger proportion of audit committee members where the membership is the most prominent are associated with higher financial reporting quality and more effective monitoring of internal control. Additional tests reveal that my results are driven by audit committee members' reputation incentives rather than independent non-audit committee members' reputation incentives. I conclude that audit committee member reputation is a strong incentive for audit committee members, such that it influences their monitoring effectiveness over the financial reporting process.

The second study explores whether the reputation incentive offered by a firm's directorship has an impact on a firm's CSR performance. I find that firms with a larger proportion of independent directors where the directorship is the most prominent are associated with better CSR performance. Specifically, the positive effect of independent directors' high reputation incentives on CSR performance is mainly driven by better performance in socially acceptable activities rather than socially unacceptable activities,

and by better performance in both stakeholder CSR and third-party CSR. Further, I find that the effect is more pronounced in an environment where firms face less external pressure to perform CSR, and in firms with a less diverse board. I find consistent results when using exogenous shocks to the reputation incentives of independent directors. Overall, my results are consistent with my conjecture that independent directors have incentives to develop their reputation as a socially responsible director.

The third study investigates the role of corporate reputation in enhancing the timeliness of external audit and earnings announcement. Changes in audit and financial reporting regulations have resulted in longer audit delay, leading to an increase in firms that announce earnings prior to audit completion, both of which have implications for the quality of financial information. I find that corporate reputation is negatively associated with audit report lag and the likelihood of firms announcing earnings after audit completion. My results are robust to a variety of tests to rule out endogeneity concerns and alternative explanations. I document important benefits in the form of timelier audits and earnings announcements derived from developing and maintaining a good corporate reputation. My findings have implications for client firms and auditors, particularly given the challenges faced by auditors in terms of more onerous audit requirements and shorter filing deadlines, as well as demands for timelier information faced by firms.

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LIST OF ABBREVIATIONS

AAER	Accounting and Auditing Enforcement Release
AS	Auditing Standards
BRC	Blue Ribbon Committee
CEO	Chief Executive Officer
CFO	Chief Financial Officer
CSO	Chief Sustainability Officer
CSR	Corporate Social Responsibility
IBES	International Brokers' Estimate System
ISS	Institutional Shareholder Services
KLD	Kinder, Lydenberg & Domini
MA List	*Fortune's Most Admired Companies List*
OLS	Ordinary Least Squares
PCAOB	Public Company Accounting Oversight Board
PSM	Propensity Score Matching
PwC	PricewaterhouseCoopers
SAS	Statement on Auditing Standards
SEC	Securities and Exchange Commission
SOX	The Sarbanes-Oxley Act of 2002
U.S.	United States
VIF	Variance Inflation Factor

1.1 Overview

Using game theory, early research identifies the notion of "reputation effect" or "reputation mechanism" as the impact of reputation concerns on a player's actions and behavior (Wilson 1985; Weigelt and Camerer 1988). In a repeated game, a player is aware that other players use his or her past behavior to form beliefs about his or her "type" (or reputation), which affects their reactions to his or her actions. Understanding this reputation effect, the player strategically selects his or her actions so as to earn future rents and maximize his or her utility. Analytical research provides strong support for the theory that reputation effect can generate actions and behaviors that are in the interest of the principal, even in the absence of a formal contract or monitoring (e.g., Fama 1980; Stiglitz and Weiss 1983; Diamond 1989, 1991). Further, empirical research supports this notion by demonstrating how the actions of business professionals, such as directors (Masulis and Mobbs 2014; Sila, Gonzalez, and Hagendorff 2017; Huang, Lobo, Wang, and Zhou 2018), analysts (Fang and Yasuda 2009; Cowen, Groysberg, and Healy 2006; Clarke, Khorana, Patel, and Rau 2007), underwriters (Carter and Manaster 1990; Carter, Dark, and Singh 1998) and auditors (Reynolds and Francis 2001), are influenced by reputation concerns.

The reputation effect is evident in the labor market for corporate directors. Prior research identifies a director's reputation as a powerful incentive that motivates a director to be an effective monitor of management because reputation influences his or her marketability and opportunities to gain additional directorships in the future (Fama 1980; Fama and Jensen 1983b). Consistent with this argument, directors with strong performance and a reputation of being an active monitor are rewarded by the labor market

for directorships (Eminet and Guedri 2010; Fich 2005; Brickley, Linck, and Coles 1999).

Given the monitoring role of independent directors, prior research documents evidence

of a reputation penalty for independent directors in the event of oversight failures,

including loss of current and future directorships, being named in shareholder lawsuits

and receiving negative recommendations from proxy advisory firms (Fich and Shivdasani

2007; Srinivasan 2005; Johnstone, Li, and Rupley 2011; Brochet and Srinivasan 2014).

Following the enactment of the Sarbanes-Oxley Act (SOX) in the United States

(U.S.), more emphasis is placed on the monitoring effectiveness of audit committees.[1]

Thus, monitoring failures of audit committees are highly visible. Given that audit

committees have primary responsibility over the financial reporting process, the

reputation penalties to audit committee members for such failures can be greater than

non-audit committee members. For example, Srinivasan (2005) finds that relative to

outside directors, the loss of directorships is greater for audit committee members

following an earnings restatement. Further, Brochet and Srinivasan (2014) document that

the likelihood of being named as defendants in securities class action lawsuits is greater

for audit committee members.

The reputation effect also exists at the firm-level. Fombrun (1996) defines firm

reputation as "a perceptual representation of a company's past actions and future

prospects that describe the firm's overall appeal to all its key constituents when compared

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[1]   An audit committee is an operating committee of the board of directors charged with oversight of the
      financial reporting process, the audit process, the company's system of internal controls and
      compliance with laws and regulations. SOX requires that the audit committee must be composed of
      independent outside directors (Section 301), with at least one qualifying as a "financial expert"
      (Section 407). Further, the independent audit committee, rather than management, is responsible for
      the appointment and compensation of the external auditor (Section 301), as well as the approval of
      audit and non-audit services (Section 201). The audit committee reviews significant accounting and
      reporting issues, as well as the results of an audit, with management and external auditors. The
      committee also meets separately with the external auditor to discuss matters that the committee or
      auditor believes should be discussed privately.

to other leading rivals". Fombrun and Shanley (1990) describe the firm reputation building process where stakeholders gather and disseminate important information regarding a firm's activities that they obtained either directly from the firm or through other information channels. As information about a firm's activities spread, individual interpretations aggregate into collective judgments that develop into reputational orderings of firms (DiMaggio and Powell 1983). These definitions highlight the summative nature of firm reputation that reflects the perceptions of a group of stakeholders on a firm (Fombrun and Shanley 1990).

Good reputation is an invaluable asset to a firm. According to the resource-based theory developed by Wernerfelt (1984) and Barney (1991), firms with assets that are valuable, rare and not easily replicable by others enjoy competitive advantages over other firms. Good firm reputation is an example of such an asset due to its potential for value creation and its intangible attribute that makes imitation by competing firms difficult (Roberts and Dowling 2002). Consistent with this view, numerous studies reinforce the strategic value and benefits for firms with a good reputation (e.g., Fombrun and Shanley 1990; Roberts and Dowling 2002; Cao, Myers, and Omer 2012; Cao, Myers, Myers, and Omer 2015; Herremans, Akathaporn, and McInnes 1993; Podolny 1993).

Given the significance and prevalence of the reputation effect, this thesis examines the role of reputation on a firm's financial and non-financial outcomes. Specifically, this thesis examines the impact of reputation on a firm's financial reporting quality and internal control systems, as well as a firm's corporate social responsibility (CSR) performance and financial reporting timeliness. The remainder of this chapter is structured as follow: Section 1.2 explains the objectives and motivations of this thesis,

Section 1.3 discusses the contributions of this thesis, and Section 1.4 presents the structure of the thesis.

1.2 Objectives and Motivations of the Thesis

This thesis presents three empirical studies in Chapters 2, 3, and 4, which are designed to enrich our understanding of the impact of reputation on various firm outcomes. I begin by investigating reputation effect at the audit committee-level. The first study examines the impact of audit committee members' reputation incentives on monitoring the financial reporting process. Next, I investigate reputation effect at the board-level. The second study examines the impact of independent directors' reputation incentives on enhancing CSR performance. Finally, I investigate reputation effect at the firm-level. The third study examines the impact of corporate reputation on the timeliness of external audit and earnings announcement. It is important to note that the three types of reputation in each of these studies are interrelated. Specifically, high reputation firms are also likely to have high reputation boards and audit committees, which act as a source of incentive for independent directors and audit committee members. I outline the objectives and motivations of each study below.

1.2.1 Study 1 – The Impact of Audit Committee Members' Reputation Incentives on Monitoring the Financial Reporting Process (Chapter 2)

Following the enactment of SOX, the composition of audit committees has significantly improved, resulting in better audit committee oversight over the financial reporting process (e.g., Naiker and Sharma 2009; Krishnan and Visvanathan 2008; Cohen, Hoitash, Krishnamoorthy, and Wright 2014; Dhaliwal, Naiker, and Navissi 2010; Hoitash and Hoitash 2009). However, the audit committee independence and financial expertise requirements of SOX reduced the number of directors qualified to serve on an

audit committee (Linck, Netter, and Yang 2009). As a result, concerns have been expressed about directors becoming too busy from being over-boarded (Institutional Shareholder Services [ISS] 2015a, 2015b). Indeed, prior research finds that audit committees with busy directors are less effective in their role of monitoring financial reporting quality (Sharma and Iselin 2012; Tanyi and Smith 2015). However, these studies assume that audit committee members allocate their oversight effort equally across all boards that they serve on and do not consider whether the differential reputation value offered by different firms influences the monitoring effectiveness of audit committee members with multiple audit committee memberships.

Therefore, my first study examines whether, when an audit committee member has multiple audit committee memberships, audit committee memberships with high reputation incentives are associated with audit committee members' effectiveness in monitoring the financial reporting process. The underlying notion is based on a director's incentive to build his or her reputation as a diligent monitor of management (Fama 1980; Fama and Jensen 1983b). Masulis and Mobbs (2014) further argue that these reputation incentives are greatest in a director's most visible and prestigious directorship. Specifically, directors with multiple directorships are likely to allocate more effort to the directorships that offer greater visibility and prestige, relative to those that offer less visibility and prestige, so that they can achieve maximum reputation value.

In the post-SOX period, the monitoring responsibilities of audit committees have increased considerably. Since audit committee members have limited time and capacity, the multiple commitments arising from memberships on numerous audit committees may reduce their effectiveness in performing their monitoring duties over the financial reporting process (Sharma and Iselin 2012; Tanyi and Smith 2015). To alleviate the

potential reputation damage resulting from such ineffectiveness, audit committee members are likely to prioritize their most prestigious audit committee membership, where their reputation effects are maximized.

However, while reputation incentives have been found to induce independent directors to allocate their effort across directorships according to their relative prestige (Masulis and Mobbs 2014, 2016; Huang et al. 2018; Sila et al. 2017), similar reputation incentive effects may not be found in the context of audit committees. Following SOX, more emphasis is placed on the governance role of audit committees. As such, the negative consequences that could arise from monitoring failures of audit committees are highly visible and the penalties to audit committee members are considerable (Fich and Shivdasani 2007; Srinivasan 2005; Johnstone et al. 2011; Brochet and Srinivasan 2014). As a result, audit committee members may ensure effective monitoring over all their audit committee memberships, regardless of the relative reputation benefit that each membership offers. Therefore, I address the following research question in Study 1:

RQ1: For audit committee members with multiple audit committee memberships, are audit committee members' reputation incentives associated with the audit committee's effectiveness in monitoring the financial reporting process?

1.2.2 Study 2 – The Impact of Independent Directors' Reputation Incentives on Enhancing CSR Performance (Chapter 3)

Recent literature suggests that independent directors with multiple directorships prioritize their time and effort differentially based on each directorship's relative prominence and prestige. As such, independent directors' most prominent firms benefit more from their abilities, thus resulting in better financial outcomes (Masulis and Mobbs 2014, 2016; Huang et al. 2018; Sila et al. 2017). While the impact of independent

directors' reputation incentives on a firm's financial performance is well-documented, it is unclear how they affect a firm's non-financial performance. This is because independent directors' incentives to enhance non-financial performance may be different from those of financial performance. Managers traditionally emphasize more on financial performance because they are often assessed based on financial measures (Eccles 1991) and because they need to maximize profitability and shareholder value (Friedman 1970). Therefore, the observed financial implications arising from independent directors' reputation incentives in prior research are not generalizable to non-financial outcomes.

My second study examines whether the differential reputation incentive offered by a firm's directorship has an impact on a firm's non-financial performance. Specifically, I investigate whether independent directors with multiple directorships prioritize the CSR performance of their most prominent and reputable directorship. While prior research suggests that independent directors have incentives to undertake CSR activities to enhance their reputations (Mallin and Michelon 2011; Johnson and Greening 1999), these studies do not consider the fact that the multiple directorships an independent director serves offer differing levels of incentives to the director. As such, I add to the literature by investigating whether the reputation incentives of independent directors are associated with a firm's CSR performance, which is a pertinent issue for both firms and stakeholders.

Prior studies suggest that independent directors care about their reputation as a socially responsible director for at least three reasons. First, independent directors can use CSR to develop their professional and personal reputation (Mallin and Michelon 2011; Johnson and Greening 1999), which enhances their value in the labor market. Second, independent directors face significant reputational penalties if the firms that they serve are involved in CSR controversies (Hickman, Korkeamäki, and Meyer 2017). Third, the

capital market is increasingly demanding greater CSR effort from firms and their executives (Noked 2013). Further, prior research also suggests that large and more prominent firms offer directors greater visibility, prestige, compensation and a higher likelihood of obtaining additional directorships (e.g., Adams and Ferreira 2008; Ryan and Wiggins 2004; Yermack 2004). Based on these studies, I argue that the incentives to be viewed as a socially responsible director is likely to be greatest in the independent director's most prestigious board, where their reputation effects are maximized. Thus, I expect that firms with a higher proportion of independent directors for whom this is the most reputable directorship are associated with better CSR performance.

However, following the growing significance and prevalence of CSR practices, independent directors may also focus on the CSR performance of their less prominent boards. Further, independent directors may face reputation penalties caused by potential spillover effects resulting from CSR lapses in their less prominent firms. Thus, there is a possibility that independent directors' reputation incentives do not influence CSR performance. Therefore, I address the following research question in Study 2:

RQ2: For independent directors with multiple directorships, are independent directors' reputation incentives associated with CSR performance?

1.2.3 Study 3 – The Impact of Corporate Reputation on the Timeliness of External Audit and Earnings Announcement (Chapter 4)

My third study focuses on the role of corporate reputation in enhancing the timeliness of external audit and earnings announcement. In an effort to provide investors with timelier information, the U.S. Securities and Exchange Commission (SEC) issued a set of regulatory requirements to substantially reduce the Form 10-K filing deadline for U.S. companies (SEC 2002b, 2004, 2005). At the same time, various new auditing

standards were introduced that significantly expanded the scope of audit requirements (Krishnan and Yang 2009; Bronson, Hogan, Johnson, and Ramesh 2011), thus lengthening the time required for auditors to complete the audit. These regulatory developments raise the concern that the pressure to perform more work in a shorter time frame will result in lower financial reporting and audit quality (e.g., Bryant-Kutcher, Peng, and Weber 2013; Doyle and Magilke 2013; Lambert, Jones, Brazel, and Showalter 2017).

Furthermore, since earnings announcements are not required to be audited, another consequence arising from the longer audit delay is a substantial increase in the number of firms that issue their earnings announcements prior to completion of the year end audit (Krishnan and Yang 2009; Bronson et al. 2011; Schroeder 2016). Firms are increasingly trading off the market demand for timeliness against a potential reduction in reliability (Krishnan and Yang 2009; Bronson et al. 2011; Schroeder 2016), so as to avoid the negative consequences associated with deviations in expected disclosure behavior (Einhorn and Ziv 2008; Givoly and Palmon 1982; Kross 1981; Bagnoli, Kross, and Watts 2002). However, studies have shown that earnings announcement disclosure, market reliance, and financial reporting quality are negatively affected if earnings are announced prior to audit completion (Schroeder 2016; Marshall, Schroeder, and Yohn 2017).

The above trends emphasize the importance of identifying the determinants of financial reporting and audit timeliness, since long audit delay and unaudited earnings announcement have implications on the quality and usefulness of financial information (Blankley, Hurtt, and MacGregor 2014; Marshall et al. 2017; Bronson et al. 2011). Therefore, the first objective of my third study is to examine whether corporate reputation is associated with the timeliness of external audit. On the one hand, economic dependence

theory suggests that auditors prioritize their high reputation clients, thus resulting in timelier external audit for high reputation clients. On the other hand, reputation protection theory predicts that auditors may act more conservatively when auditing prominent firms so as to protect their reputation and avoid litigation, thus resulting in longer audit delay. Based on these competing arguments, the first research question I address in Study 3 is as follows:

RQ3a: Does corporate reputation have an association with external audit timeliness?

The second objective of my third study is to examine whether corporate reputation influences the timing of earnings announcements. On the one hand, high reputation firms may announce earnings prior to completion of the audit. This is because the need for audit completeness at the earnings announcement date is likely to be less important for high reputation firms. High reputation firms highlight credibility, trust, and consistency, which demonstrates their commitment to work in the interest of stakeholders and to provide reliable earnings announcements even before the audit is completed. Further, given the negative consequences associated with deviations from expected disclosure behavior (Einhorn and Ziv 2008; Givoly and Palmon 1982; Kross 1981; Bagnoli et al. 2002), high reputation firms are likely to maintain their reputation by ensuring timely and consistent earnings announcements. On the other hand, due to the greater downside risk of reputational damage in the event of an earnings revision, high reputation firms may act more conservatively by waiting until completion of the audit before announcing their earnings. Based on these competing arguments, the second research question I address in Study 3 is as follows:

RQ3b: Does corporate reputation have an association with the likelihood of firms announcing earnings after audit completion?

1.3   Contributions of the Thesis

1.3.1 Contributions to the Literature

This thesis contributes to the existing literature in the following ways. First, I contribute to recent literature on the consequences of independent directors' reputation incentives. Prior research documents how independent directors' varying reputation incentives impact various aspects of a firm's financial outcomes (Masulis and Mobbs 2014, 2016; Huang et al. 2018; Sila et al. 2017). I extend this line of research by demonstrating that audit committee members are also influenced by the relative reputation value that their respective audit committee memberships offer, which, in turn, affects their monitoring effectiveness over the financial reporting process (Study 1). In addition, I demonstrate that independent directors' reputation incentives not only affect a firm's financial performance, but also influence a firm's non-financial performance in the context of CSR (Study 2).

Second, I contribute to the literature that primarily focuses on examining the impact of traditional measures of audit committee characteristics, such as expertise, size, or independence, on audit committee monitoring effectiveness (Study 1) (e.g., Cohen et al. 2014; Dhaliwal et al. 2010; Hoitash and Hoitash 2009). I also contribute to prior research that investigates board characteristics, particularly board independence and board diversity, on CSR performance (Study 2) (e.g., Bear, Rahman, and Post 2010; Harjoto, Laksmana, and Lee 2015; Zhang, Zhu, and Ding 2013). My findings emphasize the importance of considering the varying reputation incentives of individual directors, rather than relying solely on attributes such as independence, expertise, or diversity. This

differentiation is especially important in the post-SOX era when the presence of independent, expert and women directors have considerably increased (Linck et al. 2009; Dalton and Dalton 2010).

Third, I contribute to prior research on an auditor's financial incentives that predominantly examines the impact of a client's relative economic importance on auditor independence (e.g., Li 2009; Chen, Sun, and Wu 2010; Chung and Kallapur 2003; Chi, Douthett, and Lisic 2012). I extend this literature by investigating how an auditor's reputation incentives influence external audit timeliness (Study 3). My results suggest that in addition to financial benefits, auditors value the reputation of their clients by ensuring timelier audits for their high reputation clients.

Finally, the effects of corporate reputation on a firm's voluntary disclosures are largely unknown. I contribute to prior research by investigating how corporate reputation influences the timing of earnings announcement disclosure (Study 3). Further, I extend recent literature that investigates the importance of audit completeness at earnings announcement date (Bronson et al. 2011; Schroeder 2016; Marshall et al. 2017; Bhaskar, Hopkins, and Schroeder 2017; Haislip, Myers, Scholz, and Seidel 2017) by providing evidence that corporate reputation has implications for a firm's decision on whether to announce earnings before or after completion of the audit.

1.3.2 Contributions to Practice

My findings also have implications for practice. First, my findings emphasize the importance for firms to consider the relative reputation incentives of individual directors when making appointments to the board. This is because independent directors' (audit committee members') differential reputation incentives influence the time and energy they expend on each of their respective directorships (audit committee memberships),

which have implications on a firm's CSR performance (financial reporting process). This consideration is particularly crucial in the post-SOX period where concerns have been raised about directors becoming too busy from being over-boarded (ISS 2015a, 2015b).

Second, I examine more recent developments in the area of timeliness in the period subsequent to the introduction of the accelerated filing deadlines, various accounting and auditing standards, and regulations such as SOX. My findings highlight potential benefits in the form of timelier external audit and earnings announcement derived from developing and maintaining a good corporate reputation. Further, my findings enhance our understanding of factors that impact audit report lag and earnings announcement timing. These issues are of significant interest and relevance to auditors, who are concerned with reducing audit report lag, and to managers, investors and regulators, who are interested in improving the timeliness of financial reporting information.

1.4   Structure of the Thesis

Figure 1.1 illustrates the structure of the thesis. The three research questions outlined above are addressed in Chapters 2, 3, and 4 respectively. Chapter 2 presents the first study of this thesis, which examines the impact of audit committee members' reputation incentives on monitoring the financial reporting process. In this chapter, I address the research question on whether the differential reputation incentives offered by different firms influence audit committee members' effectiveness in overseeing a firm's financial reporting quality and internal control systems.

Chapter 3 presents the second study of this thesis, which examines the impact of independent directors' reputation incentives on CSR performance. In this chapter, I address the research question on whether the differential reputation incentives offered by

different firms impact independent directors' effectiveness in enhancing a firm's CSR performance.

Chapter 4 presents the third study of this thesis, which examines the role of corporate reputation on the timeliness of external audit and earnings announcement. In this chapter, I address the research questions on whether corporate reputation is associated with external audit timeliness and the likelihood of firms announcing earnings after audit completion.

Chapter 5 summarizes the three studies and their main findings and identifies their limitations. Given these limitations, avenues for future research are suggested to conclude this thesis.

Figure 1.1: The Structure of the Thesis

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                    │  Chapter 1: Introduction      │
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Chapter 2: The Impact of Audit Committee Members' Reputation Incentives on Monitoring the Financial Reporting Process

RQ1: For audit committee members with multiple audit committee memberships, are audit committee members' reputation incentives associated with the audit committee's effectiveness in monitoring the financial reporting process?

Chapter 3: The Impact of Independent Directors' Reputation Incentives on Enhancing CSR Performance

RQ2: For independent directors with multiple directorships, are independent directors' reputation incentives associated with better CSR performance?

Chapter 4: The Impact of Corporate Reputation on the Timeliness of External Audit and Earnings Announcement

RQ3a: Does corporate reputation have an association with external audit timeliness?

RQ3b: Does corporate reputation have an association with the likelihood of firms announcing earnings after audit completion?

Chapter 5: Conclusion

CHAPTER 2: Study 1 – The Impact of Audit Committee Members' Reputation Incentives on Monitoring the Financial Reporting Process

2.1   Introduction

The Sarbanes-Oxley Act of 2002 (SOX) significantly strengthened the governance role of audit committees in the financial reporting process.[2] Subsequent to the enactment of SOX, several studies have investigated the impact of audit committee composition on its monitoring effectiveness.[3] Overall, these studies find that enhanced audit committee responsibilities following SOX have improved audit committee composition, resulting in better audit committee oversight and financial reporting quality. However, the audit committee independence and financial expertise requirements of SOX decreased the pool of suitably qualified directors that could serve on an audit committee (Linck et al. 2009). As a result, many directors have become very busy by serving on multiple audit committees (Tanyi and Smith 2015). Prior research finds that audit committees with busy directors are less effective in their role of monitoring financial reporting quality (Tanyi and Smith 2015; Sharma and Iselin 2012). However, these studies examine whether merely serving on multiple audit committees results in less effective monitoring of

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[2]   SOX changed the composition of audit committees, such that each member of the committee is required to be independent (Section 301), and at least one member must be a "financial expert" (Section 407). In addition, the independent audit committee, rather than management, is responsible for the appointment and compensation of the external auditor (Section 301), as well as the approval of audit and non-audit services (Section 201).

[3]   For example, prior research explores the association between audit committee characteristics and audit committee supervision over a firm's financial reporting quality, specifically with respect to internal control (Krishnan 2005; Naiker and Sharma 2009), accounting conservatism (Krishnan and Visvanathan 2008), restatements (Cohen et al. 2014; Sharma and Iselin 2012), the length of time required to disclose restatements (Schmidt and Wilkins 2013), and accruals quality (Dhaliwal et al. 2010; Cohen et al. 2014). In addition, Cohen et al. (2014), Naiker et al. (2013), and Hoitash and Hoitash (2009) examine how various audit committee characteristics influence the audit committee's external audit oversight function in the post-SOX period.

financial reporting quality and have not investigated whether the differential reputation incentives offered by different firms have an impact on the monitoring effectiveness of directors with multiple audit committee memberships.

While prior research predominantly considers how audit committee composition and audit committee busyness affect audit committee monitoring effectiveness, my study adds to the literature by investigating another important determinant of audit committee monitoring effectiveness: the reputation incentives of audit committee members. Specifically, I examine whether, when an audit committee member has multiple audit committee memberships, audit committee memberships with higher reputation incentives affect audit committee members' effectiveness in monitoring the quality of financial reports and overseeing the internal control systems. The underlying notion is based on directors' incentives to develop their reputation as a diligent monitor of management so as to increase their value in the labor market and to secure prospective directorships (Fama 1980; Fama and Jensen 1983b). The reputation incentives to be regarded as an esteemed director are higher in the director's most visible and prestigious directorship. Given that directors are often busy with multiple commitments, it is expected they will prioritize their work across various boards based on the directorships' relative visibility and prestige to achieve maximum benefits in terms of reputation value. This concept is based on the findings of Masulis and Mobbs (2014), who conclude that independent directors with multiple directorships distribute their time and effort disproportionately according to the directorship's relative attractiveness, and that director reputation represents a strong incentive for independent directors.

I focus on audit committee members and their crucial role in overseeing the financial reporting process. In the wake of various high-profile accounting scandals

worldwide, audit committees and external auditors are under heightened scrutiny from regulators, investors, and other capital market participants. In the post-SOX environment, more emphasis is placed on the monitoring effectiveness of audit committees over the external auditors. As a result, the oversight responsibilities of audit committees have significantly increased, placing a huge demand on audit committee members' limited time and energy. The challenging workload associated with memberships on multiple audit committees may compromise their ability to effectively fulfil their monitoring responsibilities over the financial reporting process (Sharma and Iselin 2012; Tanyi and Smith 2015). To mitigate the potential reputation damage that may arise from multiple memberships and the resulting ineffectiveness, audit committee members are likely to rationally allocate their time and effort to different audit committee memberships based on each membership's relative prestige.

However, while prior research documents independent directors' reputation incentive effects on firm performance, bank loan contracting and share price informativeness (Masulis and Mobbs 2014; Huang et al. 2018; Sila et al. 2017), I may not find similar reputation incentive effects in the context of audit committees. Given the greater emphasis on audit committees' governance role following SOX and the negative consequences that could arise from monitoring failures, such as loss of current and future directorships, being named in shareholder lawsuits and receiving negative recommendations from proxy advisory firms (Fich and Shivdasani 2007; Srinivasan 2005; Johnstone et al. 2011; Brochet and Srinivasan 2014), audit committee members may ensure effective monitoring over all their audit committee memberships, regardless of the relative reputation benefit that each membership offers. Therefore, I address the following research question:

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RQ1: For audit committee members with multiple audit committee memberships, are audit committee members' reputation incentives associated with the audit committee's effectiveness in monitoring the financial reporting process?

To address the research question, I first obtain information on directors on the boards of U.S. listed firms between 2007 and 2015 using the BoardEx database. Because my study focuses specifically on audit committee members with multiple audit committee memberships, my sample is comprised of firms where at least one audit committee member serves on the audit committees of two or more firms. I adopt two measures from prior research to proxy for audit committee members' reputation incentives. Following Masulis and Mobbs (2014, 2016), Huang et al. (2018), and Sila et al. (2017), my first proxy uses firm size based on market capitalization to construct a measure of an audit committee member's reputation incentive. Prior research suggests that directorships in larger firms provide higher reputation incentives to directors (e.g., Adams and Ferreira 2008; Ryan and Wiggins 2004; Yermack 2004). As such, each audit committee member's audit committee memberships are ranked based on each firm's market capitalization to proxy for the relative prominence of each membership. I then use the percentage of audit committee members for whom this audit committee membership is their highest ranked based on market capitalization as my first measure of audit committee members' varying reputation incentive effects at the firm-level (Masulis and Mobbs 2014). For my second measure of reputation incentive, following Erkens and Bonner (2013), I use an aggregate reputation measure based on a factor score that includes a firm's market capitalization, the number of firms the focal firm is connected to through common board members and a firm's corporate reputation scores from *Fortune's Most Admired Companies' List* (MA List). I use the percentage of audit committee members for whom this audit committee

membership is their highest ranked based on the aggregate reputation measure as my second test variable.

I examine two dimensions of effectiveness of the audit committee's monitoring responsibilities over the financial reporting process. The two dimensions are: (1) financial reporting quality, proxied by the likelihood of a financial restatement (Cohen et al. 2014; Sharma and Iselin 2012) and the likelihood of a substantial risk of a material misstatement, proxied by the F-Score constructed by Dechow, Ge, Larson, and Sloan (2011); and (2) internal control effectiveness, proxied by the likelihood of material weaknesses in internal control (Naiker and Sharma 2009; Chen, Knechel, Marisetty, Truong, and Veeraraghavan 2017) and the likelihood of remediating material weaknesses in internal control (Goh 2009).

To the extent that audit committee members with multiple audit committee memberships perceive their memberships differently based on the relative reputation value it provides, I predict and find that firms with a higher percentage of audit committee members for whom this audit committee membership is their highest ranked are associated with a lower likelihood of financial restatement, substantial risk of a material misstatement, and material weaknesses in internal control, as well as a higher likelihood of remediating material weaknesses in internal control. These results suggest that reputation is a powerful incentive for audit committee members, such that it impacts their monitoring effectiveness over financial reporting quality and internal control systems.

Given that directors' incentives are influenced by the external market for directorships and not by internal firm decisions, the issue of endogeneity is less critical (Masulis and Mobbs 2014). Nevertheless, I conduct five additional tests for robustness to address the concern that my results could be driven by firm size or other firm

characteristics. First, I adopt entropy balancing to reweight covariates such that there are no significant differences in the mean values of these covariates between treatment and control observations. Second, I adopt a propensity score matched sample based on firm size and other endogenously determined firm characteristics. Third, I adopt a matched sample based on firm size and industry. Fourth, I censor my sample of firms by annually excluding the largest and smallest 5 percent of firms based on market capitalization. Finally, I include both firm size and its squared value in my regression models. Under these tests, my results are qualitatively similar to my main results, thus reducing concerns of endogeneity or firm size effects. Additional tests reveal that my results are driven by audit committee members' reputation incentives rather than independent non-audit committee members' reputation incentives. These results highlight the fundamental role that audit committees play in monitoring the firm's financial reporting process. Finally, I find stronger effects for audit committee members' reputation incentives in firms with busier audit committee members.

My study provides several important contributions to the literature on audit committee monitoring effectiveness and directors' incentives. First, I provide evidence on the crucial roles that audit committee members' reputation incentives play in enhancing their monitoring effectiveness over the financial reporting process. These findings add to prior research on the determinants of audit committee monitoring effectiveness, which mainly focuses on examining the impact of audit committee characteristics, such as expertise, size, or independence, on audit committee monitoring effectiveness (e.g., Cohen et al. 2014; Dhaliwal et al. 2010; Hoitash and Hoitash 2009). In addition, my findings provide insights on how reputation incentives vary among audit committee memberships in different firms, and how this variation can influence audit

committee members' monitoring effectiveness for audit committee members with multiple audit committee memberships.

Second, my study contributes to the recent literature on the effects of independent directors' reputation incentives. Prior research finds that firms with a higher proportion of independent directors with multiple directorships who rank a directorship as more prestigious (based on firm size) are associated with better firm performance, lower forced Chief Executive Officer (CEO) turnover (Masulis and Mobbs 2014), better loan conditions, lower cost of borrowing (Huang et al. 2018), and greater share price informativeness (Sila et al. 2017). I add to this literature by providing evidence on the influence of an audit committee membership's relative prestige on the committee's monitoring effectiveness over the financial reporting process. SOX led to an increased emphasis on the governance role of the audit committee's oversight of the financial reporting process under Section 301 of SOX. My findings provide an understanding of audit committee members' reputation incentives as a key factor affecting their monitoring effectiveness in the financial reporting process.

Third, I contribute to our understanding of the monitoring effectiveness of busy audit committee members. Prior research on audit committee monitoring effectiveness examines the effects of multiple board seats under the assumption that directors allocate their monitoring effort equally across all their directorships (Sharma and Iselin 2012; Tanyi and Smith 2015). However, the results of my study imply that the monitoring effectiveness of audit committee members with multiple audit committee memberships is not uniform across all their audit committees. I find that their monitoring effectiveness over financial reporting quality and internal control systems is associated with the relative reputation incentives associated with their audit committee memberships.

Finally, my study contributes to a deeper understanding of the role of reputation in the financial markets. Prior studies find that the actions of business professionals, such as financial analysts, investment bankers, auditors, directors, and investors, are influenced by reputation concerns (Fang and Yasuda 2009; Masulis and Mobbs 2014; Reynolds and Francis 2001; Cao et al. 2012, 2015). My study extends these studies to audit committee members and shows that their monitoring effectiveness is also influenced by the relative reputation value that their respective audit committee memberships offer.

My findings have implications for practice. Busy directors and audit committee members is an important issue. Investors and proxy advisors are concerned that directors are not able to properly execute their duties if they are too busy as a result of being on multiple boards (ISS 2015a, 2015b). Concerns have been raised that audit committee members are finding it difficult to properly carry out their oversight function (Amato 2015). This concern is exacerbated in the post-SOX era when audit committee members hold multiple audit committee memberships. My results suggest that firms should consider the reputation incentives of audit committee members when making appointments to the audit committee. In particular, if the reputation incentives for the director being appointed to the audit committee are high for this audit committee, then they are more likely to be effective monitors of the financial reporting process. Auditors might also consider the reputation incentives of audit committee members when evaluating corporate governance and the monitoring effectiveness of the audit committee.

The remaining sections proceed as follows: Section 2.2 reviews prior research, Section 2.3 develops the hypotheses, Section 2.4 describes the research design, Section 2.5 presents the results, Section 2.6 discusses the results of additional tests, and Section 2.7 concludes the study.

2.2 Literature Review

2.2.1 Audit Committee Oversight Role

2.2.1.1 Theoretical Perspectives on Corporate Governance

Agency theory highlights the role of the board and the audit committee in monitoring management, who have incentives to act in their own self-interest at the expense of shareholders (Jensen and Meckling 1976). The agency view of the audit committee is illustrated in the findings of prior research such as Beasley, Carcello, Hermanson, and Neal (2009), Bédard, Chtourou, and Courteau (2004), Cohen, Hayes, Krishnamoorthy, Monroe, and Wright (2013), and Klein (2002a), where audit committee members provide effective supervision over management's financial reporting practices to reduce agency costs. This perspective underscores the pivotal role of the audit committee in ensuring the financial integrity of the firm. In particular, the audit committee has been described, among other things, as "one of the most reliable guardians of the public interest" (Levitt 2000), and "a catalyst for effective financial reporting" (Blue Ribbon Committee [BRC] 1999). The growing emphasis on audit committee responsibilities has resulted in an increased number of studies on audit committee effectiveness.[4] These studies typically examine the association between audit committee inputs, such as independence, expertise, diligence, and financial reporting outputs, including measures of financial reporting and audit quality.

In addition to agency theory, the literature provides other theoretical perspectives on the role of corporate governance, including resource dependence, managerial hegemony, and institutional theory (Cohen, Krishnamoorthy, and Wright 2008).

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[4] See DeZoort, Hermanson, Archambeault, and Reed (2002), DeFond and Francis (2005), and Bédard and Gendron (2010) for a review of the literature on audit committee effectiveness.

Resource dependence theory suggests that audit committee members with valuable non-accounting expertise can contribute toward audit committee effectiveness (Pfeffer and Salancik 1978; Boyd 1990). In line with this theory, Dhaliwal et al. (2010) and Cohen et al. (2014) find that business and industry knowledge of finance experts and industry experts, when combined with accounting expertise, provide incremental benefits to the audit committees. However, most studies do not find a significant association between supervisory expertise and audit committee effectiveness (e.g., Krishnan and Visvanathan 2008; Dhaliwal et al. 2010; Cohen et al. 2014; Defond, Hann, and Hu 2005).

The managerial hegemony perspective asserts that the board and its committees are under the control of management, and its existence is merely to fulfil regulatory requirements (Kosnik 1987). Based on this perspective, several studies examine the influence of management's power over the effectiveness of the audit committee. For example, Lisic, Neal, Zhang, and Zhang (2016) find that CEO power influences the substance of audit committee effectiveness, thus the appearance of having an effective audit committee does not necessarily result in effective monitoring. Specifically, the negative association between audit committee financial expertise and the incidence of internal control weaknesses weakens as CEO power increases. In addition, Beck and Mauldin (2014) find that Chief Financial Officers (CFOs) continue to have significant influence over audit fees even though the audit committee is contractually responsible for compensating external auditors.

Other studies investigate the impact of audit committee members' social ties on its monitoring effectiveness. Bruynseels and Cardinaels (2013) find that firms whose audit committee members have "friendship" ties to the CEO have a negative association with audit committee oversight quality, specifically in the form of purchasing fewer audit

services, more earnings management, a lower likelihood of issuing a going-concern opinion, and a lower likelihood of reporting internal control weaknesses. Similarly, Wilbanks, Hermanson, and Sharma (2017) find that audit committee members with social ties to the CEO are less vigilant as they expend less effort in assessing fraudulent financial reporting and management integrity.

Finally, institutional theory suggests that audit committees may emphasize ceremonial and symbolic roles, particularly in periods of ambiguous and uncertain environments. Cohen et al. (2013) find that the enactment of SOX led to a rule-based approach to accounting policy decision making by the audit committee and external auditor, so as to protect themselves from litigation. Furthermore, they find that the emphasis on financial expertise in the audit committee post-SOX at the expense of legal and business expertise may compromise the quality of financial disclosures. While Beasley et al. (2009) find that audit committee members are committed to provide effective monitoring over the financial reporting process, they also find evidence that reflects a more ceremonial role for the audit committee.

2.2.1.2 Prior Research in the Pre-SOX Period

Prior studies in the pre-SOX period provide evidence that a more independent, expert, and diligent audit committee is not only associated with better financial reporting practices, but also related to higher quality audits. For example, Klein (2002a) finds a negative association between audit committee independence and abnormal accruals. Similarly, Bédard et al. (2004) document that aggressive earnings management is negatively associated with the financial and governance expertise of audit committee members, with indicators of independence, and with the presence of a clear audit committee mandate. Yang and Krishnan (2005) report that quarterly earnings

management is lower for firms when audit committee members have greater governance expertise, lower share ownership and longer tenure.

In terms of restatements, Abbott, Parker, and Peters (2004) show that independent, diligent and expert audit committees exhibit a significantly negative association with the incidence of restatements. Agrawal and Chadha (2005) find that restatements are significantly and negatively associated with the presence of an independent audit committee financial expert. Focusing on compensation paid to audit committee members, Archambeault, Dezoort, and Hermanson (2008) find that both audit committee member's short-term and long-term stock option grants are positively related to restatements.

In addition, with respect to auditor selection, Abbott and Parker (2000) show that firms with audit committees that are independent and that meet at least twice per year are more likely to engage an industry-specialist auditor. Similarly, Lennox and Park (2007) find that independent audit committees enhance auditor independence by reducing the likelihood of appointing senior officers' former audit firms. In terms of auditor dismissal, Carcello and Neal (2003) provide evidence that audit committees with greater independence, higher governance expertise, and lower shareholdings in the firm are more effective in protecting auditors from dismissal following the issuance of first-time going concern reports. Further, in the area of auditor independence, Abbott, Parker, Peters, and Raghunandan (2003) document that fully independent audit committees that meet at least four times per year are associated with a lower ratio of non-audit fees to total fees, which indicates better auditor independence.

2.2.1.3 Prior Research in the Post-SOX Period

The series of corporate frauds that occurred in the early 2000s in the U.S. led to the enactment of SOX, which increased the severity of penalties for fraudulent financial

activity and expanded the oversight role of the boards of directors and the independence of external auditors. In particular, SOX reinforces the governance role of audit committees by imposing stringent composition requirements and greater oversight responsibilities. SOX changed the composition of audit committees, such that each member of the committee is required to be independent (Section 301), and at least one member must be a "financial expert" (Section 407). In addition, the audit committee's responsibilities and supervision over the external auditor were expanded. Section 301 of SOX requires audit committees to be directly responsible for the appointment, compensation and oversight of the external auditor. Section 201 requires audit committees to pre-approve all audit and non-audit services.

Hoitash and Hoitash (2009) examine the relation between audit committee characteristics and its extended responsibilities over the external auditor following the enactment of SOX. Their findings suggest that stronger audit committees (larger, more diligent and more expert audit committees) are associated with an increased level of assurance, an increased likelihood of appointing higher quality auditors, a reduced likelihood of auditor dismissals, reduced purchases of non-audit services, and improved auditor independence. Thus, their overall results suggest that enhanced audit committee responsibilities and independence in the post-SOX period contribute to auditor independence and audit quality. Similarly, based on interviews conducted with experienced directors, Cohen et al. (2013) find that SOX has positively impacted the monitoring role of the audit committee and the quality of financial reporting.

Given that SOX requires audit committees to be comprised only of independent directors, research on audit committee effectiveness in the post-SOX period predominantly focuses on audit committee expertise. Under Section 407 of SOX, audit

committees of public firms are required to include at least one financial expert on the audit committee. SOX initially proposed a narrow definition of financial expert as someone with experience in "preparing or auditing financial statements" (accounting expert). However, the definition was later expanded by the SEC to include persons with expertise in analysing or evaluating financial statements (finance expert) or expertise in supervising the preparation of financial statements (supervisory expert) (SEC 2003a).

The definition of a financial expert led to research on whether accounting versus non-accounting financial expertise on audit committees have different effects on monitoring effectiveness. Findings from several studies suggest that the positive impact of financial expertise on audit committee monitoring effectiveness is most likely driven by accounting financial expertise. For example, Krishnan and Visvanathan (2008) document that accounting expertise is positively associated with accounting conservatism, while non-accounting expertise is not. Similarly, Schmidt and Wilkins (2013) find that financial expertise on the audit committee shortens the length of time required to disclose financial statement restatements, but only when such expertise relates specifically to accounting. Dhaliwal et al. (2010) find that business and industry knowledge possessed by finance experts can complement the domain-specific knowledge of accounting experts to promote accruals quality. By contrast, business acumen held by supervisory experts does not have a similar effect.

While various studies find that the presence of a financial expert on the audit committee improves financial reporting outcomes (Cohen et al. 2014; Dhaliwal et al. 2010), other studies find that accounting financial experts have lower status than other types of directors, thus resulting in a greater reluctance by high status firms to appoint them (Erkens and Bonner 2013). Badolato, Donelson, and Ege (2014) find that the low

relative status of audit committee financial experts could result in higher levels of earnings management.

In addition to financial expertise, recent research explores the industry expertise and legal expertise of audit committee members. Cohen et al. (2014) find that industry expertise, when combined with accounting expertise, improves the effectiveness of the audit committee in monitoring the financial reporting process, as indicated by a lower likelihood of restatement, lower discretionary accruals, higher audit fees, and lower non-audit fees. Krishnan, Wen, and Zhao (2011) find that the proportion of audit committee members with legal expertise is associated with higher financial reporting quality, even after controlling for the positive effect of accounting expertise.

Studies also investigate the presence of affiliated versus non-affiliated former audit partners on the audit committee following the SEC's (2003) requirement of a three-year "cooling-off" period for appointing audit firm alumni as independent directors (Naiker, Sharma, and Sharma 2013; Naiker and Sharma 2009). In particular, Naiker and Sharma (2009) show that both affiliated and non-affiliated former audit partners on the audit committee are associated with more effective monitoring of internal controls and financial reporting. Naiker et al. (2013) further demonstrate that affiliated and non-affiliated former audit partners on the audit committee do not result in greater non-audit services being purchased from the auditor; instead, non-audit services purchased from the auditor decrease following their appointment to the audit committee. These results suggest that the "cooling-off" rule applying to affiliated former audit partners may be unwarranted.

Dhaliwal et al. (2010), Sharma and Iselin (2012), and Tanyi and Smith (2015) examine how various personal attributes of audit committee members, such as their

independence, multiple directorships, tenure and share ownership, affect financial reporting quality. Dhaliwal et al. (2010) find that accruals quality is positively related to audit committee accounting experts who are independent, have fewer directorships, and have shorter tenure in their firms. Sharma and Iselin (2012) suggest that audit committee members serving on multiple boards may be too overstretched to effectively perform their monitoring responsibilities, and that members with longer tenure may not exercise independent judgments. Tanyi and Smith (2015) extend Sharma and Iselin (2012) by providing evidence that the negative effect of multiple audit committee directorships on financial reporting quality applies only to audit committee chairs and financial experts. However, it is important to note that neither study considers whether audit committee members with multiple directorships distribute their effort disproportionately across the boards that they serve on.

In summary, the passage of SOX significantly expanded the audit committee's governance role in the financial reporting process. The heightened scrutiny over the audit committee leads to an increased interest in issues related to financial reporting quality, internal control monitoring and earnings manipulation. Specifically, much attention has been focused on whether various audit committee characteristics, such as audit committee expertise, former audit firm affiliation and audit committee members' personal characteristics, improve audit committee monitoring effectiveness in the post-SOX period.

2.2.2 Directors' Reputation Incentives

The literature on directors' incentives examines how financial incentives, board retention, and future directorship prospects influence outside directors' behavior and performance. For example, Yermack (2004) provides evidence that outside directors

receive positive performance incentives from compensation, threat of replacement, and opportunities to obtain new board seats. On the other hand, Adams and Ferreira (2008) suggest that directors, who are likely to be wealthy individuals, are more likely to be motivated by implicit incentives, such as power, prestige, reputation as well as career concerns, and less by financial incentives. One aspect of implicit incentives relates to the reputation developed through directors' performance when they serve on the board. While reputation cannot be explicitly measured, studies have shown that it represents a valuable asset for executives (Alchian and Demsetz 1972). In fact, Fama and Jensen (1983b) argue that preserving and improving reputation in the labor market for directors is the main motivation of directors.

Prior studies demonstrate various aspects of directors' reputation effects. For example, Brickley et al. (1999), Eminet and Guedri (2010), and Fich (2005) demonstrate that directors with strong performance and a reputation of being an active monitor of management are rewarded by the labor market for directorships. Fahlenbrach, Low, and Stulz (2010a) report that outside directors are more likely to protect their reputation by resigning from the boards of firms that are likely to experience poor performance or receive a first-time going concern opinion. Other studies also document negative effects on director reputation when companies experience financial distress (Gilson 1990), are liquidated (Harford 2003), perform poorly (Yermack 2004), or reduce dividends (Kaplan and Reishus 1990). Similarly, Fich and Shivdasani (2007), Srinivasan (2005) and Brochet and Srinivasan (2014) provide evidence of a reputation penalty for directors of companies found guilty of financial fraud.

Recent literature examines the differential economic implications of independent directors' unequal distribution of their time and effort across multiple board positions. At

the director-level, Masulis and Mobbs (2014) find that independent directors with stronger reputation incentives attend more board meetings, serve on more time-consuming audit and compensation committees, and hold on to their more prominent directorships. At the firm-level, boards with more directors who assess the directorship as a more prominent position have better firm value, lower forced CEO turnover, and higher forced CEO turnover sensitivity to performance. Masulis and Mobbs (2016) document that independent directors with high reputation incentives employ more equity-based CEO compensation, which raises CEO pay-performance sensitivity. Similarly, Huang et al. (2018) find that bank loan contract terms reflect independent directors' unequal allocation of monitoring effort based on the directorship's relative prestige. Further, Sila et al. (2017) show that when a firm has a higher proportion of independent directors for whom this directorship is more prominent, the firm-specific information content in the firm's stock price increases. Collectively, these studies suggest that independent directors are motivated by reputation incentives, and the relative reputation value of each directorship influences the amount of effort that directors expend on their respective boards. This, in turn, influences firm performance, CEO compensation contracting, bank loan contracting and stock price informativeness.

2.3 Hypothesis Development

Prior research provides two hypotheses that can potentially explain the relation between audit committee members' multiple directorships and audit committee effectiveness. First, the reputation hypothesis argues that the demand for a director's services on multiple boards is an indication of the director's talent and expertise, which enhances his or her reputation (Fama and Jensen 1983b). Prior studies find that the number of directorships held by directors is positively associated with a director's talent

and reputation (Shivdasani and Yermack 1999) and their likelihood of becoming a CEO (Mobbs 2013), and negatively associated with the likelihood of hostile takeover attempts (Shivdasani 1993). Furthermore, Field, Lowry, and Mkrtchyan (2013) argue that busy directors are excellent advisors due to their experience and contacts. In the context of the audit committee, the reputation hypothesis implies that holding multiple audit committee positions allows audit committee members to gain wider knowledge and to accumulate more extensive audit committee relevant experience, thus enabling them to perform their oversight responsibilities more effectively. Prior research on the pre-SOX period provides support for this proposition by showing that the reputational effect of holding multiple directorships has a strong predictive value of financial reporting quality (Carcello and Neal 2003; Yang and Krishnan 2005).

By contrast, the busyness hypothesis argues that serving on many boards requires considerable time and effort from directors, thus reducing their effectiveness as monitors. Several studies highlight the negative aspects of multiple directorships held by directors. For example, Fich and Shivdasani (2006) claim that firms with busy boards are associated with weaker corporate governance. Further, other studies posit that busy independent directors shirk their responsibilities (Srinivasan 2005), provide less effective monitoring of management (Carpenter and Westphal 2001), and are associated with a higher likelihood of fraud (Beasley 1996). Following the enactment of SOX, the oversight responsibilities of audit committees have greatly increased, placing a huge demand on audit committee members' time. The challenging workload associated with memberships of many audit committees may compromise their ability to monitor the financial reporting process. As shown in Sharma and Iselin (2012) and Tanyi and Smith (2015), the negative busyness effect resulting from multiple directorships is more likely to outweigh the

positive reputation effect in the post-SOX period, thus reducing the oversight effectiveness of audit committees.

An important assumption of both the reputation and busyness hypotheses is that directors (audit committee members) distribute their time and effort proportionately across all directorships (audit committees) that they serve on, such that boards (audit committees) benefit uniformly from their talents and abilities. However, Masulis and Mobbs (2014) argue and find that directors do not allocate their time and effort equally across all boards. Rather, they allocate more time to their more prominent directorships, and less time to their less prominent directorships. Therefore, it can be expected that more prestigious firms benefit more from directors' capabilities, since directors have greater motivation to be regarded as dutiful and valuable directors on these boards where their reputation effects are enlarged.

Given that the audit committee's composition, responsibilities and incentive structure are often very different from those of the board as a whole, one key question is whether similar reputation incentive effects can be observed in the audit committee context. Since the audit committee plays an instrumental role in ensuring effective financial reporting and safeguarding the financial integrity of the firm, I examine whether audit committee members' reputation incentives influence their monitoring effectiveness over the financial reporting process.

I argue that the incentive to be viewed as a valuable audit committee member is likely to be greatest in their most prestigious audit committee memberships. Furthermore, given the demanding oversight responsibilities following SOX, limited time and energy may prevent audit committee members with multiple audit committee memberships from performing their duties effectively. I posit that the incentive to minimize the potential

reputation damage resulting from such ineffectiveness is likely to be greatest in their most prominent audit committee memberships. Based on these arguments, audit committee members are likely to expend greater monitoring effort in the most prestigious and prominent firms in order to enhance and protect their reputation capital (Fama and Jensen 1983b). By increasing their monitoring on the oversight process, audit committee members will be more informed and knowledgeable about the firm's financial reporting issues, and will be more able to address these issues more effectively and efficiently. This, in turn, can strengthen the process of detecting and resolving misstatements, earnings management and internal control weaknesses, thus reducing the likelihood of their occurrence. Further, this can improve the process of remediating internal control weaknesses.

The preceding discussion emphasizes the expected influence of audit committee members' reputation incentives in improving the monitoring effort of the audit committee over the financial reporting process. Thus, my hypothesis is stated as follows:

H1: Firms with a higher percentage of audit committee members for whom this audit committee membership represents the most prestigious position are associated with more effective monitoring of the financial reporting process and internal control.

However, SOX imposes strict monitoring responsibilities on the audit committees over the financial reporting process. Given the greater emphasis on audit committees' oversight role and the significant negative legal, financial or reputational consequences that could arise from monitoring failures (Fich and Shivdasani 2007; Srinivasan 2005; Johnstone et al. 2011; Brochet and Srinivasan 2014), audit committee members may ensure effective monitoring over all their audit committee memberships, regardless of the

reputation value that each membership offers. Furthermore, audit committee members may risk reputation damage due to potential spillover effects arising from poor monitoring in any of the firms that they serve, including their less prominent audit committee memberships. As such, there is a possibility that audit committee members' reputation incentives do not influence their monitoring effectiveness.

2.4   Research Design

2.4.1 Test Variables

Prior research finds that larger firms offer directors greater visibility, prestige, compensation and a higher likelihood of obtaining additional directorships (Adams and Ferreira 2008; Ryan and Wiggins 2004; Yermack 2004). Thus, firm size represents an important source of director reputation incentives to demonstrate that they are effective monitors and I expect audit committee memberships in firms of varying sizes to generate differential incentives to monitor the financial reporting process (Masulis and Mobbs 2014). To capture the relative importance of an audit committee member's reputation incentive effect in a specific firm, I first use firm size as a proxy of an audit committee membership's visibility and prestige and compare the relative market capitalization of each firm on which the audit committee member serves. For each audit committee member with multiple audit committee memberships, I identify the most prestigious audit committee membership, which represents the largest fraction of the total market capitalization under an audit committee member's oversight. Since having a higher proportion of better motivated audit committee members on the audit committee can improve the committee's monitoring, I aggregate the director-level measures to the firm-level to obtain the proportion of audit committee members with multiple audit committee

memberships for whom this audit committee membership is categorized as the most prestigious based on market capitalization, defined as *AC_HIGH_PERC*.[5, 6]

For my second measure of reputation incentive, I start by following Erkens and Bonner (2013) and construct an aggregate firm reputation measure that comprises three common proxies for a firm's reputation.[7] The first proxy is a firm's market capitalization, since larger firms provide greater visibility and prominence, and they are better linked to other firms via various partnerships and affiliations (Fombrun and Shanley 1990; Greve 2005; Fahlenbrach, Low, and Stulz 2010b). The second proxy is the number of firms to which a focal firm is connected through common board members. Such connections represent an important source of reputation (Greve 2005). The third proxy is a firm's corporate reputation scores obtained from the MA List (Cao et al. 2012, 2015). I first standardize the proxies to have a mean of zero and a standard deviation of one. I then construct the aggregate reputation measure using a principal components factor analysis that extracts the common variation among the three proxies. Consistent with Erkens and Bonner (2013), the factor analysis identified one factor with an eigen value greater than one (1.83). The principal component loadings for each of my three proxies are 0.64, 0.44,

---

[5] As part of my sensitivity tests, I use two alternative measures of audit committee members' relative reputation effects: (1) *AC_HIGH_NO* (*AC_HIGH_NO_SCORE*), defined as the number of audit committee member for whom this audit committee membership is the most prestigious based on market capitalization (aggregate reputation score); and (2) *AC_HIGH_MAJ* (*AC_HIGH_MAJ_SCORE*), defined as an indicator variable that equals one if the percentage of audit committee members for whom this audit committee membership is the most prestigious based on market capitalization (aggregate reputation score) is greater than 50 percent, and zero otherwise. My results remain qualitatively unchanged when using either of these measures in place of *AC_HIGH_PERC* (*AC_HIGH_PERC_SCORE*).

[6] It is important to note that this measure is capturing firm visibility and prestige, and not just firm size. For example, assume I start with 3,000 firms numbered 1 to 3,000 with 1 being the largest and 3,000 being the smallest. If audit committee member A serves on the audit committees of firms 30 and 400, firm 30 is ranked as the most prestigious as it is larger than firm 400. If audit committee member B serves on the audit committees of firms 2,500 and 2,900, firm 2,500 is ranked as the most prestigious, but it is not a large firm when compared to the sample of 3,000 firms. Thus, my measure captures relative size as a measure of reputation incentive, rather than just firm size. As reported in Table 2.5, *AC_HIGH_PERC* and firm size are not highly correlated with a Pearson correlation coefficient of 0.38.

[7] Erkens and Bonner (2013) use the term "firm status". I regard "firm status" as "firm reputation" because both terms represent a similar concept.

and 0.62 respectively. Next, I use the standardized scoring coefficients (all positive) for this factor to compute the aggregate reputation measure.[8] I then rank each audit committee member's audit committee memberships based on each firm's aggregate reputation measure. Finally, I obtain the percentage of audit committee members for whom this audit committee membership is their highest ranked based on the aggregate reputation measure as my second test variable (*AC_HIGH_PERC_SCORE*).[9]

2.4.2 Dependent Variables and Empirical Models

I adopt four widely used measures to examine audit committee's monitoring effectiveness in the financial reporting process. These measures are the likelihood of a restatement (*RESTATE*), the likelihood of a substantial risk of a material misstatement (*IV_FSCORE*), the likelihood of material weaknesses in internal control (*IC*), and the likelihood of remediating material weaknesses in internal control (*REMEDIATE*).

2.4.2.1 Restatement

I define *RESTATE* as an indicator variable that equals one if the firm has a non-technical restatement (Big R), and zero otherwise.[10] Specifically, *RESTATE* equals one in the year in which the financial statements are misstated, where they are subsequently restated in later periods (Kinney, Palmrose, and Scholz 2004; Cao et al. 2012). Prior research views a restatement as an objective measure of financial reporting quality because it is an unambiguous acknowledgement that the accounts were inaccurate (e.g., Kinney et al. 2004; Carcello, Neal, Palmrose, and Scholz 2011). Further, it represents an

---

[8] The mean (median) of the aggregate reputation measure is -0.01 (-0.42). This is comparable to the mean (median) aggregate firm status measure reported in Erkens and Bonner (2013), which is -0.02 (-0.39).

[9] As reported in Table 2.5, the Pearson correlation coefficient between *AC_HIGH_PERC_SCORE* and firm size is only 0.35.

[10] Following prior research (Cohen et al. 2014; Kinney et al. 2004), non-technical restatements refer to restatements that are caused by errors or irregularities, whereas technical restatements are those resulting from changes in accounting standards or other factors that are beyond the control of the firm.

explicit failure of the financial reporting and oversight process since a restatement entails

material events that impact the validity of previously issued financial statements. Abbott

et al. (2004), Sharma and Iselin (2012), and Cohen et al. (2014) emphasize the oversight

role that audit committees play in reducing the incidence of restatements. I expect audit

committees with a higher proportion of audit committee members with high reputation

incentives to be more effective monitors of the financial reporting process, thus lowering

the likelihood of a restatement.

To test the association between audit committee members' reputation incentives

and the likelihood of restatement, I estimate a restatement model using the logistic

regression:

$$
\begin{aligned}
RESTATE = {} & \alpha_0 + \alpha_1 \textbf{\textit{AC\_HIGH\_PERC}}(or\ \textbf{\textit{AC\_HIGH\_PERC\_SCORE}}) + \\
& \alpha_2 AC\_LOW\_PERC\ (or\ AC\_LOW\_PERC\_SCORE) + \alpha_3 SIZE + \\
& \alpha_4 LNSEGMENT + \alpha_5 RESTRUCTURE + \alpha_6 MERGER + \alpha_7 MB + \\
& \alpha_8 EXGROWTH + \alpha_9 LEV + \alpha_{10} ROA + \alpha_{11} NEWFIN + \alpha_{12} BIG4 + \\
& \alpha_{13} ISP + \alpha_{14} CHANGE + \alpha_{15} MODIFIED + \alpha_{16} IC + \alpha_{17} LNAGE + \\
& \alpha_{18} LNBDSIZE + \alpha_{19} BDIND + \alpha_{20} DUALITY + \alpha_{21} LNACSIZE + \\
& \alpha_{22} ACEXP + Year\ fixed\ effects\ + Industry\ fixed\ effects + \\
& \varepsilon \qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad (2.1)
\end{aligned}
$$

Control variables are identified from prior research: firms with high growth (*MB*

and *EXGROWTH*), high complexity (*LNSEGMENT*), low profitability (*ROA*), high

leverage (*LEV*), or new equity (*NEWFIN*) have a higher likelihood of restatement (Doyle,

Ge, and McVay 2007b; Kinney et al. 2004; Defond and Jiambalvo 1991; Kinney and

McDaniel 1989). Furthermore, firms with a merger or restructuring (*MERGER* and

RESTRUCTURE) may be associated with financial misreporting (Kinney et al. 2004;

Firth 1997). Prior research also suggests that a modified audit opinion (*MODIFIED*) may be a potential determinant of financial misstatements (Kinney et al. 2004; Myers, Myers, and Omer 2003). *SIZE* controls for firm size, *LNAGE* controls for firm age, *BIG4* and *ISP* control for higher quality auditor, while *CHANGE* controls for new audit. The internal control indicator variable (*IC*) is also included as ineffective internal controls are positively associated with restatements (Feldmann, Read, and Abdolmohammadi 2009; Blankley, Hurtt, and MacGregor 2012). I include control variables that represent board and audit committee characteristics that may influence the committee's monitoring effectiveness. *LNBDSIZE* and *LNACSIZE* control for board size and audit committee size respectively, while *BDIND* and *ACEXP* represent the fraction of independent board members and the proportion of audit committee financial experts respectively. *DUALITY* controls for CEO duality. Finally, I include *AC_LOW_PERC* (or *AC_LOW_PERC_SCORE*) to control for the proportion of audit committee members with lower reputation incentives.[11]

2.4.2.2 Substantial Risk of a Misstatement

I use a scaled logistic probability of a material misstatement or earnings manipulation (*F_SCORE*) proposed by Dechow et al. (2011) as a signal of a substantial risk of a material misstatement (See Appendix 1 for further details).[12] I define my dependent variable (*IV_FSCORE*) as one if a firm's *F_SCORE* is above 1.85, and zero otherwise. Dechow et al. (2011) categorize firms with an *F_SCORE* of greater than 1.85

---

[11]   Similar results are obtained when *AC_LOW_PERC* (or *AC_LOW_PERC_SCORE*) are not included in the models.

[12]   Dechow et al. (2011) developed the F-Score by modelling the factors associated with actual accounting misstatements. The authors demonstrate that their model has reasonable predictive ability using out-of-sample tests. Further, they show that the modified Jones model has less power than unadjusted measures of accruals to identify misstatements. The F-Score is commonly used as a proxy of earnings management in the accounting literature, including Ge, Matsumoto, and Zhang (2011), Kim, Li, and Zhang (2011), and McGuire, Omer, and Sharp (2012).

as firms with "substantial risk" of receiving an Accounting and Auditing Enforcement Release (AAER) from the SEC.[13] I expect firms with a higher proportion of audit committee members with high reputation incentives to monitor the firm more effectively, thus reducing the likelihood of a substantial risk of a material misstatement. This expectation is in line with prior research that underscores the important oversight role of audit committees in reducing fraud and earnings management (Beasley, Carcello, Hermanson, and Lapides 2000; Beasley et al. 2009; Klein 2002a; Abbott, Park, and Parker 2000).

I examine the association between audit committee members' reputation incentives and the likelihood of a substantial risk of a material misstatement using the following logistic regression model:

$$
\begin{aligned}
IV\_FSCORE = {} & \beta_0 + \beta_1 \boldsymbol{AC\_HIGH\_PERC}\ (or\ \boldsymbol{AC\_HIGH\_PERC\_SCORE}) + \\
& \beta_2 AC\_LOW\_PERC(or\ AC\_LOW\_PERC\_SCORE) + \beta_3 SIZE + \\
& \beta_4 RESTRUCTURE + \beta_5 MERGER + +\beta_6 MB + \beta_7 EXGROWTH + \\
& \beta_8 LEV + \beta_9 LOSS + \beta_{10} BIG4 + \beta_{11} ISP + \beta_{12} LITIGATION + \\
& \beta_{13} OPERCYCLE + \beta_{14} CFO + \beta_{15} STD\_CFO + \beta_{16} STD\_SALE + \\
& \beta_{17} CAP\_INTENSITY + \beta_{18} INT\_INTENSITY + \beta_{19} NO\_INT + \\
& \beta_{20} LNAGE + \beta_{21} LNBDSIZE + \beta_{22} BDIND + \beta_{23} DUALITY + \\
& \beta_{24} LNACSIZE + \beta_{25} ACEXP + Year\ fixed\ effects + \\
& Industry\ fixed\ effects + \varepsilon \quad\quad\quad\quad\quad (2.2)
\end{aligned}
$$

---

[13] My results remain unchanged if I use a continuous measure of *F_SCORE* as my dependent variable. Further, my results remain unchanged if I define *IV_FSCORE* as an indicator variable that equals to one if a firm's *F_SCORE* is above 1 (2.45), and zero otherwise. Dechow et al. (2011) categorize firms with an *F_SCORE* of greater than 1 (2.45) as firms with "above normal risk" ("high risk") of receiving an AAER from the SEC.

The control variables are identified from prior research: firms with high growth (*MB* and *EXGROWTH*), losses (*LOSS*), poor performance (*CFO*), high leverage (*LEV*), and a long operating cycle (*OPERCYCLE*) have a greater tendency to engage in earnings management (Matsumoto 2002; Brown 2001; DeFond and Jiambalvo 1991; Frankel, Johnson, and Nelson 2002; Ashbaugh, LaFond, and Mayhew 2003; Dechow and Dichev 2002). In addition, firms with merger or restructuring events (*MERGER* and *RESTRUCTURE*) may also be associated with financial misreporting (Kinney et al. 2004; Firth 1997). The volatility of the firm's cash flows (*STD_CFO*) and sales (*STD_SALE*) are included in the model as they may be related to accrual volatility (Hribar and Nichols 2007). I follow Francis, LaFond, Olsson, and Schipper (2004) and Francis, Nanda, and Olsson (2008) and control for capital intensity (*CAP_INTENSITY*), intangibles intensity (*INT_INTENSITY*) and the absence of intangibles (*NO_INT*). *SIZE* controls for firm size, *BIG4* and *ISP* control for auditor quality, *LNAGE* controls for firm age, and *LITIGATION* controls for firms that operate in highly litigious industries. I also include controls for board and audit committee characteristics.

2.4.2.3 Material Weaknesses in Internal Control

Under Section 404 of SOX, the auditor is required to attest on the effectiveness of the firm's internal controls over financial reporting. Therefore, I define *IC* as an indicator variable that equals one if the auditor assessed material weaknesses in internal control during the year, and zero otherwise. Prior research suggests that the auditor's attestation on internal controls represents an unambiguous measure of financial reporting quality (e.g., Ashbaugh-Skaife, Collins, Kinney, and LaFond 2008; Chen et al. 2017). I expect firms with a higher proportion of audit committee members with high reputation incentives to be more effective monitors of the internal control system, thus lowering the

likelihood of material weaknesses in internal control. My expectation is supported by prior research that finds that higher quality corporate governance mechanisms are associated with more effective internal controls (Hoitash, Hoitash, and Bedard 2009; Krishnan 2005; Zhang, Zhou, and Zhou 2007).

To test the association between audit committee members' reputation incentives and the likelihood of material weaknesses in internal control, I estimate the following logistic regression model:

$$
\begin{aligned}
IC = \gamma_0 + \gamma_1 \textbf{\textit{AC\_HIGH\_PERC}}(or\ \textbf{\textit{AC\_HIGH\_PERC\_SCORE}}) + \\
\gamma_2 AC\_LOW\_PERC(or\ AC\_LOW\_PERC\_SCORE) + \gamma_3 SIZE + \\
\gamma_4 LNSEGMENT + \gamma_5 RESTRUCTURE + \gamma_6 MERGER + \gamma_7 MB + \\
\gamma_8 EXGROWTH + \gamma_9 LEV + \gamma_{10} ROA + \gamma_{11} BIG4 + \gamma_{12} ISP + \gamma_{13} CHANGE + \\
\gamma_{14} LNAGE + \gamma_{15} LNBDSIZE + \gamma_{16} BDIND + \gamma_{17} DUALITY + \gamma_{18} LNACSIZE + \\
\gamma_{19} ACEXP + +Year\ fixed\ effects\ + Industry\ fixed\ effects + \varepsilon \quad\quad (2.3)
\end{aligned}
$$

Control variables follow Doyle et al. (2007b), Ashbaugh-Skaife, Collins, and Kinney (2007), and Chen et al. (2017). These studies find that firms that are smaller (*SIZE*), younger (*LNAGE*), financially weaker (*ROA*), more complex (*LNSEGMENT* and *FOREIGN*), growing rapidly (*MB* and *EXGROWTH*), and undergoing organizational changes (*RESTRUCTURE* and *MERGER*) are more likely to have internal control problems. In addition, I control for auditor quality (*BIG4* and *ISP*) and auditor change (*CHANGE*). Finally, I include variables that control for board and audit committee characteristics as firms with more effective board and audit committee are expected to have fewer internal control problems (Doyle et al. 2007b; Krishnan 2005; Chen et al. 2017; Zhang et al. 2007).

2.4.2.4 Remediation of Material Weaknesses in Internal Control

In addition to the likelihood of material weaknesses in internal control, I examine whether audit committee members' reputation incentives are associated with the likelihood of remediating these weaknesses on a timely basis. I define *REMEDIATE* as an indicator variable that equals one if the material weaknesses in internal control are remediated in the subsequent year, and zero otherwise. It is important to consider the remediation of material weaknesses as these weaknesses can impair the firm's financial reporting quality (Doyle, Ge, and McVay 2007a). Remediation of these weaknesses can also improve financial reporting quality (Ashbaugh-Skaife et al. 2008). Based on prior research that highlights the important role that audit committee and the board plays in monitoring the remediation of material weaknesses in internal control (Goh 2009; Chen et al. 2017; Johnstone et al. 2011), I expect firms with a higher proportion of audit committee members with high reputation incentives to increase the likelihood of remediating material weaknesses in internal control.

I examine the association between audit committee members' reputation incentives and the likelihood of remediation using the following logistic regression model:

$$REMEDIATE = \delta_0 + \delta_1 \boldsymbol{AC\_HIGH\_PERC} (or\ \boldsymbol{AC\_HIGH\_PERC\_SCORE}) +$$
$$\delta_2 AC\_LOW\_PERC (or\ AC\_LOW\_PERC\_SCORE) +$$
$$\delta_3 LNTOTAL\_IC + \delta_4 SIZE + \delta_5 LNSEGMENT +$$
$$\delta_6 RESTRUCTURE + \delta_7 MERGER + \delta_8 MB + \delta_9 EXGROWTH +$$
$$\delta_{10} LEV + \delta_{11} ROA + \delta_{12} BIG4 + \delta_{13} ISP + \delta_{14} CHANGE +$$
$$\delta_{15} LNAGE + \delta_{16} LNBDSIZE + \delta_{17} BDIND + \delta_{18} DUALITY +$$
$$\delta_{19} LNACSIZE + \delta_{20} ACEXP + Year\ fixed\ effects +$$
$$Industry\ fixed\ effects + \varepsilon \qquad\qquad (2.4)$$

In addition to the control variables included in Model 2.3, I include a proxy for the total number of material weaknesses in internal control during the year (*LNTOTAL_IC*).

Appendix 1 provides definitions of all the variables.

2.4.3 Sample Selection

In order to test H1, I need a sample of firms that have at least one audit committee member with two or more audit committee memberships. I begin by obtaining director data from the BoardEx database.[14] My initial sample comprises 307,800 director-year observations from 2007 to 2015. After excluding directors who do not serve on at least one audit committee, I obtain a sample of 156,184 director-year observations for 25,668 unique directors. Following Masulis and Mobbs (2014), Huang et al. (2018), and Sila et al. (2017), I exclude executive directorships (number of director-years = 4,789). Since the objective of my study is to examine the reputation incentives of audit committee members who serve on multiple audit committee memberships, I exclude non-audit committee memberships (number of director-years = 18,146) and sole audit committee memberships (number of director-years = 87,351). Finally, with a sample of 45,898 director-year observations, I rank each audit committee member's audit committee memberships based on market capitalization or the aggregate reputation measure.

Based on the 45,898 audit committee members with more than one audit committee memberships, I obtain an initial sample of 24,324 firm-year observations for 4,789 different firms.[15] I omit observations that are not identifiable in Compustat or Audit

---

[14] BoardEx provides director information for both large and small entities. Unlike prior research that examines directors' reputation incentives (Masulis and Mobbs 2014, 2016), my study is not limited to only S&P 1500 firms, thus enhancing the generalizability of my results.

[15] Out of the 4,789 unique firms, I hand collected market capitalization information for 1,563 firms as the market capitalization data for those firms was missing from Compustat. Information on the number of outstanding shares are hand collected from Form 10-K, while share price information are hand collected from www.investorpoint.com.

Analytics (number of firm-years = 5,672). Consistent with prior research, I exclude firms from the financial (two-digit SIC codes 60-69; number of firm-years = 4,146) and utilities industries (two-digit SIC code 49; number of firm-years = 742). Finally, I eliminate observations lacking the data necessary to calculate the control variables (number of firm-years = 2,991), which yields a final sample of 10,773 firm-years. Out of 10,773 firm-years, 347 firm year observations have material weaknesses in internal control in year t. Table 2.1 presents the sample selection procedure.

Table 2.1: Sample Selection (Sample Period: 2007 – 2015)

Panel A: Director-Level

	Number of Director-Years
Initial sample from BoardEx	307,948
Less: Directors who do not sit on at least one audit committee membership	(151,764)
Directors who sit on at least one audit committee membership	156,184
Less: Executive directorships	(4,789)
Less: Non-audit committee memberships	(18,146)
Sample of audit committee memberships	133,249
Less: Sole audit committee memberships	(87,351)
Audit committee members with more than one audit committee memberships	45,898

Panel B: Firm-Level

	Number of Firm-Years
Initial sample [a]	24,324
Less: Unidentifiable observations in Compustat or Audit Analytics	(5,672)
Less: Observations from financial industries	(4,146)
Less: Observations from utilities industries	(742)
Less: Missing information	(2,991)
Final sample	10,773
Firms with material weaknesses in internal control in year t	347

[a] Initial sample is based on 45,898 audit committee members with more than one audit committee memberships. As such, it includes firm-year observations where there is at least one audit committee member with two or more audit committee memberships in a given year.

2.4.4 Entropy Balanced Matched Sample

To reduce the concern that my results are driven by differences in firm size or other firm characteristics between firms with a higher proportion of high reputation incentive audit committee members and those without, I implement an entropy balancing technique that achieves covariate balance across first, second, and third moments of the respective variable distributions (Hainmueller 2012). Entropy balancing allows me to retain my original sample (10,773 firm-year observations for Models 2.1 to 2.3 and 347 firm-year observations for Model 2.4), while using an algorithm to reweight observations in the control sample such that there are no significant post-weighting differences between the moments of the distributions of the matching variables for the reweighted control sample and those for the treatment sample.[16]

Designating firms with a majority of audit committee members for whom this audit committee membership is their highest ranked as the treated group (*AC_HIGH_MAJ* = 1 or *AC_HIGH_MAJ_SCORE* = 1), I use entropy balancing to reweight a sample of firms that do not have a majority of audit committee members for whom this audit committee membership is their highest ranked (the control group) (*AC_HIGH_MAJ* = 0 or *AC_HIGH_MAJ_SCORE* = 0). I match firms on firm characteristics, such as firm size (*SIZE*), firm complexity (*LNSEGMENT*), firm growth (*MB*), leverage (*LEV*), firm profitability (*ROA*), firm age (*LNAGE*), operating cycle (*OPERCYCLE*), free cash flow (*CFO*), cash and sales variability (*STD_CFO* and *STD_SALE*), capital and intangibles intensity (*CAP_INTENSITY* and *INT_INTENSITY*) and litigious industry (*LITIGATION*). I also match firms on governance characteristics, such as board size (*LNBDSIZE*), board independence (*BDIND*), CEO duality (*DUALITY*), audit committee size (*LNACSIZE*) and

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[16] Examples of accounting papers using entropy balancing include Wilde (2017), Shroff, Verdi, and Yost (2017), and Bonsall and Miller (2017).

audit committee expertise (*ACEXP*).[17] After employing the entropy balancing procedure, I find that the mean, variance, and skewness of all covariates are nearly identical across the treated and control firms.

2.5 Results

2.5.1 Descriptive Statistics

Table 2.2 reports the descriptive statistics for my sample of audit committee members. Out of my sample of audit committee memberships (133,249 director-years), around 34 percent hold more than one audit committee membership (45,898 director-years). Audit committee members with multiple memberships hold an average of 3.75 public board seats and an average of 2.99 directorships in the BoardEx sample.[18] Further, they hold an average of 2.48 audit committee memberships in the BoardEx sample. Finally, market capitalization of the firms where an audit committee member holds multiple memberships varies widely. The mean difference in the size between the largest membership and the smallest membership is $7,615 million. Thus, significant differences in reputation incentives for an audit committee member can exist in his or her largest and smallest memberships, while audit committee members on the same audit committee can experience very different reputation incentives.

---

[17] My choice of matching variables follows prior research that examines the determinants of an effective audit committee. These studies suggest that larger firms, as well as firms with growth opportunities, losses, low leverage, larger and more independent board, as well as larger and more expert audit committee, are associated with more effective audit committee (e.g., Al-Najjar 2011; Sharma, Naiker, and Lee 2009; Klein 2002b; Raghunandan and Rama 2007).

[18] The averages are slightly different because BoardEx may not provide information on all directorships that a director sits on. While my approach understates the total number of audit committee memberships held, it is unlikely to bias my findings. This is because any unavailable audit committee memberships in BoardEx are likely to be those at smaller and less prominent firms, which are expected to have a minimal impact on the reputation of audit committee members.

Table 2.3 presents firm-level descriptive statistics for the full sample. Continuous variables are winsorized at the 1st and 99th percentiles. The mean percentage of audit committee members for whom this is the highest (lowest) ranked directorship based on market capitalization is 31 percent (29 percent). 14 percent of the sample observations have a financial restatement (*RESTATE*), while 3 percent of the firm-years in the sample have material weaknesses in internal control (*IC*). For the firms with material weaknesses in internal control, 69 percent remediate the material weaknesses in the subsequent year (*REMEDIATE*). The mean *F_SCORE* measure is 0.98, while the percentage of firms with an *F_SCORE* greater than 1.85 (*IV_FSCORE*) is 6 percent.[19]

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[19] Overall, the mean values of my dependent variables are consistent with those documented in prior research. For example, Cohen et al. (2014) report that 13 percent of firm-year observations have restatements, Newton, Persellin, Wang, and Wilkins (2016) report that 4 percent of firm-year observations have material weaknesses in internal control, Bedard, Hoitash, Hoitash, and Westermann (2012) report that 70 percent of firm-year observations remediate previously disclosed material weaknesses, and Ge et al. (2011) report a mean *F_SCORE* of 1.08.

Table 2.2: Director-Level Descriptive Statistics

Variables	Number of Observations [a]	Mean/ Frequency	Median	Standard Deviation
Director age	45,830	62.84	64.00	7.57
Number of committee memberships	45,898	1.00	1.00	0.00
Number of current public boards	45,898	3.75	3.00	6.12
Number of current private boards	30,265	2.63	2.00	2.76
Number of boards within BoardEx	45,898	2.99	2.00	2.80
Number of audit committee memberships within BoardEx	45,898	2.48	2.00	2.82
Board tenure (years)	45,839	5.78	4.60	5.02
Nominating committee member	45,898	0.43	-	-
Remunerating committee member	45,898	0.42	-	-
Gender (male)	45,839	0.85	-	-
Maximum-minimum (market capitalization $ million)	45,898	7,614.65	772.17	26,069.77
Maximum as percent of minimum (percentage)	45,898	3,165.41	324.34	39,391.35

[a] Total sample size for audit committee members with multiple audit committee memberships is 45,898 director-years. See Table 2.1 for sample selection procedure. Differences in the number of observations are due to missing information from BoardEx database.

Table 2.3: Firm-Level Descriptive Statistics (Number of Observations: 10,773 Firm-Years)

Panel A: Descriptive Statistics for All Firms

Variables	Mean/ Frequency	25th Percentile	Median	75th Percentile	Standard Deviation
AC_HIGH_PERC	0.31	0.00	0.33	0.50	0.25
AC_LOW_PERC	0.29	0.00	0.33	0.40	0.24
AC_HIGH_PERC _SCORE	0.31	0.00	0.33	0.50	0.26
AC_LOW_PERC _SCORE	0.30	0.20	0.33	0.40	0.22
F_SCORE	0.98	0.56	0.91	1.31	0.52
AT ($ million)	6,429.60	393.26	1,326.83	4,582.60	16,007.30
SEGMENT	2.58	1.00	2.00	4.00	1.72
MB	3.26	1.35	2.24	3.83	5.22
LEV	0.21	0.01	0.17	0.32	0.20
ROA	0.01	-0.00	0.05	0.08	0.17
AGE (years)	24.58	13.00	19.00	38.00	15.28
OPERCYCLE (days)	102.41	31.55	93.11	145.61	92.04
CFO	0.08	0.05	0.10	0.14	0.14
STD_CFO	0.06	0.02	0.04	0.07	0.08
STD_SALE	0.16	0.06	0.11	0.20	0.16
CAP_INTENSITY	0.26	0.08	0.18	0.36	0.23
INT_INTENSITY	0.03	0.00	0.00	0.01	0.07
BDSIZE	8.88	7.00	9.00	10.00	2.09
BDIND	0.78	0.71	0.82	0.88	0.12
ACSIZE	3.78	3.00	4.00	4.00	0.92
ACEXP	0.54	0.33	0.40	0.75	0.29
IC_TOTAL [a]	5.37	4.00	5.00	7.00	1.42
RESTATE	0.14	-	-	-	-
IV_FSCORE	0.06	-	-	-	-
IC	0.03	-	-	-	-
REMEDIATE [a]	0.69	-	-	-	-
RESTRUCTURE	0.41	-	-	-	-
MERGER	0.22	-	-	-	-
EXGROWTH	0.24	-	-	-	-
NEWFIN	0.14	-	-	-	-
BIG4	0.89	-	-	-	-
ISP	0.29	-	-	-	-
CHANGE	0.03	-	-	-	-
MODIFIED	0.29	-	-	-	-
YE	0.76	-	-	-	-
LOSS	0.25	-	-	-	-
LITIGATION	0.20	-	-	-	-
NO_INT	0.69	-	-	-	-
DUALITY	0.55	-	-	-	-

Table 2.3 (Continued)

Panel B: Descriptive Statistics by Industry

Variables	Agriculture, Forestry, Fishing	Mining	Construction	Manufacturing	Transportation	Wholesale Trade	Retail Trade	Services	Public Admin
				Mean / Frequency					
AC_HIGH_PERC	0.22	0.34	0.26	0.31	0.37	0.31	0.30	0.30	0.30
AC_LOW_PERC	0.22	0.26	0.35	0.29	0.28	0.30	0.30	0.30	0.35
AC_HIGH_PERC _SCORE	0.21	0.33	0.28	0.30	0.35	0.33	0.30	0.29	0.37
AC_LOW_PERC _SCORE	0.20	0.27	0.33	0.30	0.30	0.27	0.29	0.30	0.29
F_SCORE	0.75	0.51	1.25	1.01	0.80	1.49	0.88	1.12	1.04
RESTATE	0.20	0.12	0.18	0.14	0.13	0.15	0.16	0.15	0.00
IV_FSCORE	0.00	0.01	0.10	0.04	0.04	0.26	0.03	0.10	0.09
IC	0.04	0.03	0.08	0.03	0.03	0.03	0.03	0.04	0.03
REMEDIATE [a]	0.50	0.59	0.67	0.68	0.85	0.69	0.82	0.66	-
Number of observations	46	712	143	5,661	720	508	1,009	1,942	32
Number of observations for REMEDIATE	2	17	12	184	20	13	28	71	0

Table 2.3 (Continued)

Panel C: Descriptive Statistics by Year

Variables	2007	2008	2009	2010	2011	2012	2013	2014	2015
					Mean / Frequency				
AC_HIGH_PERC	0.32	0.32	0.32	0.31	0.30	0.30	0.31	0.31	0.31
AC_LOW_PERC	0.30	0.29	0.29	0.29	0.29	0.28	0.29	0.30	0.30
AC_HIGH_PERC _SCORE	0.32	0.31	0.31	0.31	0.30	0.30	0.30	0.31	0.31
AC_LOW_PERC _SCORE	0.30	0.30	0.30	0.29	0.29	0.29	0.30	0.30	0.30
F_SCORE	1.10	0.98	0.84	1.00	1.04	1.00	0.99	0.99	1.00
RESTATE	0.11	0.11	0.13	0.15	0.16	0.19	0.17	0.13	0.11
IV_FSCORE	0.08	0.05	0.03	0.06	0.07	0.06	0.05	0.06	0.07
IC	0.05	0.02	0.02	0.01	0.03	0.04	0.04	0.04	0.05
REMEDIATE [a]	0.76	0.80	0.95	0.50	0.70	0.68	0.64	0.65	0.66
Number of observations	1,099	1,115	1,094	1,118	1,163	1,213	1,250	1,341	1,380
Number of observations for REMEDIATE	50	20	20	16	30	44	47	55	65

See Appendix 1 for variable definitions.

[a] Descriptive statistics are based on a sample of firms with material weaknesses in internal control in year t (347 firm-year observations).

Table 2.4 reports the descriptive statistics for the two subsamples of firms that have a majority of audit committee members for whom this is the highest ranked audit committee membership (*AC_HIGH_MAJ* = 1) and those otherwise (*AC_HIGH_MAJ* = 0). Firms with a majority of audit committee members for whom this represents the highest ranked membership are larger, older, more profitable and more complex. They have higher free cash flow and lower cash flow and sales variability. They are more likely to be audited by Big 4 and industry specialist auditors. Further, these firms have bigger and more independent boards, as well as more expert audit committees. They are also less likely to experience a financial restatement, substantial risk of a material misstatement and material weaknesses in internal control.

Finally, Table 2.5 reports the correlation coefficients for my test variables, firm size and the dependent variables (excluding *REMEDIATE*). It is worth noting that the two measures of my test variable are highly correlated ($\rho = 0.77$), while the correlations between my test variables and firm size are only 0.38 and 0.35, which suggests my test variables are not just proxies for firm size. The majority of the correlations among my other independent variables are below 0.50. Further, the highest variance inflation factor (VIF) for my test variables is less than 3 in each of my models, thus suggesting that multicollinearity is not a significant concern.

Table 2.4: Firm-Level Descriptive Statistics (Subsamples)

Variables	AC_HIGH_MAJ = 1		AC_HIGH_MAJ = 0		t-value/ Chi-square [a]
	Mean/ Frequency	Median	Mean/ Frequency	Median	
AT ($ million)	16,058.36	4,734.70	4,522.48	1,089.87	-29.87***[b]
SEGMENT	2.80	3.00	2.54	2.00	-5.02***[b]
MB	4.16	2.94	3.08	2.13	-7.96***
LEV	0.22	0.20	0.20	0.17	-3.55***
ROA	0.03	0.06	0.00	0.04	-6.61***
AGE (years)	26.50	20.00	24.20	19.00	-4.45***[b]
OPERCYCLE (days)	106.15	90.71	101.67	93.62	-1.88*
CFO	0.09	0.11	0.07	0.09	-5.20***
STD_CFO	0.05	0.03	0.06	0.04	5.50***
STD_SALE	0.13	0.09	0.17	0.11	7.73***
CAP_INTENSITY	0.26	0.17	0.26	0.18	-0.39
INT_INTENSITY	0.03	0.00	0.03	0.00	-3.15***
BDSIZE	9.61	9.00	8.74	9.00	-15.47***[b]
BDIND	0.79	0.83	0.78	0.82	-2.83***
ACSIZE	3.77	3.00	3.79	4.00	1.53[b]
ACEXP	0.59	0.50	0.53	0.40	-7.81***
RESTATE	0.12	-	0.15	-	11.69***
IV_FSCORE	0.04	-	0.06	-	8.48***
IC	0.02	-	0.04	-	12.38***
RESTRUCTURE	0.44	-	0.41	-	6.80***
MERGER	0.27	-	0.21	-	35.60***
EXGROWTH	0.24	-	0.24	-	0.00
NEWFIN	0.14	-	0.14	-	0.33
BIG4	0.95	-	0.88	-	69.47***
ISP	0.36	-	0.28	-	44.06***
CHANGE	0.02	-	0.03	-	5.81**
MODIFIED	0.35	-	0.28	-	32.62***
YE	0.77	-	0.76	-	0.21
LOSS	0.18	-	0.27	-	54.60***
LITIGATION	0.24	-	0.19	-	22.37***
NO_INT	0.67	-	0.70	-	6.13**
DUALITY	0.60	-	0.55	-	16.15***
Number of observations	1,781		8,992		

*, **, *** represent two-tailed significance at 10 percent, 5 percent, and 1 percent levels, respectively.

[a] *t*-values are reported for continuous variables, and Chi-square values for dummy variables.

[b] *t*-tests are based on natural logarithm transformed values.

See Appendix 1 for variable definitions.

Table 2.5: Correlation Matrix (Number of Observations: 10,773 Firm-Years)

		1	2	3	4	5	6	7	8
1	*AC_HIGH_PERC*		**-0.05**	**0.75**	**0.13**	**0.36**	**-0.02**	**-0.03**	**-0.05**
2	*AC_LOW_PERC*	**-0.03**		**0.22**	**0.69**	**-0.09**	-0.01	0.02	**0.02**
3	*AC_HIGH_PERC_SCORE*	**0.77**	**0.23**		**-0.04**	**0.33**	**-0.02**	**-0.02**	**-0.04**
4	*AC_LOW_PERC_SCORE*	**0.14**	**0.69**	**-0.02**		**-0.08**	-0.01	0.01	0.01
5	*SIZE*	**0.38**	**-0.07**	**0.35**	**-0.06**		-0.02	0.00	**-0.08**
6	*IV_FSCORE*	**-0.03**	-0.01	**-0.03**	-0.01	**-0.02**		**0.04**	**0.02**
7	*RESTATE*	**-0.04**	0.02	**-0.03**	0.01	-0.01	**0.04**		**0.23**
8	*IC*	**-0.05**	**0.02**	**-0.04**	0.01	**-0.07**	**0.03**	**0.23**	

Pearson (Spearman) correlations are reported below (above) the diagonal.
Correlations significant at $p < 0.05$ are in bold.

2.5.2 Empirical Results

2.5.2.1 Restatement

Table 2.6 reports the results for testing H1 using the likelihood of a financial restatement as the dependent variable. Column 1 (Column 2) presents the results where audit committee members' reputation incentives are measured as the proportion of audit committee members for whom this audit committee membership is the highest ranked based on market capitalization (aggregate reputation measure). Columns 3 and 4 present the results using the entropy balancing technique.

H1 predicts that firms with more audit committee members for whom this audit committee membership is the most prestigious position are associated with more effective monitoring of the financial reporting process. The results in Columns 1 and 2 indicate a significant and negative association between audit committee members' high reputation incentives and the likelihood of a financial restatement for both *AC_HIGH_PERC* and *AC_HIGH_PERC_SCORE* (Column 1: $p < 0.05$; Column 2: $p < 0.10$). Thus, H1 is supported with respect to restatements. The results are also economically significant. I measure the marginal effects of *AC_HIGH_PERC* and find that an increase of one standard deviation in the proportion of audit committee members for whom this audit committee membership is classified as the highest rank (from 31 percent to 56 percent) leads to a decrease in the likelihood of a financial restatement by approximately 1 percent, evaluating other variables at their means. Compared to the unconditional restatement rate of 14 percent, this represents an economically significant difference of 7 percent in the likelihood of a restatement.[20] Columns 3 and 4 present the results using the entropy

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[20]   This is calculated as follows: $0.01/0.14 = 0.07$.

balancing technique. The coefficients of *AC_HIGH_PERC* and *AC_HIGH_PERC_SCORE* are negative and significant (Columns 3 and 4: $p < 0.05$), thus mitigating concerns of firm size or other firm characteristics driving the full sample results.

Table 2.6: Logistic Regressions of the Likelihood of a Financial Restatement on Audit Committee Members' Reputation Incentives (DV = *RESTATE*)

| | | Dependent Variable = *RESTATE* | | | |
| | | Full Sample | | Entropy Balanced Matching Sample | |
Variables	**Predicted Sign**	**(1) Coefficient (*t*-statistic)**	**(2) Coefficient (*t*-statistic)**	**(3) Coefficient (*t*-statistic)**	**(4) Coefficient (*t*-statistic)**
AC_HIGH_ PERC	-	-0.359**		-0.338**	
		(-2.05)		(-1.67)	
AC_LOW_ PERC	+	0.126		0.082	
		(0.70)		(0.33)	
AC_HIGH_ PERC_SCORE	-		-0.255*		-0.374**
			(-1.58)		(-2.04)
AC_LOW_ PERC_SCORE	+		0.153		0.148
			(0.84)		(0.60)
SIZE	?	-0.015	-0.028	-0.159***	-0.113**
		(-0.36)	(-0.67)	(-2.88)	(-2.12)
LNSEGMENT	+	0.174**	0.180**	0.253**	0.156*
		(2.22)	(2.30)	(2.20)	(1.48)
RESTRUCTURE	+	0.250***	0.259***	0.150*	0.129
		(2.99)	(3.08)	(1.29)	(1.17)
MERGER	+	0.013	0.013	0.122	0.085
		(0.16)	(0.15)	(1.12)	(0.81)
MB	+	-0.005	-0.006	-0.003	-0.006
		(-0.75)	(-0.89)	(-0.31)	(-0.72)
EXGROWTH	+	0.229***	0.225**	0.160	0.185*
		(2.34)	(2.31)	(1.18)	(1.45)
LEV	+	0.664***	0.682***	0.687**	0.664**
		(2.94)	(3.02)	(2.11)	(2.15)
ROA	-	-0.435**	-0.464**	-0.357	-0.356
		(-1.83)	(-1.96)	(-0.94)	(-1.09)
NEWFIN	+	-0.019	-0.031	0.109	-0.020
		(-0.16)	(-0.27)	(0.71)	(-0.13)

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Table 2.6 (Continued)

		Dependent Variable = *RESTATE*			
		Full Sample		**Entropy Balanced Matching Sample**	
Variables	**Predicted Sign**	**(1)** Coefficient (*t*-statistic)	**(2)** Coefficient (*t*-statistic)	**(3)** Coefficient (*t*-statistic)	**(4)** Coefficient (*t*-statistic)
BIG4	?	0.379**	0.378**	0.323	0.320
		(2.38)	(2.38)	(1.19)	(1.27)
ISP	?	0.219**	0.221**	0.231*	0.244**
		(2.50)	(2.52)	(1.88)	(2.13)
CHANGE	+	-0.023	-0.022	0.395*	0.146
		(-0.13)	(-0.12)	(1.51)	(0.56)
MODIFIED	+	0.272***	0.269***	0.428***	0.282***
		(2.93)	(2.90)	(3.31)	(2.33)
IC	+	2.196***	2.199***	2.155***	2.103***
		(17.93)	(18.01)	(11.91)	(11.88)
LNAGE	?	0.012	0.012	0.021	0.004
		(0.15)	(0.15)	(0.19)	(0.04)
LNBDSIZE	-	-0.282	-0.239	0.226	0.305
		(-1.15)	(-0.97)	(0.62)	(0.85)
BDIND	-	-0.217	-0.216	0.210	-0.035
		(-0.55)	(-0.55)	(0.41)	(-0.07)
DUALITY	+	0.038	0.041	-0.054	0.007
		(0.41)	(0.45)	(-0.41)	(0.06)
LNACSIZE	-	0.029	0.041	-0.088	-0.092
		(0.12)	(0.18)	(-0.29)	(-0.31)
ACEXP	-	-0.185	-0.181	-0.241	-0.176
		(-1.13)	(-1.10)	(-1.11)	(-0.83)
Intercept	?	-1.866**	-1.774**	-0.510	-1.129
		(-2.39)	(-2.27)	(-0.46)	(-1.10)
Year fixed effects		Yes	Yes	Yes	Yes
Industry fixed effects		Yes	Yes	Yes	Yes
Number of firm-years		10,773	10,773	10,773	10,773
Pseudo R^2		7.25%	7.22%	7.83%	6.66%
Wald χ^2		472.83***	473.35***	289.37***	260.62***

*, **, *** represent significance at 10 percent, 5 percent, and 1 percent levels, respectively, with probability levels one-tailed for variables with directional expectations, and two-tailed otherwise.

Numbers in parentheses are test statistics based on standard errors robust to heteroskedasticity, and clustered at the firm-level.

See Appendix 1 for variable definitions.

2.5.2.2 Substantial Risk of a Material Misstatement

Table 2.7 presents the results for testing the association between audit committee members' reputation incentives and the likelihood of a substantial risk of a material misstatement using the full sample (Columns 1 and 2) and the entropy balancing analysis (Columns 3 and 4). My results indicate that audit committees with more audit committee members for whom this audit committee membership is classified as the highest rank are associated with a lower likelihood of a substantial risk of a material misstatement (Columns 1 to 4: $p < 0.01$). Thus, H1 is supported with respect to the propensity for substantial risk of a material misstatement. I measure the marginal effects of *AC_HIGH_PERC* and find that an increase of one standard deviation in the proportion of audit committee members for whom this audit committee membership is classified as the highest rank (from 31 percent to 56 percent) leads to a decrease in the likelihood of a substantial risk of a material misstatement by 0.1 percent, evaluating other variables at their means. Compared to the unconditional substantial risk of a material misstatement rate of 6 percent, this represents a difference of 2 percent in the likelihood of a substantial risk of a material misstatement.[21]

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[21]   This is calculated as follows: $0.001/0.06 = 0.02$.

Table 2.7: Logistics Regressions of the Likelihood of a Substantial Risk of Material Misstatement on Audit Committee Members' Reputation Incentives (DV = *IV_FSCORE*)

		Dependent Variable = *IV_FSCORE*			
		Full Sample		**Entropy Balanced Matching Sample**	
Variables	**Predicted Sign**	**(1) Coefficient (*t*-statistic)**	**(2) Coefficient (*t*-statistic)**	**(3) Coefficient (*t*-statistic)**	**(4) Coefficient (*t*-statistic)**
AC_HIGH_PERC	-	-0.769***		-1.057***	
		(-3.15)		(-3.73)	
AC_LOW_PERC	+	-0.162		-0.158	
		(-0.69)		(-0.50)	
AC_HIGH_PERC_SCORE	-		-0.731***		-1.003***
			(-3.22)		(-4.00)
AC_LOW_PERC_SCORE	+		-0.239		-0.117
			(-0.94)		(-0.33)
SIZE	?	0.228***	0.218***	0.244***	0.222***
		(4.08)	(4.05)	(3.09)	(2.86)
RESTRUCTURE	+	-0.221	-0.214	-0.190	-0.126
		(-1.93)	(-1.86)	(-1.20)	(-0.78)
MERGER	+	0.848***	0.844***	0.821***	0.837***
		(7.39)	(7.36)	(4.89)	(5.31)
MB	+	-0.009	-0.010	-0.001	0.001
		(-0.84)	(-0.99)	(-0.06)	(0.04)
EXGROWTH	+	0.921***	0.912***	0.774***	0.819***
		(7.66)	(7.60)	(4.64)	(5.16)
LEV	+	1.172***	1.162***	1.628***	1.130***
		(4.25)	(4.20)	(3.84)	(2.89)
LOSS	+	-0.587	-0.584	-0.857	-0.924
		(-3.61)	(-3.59)	(-2.86)	(-3.77)
BIG4	-	-0.551***	-0.551***	-0.586**	-0.589**
		(-2.79)	(-2.78)	(-1.83)	(-1.83)
ISP	-	0.194	0.203	0.171	0.208
		(1.42)	(1.48)	(0.94)	(1.24)
LITIGATION	+	-0.457	-0.465	-0.416	-0.408
		(-2.58)	(-2.61)	(-1.73)	(-1.83)
OPERCYCLE	+	0.002***	0.002***	0.003***	0.002***
		(2.87)	(2.75)	(3.65)	(3.03)
CFO	-	-2.340***	-2.385***	-3.935***	-3.488***
		(-5.38)	(-5.48)	(-5.22)	(-5.08)
STD_CFO	+	-2.212	-2.302	-3.839	-3.520
		(-2.62)	(-2.72)	(-2.58)	(-2.75)

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Table 2.7 (Continued)

		Full Sample		Entropy Balanced Matching Sample	
		(1)	**(2)**	**(3)**	**(4)**
Variables	**Predicted Sign**	**Coefficient** (*t*-statistic)	**Coefficient** (*t*-statistic)	**Coefficient** (*t*-statistic)	**Coefficient** (*t*-statistic)
STD_SALE	+	1.061***	1.111***	1.188***	1.759***
		(3.67)	(3.81)	(2.84)	(4.07)
CAP_INTENSITY	-	-14.380***	-14.430***	-17.118***	-16.755***
		(-12.35)	(-12.34)	(-10.38)	(-10.81)
INT_INTENSITY	-	-2.628**	-2.668**	-4.527***	-3.655***
		(-2.17)	(-2.19)	(-2.41)	(-2.07)
NO_INT	?	-0.064	-0.063	-0.318	-0.304
		(-0.35)	(-0.34)	(-1.29)	(-1.22)
LNAGE	?	-0.299***	-0.300***	-0.308**	-0.347***
		(-2.99)	(-2.99)	(-2.37)	(-2.87)
LNBDSIZE	-	-0.637**	-0.579*	-1.044**	-0.816*
		(-1.82)	(-1.63)	(-2.08)	(-1.59)
BDIND	-	-0.222	-0.209	-0.793	-0.946*
		(-0.43)	(-0.41)	(-1.16)	(-1.50)
DUALITY	+	-0.142	-0.143	-0.311	-0.215
		(-1.10)	(-1.11)	(-1.70)	(-1.26)
LNACSIZE	-	-0.382	-0.369	-0.728*	-0.548*
		(-1.28)	(-1.24)	(-1.62)	(-1.36)
ACEXP	-	-0.191	-0.183	-0.412*	-0.341
		(-0.87)	(-0.84)	(-1.37)	(-1.19)
Intercept	?	-1.478	-1.388	0.538	0.558
		(-1.39)	(-1.32)	(0.38)	(0.40)
Year fixed effects		Yes	Yes	Yes	Yes
Industry fixed effects		Yes	Yes	Yes	Yes
Number of firm-years		10,773	10,773	10,773	10,773
Pseudo R^2		27.06%	27.08%	30.28%	29.60%
Wald χ^2		532.33***	537.46***	386.36***	414.47***

*, **, *** represent significance at 10 percent, 5 percent, and 1 percent levels, respectively, with probability levels one-tailed for variables with directional expectations, and two-tailed otherwise.

Numbers in parentheses are test statistics based on standard errors robust to heteroskedasticity, and clustered at the firm-level.

See Appendix 1 for variable definitions.

2.5.2.3 Likelihood of Material Weaknesses in Internal Control

Table 2.8 presents the results for testing the association between audit committee members' reputation incentives and the likelihood of material weaknesses in internal control. The results for the full sample presented in Columns 1 and 2 indicate a significant and negative association between audit committee members' high reputation incentives and the likelihood of material weaknesses in internal control for both *AC_HIGH_PERC* and *AC_HIGH_PERC_SCORE* (Columns 1 and 2: $p < 0.05$). Thus, H1 is supported with respect to material weaknesses in internal control. To assess the economic importance of my results, I measure the marginal effects of *AC_HIGH_PERC*. I find that an increase of one standard deviation in the proportion of audit committee members for whom this audit committee membership is classified as the highest rank (from 31 percent to 56 percent) leads to a decrease in the likelihood of material weaknesses by approximately 0.3 percent, evaluating other variables at their means. Compared to the unconditional internal control weaknesses rate of 3 percent, this represents an economically significant difference of 10 percent in the likelihood of material weaknesses in internal control.[22] Columns 3 and 4 present the results using the entropy balancing technique. The coefficients of *AC_HIGH_PERC* and *AC_HIGH_PERC_SCORE* are both negative and significant (Column 3: $p < 0.10$; Column 4: $p < 0.05$).

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[22]   This is calculated as follows: $0.003/0.03 = 0.10$.

Table 2.8: Logistic Regressions of the Likelihood of Material Weaknesses in Internal Control on Audit Committee Members' Reputation Incentives (DV = *IC*)

Variables	Predicted Sign	Full Sample		Entropy Balanced Matching Sample	
		(1) Coefficient (*t*-statistic)	(2) Coefficient (*t*-statistic)	(3) Coefficient (*t*-statistic)	(4) Coefficient (*t*-statistic)
AC_HIGH_PERC	-	-0.562**		-0.588*	
		(-2.00)		(-1.57)	
AC_LOW_PERC	+	0.260		0.103	
		(0.99)		(0.26)	
AC_HIGH_PERC_SCORE	-		-0.425**		-0.487**
			(-1.65)		(-1.75)
AC_LOW_PERC_SCORE	+		0.062		-0.261
			(0.21)		(-0.53)
SIZE	?	-0.140**	-0.161**	-0.244***	-0.246***
		(-2.07)	(-2.46)	(-2.71)	(-2.88)
LNSEGMENT	+	-0.042	-0.031	-0.013	-0.023
		(-0.37)	(-0.28)	(-0.07)	(-0.14)
RESTRUCTURE	+	0.297**	0.318**	0.237	0.351*
		(2.08)	(2.25)	(1.09)	(1.63)
MERGER	+	-0.175	-0.182	-0.549	-0.317
		(-1.12)	(-1.16)	(-2.30)	(-1.47)
MB	+	-0.004	-0.006	-0.012	-0.017
		(-0.40)	(-0.59)	(-0.74)	(-1.14)
EXGROWTH	+	0.396***	0.388***	0.584***	0.556***
		(2.79)	(2.74)	(2.76)	(2.87)
LEV	+	0.407*	0.431*	1.274***	1.141***
		(1.39)	(1.48)	(2.74)	(2.50)
ROA	-	-0.600**	-0.617**	-0.723*	-0.275
		(-1.94)	(-2.00)	(-1.34)	(-0.55)
BIG4	?	-0.001	-0.002	0.118	-0.071
		(-0.01)	(-0.01)	(0.28)	(-0.24)
ISP	?	0.240*	0.243*	0.207	0.186
		(1.75)	(1.76)	(1.03)	(0.97)
CHANGE	+	1.027***	1.026***	0.749**	0.989***
		(5.18)	(5.18)	(2.02)	(2.96)
LNAGE	?	-0.058	-0.060	-0.274	-0.217
		(-0.47)	(-0.48)	(-1.55)	(-1.28)
LNBDSIZE	-	-0.424	-0.362	-0.425	-0.460
		(-1.23)	(-1.04)	(-0.77)	(-0.94)

(continued on next page)

Table 2.8 (Continued)

Variables	Predicted Sign	Full Sample		Entropy Balanced Matching Sample	
		(1) Coefficient (*t*-statistic)	(2) Coefficient (*t*-statistic)	(3) Coefficient (*t*-statistic)	(4) Coefficient (*t*-statistic)
		Dependent variable = *IC*			
BDIND	-	-0.623	-0.615	0.375	0.097
		(-1.16)	(-1.14)	(0.44)	(0.13)
DUALITY	+	-0.196	-0.193	-0.119	-0.168
		(-1.47)	(-1.45)	(-0.62)	(-0.93)
LNACSIZE	-	-0.182	-0.177	0.238	0.170
		(-0.54)	(-0.53)	(0.47)	(0.35)
ACEXP	-	-0.587***	-0.571***	-0.661**	-0.716**
		(-2.46)	(-2.40)	(-1.85)	(-2.21)
Intercept	?	1.991*	2.260*	4.190***	4.359***
		(1.66)	(1.90)	(2.56)	(2.78)
Year fixed effects		Yes	Yes	Yes	Yes
Industry fixed effects		Yes	Yes	Yes	Yes
Number of firm-years		10,773	10,773	10,773	10,773
Pseudo R^2		7.65%	7.55%	10.65%	10.06%
Wald χ^2		244.99***	247.36***	303.40***	272.61***

*, **, *** represent significance at 10 percent, 5 percent, and 1 percent levels, respectively, with probability levels one-tailed for variables with directional expectations, and two-tailed otherwise.

Numbers in parentheses are test statistics based on standard errors robust to heteroskedasticity, and clustered at the firm-level.

See Appendix 1 for variable definitions.

2.5.2.4 Remediation of Material Weaknesses in Internal Control

Table 2.9 provides the results for testing the association between audit committee members' reputation incentives and the likelihood of remediating material weaknesses in internal control. Based on a sample of 347 firm-year observations with disclosed material weaknesses in internal control during the year, I find that for both the full sample and the entropy balancing technique, *AC_HIGH_PERC* and *AC_HIGH_PERC_SCORE* are associated with a higher likelihood of remediating material weaknesses in internal control (Columns 1 to 4: $p < 0.01$). Thus, H1 is supported with respect to remediation of material weaknesses in internal control. The results are also economically significant. I measure the marginal effects of *AC_HIGH_PERC* and find that an increase of one standard deviation in the proportion of audit committee members for whom this audit committee membership is classified as the highest rank (from 31 percent to 56 percent) leads to an increase in the likelihood of remediating material weaknesses in internal control by 6 percent, evaluating other variables at their means. Compared to the unconditional remediation rate of 69 percent, this represents a significant difference of 9 percent in the likelihood of remediating the internal control weaknesses.[23]

The coefficients of my low incentive measures, *AC_LOW_PERC* and *AC_LOW_PERC_SCORE*, are not significant in any of my models, thus suggesting that firms with more audit committee members for whom this audit committee membership represents the least prestigious position are not associated with the effectiveness of monitoring the financial reporting process.

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[23]   This is calculated as follows: 0.06/0.69 = 0.09.

Table 2.9: Logistic Regressions of the Likelihood of Remediation of Material Weaknesses in Internal Control on Audit Committee Members' Reputation Incentives (DV = *REMEDIATE*)

		Full Sample		Entropy Balanced Matching Sample	
		(1)	**(2)**	**(3)**	**(4)**
Variables	**Predicted Sign**	**Coefficient (*t*-statistic)**	**Coefficient (*t*-statistic)**	**Coefficient (*t*-statistic)**	**Coefficient (*t*-statistic)**
AC_HIGH _PERC	+	1.458***		2.174***	
		(2.48)		(3.37)	
AC_LOW _PERC	-	0.359		-0.386	
		(0.49)		(-0.50)	
AC_HIGH _PERC_SCORE	+		1.908***		2.052***
			(2.92)		(2.71)
AC_LOW _PERC_SCORE	-		0.070		0.252
			(0.11)		(0.33)
LNIC_TOTAL	-	-1.969***	-1.916***	-2.501***	-2.457***
		(-5.09)	(-4.93)	(-4.67)	(-4.34)
SIZE	?	-0.086	-0.073	-0.271	-0.172
		(-0.64)	(-0.54)	(-1.26)	(-0.88)
LNSEGMENT	?	-0.245	-0.176	-0.275	-0.335
		(-1.03)	(-0.74)	(-0.73)	(-0.91)
RESTRUCTURE	?	0.682**	0.691**	1.044**	1.107**
		(2.21)	(2.20)	(2.27)	(2.55)
MERGER	?	-0.059	-0.101	0.312	0.031
		(-0.15)	(-0.25)	(0.57)	(0.06)
MB	?	0.002	0.005	-0.027	-0.009
		(0.10)	(0.24)	(-0.85)	(-0.27)
EXGROWTH	?	-0.074	-0.079	-0.455	-0.223
		(-0.21)	(-0.22)	(-0.95)	(-0.51)
LEV	-	0.239	0.211	-1.034	-0.288
		(0.35)	(0.30)	(-0.97)	(-0.27)
ROA	+	-1.470	-1.411	-3.043	-0.977
		(-1.50)	(-1.47)	(-1.61)	(-0.63)
BIG4	?	-0.121	-0.194	-0.022	-0.835
		(-0.26)	(-0.43)	(-0.03)	(-1.14)
ISP	?	-0.332	-0.300	-0.470	-0.403
		(-1.04)	(-0.93)	(-1.05)	(-0.97)
CHANGE	?	0.544	0.639	1.234*	1.045
		(1.13)	(1.28)	(1.67)	(1.62)
LNAGE	?	0.217	0.193	0.625*	0.565*
		(0.83)	(0.73)	(1.90)	(1.66)

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Table 2.9 (Continued)

		Full Sample		Entropy Balanced Matching Sample	
Variables	**Predicted Sign**	**(1)** Coefficient (*t*-statistic)	**(2)** Coefficient (*t*-statistic)	**(3)** Coefficient (*t*-statistic)	**(4)** Coefficient (*t*-statistic)
LNBDSIZE	+	-1.308	-1.663	0.292	-0.555
		(-1.59)	(-1.97)	(0.19)	(-0.42)
BDIND	+	-3.712	-3.455	-7.249	-6.432
		(-2.99)	(-2.82)	(-3.70)	(-3.64)
DUALITY	-	0.306	0.333	0.591	0.618
		(1.14)	(1.24)	(1.38)	(1.54)
LNACSIZE	+	0.164	0.125	-1.409	-0.320
		(0.17)	(0.13)	(-1.12)	(-0.27)
ACEXP	+	0.284	0.270	0.492	0.379
		(0.48)	(0.45)	(0.53)	(0.45)
Intercept	?	11.057***	11.388***	15.647***	13.954***
		(3.76)	(3.92)	(3.52)	(3.48)
Year fixed effects		Yes	Yes	Yes	Yes
Industry fixed effects		Yes	Yes	Yes	Yes
Number of firm-years [a]		347	347	347	347
Pseudo R^2		20.08%	20.86%	36.74%	29.66%
Wald χ^2		116.27***	115.29***	331.18***	168.61***

Dependent variable = *REMEDIATE*

*, **, *** represent significance at 10 percent, 5 percent, and 1 percent levels, respectively, with probability levels one-tailed for variables with directional expectations, and two-tailed otherwise.

Numbers in parentheses are test statistics based on standard errors robust to heteroskedasticity, and clustered at the firm-level.

See Appendix 1 for variable definitions.

[a] The regressions are based on a sample of firms with material weaknesses in internal control in year *t* (347 firm-year observations).

2.6   Additional Analyses

2.6.1 Propensity Score Matching (PSM)

In addition to the entropy balancing technique, I estimate my results using a matched sample. Specifically, I use propensity score matching (PSM) to construct two samples (Rosenbaum 2002; Rosenbaum and Rubin 1983). I estimate the probability that a firm has a majority of audit committee members for whom this audit committee membership is their highest ranked using a probit model with the same explanatory variables used in my entropy balancing technique. The first PSM sample is determined using a one-to-one match, without replacement, of treatment observations (AC_HIGH_MAJ = 1) to control observations (AC_HIGH_MAJ = 0), within a caliper range of 1 percent. This results in 1,723 matched pairs (3,446 observations). Similarly, the second PSM sample is based on a one-to-one match, without replacement, of treatment observations ($AC\_HIGH\_MAJ\_SCORE$ = 1) to control observations ($AC\_HIGH\_MAJ\_SCORE$ = 0), within a caliper range of 1 percent. This results in 1,857 matched pairs (3,714 observations).

Estimates from the probit model are shown in Table 2.10. Most of the explanatory variables are significant and are of the proper sign. In addition, covariate balance is achieved on all explanatory variables. Results using the PSM samples are tabulated in Table 2.11 and are qualitatively similar to my main results with my test variables remaining significant for my PSM samples.[24]

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[24]   Due to the small sample size, I am not able to perform the PSM procedure and the matched sample analysis based on firm size and industry to test the association between audit committee members' reputation incentives and the likelihood of remediating material weaknesses in internal control.

Table 2.10: Propensity Score Matching – Results of Probit Regression

Variables	Predicted Sign	Match AC_HIGH_MAJ = 1 with AC_HIGH_MAJ = 0 Coefficient (*t*-statistic)	Match AC_HIGH_MAJ_SCORE = 1 with AC_HIGH_MAJ_SCORE = 0 Coefficient (*t*-statistic)
SIZE	+	0.350***	0.226***
		(24.45)	(18.91)
LNSEGMENT	-	-0.093***	-0.066***
		(-3.55)	(-2.61)
MB	+	0.020***	0.009***
		(6.95)	(3.28)
LEV	-	-0.362***	-0.209***
		(-3.98)	(-2.45)
ROA	+	0.220*	0.134
		(1.29)	(0.84)
LNAGE	?	-0.093***	-0.099***
		(-3.30)	(-3.63)
OPERCYCLE	?	0.000	0.000
		(1.04)	(0.53)
CFO	?	-0.349*	-0.528***
		(-1.67)	(-2.70)
STD_CFO	?	0.889***	0.460*
		(3.24)	(1.76)
STD_SALE	?	-0.257**	-0.009
		(-2.48)	(-0.09)
CAP_INTENSITY	?	-0.104	-0.046
		(-1.03)	(-0.48)
INT_INTENSITY	?	-0.506*	-0.440*
		(-1.95)	(-1.75)
LITIGATION	+	0.141***	0.137***
		(2.86)	(2.88)
LNBDSIZE	+	0.034	0.549***
		(0.38)	(6.27)
BDIND	+	0.043	0.111
		(0.30)	(0.83)
DUALITY	-	-0.048*	-0.030
		(-1.44)	(-0.93)
LNACSIZE	+	-0.876	-0.689
		(-10.01)	(-8.25)
ACEXP	+	0.160***	0.157***
		(2.93)	(2.99)
Intercept	?	-6.999***	-6.492***
		(-25.94)	(24.86)

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Table 2.10 (Continued)

	Match $AC\_HIGH\_MAJ = 1$ with $AC\_HIGH\_MAJ = 0$	Match $AC\_HIGH\_MAJ\_SCORE = 1$ with $AC\_HIGH\_MAJ\_SCORE = 0$
Year fixed effects	Yes	Yes
Industry fixed effects	Yes	Yes
Number of firm-years	10,773	10,773
Pseudo R^2	13.29%	9.70%
LR χ^2	1,283.88***	976.96***

The PSM samples are based on one-to-one match, without replacement, or treatment observations to control observations, within a caliper range of 1 percent.

*, **, *** represent significance at 10 percent, 5 percent, and 1 percent levels, respectively, with probability levels one-tailed for variables with directional expectations, and two-tailed otherwise.

See Appendix 1 for variable definition

Table 2.11: Results using Propensity Score Matching Sample

Variables	Predicted Sign	Dependent Variable = RESTATE		Dependent Variable = IV_FSCORE		Dependent Variable = IC	
		(1) Coefficient (*t*-statistic)	(2) Coefficient (*t*-statistic)	(3) Coefficient (*t*-statistic)	(4) Coefficient (*t*-statistic)	(5) Coefficient (*t*-statistic)	(6) Coefficient (*t*-statistic)
AC_HIGH_PERC	-	-0.349*		-0.827***		-0.781**	
		(-1.46)		(-2.32)		(-1.67)	
AC_HIGH_PERC_SCORE	-		-0.401**		-0.977***		-0.544*
			(-1.88)		(-3.22)		(-1.42)
Intercept	?	-1.663	-1.559	0.888	0.303	3.706*	3.828*
		(-1.33)	(-1.33)	(0.48)	(0.18)	(1.86)	(1.82)
Control variables		Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects		Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects		Yes	Yes	Yes	Yes	Yes	Yes
Number of firm-years		3,446	3,714	3,446	3,714	3,446	3,714
Pseudo R^2		8.67%	7.13%	32.09%	34.66%	12.19%	10.63%
Wald χ^2		184.86***	197.63***	223.60***	276.95***	130.67***	128.14***

*, **, *** represent significance at 10 percent, 5 percent, and 1 percent levels, respectively, with probability levels one-tailed for variables with directional expectations, and two-tailed otherwise.

Numbers in parentheses are test statistics based on standard errors robust to heteroskedasticity, and clustered at the firm-level.

See Appendix 1 for variable definitions.

2.6.2 A Further Examination of Firm Size Effect

In addition to matching firms by propensity score, I match each firm that has a majority of audit committee members for whom this audit committee membership is the largest ($AC\_HIGH\_MAJ = 1$ or $AC\_HIGH\_MAJ\_SCORE = 1$) with a control firm ($AC\_HIGH\_MAJ = 0$ or $AC\_HIGH\_MAJ\_SCORE = 0$) in the same industry-year that is closest in firm size. This results in a matched sample of 3,562 (3,826) firm-year observations when ranking firms using market capitalization (aggregate reputation measure). My findings (untabulated) are consistent with my main results when using the matched sample. I also censor the sample of firms by annually excluding the top and bottom 5 percent of firms based on market capitalization. Specifically, I first calculate audit committee members' reputation ranking measures using the full uncensored sample, then I remove the largest and smallest 5 percent of firms from each sample year prior to conducting my tests. The results (untabulated) when using the censored sample (9,705 firm-year observations) are consistent with my main results. Finally, I include both firm size ($SIZE$) and its squared value ($SIZESQ$) as control variables in my regression models. My results (untabulated) are robust to the inclusion of both variables. My additional tests for a further examination of a firm size effect indicate that the reputation incentive of audit committee members is a key board attribute that is different from firm size.

2.6.3 Independent Non-Audit Committee Members' Reputation Incentives

Prior research suggests that monitoring by independent board members is important to ensure the reliability of a firm's financial reporting process. Specifically, prior studies find that firms with more independent and expert boards are associated with better financial reporting quality and lower earnings management (e.g., Dechow, Sloan, and

Sweeney 1996; Xie, Davidson, and DaDalt 2003; Bedard and Johnstone 2004; Chen et al. 2017).

Given that the responsibility of ensuring effective financial reporting falls primarily on the audit committee, I argue that the impact of audit committee members' reputation incentives on monitoring the financial reporting process is stronger than those of independent non-audit committee members' reputation incentives. I define independent non-audit committee members as directors who are independent and who do not sit on any audit committee. As such, compared to audit committee members' reputation incentives, I expect independent non-audit committee members' reputation incentives to have a weaker or insignificant association with the monitoring effectiveness over the financial reporting process.

I include independent non-audit committee members' reputation incentives in my regression models and report my results in Table 2.12.[25, 26] I find that my results are driven by audit committee members' reputation incentives rather than independent non-audit committee members' reputation incentives. The audit committee members' reputation incentives variables remain significant in seven of my eight regressions, while the

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[25] Using a group of directors who do not sit on any audit committee (director-year observations = 151,764 as shown in Table 2.1), I exclude executive directorships (director-year observations = 46,626) and sole directorships (director-year observations = 81,944). This results in 23,194 director-year observations, which represents independent non-audit committee members with multiple independent directorships. Based on a sample of 23,194 director-year observations, I rank each independent non-audit committee members' directorships based on market capitalization (aggregate reputation measure) and compute the percentage of independent non-audit committee members for whom this directorship is their most prominent directorship, defined as *NONAC_HIGH_PERC* (*NONAC_HIGH_PERC_SCORE*).

[26] In my full sample of 10,773 firm-year observations, 4,867 firm-year observations consist of firms that do not have at least one independent non-audit committee members with multiple independent directorships. For these 4,867 firm-year observations, I assign a value of zero for the independent non-audit committee members' reputation incentives (*NONAC_HIGH_PERC* or *NONAC_HIGH_PERC_SCORE*). I define an indicator variable (*NO_IND*) that equals one for these firms (4,867 firm-year observations) that do not have at least one independent non-audit committee members with two or more independent directorships, and zero otherwise. I include both *NONAC_HIGH_PERC* (or *NONAC_HIGH_PERC_SCORE*) and *NO_IND* in my regression models when testing the impact of independent non-audit committee members' reputation incentives on monitoring the financial reporting process.

independent non-audit committee members' reputation incentives variables are only marginally significant in one of the regressions. Overall, these findings suggest that while the board, as a whole, influences a firm's financial reporting outcomes through their governance role, the audit committee plays a fundamental and crucial role in overseeing the firm's financial reporting process.

Table 2.12: Independent Non-Audit Committee Members' Reputation Incentives

Variables	Predicted Sign	Dependent Variable = RESTATE		Dependent Variable = IV_FSCORE		Dependent Variable = IC		Dependent Variable = REMEDIATE [a]	
		(1) Coefficient (*t*-statistic)	(2) Coefficient (*t*-statistic)	(3) Coefficient (*t*-statistic)	(4) Coefficient (*t*-statistic)	(5) Coefficient (*t*-statistic)	(6) Coefficient (*t*-statistic)	(7) Coefficient (*t*-statistic)	(8) Coefficient (*t*-statistic)
AC_HIGH_PERC	- / +	-0.329**		-0.743***		-0.555**		1.629***	
		(-1.87)		(-3.03)		(-1.96)		(2.67)	
NONAC_HIGH_P ERC	- / +	-0.495		-1.218*		0.215		-2.042	
		(-0.63)		(-1.49)		(0.19)		(-0.58)	
AC_HIGH_PERC _SCORE	- / +		-0.196		-0.712***		-0.443**		2.023***
			(-1.21)		(-3.06)		(-1.66)		(2.96)
NONAC_HIGH_ PERC_SCORE	- / +		-0.476		-0.890		-0.083		2.799
			(-0.62)		(-1.10)		(-0.07)		(0.81)
Intercept	?	-2.577***	-2.507***	-1.862*	-1.683	1.836	2.395*	9.433***	9.889***
		(-3.00)	(-2.90)	(-1.71)	(-1.58)	(1.31)	(1.85)	(3.22)	(3.39)
Control variables		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of firm-years		10,773	10,773	10,773	10,773	10,773	10,773	347	347
Pseudo R^2		7.36%	7.34%	27.15%	27.16%	7.67%	7.58%	21.21%	21.69%
Wald χ^2		480.46***	480.30***	537.50***	536.75***	250.29***	249.55***	117.15***	112.85***

*, **, *** represent significance at 10 percent, 5 percent, and 1 percent levels, respectively, with probability levels one-tailed for variables with directional expectations, and two-tailed otherwise.

Numbers in parentheses are test statistics based on standard errors robust to heteroskedasticity, and clustered at the firm-level.

See Appendix 1 for variable definitions.

[a] The regressions are based on a sample of firms with material weaknesses in internal control in year *t* (347 firm-year observations).

2.6.4 Busy Audit Committee and Audit Committee Members' Reputation Incentives Effect

The busyness hypothesis suggests that serving on multiple board positions reduces audit committee members' effectiveness as monitors, since it demands substantial time and commitment from audit committee members, and it assumes that directors allocate their monitoring effort equally across all their directorships (e.g., Sharma and Iselin 2012; Tanyi and Smith 2015). However, my main results indicate that the negative effect of multiple directorships does not apply uniformly to all firms. Rather, audit committee members monitoring effectiveness depends on the relative reputation value that the membership offers. I further examine whether the effects of audit committee members' reputation incentives will be greater in firms with "busier" audit committees. Specifically, the more directorships an audit committee member holds, the more commitments he or she has, and therefore it is more likely that he or she will strategically distribute his or her monitoring effort across his or her audit committee memberships due to his or her limited time and energy.

To test this prediction, I partition my sample into two subsamples based on the average number of directorships held by the audit committee members (*AVEBOARD*). I classify a firm observation into the "Busy Audit Committee" group if *AVEBOARD* is above the industry median in a given year (*BUSY* = 1). Table 2.13, Panels A, C and D show that the significant association between audit committee members' reputation incentives and their monitoring effectiveness in terms of restatement, material weaknesses in internal control and remediation of material weaknesses in internal control are observed only in the "Busy Audit Committee" group. Contrary to my expectation, Panel B shows that the association between audit committee members' reputation

incentives and *IV_FSCORE* is observed in the subsample of firms whose audit committee

members are less busy.

Table 2.13: Moderating Effect of Busy Audit Committee

Panel A: Logistic Regressions of the Likelihood of a Financial Restatement on Audit Committee Members' Reputation Incentives (DV = *RESTATE*)

Variables	Predicted Sign	BUSY = 1		BUSY = 0	
		(1) Coefficient (*t*-statistic)	(2) Coefficient (*t*-statistic)	(3) Coefficient (*t*-statistic)	(4) Coefficient (*t*-statistic)
AC_HIGH_PERC	-	-0.484**		-0.079	
		(-2.03)		(-0.33)	
AC_HIGH_PERC_SCORE	-		-0.397**		0.011
			(-1.74)		(0.05)
Intercept	?	-1.400	-1.199	-2.082**	-2.068**
		(-1.23)	(-1.04)	(-2.12)	(-2.09)
Control variables		Yes	Yes	Yes	Yes
Year fixed effects		Yes	Yes	Yes	Yes
Industry fixed effects		Yes	Yes	Yes	Yes
Number of firm-years		4,435	4,435	6,338	6,338
Pseudo R^2		7.95%	7.90%	7.95%	7.95%
Wald χ^2		204.08***	204.22***	325.19***	324.81***

Table 2.13 (Continued)

Panel B: Logistic Regressions of the Likelihood of a Substantial Risk of a Material Misstatement on Audit Committee Members' Reputation Incentives (DV = IV_FSCORE)

Variables	Predicted Sign	BUSY = 1		BUSY = 0	
		(1) Coefficient (*t*-statistic)	(2) Coefficient (*t*-statistic)	(3) Coefficient (*t*-statistic)	(4) Coefficient (*t*-statistic)
AC_HIGH_ PERC	-	-0.166		-0.971***	
		(-0.48)		(-3.25)	
AC_HIGH_ PERC_SCORE	-		-0.368		-0.711***
			(-1.11)		(-2.41)
Intercept	?	0.406	2.389	-3.564***	-3.281**
		(0.25)	(0.15)	(-2.64)	(-2.47)
Control variables		Yes	Yes	Yes	Yes
Year fixed effects		Yes	Yes	Yes	Yes
Industry fixed effects		Yes	Yes	Yes	Yes
Number of firm-years		4,435	4,435	6,338	6,338
Pseudo R^2		28.74%	28.83%	27.49%	27.35%
Wald χ^2		253.54***	252.87***	395.95***	401.75***

Panel C: Logistic Regressions of the Likelihood of Material Weaknesses in Internal Control on Audit Committee Members' Reputation Incentives (DV = IC)

Variables	Predicted Sign	BUSY = 1		BUSY = 0	
		(1) Coefficient (*t*-statistic)	(2) Coefficient (*t*-statistic)	(3) Coefficient (*t*-statistic)	(4) Coefficient (*t*-statistic)
AC_HIGH_ PERC	-	-0.978**		-0.138	
		(-2.02)		(-0.38)	
AC_HIGH_ PERC_SCORE	-		-0.640*		-0.115
			(-1.62)		(-0.33)
Intercept	?	2.444	3.245*	1.303	1.464
		(1.35)	(1.86)	(0.86)	(0.96)
Control variables		Yes	Yes	Yes	Yes
Year fixed effects		Yes	Yes	Yes	Yes
Industry fixed effects		Yes	Yes	Yes	Yes
Number of firm-years		4,435	4,435	6,338	6,338
Pseudo R^2		8.90%	8.46%	8.01%	7.96%
Wald χ^2		101.84***	101.03***	196.48***	202.66***

Table 2.13 (Continued)

Panel D: Logistic Regressions of the Likelihood of Remediation of Material Weaknesses in Internal Control on Audit Committee Members' Reputation Incentives (DV = *REMEDIATE*)

Variables	Predicted Sign	BUSY = 1		BUSY = 0	
		(1) Coefficient (*t*-statistic)	(2) Coefficient (*t*-statistic)	(3) Coefficient (*t*-statistic)	(4) Coefficient (*t*-statistic)
AC_HIGH_ PERC	+	2.647**		0.248	
		(2.05)		(0.24)	
AC_HIGH_ PERC_SCORE	+		4.206***		1.051
			(3.38)		(1.08)
Intercept	?	12.207*	15.299**	17.107***	17.022***
		(1.81)	(2.14)	(4.65)	(4.56)
Control variables		Yes	Yes	Yes	Yes
Year fixed effects		Yes	Yes	Yes	Yes
Industry fixed effects		Yes	Yes	Yes	Yes
Number of firm-years [a]		117	117	230	230
Pseudo R^2		36.86%	37.69%	27.96%	28.30%
Wald χ^2		44.20	46.95	89.98***	88.68***

*, **, *** represent significance at 10 percent, 5 percent, and 1 percent levels, respectively, with probability levels one-tailed for variables with directional expectations, and two-tailed otherwise.

Numbers in parentheses are test statistics based on standard errors robust to heteroskedasticity, and clustered at the firm-level.

See Appendix 1 for variable definitions.

[a] The regressions are based on a sample of firms with material weaknesses in internal control in year *t* (347 firm-year observations).

2.6.5 Controlling for Director Characteristics

To mitigate the confounding effects resulting from director characteristics, as part of my additional tests, I include the average number of directorships held by the audit committee members (*AVEBOARD*), the average tenure of audit committee members (*AVETENURE*), the average age of audit committee members (*AVEAGE*), and the average cash compensation (*AVECASH*) in my regression models. I include *AVEBOARD* since prior research suggests that more directorships increase the reputation risk for directors (Bugeja, Da Silva Rosa, and Lee 2009; Shivdasani 1993), which, in turn, increase their monitoring effort. I include *AVETENURE* and *AVEAGE* since newer and younger directors are likely to exert greater monitoring effort to advance their career and build their reputation capital. I include *AVECASH* since higher pay provides greater incentives to increase monitoring effort (Adams and Ferreira 2008). Further, I include *ACONLY* (*ACBUSY*), which controls for firms with a majority of audit committee members who serve on only one directorship (three or more directorships). My main results remain qualitatively unchanged even after controlling for these variables.

2.6.6 Alternative Earnings Management Measure

In addition to the F-Score constructed by Dechow et al. (2011), I adopt an alternative measure of earnings management, i.e. the discretionary accruals (*DACC*). Discretionary accruals are measured by the residual based on industry-year using the performance-adjusted modified-Jones model (Dechow, Sloan, and Sweeney 1995; Jones 1991; Kothari, Leone, Wasley 2005), as follows:

$$TAC_{ijt}/A_{ijt-1} = \alpha_j + \beta_{1j}(1/A_{ijt-1}) + \beta_{2j}[(\Delta REV_{ijt} - \Delta REC_{ijt})/A_{ijt-1}] +$$

$$\beta_{3j}(PPE_{ijt}/A_{ijt-1}) + \beta_{4j}ROA_{t-1} + \varepsilon_{ijt-1} \tag{2.5}$$

TAC represents total accruals, *A* represents total assets, Δ*REV* represents change in revenue, Δ*REC* represents change in receivables, *PPE* represents gross property, plant and equipment, and *ROA* represents return on asset. Using *DACC* as the dependent variable, I do not find significant results for both my test variables (*AC_HIGH_PERC* and *AC_HIGH_PERC_SCORE*).

2.7   Conclusion

Following SOX, the oversight responsibilities of audit committees have significantly increased, placing a huge demand on audit committee members' limited time and energy. Prior research finds that the increased workload associated with multiple audit committee memberships compromises audit committee members' monitoring effectiveness over the financial reporting process (Tanyi and Smith 2015; Sharma and Iselin 2012). I investigate whether the differential reputation incentives offered by different firms influence audit committee members' effectiveness in overseeing the firm's financial reporting process. Reputation represents an invaluable asset to both firms and individuals. To the extent that audit committee members have incentives to build their reputation as an effective monitor over management, my study addresses whether audit committee members with multiple audit committee memberships regard each membership differently according to the relative reputation value an audit committee membership offers.

My results yield several key findings. I document that firms with a higher proportion of audit committee members who have relatively high reputation incentives are associated with better financial reporting quality and more effective internal control monitoring, both of which are indicators of effective monitoring of the financial reporting process. These findings emphasize the importance of considering audit committee

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members' reputation incentives when examining the effectiveness of their monitoring, given its impact and implication on the quality of the financial reporting process. My results are robust to endogeneity concerns and firm size effects, although I acknowledge that these concerns can never be ruled out entirely. In addition, I find that my results are driven by audit committee members' reputation incentives rather than independent non-audit committee members' reputation incentives, thus emphasizing the pivotal role that audit committee members play in governing the financial reporting process. I find stronger audit committee members' reputation incentives effect for firms with busier audit committee members.

My study contributes to the literature by providing insights into the roles that audit committee members' reputation incentives play in influencing the audit committee monitoring effectiveness. Contrary to prior research (Sharma and Iselin 2012; Tanyi and Smith 2015), my study implies that audit committee members' monitoring effectiveness is not uniform across all audit committee memberships that they sit on. Rather, audit committee members tend to be more effective monitors on the audit committees where they can achieve the greatest reputation benefit. Collectively, these findings suggest that reputation concerns impact audit committee members' behavior and actions, thus identifying a key factor that incentivizes audit committee members.

My results suggest that firms should consider the reputation incentives of audit committee members when making appointments to the audit committee. In particular, if the reputation incentives for the director being appointed to the audit committee are high for this audit committee, then they are more likely to be effective monitors of the financial reporting process. Auditors might also consider the reputation incentives of audit

committee members when evaluating corporate governance and the monitoring effectiveness of the audit committee.

CHAPTER 3: Study 2 – The Impact of Independent Directors' Reputation Incentives on Enhancing CSR Performance

3.1 Introduction

Recent studies suggest that independent directors have incentives to build their reputation as a valuable and diligent director in their most prominent and prestigious boards. As a result, these firms benefit more from independent directors' capabilities, resulting in better financial performance (Masulis and Mobbs 2014; Huang et al. 2018; Sila et al. 2017).

While the impact of independent directors' reputation incentives on a firm's financial performance is well documented, it is unclear whether or how they affect a firm's non-financial performance. This is because independent directors' incentives to improve non-financial performance may differ from those of financial performance. Specifically, compared with financial performance, non-financial performance is voluntary in nature, harder to measure and assure, and broader with greater emphasis on future and long-term objectives (Lau and Sholihin 2005; Dhaliwal, Li, Tsang, and Yang 2011; Ittner and Larcker 1998). As a result, managers have greater discretion over whether and how they choose to engage in non-financial activities. Managers may place greater importance on financial performance because, traditionally, they are often evaluated based on financial measures (Eccles 1991) and they are required to maximize profitability and shareholder value (Friedman 1970). Given these differences, the observed financial implications resulting from independent directors' reputation incentives in prior research cannot be generalized to non-financial outcomes.

CHAPTER 3: Study 2 – The Impact of Independent Directors' Reputation Incentives on Enhancing CSR Performance

In this study, I examine whether the differential reputation incentive offered by a firm's directorship has an impact on a firm's non-financial performance. Specifically, I investigate whether independent directors with multiple directorships prioritize the CSR performance of their most prominent and reputable directorship. Over the past two decades, CSR is an issue of growing significance as stakeholders place greater emphasis on socially responsible behavior. Firms have committed significant amount of resources to CSR activities, and regard social and sustainability performance as top priorities (PricewaterhouseCoopers [PwC] 2018; McKinsey 2014).[27] Prior research on board characteristics suggests that independent directors have incentives to undertake CSR activities to build their reputations as socially responsible directors (Mallin and Michelon 2011). Similarly, Johnson and Greening (1999) argue that independent directors tend to comply with environmental standards to avoid loss of reputation. However, these studies do not consider the fact that when an independent director has multiple directorships, the different directorships offer differing levels of reputation incentives to the director, which may influence how much attention he or she focuses on a firm's CSR performance. Therefore, I add to the literature by investigating how the differential reputation incentives of independent directors with multiple directorships influence a firm's CSR performance, which is an important issue for firms and stakeholders. I state my research question as:

RQ2: For independent directors with multiple directorships, are independent directors' differential reputation incentives associated with CSR performance?

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[27] Fortune Global 500 firms spend over $15 billion a year on CSR initiatives. Further, Verdantix survey on U.S. Sustainable Business Spending predicts that U.S. firms' spending on CSR activities will increase from $34.6 billion in 2012 to $43.6 billion in 2017 (Verdantix 2013).

CHAPTER 3: Study 2 – The Impact of Independent Directors' Reputation Incentives on Enhancing CSR Performance

Prior studies suggest that independent directors care about their reputation as a socially responsible director for at least three reasons. First, independent directors can use CSR as a strategic tool to build their professional and personal reputation (Mallin and Michelon 2011; Johnson and Greening 1999), thus increasing their value in the labor market. Consistent with this view, recent survey evidence shows that corporate executives place significant importance on social and sustainability activities (PwC 2018; McKinsey 2014), and that boards are spending more time discussing and resolving CSR issues (Patrick 2017). Second, independent directors who sit on boards of firms involved in CSR controversies face significant reputational penalties, including board turnover and loss of other board seats (Hickman et al. 2017).[28] Third, there is a high demand for CSR in the capital markets. Anecdotal evidence suggests that investors and stakeholders expect better CSR performance from firms and their executives (Noked 2013). Further, Larry Fink (Chairman and Chief Executive of BlackRock) proposes that "every company must not only deliver financial performance, but also show how it makes a positive contribution to society" (Fink 2018).

Prior studies also suggest that large and prominent firms offer directors greater opportunities for reputation building, career development and networking, as well as higher visibility and compensation (e.g., Masulis and Mobbs 2014; Knyazeva, Knyazeva, and Masulis 2013; Adams and Ferreira 2008; Shivdasani 1993; Ryan and Wiggins 2004). Therefore, based on these aforementioned studies, I argue that the incentive to be regarded as a valuable director in enhancing CSR performance is likely to be greatest in the

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[28] Numerous anecdotes demonstrate the reputational penalties and dismissals faced by top executives of firms that experience CSR controversies. According to PwC's 2016 Strategy& study, the number of forced CEO turnover for ethical lapses increased by 36 percent between 2012 and 2016 (Karlsson et al. 2017). Other notable examples include the resignation of Tony Hayward (Chief Executive of BP) following the Deepwater Horizon oil rig explosion (Mason 2010), and the resignation of Trevor Edwards (Brand President of Nike) amid complaints about poor workplace conduct (Hsu 2018).

independent director's most visible and prestigious board. As a result, they are more likely to improve the CSR performance of those firms where the effects of their reputation as a socially responsible director are maximized. Furthermore, developing and implementing CSR strategies require significant time and effort (Wang and Bansal 2012; Wood 1991). Given that independent directors have limited time and are often busy with multiple commitments (Masulis and Mobbs 2014; Harris and Shimizu 2004), it is expected that they will prioritize their most prominent boards, so as to gain maximum recognition and reputation reward for their effort in improving the CSR practices of these firms, and to minimize potential reputation damage that may result from CSR lapses (Hickman et al. 2017). Based on these arguments, I predict that firms with a higher proportion of independent directors for whom this is the most reputable board position are associated with better CSR performance.

However, there are at least two reasons why my prediction may not be borne out. First, the practice of CSR has become increasingly mainstream among corporations (e.g., Dhaliwal et al. 2011; KPMG 2013); therefore, independent directors may focus on CSR performance for all their directorships, including their less prominent directorships. Second, independent directors may risk reputation damage due to potential spillover effects arising from CSR lapses in their less prominent directorships. Therefore, I may not observe better CSR performance in the director's most prominent directorship.

To test my prediction, I use a sample of U.S. listed firms from 2003 to 2012. To capture the varying reputation incentive effects of directors at the firm-level, I use the percentage of independent directors for whom this directorship is their highest ranked based on an aggregate reputation measure. Following Erkens and Bonner (2013), the aggregate reputation measure is constructed based on a factor score that includes a firm's

market capitalization, the number of firms the focal firm is connected to through common board members and a firm's corporate reputation score from the *Fortune's Most Admired Companies List* (MA List). A firm's CSR performance is measured by the CSR scores obtained from the MSCI STATS database.

I find that firms with a higher proportion of independent directors for whom this directorship is their highest ranked are associated with better CSR performance. Specifically, a one standard deviation increase in my directorship ranking measure (from 13 percent to 28 percent) is associated with an increase in a firm's CSR score by around 0.22. This effect on CSR performance is economically meaningful, given that our mean CSR score is 0.06. Further, this effect corresponds to approximately 8 percent of the standard deviation of the CSR score in my pooled sample. Overall, these results support my conjecture that reputation is a strong incentive for independent directors, such that it not only influences a firm's financial outcomes (Masulis and Mobbs 2014; Huang et al. 2018; Sila et al. 2017), but also impacts a firm's social performance and sustainability efforts.

To obtain an insight into how independent directors' reputation incentives improve CSR performance, I examine the impact of independent directors' high reputation incentives on the subcomponents of the aggregate CSR scores. Specifically, I differentiate between CSR strengths and CSR concerns, between stakeholder CSR and third-party CSR, and among six individual CSR dimensions. I find that the better CSR performance in firms with a larger proportion of independent directors for whom this directorship is their most prestigious is mainly driven by: (1) better performance in socially acceptable activities, rather than in socially unacceptable activities; (2) better performance in both

stakeholder CSR and third-party CSR; and (3) CSR efforts in the areas of diversity, employee relations, community relations, and the environment.

To further corroborate my argument that independent directors' high reputation incentives influence CSR performance, I next investigate the conditions under which the positive relation between independent directors' high reputation incentives and CSR performance varies cross-sectionally. Prior research suggests that firms that belong to an environmentally sensitive or a highly litigious industry experience higher risk as well as greater social, political and stakeholder pressure to engage in CSR activities (Peters and Romi 2015; Dhaliwal et al. 2011). I find that the effect of independent directors' high reputation incentives on CSR performance is alleviated for these firms. My results suggest that the impact of independent directors' high reputation incentives on CSR performance is more pronounced when firms face less external pressure to undertake CSR. Furthermore, prior research indicates that firms with a more gender diverse board (Zhang et al. 2013; Bear et al. 2010; Harjoto et al. 2015) and firms with high managerial ability (Yuan et al. 2017) are associated with better CSR performance. We find that a more gender diverse board attenuates the impact of independent directors' high reputation incentives on CSR performance. However, the mitigating effect of managerial ability is not statistically significant.

To alleviate the concern that my results are driven by unobservable time-invariant firm characteristics, I include firm fixed effects in my regression models. My results are robust to such inclusion. Further, to address potential endogeneity issues, I adopt a lead-lag approach by lagging all independent variables in my regression models. Specifically, to address the concern that my results could be driven by firm size or other endogenously determined firm characteristics, I perform the following analyses. First, I include both

firm size and its squared value in my regression models. Second, I censor my sample of firms by annually excluding the largest and smallest 5 percent of firms based on market capitalization. Third, I create a propensity score matched sample based on firm size and other firm characteristics. Fourth, I employ a difference-in-differences test using exogenous shocks that lead to an independent director's ranking of a directorship to change. I identify treatment (control) firms as firms with at least one independent director who experiences an increase (decrease) in his or her directorship ranking that is caused by a decrease (increase) in the aggregate reputation measure of other firms in his or her directorship portfolio. I find that, following an exogenous increase in directorship ranking, treatment firms experience an increase in CSR performance relative to the matched control firms. The robustness of my main results to these tests reduces concerns that firm size or endogeneity drives my main findings.

My study provides several important contributions to the literature on CSR performance and directors' incentives. First, I provide evidence on the effect of independent directors' reputation incentives on a firm's CSR performance. The literature linking board governance and CSR performance mainly focuses on examining the impact of traditional measures of board attributes, particularly board independence and board diversity, on CSR efforts (e.g., Harjoto et al. 2015; Zhang et al. 2013; Bear et al. 2010). These studies suggest that independent directors undertake CSR to enhance their own reputation (Mallin and Michelon 2011; Johnson and Greening 1999). I add to this line of research by focusing on the implications of differential reputation incentives for independent directors with multiple directorships on CSR performance, which to date has not been investigated. I extend prior research that highlights the significance of an independent and diverse board to a firm's CSR performance (e.g., Harjoto et al. 2015; Zhang et al. 2013; Bear et al. 2010). My results are also relevant to regulators who

emphasize board independence and diversity, as evidenced by the substantial increase in the presence of independent and women directors in the post-SOX era (Linck et al. 2009; Dalton and Dalton 2010). My findings suggest that independent directors are not likely to focus the same amount of attention on CSR across all their directorships. Therefore, it is important to consider the differential reputation incentives of independent directors when evaluating their contributions to a firm's CSR performance.

Second, I contribute to the emerging literature on the consequences of independent directors' reputation incentives. Prior research highlights independent directors' incentives to build their reputation as an effective monitor of management (Fama 1980; Fama and Jensen 1983b), and documents how these reputation incentives impact different aspects of a firm's financial outcomes, including firm performance (Masulis and Mobbs 2014), cost of borrowing (Huang et al. 2018), and share price informativeness (Sila et al. 2017). I extend this line of research by demonstrating that independent directors' reputation incentives also impact a firm's non-financial performance. Specifically, my findings suggest that independent directors also have incentives to develop their reputation as a socially responsible director. These reputation incentives motivate them to prioritize the CSR practices of their most prestigious directorships, resulting in better CSR performance for these firms. My results suggest that, when appointing or retaining an independent director, a firm should also consider the relative importance the director places on the firm, as well as time and effort, that it will receive from the director. This is because, in addition to financial effects, the decision to appoint or retain a director has implications for a firm's CSR performance, which impacts its reputation, competitive advantages, and attractiveness to stakeholders (e.g., Greening and Turban 2000; Fombrun and Shanley 1990; Arora and Henderson 2007; Waddock and Graves 1997a).

The remaining sections proceed as follows: Section 3.2 reviews the prior literature, Section 3.3 develops the hypotheses, Section 3.4 describes the research design, Section 3.5 presents the results, Section 3.6 discusses the results of additional tests, and Section 3.7 concludes the study.

3.2 Literature Review

3.2.1 CSR

Prior research in economics, finance and accounting is predominantly founded upon shareholder theory, which states that the sole responsibility of firms is to maximize shareholder wealth within legal constraints and social norms (Friedman 1970). However, in recent years, CSR has become increasingly important and widespread among corporations around the world. The growing significance of CSR is in line with the stakeholder theory, which proposes that a firm owes a responsibility to a broader group of stakeholders, and not just the shareholders (Freeman 1984).

Consistent with Moser and Martin (2012), I adopt a broad perspective and regard CSR activities as corporate actions that have a significant impact on a wide range of the firm's stakeholders, including shareholders, employees, customers, the community, and others. I follow prior research and define CSR as "actions that appear to further some social good, beyond the interests of the firm and that which is required by law" (McWilliams and Siegel 2001; McWilliams, Siegel, and Wright 2006). This is consistent with Aguinis (2011), who define CSR as "context-specific organizational actions and policies that take into account stakeholders' expectations and the triple bottom line of economic, social, and environmental performance". Both definitions refer to firms' policies and actions that incorporate economic, ethical, legal, and philanthropic

responsibilities into corporate decision making (Carroll 1979) and that balances shareholder interests with stakeholder interests (Carroll 1991).

In this section, I review three main categories of research on CSR: (1) the determinants of CSR; (2) the consequences of CSR; and (3) the roles of CSR disclosure and assurance.[29]

3.2.1.1 Determinants of CSR

Garriga and Melé (2004) classify the theoretical framework used to explain a firm's incentive to pursue CSR activities into four categories. First, instrumental theory suggests that firms are motivated by self-interest and engage in CSR activities as a strategic approach to increase profit and maximize shareholder value (Friedman 1970; McWilliams and Siegel 2000). For example, Husted and Allen (2000) suggest that firms use CSR to access and allocate resources in order to achieve long-term strategic goals and create competitive advantages. Further, using the resource-based view (Barney 1991; Wernerfelt 1984), Yuan, Lu, Tian, and Yu (2018) suggest that CSR activities are likely to be more crucial for firms that adopt an innovative-oriented strategy; thus, these firms are associated with better CSR performance than those following an efficiency-oriented strategy.

Second, political theory highlights the need for firms to consider the community where they operate and explore means of formalizing firms' commitment to improve the community (Matten and Crane 2005). Consistent with this view, prior research documents various institutional factors that influence CSR actions and policies, including

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[29] See Huang and Watson (2015), Aguinis and Glavas (2012), and Gray and Laughlin (2012) for a review of recent literature on CSR. See Rao and Tilt (2016) for a review of literature specifically on board composition and CSR. See Velte and Stawinoga (2017) and Cohen and Simnett (2014) for a review of literature specifically on CSR assurance.

regulation (Fineman and Clarke 1996), standards and certification (Christmann and Taylor 2006), and political affiliation (Di Giuli and Kostovetsky 2014).

Third, integrative theory argues that firms need to incorporate social demands into their business because their success is reliant on society (Wood 1991; Swanson 1995). Prior research documents how stakeholders adopt different roles and engage in various activities in order to influence firms to undertake CSR. These stakeholders include investors (David, Bloom, and Hillman 2007), consumers (Sen and Bhattacharya 2001), the media (Weaver, Treviño, and Cochran 1999), the community (Marquis, Glynn, and Davis 2007), and interest groups (Greening and Gray 1994). Rodrigue, Magnan, and Boulianne (2013) show how a firm incorporates stakeholder concerns into its strategic performance measurement systems. In addition, Pondeville, Swaen, and Rongé (2013) suggest that pressures from market, community and organizational stakeholders motivate the establishment of environmental management control systems. Contrafatto (2014) demonstrates that growing public expectations for CSR motivate firms to develop a common definition of CSR, which leads to the implementation of CSR reporting.

Finally, ethical theory indicates that firms are motivated to perform CSR due to their ethical responsibilities to society (Carroll 1979; Jones 1995). For example, studies find that firms conduct CSR for normative reasons, such as higher order moral values (Aguilera, Rupp, Williams, and Ganapathi 2007), a sense of responsibility (Bansal and Roth 2000), and a sense of stewardship (Davis, Schoorman, and Donaldson 1997).

While many studies examine a firm's incentive to perform CSR, fewer studies investigate a director's incentive in directing firms to engage in CSR activities. Nevertheless, the important role of the board on influencing CSR decisions is widely recognised in the literature (Rao and Tilt 2016). For example, studies indicate that CSR

is a crucial item on boards' agendas (Kakabadse 2007), and that boards are responsible in attaining CSR goals (Elkington 2006; Jamali, Safieddine, and Rabbath 2008) and avoiding breaches of CSR standards (Mackenzie 2007). Hung (2011) further highlights the role of corporate directors in managing the interests of stakeholders, and in protecting the interests of their firms as stakeholders in the society.

The literature on the association between board characteristics and CSR performance further emphasizes the key role that boards play in enhancing CSR performance. Consistent with the notion that independent directors are more sensitive to society's needs (Ibrahim and Angelidis 1995) and are more concerned with the ethical aspects of the firm (Ibrahim, Howard, and Angelidis 2003), prior research finds that board independence is positively related to CSR performance (Johnson and Greening 1999; Zhang et al. 2013; Mallin and Michelon 2011). In addition, prior research finds consistent evidence that a more diverse board positively influence CSR performance (e.g., Hafsi and Turgut 2013; Shaukat, Qiu, and Trojanowski 2016; Boulouta 2013; Post, Rahman, and McQuillen 2015; Zhang et al. 2013). For example, Harjoto et al. (2015) find that board diversity is positively associated with CSR performance. Similarly, Bear et al. (2010) suggest that the diversity of board resources and the number of women on boards improve a firm's CSR ratings, which, in turn, enhance corporate reputation.

Various studies also examine how management characteristics influence CSR performance. Parker (2014) finds that managers' accountability orientation reflects their personal philosophical and religious beliefs, which shape their firm's CSR actions. Managers' desire to be industry leaders in environmental efforts and CSR performance may also motivate them to undertake CSR (Rodrigue et al. 2013). Further, prior research shows that the CEO's ethical leadership (Wu, Kwan, Yim, Chiu, and He 2015), political

ideologies (Chin, Hambrick, and Treviño 2013; Di Giuli and Kostovetsky 2014), and personal incentives (Fabrizi, Mallin, and Michelon 2014) have significant effects on CSR decisions. In addition to a CEO's values and beliefs, a CEO's ability (Yuan et al. 2017), academic and career background (Manner 2010), gender (Manner 2010), hubris (Tang, Qian, Chen, and Shen 2015), narcissism (Petrenko, Aime, Ridge, and Hill 2016), and materialism (Davidson, Dey, and Smith 2018) also influence CSR performance.

3.2.1.2 Consequences of CSR

Given the long-term nature of CSR projects (Falck and Heblich 2007) and the significant cost and effort involved in implementing them (Wang and Bansal 2012), it is important for firms to understand whether and how CSR benefits them. Recognizing the consequences of CSR also helps shareholders and stakeholders to be aware of the significance of CSR and to better understand the value and benefits of CSR practices.

CSR practices can be viewed as a form of reputation building (Fombrun and Shanley 1990). Prior research finds consistent evidence that CSR helps establish a positive reputation for the firm (e.g., Brammer and Pavelin 2006; Fombrun and Shanley 1990; Greening and Turban 2000; Waddock and Graves 1997a). Such positive reputation benefits the firm as it creates reputational capital (Fombrun 1996), extends organizational networks (Fombrun 1996), and facilitates talent attraction and retention (Turban and Greening 1997; Greening and Turban 2000). Further, prior research in marketing documents a reputation effect from consumers who respond to CSR through positive assessments of the firm and its products (Arora and Henderson 2007; Sen and Bhattacharya 2001), increased customer loyalty (Maignan, Ferrell, and Hult 1999), and improved consumer evaluations (Brown and Dacin 1997).

CHAPTER 3: Study 2 – The Impact of Independent Directors' Reputation Incentives on Enhancing CSR Performance

Given that CSR can improve a firm's reputation and its attractiveness to customers and employees (e.g., Fombrun and Shanley 1990; Greening and Turban 2000; Arora and Henderson 2007), it is likely that CSR can increase profitability and firm value. In this regard, numerous studies show a positive association between CSR and financial performance (Waddock and Graves 1997b; Orlitzky, Schmidt, and Rynes 2003; Griffin and Mahon 1997; Roman, Hayibor, and Agle 1999; Cochran and Wood 1984). Deng, Kang, and Low (2013) document that CSR creates value for acquiring firms' shareholders as high CSR acquirers achieve greater merger performance. Using a regression discontinuity approach, Flammer (2015) finds that CSR leads to higher stock returns and more superior accounting performance. However, a review by Margolis, Elfenbein, and Walsh (2009) suggest that there is only a small positive relation between CSR and financial performance. Servaes and Tamayo (2013) suggest that CSR activities add value to the firm only when customer awareness is high. Lys, Naughton, and Wang (2015) further argue that CSR does not cause an improvement in future financial performance. Rather, managers undertake CSR in the current period when they anticipate strong financial performance in the future period, thus indicating that CSR is an avenue for managers to signal private information about firms' future financial prospects.

A positive CSR reputation can potentially mitigate the risk associated with negative corporate events. Prior studies argue that CSR activity can create value for shareholders through the creation of insurance-like protection against the risk of negative attention or regulatory actions when negative corporate events occurred (Godfrey, Merrill, and Hansen 2009; Peloza 2006; Minor and Morgan 2011; Hillman and Keim 2001). Furthermore, Chakravarthy, deHaan, and Rajgopal (2014) show that CSR can repair reputational damage following a serious accounting restatement. Firms may also refrain from engaging in socially unacceptable activities in order to protect their reputation.

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Consistent with this notion, Gao, Lisic, and Zhang (2014) report that executives of CSR-conscious firms are less likely to engage in insider trading, thus suggesting that executives of CSR-conscious firms adhere to a stricter code of ethics than executives of non-CSR conscious firms.

Prior research finds that CSR activities influence firms' earnings quality, information asymmetry, and cost of equity. Specifically, Kim, Park, and Wier (2012) document that socially responsible firms exhibit less earnings management through discretionary accruals or real activities, and are less likely to be subjected to SEC investigations for accounting and auditing issues. However, Chih, Shen, and Kang (2008) find that while firms with a greater commitment to CSR are less likely to engage in earnings smoothing and earnings loss avoidance, they are more aggressive in accruals management. Cho, Lee, and Pfeiffer (2013) report that both positive and negative CSR performance reduce information asymmetry as proxied by bid-ask spread. Further, the negative association between CSR performance and bid-ask spread decreases for firms with a higher level of institutional ownership. El Ghoul, Guedhami, Kwok, and Mishra (2011) find that firms with better CSR scores have lower cost of equity.

Prior research examines the relation between CSR and tax avoidance and finds mixed results. One the one hand, Hoi, Wu, and Zhang (2013) find that firms with excessive irresponsible CSR activities are more aggressive in avoiding taxes. On the other hand, Davis, Guenther, Krull, and Williams (2016) find that socially responsible firms are associated with tax avoidance, thus suggesting that firms do not consider taxes as part of CSR. Watson (2015) suggests that the relation between CSR and tax avoidance is moderated by earnings performance. Specifically, while both socially responsible and

socially irresponsible firms avoid more tax when earnings performance is poor, these effects disappear when earnings performance is strong.

Prior management research provides considerable insights into the association between CSR and various non-financial outcomes. For example, CSR is shown to enhance a firm's competitive advantage in attracting a quality workforce (Greening and Turban 2000) and institutional investors (Graves and Waddock 1994). In addition, studies find that CSR performance and strategies improve the perceived quality of management (Waddock and Graves 1997a), management practices (Waddock and Graves 1997b) and organizational capabilities (Sharma and Vredenburg 1998).

While many studies examine the consequences of CSR to firms, only a few studies investigate the consequences of CSR to directors. However, prior research argues that CSR helps directors develop their own reputation and role in society (Mallin and Michelon 2011; Johnson and Greening 1999). In addition, prior research finds that directors face significant reputational penalties if the firms that they serve are involved in CSR controversies (Hickman et al. 2017). These studies suggest that a firm's CSR performance has implications on its directors' reputation, which highlight a reason why directors have incentives to improve the CSR performance of the firms that they serve.

3.2.1.3 CSR Disclosure and Assurance

While CSR disclosure is voluntary, there is a dramatic increase in the number of firms that issue stand-alone reports on CSR activities around the world (Dhaliwal et al. 2011; KPMG 2013; Simnett, Vanstraelen, and Chua 2009). Prior research suggests that CSR disclosures influence investors' perceptions and managerial intent. For instance, Dhaliwal et al. (2011) and Dhaliwal, Radhakrishnan, Tsang, and Yang (2012) report that CSR disclosures increase analyst coverage and forecast accuracy, attract more

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institutional investors, and reduce a firm's cost of equity capital. Dhaliwal, Li, Tsang, and Yang (2014) further suggest that CSR disclosures can act as a substitute for financial disclosures in terms of improving a firm's information environment. In addition, Clarkson, Fang, Li, and Richardson (2013) and Griffin and Sun (2013) find that voluntary environmental disclosures are incrementally informative to investors. Christensen (2016) finds that firms that report on CSR are less likely to engage in high-profile misconduct. Further, when such misconduct does occur, such firms experience fewer negative consequences than firms that do not report on CSR. Lu, Shailer, and Yu (2017) find that the issuance of CSR reports mitigates the value destruction associated with increases in cash holdings.

Similar to CSR disclosure, the independent assurance of CSR reports is voluntary, and it has gained wide attention in recent years (Cohen and Simnett 2014; KPMG 2013). Prior research provides insights into the market for CSR assurance and the choice of assurance provider. Simnett et al. (2009) find that firms choose CSR assurance to enhance the credibility of their CSR reports and to build their reputation. Pflugrath, Roebuck, and Simnett (2011) suggest that CSR disclosure is more credible when it is assured and when the assurer is a professional accountant. Peters and Romi (2015) examine whether sustainability-oriented corporate governance mechanisms influence the assurance of CSR reports. They find that firms employing a Chief Sustainability Officer (CSO) and firms with an environmental committee that has greater expertise are more likely to obtain CSR assurance. Further, environmental committees with greater expertise are more likely to engage accounting professionals for CSR assurance services, while expert CSOs prefer to engage consultants.

3.2.2 Directors' Incentives

Prior research on the determinants of board composition is predominantly based on the demand perspective. Fama and Jensen (1983a) suggest that firms structure their board of directors in accordance to their needs for monitoring and advising. For example, firms may appoint independent directors to satisfy their needs for expertise (Masulis, Wang, and Xie 2012; DeFond et al. 2005), diversity (Lai, Srinidhi, Gul, and Tsui 2017; Adams and Ferreira 2009), or their networks of directorships (Akbas, Meschke, and Wintoki 2016; Chiu, Teoh, and Tian 2012). Independent directors may also be appointed due to their social ties to other board members (Hwang and Kim 2009; Coles, Daniel, and Naveen 2014).

In addition to the demand perspective, the supply perspective suggests that board composition is also determined by a director's willingness to serve on a board and exert effort. Consistent with this perspective, Knyazeva et al. (2013) find that larger firms tend to attract prospective directors from distant locations. Fahlenbrach et al. (2010a) find that independent directors are more likely to relinquish their directorships in poorly performing firms, since these firms offer lower prestige and greater workloads.

Reputation incentive is a potential supply side explanation for why some independent directors are more effective in their roles. Fama and Jensen (1983b) argue that directors' main motivation is to preserve and improve their reputation in the labor market for directors. They suggest that directors want to develop a reputation as a diligent monitor of management, since this enhances the value of directors' human capital and increases opportunities for future appointments (Fama 1980). This argument is supported by various studies that find that directors with strong performance and a reputation of being an active monitor of management are rewarded by the labor market for directorships

(e.g., Brickley et al. 1999; Eminet and Guedri 2010; Fich 2005). Therefore, reputation considerations can have a significant impact on the supply of independent director services available to a firm.

Prior research also demonstrates the reputational costs for independent directors when negative events happen. For example, Srinivasan (2005) finds that independent directors, particularly audit committee members, face significant labor market penalties when their firms experience accounting restatements. Similarly, Johnstone et al. (2011) find that the disclosure of internal control material weaknesses is positively associated with the subsequent turnover of members of boards of directors, audit committees and top management. Prior research finds that following a financial fraud lawsuit, independent directors experience a significant decline in other board seats held (Fich and Shivdasani 2007). They also experience a higher likelihood of being named in shareholder lawsuits, leaving the sued firms, and receiving negative recommendations from proxy advisory firms (Brochet and Srinivasan 2014).

Recent research investigates the differential economic effects of independent directors' disproportionate allocation of their time and effort across multiple directorships. Masulis and Mobbs (2014) find that independent directors' reputation incentives motivate them to prioritize their time and effort to their more reputable directorships, thus improving their board attendance rate, subsequent firm performance and forced CEO departure sensitivity to poor performance. Further, independent directors are less willing to resign from their more prominent boards, despite poor firm performance. Masulis and Mobbs (2016) demonstrate that firms with more independent directors for whom the board is among their most prestigious are associated with higher CEO pay-performance sensitivity and lower earnings management. Huang et al. (2018)

report that firms with a greater proportion of independent directors with high reputation incentives are associated with a lower cost of borrowing. Specifically, these firms have bank loans with lower spreads, longer maturities, fewer covenants, lower syndicate concentration, lower likelihood of collateral requirement, lower annual loan fees, and higher bond ratings. Sila et al. (2017) document that when more independent directors rank a directorship as high, the firm-specific information content in a firm's stock price increases. Collectively, these findings provide evidence that independent directors are motivated by reputation incentives, and the relative reputation benefits a board offers impacts the effort that directors exert on each board.

While the impact of independent directors' reputation incentives on a firm's financial performance is well-documented, there is limited evidence to indicate whether a similar effect can be found on a firm's non-financial performance. My study focuses on a firm's CSR performance. Specifically, I examine whether independent directors' reputation incentives have an impact on a firm's CSR performance.

3.3   Hypothesis Development

Prior research suggests that independent directors have incentives to develop their reputation as a socially responsible director for at least three reasons. First, independent directors can use CSR as a strategic tool to build their professional and personal reputation, thus increasing their value in the labor market. By focusing on CSR and improving CSR performance, independent directors meet stakeholders' expectations, thus increasing their own reputation. Mallin and Michelon (2011) argue that "by being more dedicated to stakeholders' expectations, independent directors will increase their own prestige and role in society". Consistent with this view, recent survey evidence shows that corporate executives place significant importance on social and sustainability efforts

(PwC 2018; McKinsey 2014). In particular, the survey conducted by McKinsey shows a gradual increase in the number of CEOs who view sustainability as a top priority (McKinsey 2014). Further, an increasing number of firms have instituted environmental or CSR related committees on their boards (Wagner, Hespenheide, and Pavlovsky 2009), and are spending more time in addressing CSR issues (Patrick 2017).

Second, independent directors face significant reputational penalties, including the loss of directorships, if the firms that they serve are involved in CSR controversies (Hickman et al. 2017). These findings are supported by Johnson and Greening (1999), who suggest that independent directors are more inclined to comply with environmental standards to avoid a subsequent loss of reputation. These findings are also corroborated by numerous survey studies and anecdotes that demonstrate the reputational penalties and dismissals faced by top executives following lapses in CSR. For example, according to PwC's Strategy& study, forced CEO turnovers due to ethical lapses increased by 36 percent during the 2012 to 2016 period (Karlsson, Aguirre, and Rivera 2017). Rivera and Karlsson (2017) suggest that CSR-related dismissals are likely to increase following the proliferation of media and digital communication as well as the more punitive governance and regulations in many countries.

Third, there is a high demand of CSR in capital markets. Corporate stakeholders, including shareholders, employees, customers, suppliers, communities, governments and regulators, are increasingly demanding that firms accept a wider scope of responsibility in addressing environmental, social and sustainability problems (e.g., Noked 2013; Michelon and Rodrigue 2015; Epstein-Reeves 2010). In an open letter to CEOs, Larry Fink (Chairman and Chief Executive of BlackRock) emphasizes that "society is demanding that companies… serve a social purpose", and proposes that "every company

must not only deliver financial performance, but also show how it makes a positive contribution to society" (Fink 2018). Following the growing demand for CSR, independent directors have incentives to enhance their reputation in improving CSR performance, so as to increase their value in the labor market.

Various studies also report evidence in line with the view that independent directors allocate more effort to their more prominent directorships (Masulis and Mobbs 2014; Huang et al. 2018; Sila et al. 2017). This is because these boards offer independent directors greater opportunities for reputation building (Adams and Ferreira 2008), higher visibility (Shivdasani 1993) and compensation (Ryan and Wiggins 2004), and a greater likelihood of attaining additional directorships (Yermack 2004). Furthermore, Knyazeva et al. (2013) find that directors are more inclined to undertake board positions in distant locations if the firm is large because directorships in large and prominent firms offer "greater reputation benefits, career building opportunities, and networking benefits". Based on these aforementioned studies, I argue that independent directors have stronger incentives to be viewed as an effective director in improving CSR performance in their most prominent directorship. Thus, they are more likely to expend greater effort in enhancing the CSR performance of these firms where their reputation effects are maximized, so as to achieve the highest recognition and reputation reward for their work in CSR.

In addition, prior research finds that holding multiple directorships can place a strain on directors' time and reduce their effectiveness (Fich and Shivdasani 2006; Srinivasan 2005; Carpenter and Westphal 2001). Given that developing and implementing CSR plans are time consuming (Wang and Bansal 2012; Wood 1991), limited time and energy may prevent independent directors with multiple directorships

from performing their CSR duties with the same level of effectiveness across all boards. Therefore, they are likely to prioritize their most prominent directorship, since the incentive to minimize potential reputation damage resulting from CSR failures is likely to be greatest in this directorship (Hickman et al. 2017). Based on the above arguments, I expect that firms with a board that consists of a greater proportion of independent directors for whom this directorship is their most prestigious to perform better in CSR.

The preceding discussion emphasizes the expected influence of independent directors' reputation incentives in improving CSR performance in order to enhance and protect their reputation capital. Thus, my hypothesis is stated as follows:

H2: Firms with a higher percentage of independent directors for whom this directorship represents the most prestigious position are associated with better CSR performance.

However, it is possible that independent directors' reputation incentives do not influence CSR performance; in this case, the null of my hypothesis would be supported. This is because CSR practices are increasingly important and prevalent among corporations. Further, independent directors may risk reputation damage caused by potential spillover effects as a result of CSR lapses in their less prominent directorships. For example, if an independent director sits on the boards of two firms and the less prestigious firm exhibits poor CSR performance, this may have a negative effect on his or her reputation for being a socially responsible director. This damage to his or her reputation as a socially responsible director may spillover to the other more prominent directorship the director holds and possibly cause the director to lose his or her more prominent directorship (Hickman et al. 2017). Therefore, independent directors may also

place importance on the CSR performance of the firms for their less prominent directorships.

3.4   Research Design

3.4.1 Test Variable

To capture the relative importance of an independent director's reputation incentive effect in a specific firm, I first construct an aggregate firm reputation measure following Erkens and Bonner (2013) and then compare the relative aggregate reputation measure of each firm on which the independent director serves.[30] The aggregate reputation measure comprises three common proxies for a firm's reputation. The first proxy is a firm's market capitalization, since larger firms provide greater visibility and prominence (Masulis and Mobbs 2014; Huang et al. 2018; Sila et al. 2017), and they are better linked to other firms via various partnerships and affiliations (Fombrun and Shanley 1990; Greve 2005; Fahlenbrach et al. 2010b). The second proxy is the number of firms to which a focal firm is connected through common board members. Such connections represent an important source of reputation (Greve 2005). The third proxy is a firm's corporate reputation score obtained from the MA List (e.g., Cao et al. 2012, 2015). Prior studies find that the corporate reputation score from the MA list appropriately represents the construct of "reputation" (Fombrun and Shanley 1990; Roberts and Dowling 2002).[31]

I first standardize the proxies to have a mean of zero and a standard deviation of one. I then construct the aggregate reputation measure using a principal components

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[30]   Erkens and Bonner (2013) use the term "firm status". I regard "firm status" as "firm reputation" because both terms represent a similar concept.

[31]   Only the most highly ranked firms appear on the MA List. As such, consistent with Erkens and Bonner (2013) and Cao et al. (2012), corporate reputation scores for firms not included in the MA List are set to zero.

factor analysis that extracts the common variation among the three proxies. Consistent with Erkens and Bonner (2013), the factor analysis identified one factor with an eigen value greater than one (1.63). The principal component loadings for each of my three proxies are 0.66, 0.45, and 0.61 respectively. Next, I use the standardized scoring coefficients (all positive) for this factor to compute the aggregate reputation measure.[32] For each independent director with multiple directorships, I identify the most prestigious directorship, which represents the directorship with the highest aggregate reputation measure under an independent director's oversight. Finally, since having a higher proportion of better motivated directors on the board can improve the board's performance, I aggregate the director-level measure to the firm-level to obtain the percentage of independent directors for whom this directorship is their highest ranked based on the aggregate reputation measure (*HIGH_REP*).

3.4.2 Dependent Variable

To measure a firm's CSR performance, I use the ratings from the MSCI STATS database (formerly Kinder, Lydenberg & Domini [KLD] Research & Analytics). The MSCI STATS evaluates a firm's CSR performance based on the number of strength items and concern items over seven dimensions, including community, corporate governance, diversity, employee relations, environment, human rights, and product quality and safety. For each dimension, a firm receives a score of one if it has the corresponding strength or concern, and zero otherwise.

Consistent with prior studies, I exclude the corporate governance dimension when measuring a firm's CSR performance because corporate governance is regarded as a

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[32] The mean (median) of the aggregate reputation measure is -0.02 (-0.41). This is comparable to the mean (median) aggregate firm status measure reported in Erkens and Bonner (2013), which is -0.02 (-0.39).

construct distinct from the other CSR dimensions (e.g., Di Giuli and Kostovetsky 2014; El Ghoul et al. 2011; Gao et al. 2014; Kim et al. 2012; Servaes and Tamayo 2013).[33] I calculate a firm's CSR score (*CSR_SCORE*) as a firm's total strengths minus total weaknesses, based on MSCI's evaluations for diversity, employee relations, product characteristics, community relations, humanity, and the environemnt. Following Dhaliwal et al. (2011), I adjust the CSR scores by the industry median so that the scores are comparable across industry. A higher total CSR score indicates better CSR performance.

3.4.3 Control Variables

I include several control variables that may confound the relation between independent directors' reputation incentives and CSR performance. First, I include *LOW_REP* to control for the percentage of independent directors with lower reputation incentives. I control for firm size (*SIZE*) because it captures various factors that motivate a firm to engage in CSR activities, such as public pressure or financial resources (e.g., Udayasankar 2008; McWilliams and Siegel 2000). I control for firm profitability (*ROA*) because firms with better financial performance have better CSR performance (Adams and Hardwick 1998; Waddock and Graves 1997b). In addition, I include a proxy for firm growth (*MB*) because firms in an expansionary period are more financially constrained, thus they have fewer resources for CSR activities. I control for firm financing activities (*FIN*) and firm leverage (*LEV*), since firms with lower risk are more likely to conduct CSR activities (Adams and Hardwick 1998; Orlitzky and Benjamin 2001). I control for firms with a global focus (*GLOBAL*) since they face greater pressure to commit to social

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[33] As part of my robustness tests, I include the corporate governance dimension when measuring a firm's CSR performance and use this construct as my dependent variable. My main results remain qualitatively unchanged for both OLS and firm fixed effect specifications when I include the measure for corporate governance in my measure of CSR performance.

performance. I include advertising intensity (*ADV*) and cash dividends (*DIV*) in the regression, since firms with higher advertising expenses and more dividend payout engage in more CSR (Di Giuli and Kostovetsky 2014; Lys et al. 2015). I also control for a firm's share liquidity (*LIQUIDITY*), share return (*RETURN*), earnings quality (*DACC*), and firm age (*AGE*).

I include control variables that represent a firm's corporate governance characteristics that may influence a firm's CSR performance. *EC* is an indicator variable that equals one if the firm has a committee that is specifically assigned responsibilities for environmental, corporate sustainability, or corporate responsibility practices (Peters and Romi 2015; Mallin and Michelon 2011).[34] *LNBDSIZE* and *LNACSIZE* control for board size and audit committee size respectively, while *BDIND* and *ACEXP* represent the fraction of independent board members and the proportion of audit committee financial experts respectively (Shaukat et al. 2016; Mallin and Michelon 2011). *DUALITY* controls for CEO duality. I include the proportion of female directors (*FEMALE*), since prior research suggests that firms with a higher percentage of female board members have higher levels of charitable giving (Williams 2003) and CSR (Post, Rahman, and Rubow 2011; Bear et al. 2010; Zhang et al. 2013). I include the average number of directorships held in listed firms by the independent directors (*AVEBOARD*). On one hand, prior research suggests that more directorships increase the reputation risk for directors (Bugeja, Da Silva Rosa, and Lee 2009; Shivdasani 1993), which, in turn, should increase their CSR effort. On the other hand, a higher number of directorships demands greater

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[34] Following Peters and Romi (2015), these committees include public policy committee, sustainability committee, corporate social responsibility committee, environmental health and safety committee, and ethics committee.

time and effort from directors, thus they may neglect CSR effort as a result of busyness (Mallin and Michelon 2011). The net effect is hence unknown *ex ante*.

Appendix 2 provides definitions of all the variables.

3.4.4 Empirical Model

To test the association between independent directors' reputation incentives and firms' CSR performance, I estimate the following regression model:

$$
\begin{aligned}
CSR\_SCORE_{i,t} = {} & \beta_0 + \beta_1 \boldsymbol{HIGH\_REP_{i,t-1}} + \beta_2 LOW\_REP_{i,t-1} + \beta_3 SIZE_{i,t-1} + \\
& \beta_4 ROA_{i,t-1} + \beta_5 FIN_{i,t-1} + \beta_6 MB_{i,t-1} + \beta_7 LEV_{i,t-1} + \\
& \beta_8 GLOBAL_{i,t-1} + \beta_9 LIQUIDITY_{i,t-1} + \beta_{10} DACC_{i,t-1} + \\
& \beta_{11} DIV_{i,t-1} + \beta_{12} ADV_{i,t-1} + \beta_{13} RETURN_{i,t-1} + \beta_{14} AGE_{i,t-1} + \\
& \beta_{15} EC_{i,t-1} + \beta_{16} LNBDSIZE_{i,t-1} + \beta_{17} BDIND_{i,t-1} + \\
& \beta_{18} DUALITY_{i,t-1} + \beta_{19} LNACSIZE_{i,t-1} + \beta_{20} ACEXP_{i,t-1} + \\
& \beta_{21} FEMALE_{i,t-1} + \beta_{22} AVEBOARD_{i,t-1} + Year\ Fixed\ Effects + \\
& Industry/Firm\ Fixed\ Effects + \varepsilon_{i,t} \quad\quad\quad (3.1)
\end{aligned}
$$

CSR_SCORE represents a firm's overall CSR performance and *HIGH_REP* is defined as the percentage of independent directors for whom this directorship is the most prominent directorship. I include year and industry (firm) fixed effects to control for any common trend in the CSR score over time and between industries (firms). I also cluster the standard errors at the firm-level (Petersen 2009). Following Dhaliwal et al. (2011), I use a lead-lag approach by lagging all independent variables to address potential endogeneity issues.[35]

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[35] My main results remain the same if the independent variables are not lagged.

3.4.5 Sample Selection

In order to test H2, I need a sample of firms that have at least one independent director with two or more directorships. I begin by obtaining director data from the BoardEx database. My initial sample comprises 341,113 director-year observations from 2003 to 2012.[36, 37] Following Masulis and Mobbs (2014), Huang et al. (2018), and Sila et al. (2017), I exclude executive directorships (number of director-years = 60,460). Since the objective of my study is to examine the reputation incentives of independent directors who serve on multiple directorships, for the purpose of calculating my test variable, I exclude independent directors who serve on only one directorship (number of director-years = 201,889). I also exclude observations with missing market capitalization data (number of director-years = 29,320). Finally, with a sample of 49,444 director-year observations for 4,244 unique directors, I rank each director's directorships based on the aggregate reputation measure described above.

Based on 49,444 independent directors with more than one directorship, I obtain an initial sample of 17,416 firm-year observations for 2,497 different firms. Consistent with prior research, I exclude firms from the financial (two-digit SIC codes 60-69; number of firm-years = 4,049) and utilities industries (two-digit SIC code 49; number of firm-years = 771). I omit observations with negative common equity (number of firm-years = 612) and with closing share price of less than one (number of firm-years = 299). Finally, I eliminate observations lacking the data necessary to calculate the CSR scores and the control variables adopted in this study (number of firm-years = 4,464), which yields a

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[36] I obtain CSR data from the MSCI STATS database. Since 2003, MSCI STATS has expanded its coverage to include all firms in the Russell 3000 Index. As such, my sample period begins from 2003 to allow greater firm coverage.

[37] My sample period ends in 2012 due to differences in data collection procedures and methodology after 2013 in the MSCI STAT database.

final sample of 7,221 firm-years for 2,426 unique firms. Table 3.1 presents the sample

selection procedure.

Table 3.1: Sample Selection (Sample Period: 2003 – 2012)

Panel A: Director-Level

	Number of Director-Years
Initial sample from BoardEx	341,113
Less: Executive directorships	(60,460)
Less: Sole directorships	(201,889)
Less: Observations with missing market capitalization data	(29,320)
Independent directors with more than one directorship	49,444

Panel B: Firm-Level

	Number of Firm-Years
Initial sample [a]	17,416
Less: Observations from financial industries	(4,049)
Less: Observations from utilities industries	(771)
Less: Observations with negative common equity	(612)
Less: Observations with closing share price of less than one	(299)
Less: Missing CSR data and control variables	(4,464)
Final sample	7,221

[a] Initial sample is based on 49,444 independent directors with more than one directorship. As such, it includes firm-year observations where there are at least one independent director with two or more directorships in a given year.

3.5   Empirical Results

3.5.1 Descriptive Statistics

Table 3.2 reports the descriptive statistics for my sample of independent directors. Independent directors with multiple directorships hold an average of 4.52 public board seats and an average of 3.06 directorships within the BoardEx sample.[38] Their mean (median) age is 62.74 (64.00), while their mean (median) number of committee memberships is 1.45 (1.00). Approximately 52 percent of independent directors with multiple directorships are on the audit committee, with 45 percent and 49 percent serving on the nominating and compensation committee, respectively. The mean (median) board tenure is 7.47 (5.80) years. 86 percent of independent directors with multiple directorships are male.

Table 3.2: Director-Level Descriptive Statistics

Variables	Number of Observations [a]	Mean/ Frequency	Median	Standard Deviation
Director age	49,347	62.74	64.00	7.64
Number of committee memberships	49,444	1.45	1.00	0.85
Number of current public boards	49,444	4.52	3.00	7.53
Number of current private boards	32,691	2.66	2.00	2.81
Number of boards within BoardEx	49,444	3.06	2.00	3.22
Board tenure (years)	49,349	7.47	5.80	6.41
Audit committee member	49,444	0.52	-	-
Nominating committee member	49,444	0.45	-	-
Remunerating committee member	49,444	0.49	-	-
Gender (male)	49,444	0.86	-	-

[a] Total sample size for independent directors with multiple directorships is 49,444 director-years. See Table 3.1 for sample selection procedure. Differences in the number of observations are due to missing information from BoardEx database.

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[38]   The averages are slightly different because BoardEx may not provide information on all directorships that a director sits on. While my approach understates the total number of directorships held, it is unlikely to bias my findings. This is because any unavailable directorships in BoardEx are likely to be those at smaller and less prominent firms, which are expected to have a minimal impact on the reputation of independent directors.

Table 3.3 presents firm-level descriptive statistics for my full sample. Continuous variables are winsorized at the 1st and 99th percentiles to remove the influence of outlier observations. The average percentage of independent directors for whom this is the highest (lowest) ranked directorship based on the aggregate reputation measure is 13 percent (14 percent). The mean total CSR score is 0.06.

Table 3.3: Firm-Level Descriptive Statistics (Number of Observations: 7,221 Firm-Years)

Panel A: Desciptive Statistics for All Firms

Variables	Mean/ Frequency	25th Percentile	Median	75th Percentile	Standard Deviation
$HIGH\_REP_{t-1}$	0.13	0.00	0.11	0.22	0.15
LOW_REP_{t-1}	0.14	0.07	0.13	0.20	0.11
CSR_SCORE_t	0.06	-2.00	0.00	1.00	2.60
AT_{t-1} ($ million)	6,524.17	514.54	1,504.38	4,958.50	15,171.16
ROA_{t-1}	0.04	0.02	0.05	0.09	0.10
FIN_{t-1}	-0.00	-0.05	-0.01	0.02	0.10
MB_{t-1}	0.50	0.24	0.39	0.62	0.42
LEV_{t-1}	0.17	0.01	0.15	0.27	0.15
$GLOBAL_{t-1}$	0.35	-	-	-	-
$LIQUIDITY_{t-1}$	2.51	1.28	2.04	3.19	1.81
$DACC_{t-1}$	0.05	0.02	0.03	0.06	0.05
DIV_{t-1}	0.53	-	-	-	-
ADV_{t-1}	0.01	0.00	0.00	0.01	0.03
$RETURN_{t-1}$	0.12	-0.20	0.05	0.32	0.54
AGE_{t-1} (years)	24.55	12.00	19.00	41.00	14.95
EC_{t-1}	0.08	-	-	-	-
$BDSIZE_{t-1}$	9.25	8.00	9.00	11.00	2.18
$BDIND_{t-1}$	0.77	0.69	0.80	0.88	0.12
$DUALITY_{t-1}$	0.65	-	-	-	-
$ACSIZE_{t-1}$	3.78	3.00	4.00	4.00	0.90
$ACEXP_{t-1}$	0.29	0.00	0.25	0.33	0.26
$FEMALE_{t-1}$	0.10	0.00	0.10	0.17	0.09
$AVEBOARD_{t-1}$	2.07	1.63	2.00	2.43	0.60

(continued on next page)

Table 3.3 (Continued)

Panel B: Descriptive Statistics by Industry

	Agriculture, Forestry, Fishing	Mining	Construction	Manufacturing	Transportation	Wholesale Trade	Retail Trade	Services	Public Admin
Variables					**Mean**				
$HIGH\_REP_{t-1}$	0.02	0.16	0.11	0.14	0.14	0.12	0.13	0.12	0.21
LOW_REP_{t-1}	0.07	0.09	0.16	0.14	0.13	0.13	0.13	0.15	0.19
CSR_SCORE_t	-1.55	-1.37	-0.84	0.34	0.03	-0.41	-0.02	0.02	-0.81
Number of observations	11	421	141	3,752	488	335	663	1,384	26

Panel C: Descriptive Statistics by Year

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Variables						**Mean**				
$HIGH\_REP_{t-1}$	0.11	0.12	0.13	0.14	0.13	0.14	0.14	0.13	0.14	0.14
LOW_REP_{t-1}	0.14	0.14	0.14	0.13	0.14	0.14	0.14	0.14	0.14	0.14
CSR_SCORE_t	0.10	-0.09	-0.09	-0.10	-0.08	-0.16	-0.22	-0.10	0.20	0.87
Number of observations	422	542	613	640	688	801	843	853	889	930
See Appendix 2 for variable definitions.										

Table 3.4 reports the descriptive statistics for the two subsamples of firms that have an above or below median score for *HIGH_REP* in a given industry-year. Firms with an above median percentage of independent directors for whom this represents the highest ranked directorship in a given industry-year (*HIGH* = 1) have higher CSR performance score. In addition, they are larger, older, more profitable, more global and more likely to pay dividends. They have higher debt level, greater share liquidity and better earnings quality. These firms have better corporate governance, as evidenced by bigger, more independent and more gender diverse boards, as well as bigger audit committees. They are also more likely to have a committee that are specifically assigned duties on environmental, corporate sustainability, or corporate responsibility practices.

Table 3.5 presents the correlation coefficients. CSR_SCORE_t is significantly and positively correlated with $HIGH\_REP_{t-1}$ ($\rho = 0.24$), and significantly and negatively correlated with LOW_REP_{t-1} ($\rho = -0.05$). In addition, $HIGH\_REP_{t-1}$ is significantly and negatively correlated with LOW_REP_{t-1} ($\rho = -0.39$). The correlation between $HIGH\_REP_{t-1}$ and $SIZE_{t-1}$ is only 0.47, thus suggesting that my test variable is not a proxy of firm size. Most correlations among my independent variables are below 0.50. Further, the highest VIF for my test variable is less than 3 in each of my regression models, thus suggesting that multicollinearity is not a significant concern.

Table 3.4: Firm-Level Descriptive Statistics (Subsamples)

Variables	HIGH = 1 Mean/ Frequency	Median	HIGH = 0 Mean/ Frequency	Median	t-value/ Chi-square [a]
CSR_SCORE_t	0.54	0.00	-0.36	-1.00	-14.90***
$HIGH\_REP_{t-1}$	0.23	0.20	0.05	0.00	-65.57***
LOW_REP_{t-1}	0.11	0.10	0.16	0.14	19.92***
AT_{t-1} ($ million)	10,858.60	3,203.82	2,808.47	903.59	-31.82***[b]
ROA_{t-1}	0.05	0.06	0.04	0.05	-4.31***
FIN_{t-1}	-0.01	-0.01	-0.00	-0.00	3.93***
MB_{t-1}	0.46	0.35	0.53	0.42	8.07***
LEV_{t-1}	0.18	0.17	0.16	0.13	-5.49***
$GLOBAL_{t-1}$	0.38	-	0.33	-	16.97***
$LIQUIDITY_{t-1}$	2.60	2.10	2.43	2.00	-4.00***
$DACC_{t-1}$	0.05	0.03	0.05	0.04	4.50***
DIV_{t-1}	0.60	-	0.48	-	101.88***
ADV_{t-1}	0.01	0.00	0.01	0.00	-1.72*
$RETURN_{t-1}$	0.12	0.06	0.13	0.04	0.52
AGE_{t-1} (years)	26.64	23.00	22.76	17.00	-11.09***
EC_{t-1}	0.11	-	0.05	-	111.34***
$BDSIZE_{t-1}$	9.83	10.00	8.75	9.00	-21.11***[b]
$BDIND_{t-1}$	0.78	0.82	0.75	0.78	-11.14***
$DUALITY_{t-1}$	0.67	-	0.64	-	5.47**
$ACSIZE_{t-1}$	3.94	4.00	3.64	3.00	-13.79***[b]
$ACEXP_{t-1}$	0.29	0.25	0.29	0.25	-0.61
$FEMALE_{t-1}$	0.11	0.11	0.09	0.10	-10.98***
$AVEBOARD_{t-1}$	2.32	2.25	1.86	1.78	-34.45***
Number of observations	3,333		3,888		

*, **, *** represent two-tailed significance at 10 percent, 5 percent, and 1 percent levels, respectively.

[a] *t*-values are reported for continuous variables, and Chi-square values for dummy variables.

[b] *t*-tests are based on natural logarithm transformed values.

HIGH is defined as an indicator variable that equals one if the percentage of independent directors for whom this directorship is the most reputable directorship based on the aggregate reputation measure of the firm (*HIGH_REP*) is above industry median in a given year, and zero otherwise.

See Appendix 2 for variable definitions.

Table 3.5: Correlation Matrix

Panel A: Correlations for Variables *CSR_SCORE* $_t$ (1) to *DIV* $_{t-1}$ (12)

		1	2	3	4	5	6	7	8	9	10	11	12
1	*CSR_SCORE*$_t$		0.19	-0.05	0.25	0.14	-0.10	-0.15	-0.01	0.07	0.08	-0.07	0.09
2	*HIGH_REP*$_{t-1}$	0.24		-0.42	0.44	0.09	-0.06	-0.13	0.13	0.07	0.06	-0.09	0.17
3	*LOW_REP*$_{t-1}$	-0.05	-0.39		-0.21	-0.05	-0.02	0.08	-0.05	-0.02	-0.01	0.06	-0.06
4	*SIZE*$_{t-1}$	0.32	0.47	-0.18		0.07	-0.11	-0.00	0.40	0.09	0.18	-0.21	0.35
5	*ROA*$_{t-1}$	0.12	0.09	-0.03	0.17		-0.23	-0.52	-0.24	0.00	0.03	-0.08	0.16
6	*FIN*$_{t-1}$	-0.10	-0.06	-0.02	-0.10	-0.27		-0.02	0.10	-0.03	0.02	0.09	-0.11
7	*MB*$_{t-1}$	-0.13	-0.11	0.06	-0.02	-0.45	-0.03		0.10	-0.00	-0.01	-0.03	0.00
8	*LEV*$_{t-1}$	-0.02	0.10	-0.03	0.31	-0.14	0.17	0.09		-0.00	0.06	-0.11	0.13
9	*GLOBAL*$_{t-1}$	0.09	0.06	-0.02	0.09	0.01	-0.04	-0.00	-0.03		0.02	-0.03	0.03
10	*LIQUIDITY*$_{t-1}$	0.05	0.04	-0.01	0.12	-0.00	0.02	0.04	0.08	0.00		0.09	-0.16
11	*DACC*$_{t-1}$	-0.07	-0.09	0.06	-0.22	-0.31	0.13	0.10	-0.08	-0.04	0.11		-0.16
12	*DIV*$_{t-1}$	0.11	0.18	-0.05	0.35	0.18	-0.11	-0.05	0.07	0.03	-0.15	-0.17	
13	*ADV*$_{t-1}$	0.17	0.02	-0.00	0.04	0.09	-0.10	-0.04	-0.04	-0.02	0.04	0.01	-0.01
14	*RETURN*$_{t-1}$	-0.06	-0.01	-0.01	-0.08	0.08	0.08	-0.33	-0.04	0.00	-0.02	0.03	-0.09
15	*AGE*$_{t-1}$	0.17	0.21	-0.02	0.44	0.12	-0.10	0.03	0.08	0.10	-0.08	-0.16	0.48
16	*EC*$_{t-1}$	0.08	0.19	-0.03	0.27	0.05	-0.03	-0.03	0.09	0.11	0.05	-0.06	0.15
17	*LNBDSIZE*$_{t-1}$	0.24	0.33	-0.19	0.61	0.06	-0.08	-0.04	0.21	0.08	-0.03	-0.14	0.33
18	*BDIND*$_{t-1}$	0.17	0.19	0.06	0.19	0.01	-0.04	-0.04	0.01	0.13	0.16	-0.02	0.08
19	*DUALITY*$_{t-1}$	0.04	0.05	-0.03	0.21	0.12	-0.05	-0.05	0.04	-0.04	-0.04	-0.09	0.15
20	*LNACSIZE*$_{t-1}$	0.13	0.23	-0.04	0.39	0.11	-0.08	-0.03	0.11	0.08	0.01	-0.11	0.32
21	*ACEXP*$_{t-1}$	0.03	0.04	-0.01	0.01	-0.00	-0.01	-0.02	0.03	-0.02	0.05	-0.01	-0.05
22	*FEMALE*$_{t-1}$	0.36	0.19	0.01	0.35	0.07	-0.11	-0.07	0.08	-0.02	0.00	-0.08	0.22
23	*AVEBOARD*$_{t-1}$	0.15	0.50	0.02	0.39	0.01	-0.02	-0.09	0.11	0.06	0.02	-0.05	0.11

Panel B: Correlations for Variables ADV_{t-1} (13) to $AVEBOARD_{t-1}$ (23)

		13	14	15	16	17	18	19	20	21	22	23
1	CSR_SCORE_t	**0.17**	**-0.05**	**0.13**	**0.06**	**0.22**	**0.15**	**0.04**	**0.12**	**0.02**	**0.36**	**0.16**
2	$HIGH\_REP_{t-1}$	**0.03**	0.01	**0.19**	**0.17**	**0.33**	**0.21**	**0.05**	**0.22**	**0.03**	**0.17**	**0.50**
3	LOW_REP_{t-1}	0.00	**-0.03**	**-0.05**	**-0.04**	**-0.22**	0.03	-0.03	**-0.06**	-0.02	-0.01	-0.01
4	$SIZE_{t-1}$	**0.06**	**-0.02**	**0.43**	**0.26**	**0.61**	**0.23**	**0.20**	**0.39**	-0.01	**0.34**	**0.40**
5	ROA_{t-1}	**0.10**	**0.11**	**0.08**	**0.03**	0.02	0.02	**0.10**	**0.07**	-0.01	**0.07**	0.01
6	FIN_{t-1}	**-0.12**	**0.04**	**-0.10**	**-0.03**	**-0.10**	**-0.05**	-0.03	**-0.08**	-0.02	**-0.13**	**-0.03**
7	MB_{t-1}	**-0.07**	**-0.34**	**0.09**	**-0.03**	-0.02	-0.01	-0.03	0.00	-0.01	**-0.08**	**-0.13**
8	LEV_{t-1}	**-0.05**	**-0.03**	**0.13**	**0.12**	**0.27**	**0.07**	**0.05**	**0.17**	0.02	**0.10**	**0.16**
9	$GLOBAL_{t-1}$	**-0.05**	0.01	**0.10**	**0.11**	**0.07**	**0.14**	-0.04	**0.08**	-0.02	-0.01	**0.06**
10	$LIQUIDITY_{t-1}$	**0.05**	**-0.11**	**-0.06**	**0.05**	-0.02	**0.18**	-0.03	0.02	**0.06**	**0.03**	**0.03**
11	$DACC_{t-1}$	-0.02	-0.00	**-0.13**	**-0.05**	**-0.14**	-0.02	**-0.09**	**-0.10**	0.01	**-0.07**	**-0.05**
12	DIV_{t-1}	-0.02	**-0.03**	**0.47**	**0.15**	**0.33**	**0.11**	**0.15**	**0.32**	**-0.07**	**0.21**	**0.10**
13	ADV_{t-1}		-0.02	**-0.04**	**-0.04**	**0.09**	**-0.07**	**0.03**	**-0.04**	**0.04**	**0.16**	**0.04**
14	$RETURN_{t-1}$	-0.01		-0.01	0.00	-0.02	0.00	0.01	0.00	0.02	**-0.03**	-0.00
15	AGE_{t-1}	**-0.04**	**-0.05**		**0.17**	**0.42**	**0.28**	**0.12**	**0.42**	**-0.05**	**0.25**	**0.10**
16	EC_{t-1}	-0.01	-0.01	**0.19**		**0.22**	**0.16**	**0.08**	**0.18**	**-0.06**	**0.15**	**0.17**
17	$LNBDSIZE_{t-1}$	**0.08**	**-0.05**	**0.42**	**0.22**		**0.20**	**0.14**	**0.46**	0.01	**0.34**	**0.27**
18	$BDIND_{t-1}$	**-0.07**	-0.02	**0.25**	**0.14**	**0.14**		**-0.05**	**0.32**	**0.03**	**0.24**	**0.14**
19	$DUALITY_{t-1}$	**0.04**	-0.01	**0.13**	**0.08**	**0.12**	**-0.06**		**0.11**	**-0.05**	**0.05**	**0.06**
20	$LNACSIZE_{t-1}$	**-0.04**	**-0.03**	**0.43**	**0.17**	**0.45**	**0.30**	**0.11**		**-0.21**	**0.24**	**0.20**
21	$ACEXP_{t-1}$	**0.03**	0.01	**-0.03**	**-0.05**	**0.04**	**0.05**	-0.04	**-0.18**		0.02	-0.01
22	$FEMALE_{t-1}$	**0.13**	**-0.05**	**0.26**	**0.14**	**0.36**	**0.23**	**0.06**	**0.24**	**0.02**		**0.15**
23	$AVEBOARD_{t-1}$	**0.05**	-0.02	**0.14**	**0.17**	**0.25**	**0.08**	**0.06**	**0.19**	-0.01	**0.15**	

Pearson (Spearman) correlations are reported below (above) the diagonal.
Correlations significant at $p < 0.05$ are in bold.

3.5.2 Results

I present my results using two specifications. The first specification is an ordinary least squares (OLS) regression with robust standard errors adjusted for firm clustering, while the second specification is estimated with the inclusion of firm fixed effects to control for unobserved time-invariant firm characteristics.

3.5.2.1 Empirical Results

Table 3.6 reports the results for testing H2 based on Model 3.1. H2 predicts that firms with a higher percentage of independent directors for whom this directorship represents the most reputable position are associated with better CSR performance. The results in Columns 1 and 2 indicate a significant and positive relation between independent directors' high reputation incentives and CSR performance ($p < 0.01$). The results hold across both the OLS and firm fixed effects specifications. Thus, H2 is supported.

In terms of economic significance, the results in Column 1 (2) indicate that an increase of one standard deviation in the proportion of independent directors for whom this directorship is the most prestigious board position (from 13 percent to 28 percent) leads to an increase in total CSR score by around 0.22 (0.16). This corresponds to 8 percent (6 percent) of the standard deviation of CSR_SCORE_t in the pooled sample. The coefficient of LOW_REP_{t-1} is not significant, thus suggesting that the percentage of independent directors with low reputation incentives does not affect a firm's CSR performance. The difference-in-coefficients test reveals significant results in the expected direction ($p < 0.05$), which add support to my hypothesis that independent directors' high reputation incentives influence CSR performance.

Table 3.6: Independent Directors' Reputation Incentives and CSR Performance

Variables	Predicted Sign	Dependent variable = CSR_SCORE $_t$	
		(1) Coefficient (*t*-statistic)	**(2)** Coefficient (*t*-statistic)
$HIGH\_REP_{t-1}$	+	1.494***	1.041***
		(3.03)	(2.86)
LOW_REP_{t-1}	-	0.484	0.237
		(1.09)	(0.64)
$SIZE_{t-1}$	+	0.352***	0.002
		(5.29)	(0.02)
ROA_{t-1}	+	0.749**	0.787**
		(1.84)	(2.12)
FIN_{t-1}	+	-0.189	0.293
		(-0.58)	(1.24)
MB_{t-1}	-	-0.493***	0.027
		(-4.74)	(0.32)
LEV_{t-1}	-	-1.158***	0.442
		(-3.15)	(1.23)
$GLOBAL_{t-1}$	+	0.235**	0.216**
		(1.95)	(1.70)
$LIQUIDITY_{t-1}$	-	0.055	0.060
		(1.74)	(2.59)
$DACC_{t-1}$	-	0.535	0.315
		(0.83)	(0.71)
DIV_{t-1}	+	0.035	0.013
		(0.31)	(0.11)
ADV_{t-1}	+	11.645***	0.373
		(4.45)	(0.14)
$RETURN_{t-1}$	?	-0.234***	-0.078*
		(-4.55)	(-1.92)
AGE_{t-1}	?	-0.001	0.142
		(-0.25)	(0.49)
EC_{t-1}	+	-0.053	1.166***
		(-0.19)	(2.74)
$LNBDSIZE_{t-1}$	+	0.281	-0.061
		(1.06)	(-0.23)
$BDIND_{t-1}$	+	0.557*	0.487
		(1.42)	(1.10)
$DUALITY_{t-1}$	-	0.090	0.001
		(0.97)	(0.01)
$LNACSIZE_{t-1}$	+	-0.131	0.030
		(-0.49)	(0.14)
$ACEXP_{t-1}$	+	0.028	0.050
		(0.16)	(0.45)
$FEMALE_{t-1}$	+	6.841***	2.437***
		(10.69)	(3.42)

(continued on next page)

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Table 3.6 (Continued)

Variables	Predicted Sign	Dependent variable = CSR_SCORE $_t$	
		(1) Coefficient (*t*-statistic)	**(2)** Coefficient (*t*-statistic)
AVEBOARD$_{t-1}$	?	-0.099	-0.438***
		(-0.85)	(-4.17)
Intercept	?	-9.127***	-3.165
		(-8.00)	(-0.51)
Year fixed effects		Yes	Yes
Industry fixed effects		Yes	No
Firm fixed effects		No	Yes
Number of firm-years		7,221	7,221
Adjusted R^2		29.88%	11.43%
Difference-in-Coefficients *F*-test		**Coefficient (*F*-statistic)**	**Coefficient (*F*-statistic)**
$\beta_1 = \beta_2$		1.010**	0.804**
		(4.37)	(5.44)

*, **, *** represent significance at 10 percent, 5 percent, and 1 percent levels, respectively, with probability levels one-tailed for variables with directional expectations, and two-tailed otherwise.

Numbers in parentheses are test statistics based on standard errors robust to heteroskedasticity, and clustered at the firm-level.

The direction of each test is indicated by the predicted sign.

See Appendix 2 for variable definitions.

3.5.2.2 CSR Subcomponents

My measure of CSR performance (CSR_SCORE_t) is a combined measure of a firm's total strengths less its total weaknesses over six MSCI evaluation dimensions, namely diversity, employee relations, product characteristics, community relations, humanity, and the environment. To elucidate how independent directors' reputation incentives enhance CSR performance, I examine the subcomponents of the aggregate CSR score.

3.5.2.2.1 CSR Strengths versus CSR Concerns

A firm's CSR activities can be classified into two categories: (1) socially responsible activities, measured by a firm's CSR strengths; and (2) socially irresponsible activities, measured by a firm's CSR concerns (Tang et al. 2015; Di Giuli and Kostovetsky 2014; Kotchen and Moon 2012; Godfrey et al. 2009). Prior research suggests that firms can concurrently perform both socially responsible and irresponsible activities (Strike, Gao, and Bansal 2006; Muller and Kraussl 2011). As such, firms that perform more socially responsible activities are not necessarily engaged in fewer socially irresponsible activities (Tang et al. 2015). In addition, prior research suggests that a firm's CSR effort is likely to be driven by engaging in socially responsible activities rather than reducing socially irresponsible activities, since the latter are more likely to be the consequence of other corporate activities that are not related to corporate effort (Servaes and Tamayo 2013).

Therefore, I examine whether the association between independent directors' reputation incentives and CSR performance is captured by better performance in socially responsible activities or socially irresponsible activities. I subdivide my measure of CSR performance (CSR_SCORE_t) into CSR strengths (CSR_STR_t) and CSR concerns

(CSR_CON_t). CSR_STR_t (CSR_CON_t) is the sum of a firm's industry-adjusted strength (concern) scores for diversity, employee relations, product characteristics, community relations, humanity, and the environment. I then re-estimate Model 3.1 using CSR_STR_t or CSR_CON_t as the dependent variable.

Table 3.7 reports the results using CSR_STR_t and CSR_CON_t, respectively, as the dependent variables. Columns 1 and 3 present the coefficient estimates using the OLS regression, while Columns 2 and 4 present the coefficient estimates using regressions that control for firm fixed effects. My results indicate that, with CSR_STR_t as the dependent variable, the coefficients of $HIGH\_REP_{t-1}$ are significant and positive ($p < 0.01$) for both the OLS specification and the firm fixed effects specification. Using CSR_CON_t as the dependent variable, the coefficients of $HIGH\_REP_{t-1}$ are not significant. These results suggest that firms with a greater proportion of independent directors for whom this directorship represents the most reputable board position demonstrate better CSR performance by engaging in socially responsible activities, and not by reducing socially irresponsible activities.

Table 3.7: Independent Directors' Reputation Incentives and CSR Strengths versus CSR Concerns

| Variables | Predicted Sign | Dependent Variable = CSR_STR_t | | Dependent Variable = CSR_CON_t | |
		(1) Coefficient (*t*-statistic)	(2) Coefficient (*t*-statistic)	(3) Coefficient (*t*-statistic)	(4) Coefficient (*t*-statistic)
$HIGH\_REP_{t-1}$	+/-	1.997***	1.016***	0.407	-0.095
		(4.50)	(3.36)	(1.45)	(-0.41)
LOW_REP_{t-1}	-/+	0.869	0.381	0.371*	0.142
		(2.17)	(1.24)	(1.44)	(0.69)
$SIZE_{t-1}$	+/-	0.900***	0.177**	0.537	0.188
		(14.67)	(1.98)	(14.18)	(2.80)
ROA_{t-1}	+/-	-0.581	0.310	-1.268***	-0.482**
		(-1.54)	(1.07)	(-4.83)	(-2.31)
FIN_{t-1}	+/-	-0.145	0.400**	0.046	0.115
		(-0.51)	(2.01)	(0.24)	(0.83)
MB_{t-1}	-/+	-0.552***	-0.064	-0.034	-0.087
		(-5.82)	(-0.93)	(-0.49)	(-1.54)
LEV_{t-1}	-/+	-1.955***	0.541**	-0.738	0.048
		(-5.89)	(1.75)	(-3.61)	(0.23)
$GLOBAL_{t-1}$	+/-	0.257***	0.125	0.008	-0.099*
		(2.34)	(1.20)	(0.11)	(-1.54)
$LIQUIDITY_{t-1}$	-/+	-0.022	0.065	-0.076	0.001
		(-0.82)	(3.35)	(-3.93)	(0.05)
$DACC_{t-1}$	-/+	1.458	0.341	0.856**	0.047
		(2.66)	(0.95)	(2.30)	(0.18)
DIV_{t-1}	+/-	0.104	0.081	0.092	0.066
		(1.09)	(0.82)	(1.37)	(1.09)
ADV_{t-1}	+/-	10.351***	0.021	-1.369	0.401
		(4.03)	(0.01)	(-1.06)	(0.21)
$RETURN_{t-1}$	?	-0.132***	-0.073**	0.108***	0.007
		(-3.04)	(-2.37)	(3.24)	(0.27)
AGE_{t-1}	?	0.008*	0.488*	0.008***	0.351**
		(1.84)	(1.84)	(2.90)	(2.26)
EC_{t-1}	+/-	0.670***	0.936***	0.736	-0.167
		(2.77)	(2.69)	(3.99)	(-0.90)
$LNBDSIZE_{t-1}$	+/-	-0.131	0.120	-0.420***	0.158
		(-0.54)	(0.58)	(-2.77)	(0.95)
$BDIND_{t-1}$	+/-	0.822**	0.589*	0.325	0.115
		(2.25)	(1.63)	(1.15)	(0.45)
$DUALITY_{t-1}$	-/+	0.093	0.038	0.001	0.022
		(1.10)	(0.48)	(0.02)	(0.42)
$LNACSIZE_{t-1}$	+/-	-0.161	-0.094	-0.013	-0.095
		(-0.70)	(-0.55)	(-0.08)	(-0.77)
$ACEXP_{t-1}$	+/-	-0.189	0.051	-0.257***	-0.005
		(-1.11)	(0.53)	(-2.80)	(-0.08)

Table 3.7 (Continued)

Variables	Predicted Sign	Dependent variable = CSR_STR $_t$		Dependent variable = CSR_CON $_t$	
		(1) Coefficient (*t*-statistic)	**(2)** Coefficient (*t*-statistic)	**(3)** Coefficient (*t*-statistic)	**(4)** Coefficient (*t*-statistic)
FEMALE$_{t-1}$	+/-	4.136***	1.125**	-2.842***	-1.402***
		(7.60)	(1.84)	(-7.90)	(-3.48)
AVEBOARD$_{t-1}$	?	0.041	-0.386***	0.139**	0.032
		(0.38)	(-4.17)	(1.97)	(0.50)
Intercept	?	-17.880***	-12.694**	-8.569***	-9.843***
		(-15.83)	(-2.31)	(-12.44)	(-2.94)
Year fixed effects		Yes	Yes	Yes	Yes
Industry fixed effects		Yes	No	Yes	No
Firm fixed effects		No	Yes	No	Yes
Number of firm-years		7,221	7,221	7,221	7,221
Adjusted R^2		51.52%	13.90%	40.59%	18.42%
Difference-in-Coefficients *F*-test		Coefficient (*F*-statistic)	Coefficient (*F*-statistic)	Coefficient (*F*-statistic)	Coefficient (*F*-statistic)
$\beta_1 = \beta_2$		1.128**	0.635**	0.046	-0.237
		(5.74)	(4.28)	(0.03)	(1.26)

*, **, *** represent significance at 10 percent, 5 percent, and 1 percent levels, respectively, with probability levels one-tailed for variables with directional expectations, and two-tailed otherwise.

Numbers in parentheses are test statistics based on standard errors robust to heteroskedasticity, and clustered at the firm-level.

The direction of each test is indicated by the predicted sign.

See Appendix 2 for variable definitions.

3.5.2.2.2 Stakeholder CSR versus Third-Party CSR

CSR is a multifaceted construct that comprises a wide array of dimensions, including diversity, employee relations, product characteristics, community relations, humanity, and the environment. Some of these dimensions relate to the interests of key stakeholders, such as employees and consumers, while others focus on the benefits to general society, such as the environment and human rights (Servaes and Tamayo 2013). I investigate the impact of independent directors' reputation incentives on firms' CSR efforts for stakeholders versus those for the whole of society. I subdivide my measure of CSR performance (CSR_SCORE_t) into stakeholder CSR (CSR_STK_t) and third-party CSR (CSR_TRD_t). Specifically, stakeholder CSR (third-party CSR) consists of CSR activities that predominantly address stakeholders' interests (general society's benefits), thus it is calculated using the sum of industry-adjusted CSR scores for the MSCI evaluation dimensions for diversity, employee relations, and product characteristics (community relations, humanity, and the environment). I then re-estimate Model 3.1 using CSR_STK_t or CSR_TRD_t as the dependent variable.

Table 3.8 reports the results using CSR_STK_t and CSR_TRD_t, respectively, as the dependent variables. I present results using both the OLS specification (Columns 1 and 3) and the firm fixed effects specification (Columns 2 and 4). I find significant and positive associations between independent directors' high reputation incentives and both CSR_STK_t ($p < 0.01$) and CSR_TRD_t ($p < 0.01$). These results hold across the OLS and firm fixed effects specifications, thus suggesting that independent directors' high reputation incentives influence both stakeholder CSR and third-party CSR.

Table 3.8: Independent Directors' Reputation Incentives and Stakeholder CSR versus Third-Party CSR

Variables	Predicted Sign	Dependent Variable = CSR_STK_t		Dependent Variable = CSR_TRD_t	
		(1) Coefficient (*t*-statistic)	(2) Coefficient (*t*-statistic)	(3) Coefficient (*t*-statistic)	(4) Coefficient (*t*-statistic)
$HIGH\_REP_{t-1}$	+	1.041***	0.639***	0.694***	0.674***
		(3.20)	(2.67)	(3.07)	(3.56)
LOW_REP_{t-1}	-	0.429	0.205	0.132	0.276
		(1.44)	(0.79)	(0.60)	(1.52)
$SIZE_{t-1}$	+	0.373***	0.104*	0.117***	-0.096
		(9.10)	(1.41)	(3.68)	(-1.66)
ROA_{t-1}	+	-0.215	0.206	0.307**	0.210
		(-0.76)	(0.84)	(1.71)	(1.15)
FIN_{t-1}	+	-0.257	0.144	0.169	0.341***
		(-1.14)	(0.83)	(1.24)	(2.88)
MB_{t-1}	-	-0.336***	0.001	-0.182***	-0.012
		(-4.61)	(0.02)	(-3.57)	(-0.28)
LEV_{t-1}	-	-1.153***	0.312	-0.178	0.375
		(-4.83)	(1.18)	(-1.05)	(2.08)
$GLOBAL_{t-1}$	+	0.180**	0.154**	0.065	0.047
		(2.25)	(1.91)	(1.18)	(0.69)
$LIQUIDITY_{t-1}$	-	0.047	0.037	0.015	0.044
		(2.24)	(2.11)	(1.02)	(4.11)
$DACC_{t-1}$	-	0.470	0.081	0.113	0.027
		(1.08)	(0.26)	(0.40)	(0.12)
DIV_{t-1}	+	0.069	0.066	-0.022	-0.004
		(0.89)	(0.87)	(-0.48)	(-0.06)
ADV_{t-1}	+	5.567***	-3.037	4.262***	1.470
		(3.42)	(-1.67)	(3.15)	(0.91)
$RETURN_{t-1}$	?	-0.114***	-0.049	-0.084***	-0.019
		(-3.19)	(-1.57)	(-3.37)	(-0.93)
AGE_{t-1}	?	0.001	0.152	0.001	-0.008
		(0.29)	(0.64)	(0.31)	(-0.05)
EC_{t-1}	+	0.158	0.387*	-0.008	0.849***
		(0.97)	(1.38)	(-0.05)	(3.58)
$LNBDSIZE_{t-1}$	+	0.241*	-0.041	0.056	-0.020
		(1.32)	(-0.21)	(0.45)	(-0.14)
$BDIND_{t-1}$	+	0.539**	0.802***	0.221	-0.182
		(1.93)	(2.56)	(1.17)	(-0.76)
$DUALITY_{t-1}$	-	0.063	-0.001	0.051	0.036
		(0.97)	(-0.02)	(1.18)	(0.72)
$LNACSIZE_{t-1}$	+	-0.083	0.028	-0.052	-0.061
		(-0.48)	(0.19)	(-0.38)	(-0.60)
$ACEXP_{t-1}$	+	-0.137	-0.006	0.095	0.036
		(-1.12)	(-0.08)	(1.15)	(0.59)

(continued on next page)

Table 3.8 (Continued)

Variables	Predicted Sign	Dependent variable = CSR_STK_t		Dependent variable = CSR_TRD_t	
		(1) Coefficient (*t*-statistic)	**(2)** Coefficient (*t*-statistic)	**(3)** Coefficient (*t*-statistic)	**(4)** Coefficient (*t*-statistic)
$FEMALE_{t-1}$	+	5.950***	2.601***	1.123***	0.170
		(13.61)	(5.15)	(3.91)	(0.45)
$AVEBOARD_{t-1}$	?	0.017	-0.262***	-0.093*	-0.210***
		(0.22)	(-3.31)	(-1.71)	(-4.08)
Intercept	?	-13.882***	-10.230**	-2.784***	2.189
		(-17.96)	(-2.06)	(-4.89)	(0.70)
Year fixed effects		Yes	Yes	Yes	Yes
Industry fixed effects		Yes	No	Yes	No
Firm fixed effects		No	Yes	No	Yes
Number of firm-years		7,221	7,221	7,221	7,221
Adjusted R^2		40.50%	10.81%	22.00%	20.73%
Difference-in-Coefficients *F*-test $\beta_1 = \beta_2$		Coefficient (*F*-statistic)	Coefficient (*F*-statistic)	Coefficient (*F*-statistic)	Coefficient (*F*-statistic)
		0.612*	0.434*	0.562**	0.398**
		(3.28)	(2.99)	(5.79)	(4.47)

*, **, *** represent significance at 10 percent, 5 percent, and 1 percent levels, respectively, with probability levels one-tailed for variables with directional expectations, and two-tailed otherwise.

Numbers in parentheses are test statistics based on standard errors robust to heteroskedasticity, and clustered at the firm-level.

The direction of each test is indicated by the predicted sign.

See Appendix 2 for variable definitions.

3.5.2.2.3 CSR Performance in Each Individual CSR Dimension

I further explore how independent directors' reputation incentives influence CSR performance in each individual CSR dimension, i.e., diversity (*CSR_DIV*), employee relations (*CSR_EMP*), product characteristics (*CSR_PRO*), community relations (*CSR_COM*), humanity (*CSR_HUM*), and the environment (*CSR_ENV*). I determine the CSR performance of each of these six dimensions by using the industry-adjusted CSR scores in each dimension.

Table 3.9, Panel A presents the results using the OLS specification, while Panel B presents the results using the firm fixed effects specification. As shown in Panel A, I find that a higher proportion of independent directors with high reputation incentives are associated with better CSR performance in the area of diversity ($p < 0.01$), employee relations ($p < 0.05$), community relations ($p < 0.01$), and the environment ($p < 0.01$). Apart from employee relations, the results presented in Panel B are qualitatively similar to those presented in Panel A. Overall, my results suggest that the association between independent directors' high reputation incentives and better CSR performance is driven by better CSR performance in the areas of diversity, employee relations, community relations, and the environment.

Table 3.9: Independent Directors' Reputation Incentives and CSR Performance in Each Individual CSR Dimension

Panel A: OLS Regressions

Variables	Predicted Sign	DV = CSR_DIV_t (1) Coefficient (*t*-statistic)	DV = CSR_EMP_t (2) Coefficient (*t*-statistic)	DV = CSR_PRO_t (3) Coefficient (*t*-statistic)	DV = CSR_COM_t (4) Coefficient (*t*-statistic)	DV = CSR_HUM_t (5) Coefficient (*t*-statistic)	DV = CSR_ENV_t (6) Coefficient (*t*-statistic)
$HIGH\_REP_{t-1}$	+	0.858***	0.312**	-0.132	0.246***	0.027	0.418***
		(3.83)	(2.16)	(-1.09)	(2.46)	(0.53)	(2.66)
LOW_REP_{t-1}	-	0.461	0.041	-0.051	0.058	-0.028	0.086
		(2.28)	(0.30)	(-0.50)	(0.65)	(-0.61)	(0.53)
Intercept	?	-7.234***	-8.896***	2.253***	-1.614***	0.567***	-1.440***
		(-13.04)	(-26.15)	(8.00)	(-7.62)	(4.78)	(-3.70)
Control variables		Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects		Yes	Yes	Yes	Yes	Yes	Yes
Firm fixed effects		Yes	Yes	Yes	Yes	Yes	Yes
Number of firm-years		7,221	7,221	7,221	7,221	7,221	7,221
Adjusted R^2		51.15%	26.94%	18.53%	18.82%	10.87%	20.56%
Difference-in-Coefficients *F*-test		**Coefficient (*F*-statistic)**	**Coefficient (*F*-statistic)**	**Coefficient (*F*-statistic)**	**Coefficient (*F*-statistic)**	**Coefficient (*F*-statistic)**	**Coefficient (*F*-statistic)**
$\beta_1 = \beta_2$		0.397*	0.271*	-0.081	0.188**	0.055	0.332*
		(2.75)	(3.57)	(0.46)	(4.13)	(1.06)	(3.69)

Table 3.9 (Continued)

Panel B: Firm Fixed Effects

Variables	Predicted Sign	DV = CSR_DIV	DV = CSR_EMP	DV = CSR_PRO	DV = CSR_COM	DV = CSR_HUM	DV = CSR_ENV
		(1) Coefficient (*t*-statistic)	(2) Coefficient (*t*-statistic)	(3) Coefficient (*t*-statistic)	(4) Coefficient (*t*-statistic)	(5) Coefficient (*t*-statistic)	(6) Coefficient (*t*-statistic)
$HIGH\_REP_{t-1}$	+	0.522***	0.095	-0.004	0.277***	0.061	0.278**
		(3.12)	(0.69)	(-0.03)	(3.21)	(1.08)	(1.93)
LOW_REP_{t-1}	-	0.020	0.112	0.058	0.123	0.041	0.110
		(0.11)	(0.88)	(0.60)	(1.56)	(0.80)	(0.80)
Intercept	?	-3.132	-9.833**	3.342**	-0.071	0.725	1.503
		(-0.94)	(-2.31)	(2.22)	(-0.05)	(0.86)	(0.84)
Control variables		Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects		Yes	Yes	Yes	Yes	Yes	Yes
Firm fixed effects		Yes	Yes	Yes	Yes	Yes	Yes
Number of firm-years		7,221	7,221	7,221	7,221	7,221	7,221
Adjusted R^2		15.00%	7.62%	3.43%	6.54%	4.84%	17.58%
Difference-in-Coefficients *F*-test		**Coefficient (*F*-statistic)**	**Coefficient (*F*-statistic)**	**Coefficient (*F*-statistic)**	**Coefficient (*F*-statistic)**	**Coefficient (*F*-statistic)**	**Coefficient (*F*-statistic)**
$\beta_1 = \beta_2$		0.502***	-0.017	-0.062	0.154*	0.020	0.168
		(6.92)	(0.02)	(0.33)	(3.23)	(0.13)	(1.36)

*, **, *** represent significance at 10 percent, 5 percent, and 1 percent levels, respectively, with probability levels one-tailed for variables with directional expectations, and two-tailed otherwise.

Numbers in parentheses are test statistics based on standard errors robust to heteroskedasticity, and clustered at the firm-level.

The direction of each test is indicated by the predicted sign.

See Appendix 2 for variable definitions.

3.6   Additional Analyses

3.6.1 External CSR Pressure and the Association Between Independent Directors' Reputation Incentives and CSR Performance

To further corroborate my argument that independent directors' high reputation incentives influence CSR performance, I investigate the conditions under which the positive relation between independent directors' high reputation incentives and CSR performance varies cross-sectionally. CSR is often regarded as a firm-level response to meet the expectations and demands of various external stakeholders (e.g., Aguinis and Glavas 2012; Rodrigue et al. 2013; Pondeville et al. 2013; Di Giuli and Kostovetsky 2014). Therefore, I expect independent directors to respond to the CSR emphasis exerted by a firm's external environment. I identify two factors that relate to the degree of CSR pressure exerted by a firm's external environment and examine how they impact the relation between independent directors' reputation incentives and CSR performance. The first factor is based on whether the firm belongs to an environmentally sensitive industry. Firms in an environmentally sensitive industry experience greater political and social pressures related to sustainability issues (Peters and Romi 2015). As such, these firms face an increased need to manage risks and stakeholder relations by enhancing their CSR performance. I define *ENVIRONMENT* as an indicator variable that equals one for firms in an environmentally sensitive industry, and zero otherwise.[39] The second factor is based on whether the firm belongs to a highly litigious industry. Studies suggest that firms facing a higher level of litigation risk are more likely to enhance CSR performance to mitigate risks and to prevent potential lawsuits (Skinner 1997; Dhaliwal et al. 2011). I

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[39] As in Cho and Patten (2007) and Peters and Romi (2015), environmentally sensitive industries are defined as industries with the following 2-digit SIC codes: 13 (oil exploration), 26 (paper), 28 (chemical and allied products), 29 (petroleum refining), 33 (metals), and 49 (utilities).

define *LITIGATION* as an indicator variable that equals one for firms in a highly litigious industry, and zero otherwise.[40]

I expect that the need to address external pressure for CSR weakens the association between independent directors' reputation incentives and CSR performance. Specifically, inclusion in an environmentally sensitive or highly litigious industry creates greater external apprehension about managing risks and stakeholder relations; thus, a greater need to improve CSR performance. Therefore, independent directors may feel obliged or motivated to participate in CSR activities if the environmental or litigious nature of their operating environment entails them to do so. This, in turn, will reduce the impact of independent directors' reputation incentives on CSR performance.

To test my prediction, I partition my sample into subsamples based on each firm's industry classification. Panel A (Panel B) of Table 3.10 reports the regression results of the impact of independent directors' reputation incentives on CSR performance for firms in environmentally sensitive industries (highly litigious industries) versus those that are not. Columns 1 and 3 report the coefficient estimates using the OLS regression, while Columns 2 and 4 report the coefficient estimates using regression that controls for firm fixed effects. I find that the positive relations between independent directors' high reputation incentives and CSR performance are observed only in firms that do not belong to an environmentally sensitive industry ($p < 0.01$) or firms that do not belong to a highly litigious industry ($p < 0.01$). Further, the results of a Chow test show that the differences in the coefficients of *HIGH_REP$_{t-1}$* in Columns 1 and 3 are statistically significant (Panel A: $p < 0.01$; Panel B: $p < 0.05$). These findings suggest that the positive impact of independent directors' high reputation incentives on CSR performance is more

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[40] As in Shu (2000), high litigation industries are defined based on SIC codes in the 2830s, 3570s, 7370s, 8730s, and between 3825 and 3829.

pronounced when the emphasis on CSR exerted by a firm's external environment is weaker.

Table 3.10: External CSR Pressure and the Association Between Independent Directors' Reputation Incentives and CSR Performance

Panel A: Environmentally Sensitive Industries

Variables	Predicted Sign	*ENVIRONMENT* = 1		*ENVIRONMENT* = 0	
		(1) **Coefficient** (*t*-statistic)	**(2)** **Coefficient** (*t*-statistic)	**(3)** **Coefficient** (*t*-statistic)	**(4)** **Coefficient** (*t*-statistic)
HIGH_REP$_{t-1}$	+	-0.743	0.549	2.073***	1.190***
		(-0.68)	(0.56)	(3.95)	(3.18)
LOW_REP$_{t-1}$	-	-0.977	0.243	0.879	0.189
		(-1.01)	(0.25)	(1.81)	(0.48)
Intercept	?	-9.900***	-3.133	-8.801***	-5.038
		(-4.95)	(-0.26)	(-6.91)	(-0.69)
Control variables		Yes	Yes	Yes	Yes
Year fixed effects		Yes	Yes	Yes	Yes
Industry fixed effects		Yes	No	Yes	No
Firm fixed effects		No	Yes	No	Yes
Number of firm-years		1,276	1,276	5,945	5,945
Adjusted R^2		38.19%	16.70%	30.35%	10.59%
Difference-in-Coefficients *F*-test $\beta_1 = \beta_2$		**Coefficient** (*F*-statistic)	**Coefficient** (*F*-statistic)	**Coefficient** (*F*-statistic)	**Coefficient** (*F*-statistic)
		0.234	0.306	1.194**	1.001***
		(0.06)	(0.16)	(5.04)	(7.31)

Table 3.10 (Continued)

Panel B: Highly Litigious Industries

Variables	Predicted Sign	*LITIGATION* = 1		*LITIGATION* = 0	
		(1) Coefficient (*t*-statistic)	**(2)** Coefficient (*t*-statistic)	**(3)** Coefficient (*t*-statistic)	**(4)** Coefficient (*t*-statistic)
$HIGH\_REP_{t-1}$	+	0.020	0.101	1.711***	1.306***
		(0.01)	(0.15)	(3.36)	(3.15)
LOW_REP_{t-1}	-	0.091	-0.578	0.721	0.508
		(0.09)	(-0.77)	(1.55)	(1.22)
Intercept	?	-18.315***	-8.844	-5.977***	-1.442
		(-7.79)	(-0.78)	(-5.21)	(-0.21)
Control variables		Yes	Yes	Yes	Yes
Year fixed effects		Yes	Yes	Yes	Yes
Industry fixed effects		Yes	No	Yes	No
Firm fixed effects		No	Yes	No	Yes
Number of firm-years		1,186	1,186	6,035	6,035
Adjusted R^2		45.52%	12.48%	27.52%	11.90%
Difference-in-Coefficients *F*-test $\beta_1 = \beta_2$		**Coefficient** (*F*-statistic)	**Coefficient** (*F*-statistic)	**Coefficient** (*F*-statistic)	**Coefficient** (*F*-statistic)
		-0.071	0.669	0.990*	0.798**
		(0.00)	(0.91)	(3.60)	(4.24)

*, **, *** represent significance at 10 percent, 5 percent, and 1 percent levels, respectively, with probability levels one-tailed for variables with directional expectations, and two-tailed otherwise.

Numbers in parentheses are test statistics based on standard errors robust to heteroskedasticity, and clustered at the firm-level.

The direction of each test is indicated by the predicted sign.

See Appendix 2 for variable definitions.

3.6.2 Internal Firm Characteristics and the Association Between Independent Directors' Reputation Incentives and CSR Performance

I also examine the moderating effects of two firm characteristics, namely board gender diversity and managerial ability, on the association between independent directors' reputation incentives and CSR performance. Prior research finds that having more female directors on the board is likely to sensitize boards to CSR initiatives and provide broader perspectives that can be helpful in addressing CSR issues and in assessing the needs of diverse stakeholders (e.g., Bear et al. 2010; Zhang et al. 2013). To the extent that female board members enhance a firm's CSR efforts, I expect that the influence of independent directors' reputation incentives on CSR performance is weaker in gender diverse boards. Further, prior research suggests that CSR performance increases with CEO ability, since highly able CEOs have less career concerns and thus are more willing to undertake long-term investments in CSR activities (Yuan et al. 2017). As such, I expect that the relation between independent directors' reputation incentives and CSR performance to be weaker in firms with high managerial ability, since independent directors have less reputation concerns in these firms where the CEOs are more inclined and motivated to participate in and improve CSR efforts.

To test these predictions, I partition my sample into subsamples based on the percentage of female board directors (*FEMALE*) and the managerial ability scores developed by Demerjian, Lev, and McVay (2012) (*MA_SCORE*). I classify a firm observation into the "Gender Diverse" group if *FEMALE* is above the industry median in a given year (*DIVERSE* = 1). Similarly, I categorize a firm observation into the "High Managerial Ability" group if *MA_SCORE* is above the industry median in a given year (*MA* = 1).

Panel A (Panel B) of Table 3.11 presents the regression results of the effect of independent directors' reputation incentives on CSR performance for firms with a gender diverse board (high managerial ability) versus those without. I present results using both the OLS specification (Columns 1 and 3) and the firm fixed effects specification (Columns 2 and 4). The results in Panel A show that independent directors' high reputation incentives are significantly and positively associated with CSR performance only in firms with a less gender diverse board ($p < 0.01$). A Chow test indicates that the difference in the coefficients of *HIGH_REP$_{t-1}$* in Columns 1 and 3 is statistically significant ($p < 0.01$). The results in Panel B show that the coefficients of *HIGH_REP$_{t-1}$* are significant and positive in both the "High Managerial Ability" ($p < 0.01$ or $p < 0.10$) group and "Low Managerial Ability" group ($p < 0.05$). The result of a Chow test is not statistically significant, thus suggesting that the moderating effect of managerial ability is not significant. Overall, my results support my conjecture that a more gender diverse board is more supportive of CSR efforts, thus mitigating the influence of independent directors' reputation incentives on CSR performance.

Table 3.11: Internal Firm Characteristics and the Association Between Independent Directors' Reputation Incentives and CSR Performance

Panel A: Board Gender Diversity

Variables	Predicted Sign	DIVERSE = 1		DIVERSE = 0	
		(1) Coefficient (*t*-statistic)	(2) Coefficient (*t*-statistic)	(3) Coefficient (*t*-statistic)	(4) Coefficient (*t*-statistic)
$HIGH\_REP_{t-1}$	+	0.806	0.712	2.093***	1.542***
		(1.14)	(1.25)	(3.99)	(3.45)
LOW_REP_{t-1}	-	0.610	0.411	0.559	0.513
		(0.93)	(0.67)	(1.21)	(1.23)
Intercept	?	-13.786***	-8.997	-5.054***	-3.349
		(-8.83)	(-0.50)	(-4.39)	(-0.60)
Control Variables		Yes	Yes	Yes	Yes
Year Fixed Effects		Yes	Yes	Yes	Yes
Industry Fixed Effects		Yes	No	Yes	No
Firm Fixed Effects		No	Yes	No	Yes
Number of firm-years		3,241	3,241	3,980	3,980
Adjusted R^2		32.73%	17.03%	22.22%	8.35%
Difference-in-Coefficients *F*-test $\beta_1 = \beta_2$		**Coefficient (*F*-statistic)**	**Coefficient (*F*-statistic)**	**Coefficient (*F*-statistic)**	**Coefficient (*F*-statistic)**
		0.196	0.301	1.534***	1.029***
		(0.07)	(0.30)	(10.73)	(6.81)

Table 3.11 (Continued)

Panel B: Managerial Ability

Variables	Predicted Sign	$MA = 1$		$MA = 0$	
		(1) Coefficient (*t*-statistic)	**(2)** Coefficient (*t*-statistic)	**(3)** Coefficient (*t*-statistic)	**(4)** Coefficient (*t*-statistic)
$HIGH\_REP_{t-1}$	+	1.822***	0.913*	1.051**	0.940**
		(2.64)	(1.63)	(2.05)	(2.03)
LOW_REP_{t-1}	-	0.759	-0.007	0.446	0.532
		(1.17)	(-0.01)	(0.94)	(1.13)
Intercept	?	-10.813***	-3.574	-7.003***	-2.004
		(-7.53)	(-1.16)	(-5.76)	(-0.29)
Control variables		Yes	Yes	Yes	Yes
Year fixed effects		Yes	Yes	Yes	Yes
Industry fixed effects		Yes	No	Yes	No
Firm fixed effects		No	Yes	No	Yes
Number of firm-years		3,511	3,511	3,710	3,710
Adjusted R^2		34.09%	16.56%	25.35%	7.13%
Difference-in-Coefficients *F*-test $\beta_1 = \beta_2$		**Coefficient** (*F*-statistic)	**Coefficient** (*F*-statistic)	**Coefficient** (*F*-statistic)	**Coefficient** (*F*-statistic)
		1.063*	0.920**	0.605	0.408
		(2.66)	(3.38)	(1.46)	(0.78)

*, **, *** represent significance at 10 percent, 5 percent, and 1 percent levels, respectively, with probability levels one-tailed for variables with directional expectations, and two-tailed otherwise.

Numbers in parentheses are test statistics based on standard errors robust to heteroskedasticity, and clustered at the firm-level.

The direction of each test is indicated by the predicted sign.

See Appendix 2 for variable definitions.

3.6.3 A Further Examination of Firm Size Effect

To address the concern that my results could be driven by firm size or other endogenously determined firm characteristics, I perform the following analyses. First, to control for non-linearity, I include both firm size ($SIZE_{t-1}$) and its squared value ($SIZESQ_{t-1}$) as control variables in my regression models. My results (untabulated) are robust to the inclusion of both variables. Second, I censor my sample of firms by annually excluding the top and bottom 5 percent of firms based on market capitalization. Specifically, I first calculate independent directors' reputation ranking measures using the full uncensored sample, then I remove the largest and smallest 5 percent of firms from each sample year prior to conducting my tests. The results (untabulated) when using the censored sample (6,505 firm-year observations) are consistent with my main results. Overall, my additional tests for a further examination of a firm size effect indicate that my measure of the reputation incentive of independent directors is a key board attribute that is different from firm size.

3.6.4 Propensity Score Matching (PSM)

In addition to the analyses performed above, I estimate my results using a matched sample. Specifically, I use PSM to construct two samples (Rosenbaum 2002; Rosenbaum and Rubin 1983). I estimate the probability that a firm has an above the median proportion of independent directors for whom this is the highest ranked directorship in a given industry-year ($HIGH = 1$) using the following logit model from Huang et al. (2018):[41]

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[41] Based on Huang et al. (2018), *SIZE* and *SIZESQ* are included because directorships in larger firms provide higher reputation incentives to directors (e.g., Adams and Ferreira 2008; Ryan and Wiggins 2004; Yermack 2004; Masulis and Mobbs 2014). *LEV* and *STD_CFO* are included as firms with high leverage and high operating earnings volatility are risker, which may increase the difficulty in recruiting committed independent directors (Mandelker and Rhee 1984; Abdel-Khalik 2007). *ROA* is included as firm profitability is associated with independent directors' reputation incentives (Masulis and Mobbs

$$HIGH_{i,t} = \beta_0 + \beta_1 SIZE_{i,t} + \beta_2 SIZESQ_{i,t} + \beta_3 LEV_{i,t} + \beta_4 ROA_{i,t} + \beta_5 STD\_CFO_{i,t} +$$

$$\beta_6 LNBDSIZE_{i,t} + \beta_7 BDIND_{i,t} + \beta_8 AGE_{i,t} + \varepsilon_t \qquad (3.2)$$

The PSM sample is based on a one-to-one match, without replacement, of treatment observations ($HIGH = 1$) to control observations ($HIGH = 0$), within a caliper range of 4 percent.[42] This results in 1,669 matched pairs (3,338 observations). Covariate balance is achieved on all explanatory variables at the 5 percent level. As shown in Table 3.12, the results using the PSM sample are qualitatively similar to my main results with my test variables remaining significant for my PSM sample.

2014). *LNBDSIZE* and *BDIND* control for board characteristics, while *AGE* controls for the life cycle of the firm (Boone, Field, Karpoff, and Raheja 2007).

[42] The caliper is set at 0.2 of the standard deviation of the propensity score.

Table 3.12: Results using Propensity Score Matching Sample

Variables	Predicted Sign	Dependent Variable = CSR_SCORE_t	
		(1) Coefficient (*t*-statistic)	(2) Coefficient (*t*-statistic)
$HIGH\_REP_{t-1}$	+	1.300***	0.597*
		(2.35)	(1.33)
Intercept	?	-7.318***	-3.522
		(-4.34)	(-0.46)
Control variables		Yes	Yes
Year fixed effects		Yes	Yes
Industry fixed effects		Yes	No
Firm fixed effects		No	Yes
Number of firm-years		3,338	3,338
Adjusted R^2		23.78%	10.48%
Difference-in-Coefficients **F-test** $\beta_1 = \beta_2$		**Coefficient** **(*F*-statistic)** 0.829* (2.78)	**Coefficient** **(*F*-statistic)** 0.660 (2.32)

*, **, *** represent significance at 10 percent, 5 percent, and 1 percent levels, respectively, with probability levels one-tailed for variables with directional expectations, and two-tailed otherwise.

Numbers in parentheses are test statistics based on standard errors robust to heteroskedasticity, and clustered at the firm-level.

The direction of each test is indicated by the predicted sign.

See Appendix 2 for variable definitions.

3.6.5 Exogenous Shocks to Directorships Rankings

To minimize concerns about endogenous effects, I exploit an exogenous shock to the reputation incentives of independent directors. My empirical setup is similar to Masulis and Mobbs (2014) and Sila et al. (2017). First, I identify 133 treatment firms that have at least one independent director (a "treatment director") who experiences an increase in the ranking of this directorship relative to the other directorships he or she holds. Importantly, the increase in ranking is exogenous because it is caused by a decrease in the aggregate reputation measure of other firms in his or her portfolio of directorships. To ensure this criterion is met, I restrict my analysis to observations where the change in

directorship ranking is not caused by an increase in the aggregate reputation measure of the treatment firm. I further require my treatment directors to not gain or lose a directorship during the event year. Next, I identify 183 control firms that have at least one independent director (a "control director") who experiences a decrease in the ranking of this directorship relative to the other directorships he or she holds. This ranking decrease is caused by an increase in the aggregate reputation measure of other firms in his or her portfolio of directorships and not by a decrease in the aggregate reputation measure of the control firm. I also exclude observations where the control directors gain or lose a directorship during the event year.

I match treatment firms with control firms that are in the same industry (as defined by Fama and French's (1997) 48 industries) and same fiscal year, and that are the nearest in size (based on market capitalization), without replacement. I exclude matched pairs where the difference in market capitalization is greater than $6.7 billion.[43] Matching based on size reduces the concern that my results are driven by firm size.[44]

I then examine the impact of independent directors' reputation incentives on CSR performance using a difference-in-differences approach. Specifically, I compare CSR performance for firms with treatment directors, who are identified as independent directors experiencing an exogenous negative shock to the ranking of one of their other directorships, to firms with control directors, who are identified as independent directors experiencing an exogenous positive shock to the ranking of one of their other directorships. For each firm, I include three years prior to the change in directorship

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[43] This threshold is set at approximately 0.2 of the standard deviation of market capitalization.
[44] The average market capitalization of the treatment group is $3,308 million, whereas the average market capitalization of the control group is $4,067 million. The test of differences between both averages is not statistically significant.

ranking and three years after the change in directorship ranking. The estimation model is as follows:

$$CSR\_SCORE_{i,t} = \beta_0 + \beta_1(TREAT_i \times POST_t) + \beta_2 TREAT_i + \beta_3 POST_t +$$

$$CONTROL_{i,t-1} + \varepsilon_{i,t} \tag{3.3}$$

The variable *TREAT* equals to one for treatment firms, and zero for control firms. The variable $POST_t$ equals one for the three years after the exogenous shock in director ranking, and zero for the three years before. $CONTROL_{t-1}$ represents the same set of control variables in Model 3.1 (excluding LOW_REP_t). The coefficient of interest is the interaction between *TREAT* and $POST_t$ (β_1). If independent directors' high reputation incentives lead to greater CSR performance, I expect a higher total CSR score in treatment firms after an exogenous increase in their reputation incentives.

Table 3.13 presents the difference-in-differences results. In Column 1, the coefficients of $TREAT \times POST_t$ are positive and significant ($p < 0.05$). The total CSR score of the treatment firms is 1.04 higher than the control firms after a positive shock to directorship rankings. This corresponds to 40 percent of the standard deviation of CSR_SCORE_t. In Column 2, I include the control variables and find that the coefficient remains statistically significant ($p < 0.05$). Overall, my results suggest that an exogenous increase in director reputation incentives leads to better CSR performance.

Table 3.13: Exogenous Shocks to Directorship Rankings

Variables	Predicted Sign	Dependent Variable = CSR_SCORE_t	
		(1) Coefficient (*t*-statistic)	**(2)** Coefficient (*t*-statistic)
$TREAT \times POST_t$	+	1.042**	1.021**
		(2.11)	(2.23)
$TREAT$	?	-1.030***	-0.625**
		(-2.78)	(-1.79)
$POST_t$	?	-0.126	-0.320
		(-0.33)	(-0.93)
Intercept	?	0.272	-12.193***
		(0.84)	(-4.14)
Control variables		Yes	Yes
Number of firm-years		494	494
Adjusted R^2		1.96%	24.41%

*, **, *** represent significance at 10 percent, 5 percent, and 1 percent levels, respectively, with probability levels one-tailed for variables with directional expectations, and two-tailed otherwise.

Numbers in parentheses are test statistics based on standard errors robust to heteroskedasticity, and clustered at the firm-level.

The direction of each test is indicated by the predicted sign.

See Appendix 2 for variable definitions.

3.6.6 Alternative Measure of CSR Performance

Since the number of strength and concern items in the MSCI STATS database changes every year, direct comparison of the raw scores across years may not be appropriate (Deng et al. 2013). As such, I follow Deng et al. (2013) and construct an alternative measure of CSR performance. Specifically, I divide each dimension's strength and concern scores by the respective number of strength and concern indicators to derive adjusted strength and concern scores for each dimension. I obtain an adjusted total CSR score (*CSR_SCORE_ADJ*) by subtracting the adjusted total strength score and the adjusted total concern score. My main results are robust to the alternative measure.

3.6.7 Alternative Measure of Independent Directors' Reputation Incentives

Following Masulis and Mobbs (2014, 2016), Huang et al. (2018) and Sila et al. (2017), I use firm size based on market capitalization to construct an alternative measure of an independent director's reputation incentive. The rationale follows prior research that suggests that directorships in larger firms provide higher reputation incentives to directors (e.g., Adams and Ferreira 2008; Ryan and Wiggins 2004; Yermack 2004). Therefore, each independent director's directorships are ranked based on each firm's market capitalization to proxy for the relative prominence of each directorship. I then use the percentage of independent directors for whom this directorship is their highest ranked (*HIGH_REP_MC*) based on market capitalization as an alternative proxy of independent directors' differential reputation incentive effects at the firm-level. I also replace *LOW_REP* with *LOW_REP_MC*. My main results are robust to this alternative measure.

3.6.8 Relative Ranking of Directorships by Compensation

Prior research finds that directors are motivated by both cash-based incentives (Adams and Ferreira 2008; Yermack 2004) and share-based incentives (Ahmed and Duellman 2007; Beasley 1996; Bhagat and Bolton 2008; Bolton 2014). I further examine whether the variation in relative remuneration across an independent director's directorships could create incentives to improve CSR performance, given that some boards offer relatively higher compensation. To consider the impact of independent directors' financial incentives on CSR performance, I rank an independent director's directorships by the average compensation received by all independent directors on the board. I determine compensation as the sum of directors' fees, stock awards, and options awards. I define *HIGH_PAY* (*LOW_PAY*) as the percentage of independent directors for whom this directorship is highest (lowest) paid.

Untabulated results reveal no significant association between CSR performance and high or low ranked directorships based on average director compensation. Given the lack of significant associations across my tests when using relative remuneration to rank an independent director's directorships, I conclude that reputation incentives are stronger than financial incentives in motivating independent directors to improve CSR performance. These results are consistent with Masulis and Mobbs (2014), who also find minimal support for independent directors' compensation having strong incentive effects.

3.7   Conclusion

Given the increasing significance and benefits associated with CSR, understanding how a firm can improve CSR performance is an important issue. In this study, I investigate whether independent directors' differential reputation incentives influence a firm's CSR performance. To the extent that independent directors have incentives to develop their reputation as a socially responsible director, my study addresses whether independent directors with multiple directorships prioritize their efforts in improving CSR performance differently according to the relative reputation value each directorship offers.

My results yield several key findings. I document that firms with a higher proportion of independent directors who have relatively high reputation incentives are associated with better CSR performance. My results are robust to the inclusion of firm fixed effects and to the treatment for endogeneity. I find that better CSR performance is mainly driven by: (1) better performance in socially acceptable activities rather than socially unacceptable activities; (2) better performance in both stakeholder CSR and third-party CSR; and (3) CSR efforts in the areas of diversity, employee relations, community relations, and the environment. Further, I find that the positive impact of

independent directors' high reputation incentives on CSR performance is more pronounced in an environment where firms face less external pressure to engage in CSR activities, as well as in firms with a less gender diverse board. Overall, these findings are consistent with my conjecture that independent directors have incentives to build their reputation as a socially responsible director, and these reputation effects are strongest in their most prominent directorships. Thus, my findings emphasize the importance of considering independent directors' reputation incentives when examining a firm's CSR performance.

My study contributes to the literature by providing insights into the role that independent directors' reputation incentives play in influencing a firm's CSR performance. I extend prior studies (Masulis and Mobbs 2014; Sila et al. 2017; Huang et al. 2018) that find that independent directors' reputation incentives influence a firm's financial performance, by demonstrating that directors' reputation incentives also impact a firm's non-financial performance. I highlight the importance of accounting for the varying reputation incentives of individual independent directors in enhancing CSR performance in the post-SOX era, rather than relying solely on board independence and board diversity. Finally, given that the relative reputation incentives that a firm offers can act as a signal to shareholders and stakeholders on the potential quality of a firm's CSR performance, firms should consider the reputation incentives of independent directors when making appointments to the board.

CHAPTER 4: Study 3 – The Impact of Corporate Reputation on the Timeliness of External Audit and Earnings Announcement

4.1   Introduction

The importance of corporate reputation has documented various effects of firm reputation on agency costs, financial reporting quality and other firm outcomes of interest to academics, regulators and financial market participants. High corporate reputation can reduce agency problems by prompting actions that are in favor of the principal, even without a formal contract (Wilson 1985; Weigelt and Camerer 1988). In addition, prior research demonstrates that a high corporate reputation has positive effects on financial reporting quality (Cao et al. 2012), debt and equity financing costs (e.g., Cao et al. 2015; Diamond 1991), firm performance and valuation (Roberts and Dowling 2002; Srivastava, McInish, Wood, and Capraro 1997), as well as stakeholder perceptions (Filbeck and Preece 2003; Pfarrer, Pollock, and Rindova 2010). My study adds to prior research by investigating whether corporate reputation affects the timeliness of accounting information, which is an important qualitative characteristic that enhances the relevance of accounting information to decision makers. It is important to examine factors associated with audit and financial reporting timeliness considering the negative consequences of a delay in the reporting of accounting information, tighter reporting deadlines, increased complexity in audit and financial reporting requirements, and implications for financial reporting quality (Bronson et al. 2011; Krishnan and Yang 2009; Givoly and Palmon 1982).

I begin by examining the association between corporate reputation and the timeliness of external audit. External audit timeliness has been a significant area of concern for various stakeholders, such as shareholders, managers, regulators, and auditors

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(Krishnan and Yang 2009; Bamber, Bamber, and Schoderbek 1993; Lambert et al. 2017). Since 2002, the SEC introduced a series of regulatory requirements that increased the pressure on firms to report, and their auditors to conduct external audits, in a timelier manner (SEC 2002b, 2004, 2005). At the same time, new auditing standards were issued that significantly widened the scope of audit requirements (Krishnan and Yang 2009; Bronson et al. 2011), thus making it more difficult for auditors to complete audit engagements in a timely manner.[45] Tighter reporting deadlines and more complex auditing standards suggest that auditors are required to perform more work in a shorter time frame, which could have a negative effect on audit quality (Blankley et al. 2014). These changes highlight the importance of examining factors associated with audit timeliness.

It is important to examine the impact of corporate reputation on external audit timeliness because prior research shows that corporate reputation is associated with auditors' actions and decisions (Cao et al. 2012; Burke, Hoitash, and Hoitash 2016). I use economic dependence theory and reputation protection theory to explain the effect of a client firm's reputation on external audit timeliness (e.g., Reynolds and Francis 2001; Whitworth and Lambert 2014). Similar to economically important clients, highly reputable clients are important to auditors due to their prominence (Podolny 1993; Reuber and Fischer 2005; Stuart, Hoang, and Hybels 1999). On the one hand, economic dependence theory suggests that auditors prioritize their high reputation clients, which results in timelier audits for high reputation clients. On the other hand, reputation protection theory predicts that auditors may be more conservative when auditing

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[45] See Krishnan and Yang (2009) for a summary of major policy changes during the period 1999 to 2006. The major auditing changes include the introduction of: (1) Statement on Auditing Standards No. 99 (SAS 99), which requires the consideration of fraud in financial statement audits; (2) SOX 404, which requires management and auditor internal control reports; and (3) AS No. 2 and No. 3, which increases internal control and audit documentation requirement (Bronson et al. 2011).

prominent firms in order to protect their reputation and avoid litigation, thus resulting in increased audit delay (Reynolds and Francis 2001). Based on these competing arguments, the first research question I address in this chapter is:

> **RQ3a**: Does corporate reputation have an association with external audit timeliness?

Next, I examine the association between corporate reputation and the timing of earnings announcements. Since earnings announcements are not required to be audited, an increase in audit delay may result in more firms releasing earnings announcements prior to completion of the audit (Bronson et al. 2011; Krishnan and Yang 2009; Schroeder 2016).[46] Firms are increasingly trading off the market demand for timeliness against a possible reduction in reliability (Bronson et al. 2011; Schroeder 2016; Krishnan and Yang 2009), so as to avoid negative consequences associated with deviations in expected disclosure behavior (Einhorn and Ziv 2008; Givoly and Palmon 1982; Kross 1981; Bagnoli et al. 2002). However, these trends have negative effects on the reliability of earnings announcement disclosures (Bronson et al. 2011). Further, studies examining the implications of audit completeness at earnings announcement date provide evidence that earnings announcement disclosure, market reliance, and financial reporting quality are greater for earnings announcements associated with completed audits (Schroeder 2016; Marshall et al. 2017). Given the significance of audit completeness at earnings announcement date and the saliency of earnings announcements (Schroeder 2016), it is

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[46] Bronson et al. (2011) document that audit report lag has increased from an average of 46 days in 2000 to an average of 65 days in 2005 since the implementation of AS No. 2 and No. 3 in 2004. Further, Schroeder (2016) reports that the percentage of firms waiting until on or after the audit report date to release earnings announcement has decreased from a high of 72 percent in 2001 to a low of 5 percent in 2011.

important to consider factors that influence a firm's decision to announce their earnings prior to audit completion.

On the one hand, high reputation firms may announce earnings prior to completion of the audit. This is because the need for audit completeness at earnings announcement date is likely to be less important for high reputation firms. High reputation firms emphasize credibility, trust, and consistency, which signals their commitment to work for the benefit of stakeholders and to provide reliable earnings announcements even before the audit is completed. Further, considering the negative consequences associated with deviations from expected disclosure behavior and the existing regulations and market demand for more timely information, high reputation firms have more incentives to uphold their reputation by providing timely and consistent earnings announcements. On the other hand, due to the greater downside risk of reputational damage in the event of an earnings revision, high reputation firms may act more conservatively by waiting until completion of the audit before announcing their earnings. Based on these competing arguments, the second research question I address in this chapter is:

RQ3b: Does corporate reputation have an association with the likelihood of firms announcing earnings after audit completion?

To examine these issues, I employ a sample of *Fortune 1000* firms who are large accelerated filers with financial year ends from 2007 to 2016.[47] I use four measures of corporate reputation: (1) the corporate reputation scores from the *Fortune's Most Admired Companies' List* (MA List), where a higher score represents better reputation;

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[47] My sample is based on *Fortune 1000* firms because these firms are eligible for inclusion on the MA List. Additional analyses show that my results are generalizable to non-*Fortune 1000* firms. I focus on large accelerated filers because they have a shorter 10-K filing deadline (60 days). As such, the subject of timeliness is expected to be of greater relevance to large accelerated filers. Additional analyses show that my results remain the same if I include accelerated filers and non-accelerated filers in my sample.

(2) an indicator variable that equals one if the firm appears on the MA List in a given year, and zero otherwise; (3) the number of sample years to date during which the firm appears on the MA List; and (4) following Erkens and Bonner (2013), a factor score that includes a firm's market capitalization, the number of firms the focal firm is connected to through common board members and a firm's corporate reputation scores from the MA List. Corporate reputation scores based on the MA list have been widely used as measures of corporate reputation in accounting studies (e.g., Cao et al. 2012, 2015; Erkens and Bonner 2013). Further, the list is independent, publicly available, and includes a substantial number of firms.

I find that firms with a high corporate reputation are associated with shorter audit report lag and a lower likelihood of announcing earnings after audit completion, after controlling for other factors affecting the timeliness of external audit and earnings announcement. My results for the association between corporate reputation and audit report lag are robust to the inclusion of firm fixed effects in my regression models. These results suggest that auditors prioritize their highly reputable clients, thus resulting in timelier audits. Further, these results demonstrate the self-disciplining nature of reputation effect, where high reputation firms are committed to provide reliable and consistent earnings announcements, even when they are not audited. Collectively, my findings highlight the crucial role of corporate reputation on the timeliness of external audits and earnings announcements.

To verify my conjecture that auditors prioritize their highly reputable clients, I control for auditor capacity at the city-industry level. I find that firms with a relatively higher corporate reputation in an auditor's city-industry portfolio are associated with a timelier audit. Further, to rule out alternative explanations, I perform several cross-

sectional analyses. I find that my main results are not associated with larger client firm size, higher financial reporting quality, or better internal controls. Thus, I rule out the possibility that the negative associations observed in my main tests could be the result of underlying firm characteristics of high reputation firms. My main results are robust to: (1) PSM that controls for observable and unobservable characteristics that affect a firm's reputation and the timing of audit completion and earnings announcement; (2) entropy balancing, which reweights covariates such that there are no significant differences in the mean values of these covariates between treatment and control observations; (3) controlling for board and audit committee characteristics; (4) the inclusion of non-*Fortune 1000* firms in the sample; (5) alternative timeliness measures; and (6) the exclusion of firms that always face audit delay and firms that always announce earnings after audit completion.

My study provides several important contributions to the literature on corporate reputation and financial reporting and external audit timeliness. First, my study enhances our understanding of how corporate reputation affects auditors' reporting timeliness. Prior research on client importance mainly focuses on auditors' financial incentives by examining the effects of the client's relative economic significance on auditor independence (e.g., Li 2009; Chen et al. 2010; Chung and Kallapur 2003; Chi et al. 2012). My study extends this literature by considering auditors' reputation incentives. Specifically, I focus on the impact of a client's reputation value on audit timeliness. I find that in addition to financial incentives, auditors value the reputation of their clients by ensuring timelier audits for their high reputation clients. I document important benefits in the form of timelier audits derived from developing and maintaining a good corporate reputation.

Second, there is limited research on how corporate reputation influences the timing of a firm's voluntary disclosures. I find that corporate reputation has implications for a firm's decision on whether to announce earnings before or after audit completion. Specifically, my results suggest that high reputation firms are less likely to wait for audit completion before announcing their earnings. My results are consistent with prior research that documents the self-disciplining nature of reputation effect (Wilson 1985; Weigelt and Camerer 1988) and the role of corporate reputation in reducing agency problems (Fama 1980; Holmstrom 1982; Schwartz et al. 2000; Stiglitz and Weiss 1983). My results also complement recent research that investigates the importance and consequences of audit completeness at earnings announcement date (Bronson et al. 2011; Schroeder 2016; Marshall et al. 2017; Bhaskar et al. 2017; Haislip et al. 2017).

Finally, I provide insights on the topic of external audit and financial reporting timeliness using a more recent sample from 2007 to 2016. The majority of studies examine this issue in the early to mid-2000s following the accelerated filing requirements mandated by the SEC (e.g., Bryant-Kutcher et al. 2013; Krishnan and Yang 2009; Bronson et al. 2011). My findings shed light on more recent developments in the area of timeliness during the past decade, subsequent to the introduction of the accelerated filing deadlines, accounting and auditing standards, and regulations such as SOX. A greater understanding of factors that impact audit report lag and earnings announcement timing is relevant and important to practitioners and academics. Timeliness is of significant interest to auditors, who are concerned with reducing audit report lag; and to managers, investors and regulators, who are interested in increasing the timeliness of financial reporting information.

The remaining sections proceed as follows: Section 4.2 describes the regulatory background, Section 4.3 reviews the literature, Section 4.4 develops the hypotheses, Section 4.5 describes the research design, Section 4.6 reports the results, Section 4.7 presents the additional tests, and Section 4.8 discusses the conclusions and implications of this study.

4.2 Regulatory Background

In an effort to provide investors with timelier information, the SEC issued a set of rules in the early 2000s to considerably reduce the Form 10-K filing deadline (SEC 2002b, 2004, 2005). As of 15 December 2003, the deadline for firms with outstanding common equity by non-affiliates of US$75 million or more, known as "accelerated filers", was reduced from 90 to 75 days. Subsequently, two categories of firms were created and are subject to different filing deadlines. Specifically, as of 15 December 2006, "large accelerated filers", defined as firms with a public float of US$700 million or more, are subject to a 60-day deadline. "Accelerated filers", which are firms with a public float of between US$75 million and US$700 million, remain subject to a 75-day deadline. The remaining firms ("non-accelerated filers") continue to be subject to the pre-existing 90-day deadline. During the same time period, the Public Company Accounting Oversight Board (PCAOB) issued Auditing Standards (AS) No. 2: "*An Audit of Internal Control Over Financial Reporting Performed in Conjunction With an Audit of Financial Statements*" (PCAOB 2004a) and AS No. 3: "*Audit Documentation*" (PCAOB 2004b) to enhance the quality of external audit. These standards resulted in an increase in internal control and audit documentation requirements, as well as the time it takes to complete a year end audit (Bronson et al. 2011; Ettredge, Li, and Sun 2006).

CHAPTER 4: Study 3 – The Impact of Corporate Reputation on the Timeliness of External Audit and Earnings Announcement

One major concern about the tighter reporting deadlines and the more complex audit reporting requirement is that the pressure to perform more work in a shorter time frame will result in lower financial reporting and audit quality (SEC 2002a). Bryant-Kutcher et al. (2013) and Doyle and Magilke (2013) find that the likelihood of a restatement increases for firms that are required to file more quickly, relative to firms whose filing practices are not affected by the regulatory change. Lambert et al. (2017) report that the accelerated filing deadlines reduced earnings quality only when there is substantial reduction in audit delay, as it induces time pressure on the audit engagement team. By contrast, Krishnan and Yang (2009) do not find any significant association between financial reporting quality and firms that completed their audits very close to the 10-K filing deadline. Similarly, Boland, Bronson, and Hogan (2015) document that, in the long run, firms are able to file their reports in a timelier manner without compromising financial reporting quality.

Another consequence of the increased audit report lag following the implementation of AS No. 2 and No. 3 is a considerable increase in the number of firms that issue their earnings announcements prior to the completion of their year end audits (Krishnan and Yang 2009; Bronson et al. 2011; Schroeder 2016). The growing trend of issuing preliminary earnings announcement is in line with the SEC's endeavor to ensure that "all investors … have access to certain basic facts about an investment prior to buying it, and so long as they hold it", and its commitment in providing a "common pool of knowledge for all investors" and a "steady flow of timely, comprehensive, and accurate information" (SEC 2013). As such, this phenomenon likely reflects firms' inclination to retain their existing earnings release behavior to avoid negative market reactions or potential litigation exposure associated with untimely disclosure or insider trading.

However, prior research suggests that this trend may have implications for financial reporting quality. Bronson et al. (2011) document a higher likelihood of earnings announcement revisions when preliminary earnings are released prior to the audit report date, suggesting a reduction in reliability. Haislip et al. (2017) find that such earnings revisions increase the likelihood of auditor dismissal and subsequent audit pricing concessions provided by the auditors to retain clients. Furthermore, Marshall et al. (2017) find that the market places greater reliance on earnings with a completed audit than those with an incomplete audit. The authors also find that earnings announcements with a completed audit are associated with better financial reporting quality than those without. Research indicates that auditors are significantly less likely to require audit adjustments for aggressive financial reporting when earnings have been announced prior to audit completion (Bhaskar et al. 2017).

4.3   Literature Review

4.3.1 External Audit Timeliness

A recent review by Abernathy, Barnes, Stefaniak, and Weisbarth (2017) provides a comprehensive overview of empirical research on external audit timeliness. The lag between a firm's fiscal year end date and the auditor's report date, known as audit report lag, is often regarded as an important indicator of both financial reporting timeliness and audit efficiency (Abernathy et al. 2017). As such, the timeliness of external audit is not only the focus of many academic studies, but also a longstanding concern for various stakeholders, including investors, managers, regulators and auditors (Abbott, Parker, and Peters 2012; Krishnan and Yang 2009; Bamber et al. 1993). I discuss two broad categories of research on external audit timeliness, namely the determinants and consequences of external audit timeliness.

4.3.1.1 Determinants of External Audit Timeliness

Early research on the determinants of external audit timeliness examines client firm characteristics that influence the timeliness of external audit. Abernathy et al. (2017) categorize these client firm characteristics as firm size, performance and financial condition, complexity and industry, internal control over financial reporting, and corporate governance. Prior studies find that larger firms have shorter audit report lag, thus providing support for the argument that large firms have better resources and internal control systems, which effectively reduce audit report lag (Givoly and Palmon 1982; Carslaw and Kaplan 1991; Ashton, Graul, Newton 1989; Ng and Tai 1994; Jaggi and Tsui 1999).

Using net income as an indicator of firm performance, earlier studies report that firms that perform poorly report in a less timely manner (Givoly and Palmon 1982; Kross 1981), and have longer audit report lag (Ashton et al. 1989; Carslaw and Kaplan 1991). More recent studies adopt the likelihood of bankruptcy as a measure of firm performance, and find consistent results, i.e., that audit report lag has a positive association with the probability of bankruptcy (Bamber et al. 1993; Jaggi and Tsui 1999; Henderson and Kaplan 2000). Similarly, other studies find that firms with higher leverage have longer audit report lag (Ashton et al. 1989; Bamber et al. 1993; Carslaw and Kaplan 1991). In addition, prior research examines the effect of audit risk on audit report lag. For example, Kinney and McDaniel (1993) report that firms that restate previously reported interim earnings experience longer audit report lag.

Prior research investigating the relationship between firm complexity and external audit timeliness finds that firm complexity has a positive association with audit report lag. The proxies of firm complexity adopted in prior research include total current revenue

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and firm listing status (Ashton, Willingham, and Elliott 1987), extraordinary items and contingencies (Ashton et al. 1989; Ng and Tai 1994; Leventis, Weetman, Caramanis, and Caramanis 2005), the presence of global operations (Lee, Mande, and Son 2008), and audit complexity (Bamber et al. 1993; Jaggi and Tsui 1999). In addition, prior studies find that the industry a firm operates in influences audit report lag (Ashton et al. 1989; Carslaw and Kaplan 1991; Bamber et al. 1993). For example, Bonsón-Ponte and Escobar-Rodríguez (2008) report that industries subject to regulatory pressure have shorter audit report lag.

Another determinant of external audit timeliness investigated in prior research pertains to a firm's internal control over financial reporting. Ettredge et al. (2006) provide evidence that the presence and type of material weaknesses in internal control over financial reporting are associated with longer audit report lag. Masli, Peters, Richardson, and Sanchez (2010) find that the implementation of monitoring technology as part of the internal control requirements under SOX reduces audit delay. Further, Mitra, Song, and Yang (2015) document that audit report lag is significantly reduced in the years following the implementation of AS No. 5: "*An Audit of Internal Control over Financial Reporting that is Integrated with an Audit of Financial Statements*" for firms with clean SOX 404 opinions. Corporate governance also plays an important role in improving audit timeliness. For example, Sultana, Singh, and Van der Zahn (2015) and Schmidt and Wilkins (2013) provide evidence that financial expertise and independence of the audit committee result in timelier financial reporting.

In addition to client firm characteristics, prior research identifies various audit characteristics that affect audit report lag, including audit firm characteristics, audit process and resources, and type of audit opinion (Abernathy et al. 2017). Studies conclude

that Big N audit firms provide timelier financial reports (Schwartz and Soo 1996; Schmidt and Wilkins 2013), and that audits performed by industry specialist auditors have shorter audit delays (Whitworth and Lambert 2014). Further, Lee et al. (2008) and Dao and Pham (2014) find that longer auditor tenure is associated with shorter audit report lag because auditors accumulate client-specific knowledge and become more familiar with their clients as their tenure increases. Previous studies find that firms that change their auditors have longer audit report lag (Schwartz and Soo 1996; Henderson and Kaplan 2000; Ettredge et al. 2006); however, Tanyi, Raghunandan, and Barua (2010) argue that the effect is alleviated for firms that followed their former Andersen audit partner to a new firm, thus highlighting the importance of the relationship between audit partners and clients in audit timeliness.

Prior research reports conflicting results on the relationship between audit fees and audit report lag. On the one hand, it is argued that higher audit fees represent a premium paid for a timelier audit opinion (Lee, Mande, and Son 2009). On the other hand, studies find a positive relation between audit fees and audit report lag, thus suggesting that audit fees are higher because of greater audit inefficiencies or audit complexities (Behn, Searcy, and Woodroof 2006; Ho and Ng 1996). In addition, prior research finds a negative association between non-audit services fees and audit report lag. This supports the argument that non-audit services may generate knowledge spillover benefits that reduce audit report lag (Knechel and Payne 2001; Lee et al. 2009; Knechel and Sharma 2012).

Research also suggests that resources available to auditors and audit processes influence audit report lag. Behn et al. (2006) find that insufficient personnel resources lead to audit inefficiency, thus resulting in longer audit report lag. Similarly, Knechel and Payne (2001) find that the use of less-experienced staff is associated with longer audit

report lag, and that audit timeliness can be improved by moving audit testing procedures to interim periods. In addition, Abbott et al. (2012) and Pizzini, Lin, and Ziegenfuss (2015) find that internal audit assistance and internal audit quality are associated with greater audit efficiency and reduced audit report lag. Studies also find that firms receiving modified or going concern audit opinions have longer audit report lags (Whittred 1980; Ettredge et al. 2006). These findings are consistent with the notion that client business risk increases overall engagement risk, which requires greater audit effort, thus leading to longer audit report lag.

4.3.1.2 Consequences of External Audit Timeliness

While many studies examine the determinants of external audit timeliness, fewer studies investigate the consequences of audit report lag. McKeown, Mutchler, and Hopwood (1991) and Mutchler, Hopwood, and McKeown (1997) find that firms with shorter audit report lag are less likely to receive a going concern opinion. Further, Mande and Son (2011) document that audit report lag is positively associated with the likelihood of an auditor's resignation, suggesting that auditors perceive audit delay as an indicator of overall audit risk. Ho and Ng (1996) find that firms with longer audit delay pay higher audit fees.

With regard to other financial reporting consequences, Shu, Chen, and Hung (2015) find that both the level and the volatility of audit report lag are positively associated with a firm's credit risk. Blankley et al. (2014) provide evidence that firms with longer abnormal audit report lags are positively associated with the likelihood of future restatements. Prior studies also investigate whether audit report lag has a negative association with financial reporting and audit quality, particularly following the accelerated Form 10-K filing deadline imposed by SEC (e.g., Krishnan and Yang 2009;

Lambert et al. 2017; Bryant-Kutcher et al. 2013). As discussed in Section 4.2, while prior

research shows that the accelerated 10-K filing deadlines increase audit report lag, there

is mixed evidence on whether the resulting audit delay is associated with lower financial

reporting and audit quality.

4.3.2 Earnings Announcement Timeliness

The annual earnings announcement represents an important information source for

investors since it offers an initial benchmark for evaluating the accuracy of previous

management forecasts and other information sources (Beyer, Cohen, Lys, and Walther

2010). Studies underscore the importance of earnings announcement to the market (Ball

and Brown 1968; Beaver 1968; Landsman and Maydew 2002). In fact, prior research

suggests that investors place greater reliance on the information included in the earnings

announcement more than that in subsequent regulatory filings (such as the 10-K filing),

as evidenced by quicker and greater stock market reactions to the earnings

announcement's timelier release (Stice 1991; Kothari 2001; Li and Ramesh 2009).

While the selection of the earnings announcement date is a voluntary disclosure

decision, prior research indicates that there is consistency and regularity to a firm's

announcement dates (Givoly and Palmon 1982; Chambers and Penman 1984). Further,

prior research suggests that a later than expected earnings announcement date is perceived

as bad news by the market (Kross and Schroeder 1984; Begley and Fischer 1998; Bagnoli

et al. 2002; Kross 1981).

The discussion above highlights the significance of timely earnings announcement

as a key attribute valued by capital markets. However, while timely issuance of earnings

information is highly desirable, it may conflict with the objective of presenting reliable

information (Bronson et al. 2011). In the following subsection, I discuss how the increasing delay in audit report dates impacts firms' earnings announcement disclosure practices and the trade-off that firms face between timeliness and reliability of earnings information.

4.3.2.1 Earnings Announcement and Audit Report Lag

Historically, audit report lag has been regarded as the most important determinant of the choice of an earnings announcement date (Givoly and Palmon 1982). Bamber et al. (1993) document that more than 70 percent of firms with fiscal years ending 1983 to 1985 waited until at least the annual report date to announce earnings. Using a sample period from 1988 to 1993, Schwartz and Soo (1996) report similar findings where more than 78 percent of firms announce their earnings on or after the annual report date.

While the earnings announcement is an important source of information for investors, it is a voluntary disclosure. There are no prescribed SEC requirements that mandate firms to issue an earnings announcement, stipulate the information that should be disclosed in an earnings announcement, or require that the information in an earnings announcement be audited by an independent auditor (Bochner and Blake 2008). Consequently, following various regulations that resulted in the delay in audit report dates (as discussed in Section 4.2), there is a significant decrease in the number of firms that choose to announce their earnings on or after the audit report date. Krishnan and Yang (2009) find that approximately 68 percent of firms made earnings announcement on or after the date of audit completion in 2001, but this proportion declined to 51 percent in 2003 and to 15 percent in 2006. Similarly, Bronson et al. (2011) report that this percentage fell from around 70 percent in the 2000 to 2001 period to around 20 percent in 2005.

Schroeder (2016) further documents that the percentage of firms waiting until on or after the audit report date to announce earnings has decreased to a low of 5 percent in 2011.

One key reason why firms might choose to announce earnings prior to audit completion is to ensure timeliness in earnings announcement and to avoid deviations from an expected earnings announcement date. Given the increasing delay in audit report dates (Krishnan and Yang 2009), if firms continue their practice of waiting until their audits were completed to announce earnings (Givoly and Palmon 1982), there would be a parallel delay in earnings announcement. Since the market reacts negatively to deviations from expected disclosure behaviours (e.g., Kross 1981; Bagnoli et al. 2002; Begley and Fischer 1998; Chambers and Penman 1984; Einhorn and Ziv 2008), firms have incentives to retain their historical earnings announcement date and announce earnings prior to audit completion, so as to provide a timely and consistent earnings announcement disclosure practice.

However, as detailed in Section 4.2, this trend may have implications for financial reporting quality (Bronson et al. 2011), stock market reaction (Marshall et al. 2017), auditor dismissals and audit pricing (Haislip et al. 2017), as well as auditor judgements (Bhaskar et al. 2017). Thus, firms that previously announced their earnings after audit completion face a trade-off between the market demand for timely information and possible negative consequences in financial reporting and audit quality if they choose to announce earnings prior to the audit report date.

4.3.3 Corporate Reputation

Corporate reputation is defined as "the observers' collective judgments of a corporation based on assessments of financial, social and environmental impacts

attributed to the corporation over time" (Barnett, Jermier, and Lafferty 2006). Wilson (1985) and Weigelt and Camerer (1988) find that firms with greater reputations highlight accountability, credibility, and trustworthiness, and develop these values into their cultures with the purpose of reflecting these values not only through formal policies and structures, but also through unwritten rules and traditions. Thus, even in the absence of formal contracts and external monitoring, reputation concerns affect the behavior of firms and individuals, such that they act in favor of long-term benefits rather than short-term interests (e.g., Masulis and Mobbs 2014; Reynolds and Francis 2001; Fang and Yasuda 2009; Carter et al. 1998; Jackson 2005; Fich and Shivdasani 2007; Cao et al. 2012, 2015).

Prior research examines the effect of corporate reputation on various aspects of the firm. For example, prior research examines how corporate reputation influences a firm's financial reporting and audit quality. Cao et al. (2012) provide evidence that firms with higher reputation are less likely to misstate their financial statements, indicating that reputation concerns motivate high reputation firms to maintain high quality financial reporting. High reputation firms also demand higher quality audits in order to protect their reputation and financial reporting quality. Furthermore, they find that stock price reactions to restatements that involve technical errors are less severe for high reputation firms, thus suggesting that positive reputational characteristics may shield high reputation firms from negative events. Burke et al. (2016) investigate the negative features of reputation. Using a measure of client reputation risk that quantifies negative media coverage on a firm's environmental, social and governance practices, they find that a client's reputation represents a key risk consideration for auditors during the risk assessment phrase. Specifically, their results indicate that a client's reputation risk has a positive association with audit fees and the likelihood of auditor resignation.

CHAPTER 4: Study 3 – The Impact of Corporate Reputation on the Timeliness of External Audit and Earnings Announcement

Studies that examine audit firms' reputation risk find that damaged auditor reputation results in financial losses to the auditor (Barton 2005), negative abnormal returns to their clients (Chaney and Philipich 2002; Krishnamurthy, Zhou, and Zhou 2006), and market-wide impairment of the assurance and insurance value of auditing (Doogar, Sougiannis, and Xie 2009). Barton (2005) concludes that firms that are more prominent in the capital markets are more concerned about engaging highly reputable auditors, so as to develop and uphold their own reputations in maintaining credible financial reporting. These studies highlight the negative consequences of reputation damage on perceived financial reporting and audit quality as well as financial statement credibility, thus emphasizing the importance of building and maintaining a good corporate reputation.

Prior research considers the impact of corporate reputation on stakeholder perceptions. For example, Filbeck and Preece (2003) examine whether a firm with a reputation of having a good work environment affects the market price of the firm and shareholder value. They conclude that the stock market values corporate concern for employees. Furthermore, prior research studies the association between corporate reputation and a firm's financing costs. Cao et al. (2015) report a negative relation between the cost of equity and corporate reputation, consistent with higher reputation reducing equity financing costs. Analytical research also suggests that a reputation of timely repayments allows borrowers to access lower debt financing costs (Bulow and Rogoff 1989; Diamond 1989, 1991; Eaton and Gersovitz 1981; Stiglitz and Weiss 1983).

Prior research in management and marketing provides considerable insights into the causes and effects of corporate reputation. The management literature documents that corporate layoffs and downsizing negatively impact corporate reputation (Flanagan and

O'Shaughnessy 2005; Love and Kraatz 2009). In addition, prior research finds that firms with relatively good reputations are better able to sustain superior profit outcomes over time (Roberts and Dowling 2002), and that investors are more willing to accept higher financial risk for the same levels of return for high reputation firms (Srivastava et al. 1997). Pfarrer et al. (2010) report that high reputation firms are less likely to announce positive earnings surprises, and that investors react more positively to earnings surprises of high reputation firms. The marketing literature investigates how corporate reputation is associated with the degree of customer loyalty. Nguyen and Leblanc (2001) find that customer satisfaction and service quality are positively related to value, and that value leads to a positive corporate image. In turn, customer satisfaction and corporate image impact customer loyalty. Further, Goldberg and Hartwick (1990) find that potential customers receive extreme advertising claims more favourably if the reputation of the advertising firm is more positive.

In summary, prior research highlights the importance of corporate reputation and demonstrates how it influences various aspects of the firm. Positive reputational attributes are found to be associated with higher financial reporting quality (Cao et al. 2012), more sustained superior financial performance (Roberts and Dowling 2002), greater market valuation (Srivastava et al. 1997), as well as lower financing costs (Cao et al. 2015). These attributes influence auditors' pricing, reporting and resignation decisions (Burke et al. 2016; Cao et al. 2012). I extend prior research by examining how reputation concerns affect auditor and firm behavior in enhancing the timeliness of external audit and earnings announcement.

4.4 Hypothesis Development

4.4.1 Corporate Reputation and the Timeliness of External Audit

Prior research examining the link between a client's economic importance and its auditor's reporting decisions is based on two competing theories: economic dependence theory and reputation protection theory (e.g., Chen et al. 2010; Li 2009). Under economic dependence theory, auditors are influenced by economically important clients, and thus are more likely to treat them more favourably (Hossain, Monroe, Wilson, and Jubb 2016). By contrast, reputation protection theory argues that auditors are concerned with protecting their reputation and reducing litigation risk, and thus are more likely to treat larger and more significant clients conservatively to avoid audit failures (Hunt and Lulseged 2007). Reynolds and Francis (2001) suggest that audit failures related to larger clients are even more damaging to an auditor's reputation because these clients involve larger fees, have higher visibility and attract greater scrutiny.

I extend both theories to the context of highly reputable client firms. I argue that auditors are motivated not only by financial incentives associated with economically important clients, but also by reputation incentives associated with highly reputable clients. Similar to economically important clients, highly reputable clients are important to auditors because of their prestige, prominence and visibility. Prior research finds that affiliations with high-status exchange partners signal the endorsement of a reputable and credible firm (Podolny 1993; Stuart et al. 1999), and affiliations with high-reputation customers are important in reputation-building (Reuber and Fischer 2005). In addition, studies show that the act of corporate name-dropping, where firms intentionally disclose their reputable customers as references, helps firms establish credibility, communicate competency, acquire new customers, and manage sales (Salminen and Möller 2004, 2006;

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Godes 2012; Kumar, Petersen, and Leone 2013). In the context of an audit firm, having brand name clients with established reputations not only signals the credibility of the auditor, but also strengthens the auditor's position and market share in the client's industry. Further, it provides the benefit of leveraging the client's brand reputation into increasing the auditor's professional reputation.

Using both theories, I examine the association between corporate reputation and external audit timeliness. Based on the concept of economic dependence theory, there is the possibility that high corporate reputation is negatively associated with audit report lag. This is because auditors are more likely to prioritize highly reputable clients and allocate more competent personnel to these clients, which should lead to timelier and more efficient auditing.

By contrast, reputation protection theory predicts that high corporate reputation is positively associated with audit report lag. This is because higher client reputation is likely to increase an auditor's business risk. Due to their prominence and visibility, highly reputable firms are prone to greater scrutiny from regulators and capital market participants, thus increasing their auditors' reputation and litigation risk.[48] As such, auditors are likely to be more conservative by expanding greater audit effort in the audits of highly prominent firms in order to protect their reputation and avoid litigation. Further, auditors may conduct more testing after year end, rather than during the interim period, so as to lower audit risk and avoid audit failure.[49] By expanding audit effort and moving more audit procedures to after year end, auditors trade off relevance and timeliness in

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[48] DeFond and Zhang (2014) define auditors' reputation risk as the risk that impairs auditors' ability to attract and retain clients, and auditors' litigation risk as the risk that litigation imposes financial penalties on auditors.

[49] Auditing standards suggest that reducing the amount of testing performed after year end increases audit risk (Arens, Elder, and Beasley 2012). Thus, auditors are likely to conduct more testing after year end to lower audit risk.

order to ensure greater reliability and accuracy (Knechel and Payne 2001; Ashton et al. 1987).

Given the competing arguments about the potential effect of corporate reputation on external audit timeliness, the first hypothesis is framed in the null form:

H3a: There is no association between corporate reputation and external audit timeliness.

4.4.2 Corporate Reputation and the Likelihood of Announcing Earnings After Audit Completion

Unlike 10-K filings, earnings announcements do not have to be audited. This provides an interesting setting to investigate how corporate reputation influences a firm's decision to announce earnings before or after completion of the audit.

There are competing arguments about the relation between corporate reputation and the timing of earnings announcements. On the one hand, high corporate reputation may be negatively associated with the likelihood of announcing earnings after audit completion for two reasons. First, the need for audit completeness at earnings announcement date is likely to be less crucial for high reputation firms. This is because the reputation effect relies on self-disciplining and induces actions that are in the interest of stakeholders, such as trustworthy and consistent financial reporting, even in the absence of official contracting and monitoring (Wilson 1985; Weigelt and Camerer 1988). Consistent with this notion, prior research finds that corporate reputation can reduce agency problems (Fama 1980; Schwartz et al. 2000; Stiglitz and Weiss 1983; Holmstrom 1982). Specifically, high reputation firms emphasize credibility, trust and consistency, and develop these values into their cultures, so that these values are practised

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even without formal contract or monitoring. The emphasis on credibility and trust underscores a firm's commitment to providing a reliable and truthful earnings announcement, even when the audit of earnings is not completed. In addition, the focus on consistency highlights a firm's commitment to providing consistent and timely delivery of high quality earnings disclosure. Given that a firm's reputation signals its ability and commitment to work for the benefits of stakeholders, high reputation firms are likely to have less need for audit completion before announcing their earnings.

Second, high reputation firms have greater incentives to provide timely and consistent earnings announcements to avoid negative market reaction. Following the increasing delay in audit report dates (Krishnan and Yang 2009), if firms continue their practice of waiting until their audits were completed to announce earnings, there would be a parallel delay in earnings announcements (Bamber et al. 1993; Givoly and Palmon 1982). Since the market reacts negatively to deviations from expected disclosure behavior (e.g., Einhorn and Ziv 2008; Kross 1981; Givoly and Palmon 1982; Bagnoli et al. 2002), high reputation firms have greater incentives to stick to their historical earnings announcement date and announce earnings prior to audit completion, as opposed to waiting until after audit completion, so as to avoid adverse market reaction. The incentive to maintain a reputation of providing timely and consistent earnings announcements is likely to be greater for higher reputation firms because they have more reputation capital, which is costly to rebuild (Reed and DeFillippi 1990; Dierickx and Cool 1989; Barney 1991). Based on the above arguments, high reputation firms would have a lower likelihood of announcing earnings after completion of the audit.

On the other hand, high corporate reputation may be positively associated with the likelihood of announcing earnings after audit completion. Due to greater media coverage

and public scrutiny, high reputation firms are likely to suffer greater reputational damage if information disclosed in the earnings announcement is subsequently revised in the 10-K filing, since such revision is an indication of poor financial reporting quality. Miller (2006) finds that the press is more likely to first identify the accounting problems of large firms and firms with more general press coverage. As such, high reputation firms may take steps to protect their reputation by relying on mechanisms that increase their confidence in the financial reporting process to reduce the incidence of earnings revision. External auditing is an example of such a mechanism. For example, Bronson et al. (2011) find a lower likelihood of earnings revision if earnings announcements are released after audit completion. Further, Marshall et al. (2017) find that earnings announcements after audit completion are associated with better financial reporting quality than those without. Based on these studies, high reputation firms are more likely to act conservatively by waiting until after audit completion to announce earnings, so as to reduce the likelihood of earnings revision and to avoid the resulting reputational damage.

Given the competing arguments on the impact of corporate reputation on the timing of earnings announcement, the second hypothesis is specified in the null form:

H3b: There is no association between corporate reputation and the likelihood of announcing earnings after audit completion.

4.5 Research Design

4.5.1 Empirical Models

To test my hypothesis on the association between corporate reputation and external audit timeliness (H3a), I estimate the following model:

$$LNAUDLAG = \beta_0 + \beta_1 REP + \beta_2 SIZE + \beta_3 LOSS + \beta_4 LEV + \beta_5 RESTATE + \beta_6 IC +$$

$$\beta_7 LNSEGMENT + \beta_8 EXTRA + \beta_9 MB + \beta_{10} RESTRUCTURE +$$

$$\beta_{11} MERGER + \beta_{12} DACC + \beta_{13} LNAGE + \beta_{14} LNFEE + \beta_{15} LNNAS +$$

$$\beta_{16} MODIFIED + \beta_{17} YE + \beta_{18} BIG4 + \beta_{19} ISP +$$

$$Year\ fixed\ effects + Industry/Firm\ fixed\ effects + \varepsilon \qquad (4.1)$$

I use two specifications to test H3a. The first specification is an OLS regression with robust standard errors adjusted for firm clustering, while the second specification is estimated with the inclusion of firm fixed effects to control for unobserved time-invariant firm characteristics.

To test my hypothesis on the association between corporate reputation and the likelihood of announcing earnings after audit completion (H3b), I estimate the following probit regression model:[50]

$$COMPLETE = \beta_0 + \beta_1 REP + \beta_2 SIZE + \beta_3 LNVOLUME + \beta_4 NEWS +$$

$$\beta_5 ANALYST + \beta_6 LOSS + \beta_7 LEV + \beta_8 RESTATE + \beta_9 IC +$$

$$\beta_{10} LNSEGMENT + \beta_{11} EXTRA + \beta_{12} MB + \beta_{13} RESTRUCTURE +$$

$$\beta_{14} MERGER + \beta_{15} DACC + \beta_{16} LNAGE + \beta_{17} LNFEE + \beta_{18} LNNAS +$$

$$\beta_{19} LNAUDLAG + \beta_{20} MODIFIED + \beta_{21} YE + \beta_{22} BIG4 + \beta_{23} ISP +$$

$$Year\ fixed\ effects + Idustry\ fixed\ effects + \varepsilon \qquad (4.2)$$

Control variables are identified based on prior research on audit report lag and earnings announcement lag (e.g., Bamber et al. 1993; Knechel and Sharma 2012; Krishnan and Yang 2009; Bronson et al. 2011). Importantly, I control for audit report lag

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[50] I do not use a fixed effects logistic regression model to test H3b because there is a lack of variation in my dependent variable (*COMPLETE*) within each firm, which leads to dropping more than half of the observations in my sample.

(*LNAUDLAG*) in Model 2 because a longer audit delay may result in a lower likelihood of announcing earnings after completion of the audit. All variables are defined in Appendix 3 and discussed below.

4.5.2 Measures of Corporate Reputation

My test variable is corporate reputation (*REP*). I use four measures of corporate reputation following Cao et al. (2012) and Erkens and Bonner (2013). First, I use the corporate reputation scores (*REP_SCORE*) from the MA List. The scores are widely adopted as a measure of corporate reputation in the management, finance, marketing, psychology and accounting literatures.[51] Studies find that it appropriately represents the construct of "reputation" (Fombrun and Shanley 1990; Roberts and Dowling 2002).[52]

Second, I use an indicator variable that equals one if the firm appears on the MA List in a given year, and zero otherwise (*REP_LIST*). Third, I use the number of sample years to date during which the firm appears on the MA List (*REP_YEARS*). *REP_YEARS* increases every time the firm is selected into the list, thus reflecting the cumulative nature and gradual change in corporate reputation.

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[51] See, for example, Anderson and Smith (2006), Brooks, Highhouse, Russell, and Mohr (2003), Chen, Ganesan, and Liu (2009), Cho and Pucik (2005), Flanagan and O'Shaughnessy (2005), Love and Kraatz (2009), Kalaignanam, Shankar, and Varadarajan (2007), King (2008), Luo and Bhattacharya (2006), Luo and Donthu (2006), Mishina, Dykes, Block, and Pollock (2010), Pfarrer et al. (2010), Philippe and Durand (2011), Still and Strang (2009), and Surroca, Tribó, and Waddock (2010). Recent accounting studies that adopt the corporate reputation scores include Cao et al. (2012, 2015), and Erkens and Bonner (2013).

[52] The corporate reputation scores are evaluated by approximately 15,600 senior executives, outside directors, and financial analysts based on nine attributes: (1) ability to attract and retain talented people; (2) quality of management; (3) social responsibility to the community and the environment; (4) innovativeness; (5) quality of products or services; (6) wise use of corporate assets; (7) financial soundness; (8) long-term investment value; and (9) effectiveness in doing business globally. The overall corporate reputation score is an average of the attribute scores. Each year, around 300 firms in 54 industries are identified as *Fortune's Most Admired Companies*, and their reputation scores are published in the Fortune magazine. Thus, presence on the MA List and corporate reputation scores are indicators of higher reputation.

Finally, following Erkens and Bonner (2013), I construct an aggregate firm reputation measure (*REP_STATUS*) that comprises three common proxies for a firm's reputation.[53] The first proxy is a firm's market capitalization (*MKVALT*), since larger firms provide greater visibility and prominence, and they are better linked to other firms via various partnerships and affiliations (e.g., Masulis and Mobbs 2014; Fombrun and Shanley 1990; Greve 2005; Fahlenbrach et al. 2010b). The second proxy is the number of firms to which a focal firm is connected through common board members (*INTERLOCK*). Such connections represent an important source of reputation (e.g., Greve 2005). The third proxy is a firm's corporate reputation scores obtained from the MA List (*REP_SCORE*) (e.g., Cao 2012, 2015). Following Erkens and Bonner (2013), I construct *REP_STATUS* using a principal components factor analysis that extracts the common variation among the three proxies. I first standardize the proxies to have a mean of zero and standard deviation of one. Consistent with Erkens and Bonner (2013), the factor analysis identified one factor with an eigenvalue greater than one (1.74). The principal component loadings for each of my three proxies are 0.61, 0.52, and 0.60 respectively. Next, I use the standardized scoring coefficients (all positive) for this factor to compute *REP_STATUS*.

4.5.3 Dependent Variables

To test H3a, I use the natural logarithm of audit report lag (*LNAUDLAG*) as my dependent variable. Audit report lag is defined as the number of days between the fiscal year end date and the audit report date. Several studies use audit report lag as a proxy of

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[53] Erkens and Bonner (2013) use the term "firm status". I regard "firm status" as "firm reputation" because both terms represent a similar concept.

external audit timeliness (e.g., Abbott et al. 2012; Ettredge et al. 2006; Knechel and Sharma 2012).

To test H3b, I use the likelihood of announcing earnings after audit completion (*COMPLETE*) as my dependent variable. Following prior research (Bronson et al. 2011; Schroeder 2016), I regard the audit report date as the date of audit completion.[54] As such, I measure audit completeness of the earnings announcement by defining *COMPLETE* as one for firms that release their earnings announcement on or after the audit report date, and zero otherwise.

4.5.4 Control Variables

Following prior studies on external audit timeliness (e.g., Abbott et al. 2012; Ettredge et al. 2006; Knechel and Sharma 2012), I include a vector of firm characteristics that can affect a firm's audit report lag in Model 4.1. Specifically, I control for firm size (*SIZE*), firm performance (*LOSS*), leverage (*LEV*), financial reporting quality (*RESTATE* and *DACC*), firm complexity (*EXTRA* and *LNSEGMENT*), internal control weaknesses (*IC*), firm growth (*MB*), mergers and restructuring (*MERGER* and *RESTRUCTURE*), and firm age (*LNAGE*). I expect negative coefficients on *SIZE*, *MB* and *LNAGE*, since larger, higher growth, and older firms experience shorter audit report lag (Ashton et al. 1989; Carslaw and Kaplan 1991). I expect positive coefficients on all other variables, since firms with losses, high leverage, poor financial reporting quality, and high complexity have longer audit report lag (Ashton et al. 1987, 1989; Bamber et al. 1993; Carslaw and Kaplan 1991; Kinney and McDaniel 1993; Ettredge et al. 2006).

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[54] This is also consistent with AU Section 530, paragraph 1, which states "The auditor should date the audit report no earlier than the date on which the auditor has obtained sufficient appropriate evidence to support the auditor's opinion" (PCAOB 1972).

I also control for audit characteristics. I include the natural logarithm of audit fee (*LNFEE*) as a proxy for audit effort (O'Keefe, Simunic, and Stein 1994) and audit quality (Carcello, Hermanson, Neal, and Riley 2002), and the natural logarithm of non-audit services fee (*LNNAS*) (Knechel and Payne 2001; Knechel and Sharma 2012). Further, I control for capacity constraint (*YE*), audit opinion (*MODIFIED*), auditor type (*BIG4*), and auditor specialization (*ISP*).[55] I expect negative coefficients on *BIG4* and *ISP*, since Big 4 and industry specialist auditors provide timelier audits (Schwartz and Soo 1996; Whitworth and Lambert 2014). I expect positive coefficients on all other variables, since busy audit period and the issuance of a modified opinion are associated with longer audit report lag (Behn et al. 2006; Whittred 1980). I include year and industry (firm) fixed effects to control for any common trend in the reporting timeliness over time and between industries (firms). The indicator variables for industry fixed effects are based on two-digit SIC codes.

As with external audit timeliness, the timing of earnings announcement is also influenced by firm size, distress, as well as firm and audit complexity. Therefore, I include all variables described above in Model 4.2. Further, I include the following additional control variables: (1) share volume (*LNVOLUME*) and the number of analysts following (*ANALYST*) as additional proxies for a firm's information environment (Bronson et al. 2011);[56] (2) the difference between current and prior year earnings per share (*NEWS*) to capture management's incentive to provide timely information (Krishnan and Yang

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[55] I use the portfolio approach to determine auditor industry specialization (Kwon 1996; Krishnan 2003; Dunn and Mayhew 2004; Knechel, Naiker, and Pacheco 2007; Numan and Willekens 2012; Audousset-Coulier, Jeny, and Jiang 2016). Specifically, I measure auditor specialization in an industry based on the proportion of an auditor's audit fees earned from the industry relative to the auditor's total fees from all industries. I code an audit firm's top three portfolio industry shares as the auditor's speciality industries and the remaining industries as non-specialist industries.

[56] Following Kim et al. (2011) and Schroeder (2016), I assign zero to the number of analyst following if the firm is not covered by IBES.

2009); and (3) audit report lag (*LNAUDLAG*), because a delayed audit may affect the likelihood of a firm announcing earnings prior to completion of the audit (Krishnan and Yang 2009; Bronson et al. 2011). I expect negative coefficients on these variables.

4.5.5 Sample and Data Sources

The sample comprises *Fortune 1000* firms in the U.S. from 2007 to 2016. The sample period starts after the introduction of the second accelerated 10-K filing deadline, which became effective from 15 December 2006 (SEC 2005).[57] My sample is based on *Fortune 1000* firms because these firms are eligible for inclusion on the MA List.[58] Further, the primary interest of this study is to examine the effects of corporate reputation on larger and more prominent firms. The subject of timeliness is expected to be of greater relevance to larger firms, since they are most likely to be large accelerated filers. Reputation data is obtained from the MA List.[59] Financial information is obtained from Compustat, audit information is obtained from Audit Analytics, while analyst information is obtained from the International Brokers' Estimate System (IBES).

Table 4.1 presents the sample selection procedure. The initial sample consists of 10,000 firm-year observations over the ten-year period from 2007 to 2016. I omit observations that are not identifiable in Compustat or Audit Analytics (number of firm-years = 1,760), and observations lacking the data necessary to calculate the variables in the models utilised in this study (number of firm-years = 623). Consistent with prior

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[57] Years 2007 and 2008 are the financial crisis period. As part of my sensitivity analysis, I exclude years 2007 and 2008, and reperform my main tests. I obtain similar results after excluding years 2007 and 2008.

[58] While *Fortune's Global 500* companies with revenues of $10 billion or more are also eligible to be on the MA List, this study does not include non-U.S. companies because the audit and litigation environment differ between U.S. and non-U.S. companies.

[59] The MA List is published in the month of March every year, as such the corporate reputation scores reflect firms' reputation in the previous year. Following Cao et al. (2012), I align the data accordingly by adopting the corporate reputation scores in the year rated rather than in the year of publication.

research, I exclude firms from the financial (two-digit SIC codes 60-69; number of firm-years = 1,106) and utilities industries (two-digit SIC code 49; number of firm-years = 566). Due to the highly regulated nature of these industries, firms in these industries have unique financial reporting and audit issues, such that the estimation of their audit report lag and earnings announcement lag may be structurally different from firms in other industries. Further, I exclude firms that changed their auditor because audit report lag could be different for these firms (number of firm-years = 122). Finally, I exclude accelerated filers (number of firm-years = 265) and non-accelerated filers (number of firm-years = 67), as these firms have different 10-K filing deadline.[60] After incorporating these adjustments, the final sample consists of 5,501 firm-year observations.

Table 4.1: Sample Selection (Sample Period: 2007 – 2016)

	No. of Firm-Years
Initial sample	10,000
Less: Unidentifiable observations in Compustat or Audit Analytics	(1,760)
Less: Observations with missing information	(623)
Less: Observations from the financial industries	(1,106)
Less: Observations from the utilities industries	(566)
Less: Observations with auditor change	(112)
Less: Observations who are accelerated filers	(265)
Less: Observations who are non-accelerated filers	(67)
Final sample	5,501

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[60] As part of my sensitivity tests, I include both accelerated filers and non-accelerated filers in my analysis, and control for a firm's filer status in my regression models. My results remain qualitatively unchanged.

4.6   Results

4.6.1 Descriptive Statistics

Table 4.2 presents the descriptive statistics for the variables used in the primary analyses, while Figure 4.1 illustrates the mean (median) days from the firm's fiscal year end to the earnings announcement, and the filing of the annual report with the SEC. All continuous variables are winsorized at the 1st and 99th percentiles to remove the influence of outlier observations. The mean (median) audit report lag (*AUDLAG*) is 53 (55) days.[61] On average, sample firms issue their earnings announcements 38 (median of 36) days after the fiscal year end date, with 15 percent of sample observations (825 firm-years) waiting until on or after the audit report date to release earnings (*COMPLETE*).[62] The mean (median) corporate reputation score (*REP_SCORE*) is 1.98 (0.00).[63] 30 percent of the sample observations (1,650 firm-years) appear on the MA List (*REP_LIST*), and the mean (median) sample years to date during which the firm appear on the list

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[61] Prior research using less recent samples reports longer mean audit report lags. For example, Whitworth and Lambert (2014) report mean audit report lag of 65 days across 2003 to 2008. Similarly, Mitra et al. (2015) report mean audit report lag of 61 days for period 2006 to 2011. The lower average audit report lag in this study likely reflects the differences in size and profitability of the sample firms (i.e., *Fortune 1000* versus non-*Fortune 1000* firms). Specifically, because my sample consists of only large accelerated filers, it is reasonable to observe a lower mean audit report lag in my study.

[62] Schroeder (2016) reports mean (median) earnings announcement lags of 45 (44) days, with 28 percent of the sample observation waiting until on or after audit completion to announce earnings. The lower mean amounts reported in my study likely reflect the differences in size and profitability of the sample firms. In addition, the lower means observed are consistent with prior research that documents a declining trend in earnings announcement lag and the percentage of firms waiting until on or after the audit report date to release their earnings announcement (Bronson et al. 2011; Schroeder 2016; Krishnan and Yang 2009).

[63] Corporate reputation scores for firms not included in the MA List are set to zero; as such the average score for the full sample is low. The mean (median) corporate reputation score for sample observations that are included in the MA List is 6.64 (6.63). This is comparable to the mean (median) corporate reputation score reported in Cao et al. (2012), which is 6.46 (6.51).

(*REP_YEARS*) is 1.62 (0.00).[64] The mean (median) of my aggregate firm reputation measure (*REP_STATUS*) is 0.00 (-0.42).[65]

Table 4.2: Descriptive Statistics (Number of Firm-Years = 5,501)

Panel A: Descriptive Statistics for All Firms

Variables	Mean/ Frequency	Standard Deviation	25th Percentile	Median	75th Percentile
AUDLAG (days)	52.94	7.26	49.00	55.00	58.00
REP_SCORE	1.98	3.06	0.00	0.00	5.97
REP_YEARS	1.62	2.50	0.00	0.00	2.00
REP_STATUS	-0.00	1.30	-0.94	-0.42	0.67
AT ($millions)	16,719.24	33,595.73	2,815.96	5,661.47	14,234.10
LEV	0.25	0.17	0.13	0.22	0.34
SEGMENT	2.91	1.70	1.00	3.00	4.00
MB	3.59	6.58	1.59	2.61	4.30
DACC	0.04	0.04	0.01	0.03	0.05
AGE (years)	31.61	16.28	17.00	29.00	48.00
FEE ($thousands)	5,792.25	6,270.98	2,110.83	3,705.00	6,560.00
NAS ($thousands)	1,621.69	2,731.83	233.32	689.00	1,751.00
VOLUME	2.84	1.88	1.61	2.35	3.48
NEWS	0.17	2.19	-0.22	0.09	0.35
ANALYST	17.26	11.69	9.00	17.00	25.00
COMPLETE	0.15	-	-	-	-
REP_LIST	0.30	-	-	-	-
LOSS	0.11	-	-	-	-
RESTATE	0.12	-	-	-	-
IC	0.02	-	-	-	-
EXTRA	0.26	-	-	-	-
RESTRUCTURE	0.51	-	-	-	-
MERGER	0.26	-	-	-	-
MODIFIED	0.30	-	-	-	-
YE	0.76	-	-	-	-
BIG4	0.98	-	-	-	-
ISP	0.12	-	-	-	-

(continued on next page)

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[64] Mean (median) *REP_YEARS* for sample observations that are included in the MA List is 4.31 (4.00) years.

[65] This is consistent with Erkens and Bonner (2013), who report a mean (median) of -0.02 (-0.39) for their firm status measure.

Table 4.2 (Continued)

Panel B: Descriptive Statistics by Industry

	Agriculture, Forestry, Fishing	Mining	Construction	Manufacturing	Transportation	Wholesale Trade	Retail Trade	Services	Public Admin
Variables					**Mean**				
AUDLAG (days)	56.44	54.59	53.87	52.58	51.47	54.75	53.78	52.47	55.45
REP_SCORE	3.12	1.02	2.41	1.77	2.67	2.14	1.91	2.40	4.45
REP_YEARS	1.11	0.97	2.04	1.43	2.26	1.79	1.63	1.87	3.51
REP_STATUS	0.61	-0.19	-0.29	0.02	0.31	-0.32	-0.17	0.03	1.90
COMPLETE	0.00	0.17	0.35	0.13	0.16	0.19	0.13	0.18	0.57
REP_LIST	0.44	0.15	0.37	0.26	0.40	0.33	0.29	0.37	0.64
Number of observations	9	319	134	2,671	447	353	672	849	47

Panel C: Descriptive Statistics by Year

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Variables					**Mean**					
AUDLAG (days)	54.64	54.05	54.03	53.71	53.43	52.77	52.51	52.09	51.88	51.30
REP_SCORE	2.61	2.27	1.95	1.97	2.04	1.73	1.88	1.80	1.84	1.91
REP_YEARS	0.38	0.70	0.99	1.22	1.50	1.71	1.94	2.10	2.31	2.64
REP_STATUS	0.25	0.03	-0.05	-0.05	-0.04	-0.10	0.00	-0.01	-0.03	0.00
COMPLETE	0.13	0.14	0.14	0.12	0.13	0.16	0.15	0.16	0.18	0.20
REP_LIST	0.38	0.34	0.30	0.30	0.31	0.27	0.28	0.27	0.28	0.29
Number of observations	455	489	493	525	549	562	573	601	632	622

See Appendix 3 for variable definitions.

Figure 4.1: Average Timing of Year End Events (Number of Firm-Years = 5,501)
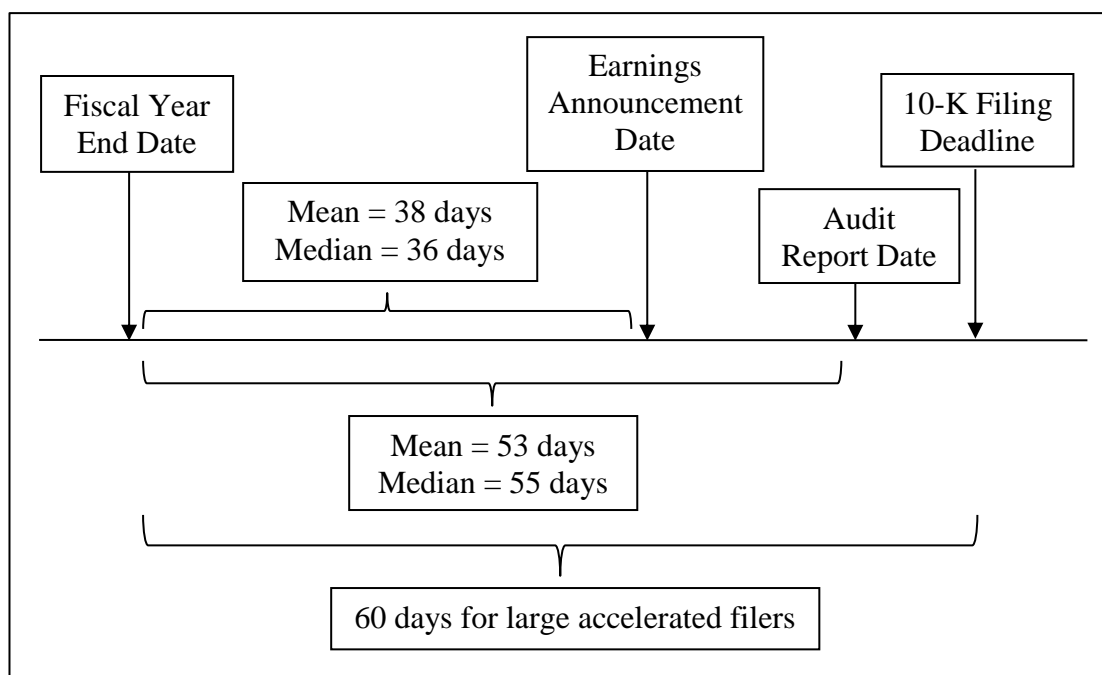
Table 4.3 classifies the variables in the primary analyses by high versus low corporate reputation. Firms are classified in the high reputation group if they appear on the MA List (*REP_LIST* = 1), and in the low reputation group otherwise (*REP_LIST* = 0). Tests of differences between the two groups using *t*-tests and Chi-square tests are reported. High corporate reputation firms have significantly shorter audit report lag and are less likely to wait until audit completion before announcing their earnings. In addition, high corporate reputation firms are larger, older, more complex, and less likely to experience losses, restatements, and internal control weaknesses. They have higher growth, lower debt levels and better financial reporting quality. Firms with low corporate reputation are covered by fewer analysts and are more likely to have a December or January year end. They also pay lower audit and non-audit services fees relative to firms with high corporate reputation.

Table 4.3: Descriptive Statistics by Corporate Reputation

Variables	High Reputation (n = 1,642)		Low Reputation (n = 3,859)		t-value/ Chi-square [a]
	Mean/ Frequency	Median	Mean/ Frequency	Median	
AUDLAG (days)	50.60	53.00	53.93	55.00	15.82***[b]
REP_SCORE	6.64	6.63	0.00	0.00	-610.00***
REP_YEARS	4.31	4.00	0.47	0.00	-73.60***
REP_STATUS	1.52	1.22	-0.65	-0.74	-88.50***
AT ($millions)	35,883.35	15,469.50	8,564.94	4,271.70	-40.15***[b]
LEV	0.22	0.20	0.25	0.23	6.30***
SEGMENT	3.36	3.00	2.72	2.00	-10.95***[b]
MB	4.16	3.06	3.35	2.43	-4.21***
DACC	0.03	0.02	0.04	0.03	5.75***
AGE (years)	36.31	40.00	29.61	25.00	-13.87***[b]
FEE ($thousands)	9,492.66	6,211.95	4,217.74	3,083.28	-30.57***[b]
NAS ($thousands)	2,864.57	1,410.00	1,092.85	500.00	-17.05***[b]
VOLUME	2.46	2.06	3.00	2.50	9.67***[b]
NEWS	0.18	0.09	0.17	0.09	-0.13
ANALYST	22.90	23.00	14.86	14.00	-24.58***
COMPLETE	0.11	-	0.17	-	31.02***
LOSS	0.05	-	0.14	-	93.09***
RESTATE	0.08	-	0.13	-	30.27***
IC	0.01	-	0.02	-	7.81***
EXTRA	0.28	-	0.24	-	7.79***
RESTRUCTURE	0.51	-	0.50	-	0.34
MERGER	0.30	-	0.24	-	24.53***
MODIFIED	0.32	-	0.28	-	8.49***
YE	0.73	-	0.77	-	7.09***
BIG4	0.99	-	0.98	-	9.57***
ISP	0.10	-	0.14	-	15.94***

*, **, *** represent two-tailed significance at 10 percent, 5 percent, and 1 percent levels, respectively.

[a] t-statistics are reported for continuous variables, and Chi-square statistics for dummy variables. The Wilcoxon Z and median tests produce identical results.

[b] t-tests are based on natural logarithm transformed values.

See Appendix 3 for variable definitions.

Table 4.4 presents the correlation coefficients. Proxies of corporate reputation (*REP_SCORE, REP_LIST*, *REP_YEARS* and *REP_STATUS*) have significantly negative correlations with the natural logarithm of audit report lag (*LNAUDLAG*) and the likelihood of audit completion prior to earnings announcements (*COMPLETE*). Most correlations are below 0.80. In addition, the highest VIF is less than 5, suggesting that the influence of multicollinearity is not a significant concern.

4.6.2 Empirical Results

4.6.2.1 Test of H3a

I begin by examining the effect of corporate reputation on external audit timeliness (H3a). I present my results using an OLS regression with robust standard errors adjusted for firm clustering as well as a firm fixed effects regression to control for unobserved time-invariant firm characteristics. Table 4.5, Columns 1 to 4 report the OLS results for Model 4.1 using *REP_SCORE*, *REP_LIST*, *REP_YEARS*, and *REP_STATUS* as proxies of corporate reputation. The dependent variable is *LNAUDLAG*. The coefficients on corporate reputation are significant and negative (*REP_SCORE*, *REP_LIST, REP_YEARS* and *REP_STATUS*: $p < 0.01$). The adjusted R^2 of 24 percent indicates good model fit. Table 4.5, Columns 5 to 8 present the results with the inclusion of firm fixed effects. Coefficients on corporate reputation remain significant and negative (*REP_SCORE*, *REP_LIST* and *REP_STATUS*: $p < 0.01$; *REP_YEARS*: $p < 0.10$). The adjusted R^2 of 14 percent indicates good model fit. My results suggest that firms with high corporate reputation are associated with shorter audit report lag.

Table 4.4: Correlation Matrix

Panel A: Correlations for Variables *LNAUDLAG* (1) to *NEWS* (14)

		1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	*LNAUDLAG*		-0.21	-0.21	-0.25	-0.22	0.03	0.01	-0.15	0.04	-0.10	-0.16	-0.13	0.02	-0.05
2	*REP_SCORE*	-0.22		0.76	0.75	0.47	-0.09	0.17	0.15	-0.06	0.20	0.39	0.34	-0.16	0.01
3	*REP_YEARS*	-0.25	0.71		0.68	0.51	-0.03	0.16	0.13	-0.05	0.26	0.38	0.35	-0.13	0.00
4	*REP_STATUS*	-0.27	0.79	0.65		0.66	-0.00	0.20	0.18	-0.07	0.27	0.58	0.48	-0.14	0.02
5	*SIZE*	-0.24	0.49	0.50	0.75		0.16	0.20	0.03	-0.07	0.29	0.72	0.52	-0.10	-0.03
6	*LEV*	0.05	-0.09	-0.02	-0.06	0.09		0.01	-0.04	-0.02	-0.06	0.07	0.03	0.00	-0.03
7	*LNSEGMENT*	0.03	0.16	0.16	0.22	0.21	-0.01		-0.05	-0.03	0.26	0.34	0.25	-0.16	-0.03
8	*MB*	-0.08	0.06	0.07	0.09	0.02	-0.03	-0.03		-0.05	0.02	0.04	0.07	-0.20	0.13
9	*DACC*	0.04	-0.08	-0.07	-0.08	-0.07	0.01	-0.03	0.04		-0.11	-0.07	-0.06	0.17	-0.01
10	*LNAGE*	-0.08	0.19	0.25	0.26	0.28	-0.12	0.24	-0.00	-0.11		0.34	0.27	-0.14	-0.02
11	*LNFEE*	-0.16	0.40	0.41	0.64	0.76	0.04	0.35	0.03	-0.07	0.31		0.68	-0.18	-0.05
12	*LNNAS*	-0.11	0.23	0.24	0.36	0.40	-0.00	0.17	0.03	-0.09	0.22	0.54		-0.20	-0.04
13	*LNVOLUME*	-0.00	-0.14	-0.18	-0.22	-0.14	0.02	-0.16	-0.07	0.18	-0.08	-0.19	-0.09		-0.01
14	*NEWS*	-0.07	0.00	0.01	0.01	-0.01	-0.04	-0.02	0.03	-0.10	-0.02	-0.02	-0.00	-0.04	
15	*ANALYST*	-0.27	0.33	0.37	0.42	0.46	-0.10	-0.06	0.09	-0.00	0.05	0.23	0.12	0.12	0.02
16	*COMPLETE*	-0.08	-0.07	-0.08	-0.10	-0.05	0.09	-0.00	-0.05	0.03	-0.15	0.00	-0.02	-0.07	0.02
17	*REP_LIST*	-0.21	0.99	0.70	0.77	0.48	-0.08	0.15	0.06	-0.08	0.18	0.38	0.22	-0.13	0.00
18	*LOSS*	0.10	-0.13	-0.11	-0.10	0.02	0.19	0.01	-0.06	0.23	-0.04	0.05	-0.02	0.23	-0.41
19	*RESTATE*	0.09	-0.08	-0.07	-0.09	-0.06	0.03	0.01	-0.03	0.04	0.01	-0.01	0.03	0.04	-0.00
20	*IC*	0.09	-0.04	-0.02	-0.04	-0.02	0.04	-0.01	0.00	0.03	0.00	0.05	0.01	-0.01	-0.02
21	*EXTRA*	0.02	0.04	0.02	0.06	0.08	-0.00	0.10	-0.04	0.04	0.07	0.10	0.05	-0.04	0.06
22	*RESTRUCTURE*	-0.06	0.00	0.06	0.08	0.11	0.07	0.13	-0.01	-0.02	0.14	0.31	0.23	-0.01	-0.04
23	*MERGER*	-0.01	0.07	0.04	0.13	0.13	-0.01	0.07	-0.02	-0.05	0.01	0.14	0.12	-0.09	-0.01
24	*MODIFIED*	0.09	0.05	-0.15	0.06	0.04	-0.04	0.03	-0.03	0.07	-0.03	0.09	0.05	0.10	-0.06
25	*YE*	0.09	-0.04	-0.03	0.01	0.07	0.07	-0.01	0.02	0.01	-0.05	0.03	-0.04	0.05	-0.00
26	*BIG4*	-0.09	0.04	0.05	0.07	0.06	0.01	-0.02	0.03	-0.00	0.06	0.09	0.15	0.06	0.02
27	*ISP*	0.05	-0.06	-0.04	-0.12	-0.16	0.02	-0.05	-0.02	0.02	-0.04	-0.25	-0.14	0.06	0.03

Panel B: Correlations for Variables *ANALYST* (15) to *ISP* (27)

		15	16	17	18	19	20	21	22	23	24	25	26	27
1	*LNAUDLAG*	**-0.22**	**-0.05**	**-0.19**	**0.10**	**0.09**	**0.10**	0.02	**-0.07**	0.00	**0.09**	**0.10**	**-0.10**	**0.07**
2	*REP_SCORE*	**0.34**	**-0.07**	**0.98**	**-0.14**	**-0.08**	**-0.04**	**0.05**	0.00	**0.07**	**0.05**	**-0.04**	**0.04**	**-0.07**
3	*REP_YEARS*	**0.39**	**-0.11**	**0.77**	**-0.11**	**-0.07**	**-0.03**	**0.03**	**0.06**	**0.04**	**-0.10**	**-0.03**	**0.07**	-0.01
4	*REP_STATUS*	**0.42**	**-0.10**	**0.75**	**-0.08**	**-0.07**	**-0.04**	**0.07**	**0.13**	**0.10**	**0.07**	0.00	**0.09**	**-0.12**
5	*SIZE*	**0.47**	**-0.04**	**0.46**	**0.04**	**-0.05**	-0.02	**0.08**	**0.12**	**0.12**	**0.04**	**0.06**	**0.06**	**-0.16**
6	*LEV*	**-0.08**	**0.05**	**-0.07**	**0.18**	**0.04**	**0.04**	0.01	**0.09**	-0.00	**-0.04**	**0.09**	0.01	0.01
7	*LNSEGMENT*	**-0.04**	-0.00	**0.15**	0.02	0.01	-0.01	**0.10**	**0.12**	**0.07**	**0.03**	-0.00	-0.02	**-0.05**
8	*MB*	**0.23**	**-0.09**	**0.14**	**-0.25**	**-0.09**	**-0.04**	**-0.05**	**-0.04**	0.03	**-0.07**	-0.02	**0.05**	-0.03
9	*DACC*	-0.02	**0.03**	**-0.06**	**0.18**	0.02	0.02	**0.04**	**-0.04**	**-0.04**	**0.06**	0.02	0.00	**0.03**
10	*LNAGE*	**0.05**	**-0.13**	**0.19**	**-0.04**	0.00	-0.00	**0.07**	**0.16**	0.01	**-0.06**	0.02	0.00	**0.03**
11	*LNFEE*	**0.22**	0.01	**0.37**	**0.07**	-0.01	**0.06**	**0.10**	**0.33**	**0.13**	**0.09**	**0.03**	**0.09**	**-0.25**
12	*LNNAS*	**0.16**	**-0.03**	**0.32**	**-0.03**	0.01	0.02	**0.08**	**0.27**	**0.15**	**0.05**	0.00	**0.13**	**-0.19**
13	*LNVOLUME*	**0.10**	**-0.03**	**-0.14**	**0.23**	**0.03**	-0.00	**-0.05**	-0.02	**-0.10**	**0.10**	**0.05**	**0.04**	**0.07**
14	*NEWS*	0.02	0.02	0.00	**-0.29**	-0.02	0.00	**0.07**	**-0.05**	-0.02	**-0.06**	-0.00	0.03	**0.03**
15	*ANALYST*		**-0.15**	**0.32**	**-0.06**	**-0.10**	**-0.05**	**-0.03**	**-0.05**	**0.08**	**-0.09**	0.01	**0.07**	**-0.05**
16	*COMPLETE*	**-0.14**		**-0.08**	**0.06**	-0.00	**0.03**	0.01	-0.01	-0.03	-0.02	0.01	**-0.13**	-0.02
17	*REP_LIST*	**0.31**	**-0.08**		**-0.13**	**-0.07**	**-0.04**	**0.04**	0.01	**0.07**	**0.04**	**-0.04**	**0.04**	**-0.05**
18	*LOSS*	**-0.05**	**0.06**	**-0.13**		**0.05**	**0.07**	**-0.06**	**0.12**	-0.074	**0.06**	**0.04**	-0.02	**-0.05**
19	*RESTATE*	**-0.10**	-0.00	**-0.07**	**0.05**		**0.16**	0.02	**0.03**	**-0.03**	0.00	**0.03**	0.00	0.02
20	*IC*	**-0.04**	**0.03**	**-0.04**	**0.07**	**0.16**		-0.00	0.03	-0.01	0.02	-0.01	-0.00	0.00
21	*EXTRA*	**-0.03**	0.01	**0.04**	**-0.06**	0.02	-0.00		0.00	0.02	**0.06**	0.01	0.02	-0.02
22	*RESTRUCTURE*	**-0.05**	-0.01	0.01	**0.12**	**0.03**	0.03	0.00		**0.04**	**0.06**	**-0.05**	**0.05**	**-0.10**
23	*MERGER*	**0.08**	-0.03	**0.07**	-0.04	-0.03	-0.01	0.02	**0.04**		**0.06**	0.03	0.00	**-0.05**
24	*MODIFIED*	**-0.09**	-0.02	**0.04**	**0.06**	0.00	0.02	**0.06**	**0.06**	**0.06**		-0.02	0.01	**-0.06**
25	*YE*	-0.00	0.01	**-0.04**	**0.04**	**0.03**	-0.01	0.01	**-0.05**	0.03	-0.02		0.01	**0.09**
26	*BIG4*	**0.06**	**-0.13**	**0.04**	-0.02	0.00	-0.00	0.02	**0.05**	0.00	0.01	0.01		**0.05**
27	*ISP*	**-0.05**	-0.02	**-0.05**	**-0.05**	0.02	0.00	-0.02	**-0.10**	**-0.05**	**-0.06**	**0.09**	**0.05**	

Pearson (Spearman) correlations are reported below (above) the diagonal.
Correlations significant at $p < 0.05$ are in bold.

Table 4.5: Effect of Corporate Reputation on External Audit Timeliness

		Dependent variable = *LNAUDLAG*							
		OLS Regression				Firm Fixed Effects Regression			
		(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
Variables	**Predicted Sign**	**Coefficient** (*t*-statistic)	**Coefficient** (*t*-statistic)	**Coefficient** (*t*-statistic)	**Coefficient** (*t*-statistic)	**Coefficient** (*t*-statistic)	**Coefficient** (*t*-statistic)	**Coefficient** (*t*-statistic)	**Coefficient** (*t*-statistic)
REP_SCORE	?	-0.006*** (-3.93)				-0.003*** (-3.49)			
REP_LIST	?		-0.034*** (-3.53)				-0.015*** (-3.05)		
REP_YEARS	?			-0.007*** (-3.20)				-0.003* (-1.67)	
REP_STATUS	?				-0.021*** (-3.88)				-0.013*** (-3.52)
SIZE	-	-0.036*** (-4.86)	-0.037*** (-4.96)	-0.037*** (-4.88)	-0.028*** (-4.02)	-0.023** (-2.51)	-0.024** (-2.54)	-0.024*** (-2.61)	-0.020** (-2.21)
LOSS	+	0.030*** (3.93)	0.031*** (4.03)	0.031*** (4.06)	0.029*** (3.90)	0.016*** (3.15)	0.016*** (3.17)	0.016*** (3.23)	0.016*** (3.18)
LEV	+	0.067** (2.25)	0.069** (2.30)	0.070** (2.30)	0.063** (2.12)	-0.003 (-0.14)	-0.003 (-0.13)	-0.000 (-0.00)	-0.006 (-0.29)
RESTATE	+	0.021*** (2.68)	0.021*** (2.73)	0.021*** (2.66)	0.020*** (2.64)	0.003 (0.64)	0.003 (0.64)	0.003 (0.61)	0.003 (0.67)
IC	+	0.082*** (5.22)	0.082*** (5.22)	0.084*** (5.37)	0.080*** (5.20)	0.080*** (6.39)	0.080*** (6.39)	0.081*** (6.49)	0.080*** (6.44)
LNSEGMENT	+	0.008 (1.01)	0.007 (0.96)	0.008 (0.98)	0.008 (1.06)	0.010 (1.55)	0.010 (1.55)	0.009 (1.40)	0.010 (1.54)
EXTRA	+	0.004 (0.67)	0.004 (0.67)	0.004 (0.69)	0.004 (0.66)	0.002 (0.51)	0.002 (0.49)	0.001 (0.42)	0.002 (0.49)

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Table 4.5 (Continued)

		OLS Regression				Firm Fixed Effects Regression			
		(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
Variables	**Predicted Sign**	**Coefficient** (*t*-statistic)	**Coefficient** (*t*-statistic)	**Coefficient** (*t*-statistic)	**Coefficient** (*t*-statistic)	**Coefficient** (*t*-statistic)	**Coefficient** (*t*-statistic)	**Coefficient** (*t*-statistic)	**Coefficient** (*t*-statistic)
MB	-	-0.001*	-0.001*	-0.001*	-0.001	-0.000	-0.000	-0.000	-0.000
		(-1.80)	(-1.86)	(-1.87)	(-1.59)	(-0.92)	(-0.93)	(-0.95)	(-0.75)
RESTRUCTURE	+	-0.014*	-0.014*	-0.013*	-0.014*	-0.001	-0.001	-0.000	-0.001
		(-1.86)	(-1.79)	(-1.67)	(-1.85)	(-0.22)	(-0.19)	(-0.12)	(-0.29)
MERGER	+	0.005	0.005	0.005	0.006	0.001	0.001	0.001	0.002
		(0.93)	(0.91)	(0.83)	(1.09)	(0.49)	(0.49)	(0.49)	(0.55)
DACC	+	-0.073	-0.074	-0.060	-0.072	0.035	0.035	0.042	0.034
		(-1.00)	(-1.00)	(-0.82)	(-1.00)	(0.89)	(0.91)	(1.08)	(0.89)
LNAGE	-	0.006	0.006	0.007	0.006	-0.040	-0.040	-0.050*	-0.042
		(0.85)	(0.83)	(1.04)	(0.85)	(-1.58)	(-1.58)	(-1.95)	(-1.63)
LNFEE	+	0.024***	0.023***	0.023***	0.027***	0.081***	0.081***	0.081***	0.081***
		(2.68)	(2.62)	(2.62)	(3.01)	(7.48)	(7.46)	(7.50)	(7.59)
LNNAS	+	0.001	0.001	0.001	0.001	-0.000	-0.000	0.000	-0.000
		(0.55)	(0.55)	(0.70)	(0.60)	(-0.20)	(-0.19)	(0.00)	(-0.17)
MODIFIED	+	0.013**	0.013**	0.012**	0.012**	0.010**	0.010**	0.009**	0.010**
		(2.35)	(2.38)	(2.19)	(2.29)	(2.54)	(2.52)	(2.44)	(2.52)
YE	+	0.031***	0.031***	0.031***	0.031***	0.071	0.071	0.071*	0.071
		(2.68)	(2.73)	(2.70)	(2.80)	(1.63)	(1.64)	(1.65)	(1.64)
BIG4	-	-0.075***	-0.075***	-0.074***	-0.073***	-0.034	-0.034	-0.033*	-0.034*
		(-2.79)	(-2.74)	(-2.75)	(-2.68)	(-1.64)	(-1.64)	(-1.76)	(-1.67)

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Table 4.5 (Continued)

		Dependent variable = *LNAUDLAG*							
		OLS Regression				**Firm Fixed Effects Regression**			
Variables	**Predicted Sign**	**(1)** Coefficient (*t*-statistic)	**(2)** Coefficient (*t*-statistic)	**(3)** Coefficient (*t*-statistic)	**(4)** Coefficient (*t*-statistic)	**(5)** Coefficient (*t*-statistic)	**(6)** Coefficient (*t*-statistic)	**(7)** Coefficient (*t*-statistic)	**(8)** Coefficient (*t*-statistic)
ISP	-	0.010	0.010	0.010	0.011	0.014**	0.014**	0.015**	0.014*
		(0.97)	(1.00)	(0.93)	(1.08)	(2.29)	(2.29)	(2.30)	(2.29)
Intercept	?	4.554***	4.583***	4.548***	4.320***	3.390***	3.397***	3.429***	3.310***
		(35.41)	(35.60)	(34.37)	(32.25)	(18.24)	(18.24)	(18.45)	(17.98)
Year fixed effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects		Yes	Yes	Yes	Yes	No	No	No	No
Firm fixed effects		No	No	No	No	Yes	Yes	Yes	Yes
Number of firm-years		5,501	5,501	5,501	5,501	5,501	5,501	5,501	5,501
Adjusted R^2		24.01%	23.81%	23.85%	24.26%	14.14%	14.06%	13.99%	14.27%

*, **, *** represent two-tailed significance at 10 percent, 5 percent, and 1 percent levels, respectively.

Numbers in parentheses are test statistics based on standard errors robust to heteroskedasticity, and clustered at the firm-level.

See Appendix 3 for variable definitions.

In economic terms, the result in Column 2 of Table 4.5 indicate that audit report lag decreases by an average of 3.4 percent or two days for high reputation firms, relative to low reputation firms. When interpreting the economic significance of such a decrease, it is important to recognize that there is likely to be a minimum period required to complete the audit of a large firm due to the nature of the year end closing process. The shortest audit report lag in my sample is 30 days, and the 25th and 75th percentiles are separated by 9 days. Following Abbott et al. (2012), I assess the marginal effect of corporate reputation in the context of the post-year end audit report lag that is subject to reduction, rather than the full engagement period. A decrease of two days is 22 percent of the 9-day period that separates firms in the 25th and 75th percentiles, respectively. From the client's perspective, I consider the economic significance of an audit opinion that takes two days longer to issue than expected, when firms are under stringent filing requirements. Among my sample firms who exceeded the 60-day filing deadline (328 firm-years), around 61 percent filed their 10-K within 2 days after the filing deadline.

Overall, my results suggest that auditors consider reputation incentives associated with highly reputable clients. Auditors are more likely to prioritize highly reputable clients due to their prestige, prominence and visibility, thus resulting in timelier auditing.

4.6.2.2 Test of H3b

Next, I examine the impact of corporate reputation on the likelihood of announcing earnings after audit completion (H3b). Table 4.6 reports results for Model 4.2 using a probit regression. The dependent variable is *COMPLETE*. I find that the coefficients on corporate reputation are significant and negative (*REP_SCORE* and *REP_LIST*: $p < 0.05$; *REP_YEARS* and *REP_STATUS*: $p < 0.01$). The pseudo R^2 of 24 percent and area under the ROC curve of 0.83 indicate good model fit. My results suggest that firms with

high corporate reputation are associated with a lower likelihood of announcing earnings after audit completion.

I calculate the marginal effects of *REP_LIST* and find that the likelihood of announcing earnings after audit completion is approximately 3 percent lower for high reputation firms, relative to low reputation firms. Compared to the unconditional rate of 15 percent, this represents an economically significant difference of 20 percent in the likelihood of announcing earnings after the completion of audit between high reputation firms and low reputation firms.[66]

My results suggest that audit completion at earnings announcement date is likely to be less important for high reputation firms. This is because high reputation firms emphasize credibility, trust, and consistency, which demonstrate their commitment to act in the interest of stakeholders and to provide reliable financial reporting even without external monitoring (Wilson 1985; Weigelt and Camerer 1988). My results also highlight the importance of a timely and consistent earnings announcement disclosure practice for high reputation firms.

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[66] This is calculated as: $0.03/0.15 = 0.20$.

Table 4.6: Effect of Corporate Reputation on the Likelihood of Announcing Earnings After Audit Completion

		Dependent variable = *COMPLETE*			
		Probit Regression			
Variables	**Predicted Sign**	**(1)** Coefficient (*t*-statistic)	**(2)** Coefficient (*t*-statistic)	**(3)** Coefficient (*t*-statistic)	**(4)** Coefficient (*t*-statistic)
REP_SCORE	?	-0.044** (-2.39)			
REP_LIST	?		-0.285** (-2.42)		
REP_YEARS	?			-0.075*** (-3.11)	
REP_STATUS	?				-0.253*** (-4.11)
SIZE	-	-0.190** (-2.20)	-0.191** (-2.22)	-0.181** (-2.08)	-0.106 (-1.19)
LNVOLUME	-	-0.064 (-0.71)	-0.062 (-0.69)	-0.071 (-0.80)	-0.093 (-1.04)
NEWS	-	0.031*** (3.02)	0.031*** (3.03)	0.031*** (3.08)	0.031*** (3.06)
ANALYST	-	-0.020*** (-4.25)	-0.021*** (-4.28)	-0.020*** (-4.05)	-0.018*** (-3.56)
LOSS	+	0.272*** (2.68)	0.273*** (2.68)	0.270*** (2.67)	0.257** (2.54)
LEV	+	-0.012 (-0.04)	-0.007 (-0.02)	-0.018 (-0.06)	-0.051 (-0.16)
RESTATE	+	-0.038 (-0.43)	-0.038 (-0.43)	-0.043 (-0.48)	-0.046 (-0.52)
IC	+	0.343* (1.93)	0.344* (1.94)	0.351* (1.95)	0.312* (1.76)
LNSEGMENT	+	-0.060 (-0.72)	-0.061 (-0.73)	-0.057 (-0.69)	-0.052 (-0.62)
EXTRA	+	0.016 (0.25)	0.015 (0.24)	0.019 (0.29)	0.021 (0.33)
MB	-	-0.014*** (-3.48)	-0.014*** (-3.50)	-0.014*** (-3.47)	-0.013*** (-3.06)
RESTRUCTURE	+	-0.137* (-1.68)	-0.135* (-1.66)	-0.123 (-1.51)	-0.135 (-1.62)
MERGER	+	-0.075 (-1.12)	-0.075 (-1.12)	-0.086 (-1.28)	-0.073 (-1.08)
DACC	+	0.272 (0.37)	0.268 (0.36)	0.386 (0.51)	0.298 (0.40)
LNAGE	-	-0.306*** (-3.55)	-0.306*** (-3.55)	-0.291*** (-3.32)	-0.303*** (-3.53)
LNFEE	+	0.277** (2.26)	0.275** (2.25)	0.288** (2.38)	0.327*** (2.67)

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Table 4.6 (Continued)

		Dependent variable = *COMPLETE*			
		Probit Regression			
Variables	**Predicted Sign**	**(1)** Coefficient (*t*-statistic)	**(2)** Coefficient (*t*-statistic)	**(3)** Coefficient (*t*-statistic)	**(4)** Coefficient (*t*-statistic)
LNNAS	+	0.004	0.004	0.005	0.004
		(0.21)	(0.20)	(0.29)	(0.23)
LNAUDLAG	-	-1.903***	-1.893***	-1.915***	-2.018***
		(-5.27)	(-5.25)	(-5.38)	(-5.53)
MODIFIED	+	-0.024	-0.024	-0.042	-0.033
		(-0.34)	(-0.34)	(-0.59)	(-0.46)
YE	+	0.038	0.040	0.034	0.044
		(0.30)	(0.32)	(0.27)	(0.35)
BIG4	-	-0.867**	-0.865**	-0.858**	-0.839**
		(-2.27)	(-2.27)	(-2.22)	(-2.17)
ISP	-	0.024	0.026	0.009	0.027
		(0.15)	(0.16)	(0.06)	(0.17)
Intercept	?	4.609*	4.586*	4.219*	2.660
		(1.86)	(1.85)	(1.70)	(1.06)
Year fixed effects		Yes	Yes	Yes	Yes
Industry fixed effects		Yes	Yes	Yes	Yes
Number of firm-years		5,501	5,501	5,501	5,501
Pseudo R^2		23.86%	23.84%	24.14%	24.68%
Area under ROC Curve		0.83	0.83	0.83	0.83

*, **, *** represent two-tailed significance at 10 percent, 5 percent, and 1 percent levels, respectively.

Numbers in parentheses are test statistics based on standard errors robust to heteroskedasticity, and clustered at the firm-level.

See Appendix 3 for variable definitions.

4.7   Additional Analyses

4.7.1 Controlling for Auditor Capacity at the City-Industry Level

In my main test for H3a, I find that high reputation firms are associated with shorter audit report lag. I argue that auditors prioritize their resources toward their highly reputable clients, thus shortening the audit report lag for these firms. To further substantiate my findings, I control for auditor capacity at the city-industry level. Specifically, I investigate whether the *relative* reputation of a client firm in an auditor's city-industry portfolio impact the *relative* external audit timeliness of this client.

I first calculate the quartile rank of a firm's aggregate reputation measure (*REP_STATUS*) in an auditor's city-industry portfolio (*REP_RANK*) as my test variable. *REP_RANK* is an ordinal variable, with one (four) representing the least (most) reputable firms in an auditor's city-industry portfolio. Similarly, I determine the quartile rank of a firm's audit report lag in an auditor's city-industry portfolio (*AUDLAG_RANK*) as my dependent variable. *AUDLAG_RANK* is an ordinal variable, with one (four) representing firms with the shortest (longest) audit report lag in an auditor's city-industry portfolio. I then estimate the ordered logistic regression model using the control variables specified in Model 4.1. Table 4.7 shows that the coefficient of *REP_RANK* is significant and negative ($p < 0.05$), thus supporting my conjecture that auditors prioritize the audits of their clients based on the relative reputation of each client in their city-industry portfolio, resulting in timelier audits for the clients with a relatively higher corporate reputation.

Table 4.7: Effect of the Relative reputation of a Client Firm in an Auditor's City-Industry Portfolio on the Relative External Audit Timeliness of the Client

Dependent variable = *AUDLAG_RANK*		
		Ordered Logistic Regression
Variables	**Predicted Sign**	**Coefficient (*t*-statistic)**
REP_RANK	-	-0.073**
		(-2.42)
Control variables		Yes
Year fixed effects		Yes
Industry fixed effects		Yes
Number of firm-years [a]		5,163
Pseudo R^2		2.77%

*, **, *** represent two-tailed significance at 10 percent, 5 percent, and 1 percent levels, respectively.

Numbers in parentheses are test statistics based on standard errors robust to heteroskedasticity, and clustered at the firm-level.

See Appendix 3 for variable definitions.

[a] 338 firm-year observations are dropped because there are fewer than four client firms in the auditor's city-industry portfolio. I require at least four observations to compute the quartile rank of a firm's aggregate reputation measure and the quartile rank of a firm's audit report lag in an auditor's city-industry portfolio.

4.7.2 Cross Sectional Analyses to Rule Out Alternative Explanations

An alternative explanation for the observed negative relation between corporate reputation and audit report lag (H3a) is that high reputation firms invest more in internal controls, resulting in a more robust financial reporting process, which leads the auditor to rely more on internal controls and thus conduct a timelier audit. Another alternative explanation for the observed negative relation between corporate reputation and the likelihood of announcing earnings after audit completion (H3b) is that high reputation firms have better financial reporting quality (Cao et al. 2012), thus they can expect a lower likelihood of errors and subsequent earnings revision, and be more confident in announcing earnings prior to audit completion. To rule out these alternative explanations, I perform several cross-sectional analyses. Specifically, I examine whether the observed negative relations for the tests of H3a and H3b are stronger for larger firms, and weaker for firms with better financial reporting quality and internal controls.

To perform my additional analyses to examine these competing explanations, I use three indicator variables as proxies of firm size, financial reporting quality, and internal control quality respectively: (1) *LARGE*, which equals one if the firm's total assets (*AT*) is above the industry median in a given year, and zero otherwise; (2) *FRQ*, which equals one if the firm's absolute value of discretionary accruals (*DACC*) is above the industry median in a given year, and zero otherwise; and (3) *IC*, which equals one if the firm reports an internal control weakness under SOX 404, and zero otherwise.

Table 4.8 reports my results for the cross-sectional analyses. I re-estimate Model 4.1 after adding interaction terms *REP_LIST* × *LARGE* (Panel A, Column 1), *REP_LIST* × *FRQ* (Panel B, Column 1), and *REP_LIST* × *IC* (Panel C, Column 1), respectively. I find that the coefficients for *REP_LIST* × *LARGE*, *REP_LIST* × *FRQ*, and *REP_LIST* ×

IC are not significant, while the coefficients of my reputation measure (*REP_LIST*) remain significant and negative. Correspondingly, I re-estimate Model 4.2 after adding interaction terms *REP_LIST × LARGE* (Panel A, Column 2), *REP_LIST × FRQ* (Panel B, Column 2), and *REP_LIST × IC* (Panel C, Column 2), respectively. I find that the coefficients for the three interaction terms are not significant, while the coefficients of *REP_LIST* remain significant and negative. Overall, the results of my cross-sectional analyses rule out the possibility that the negative associations observed between corporate reputation and audit report lag, as well as between corporate reputation and the likelihood of announcing earnings after audit completion, are the result of underlying firm characteristics of high reputation firms.

Table 4.8: Results of Cross-Sectional Analyses

Panel A: Firm Size (*LARGE*)

Variables	Predicted Sign	Dependent variable = *LNAUDLAG*	Dependent variable = *COMPLETE*
		OLS Regression	Probit Regression
		(1) Coefficient (*t*-statistic)	(2) Coefficient (*t*-statistic)
REP_LIST	-	-0.040***	-0.365**
		(-2.65)	(-2.06)
LARGE	-	0.013	-0.131
		(-1.32)	(-1.12)
REP_LIST × LARGE	-	-0.014	0.035
		(-0.77)	(0.16)
Intercept	?	4.207***	1.697
		(34.43)	(0.69)
Control variables (other than *SIZE*)		Yes	Yes
Year fixed effects		Yes	Yes
Industry fixed effects		Yes	Yes
Number of firm-years		5,501	5,501
Adjusted R^2 / Pseudo R^2		21.91%	23.48%
Area under ROC Curve			0.83

Panel B: Financial Reporting Quality (*FRQ*)

Variables	Predicted Sign	Dependent variable = *LNAUDLAG*	Dependent variable = *COMPLETE*
		OLS Regression	Probit Regression
		(1) Coefficient (*t*-statistic)	(2) Coefficient (*t*-statistic)
REP_LIST	-	-0.027***	-0.276**
		(-2.72)	(-2.02)
FRQ	+	-0.003	-0.054
		(-0.61)	(-0.86)
REP_LIST × FRQ	+	-0.015	-0.019
		(-1.35)	(-0.16)
Intercept	?	4.581***	4.577*
		(35.67)	(1.84)
Control variables (other than *DACC*)		Yes	Yes
Year fixed effects		Yes	Yes
Industry fixed effects		Yes	Yes
Number of firm-years		5,501	5,501
Adjusted R^2 / Pseudo R^2		23.87%	23.87%
Area under ROC Curve			0.83

Table 4.8 (Continued)

Panel C: Internal Control System (*IC*)

Variables	Predicted Sign	Dependent variable = *LNAUDLAG* OLS Regression (1) Coefficient (*t*-statistic)	Dependent variable = *COMPLETE* Probit Regression (2) Coefficient (*t*-statistic)
REP_LIST	-	-0.033***	-0.276**
		(-3.51)	(-2.33)
IC	+	0.086***	0.416**
		(5.35)	(2.16)
REP_LIST × *IC*	+	-0.023	-0.661
		(-0.48)	(-1.18)
Intercept	?	4.583***	4.576*
		(35.57)	(1.84)
Control variables		Yes	Yes
Year fixed effects		Yes	Yes
Industry fixed effects		Yes	Yes
Number of firm-years		5,501	5,501
Adjusted R^2 / Pseudo R^2		23.80%	23.88%
Area under ROC Curve			0.83

*, **, *** represent two-tailed significance at 10 percent, 5 percent, and 1 percent levels, respectively.

Numbers in parentheses are test statistics based on standard errors robust to heteroskedasticity, and clustered at the firm-level.

See Appendix 3 for variable definitions.

4.7.3 Propensity Score Matching (PSM)

One potential concern for the tests of H3a and H3b is the endogenous nature of the corporate reputation scores because common factors could influence a firm's reputation and its timing of audit completion and earnings release. To mitigate this concern, I use PSM to construct two samples. PSM is helpful because it can attain covariate balance on observable characteristics between treatment and control groups, thus allowing for better specification and causal inference (Rosenbaum and Rubin 1983; Rosenbaum 2002).

For each high corporate reputation firms (i.e., firms included in the MA List), I select a matching firm that is not included on the MA List and that has the closest "propensity score". This propensity score is the predicted probability that a firm is selected for inclusion in the MA List from the following probit model based on Cao et al. (2012):[67]

$$REP\_LIST = \beta_0 + \beta_1 R\&D\_INTENSITY + \beta_2 ADV\_INTENSITY + \beta_3 EMP +$$
$$\beta_4 SIZE + \beta_5 LOSS + \beta_6 LEV + \beta_7 RESTATE + \beta_8 IC +$$
$$\beta_9 LNSEGMENT + \beta_{10} INVREC + \beta_{11} MB + \beta_{12} MERGER +$$
$$\beta_{13} NEWFIN + \beta_{14} FOREIGN + \beta_{15} MODIFIED + \beta_{16} LNFEE +$$
$$\beta_{17} LNNAS + \beta_{18} BIG4 + \beta_{19} ISP + Year\ fixed\ effects +$$
$$Industry\ fixed\ effects + \varepsilon \tag{4.3}$$

I estimate the probit model on a pooled basis across a sample of *Fortune 1000* firms from 2007 to 2016. See Table 4.1 for detailed sample selection procedure and Appendix

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[67] Cao et al. (2012) include variables that capture firm size, profitability, growth, complexity, risks, and audit characteristics, all of which are likely to increase the probability that a firm is included in the MA List. Further, the authors include three variables that reflect elements of corporate reputation scores: (1) research and development intensity (*R&D_INTENSITY*), which affects the firm's innovation as well as product and service quality; (2) advertising intensity (*ADV_INTENSITY*), which represents the firm's investments in products and services; and (3) the number of employees (*EMP*), which captures the extent of market awareness or attention.

3 for variable definitions. Estimates from the probit regression model are shown in Table 4.9. Most of the explanatory variables are significant and are of the proper sign. The model fits well, with a pseudo R^2 of 36 percent and an area under the ROC curve of 0.88. The PSM sample is based on a one-to-one match, without replacement, of treatment observations (firms included in the MA List) to control observations (firms not included in the MA List), within a caliper range of 3 percent. This results in 952 matched pairs (1,904 observations). The mean and median values of the explanatory variables and propensity scores for treatment and control firms are reported in Table 4.10. The results show that all mean differences of observable covariates and the propensity scores are insignificant ($p > 0.10$). As such, covariate balance is achieved on all explanatory variables.

Table 4.11 presents the results using the propensity score matched sample. Panel A (B) reports the results for the effect of corporate reputation on external audit timeliness using the OLS (firm fixed effects) specification, while Panel C reports the results for the effects of corporate reputation on the likelihood of announcing earnings after audit completion. Consistent with my main results, the coefficients of corporate reputation are significant and negative in all three panels. These findings reduce concerns about endogeneity impacting the full sample results.

Table 4.9: Propensity Score Matching: Results of Probit Regression

Variables	Predicted Sign	Coefficient	*t*-statistic	*p*-value
R&D_INTENSITY	+	1.896	3.41	<0.01
ADV_INTENSITY	+	2.092	2.17	0.03
EMP	+	0.004	6.83	<0.01
SIZE	+	0.763	17.58	<0.01
LOSS	-	-0.653	-7.88	<0.01
LEV	-	-0.683	-3.96	<0.01
RESTATE	-	-0.222	-3.02	<0.01
IC	-	-0.126	-0.66	0.51
LNSEGMENT	+	0.186	4.32	<0.01
INVREC	+	0.439	1.92	0.05
MB	+	0.011	3.14	<0.01
MERGER	+	-0.021	-0.40	0.69
NEWFIN	+	-0.032	-0.35	0.72
FOREIGN	+	-0.177	-2.86	<0.01
MODIFIED	-	-0.200	-1.67	0.10
LNFEE	+	-0.045	-0.77	0.44
LNNAS	+	-0.004	-0.31	0.75
BIG4	+	0.256	1.29	0.20
ISP	+	-0.186	-2.32	0.02
Intercept	?	-16.857	-22.11	<0.01
Year fixed effects		Yes		
Industry fixed effects		Yes		
Number of firm-years		5,501		
Pseudo R^2		36.19%		
ROC Curve		0.88		

The propensity score matched sample is based on a one-to-one match, without replacement, of treatment observations to control observations, within a caliper range of 3 percent.

The *p*-values are two-tailed.

The direction of each test is indicated by the predicted sign.

See Appendix 3 for variable definition.

Table 4.10: Propensity Score Matching: Descriptive Statistics of Treatment and Control Firms

Variables	High Reputation (n = 952)		Low Reputation (n = 952)		t-value/ Chi-square [a]
	Mean	**Median**	**Mean**	**Median**	
R&D_INTENSITY	0.03	0.00	0.03	0.00	-0.72
ADV_INTENSITY	0.01	0.00	0.01	0.00	-0.30
EMP	43.02	25.55	39.34	20.84	-1.60
AT ($millions)	16,153.55	9,041.70	18,331.83	8,756.22	0.52[b]
LEV	0.23	0.21	0.24	0.21	1.08
SEGMENT	3.05	3.00	2.96	3.00	-0.62[b]
INVREC	0.24	0.23	0.24	0.21	-0.63
MB	3.84	2.85	3.90	2.40	0.18
FOREIGN	0.29	0.27	0.28	0.24	-1.02
FEE ($thousands)	6,296.51	4,790.80	6,618.48	4,612.69	0.18[b]
NAS ($thousands)	1,817.82	961.73	1,966.23	983.84	-0.31[b]
LOSS	0.07	-	0.08	-	0.12
RESTATE	0.11	-	0.10	-	0.05
IC	0.01	-	0.01	-	0.04
MERGER	0.27	-	0.26	-	0.04
NEWFIN	0.06	-	0.07	-	0.33
MODIFIED	0.32	-	0.32	-	0.01
BIG4	0.99	-	0.99	-	1.10
ISP	0.13	-	0.13	-	0.12
Propensity Score	0.40	0.39	0.41	0.39	1.14

[a] *t*-statistics are reported for continuous variables, and Chi-square statistics for dummy variables. The Wilcoxon *Z* and median tests produce identical results.

[b] *t*-tests are based on natural logarithm transformed values.

Table 4.11: Results Using the Propensity Score Matched Sample

Panel A: Effect of Corporate Reputation on External Audit Timeliness (OLS Regression)

Variables	Predicted Sign	Dependent variable = LNAUDLAG			
		(1) Coefficient (*t*-statistic)	**(2)** Coefficient (*t*-statistic)	**(3)** Coefficient (*t*-statistic)	**(4)** Coefficient (*t*-statistic)
REP_SCORE	-	-0.006*** (-3.81)			
REP_LIST	-		-0.034*** (-3.54)		
REP_YEARS	-			-0.011*** (-4.28)	
REP_STATUS	-				-0.026*** (-4.03)
Intercept	?	4.509*** (21.86)	4.510*** (21.83)	4.346*** (21.40)	4.218*** (20.82)
Control variables		Yes	Yes	Yes	Yes
Year fixed effects		Yes	Yes	Yes	Yes
Industry fixed effects		Yes	Yes	Yes	Yes
Number of firm-years		1,904	1,904	1,904	1,904
Adjusted R^2		27.70%	27.44%	28.80%	28.29%

Panel B: Effect of Corporate Reputation on External Audit Timeliness (Firm Fixed Effects Regression)

Variables	Predicted Sign	Dependent variable = LNAUDLAG			
		(1) Coefficient (*t*-statistic)	**(2)** Coefficient (*t*-statistic)	**(3)** Coefficient (*t*-statistic)	**(4)** Coefficient (*t*-statistic)
REP_SCORE	-	-0.002** (-2.24)			
REP_LIST	-		-0.011* (-1.91)		
REP_YEARS	-			-0.000 (-0.04)	
REP_STATUS	-				-0.011*** (-2.75)
Intercept	?	3.212*** (10.31)	3.209*** (10.29)	3.188*** (10.23)	3.126*** (10.13)
Control variables		Yes	Yes	Yes	Yes
Year fixed effects		Yes	Yes	Yes	Yes
Firm fixed effects		Yes	Yes	Yes	Yes
Number of firm-years		1,904	1,904	1,904	1,904
Adjusted R^2		19.27%	19.17%	18.92%	19.47%

Table 4.11 (Continued)

Panel C: Effect of Corporate Reputation on the Likelihood of Announcing Earnings After Audit Completion (Probit Regression)

Variables	Predicted Sign	Dependent variable = *COMPLETE*			
		(1) Coefficient (t-statistic)	**(2)** Coefficient (t-statistic)	**(3)** Coefficient (t-statistic)	**(4)** Coefficient (t-statistic)
REP_SCORE	-	-0.037* (-1.87)			
REP_LIST	-		-0.227* (-1.82)		
REP_YEARS	-			-0.098*** (-3.27)	
REP_STATUS	-				-0.277*** (-3.41)
Intercept	?	8.285* (1.92)	8.196* (1.90)	8.055* (1.94)	7.713* (1.83)
Control variables		Yes	Yes	Yes	Yes
Year fixed effects		Yes	Yes	Yes	Yes
Industry fixed effects		Yes	Yes	Yes	Yes
Number of firm-years		1,904	1,904	1,904	1,904
Pseudo R^2		32.72%	32.68%	33.72%	33.76%
Area under ROC Curve		0.88	0.88	0.88	0.88

*, **, *** represent two-tailed significance at 10 percent, 5 percent, and 1 percent levels, respectively.

Numbers in parentheses are test statistics based on standard errors robust to heteroskedasticity, and clustered at the firm-level.

See Appendix 3 for variable definitions.

4.7.4 Entropy Balanced Matched Sample

In addition to the PSM procedure, I implement an entropy balancing technique that achieves covariate balance across the first, second, and third moments of the respective variable distributions (Hainmueller 2012). Entropy balancing allows me to retain my original sample (5,501 firm-year observations), while using an algorithm to reweight observations in the control sample such that there are no significant post-weighting differences between the moments of the distributions of the matching variables for the reweighted control sample and those for the treatment sample.

Designating high reputation firms as the treated group ($REP\_LIST = 1$), I use entropy balancing to reweight a sample of low reputation firms (the control group) ($REP\_LIST = 0$). I match firms based on the same explanatory variables used in my PSM procedure. After employing the entropy balancing procedure, I find that the mean, variance, and skewness of all covariates are nearly identical across the treated and control firms.

Untabulated results indicate that the coefficients on corporate reputation are significant and negative in Model 4.1 (REP_SCORE, $REP\_LIST,$ and REP_YEARS: $p < 0.01$; REP_STATUS: $p < 0.05$) and Model 4.2 (REP_SCORE and REP_LIST: $p < 0.10$; REP_YEARS and REP_STATUS: $p < 0.01$). These findings further reduce concerns about endogeneity impacting the full sample.

4.7.5 Controlling for Corporate Governance Characteristics

Cao et al. (2012) posit that corporate reputation and corporate governance are related, but they are fundamentally different. Specifically, both represent measures to reduce agency problems; however, while corporate reputation relies on self-disciplining, corporate governance relies on formal contract as well as internal and external monitoring. To separately capture the effects of corporate reputation from the effects of corporate governance, I re-estimate Models 4.1 and 4.2 controlling for board size (*LNBDSIZE*), board independence (*BDIND*) and CEO duality (*DUALITY*) as these are board characteristics commonly used to proxy for the strength of corporate governance (Klein 2002a; Carcello et al. 2002; Ahmed and Duellman 2007). In addition, I control for audit committee size (*LNACSIZE*) and audit committee financial expertise (*ACEXP*) because audit committees are charged with the responsibility over management's financial reporting practices to reduce agency costs (Beasley et al. 2009; Bédard et al. 2004).

Untabulated results indicate that the coefficients on corporate reputation are significant and negative in Model 4.1, for both the OLS specification (*REP_SCORE*, *REP_LIST, REP_YEARS,* and *REP_STATUS*: $p < 0.01$) and the firm fixed effects specification (*REP_SCORE*, *REP_LIST,* and *REP_STATUS*: $p < 0.01$). In addition, the coefficients on corporate reputation are significant and negative in Model 4.2 (*REP_SCORE* and *REP_LIST*: $p < 0.05$; *REP_YEARS* and *REP_STATUS*: $p < 0.01$). Thus, the results of my main tests are robust to the inclusion of these corporate governance variables.

4.7.6 Inclusion of Non-*Fortune 1000* Firms

To determine whether my results can be generalized to firms that are not included
in the *Fortune 1000*, I include non-*Fortune 1000* firms in my sample. This results in a
sample of 12,206 firm-year observations.[68] I add an additional control variable
(*FORTUNE1000*) to control for *Fortune 1000* firms because non-*Fortune 1000* firms are
not eligible for inclusion on the MA List. I then re-estimate Models 4.1 and 4.2.

Untabulated results indicate that the coefficients on corporate reputation are
significant and negative in Model 4.1, for both OLS specification (*REP_SCORE*,
REP_LIST, REP_YEARS, and *REP_STATUS*: $p < 0.01$) and firm fixed effects
specification (*REP_SCORE*, *REP_LIST,* and *REP_STATUS*: $p < 0.01$). Further, the
coefficients on corporate reputation are significant and negative in Model 4.2
(*REP_SCORE*, *REP_LIST*, and *REP_YEARS*: $p < 0.05$; *REP_STATUS*: $p < 0.01$).
Thus, my main results are generalizable to non-*Fortune 1000* firms.

4.7.7 Alternative Timeliness Measures

I examine the effect of corporate reputation on the unexpected portion of audit
report lag (*RES_AUDLAG*), which represents incremental audit efficiency (Blankley et
al. 2014).[69] Following the two-stage approach adopted in Blankley et al. (2014), I first
regress the natural logarithm of audit report lag (*LNAUDLAG*) on the control variables
specified in Model 4.1, excluding corporate reputation (*REP*). The residuals from this

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[68] I begin by combining available sample firms from Audit Analytics and Compustat. After excluding
firms in the financial and utilities industries, I obtain 36,107 firm-year observations. I exclude
observations with missing information (5,800 firm-year observations), observations with an auditor
change (2,070 firm-year observations), and observations that are not large accelerated filers (16,031
firm-year observations). My final sample consists of 12,206 firm-year observations.

[69] AS No. 9 requires auditors to appropriately plan for the audit, taking into consideration the nature,
timing, and extent of risk assessment procedures, tests of controls, and substantive procedures (PCAOB,
2010). As such, the audits of financial statements are structured and planned to avoid unnecessary
delays.

model (*RES_AUDLAG*) represent the unexpected portion of audit report lag. I then regress the dependent variable *RES_AUDLAG* on each of my corporate reputation measures. Consistent with my main findings for H3a, untabulated results indicate that the coefficients on corporate reputation are significant and negative (*REP_SCORE*, *REP_LIST,* and *REP_YEARS*: $p < 0.05$; *REP_STATUS*: $p < 0.10$).

I also examine the effect of corporate reputation on the number of days between earnings announcement date and audit report date, censored at zero when the earnings announcement date occurs on or after the audit report date (*COMPLETE_DAYS*) (Schroeder 2016). *COMPLETE_DAYS* captures the degree of audit completeness at the earnings announcement date, and it assumes that each day closer to the audit report date is incrementally more complete. Using *COMPLETE_DAYS* as the dependent variable, I estimate a tobit regression model using the control variables specified in Model 4.2. Consistent with my main finding for H3b, untabulated results indicate that the coefficients on corporate reputation are significant and negative (*REP_SCORE*, *REP_LIST, REP_YEARS,* and *REP_STATUS*: $p < 0.01$).

4.7.8 Exclusion of "Atypical" Firms

To ensure that my results for H3a are not driven by firms that consistently experience audit delay, I exclude firms that always file their 10-Ks on or after the 10-K filing deadline during my sample period (67 sample observations), and re-estimate Model 4.1. Furthermore, to reduce the possibility that my results for H3b reflect a firm's choice to consistently announce earnings on or after audit report date, I exclude firms that always announce earnings after audit completion during my sample period (317 sample observations), and re-estimate Model 4.2. Untabulated results indicate that all my reputation measures remain significant and negative in Model 4.1 ($p < 0.01$) and Model

4.2 ($p < 0.01$), even after excluding firms that always face audit delay and firms that always announce earnings after audit completion respectively.

4.7.9 Auditor Brand Effects

My results for H3a suggest that auditors prioritize their highly reputable clients, thus resulting in timelier external audit reporting for these clients. I further argue that these effects are more significant for non-Big 4 auditors, relative to Big 4 auditors, because Big 4 auditors have an established brand name reputation (e.g., Craswell, Francis, and Taylor 1995; DeAngelo 1981; Palmrose 1988; Francis and Wilson 1988), and their clientele comprises a greater number of large and well-established clients. They also possess a boarder range of specialisms in a wider range of industries (e.g., Ferguson and Stokes 2002; Defond, Francis, and Wong 2000; Casterella, Francis, Lewis, and Walker 2004).

I partition my sample into Big 4 and non-Big 4 subsamples. I include non-*Fortune 1000* firms in my analysis to increase sample variation. Untabulated results show that while the coefficient of *REP_LIST* is significant and negative for both Big 4 and non-Big 4 audit clients, the economic significance is greater for non-Big 4 audit clients. Specifically, the likelihood of completing the audit within one day of or after the 10-K filing deadline is approximately 37 percent lower for high reputation firms audited by non-Big 4 auditors, but it is 27 percent for those audited by Big 4 auditors. These results suggest that client reputation is more important for non-Big 4 auditors.

My results for H3b suggest that high reputation firms are more likely to announce their earnings prior to audit completion. I posit that firms' reputation effect is more significant for firms audited by Big 4 auditors. Prior research suggests that having a Big 4 auditor is an indication of high audit quality (e.g., DeFond and Zhang 2014; DeAngelo

1981). Thus, firms audited by Big 4 auditors are likely to have higher quality interim reviews and controls testing during the year, which reduces the likelihood of errors and misstatements in earnings release and increases firms' confidence in announcing early. Untabulated results show that while the coefficient of *REP_LIST* is significant and negative for Big 4 auditors ($p < 0.01$), it is not significant for non-Big 4 auditors. These results support the complementary relationship between corporate reputation and external audit.

I further examine whether corporate reputation impact external audit and earnings announcement timeliness for individual auditors. I rerun Models 4.1 and 4.2 independently for each of the Big 4 auditors to determine if there are significant differences in the association between corporate reputation and our timeliness measures across the Big 4. Untabulated results indicate that *REP_LIST* remained negative and significant for each of the Big 4 auditors.

4.8   Conclusion

My study examines the role of corporate reputation on the timeliness of external audit and earnings announcement. The concept of timeliness has been an area of concern for firms, auditors, regulators and investors. Changes in regulation in the audit and financial reporting environment have resulted in longer audit delay, leading to a significant increase in the number of firms that choose to announce their earnings prior to audit completion. These trends further emphasize the importance of identifying the determinants of financial reporting and audit timeliness, particularly given that long audit delay and unaudited earnings announcement have implications on the quality and usefulness of financial information (Blankley et al. 2014; Marshall et al. 2017; Bronson et al. 2011).

My results yield several key findings. I document a significant negative relation between corporate reputation and audit report lag. This result suggests that auditors place importance on their clients' reputation, and are likely to prioritize their more reputable clients, thus resulting in timelier audits. In addition, my findings suggest that high corporate reputation is significantly and negatively associated with the likelihood of announcing earnings after audit completion. This finding suggests that audit completion at earnings announcement date is likely to be less important for high reputation firms given the self-disciplining nature of reputation effect. It also emphasizes the importance of a timely and consistent earnings announcement disclosure practice for high reputation firms.

In my additional analyses, I find that client firms with a relatively high corporate reputation in an auditor's city-industry portfolio are associated with relatively timelier audits, thus supporting my conjecture that auditors prioritize their highly reputable clients. Further, I find that my main results are not associated with larger firm size, higher financial reporting quality, or better internal controls, thus ruling out the likelihood that the negative associations observed in my main tests could be the result of underlying firm characteristics of high reputation firms. My results are robust to endogeneity concerns regarding common factors that influence both corporate reputation and timeliness in financial reporting and external audit, although I acknowledge that these concerns can never be ruled out entirely. My results are also robust to the inclusion of corporate governance variables, the inclusion of non-*Fortune 1000* firms, the use of alternative timeliness measures, and the exclusion of atypical firms.

My study adds to the literature by providing insights into the role that corporate reputation plays in influencing auditors' and firms' behavior in enhancing the timeliness

of external audit and earnings announcement. The results of my study have important implications for firms, auditors, and regulators interested in improving the timeliness in the audit and financial reporting process. Specifically, my results demonstrate that auditors are motivated by reputation concerns by ensuring timelier audits in their highly reputable clients. My results also highlight the benefits of corporate reputation in maintaining timely earnings announcement disclosures. These results emphasize the value to client firms of investing in and preserving a good corporate reputation.

5.1   Summary and Main Findings

Reputation represents an invaluable asset to both individuals and firms. Directors who establish their reputations as diligent and competent monitors are rewarded with additional board positions (Fama 1980; Fama and Jensen 1983b), while negligent directors suffer a damage in reputation that results in the loss of their existing directorships and fewer opportunities to serve on other boards (Fich and Shivdasani 2007; Srinivasan 2005; Johnstone et al. 2011; Hickman et al. 2017). For firms, a positive reputation can provide significant value and competitive advantages in the form of greater financial performance (Roberts and Dowling 2002; Fombrun 1996; Srivastava et al. 1997), lower financing costs (Cao et al. 2015), better stakeholder perceptions (Filbeck and Preece 2003; Pfarrer et al. 2010; Goldberg and Hartwick 1990), and higher financial reporting quality (Cao et al. 2012).

My thesis enhances our understanding of the reputation effect and its impact on a firm's financial and non-financial outcomes through three empirical studies. My first study (Chapter 2) investigates whether the differential reputation incentives offered by different firms influence the effectiveness of audit committee members in overseeing a firm's financial reporting quality and internal control systems. To the extent that audit committee members have incentives to build their reputation as an effective monitor over management, I investigate whether audit committee members with multiple audit committee memberships regard each membership differently according to the relative reputation value an audit committee membership offers. This issue is important considering the prevalence of busy directors in the post-SOX period and the resulting

monitoring ineffectiveness arising from such busyness (Sharma and Iselin 2012; Tanyi and Smith 2015).

My second study (Chapter 3) examines whether independent directors' differential reputation incentives arising from multiple directorships impact a firm's CSR performance, which represents an important aspect of non-financial performance. Prior research suggests that independent directors have incentives to develop their reputations as a socially responsible director (Mallin and Michelon 2011; Johnson and Greening 1999) and to avoid reputational penalties arising from CSR lapses (Hickman et al. 2017). To the extent that independent directors with multiple directorships perceive their directorships differently based on the relative visibility and reputation value it provides (Masulis and Mobbs 2014), I investigate whether the most prominent firms benefit more from independent directors' incentives to be viewed as a socially responsible director on these boards where their potential reputation effects are greatest.

My third study (Chapter 4) investigates the role of corporate reputation on the timeliness of external audit and earnings announcement. Changes in regulation in the audit and financial reporting environment have increased audit report lag, resulting in a substantial increase in the number of firms that announce their earnings prior to audit completion. These developments underscore the importance of determining the factors associated with financial reporting and audit timeliness, since long audit delay and unaudited earnings announcement have implications on financial reporting and audit quality (Blankley et al. 2014; Marshall et al. 2017; Bronson et al. 2011). Therefore, my third study examines whether corporate reputation is a determinant of timelier audit and earnings announcement.

The following three sections − Sections 5.1.1, 5.1.2, and 5.1.3 − discuss the main findings of each of the three studies.

5.1.1 Study 1 – The Impact of Audit Committee Members' Reputation Incentives on Monitoring the Financial Reporting Process (Chapter 2)

In my first study, I document that firms with a higher proportion of audit committee members who have relatively high reputation incentives are associated with more effective monitoring of the financial reporting process. Specifically, firms with a higher proportion of audit committee members who have relatively high reputation incentives have a lower likelihood of financial restatement, substantial risk of a material misstatement, and material weaknesses in internal control, as well as a higher likelihood of remediating material weaknesses in internal control on a timely basis. These results support the notion that reputation is a strong incentive for audit committee members, such that it influences their effectiveness in overseeing the financial reporting quality and internal control systems.

These results provide a different perspective on the busyness hypothesis, which suggests that holding multiple board positions reduces the effectiveness of audit committee members as monitors (Sharma and Iselin 2012; Tanyi and Smith 2015). While prior research assumes that audit committee members allocate their effort uniformly across all directorships, my results indicate that the negative effect of multiple directorships does not apply evenly to all firms. Rather, the monitoring effectiveness of audit committee members depends on the relative reputation benefits that the audit committee membership offers.

Importantly, I find that my results are driven by the reputation incentives of audit committee members, rather than independent non-audit committee members' reputation

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incentives. This finding reinforces the crucial role of the audit committee in governing the financial reporting process. Further, I find a strong reputation incentive effect in firms with busier audit committee members. This finding is consistent with my argument that audit committee members will strategically allocate their effort across audit committee memberships because of their limited time and energy.

5.1.2 Study 2 – The Impact of Independent Directors' Reputation Incentives on Enhancing CSR Performance (Chapter 3)

In my second study, I document that firms with a higher proportion of independent directors who have relatively high reputation incentives are associated with better CSR performance. I find that firms with a greater proportion of independent directors for whom this directorship represents the most reputable board position improve CSR performance by engaging in socially responsible activities, rather than by reducing socially irresponsible activities. Further, I find that independent directors' high reputation incentives influence CSR practices that address both corporate stakeholders' and the society's interests. Finally, I find that the better CSR performance associated with independent directors' high reputation incentives is driven by better CSR performance in the areas of diversity, employee relations, community relations, and the environment.

Consistent with the notion that CSR is a firm-level response to address the demands of external stakeholders (Aguinis and Glavas 2012; Jensen 2002), I find that the positive association between independent directors' high reputation incentives and CSR performance is more pronounced in an environment where firms face less external pressure to engage in CSR activities. In addition, I find that this association is more pronounced in firms with a less gender diverse board, since board gender diversity

positively influences a firm's CSR performance (Bear et al. 2010; Harjoto et al. 2015; Zhang et al. 2013).

These results suggest that the reputation incentives of independent directors not only influence a firm's financial outcomes (Masulis and Mobbs 2014; Huang et al. 2018; Sila et al. 2017), but also impact a firm's non-financial outcomes, particularly in the context of CSR. Overall, these findings are consistent with my conjecture that independent directors have incentives to develop their reputation as a socially responsible director, and that these reputation effects are strongest in their most prominent directorships. Therefore, my findings emphasize the importance of considering the reputation incentives of independent directors when examining a firm's CSR performance.

5.1.3 Study 3 – The Impact of Corporate Reputation on the Timeliness of External Audit and Earnings Announcement (Chapter 4)

In my third study, I document a significant negative relation between corporate reputation and audit report lag. This result indicates that auditors value a client's reputation due to their prestige and prominence. A highly reputable client not only signals the credibility of the auditor (Podolny 1993; Stuart et al. 1999), but also enhances the auditor's professional reputation. As such, auditors are likely to prioritize their more reputable clients, thus resulting in timelier and more efficient audits.

Further, I document that high corporate reputation is significantly and negatively associated with the likelihood of a firm waiting until on or after audit completion to announce earnings. This finding suggests that audit completion at earnings announcement date is likely to be less important for high reputation firms. Considering the self-disciplining nature of reputation effect (Weigelt and Camerer 1988; Wilson 1985), this

finding indicates that reputation effect can be regarded as a complement to external audit and other governance mechanisms in reducing agency problems and in maintaining high quality financial reporting. My finding also highlights the significance of a timely and consistent earnings announcement disclosure practice to high reputation firms.

My additional analyses indicate that client firms with a relatively high corporate reputation in an auditor's city-industry portfolio are associated with relatively timelier audits. In addition, I find that my main results are not associated with larger firm size, higher financial reporting quality, or better internal control, thus ruling out the likelihood that the negative associations observed in my main tests could be the result of underlying firm characteristics of high reputation firm. Collectively, my results emphasize the pivotal role of corporate reputation on the timeliness of external audit and earnings announcement.

5.2   Limitations of Studies in the Thesis

The results of this thesis are subject to the following limitations. First, my studies face the challenge of potential endogeneity, since common factors may influence both a firm's reputation and a firm's financial and non-financial outcomes. I employ various measures to address this concern: (1) my first and third study adopt entropy balancing to reweight covariates such that there are no significant differences in the mean values of these covariates between treatment and control observations; (2) my second study employs a difference-in-differences approach using exogenous shocks that lead to an independent director's ranking of a directorship to change; (3) my second study uses the lead-lag approach of measuring the dependent variable as $t+1$ rather than on a contemporaneous basis; (4) all three studies include a PSM analysis to attain covariate balance on observable characteristics between treatment and control groups. Despite the

multiple methods used to address the endogeneity concern, caution must be exercised in interpreting the results reported in my thesis because this concern cannot be entirely ruled out due to the inherent limitations of these methods.

Second, my reputation incentives measures in the first and second study are in-sample measures that are calculated using directorship information from BoardEx. However, this limitation is unlikely to bias my findings. BoardEx comprises a wide range of U.S. listed firms. Thus, any unavailable (out-of-sample) directorships are those at smaller and possibly less prominent firms, which are likely to have a minimal impact on the reputation of independent directors (or audit committee members).

Third, as stated in Cao et al. (2012), the corporate reputation scores obtained from the MA List are subject to several weaknesses: (1) the scores may capture raters' assessments of financial performance and future growth potential (Fombrun and Shanley 1990; Fryxell and Wang 1994; Brown and Perry 1994); (2) the raters represent a limited group of stakeholders (Fryxell and Wang 1994) and do not include other important stakeholders, such as customers, suppliers, and employees (Freeman 1984); (3) the scores are available for only the largest U.S. firms; and (4) the scores were not developed specifically for the scientific study of reputation (Deephouse 2000). Despite these weaknesses, the corporate reputation scores are widely used as a measure of corporate reputation in the management, finance, marketing, psychology and accounting literatures. Further, prior research suggests that the scores represent the construct of "reputation" (Fombrun and Shanley 1990; Roberts and Dowling 2002). I also include several measures of financial performance and firm growth in my models to address the concern that the scores may depict raters' evaluations of a firm's financial performance and future growth potential.

Finally, the CSR scores obtained from MSCI STATS (formerly KLD) database are constructed using indicator variables used to depict a firm's CSR performance. The use of indicator variables is a crude measure and potentially suffers from loss of information. Further, Chatterji, Levine, and Toffel (2009) demonstrate that KLD environmental strengths do not accurately predict pollution levels or compliance violations, and that KLD ratings do not optimally use publicly available data. Notwithstanding these weaknesses, numerous studies use the CSR scores from KLD to operationalize the CSR construct (e.g., Dhaliwal et al. 2011; Deng et al. 2013; Hoi et al. 2013; Kim et al. 2012; Graves and Waddock 1994; Davidson et al. 2018). Prior research also suggests that the KLD CSR scores are a widely accepted, influential, reliable, and highly regarded measure of CSR performance (e.g., Szwajkowski and Figlewicz 1999; Mattingly and Berman 2006; Waddock 2003).

5.3 Directions for Future Research

The findings reported in my thesis point to several future research opportunities. First, my first study focuses on the reputation incentive effect of the audit committee as a whole. However, it is unclear whether the results are driven by the audit committee chair and/or audit committee financial experts. Since the audit committee chair plays a pivotal leadership and liaison role within the audit committee, the chair's position is likely to be crucial in achieving the aims of the audit committee to effectively govern the financial reporting process. Further, subsequent to the SOX mandate that requires at least one financial expert on the audit committee, the demand for directors with the relevant expertise has increased (Linck et al. 2009). Prior research also highlights the importance of financial experts in improving financial reporting outcomes (e.g., Schmidt and Wilkins 2013; Dhaliwal et al. 2010; Krishnan and Visvanathan 2008). Given the instrumental

roles that the audit committee chair and audit committee financial experts play in the financial reporting process, future research can examine the differential effects of the reputation incentives of audit committee chairs and audit committee financial experts on the monitoring effectiveness of financial reporting process.

Second, my first study focuses on audit committee monitoring effectiveness over financial reporting quality and internal control systems. Apart from overseeing the financial reporting process, Section 301 of SOX highlights the monitoring responsibilities of audit committees over the external audit function, which include matters associated with auditor appointment, auditor compensation, and the approval of audit and non-audit services (e.g., Cohen et al. 2014; Hoitash and Hoitash 2009; Naiker et al. 2013). Future research can investigate whether the reputation incentives of audit committee members impact their monitoring effectiveness over the external audit function. Specifically, future research can explore whether audit committee members with high reputation incentives demand more audit effort, ensure greater auditor independence, and appoint higher quality auditors.

Third, while the second study examines the effect of the reputation incentives of independent directors at the board level, future research can investigate this effect at the committee level. In recent years, a greater number of firms have instituted environmental-related committees on their boards (Wagner, Hespenheide, and Pavlovsky 2009). Further, evidence suggests that the presence of such committees has a positive impact on a firm's environmental and sustainability efforts (Peters and Romi 2014, 2015). Therefore, future research can consider the impact of the reputation incentives of environmental committee members on a firm's CSR performance, and whether such an impact is stronger than those of non-environmental committee members.

Fourth, while my second study focuses specifically on CSR performance, one interesting avenue for future research involves CSR disclosure and assurance decisions. Prior research identifies a growing tendency for firms to issue and assure stand-alone CSR reports (e.g., Simnett et al. 2009; Dhaliwal et al. 2011; KPMG 2013; Cohen and Simnett 2014). Given the voluntary nature of a firm's CSR disclosure and assurance decisions, future research can explore whether the reputation incentives of independent directors influence the likelihood of issuing a stand-alone CSR report and obtaining assurance on such a report. Further, prior research finds that CSR disclosure is perceived as more credible when the assurer is a professional accountant, as opposed to a sustainability consultant (Pflugrath et al. 2011). Thus, future research can study whether the reputation incentives of independent directors influence a firm's choice of assurer.

Finally, prior research identifies a growing trend where firms announce their earnings prior to audit completion and finds that these firms have more earnings revisions (Bronson et al. 2011) and less detailed earnings announcement disclosure (Schroeder 2016). Future research can explore whether corporate reputation mitigates the frequency and magnitude of earnings revisions of firms with unaudited earnings announcements. Further, future research can examine whether corporate reputation improves the extent of earnings announcement disclosures of these firms.

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APPENDIX 1: Study 1 – Definition and Computation of Variables

Variables	Definition
Dependent Variables	
RESTATE	Indicator variable that equals one if the firm has a non-technical restatement, and zero otherwise [Audit Analytics].
IV_FSCORE	Indicator variable that equals one if *F_SCORE* is above 1.85, and zero otherwise. Dechow et al. (2011) categorize firms with an *F_SCORE* greater than 1.85 as firms with a "substantial risk" of receiving an AAER from the SEC, i.e., a substantial risk of a material misstatement.

F_SCORE is the scaled probability of misstatement or earnings management developed by Dechow et al. (2011) using the following model:

$$P_{jt} = (-7.893) + 0.790 \times RSST\_ACCT_{jt} + 2.518 \times \Delta REC_{jt} + 1.191 \times \Delta INV_{jt} + 1.979 \times SOFT_{jt} + 0.171 \times \Delta CSALE_{jt} + (-0.932) \times \Delta ROA_{jt} + 1.029 \times ISSUE_{jt}$$

where: $RSST\_ACCT_{jt}$ = Richardson, Sloan, Soliman, and Tuna's (2005) measure of accruals for firm *j* in year *t*, which is the sum of the change in non-cash working capital [Compustat items ($ACT − CHE$) − ($LCT − DLC$)], the change in net non-current operating assets [Compustat items ($AT − ACT − IVAO$) − ($LT − LCT − DLTT$)], and the change in net financial assets [Compustat items ($IVST + IVAO$) − ($DLTT + DLC + PSTK$), scaled by average total assets; ΔREC_{jt} = the change in receivables for firm *j* in year *t* [Compustat item *RECT*], scaled by average total assets; ΔINV_{jt} = the change in inventory for firm *j* in year *t* [Compustat item *INVT*], scaled by average total assets; $SOFT_{jt}$ = total assets minus property, plant, and equipment and cash for firm *j* in year *t* [Compustat items $AT − PPENT − CHE$], scaled by total assets; $\Delta CSALE_{jt}$ = the percentage change in cash sales for firm *j* in year *t* [Compustat items *SALE* and *RECT*]; ΔROA_{jt} = the change in return on assets for firm *j* in year *t* [Compustat items *IB* and *AT*]; and $ISSUE_{jt}$ = an indicator variable that equals one if the firm has issued new debt or equity during the year, and zero otherwise [Compustat items *SSTK* and *DLTIS*].

The probability of misstatement is then calculated as:

$$Pr_{jt} = e^{P_{jt}} \Big/ (1 + e^{P_{jt}})$$
$$F\_SCORE_{jt} = Pr_{jt}/0.0037$$

IC	Indicator variable that equals one if the auditor assessed material weaknesses in internal control during the year under Section 404 of SOX, and zero otherwise [Audit Analytics].

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APPENDIX 1 (Continued)

Variables	Definition
Dependent Variables	
REMEDIATE	Indicator variable that equals one if the material weaknesses in internal control are remediated in the subsequent year, and zero otherwise [Audit Analytics].
Test Variables	
AC_HIGH_PERC	The percentage of audit committee members for whom this audit committee membership is the largest audit committee membership based on the market capitalization of the firm [BoardEx, Compustat item *MKVALT*, Form 10-K, and InvestorPoint.com] using the approach in Masulis and Mobbs (2014, 2016), Huang et al. (2018) and Sila et al. (2017).
AC_HIGH_PERC_ SCORE	The percentage of audit committee members for whom this audit committee membership is the highest ranked audit committee membership based on the aggregate reputation measure of the firm using the approach in Erkens and Bonner (2013). The aggregate reputation measure is a factor score derived from a principal components factor analysis of standardized measures of market capitalization, the number of firms a focal firm is tied to through shared board members, and the reputation score obtained from the MA List [Compustat item *MKVALT*, Form 10-K, InvestorPoint.com, BoardEx, and Fortune Magazine].
Control Variables	
AC_LOW_PERC	The percentage of audit committee members for whom this audit committee membership is the smallest audit committee membership based on the market capitalization of the firm [BoardEx, Compustat item *MKVALT*, Form 10-K, and InvestorPoint.com].
AC_LOW_PERC_ SCORE	The percentage of audit committee members for whom this audit committee membership is the lowest ranked audit committee membership based on the aggregate reputation measure of the firm using the approach in Erkens and Bonner (2013) [Compustat item *MKVALT*, Form 10-K, InvestorPoint.com, BoardEx, and Fortune Magazine].
SIZE	The natural logarithm of total assets [Compustat item *AT*].
LNSEGMENT	The natural logarithm of the number of business segments [Compustat segment file].
RESTRUCTURE	Indicator variable that equals one if the firm was involved in a restructuring, and zero otherwise [coded as one if any of the following Compustat items are non-zero: *RCP*, *RCA*, *RCEPS*, and *RCD*].
MERGER	Indicator variable that equals one if the firm has experienced a merger in the past two years, and zero otherwise [SDC platinum].

APPENDIX 1 (Continued)

Variables	Definition
Control Variables	
MB	Market value of equity divided by net book value, calculated by Compustat items [(*CSHO* * *PRCC_F*)/(*AT* − *LT*)].
EXGROWTH	Indicator variable that equals one if industry-adjusted annual growth rate of sales revenue falls into the top quintile, and zero otherwise [Compustat item *SALE*].
LEV	The ratio of long-term debt to total assets [Compustat items *DLTT* and *AT*].
ROA	Return on assets, calculated by income before extraordinary items scaled by total assets [Compustat items *IB* and *AT*].
LOSS	Indicator variable that equals one if net income is negative, and zero otherwise [Compustat item *NI*].
NEWFIN	Indicator variable that equals one if the firm issue long-term equity greater than five percent of beginning total assets, and zero otherwise [Compustat items *SSTK* and *AT*].
BIG4	Indicator variable that equals one for firms audited by a Big-4 audit firm, and zero otherwise [Audit Analytics].
ISP	Indicator variable that equals one for firms that engage industry specialist auditor, and zero otherwise [Audit Analytics]. Industry specialist auditor is measured as audit firms who possess the largest market share (based on audit fees) in a given industry.
YE	Indicator variable that equals one if the firm's fiscal year end falls on December or January, and zero otherwise [Audit Analytics].
CHANGE	Indicator variable that equals one if the firm engages a new auditor, and zero otherwise [Audit Analytics].
MODIFIED	Indicator variable that equals one if the firm receives a modified audit opinion, and zero otherwise [Compustat item *AUOP*, Audit Analytics].
LNAGE	The natural logarithm of firm age, determined by the number of years the firm exists in the Compustat database.
OPERCYCLE	The length of a firm's operating cycle, calculated as: $$\frac{360}{Sales/Accounts\ Receivable} + \frac{360}{Cost\ of\ Goods\ Sold/Inventory}$$ where: Sales, Accounts Receivable, Cost of Goods Sold are Compustat items *SALE*, *RECT*, *COGS*, and *INVT* respectively.
CFO	Operating cash flow divided by total assets [Compustat items *OANCF* and *AT*].
STD_CFO	Cash flow variability, calculated as the standard deviation of cash flow from operations deflated by total assets from years *t-5* to *t-1* [Compustat items *OANCF* and *AT*].
STD_SALE	Sales variability, calculated as the standard deviation of sales deflated by total assets from years *t-5* to *t-1* [Compustat items *SALE* and *AT*].

APPENDIX 1 (Continued)

Variables	Definition
Control Variables	
CAP_INTENSITY	Capital intensity, calculated by net property, plant, and equipment divided by total assets [Compustat items PPENT and AT].
INT_INTENSITY	Intangibles intensity, measured as the sum of R&D and advertising expense scaled by net sales [Compustat items XRD, XAD and SALE].
NO_INT	Indicator variable that equals one if INT_INTENSITY is zero for the firm-year, and zero otherwise.
LITIGATION	Indicator variable that equals one for firms in the technology industries, and zero otherwise. As in Shu (2000), technology industries are defined based on SIC codes in the 2830s, 3570s, 7370s, 8730s, and between 3825 and 3829.
LNBDSIZE	The natural logarithm of the number of board members [BoardEx].
BDIND	The percentage of board directors who are independent [BoardEx].
DUALITY	Indicator variable that equals one if the CEO is also the chairman of the board [BoardEx].
LNACSIZE	The natural logarithm of the number of audit committee members [BoardEx].
ACEXP	The percentage of audit committee members who are financial experts [BoardEx].
LNIC_TOTAL	The natural logarithm of total number of material weaknesses in internal control identified during the year [Audit Analytics].
Variable under Additional Analyses	
SIZESQ	Square of the natural log of total assets [Compustat item AT].
NONAC_HIGH_ PERC	The percentage of independent non-audit committee members for whom this independent directorship is the largest directorship based on the market capitalization of the firm [BoardEx, Compustat item MKVALT, Form 10-K, and InvestorPoint.com].
NONAC_HIGH_ PERC_SCORE	The percentage of independent non-audit committee members for whom this independent directorship is the highest ranked directorship based on the aggregate reputation measure of the firm [Compustat item MKVALT, Form 10-K, InvestorPoint.com, BoardEx, and Fortune Magazine].
NO_IND	Indicator variable that equals one for firms that do not have at least one independent non-audit committee members with two or more independent directorships, and zero otherwise.
BUSY	Indicator variable that equals one if the average number of directorships held in listed firms by the audit committee members (AVEBOARD) is above the industry median in a given year, and zero otherwise [BoardEx].

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APPENDIX 1 (Continued)

Variables	Definition
Variable under Additional Analyses	
AVEBOARD	The average number of directorships held in listed firms by the audit committee members [BoardEx].
AVETENURE	The average tenure of audit committee members [BoardEx].
AVEAGE	The average age of audit committee members [BoardEx].
AVECASH	The average cash compensation received by audit committee members [Execucomp and Proxy Statement].
ACONLY	Indicator variable that equals one if more than 50 percent of the audit committee members serve on only one directorship, and zero otherwise [BoardEx].
ACBUSY	Indicator variable that equals one if more than 50 percent of the audit committee members each hold three or more directorships, and zero otherwise [BoardEx].
DACC	Discretionary accruals measured by the residual based on industry-year using the performance-adjusted modified-Jones model (Dechow et al. 1995; Jones 1991; Kothari et al. 2005): $$TAC_{ijt}/A_{ijt-1} = \alpha_j + \beta_{1j}(1/A_{ijt-1}) + \beta_{2j}\big[(\Delta REV_{ijt} - \Delta REC_{ijt})/A_{ijt-1}\big] + \beta_{3j}\big(PPE_{ijt}/A_{ijt-1}\big) + \beta_{4j}ROA_{t-1} + \varepsilon_{ijt-1}$$ where: TAC_{ijt} = total accruals for firm *i* in industry *j* in the current year *t* [Computstat items $IB - OANCF$]; A_{ijt-1} = total assets for firm *i* in industry *j* at the end of the previous year [Compustat item *AT*]; ΔREV_{ijt} = change in revenue for firm *i* in industry *j* between the current year and last year [Compustat item *REVT*]; ΔREC_{ijt} = the change in receivables for firm *i* industry *j* between the current year and last year [Compustat item *RECT*]; PPE_{ijt} = gross property, plant, equipment for firm *i* industry *j* in the current year [Compustat item *PPEGT*]; ROA_{t-1} = return on assets at the end of the previous year [Compustat items *IB/AT*].
Other Variables	
AT	Total assets [Compustat item *AT*].
SEGMENT	Number of business segments [Compustat segment file].
MKVALT	Market capitalization [Compustat item *MKVALT*].
AGE	Firm age [Compustat].
BDSIZE	The number of board members [BoardEx].
ACSIZE	The number of audit committee members [BoardEx].
IC_TOTAL	The total number of material weaknesses in internal control identified during the year [Audit Analytics].

APPENDIX 1 (Continued)

Variables	Definition
Other Variables	
AC_HIGH_MAJ	Indicator variable that equals one if the percentage of audit committee members for whom this audit committee membership is the largest audit committee membership based on the market capitalization of the firm is greater than 50 percent, and zero otherwise [BoardEx, Compustat item *MKVALT*, Form 10-K, and InvestorPoint.com].
AC_HIGH_MAJ_ SCORE	Indicator variable that equals one if the percentage of audit committee members for whom this audit committee membership is the highest ranked audit committee membership based on the aggregate reputation measure of the firm is greater than 50 percent, and zero otherwise [Compustat item *MKVALT*, Form 10-K, InvestorPoint.com, BoardEx, and Fortune Magazine].
AC_HIGH_NO	The number of audit committee members for whom this audit committee membership is the largest audit committee membership based on market capitalization [BoardEx, Compustat item *MKVALT*, Form 10-K, and InvestorPoint.com].
AC_HIGH_NO_ SCORE	The number of audit committee members for whom this audit committee membership is the highest ranked audit committee membership based on aggregate reputation score [Compustat item *MKVALT*, Form 10-K, InvestorPoint.com, BoardEx, and Fortune Magazine].

APPENDIX 2: Study 2 – Definition and Computation of Variables

Variables	Definition
Dependent Variables	
CSR_SCORE	The sum of a firm's CSR scores calculated as the firm's total strengths minus total weaknesses, based on MSCI evaluations for diversity, employee relations, product characteristics, community relations, humanity, and the environment. Following Dhaliwal et al. (2011), we adjust the CSR scores by the industry median to make them comparable across industries [MSCI].
CSR_STR	The sum of a firm's industry-adjusted strength scores over diversity, employee relations, product characteristics, community relations, humanity, and the environment [MSCI].
CSR_CON	The sum of a firm's industry-adjusted concern scores over diversity, employee relations, product characteristics, community relations, humanity, and the environment [MSCI].
CSR_STK	The sum of industry-adjusted CSR scores over diversity, employee relations, and product characteristics [MSCI].
CSR_TRD	The sum of industry-adjusted CSR scores over community relations, humanity, and the environment [MSCI].
CSR_x	The industry-adjusted CSR scores for each MSCI evaluation dimension. *x* represents *DIV* for diversity, *EMP* for employee relations, *PRO* for product characteristics, *COM* for community relations, *HUM* for humanity, and *ENV* for environment [MSCI].
Test Variables	
HIGH_REP	The percentage of independent directors for whom this directorship is the most prominent directorship based on the aggregate reputation measure of the firm, which is based on Erkens and Bonner (2013). The aggregate reputation measure is a factor score derived from a principal components factor analysis of standardized measures of market capitalization, the number of firms a focal firm is tied to through shared board members, and the reputation score obtained from *Fortune's Most Admired Companies List* [Compustat item *MKVALT*, BoardEx, and Fortune Magazine].
LOW_REP	The percentage of independent directors for whom this directorship is the least prominent directorship based on the aggregate reputation measure of the firm [Compustat item *MKVALT*, BoardEx, and Fortune Magazine].

APPENDIX 2 (Continued)

Variables	Definition
Control Variables	
SIZE	The natural logarithm of total assets [Compustat item *AT*].
ROA	Return on assets, calculated as income before extraordinary items scaled by total assets [Compustat items *IB* and *AT*].
FIN	The amount of debt or equity capital raised by the firm during the year scaled by total assets [Compustat items *SSTK*, *PRSTKC*, *DLTIS*, *DLTR* and *AT*].
MB	Market-to-book ratio [Compustat items *CSHO*, *PRCC_F*, and *CEQ*].
LEV	The ratio of long-term debt to total assets [Compustat items *DLTT* and *AT*].
GLOBAL	Indicator variable that equals one if a firm reports foreign exchange gain or loss, and zero otherwise [Compustat items *FCA*].
LIQUIDITY	The ratio of the number of shares traded in the year to the total shares outstanding at the year-end [Compustat items *CSHTR_F* and *CSHO*].
DACC	Discretionary accruals measured by the residual based on industry-year using the performance-adjusted modified-Jones model (Dechow, Sloan, and Sweeney 1995; Jones 1991; Kothari, Leone, and Wasley 2005): $$TAC_{ijt}/A_{ijt-1} = \alpha_j + \beta_{1j}(1/A_{ijt-1}) + \beta_{2j}\big[(\Delta REV_{ijt} - \Delta REC_{ijt})/A_{ijt-1}\big] + \beta_{3j}\big(PPE_{ijt}/A_{ijt-1}\big) + \beta_{4j}ROA_{t-1} + \varepsilon_{ijt-1}$$ where: TAC_{ijt} = total accruals for firm i in industry j in the current year t [Computstat items $IB - OANCF$]; A_{ijt-1} = total assets for firm i in industry j at the end of the previous year [Compustat item *AT*]; ΔREV_{ijt} = change in revenue for firm i in industry j between the current year and last year [Compustat item *REVT*]; ΔREC_{ijt} = the change in receivables for firm i industry j between the current year and last year [Compustat item *RECT*]; PPE_{ijt} = gross property, plant, equipment for firm i industry j in the current year [Compustat item *PPEGT*]; ROA_{t-1} = return on assets at the end of the previous year [Compustat items *IB*/*AT*].
DIV	Indicator variable that equals one if the firm paid a dividend during the year, and zero otherwise [Compustat items *DVT*].
ADV	Advertising intensity, calculated as advertising expense scaled by net sales [Compustat items *XAD* and *SALE*].
RETURN	Accumulated monthly return during the fiscal year.
AGE	Firm age, determined by the number of years the firm exists in the Compustat database.
EC	Indicator variable that equals one if the firm has a committee that are specifically assigned responsibilities on environmental, corporate sustainability, or corporate responsibility practices.
LNBDSIZE	The natural logarithm of the number of board members [BoardEx].

APPENDIX 2 (Continued)

Variables	Definition
Control Variables	
BDIND	The percentage of board directors who are independent [BoardEx].
DUALITY	Indicator variable that equals one if the CEO is also the chairman of the board [BoardEx].
LNACSIZE	The natural logarithm of the number of audit committee members [BoardEx].
ACEXP	The percentage of audit committee members who are financial experts [BoardEx].
FEMALE	The percentage of female board directors [BoardEx].
AVEBOARD	The average number of directorships held in listed firms by the independent directors [BoardEx].
Variables under Additional Analyses	
TREAT	Indicator variable that equals one for treatment firms, and zero for control firms. Treatment firms (Control firms) are firms with at least one independent director who experiences an increase (a decrease) in the ranking of this directorship relative to the other directorships that he or she holds. This increase (decrease) is caused by a decrease (an increase) in the aggregate reputation measure of other firms in his or her portfolio of directorships.
POST	Indicator variable that equals one for the three years after the exogenous shock in director ranking, and zero for the three years before.
ENVIRONMENT	Indicator variable that equals one for firms in an environmentally sensitive industry, and zero otherwise. As in Cho and Patten (2007) and Peters and Romi (2015), environmentally sensitive industries are defined as industries with 2-digit SIC codes: 13 (oil exploration), 26 (paper), 28 (chemical and allied products), 29 (petroleum refining), 33 (metals), and 49 (utilities).
LITIGATION	Indicator variable that equals one for firms in the technology industries, and zero otherwise. As in Shu (2000), technology industries are defined based on SIC codes in the 2830s, 3570s, 7370s, 8730s, and between 3825 and 3829.
DIVERSE	Indicator variable that equals one if the percentage of female board directors (FEMALE) is above the industry median in a given year, and zero otherwise [BoardEx].
MA_SCORE	Managerial ability scores developed by Demerjian et al. (2012).
MA	Indicator variable that equals one if the managerial ability scores developed by Demerjian et al. (2012) (MA_SCORE) is above the industry median in a given year, and zero otherwise.
SIZESQ	Square of the natural log of total assets [Compustat item AT].
STD_CFO	Cash flow variability, calculated as the standard deviation of cash flow from operations deflated by total assets from years t-5 to t-1 [Compustat items OANCF and AT].

APPENDIX 2 (Continued)

Variables	Definition
Other Variables	
AT	Total assets [Compustat item AT].
BDSIZE	Board size [BoardEx].
ACSIZE	Audit committee size [BoardEx].
CSR_SCORE_ADJ	The sum of a firm's CSR scores developed by Deng et al. (2013). The concern (strength) scores for each of the MSCI evaluation dimension (e.g., diversity, employee relations, product characteristics, community relations, humanity, and the environment) are calculated by dividing the raw concern (strength) scores by the respective number of concern (strength) indicators to derive the adjusted concern (strength) scores for that dimension. We then take the difference between the adjusted total strength scores and the adjusted total concern scores [MSCI].
HIGH_REP_MC	The percentage of independent directors for whom this directorship is the largest directorship based on the market capitalization of the firm [BoardEx, Compustat item *MKVALT*] using the approach in Masulis and Mobbs (2014, 2016), Huang et al. (2018) and Sila et al. (2017).
LOW_REP_MC	The percentage of independent directors for whom this directorship is the smallest directorship based on the market capitalization of the firm [BoardEx, Compustat item *MKVALT*].
HIGH_PAY	The percentage of independent directors for whom this directorship is the highest paid based on average compensation received by all independent directors on the board [BoardEx, Proxy statement].
LOW_PAY	The percentage of independent directors for whom this directorship is the lowest paid based on average compensation received by all independent directors on the board [BoardEx, Proxy statement].

APPENDIX 3: Study 3 – Definition and Computation of Variables

Variables	Definition
Dependent Variables	
LNAUDLAG	The natural logarithm of audit report lag [Audit Analytics].
COMPLETE	Indicator variable that equals one if the earnings announcement is issued on or after the audit report date, and zero otherwise [Compustat item *RDQ*, Audit Analytics].
Test Variables	
REP_SCORE	Corporate reputation scores from *Fortune's Most Admired Companies List*.
REP_LIST	Indicator variable that equals one if the firm appears on the *Fortune's Most Admired Companies List* in a given year, and zero otherwise.
REP_YEARS	The number of sample years to date during which the firm appears on *Fortune's Most Admired Companies List*.
REP_STATUS	Factor score derived from a principal components factor analysis of standardized measures of market capitalization [Compustat item *MKVALT*], the number of firms a focal firm is connected to through common board members (*INTERLOCK*), and corporate reputation scores from *Fortune's Most Admired Companies List* (*REP_SCORE*). Measures were standardized using the mean and standard deviation of each measure.
Control Variables	
SIZE	The natural logarithm of total assets [Compustat item *AT*].
LOSS	Indicator variable that equals one if net income is negative, and zero otherwise [Compustat item *NI*].
LEV	The ratio of long-term debt to total assets [Compustat items *DLTT* and *AT*].
RESTATE	Indicator variable that equals one if the firm has a non-technical restatement, and zero otherwise [Audit Analytics].
IC	Indicator variable that equals one if the firm reports a material internal control weakness during the year under SOX404, and zero otherwise [Audit Analytics].
EXTRA	Indicator variable that equals one if the firm reports discontinued operations, extraordinary, or special items, and zero otherwise [Compustat item *XIDO* and *SPI*].
LNSEGMENT	The natural logarithm of the number of business segments [Compustat segment file].
MB	Market-to-book ratio, calculated by market value of equity divided by book value of equity [Compustat items *MKVALT* and *CEQ*].
RESTRUCTURE	Indicator variable that equals one if the firm was involved in a restructuring, and zero otherwise [coded as one if any of the following Compustat items are non-zero: *RCP*, *RCA*, *RCEPS* or *RCD*].

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APPENDIX 3 (Continued)

Variables	Definition
Control Variables	
MERGER	Indicator variable that equals one if the firm has experienced a merger in the past two years, and zero otherwise [SDC platinum].
DACC	Discretionary accruals measured by the residual based on industry-year using the performance-adjusted modified-Jones model (Dechow et al. 1995; Jones 1991; Kothari et al. 2005):

$$TAC_{ijt}/A_{ijt-1} = \alpha_j + \beta_{1j}(1/A_{ijt-1}) + \\ \beta_{2j}\big[(\Delta REV_{ijt} - \Delta REC_{ijt})/A_{ijt-1}\big] + \\ \beta_{3j}\big(PPE_{ijt}/A_{ijt-1}\big) + \beta_{4j}ROA_{t-1} + \varepsilon_{ijt-1}$$

where: TAC_{ijt} = total accruals for firm i in industry j in the current year t [Computstat items $IB - OANCF$]; A_{ijt-1} = total assets for firm i in industry j at the end of the previous year [Compustat item AT]; ΔREV_{ijt} = change in revenue for firm i in industry j between the current year and last year [Compustat item $REVT$]; ΔREC_{ijt} = the change in receivables for firm i industry j between the current year and last year [Compustat item $RECT$]; PPE_{ijt} = gross property, plant, equipment for firm i industry j in the current year [Compustat item $PPEGT$]; ROA_{t-1} = return on assets at the end of the previous year [Compustat items IB/AT].

Variables	Definition
LNAGE	The natural logarithm of firm age, determined by the number of years the firm exists in the Compustat database.
LNFEE	The natural logarithm of audit fees [Audit Analytics].
LNNAS	The natural logarithm of non-audit service fees [Audit Analytics].
MODIFIED	Indicator variable that equals one if the firm receives a modified audit opinion, and zero otherwise [Compustat item $AUOP$].
YE	Indicator variable that equals one if the firm's fiscal year end falls on December or January, and zero otherwise [Audit Analytics].
BIG4	Indicator variable that equals one if the firm engaged a Big-4 audit firm, and zero otherwise [Audit Analytics].
ISP	Indicator variable that equals one if the firm engaged an industry specialist audit firm, and zero otherwise [Audit Analytics]. Industry specialist auditor is measured as audit firms who possess the largest market share (based on audit fees) in a given industry.
LNVOLUME	The natural logarithm of common shares traded divided by number of common shares outstanding [Compustat items $CSHTR\_F$ and $CSHO$].
ANALYST	The number of analysts included in the last IBES consensus forecast before the preliminary earnings announcement [IBES].

APPENDIX 3 (Continued)

Variables	Definition
Control Variables	
NEWS	The difference between current and prior year earnings per share divided by prior year earnings per share [Compustat item *EPSPX*].
Variables for Additional Analyses	
LARGE	Indicator variable that equals one if the firm's total assets (*AT*) is above the industry median in a given year, and zero otherwise.
FRQ	Indicator variable that equals one if the firm's absolute value of discretionary accruals (*DACC*) is above the industry median in a given year, and zero otherwise.
REP_RANK	The quartile rank of a firm's aggregate reputation measure (*REP_STATUS*) in an auditor's city-industry portfolio.
AUDLAG_RANK	The quartile rank of a firm's audit report lag (*AUDLAG*) in an auditor's city-industry portfolio.
ADV_INTENSITY	Advertising expenses scaled by net revenue [Compustat items *XAD* and *SALE*].
R&D_INTENSITY	Research and development (R&D) expenses scaled by net revenue [Compustat items *XRD* and *SALE*].
EMP	The number of employees [Compustat item *EMP*].
INVREC	The sum of inventories and receivables divided by total assets [Compustat items *INVT* and *RECT*].
FOREIGN	The ratio of the firm's sales from foreign operations to total sales [Compustat segment file].
NEWFIN	Indicator variable that equals one if the firm issue long-term equity greater than five percent of beginning total assets, and zero otherwise [Compustat items *SSTK* and *AT*].
FORTUNE1000	Indicator variable that equals one if the firm is a *Fortune 1000* company in a given year, and zero otherwise.
LNBDSIZE	The natural logarithm of the number of board directors [BoardEx].
BDIND	The percentage of board directors who are independent [BoardEx].
DUALITY	Indicator variable that equals one if the CEO is also the chairman of the board [BoardEx].
LNACSIZE	The natural logarithm of the number of audit committee members [BoardEx].
ACEXP	The percentage of audit committee members who are financial experts [BoardEx].
RES_AUDLAG	Residuals from the audit report lag model (Model 1), excluding corporate reputation measure (*REP*).
COMPLETE_DAYS	The number of days between earnings announcement date and audit report date, censored at zero when the earnings announcement date occurs on or after the audit report date [Compustat items RDQ, Audit Analytics].

APPENDIX 3 (Continued)

Variables	Definition
Other Variables	
AUDLAG	Audit report lag measured as number of days between fiscal year end date and audit report date [Audit Analytics].
AT	Total assets [Compustat item AT].
SEGMENT	Number of business segments [Compustat segment file].
AGE	Firm age.
FEE	Audit fees [Audit Analytics].
NAS	Non-audit services fees [Audit Analytics].
VOLUME	Common shares traded divided by number of common share outstanding [Compustat items CSHTR_F and CSHO].
MKVALT	Market capitalization [Compustat item MKVALT].
INTERLOCK	The number of firms a focal firm is connected to through common board members [BoardEx].