University of Southampton

Faculty of Social Sciences

Southampton Business School

Internal Governance, External Governance, and Corporate Strategic Decisions

by

Jing Feng

Thesis for the degree of Doctor of Philosophy

September 2024

University of Southampton

Abstract

Faculty of Social Sciences

Southampton Business School

Doctor of Philosophy

Internal Governance, External Governance, and Corporate Strategic Decisions

by

Jing Feng

This thesis comprises three self-contained essays analysing topics in the field of internal governance, external governance, and corporate strategic decisions.

The first essay explores the impact of managerial ability of the entire top management team, as an internal corporate governance entity, on firms' risky-taking in investing financial assets. Utilising hand-collected data on detailed financial asset portfolios from S&P 500 index firms spanning the period from 2009 to 2019, we find that, generally, management with higher ability scores allocates a greater proportion of financial assets to risky positions, while management with relatively lower scores holds fewer risky financial assets. This positive effect is more pronounced when firms encounter fewer financial constraints, exhibit lower financial asymmetry, have higher bank debt ratios, and have more industry peers. In addition, the market perceives a higher firm value when high-ability management runs more risky financial assets. Further, the positive effect is stronger when current CEOs are younger and in the early stages of their careers.

The second essay delves into the impact of an exogenous shock in corporate governance, specifically focusing on an immutable part of the duty of loyalty and corporate law, on firms' financial reporting in terms of earnings management. By exploiting the staggered introduction of Corporate Opportunity Waivers (COW) since 2000, our findings indicate that firms incorporated in states that eventually adopted the waivers experienced a reduction in accrual-based earnings management. The effect is more pronounced for firms led by managers with greater ex-ante career concerns and pressures for short-term profits. Further, we are unable to find evidence suggesting that firms resort to real earnings management, nor does it support the argument that earnings management decreases due to an improvement in corporate governance. Overall, we provide insights suggesting that adopting COW might not be detrimental; instead, it could yield plausible benefits such as fostering more precise and transparent financial reporting.

The third essay examines the relationship between auditors, as an external corporate governance mechanism, and firms' strategic decisions. Specifically, we utilise state-level exogenous shocks in third-party auditor liability for ordinary negligence to explore the dynamics between governance and dividend payouts. Our findings indicate that the client firms' dividend payments decrease when the state shifts to a higher auditor liability regime. In addition, we conduct separate analyses for positive and negative shocks and find that this impact is symmetrical. We subject the main findings to several robustness tests to reinforce the key inferences. Further, we find that main results are more pronounced among firms with weaker governance and more severe free cash flow problems, providing support for the substitute view in the competing agency theory of dividend puzzles.

Table of Contents

Table of Tables

Table of Figures

Research Thesis: Declaration of Authorship

Print name: Jing Feng

Title of thesis: Internal governance, external governance, and corporate strategic decisions

I declare that this thesis and the work presented in it are my own and has been generated by me as the result of my own original research.

I confirm that:

1. This work was done wholly or mainly while in candidature for a research degree at this University;
2. Where any part of this thesis has previously been submitted for a degree or any other qualification at this University or any other institution, this has been clearly stated;
3. Where I have consulted the published work of others, this is always clearly attributed;
4. Where I have quoted from the work of others, the source is always given. With the exception of such quotations, this thesis is entirely my own work;
5. I have acknowledged all main sources of help;
6. Where the thesis is based on work done by myself jointly with others, I have made clear exactly what was done by others and what I have contributed myself;
7. None of this work has been published before submission.

Signature: ..... Date:

Acknowledgements

First and foremost, I would like to extend my deepest gratitude to my supervisors, Dr Zhuang Zhang and Dr Qingjing Zhang, for their unwavering support, invaluable guidance, and endless patience throughout my doctoral journey. Their expertise, encouragement, and kindness have been instrumental in shaping my growth and have helped me understand the kind of mentor I aspire to be in the future. I would also like to extend my thanks to Dr Wei Song for guiding me into the PhD journey and for sharing all the valuable research ideas.

I would like to extend my profound gratitude to Professor Woon Sau Leung and Dr Junhong Yang for their time and effort during my PhD viva examination. I sincerely appreciate their insightful questions and valuable suggestions, and I am deeply thankful for their dedication in contributing to my academic growth.

I am indebted to my fellow PhD peers and officemates for the camaraderie and companionship we shared, the fresh air we enjoyed outside Building 58, the homemade desserts and lunches, the interesting discussions and insightful exchanges regarding research, teaching, and daily life. To my cherished old friends scattered across different time zones, from GMT-7 to GMT+11, I offer heartfelt appreciation for occasionally checking on my survival status, for always being with me through the past 15 to 20 years, and for your unwavering companionship, especially when the PhD journey became more difficult during the pandemic. The time spent together on campus, in Night City, in L'Entre-Terre, and in Hyrule has immensely enriched this journey and made it far more joyful.

I owe a profound debt of gratitude to my family, especially my parents, for their support from the very beginning, and for asking whether I am happy rather than asking when I could finish my PhD. I am deeply grateful to my grandparents for their enduring love and affection. In loving memory of my grandfather. I would also like to thank my cat for providing endless comfort during the long hours of writing and research, and for still recognising me after three years.

I am profoundly grateful to all those who have contributed to my academic and personal growth, directly or indirectly. Thank you to each of you reading these lines. Your support and encouragement have been instrumental in achieving this significant milestone and broadening my horizons, making me know ‘there are more things in heaven and earth’, than are dreamt of in my philosophy.

Definitions and Abbreviations

AEM ..... Accrual-based earnings management

CHE ..... Cash and cash equivalents

COD ..... Corporate opportunity doctrine

COW..... Corporate opportunity waivers

FCF..... Free cash flow

GAI ..... General ability index

MA ..... Managerial ability

PSLRA..... Private Securities Litigation Reform Act

PSM ..... Propensity score matching

TPAL ..... Third-party auditor liability

Chapter 1 Introduction

1.1 Research background

Over the last few decades, corporate governance has attracted substantial interest from scholars and practitioners and has been under closer scrutiny than ever. Much of this attention has been the result of systemic corporate misconduct, such as the wave of scandals including Enron and WorldCom, increased shareholder activism, and financial crises (Aguilera et al., 2015; Filatotchev & Nakajima, 2010). As a socially constructed term that has evolved over time (Ocasio & Joseph, 2005), the definition of corporate governance varies widely depending on different emphasis on governance dimensions and ultimate goals. From a broad perspective, Zingales (1998) sees governance systems as intricate constraints that influence the ex-post negotiations over quasi-rents generated by firms. Becht et al. (2003) and Shleifer and Vishny (1997) define corporate governance as the "ways in which the suppliers of finance to corporations assure themselves of getting a return on their investment". Adopting a broad perspective, Gillan and Starks (1998) relate corporate governance to the system of laws, rules, and factors that control operations within a company. Similarly, Thomsen and Conyon (2012) define corporate governance as "the control and direction of companies by ownership, boards, incentives, company law, and other mechanisms". Elston (2019) describes it as "the system of rules, practices, and processes by which a firm is operated and controlled."

Corporate governance, encompassing the systems, processes, and principles by which organizations are directed and controlled, influences how strategic decisions are conceived, executed, and adapted over time (Elston, 2019; Gillan & Starks, 1998; Thomsen & Conyon, 2012). Regardless of the specific definition employed, researchers commonly categorise corporate governance mechanisms into two main groups: those internal to firms and those external to firms (Filatotchev & Nakajima, 2010; Gillan, 2006). Extensive research has focused on internal governance mechanisms, including board of directors, ownership, management and leadership, which aim to reduce agency costs, align managerial and shareholder interests, and enhance shareholder value (Aguilera et al., 2015; Filatotchev & Nakajima, 2010). Firms also operate within a broader context, influenced by external forces and subject to multiple forms of oversight. A number of external governance mechanisms operate from outside the nucleus of firm, such as the legal system and lawsuits, the markets, external auditors, stakeholder activists, rating organizations, and the media. These mechanisms can directly affect a firm's governance and influence the effectiveness of other governance mechanisms, thus contributing to ensuring that

executives act in alignment with the firm's interests, maintaining financial transparency, and providing strategic advice (Aguilera et al., 2015; Coffee, 2005; Gillan, 2006).

In the realm of internal corporate governance, top management and CEOs take the pivotal role in influencing firm decisions. The efficacy of leadership and managerial ability shapes the contours of strategic vision and contribute to the overall effectiveness of governance mechanisms. Top management, often regarded as part of the dominant coalition, is anticipated to establish the goals of organisations, with their distinct upper echelon characteristics and observable background traits influencing corporate behaviour and outcome (Cyert & March, 1963; Hambrick & Mason, 1984). Following Hambrick and Mason (1984), a large body of literature has explored the role of managers in internal governance in shaping corporate behaviour and has highlighted the significance of effective management in upholding the integrity of financial reporting and compliance with laws and regulations, and adeptly managing organisational risks (Bertrand & Schoar, 2003; Faccio et al., 2016; Graham & Narasimhan, 2004). Considerable literature has amassed evidence that manager-specific traits matter, showing that gender, age, tenure, overconfidence, early-life experience, communication and interpersonal skills play an important role in firm policies and performance such as capital allocation process and managerial styles (Bertrand & Schoar, 2003; Faccio et al., 2016; Graham & Narasimhan, 2004; Kaplan et al., 2012; Malmendier et al., 2011; Malmendier & Tate, 2005; Schoar & Zuo, 2017).

In addition to using these observable background characteristics and executive demography as a measurement proxy for underlying individual and group cognitions and behaviours (Carpenter et al., 2004), another stream of literature focuses on quantifying the managerial ability of the whole management team through measuring managers' efficiency in transforming firm resources to revenues. Large amount of literature has documented the role of managerial ability in corporate activities and outcomes. High-ability managers are more prone to signal their ability through more frequent earnings forecast, engage more in exploiting tax planning opportunities, consider shareholder taxes into dividend payout policies, improve earnings quality and performance of innovation, as well as have better access to credit market (Baik et al., 2011; Bonsall et al., 2017; Chen et al., 2015; Cornaggia et al., 2017; Demerjian et al., 2013; Guan et al., 2018; Koester et al., 2017).

Management plays an integral role in internal governance, with the effectiveness of internal governance hinging on characteristics of top management (Jain et al., 2016). In addition to the focus on board-CEO dichotomy, corporate governance research should also consider all management levels and managerial behaviour within the organisation (Bushman & Smith, 2001; Demirag et al., 2000; Hakimi et al., 2010; Knight & Haslam, 2010).

Along with internal governance, companies are subject to legal constraints, market forces and scrutiny from subject sources beyond the firm (Acharya et al., 2011; Filatotchev & Nakajima, 2010; Gillan, 2006). The legal and regulatory environment is closely intertwined with corporate governance, and a substantial body of research explores the relationship between governance, law, accounting and finance (La Porta et al., 1998). The legal system, functioning as an external corporate governance mechanism, unequivocally influences various dimensions of how firms are governed (Aguilera et al., 2015).

Law and regulation might directly affect governance structures, or influence various entities in firms' external environment as well as boards of directors or managers within firms, thereby shaping the ultimate decisions and outcomes of corporations (Linck et al., 2009; Scott, 1983; UK Corporate Governance Code, 2010). For example, papers examine the impact of law changes, including universal demand (UD) laws and Ninth Circuit Court ruling, on alternative governance mechanisms, managers' attempts to manipulate earnings, cash holding and investment decisions (Appel, 2019; Huang et al., 2020; Nguyen et al., 2018). State antitakeover laws are also employed as a source of exogenous variation in an important governance mechanism to examine firms' information environment, financial statement informativeness, reporting quality and agency cost of debt (Armstrong et al., 2012; Francis et al., 2010; Ni, 2020; Zhao & Chen, 2009). Law changes can alter managers' accounting and strategic choices by affecting employees' ability to switch firms. Reduced outside employment opportunities for key employees resulted from the inevitable disclosure doctrine (IDD) leads to a decrease upward earnings management to retain them (Gao et al., 2018). Following the rejection of the IDD, companies increase corporate social responsibility (CSR) in response to the threat of knowledge spillovers (Flammer & Kacperczyk, 2019).

In addition to legal environment, monitoring of corporations is performed by a variety of external parties such as auditors, creditors, analysts and rating agencies (Aguilera et al., 2015; Coffee, 2005; Tirole, 2010). Since there has been growing recognition in recent years of the importance of corporate governance in ensuring sound financial reporting and deterring fraud, the audit serves as a monitoring device and is thus an integral part of the corporate governance mosaic, having the potential to work with other governance actors to limit managers' ability to manipulate information and extract undue wealth, and to improve quality of the financial reporting process (Aguilera et al., 2015; Cohen et al., 2002; Desender et al., 2013; Fan & Wong, 2005).

External auditing contributes to more effective governance through a reduction in the information asymmetry (Boubaker et al., 2018), a lower incidence of accounting fraud (Lennox & Pittman, 2010), easing external financing constraints (Hope et al., 2011), and a lower ex ante cost of equity capital (Khurana & Raman, 2004). Another stream of broad literature explores how local

institutional and legal environments might affect the governance role of external auditors. The overall legal environment and litigation can bring auditors monetary penalties, related litigation costs and reputation damage (Black et al., 2006; Caramanis & Lennox, 2008; Khurana & Raman, 2004; Weber et al., 2008), thereby influencing auditors' conduct and clients' behaviour (Al-Hadi & Habib, 2023; Habib et al., 2014).

Studies examine whether increased legal liability leads to improvement in audit quality and document that strict liability could induce higher audit quality (Liu & Wang, 2006; Patterson & Wright, 2003; Yu, 2011), overinvestment in audit effort (Pae & Yoo, 2001) and reduce auditor failure rate (Deng et al., 2012). However, some studies raise concerns that increased litigation risk may increase management's strategic reporting which could lead to audit failure (Hillegeist, 1999), or decrease capital investment efficiency (Chan & Wong, 2002). As stated by Appel (2019), law and regulatory changes may have unintended consequences for other facets of corporate governance.

Research on corporate governance has increased dramatically, with a growing focus on a comprehensive perspective of the firm and its corporate governance by integrating the community in which firms operate. A comprehensive understanding of corporate governance mechanisms is crucial, as it involves recognising the interdependencies among key elements and their effects on firm outcomes such as decision-making and performance (Aguilera et al., 2008; Filatotchev & Nakajima, 2010). This thesis aims to extend our understanding of corporate governance and its impact on firm decisions by examining the entire management team, rather than focusing on specific managerial characteristics, and by investigating how regulatory changes, as an external governance mechanism, affect the behaviour of other governance mechanisms. The next section provides more discussion on existing research and, highlighting the gaps that will be addressed in the ensuing chapters.

1.2 Research motivations

Among internal corporate governance mechanisms, management serves as agents of shareholders, making decisions that align with organisational goals, including the allocation of investments in different assets and determines the financing strategies for these investments (Gillan, 2006). Large amount of literature has proposed potential influences that individual managers can exert on firm decisions (e.g. Bertrand & Schoar, 2003; Cyert & March, 1963; Kaplan et al., 2012). In addition to the impact of managers' certain personal characteristics (Bertrand & Schoar, 2003; Malmendier et al., 2011) or specific experience (Dittmar & Duchin, 2016; Graham & Narasimhan, 2004; Schoar & Zuo, 2017) on corporate policies, some studies consider proxies for more general skills and a more complete reflection of career focusing on several aspects

throughout the entire work experience (Custódio et al., 2013; Custódio et al., 2019; Chen et al., 2020).

However, the impact of certain personal characteristics or experience on firm outcomes could be supported (or potentially undermined) by other traits (or lack thereof). For example, risk-tolerance is not determined solely by a specific trait but the interaction among different characteristics (Adams & Funk, 2012; Dwyer et al., 2002). As suggested by the upper echelons theory and the concept of dominant coalition, the leadership of companies is a shared activity and focus should be placed more on the whole top management team rather than an individual executive to examine the relation among managers' idiosyncratic "givens", collective choices and firms' outcomes (Cyert & March, 1963; Hambrick & Mason, 1984). The interaction of the management team and their collective characteristics have a combined impact on corporate decisions. Thus, this study is motivated to focus on a combined reflection of individual characteristics, such as education, experiences, and unobservable traits, of those who can most influence firm decisions—the top management team.

Firms do not operate in vacuum. Firms are also subject to various external mechanisms operating outside the focal firm. The legal system in which firms operate, particularly corporate law, has been considered a mechanism that largely influence firms' corporate governance (Aguilera et al., 2015). In addition to regulatory changes such as antitakeover laws, Ninth Circuit Court ruling, and UD laws that have been examined in a substantial body of literature, research on changes in fiduciary duties and third-party auditor liability is much more limited.

Fiduciary duties, including duty of loyalty and duty of care, have served as the foundation of Anglo-American corporate law for almost two centuries, with the duty of loyalty particularly standing as the focal point and subject to more rigorous enforcement (Rauterberg & Talley, 2017; Velasco, 2018). It is commonly regarded as immutable, resistant to private attempts to diminish, customise, or eradicate it (Bebchuk & Hamdani, 2002). Fiduciary duties are mandated upon managers to regulate their behaviour and ensure that they act in a manner where the paramount consideration is given to shareholders' interests (Rosenberg, 2012). Law scholars have noted that executives ultimately owe just one fiduciary duty to the firm, which is the duty to diligently pursue the best interests of shareholders, referred to as shareholder profit maximisation (Eisenberg, 2006; Friedman, 2007; Hill & McDonnell, 2006). Corporate opportunity doctrine (COD), constituting a foundational aspect of the duty of loyalty that managers owe to shareholders, has an extensive history in Delaware case law, exemplified by cases such as *Guth v. Loft Inc*. in 1939, and has remained an immutable part of the corporate law within the common law legal system since the 1800s (Currie & Emeritz, 2020; Fich et al., 2023). As noted by decisions of *Broz v. Cellular Info. Sys* and *Guth* v. *Loft Inc*, COD mandates that directors and officers, acting as fiduciaries,

refrain from personally seizing any business opportunity that could be advantageous to the firm. Hence, it appears even more surprising that Delaware legislature departed from tradition, amended corporate law, and explicitly permitted corporations incorporated in Delaware to waive this supposedly "unchangeable" aspect of duty of loyalty, with eight more states subsequently adopting provisions concerning corporate opportunity waivers (COW). Then, this fundamental core of fiduciary duties is not rigorously enforced as commonly believed, and there has been an acceleration in the weakening of the duty of loyalty (Velasco, 2018).

Therefore, this study is motivated by the status quo where only limited studies have examined the consequences of the waiver, despite firms in these states having the ability to contract out of this core and immutable duty of loyalty. Another motivation stems from the fact that COD and the waivers continue to be essential topics in Delaware corporate law and have been addressed in recent litigation cases, such as *Leased Access Preservation Assoc. v. Thomas, C.A., Alarm.com Holdings, Inc. v. ABS Capital Partners Inc.*, and *Personal Touch Holding Corp. v. Glaubach*.

Legal environments and regulatory changes can also affect other external monitors, thus shaping the corporate governance landscape. External auditors, with their capacity to enhance the reliability and quality of financial information, are regarded as an integral part of the corporate governance puzzle, potentially limiting managers' ability to engage in misconduct (Desender et al., 2013). The literature concerning external auditing as an external governance mechanism frequently relies on agency theory, highlighting the significant governance role that external auditing might play (Aguilera et al., 2015). Regulatory changes and a more stringent legal environment can serve as an additional external mechanism and strengthen auditors' monitoring role (Chy et al., 2021; Chy & Hope, 2021).

This thesis is also motivated by the significant liability that auditors face to third parties under state law, which is their primary legal exposure (Anantharaman et al., 2016; Donelson, 2013). Furthermore, the motivation lies in the future trajectories proposed by contemporary studies (Al-Hadi et al., 2022; Chy et al., 2021; DeFond & Zhang, 2014), suggesting a need for further research to better understand how the regulatory environment is likely to exert a prominent influence on the behaviour of auditors and outcomes of client firms.

This thesis investigates the corporate governance mechanisms and firm decisions. Corporate governance mechanisms have different aspects, including wealth creation, protection and distribution (Filatotchev & Wright, 2005; Filatotchev & Nakajima, 2010). While governance mechanisms can help discipline agents' self-serving behaviour and ensure that management acts in the best interest of shareholders, the interests of shareholders are also served by allowing managers to exercise enterprise in terms of risk-taking such as innovation activities (Demirag et al., 2000; Short et al., 1999). Managers' excessive aversion to risk, leading them to forgo

potentially valuable yet risky projects, can impose significant agency costs upon shareholders (Cain & McKeon, 2016). Moreover, some managers might view risk-taking as an integral facet of their roles, especially when advancing to a higher hierarchy level (MacCrimmon & Wehrung, 1990; March & Shapira, 1987; Shapira, 1986). Although internal governance mechanisms are deployed to ensure accountability of management to minimise downside shareholder risk, governance is also concerned with enabling managerial entrepreneurship so that shareholders benefit from the upside potential of firms (Filatotchev & Nakajima, 2010). Therefore, this thesis is motivated to examine the impact of corporate governance on firm decisions in terms of these three aspects.

1.3 Objectives and research questions

This thesis makes an endeavour to contribute to a more comprehensive and holistic view of corporate governance and its impact on firm decisions by exploring three aspects of corporate governance. To do so, the thesis aims to answer the following questions:

1. How top management team—as an internal corporate governance mechanism actively allocate and invest firm assets and conduct risk-taking?
2. How regulatory changes—as an external corporate governance influence the financial reporting and thus increase/decrease agency costs?
3. How regulatory changes influence the distribution of earnings through affecting external auditors—another external corporate governance mechanism?

To answer these questions, the thesis first explores the role of managerial ability plays in holding risky financial assets. We employ a relatively new measure introduced by Demerjian et al. (2012) that quantifies managerial ability based on managers' efficiency in transforming firm resources to revenues, rather than focusing on a specific managerial characteristic or experience.

Then, considering that commonly employed risk-taking activities such as research and development, mergers and acquisitions, and risky real investments may be concentrated in large firms or specific industries (Fang et al., 2014), and that managers might prefer short-term projects with quicker payoffs (Narayanan, 1985), we follow Duchin et al. (2017) and Chen and Duchin (2019) in using risky financial assets as a relatively novel measure of risk-taking, which can also be utilised by non-innovative firms with few or no patents.

To answer the second question, we examine how the waivers of COD, considered a significant shift in corporate governance framework, impact the information environments. Discussion on the relationship between corporate governance and information environments is still an ongoing debate. Corporate governance is viewed a fundamental concept addressing the mechanisms to alleviate agency issues, with the primary source of agency problems stemming from the concept

of information asymmetry (Core et al., 2003; Jensen, 1993; Shleifer & Vishny, 1997). Despite numerous studies exploring the connection between corporate governance structures and diverse aspects of information environment, conflicting empirical findings persist, leaving the exact nature of this relationship incompletely understood (Ajinkya et al., 2005; Armstrong et al., 2010; Bushman et al., 2004; Dechow et al., 2010). The second study in the thesis exploits the exogenous variation in fiduciary duties, a crucial component of a firm's overall corporate governance framework, to examine the impact of changes in corporate governance on financial outcomes, specifically focusing on the aspect of earnings management.

Then, to answer the third question, we investigate how changes in external auditors' exposure to litigation risk influence their client firms' decisions to distribute earnings to shareholders. Given its regular occurrence, substantial financial amount, and its connection to a company's broader strategic objectives and other critical decisions, the dividend payout policy is intricately related to investment, financing, and overall firm value (Farre-Mensa et al., 2014; Jordan et al., 2018; Koo et al., 2017). The current body of literature has pinpointed numerous factors that influence corporate payout policies (De Cesari & Ozkan, 2015; Desai & Jin, 2011; Jiang et al., 2017; Koo et al., 2017) and has put forth several theories such as signalling, tax and agency costs (Baker et al., 2002; Farre-Mensa et al., 2014). However, dividends still continue to be one of the most puzzling issues in corporate finance. Among the traditional motivations for payouts, the agency theory is the most compelling one, supported by the most robust empirical evidence (Allen & Michaely, 2003; Farre-Mensa et al., 2014; Leary & Michaely, 2011).

In terms of agency-based models of payout policy, there are two views regarding the relationship between corporate governance and dividend payouts. Dividends can serve either as a substitute for alternative governance mechanisms or as an outcome in themselves (La Porta et al., 2000). The impact of corporate governance on firms' dividend payout policies remains an unresolved issue (Easterbrook, 1984; Farre-Mensa et al., 2014; Jensen, 1986; Lambrecht & Myers, 2012). Thus, the third study in the thesis aims to investigate the unresolve issue concerning the dynamics between corporate governance and dividend payouts, employing changes in auditors' liability as shifts in the strength of external corporate governance.

1.4 Overview of three conducted studies

This section provides individual summaries for each study, outlining their respective research designs, data samples, and conclusions for the three empirical studies.

1.4.1 Study one: Managerial ability and risky financial assets

-The first study explores the role of managerial ability plays in holding risky financial assets. Top management is perceived as the dominant component in the governance mosaic and plays a pivotal role in corporate governance (Cohen et al., 2002). In contrast to the view that managers are postulated to be rational agents and make decisions in a consistent manner under firm monitoring mechanisms and contractual incentive schemes (Bamber et al., 2010; Teraji, 2018), large amount of literature has proposed potential influences that individual managers can exert on firm decisions (e.g. Bertrand & Schoar, 2003; Cyert & March, 1963; Kaplan et al., 2012). In addition to the impact of managers' certain personal characteristics (Bertrand & Schoar, 2003; Malmendier et al., 2011) or specific experience (Dittmar & Duchin, 2016; Graham & Narasimhan, 2004; Schoar & Zuo, 2017) on corporate policies, some studies consider proxies for more general skills and a more complete reflection of career focusing on several aspects throughout the entire work experience (Custódio et al., 2013; Custódio et al., 2019; Chen et al., 2020).

This study focuses on the managerial ability of the entire top management team based on the upper echelons theory and dominant coalition. Empirical studies document the impact of managerial ability (MA score) on tax, innovation, earnings quality and credit ratings (Chen et al., 2015; Cornaggia et al., 2017; Guan et al., 2018; Koester et al., 2017). This study intends to extend and complement the line of literature by examining managerial ability and firms' risk-taking behaviour, an important strategy related to growth, opportunity and hierarchy promotion (John et al., 2008; Shapira, 1986), motivated by the view that corporate governance is not limited to disciplining managers' behaviour to align their interest with shareholders but also about allowing managers to engage in risk-taking decisions so that shareholders might benefit from the upside potential of firms (Demirag et al., 2000; Filatotchev & Nakajima, 2010; Short et al., 1999). In terms of risk-taking activities, we utilise the risky financial assets, which are inadvertently overlooked in existing literature despite their potential to finance real investment opportunities and mitigate potential adverse shocks in the future.

In our analyses, we adopt the risk-taking measurement methodology outlined by Duchin et al. (2017) and hand-collect comprehensive composition data on the financial assets of S&P500 firms from annual reports. We extract information from notes of fair value measurements, covering the period from 2009 and 2019. The footnotes provide details of cash holdings including various asset categories. Then we utilise the proportion of risky financial assets to total financial portfolios as our primary measure of risk-taking and the MA score proposed by Demerjian et al. (2012) as the proxy of managerial ability. Our findings suggest a positive relation between managerial ability and the percentage of risky financial assets, showing that one standard deviation increase in managerial ability score is associated with a 0.043 increase in the

percentage of risky financial assets. The results are robust to the inclusion of firm, industry and year fixed effects, as well as propensity score matching approach including firm which alleviates the concern over endogenous matching between firms and top managers. Cross-sectional analyses indicate that managerial ability plays a larger role in risk-taking among firms with fewer financial constraints, more transparent information, higher bank debt ratios and more industry peers. Further analyses reveal that management teams demonstrating higher ability are effective in managing risky financial securities, leading to a higher firm valuation. Additional tests indicate that the positive relation is more pronounced when firms are led by youngers CEOs in their early stages of careers.

1.4.2 Study two: The unintended consequences of disloyal managers on earnings management

The second study the impact of changes in corporate governance, specifically the allocation of new business opportunities between shareholders and management, on firms' earnings management. The legal environment, as an integral component of external governance, within which firms operate, particularly the corporate law, has traditionally been regarded as a mechanism that defines various aspects of firms' corporate governance, including liability, management-board relationships, ownership structure, and related matters (Aguilera et al., 2015).

Corporate opportunity waivers (COW) waive the "unchangeable" aspect of duty of loyalty, which is widely recognised as one of the few mandatory principles in corporate law. The waivers can potentially increase earnings management, as managers gain increased discretion and flexibility, creating a situation where they might prioritise personal benefits and manipulate financial reporting to meet earnings targets (Davidson et al., 2004). The waivers also have the potential to decrease earnings management. Managers, endowed with greater autonomy to pursue external opportunities, could experience reduced career concerns and pressure to meet short-term earnings targets, particularly considering that their undiversified human capital tied to their firms may largely determine their job security and compensation (Gibbons & Murphy, 1992; Graham et al., 2005; Hung et al., 2012).

To investigate these competing predictions, we utilise a difference-in-differences (DID) methodology to assess the impact of waivers on earnings management. Considering the enactment of COW as a significant shift in corporate law underpinning corporate governance, we use performance-matched discretionary accruals as the primary proxy for earnings management, with the sample spanning from 1996 to 2020. Our results indicate a negative relationship between the waivers and earnings management, suggesting that companies incorporated in states that

have adopted COW are likely to witness a reduction in discretionary accruals. We employ the Cox proportional hazard model to address concerns that the enactment of the waiver might be influenced by state-level accruals and macro-level state characteristics. Additionally, we conduct a dynamic treatment model to alleviate concerns regarding pre-treatment differences between treated and control firms. Our results are further verified by the stacked DID design, as proposed by Callaway and Sant' Anna (2021) and Baker et al. (2022). Our findings withstand various robustness checks, including controlling for confounding state-level regulatory changes, alternative samples, different event windows, model specifications, measures of accrual-based earnings management, and falsification tests. We further explore the potential underlying mechanisms of our results and find that the negative relation is more pronounced for firms where managers experience heightened job security concerns and increased pressures for short-term profits. In our additional analyses, we are unable to find evidence of the substitution effect between accrual-based and real earnings management, or the substitution between regulation and traditional monitoring methods.

1.4.3 Study three: Auditor litigation risk and clients' dividend policy

The third study investigates changes in external auditors' exposure to litigation risk and how these changes influence their client firms' dividend payout policy, focusing specifically the third-party auditor liability (TPAL). Dividends can function as a disciplinary tool, aligning managers' interest and mitigating agency issues. However, there are two competing views on the relationship between governance and dividends payout. The outcome view posits that when corporate governance mechanisms are sufficiently strong, the capacity of managers to appropriate firm resources or make suboptimal investments for personal benefits is restricted, their misbehaviour becomes more visible, and dividend cuts may incur significant penalties (Allen et al., 2000; Koo et al., 2017; Lambrecht & Myers, 2012). Thus, dividend payouts are expected to increase with stronger corporate governance. The substitution view suggests that when other corporate governance mechanisms are strong enough to regulate management behaviour, the need to utilise payouts as a disciplining mechanism diminishes, along with the pressure to use dividends for conveying commitment to prevent overinvestment or establish a reputation (Hail et al., 2014; Hu & Kumar, 2004; Officer, 2011). Given that all forms of controlling agency costs, including dividend payouts, entail costs themselves, there might be a substitution among mechanisms for controlling agency costs (Allen et al., 2000; Easterbrook, 1984; John et al., 2015).

Some existing studies examining the relationship between governance and dividends payout, whether supporting the outcome or substitute view, employ relatively internal factors such as boards, CEO duality, shareholders, and reporting quality and have provided substantial evidence (Officer, 2011). Different from these studies and recognising the endogenous nature of the link

between the firm's governance and dividend payouts, this study is motivated to focus on an extensively acknowledged external governance aspect (auditors), utilising exogenous shocks to auditors' liability not specifically designed for dividends, thereby expecting our results to be less susceptible to endogeneity concerns.

In our analyses, we employ a difference-in-differences (DID) methodology to investigate the impact of changes in auditors' liability to third parties on payout policy, using a sample consisting of 33,236 observations from 1965 to 1998. We find that clients' cash dividend payments decrease when the auditor's state of incorporation or location shifts to a higher auditor liability regime, while there is no evidence of significant effects on repurchases and total payouts. Additional analyses indicate that the results remain consistent when separately examining positive and negative shocks to auditor liability. The dynamic treatment model is then conducted to mitigate concerns related to pre-existing differences. The propensity score matching is employed to further address concerns regarding the potential endogenous matching of firms with their choices of states of location and incorporation. Our findings remain robust to concurrent law changes, variations in sample period and size, alternative specifications, measures, and jurisdiction assumptions. Further cross-sectional analyses explore the underlying mechanisms and indicate that the negative relationship between auditor liability and dividend payouts is more pronounced for firms with weaker governance and more severe free cash flow issues, aligning with the substitute view.

1.5 Overarching research contributions

This thesis contributes to the existing literature on the impact of corporate governance on firm decisions by holistically examining its influence on three aspects, id est, the allocation and investment of assets, financial reporting quality, and profit distribution to shareholders. In addition, this thesis examines both internal and external corporate governance by focusing on the entire top management team rather than specific characteristics, as well as investigating regulatory changes and their impact on other governance mechanisms. As such, we provide a more comprehensive view of the firm and its corporate governance by integrating both internal and external governance, along with the three aspects of governance noted by existing literature: wealth creation, protection and distribution (Filatotchev & Wright, 2005; Filatotchev & Nakajima, 2010).

We also contribute to the existing research on upper echelons theory and expand the literature on the influence of managers in shaping corporate strategic decisions by examining the entire top management team rather than specific executives. We focus on the whole management team's ability to efficiently convert firm resources into revenues, consistent with the notion that the

primary objective of a firm is to pursue value maximisation for both the firm and its shareholders, and aligning with the dominant coalition (Cyert & March, 1963) and upper echelons theory (Hambrick & Mason, 1984), which suggest that firm decisions are influenced by a diverse group of top executives.

Next, we contribute to the broader literature on the impact of legal environment as an external corporate governance mechanism on firms' behaviour, and to the literature examining the tangible consequences of changes in law and regulations by exploiting COW and TPAL. Specifically, the duty of loyalty and the COD are generally considered as immutable and resistant to private efforts to diminish, customise, or eliminate them (Bebchuk & Hamdani, 2002). However, only limited studies have investigated COW which waives this unchangeable aspect, despite its continued importance in legal cases (e.g. *Leased Access Preservation Assoc*. v. *Thomas, C.A*.). Thus, we contribute to the limited but emerging studies exploring the waivers. We also address the call from contemporary studies (Al-Hadi et al., 2022; Chy et al., 2021; DeFond & Zhang, 2014) to investigate the impact of legal environment on auditor side and its broader effects on client firms.

We further contribute to the literature on the dynamics between corporate governance structures and information environments, an area that remains empirically unresolved with conflicting findings (Ajinkya et al. 2005; Armstrong et al. 2012). Additionally, we advance the understanding of the relationship between corporate governance and firms' dividend payouts, an ongoing topic in existing literature (Easterbrook, 1984; Farre-Mensa et al., 2014; Jensen, 1986; La Porta et al., 2000; Lambrecht & Myers, 2012; Hail et al., 2014), and provide support for the argument that dividends may be less necessary when robust governance mechanisms are in place.

In summary, the thesis comprehensively investigates the effects of both internal and external corporate governance on asset allocation and investment, earnings management, profits distribution to shareholders.

1.6 Thesis structure

The remaining parts of the thesis are organised as follows. Chapter 2 explores managerial ability and risky financial assets. Chapter 3 investigates the impact of the corporate opportunity waivers on earnings management. Chapter 4 examines auditor liability to third parties and client firms' dividend payout policy. Chapter 5 concludes the thesis.

Chapter 2 Managerial ability and risky financial assets

Using hand-collected data on detailed financial asset portfolios, we investigate the role of managerial ability in holding risky financial assets. We find that high-ability management generally holds more risky financial assets, while low-ability management invests less in risky positions. These effects are stronger when firms are less financially constrained, transparent in information disclosure, and have higher levels of bank debt ratio and more competitive peers in the industry. Additionally, the market perceives higher firm value when high-ability management is at the helm, managing a large proportion of financial assets allocated to risky assets. Furthermore, the positive effect is more pronounced when CEOs are younger and in their early stages of careers.

2.1 Introduction

In neoclassical theory, rationality is related to the maximisation of profit or net revenue. Individuals are postulated to be rational agents who make decisions in a consistent manner (Teraji, 2018). Under firm monitoring mechanisms and contractual incentive schemes, managers are presumed to behave as rational optimisers, making similar decisions. Consequently, the role of managerial heterogeneity in affecting firm policies is considered limited. In this regard, managers are unlikely to exert idiosyncratic influences on corporate policies and outcomes based solely on their personal characteristics or preferences (Bamber et al., 2010). Hitt and Tyler (1991) examine the normative model of strategic decision-making, the external control, and strategic choice perspectives. They find that while industry and managerial characteristics have small effects on final decisions, the objective criteria play a more salient role, suggesting the predominant role of rational analytical methods in strategic decision processes.

In contrast to the view that managers are symbolic and act merely as representative agents, literature has explored the possible influences individual managers can exert on decisions. Bounded rationality, proposed by Simon (1947), suggests that individuals' rationality in decision-making is limited due to factors such as cognitive ability, available time, and the complexity of issues. Hence, achieving completely rational and optimal decisions is not feasible in practice. Another emphasis in organisational research is the dominant coalition, which posits that both individuals and groups impact organisational decisions. Top management members, typically considered constituents of the dominant coalition, are expected to set organisational goals, and their values can shape firm behaviour (Cyert & March, 1963). Thus, corporate policies and outcomes could be viewed as the result of top executives' collective decisions. Building on the premises of earlier strategic decision studies, bounded rationality and dominant coalition,

Hambrick and Mason (1984) advocate the upper echelons theory. It suggests that idiosyncratic differences in manager' characteristics, or "givens", influence their perceptions of various situation they face. Upper echelon characteristics, including cognitive base, values and observable background traits, affect how executives interpret complex situations and make decisions, ultimately impacting corporate outcomes.

We contribute to the broad literature on the influence of managers in shaping corporate strategic decisions. Extensive studies following Hambrick and Mason (1984) have amassed evidence on the determining role of manager-specific characteristics such as gender, overconfidence, early-life experiences, and communication and interpersonal skills (Bertrand & Schoar, 2003; Faccio et al., 2016; Kaplan et al., 2012; Malmendier et al., 2011; Schoar & Zuo, 2017). As proposed by the upper echelons theory and the concept of dominant coalition, firm leadership is a collective activity, and attention should be directed towards the entire top management team rather than a single executive (Cyert & March, 1963; Hambrick & Mason, 1984). The interactions within the management team and their combined characteristics collectively influence corporate decisions. Thus, we are motivated to focus on the entire top management team, as they can most influence firm decisions, rather than on individual characteristics or work experiences.

With considerable evidence on the impact of managers on firm policies and outcomes, this study aims to complement the literature by investigating the top management team and risk-taking. Risk-taking behaviour, which aims to pursue profitable opportunities, is an essential anchor of long-term growth, and there is a trade-off between risk and expected return in traditional decision theory (Acemoglu & Zilibotti, 1997; Faccio et al., 2011; John et al., 2008; March & Shapira, 1987). Risk-taking is closely associated with management. Management perceives risk-taking as an essential aspect of their role and as a means to advance within the corporate hierarchy (MacCrimmon & Wehrung, 1990; March & Shapira, 1987; Shapira, 1986). Therefore, it is valuable to investigate the important driving forces of risk-taking.

In a perfect capital market, managers' characteristics and preferences play little role in influencing corporate policies and risk-taking choices. Individual executives are expected to rationally manage the trade-off between risk and return to maximise firm value (Faccio et al., 2016). However, in the real world, the preference for risk-taking varies among managers. A vast body of literature documents that managerial risk-taking decisions vary among executives with heterogeneous individual characteristics, including age, tenure, gender, education, early-life experiences, and career experiences (Bertrand & Mullainathan, 2003; Chemmanur et al., 2009; Croson & Gneezy, 2009; Custódio et al., 2019; Gormley & Matsa, 2016; Koijen, 2014). Nonetheless, the impact of certain personal characteristics or experiences could be influenced (or potentially counteracted) by other traits. For example, the effect of gender on risk tolerance

can be moderated if an individual possesses financial knowledgeable and holds a senior executive position in a higher hierarchy (Adams & Funk, 2012; Dwyer et al., 2002). Therefore, it can be expected that the determinants of risk tolerance are not solely attributable to specific personal traits, but rather to the interactions among various characteristics within the management team.

We aim to complement the existing research on managers and risk-taking by investigating the managerial ability of the top management team. Managerial ability quantifies how effectively managers transform firm resources into revenues, aligning with the notion that a firm's primary objective is to maximise value for both the firm and its shareholders. This approach is consistent with the dominant coalition and upper echelons theory, which suggest that firm decisions are influenced by a diverse group of top executives.

We further contribute to the literature on the impact of management on risk-taking by employing a novel measure. Previous literature measures risk-taking using the standard deviation of return on assets, research and development, merges and acquisitions, risky real investments and so forth. While innovation and acquisitions are undeniably important forms of risk-taking, these activities tend to be concentrated in large firms and a few industries. For example, as reported by Fang et al. (2014), more than 70 percent of the observations in their sample showed zero patents. Additionally, innovation might not always be the preferred channel of risk-taking due to its long-term nature. Managers might favour short-term projects with quicker payoffs due to concerns about their career prospects (Narayanan, 1985). In this research, we follow Chen and Duchin (2019) by hand-collecting risky financial assets as a relatively novel proxy for risk-taking and extending their sample period. Due to low transaction fees, easy access, invisibility and instant returns, investing in financial assets might be a more effective approach for risk-taking. Moreover, these risky financial securities are subject to limited regulation and less scrutiny from shareholders and creditors, as they are disclosed in financial statements as seemingly safe corporate cash holdings. Another point raised by Duchin et al. (2017) is that holding risky financial positions might be considered a risk-taking activity with lower agency costs compared to mergers and acquisitions.

We conduct our research using an empirical sample comprising an unbalanced panel of 5,968 firm-year observations spanning the fiscal years 2008 to 2019. We use the managerial ability proxy proposed by Demerjian et al. (2012), which is defined as the efficiency with which managers convert resources into revenues compared to their industry peers. This method first employs Data Envelopment Analysis (DEA) to estimate firm efficiency, then disentangles management efficiency from overall firm efficiency. In the first stage, total firm efficiency is derived by using DEA data to construct a function of revenue and revenue-generating inputs, yielding a value

between zero and one. In the second stage, Demerjian et al. (2012) construct both continuous and discrete variables for managerial ability. The MA score, which is the residual from the second-stage estimation after controlling for a vector of firm-level characteristics, is then ranked by industry and year into deciles. The validity of this measure is confirmed through a series of tests, including manager fixed effects, stock price reactions to turnover announcements, and firm performance following turnover. These tests suggest that the MA score effectively captures manager-specific characteristics that are distinct from the firm itself.

We follow the method outlined by Duchin et al. (2017) to construct the risk-taking proxy. As demonstrated in their study, U.S. nonfinancial firms hold significant risky financial positions, such as mortgage-backed securities and corporate bonds, which constitute 40% of their total financial assets. First, we hand-collect data on corporate financial assets from annual reports and the notes on fair value measurements available through the Securities and Exchange Commission (SEC) Edgar database. The footnotes to the 10-K filings provide detailed breakdowns of cash holdings, including broad asset categories. We then use the proportion of risky financial assets to total financial portfolios as our primary measure of risk-taking. The data collected shows that firms hold a substantial proportion of their financial assets in risky assets. For instance, the total value of risky assets held in 2012 within our sample was approximately $600 billion, representing 37% of financial assets. We use the year 2012 to compare the aggregate values with those reported by Duchin et al. (2012), and the aggregate statistics are comparable. The percentage of risky financial assets to book assets for the entire sample period in our study is also comparable, standing at 5.5%. The mean percentage of risky financial assets to book assets, 3.8%, is close to the mean reported by Chen and Duchin (2019), which is 3.7%. Although the means for the percentage of R&D to total assets and acquisitions to total assets are higher, 15% of firms in our sample have no R&D, 20% have no acquisition costs, yet they still hold risky financial positions.

The baseline results indicate a positive association between managerial ability and the percentage of risky financial assets, after controlling for firm-level characteristics, as well as year and industry fixed effects. Specifically, the findings show that a one standard deviation increase in the managerial ability score is associated with a 0.043 increase in the percentage of risky financial assets, equivalent to a 0.19 standard deviation increase in the ratio of risky assets, or a 34.31% increase from the mean. This result remains significant after the inclusion of firm fixed effects.

While the baseline results are significantly positive, some research raises concerns about the matching process between firms and top executives, which might introduce bias and challenge the existence of management idiosyncrasy. If this is the case, managerial styles might be

anticipated by firm boards, leading to the appointment of top executives specifically to hold risky financial assets. To address this concern, we employ a propensity score matching (PSM) approach. We partition observations into firms with high-ability managers and those with low-ability managers, where high-ability managers are defined as executives with a managerial ability score above the yearly median, and low-ability managers as those with a score below the yearly median. The results suggest that managerial ability has a significantly positive impact on the percentage of risky financial assets, with all other firm-level characteristics remaining indistinguishable, indicating that our baseline inferences continue to hold.

We then conduct a series of cross-sectional analyses to further explore the implications of managerial ability on the management of risky financial securities. The results indicate that managerial ability has a more pronounced effect on holding risky financial assets under the following conditions: (1) when financial constraints are lower, (2) when information asymmetry is reduced, (3) when the firm has a higher bank debt ratio, and (4) when there are more industry peers. Our empirical tests also utilise Tobin's Q and return on assets as proxies for firm valuation and performance. The results indicate that firms with a higher proportion of risky financial assets experience greater valuation when high-ability management is in charge. This suggests that more capable managers are effective in managing risky financial assets within the overall portfolio and in balancing the trade-off between risk and return, at the very least not diminishing firm value when investing heavily in risky securities. In another set of supplementary tests, we examine whether the magnitude of the association between managerial ability and risky financial assets varies with different CEO characteristics. The results indicate that while generally skilled managers tend to hold more risky financial assets, the influence of managerial ability is particularly pronounced when the firm is led by a younger CEO in the early stages of their career.

The remainder of the chapter is structured as follows. Section 2 reviews the relevant literature and presents the empirical hypothesis. Section 3 details the data collection process, construction of key variables, sample selection, empirical methodology, and summary statistics. Section 4 reports the main baseline results and provides interpretations. Section 5 presents additional cross-sectional analyses, explores how the market perceives the firm value of risky financial assets, and investigates the impact of certain CEO characteristics on the holding of risky financial assets. Finally, Section 6 concludes the chapter.

2.2 Related literature and hypothesis

2.2.1 Management and firm policies

The importance of the management team has been widely addressed in the literature when exploring why organisations perform as they do. Hambrick and Mason (1984) propose the upper echelons theory, based on the concepts of bounded rationality and dominant coalition, arguing that the experiences, values, and personalities of powerful actors within organisations significantly influence how they interpret strategic situations and, consequently, the choices they make, which ultimately manifest in organisational outcomes. Managers with idiosyncratic "givens" or characteristics perceive the complex situations they face differently. These perceptions, combined with their cognitive base and values, guide managers in making strategic choices. The upper echelon characteristics such as cognitive base, values, and other observable traits are key determinants of strategic policies, which in turn influence organisational performance. Additionally, another idea introduced is that focusing on the entire top management team rather than on individual executives provides a more comprehensive understanding of how characteristics and outcomes are related, as the interactions and collective traits of the team exert a combined influence on corporates. In this context, executives have a significant impact—whether positive or negative—on their firms.

Extensive studies have provided empirical evidence on the role of executive characteristics in shaping corporate behaviour. Bertrand and Schoar (2003) use manager fixed effects to track top management across different companies over time, demonstrating that these effects can explain a wide range of firm policies, such as dividend policy, cost-cutting strategies, diversification, and acquisitions. Specifically, they analyse the impact of two observable managerial characteristics—birth cohort and MBA degree. Their findings indicate that older generations of executives tend to behave more conservatively, engaging in lower levels of investment, maintaining lower leverage, and holding more cash, while MBA degree holders pursue more aggressive strategies, including lower dividends, higher leverage, and increased investment. Malmendier and Tate (2005) examine the influence of executive characteristics on corporate investment policies, revealing that, beyond managerial overconfidence, CEOs with financial education backgrounds exhibit lower investment-cash flow sensitivity, whereas those with technical education—such as engineering, mathematics, and applied sciences—display higher sensitivity. Additionally, formative early-life experiences, such as growing up during the Great Depression or serving in the military, are shown to shape individuals' beliefs and strategic choices. Recession CEOs are relatively reluctant to access external capital, likely due to scepticism of public markets, and maintain lower levels of R&D, capital expenditures, and leverage ratios

(Graham & Narasimhan, 2004; Malmendier et al., 2011; Schoar & Zuo, 2017). In contrast, military CEOs, especially those who served in World War II, tend to be more aggressive, with higher leverage ratios (Malmendier et al., 2011).

Unlike early-life experiences or relatively time-invariant personal traits such as gender and education, ongoing professional experiences are not predetermined but evolve and change throughout a career. These experiences are crucial in shaping management styles, which in turn influence different firm policies (Dittmar & Duchin, 2016). Dittmar and Duchin (2016) distinguish the effect of professional experience from early-life experiences and personal traits, finding it to have a stronger impact on corporate policies. Specifically, professional experiences can mitigate the influence of overconfidence while amplifying the effects of having lived through the Depression. When considering the impact of career experiences per se, it is suggested that managers' risk preferences may change, leading them to adopt more conservative strategies if they have faced negative firm outcomes, such as bankruptcy, adverse shocks to cash flows, stock returns, or bond ratings. Consequently, top executives who encountered such distress earlier in their careers tend to hold lower levels of debt and capital expenditures, while maintaining higher cash reserves. Custódio and Metzger (2014) specifically examine financial expertise derived from previous career experience in banking or investment firms. Their findings indicate that financial expert CEOs are perceived as better communicators, as evidenced by a reduced dispersion in analysts' forecasts. This enhanced communication ability allows them better access to capital markets and facilitates raising external financing. As a result, these CEOs do not need to maintain high levels of cash holdings, instead opting to hold more debt and engage more frequently in share repurchases. However, despite their dynamic response to the Bush Tax Cuts and their financial sophistication, corporates led by financial expert CEOs tend to invest less in innovation and produce fewer patents and patent citations.

Instead of focusing on specific work experiences in distressed firms or the financial industry, the General Ability Index (GAI) introduced by Custódio et al. (2013) encompasses several aspects of past career experience, such as the number of previous positions, firms, and industries, classifying CEOs as either generalists or specialists. Unlike personal characteristics or experience in a specific type of firm or industry, GAI offers a more comprehensive reflection of a CEO's entire professional career. Given their diverse work experiences, generalists possess transferable skills that can be applied across firms and industries, making them more likely to have external job opportunities. The general human capital accumulated from their varied career experiences can also be advantageous in their current roles. CEOs with broader managerial skills may bring innovative ideas from their extensive career backgrounds, fostering innovation and leading to the production of more patents with greater citation impact (Custódio et al., 2019). However, a potential downside is that generalists' fortunes may be less tied to the long-term

success of their current firms due to their transferable skills and outside job options. Consequently, they might be less inclined to engage in activities with long-term returns. For example, generalist CEOs are less likely to engage in corporate social responsibility (CSR) activities, as these initiatives are time-consuming, yield uncertain long-term payoffs, and are difficult to reflect in stock prices (Chen et al., 2020).

While a large literature showing that managerial ability is important to the equity market and valued by equity holders, its importance to the credit market is also documented. High-ability managers better understand industry trends and future product demand, thus generate future earnings and returns with less volatility. Therefore, credit rating agencies are inclined to perceive higher managerial ability as a signal of lower default risk (Bonsall et al., 2017). Using Standard and Poor's (S&P) issuer-level credit ratings as a measure for credit risk, firms with high-ability managers are found to receive favourable credit ratings, as they can alleviate the undesirable impact of negative earnings and low interest coverage ratio on credit ratings (Cornaggia et al., 2017). In addition to credit ratings and credit risk captured by ratings, managerial ability also affects required rates of return of credit market participants. Higher managerial ability is negatively associated with credit spreads and then impact bond pricing directly and indirectly through the channel of credit ratings (Bonsall et al., 2017). Overall, managerial ability is an important factor considered by debt market participants and incorporated into credit risk assessment by the credit market.

2.2.2 Top management team, managerial ability and firm policies

In contrast to the influence of individual managers' abilities or experiences, the upper echelons theory and the concept of the dominant coalition suggest that organisational outcomes may result from the collective choices of managers. Since corporate leadership is a shared activity, the interactions within the management team and their combined characteristics collectively influence firm decisions (Cyert & March, 1963; Hambrick, 2007; Hambrick & Mason, 1984). As discussed in the upper echelons theory by Hambrick and Mason (1984), top executives' strategic choices are shaped by their perceptions of complex real-world situations, which are influenced by their idiosyncratic 'givens,' cognitive base, and values. Thus, firm policies may be affected not only by specific factors but also by their interactions with other managerial aspects. For example, professional experiences can mitigate the impact of overconfidence while magnifying the influence of early-life depression experiences (Dittmar & Duchin, 2016).

Instead of focusing on personal characteristics, life or work experiences, Demerjian et al. (2012) introduce a novel measure to quantify managerial ability (MA score) based on managers' efficiency in converting firm resources into revenues. This overall measure of managerial ability

reflects a combination of individual traits, such as education and past career experiences. Utilising Data Envelopment Analysis (DEA), the measure assesses firm efficiency by evaluating how well firms transform a given set of resources into revenues. The firm efficiency measure is influenced by both firm-level and management-level factors. Therefore, by removing firm-specific features that might assist or hinder managerial efforts, the remaining unexplained residual is attributed to the management team. Assessing managers based on their efficiency in generating revenues aligns with the principle that a firm's primary objective is value maximisation, and managers are expected to act rationally to maximise value for the firm and its shareholders. A series of validity tests confirm that the MA score is significantly related to manager fixed effects, and announcement returns for CEO turnovers are negatively associated with the MA score, indicating its superiority over other managerial ability proxies. Additionally, subsequent firm performance improves when a newly appointed CEO has a higher MA score than the departing CEO. This suggests that the MA score provides a more comprehensive and accurate depiction of managerial ability, is transferable across firms, and is valued by the market.

Empirical studies have shown that higher-ability managers are expected to have a better understanding of firm operations and possess greater knowledge about efficiently implementing strategies. High-ability management can capitalise on income shifting and foreign transfer pricing, effectively respond to changes in dividend tax penalties by incorporating them into payout policies, and engage in tax planning opportunities that reduce tax payments through integration with tax avoidance strategies (Guan et al., 2018; Koester et al., 2017). Additionally, high-ability managers are more familiar with clients and business operations, enabling them to make more accurate accrual estimates, thereby improving earnings quality and providing a more precise depiction of the firm's operating performance (Demerjian et al., 2013). Furthermore, Chen et al. (2015) find that managerial ability is positively associated with firm innovation output, as measured by the number of patents and patent citations. The equity market values the innovation output generated by high-ability managers to a greater extent, as reflected in higher market-to-book ratios.

2.2.3 Management, risk tolerance and risk-taking

Among the various firm policies, risk-taking stands out as particularly crucial due to its direct impact on growth opportunities and the strategic positioning of a firm within a competitive market environment. John et al. (2008) examine the association between risk-taking and growth using market-adjusted volatility of firm earnings, country averages of firm earnings volatility, and imputed country risk scores derived from industry risk characteristics. Firm-level growth is measured by the average growth in total assets and sales, while country-level growth is gauged by the growth of real GDP per capita and total factor productivity (TFP). Their findings indicate that

higher levels of risk-taking are associated with increased growth, particularly in terms of productivity. Additionally, another stream of literature explores managers' perceptions and attitudes, demonstrating a close link between management and risk-taking. Research shows that managers often view risk-taking as an essential aspect of conducting business. Executives are more likely to encourage risk-taking, especially as they ascend to higher positions within the corporate hierarchy, where it becomes ingrained in their belief system that risk-taking is a fundamental element of being managers (March & Shapira, 1987; Shapira, 1986). Furthermore, successful managers, who possess greater wealth and authority, tend to perceive themselves as more inclined to engage in risk-taking (MacCrimmon & Wehrung, 1990).

In a perfect capital market, executives are expected to select investments that align with the goal of firm value maximisation. Therefore, managers' personal characteristics and preferences should not influence their risk-taking decisions (Faccio et al., 2016). However, in reality, the propensity for risk-taking varies among managers due to differing managerial incentives, ownership holdings, and personal characteristics (Chen et al., 2015; Gormley & Matsa, 2016; Wright et al., 2007). Risk-taking is an external manifestation of risk tolerance, which significantly influences individual financial decisions. Previous studies have explored various factors related to risk tolerance, including age, individual wealth, and gender, as well as the resulting differences in behaviour (Croson & Gneezy, 2009; Morin & Suarez, 1983; Wang & Hanna, 1998). Executives with varying degrees of risk tolerance exhibit different risk-taking behaviours, such as distinct mergers and acquisitions strategies and conservative dividend payout policies (Caliskan & Doukas, 2015; Cain & McKeon, 2016; Frijns et al., 2013; Graham et al., 2013).

As aforementioned, firm policies are not solely influenced by a specific characteristic of an individual manager. For instance, career experiences can moderate the effects of managerial overconfidence and amplify the influence of early-life experiences (Dittmar & Duchin, 2016). The impact of age on risk tolerance and subsequent risk-taking decisions may be altered by individual wealth (Morin & Suarez, 1983). Similarly, the gender-related impact on risk-taking behaviour can be mitigated by executives' expertise in financial markets and their possession of valuable skills (Adams & Funk, 2012; Dwyer et al., 2002). Given that corporate leadership is a collective endeavour, with the entire management team exerting the most significant influence on firm policies, it is reasonable to expect that risk-taking strategies are shaped not by a single trait or experience but by the interaction of various characteristics within the whole management team.

2.2.4 Management and risky financial assets

Previous studies have employed a variety of proxies to measure risk-taking, including the standard deviation of return on assets, standard deviation of return on equity, innovation

citations or patents, capital expenditures, acquisition expenditures (Faccio et al., 2011, 2016; Gormley & Matsa, 2016). While innovation and acquisitions are undeniably important forms of risk-taking, these activities tend to be concentrated in large firms or specific industries. For instance, Fang et al. (2014) report that over 70 percent of the observations in their sample had zero patents. Furthermore, innovation may not always be the preferred channel of risk-taking due to its long-term nature. Managers, concerned about their career prospects, might favour short-term projects with quicker payoffs (Narayanan, 1985). Therefore, we follow Duchin et al. (2017) and Chen and Duchin (2019) by using risky financial assets as a relatively novel measure of risk-taking, which can also be applied to non-innovative firms with few or no patents.

As demonstrated by Duchin et al. (2017), U.S. nonfinancial firms invest significantly in risky financial assets, which constitute approximately 40% of their total financial portfolios. Traditional measures of cash holdings (CHE) typically include only 'cash and cash equivalents' and 'short-term investments/marketable securities' reported on the balance sheet. However, the authors argue that relying solely on this traditional measure may underestimate the extent of firms' money-like financial assets, as firms also make substantial investments in other balance sheet items such as 'long-term investments' and 'other assets.' Their findings reveal that at least 23.2% of the traditional CHE of nonfinancial firms consists of risky assets. Chen and Duchin (2019) further explore this topic by examining the impact of the 2014 oil price crisis, finding that firms increased their holdings of risky financial securities post-crisis, particularly those with significant short-term debt. Additionally, their hand-collected data on real risky investments in exploratory wells within the oil and gas industry show no evidence that firms with short-term debt shifted risk through real investments after the crisis. In fact, among firms in the oil and gas sector, those with higher leverage ratios tended to prefer risky financial assets over real assets for risk-taking and risk-shifting. Overall, it is suggested that firms may hold financial securities to engage in risk-taking, using these securities—presented as corporate cash holdings—as a form of camouflage.

Corporations might prefer risky financial securities as a novel conduit for risk-taking. Investing in financial assets offers advantages over traditional real assets for nonfinancial firms, as these securities are more invisible, easier to access, more liquid, and have lower transaction costs, providing quicker returns compared to conventional risky projects like innovation. Additionally, these securities face less regulation and scrutiny from shareholders and creditors and incur lower agency costs compared to mergers and acquisitions (Duchin et al., 2017). Moreover, when engaging in risk-taking activities, managers may opt for strategies that minimise complications and challenges (Chen et al., 2015). For example, managers might pursue diversifying acquisitions that allow firms to enter new industries as a means to mitigate risk (Gormley & Matsa, 2016). Thus, investing in risky financial assets can be a preferred approach for risk-taking, as these assets are

presented in financial statements as ostensibly safe, with reduced agency costs and fewer associated risks.

Managerial heterogeneity exists among individual executives, with managers displaying different styles and preferences when making decisions. Extensive literature documents that managerial characteristics influence risk tolerance and subsequent risk-taking strategies (Caliskan & Doukas, 2015; Graham et al., 2013). However, the impact of certain personal characteristics or experiences on firm outcomes can be either reinforced or mitigated by other traits. For example, the influence of gender may be altered by financial knowledge (Dwyer et al., 2002). According to upper echelons theory and dominant coalition, firm policies are shaped by the entire management team, as corporate leadership is a shared activity. The characteristics of top executives and their interactions collectively influence risk-taking strategies. Thus, we focus on the impact of the entire top management team and their overall managerial ability, which can be considered as a combination of personal traits, skills, and experiences. Moreover, managerial ability reflects the efficiency of the management team in converting firm resources into revenues, aligning with the principle that a firm's primary objective is to maximise value.

Managers with high ability are associated with higher quality financial reporting (Demerjian et al., 2013), greater access to equity and debt markets (Bonsall et al., 2017; Cornaggia et al., 2017), and are expected to implement superior policies and generate more revenue (Chen et al., 2015; Guan et al., 2018; Koester et al., 2017). When managers possess better abilities or transferable skills across firms and industries, they are less exposed to unemployment risk and more likely to engage in risky projects, such as innovation (Custódio et al., 2019). Chemmanur et al. (2009) argue that firms with more capable and reputable management enjoy greater access to equity markets, invest at higher levels, and undertake better projects with larger net present value. Similarly, studies using the MA score as a proxy for managerial ability indicate that higher-ability managers are more likely to engage in risk-taking (Andreou et al., 2016; Chen et al., 2015; Yung & Chen, 2018). In this context, managers with superior ability are both more inclined and more capable of assuming risks in decision-making, given their advanced human capital and confidence in their abilities, or their desire to signal competence. Given the advantages of financial securities over traditional real projects—such as invisibility, quick returns, lower agency costs, and limited scrutiny—managers may prefer to use risky financial assets as a conduit for risk-taking. Based on this discussion, we propose the following hypothesis:

Managerial ability is positively related to corporate holdings of risky financial assets.

2.3 Data, methodology and summary statistic

Our empirical analysis focuses on firms that were members of the S&P 500 index at any time between 2009 and 2019. Data on GVKEY, TICKER, CUSIP, company name, and the dates of inclusion and exclusion from the S&P 500 are obtained from WRDS. Firms not listed in the S&P 500 at any given point during this period are excluded. In line with Duchin et al. (2017), financial firms with four-digit SIC codes 6000-6999 and utility firms with SIC codes 4900-4999 are also excluded from the sample. Using identifiers including GVKEY and TICKER, firm-level accounting data are obtained from WRDS-Compustat, while CEO-related data used in additional tests are obtained from WRDS-ExecuComp and BoardEx. After merging the relevant datasets, the final sample comprises 5,968 firm-year observations from 2008 to 2019, covering 549 unique firms.

2.3.1 Measuring managerial ability

We use the managerial ability score (MA score) proposed by Demerjian et al. (2012) to measure managerial ability, which estimates managers' efficiency in converting firm resources into revenues. This measure is widely applied as a proxy for quantifying managerial ability and examining its impact on firm policies and performance across accounting, finance, and management research (Andreou et al., 2016; Chen et al., 2015; Koester et al., 2017). The updated version of the dataset used in Demerjian et al. (2012) is available on Peter Demerjian's website and includes 221,922 observations for fiscal years 1980 through 2018, representing 22,617 unique firms. To estimate within-industry firm efficiency, Demerjian et al. (2012) first use Data Envelopment Analysis (DEA) to model revenue as a function of firm resources. This measure reflects both the effects of the firm and the management team. Next, the total firm efficiency is decomposed by regressing it on firm characteristics. To isolate managerial ability, they estimate a Tobit regression by industry, incorporating year fixed effects and clustering standard errors by firm and year to control for cross-sectional and intertemporal correlation, as shown in Equation (2.1). The residual from this model serves as the measure of managerial ability.

$$Firm\ Efficiency_i = \alpha + \beta_1 \ln(Total\ Assets)_i + \beta_2 Market\ Share_i + \beta_3 Free\ Cash\ Flow\ Indicator_i + \beta_4 \ln(Age)_i + \beta_5 Business\ Segment\ Concentration_i + \beta_6 Foreign\ Currency\ Indicator_i + Year_i + \varepsilon_i \quad (2.1)$$

2.3.2 Measuring risky financial assets

To investigate risky financial assets, we begin with the approach used by Duchin et al. (2017) and hand-collect data on firms' financial investments from the footnotes of 10-K filings available on

the Securities and Exchange Commission's EDGAR database, as well as from firms' official websites for additional information. We focus on non-operating financial portfolios, which include: (1) the traditional measure of cash holdings from prior studies, namely Compustat's data item CHE, which encompasses 'cash and cash equivalents' and 'short-term investments (short-term marketable securities)' as reported on the consolidated balance sheet, and (2) additional financial assets disclosed as 'long-term investments (long-term marketable securities)' or 'other assets'.

Since firms began disclosing the fair value of financial assets in 2009 following the implementation of SFAS No. 157, the final sample spans 11 years, from 2009 to 2019, the most recent year for which data are available for most firms. The sample includes all firms that were members of the S&P 500 index at any point between 2009 and 2019. In line with prior literature, financial industry firms (SIC 6000-6999), utilities industry firms (SIC 4900-4999), and payroll processing firms that hold substantial financial assets on behalf of their clients are excluded. The hand-collected dataset comprises 6,029 observations across 549 unique firms.

To measure asset riskiness, we adopt the dichotomous approach outlined by Duchin et al. (2017), classifying financial assets as either safe or risky, with 'risky' referring to systematic risk. Based on the Federal Reserve's distinction between money-like and non-money-like securities (Anderson & Kavajecz, 1994), a natural breakpoint is established between safe and risky assets. Money-like assets are those that function as a store of value, indicating a stable value. Accordingly, securities deemed money-like by the Federal Reserve are categorised as safe assets. This approach aligns with the traditional view of corporate cash holdings that industrial firms typically invest in actual cash or risk-free, near-cash securities. Specifically, financial assets are considered safe if they fall into the following broad categories: cash, cash equivalents, time deposits, bank deposits, commercial paper, money market funds, and U.S. Treasury securities. Financial assets collected are classified as risky if they fall into the following categories: corporate bonds, equity, asset-backed securities, mortgage-backed securities, non-U.S. government bonds, and other securities. Restricted assets, pension plan assets, deferred executive compensation, and derivative hedging instruments are excluded from our analysis.

Using the collected data, the primary measure of firms' risky financial assets can be constructed. This is done by calculating the ratio of risky financial assets to total financial assets, which represents the proportion of investments classified as risky within a firm's overall financial portfolio. This ratio captures the allocation between risky and safe financial assets, where an increase in the ratio indicates either a rise in risky financial assets or a decline in safe financial assets. Another measure considered is the ratio of risky financial assets to total book assets, which scales a firm's risky financial assets by its overall size. However, as noted by Chen and

Duchin (2019), a potential concern is that an increase in the ratio could be driven by a reduction in book assets rather than an active decision to increase holdings of risky financial assets.

$$\frac{Risky\ financial\ assets}{Risky\ financial\ assets + Safe\ financial\ assets}$$

2.3.3 Firm-level variables and CEO-level characteristics

A vector of firm-level variables is collected to proxy for fundamental characteristics that can influence firms' investment decisions and financial portfolio allocations. In line with Bates et al. (2009), these variables include the market-to-book ratio, firm size, cash flow to assets, net working capital to assets, capital expenditures to assets, leverage, industry cash flow risk, a dividend payout dummy, R&D to sales, and acquisitions to assets—all of which may affect the level of firms' financial investments. All firm-level accounting variables are constructed using data from Compustat and are winsorised at the 1st and 99th percentile levels to minimise the potential impact of outliers. For further analysis, data on financial constraints, information asymmetry, bank debt ratio, and industry peers are also collected. These factors have been identified in prior literature as relevant to corporate risk-taking behaviour and firm policies (Bonsall et al., 2017; Chen et al., 2015; Cornaggia et al., 2017).

CEO-level variables are also incorporated in additional tests. Following Hirshleifer et al. (2012) and Custódio et al. (2019), we collect data on CEO age, CEO tenure, and CEO-chair duality, as CEO characteristics might play a significant role in firms' risk-taking behaviour. CEO tenure is measured as the number of years the CEO has been with the firm, while CEO-chair duality is a binary variable that equals one if the CEO also serves as the chairman of the board.

2.3.4 Summary statistics

Table 2.1 provides the descriptive statistics for the main variables used in the baseline regression analysis. These statistics include the mean, median, standard deviation, minimum, and maximum values. The average winsorised managerial ability (MA) score is 0.052, with a standard deviation of 0.175. Firm size, measured as the natural logarithm of the book value of total assets, has an average value of 9.115. On average, firms in the sample have a market-to-book ratio of 2.203, a leverage ratio of 28.2%, and allocate 4.8% of their total book assets to capital expenditures and 2.7% to acquisitions. Additionally, 5.2% of sales is typically spent on R&D. Cash flow represents 9.1% of total assets, and net working capital, which includes assets that act as cash substitutes, accounts for 1.6% of total assets. The average industry cash flow risk stands at 2.255. The proportion of risky financial assets in the total financial portfolio averages 12.6%. The absolute amount, percentage of book assets, and the composition of cash holdings (CHE) and

total financial assets for the fiscal year 2012 are consistent with those reported by Duchin et al. (2017). Similarly, the summary statistics presented in Table 2.1 are also comparable.

[Insert Table 2.1 Here]

Table 2.2 presents the results of the univariate analysis for the dependent variable and firm-level covariates. Observations are classified into two groups: the low-ability group, consisting of firms with a managerial ability (MA) score lower than the median, and the high-ability group, where the MA score is higher than the yearly median. After excluding all missing values, the analysis includes 2,106 observations in the low-ability group and 2,109 observations in the high-ability group. T-tests and Wilcoxon–Mann–Whitney tests are performed to examine differences in means and medians, respectively. The results indicate that, on average, firms with high-ability management hold a larger percentage of risky financial assets compared to those with lower-ability management. Additionally, firms with higher MA scores tend to be larger in size, exhibit a higher market-to-book ratio, generate higher cash flow, maintain lower net working capital, allocate a higher proportion of sales to R&D, and have a lower leverage ratio.

[Insert Table 2.2 Here]

2.4 Main results

2.4.1 Baseline results

To examine the effect of managerial ability on risky financial asset holdings, the following regression model is used:

$$Risky\ financial\ assets_{it} = \alpha + \beta MA\ score_{i,t-1} + \gamma X_{i,t-1} + Fixed\ Effects + \varepsilon_{it} \quad (2.2)$$

In the equation above, the dependent variable refers to the ratio of risky financial assets to total financial assets for firm i in year t, as described earlier. The key explanatory variable is the MA score for firm i in fiscal year $t-1$. X represents a vector of firm-level control variables as outlined in the previous section. The baseline regression also controls for 2-digit SIC industry fixed effects to account for industry-specific factors, year fixed effects to capture macroeconomic time trends, and industry-year interaction fixed effects to address unobservable, time-varying industry-specific influences. Additionally, firm fixed effects are included to account for unobservable time-invariant differences across firms. Estimates are reported with robust standard errors clustered at the firm level.

Table 2.3 presents the baseline results on the relationship between risky financial assets and managerial ability. Covariates are lagged by one year, with all missing values excluded. Column (1) shows the estimates after including firm and industry effects, without additional control variables. The coefficient for the MA score is significantly positive at the 1% level. When firm-level covariates are included, as shown in Column (3), the coefficient remains positive and significant at the 1% level. This suggests that managerial ability is positively associated with the percentage of risky financial assets. In terms of economic significance, the coefficient in Column (3) indicates that a one standard deviation increase in the MA score is associated with a 0.043 increase in the percentage of risky financial assets, id est, a 0.19 standard deviation increase in the ratio of risky assets, or a 34.31% increase from the mean. Columns (2) and (4) include firm fixed effects for robustness to address concerns about unobserved time-invariant differences at the firm level. The coefficients on the MA score remain positive and significant in both specifications, with a significance level of 10% in the absence of control variables and a significance level of 5% with time-varying covariates. Our inferences continue to hold and suggest that unobserved firm-level factors do not impact the results. In Appendix 2B, the baseline results remain significant when using the alternative measure, specifically the ratio of risky financial assets to total book assets.

Following Bates et al. (2009), Chen and Duchin (2019), and Duchin et al. (2017), control variables include market-to-book ratio, firm size, cash flow to assets, net working capital to assets, capital

expenditures to assets, leverage, industry cash flow risk, a dividend payout dummy, R&D to sales, and acquisitions to assets. The baseline results indicate that firm size is positively associated with the proportion of financial assets allocated to risky categories, consistent with findings from studies on unconstrained firms. Conversely, the negative relationship between leverage and risky financial assets suggests that firms with higher leverage ratios tend to avoid risky financial investments. Additionally, the estimates for market-to-book ratio, net working capital, R&D expenditures, and acquisition expenditures are comparable to those reported in previous research.

[Insert Table 2.3 Here]

2.4.2 Identification strategy

The baseline regression thus far has demonstrated a significantly positive relationship between managerial ability and the percentage of risky financial assets. However, the endogenous matching between firms and top managers could introduce bias into the results (Custódio et al., 2019). Fee et al. (2013) have casted doubt on the existence of idiosyncratic-style effects in policy choices, arguing that managerial styles are anticipated by firm boards. To address this concern, propensity score matching (PSM) is employed as an identification strategy. Firm-years with a MA score above the median are matched with those below the yearly median, ensuring that all other firm-level characteristics exhibit no significant differences.

Table 2.4 presents the results of the propensity score matching (PSM) estimation. Specifically, it compares the percentage of risky financial assets between firms with a higher-than-median MA score and those with a lower-than-median MA score. As previously mentioned, the median MA score is calculated for each fiscal year, and a dummy variable is constructed, taking the value of one if the firm-year observation has an MA score higher than the median. The results from a logit regression predicting whether a firm has an MA score higher than the median are presented, followed by the estimation of the propensity score. The same vector of control variables used in the baseline regression is included in the PSM analysis.

The nearest-neighbour method is employed, with 1-to-1 matching performed without replacement. As highlighted by Shipman et al. (2017), the most frequently used design is one-to-one matching without replacement, with over 80% of the studies surveyed reporting the use of this approach. Following Al-Hadi et al. (2023) and Ni (2020), this study employs one-to-one matching without replacement to pair the treatment group with the control group. A caliper value of 0.001 is used, setting the maximum allowable distance in propensity scores between the treated and matched firms. Each firm in the control group is used no more than once as a match for a treated observation. This approach ensures that firms with a higher-than-median MA score,

referred to as the treatment group, are comparable to those with a lower-than-median MA score (control group). Specifically, each firm in the treatment group is matched to a firm in the control group with the closest propensity score, ensuring no significant differences across all covariate variables.

Two diagnostic tests are conducted to ensure that firms in the treatment group are not statistically distinguishable from those in the control group based on firm-level characteristics. First, a logit regression is estimated for the matched sample, with the post-match results presented in column (2) of Panel A of Table 2.4. None of the coefficient estimates are significant, indicating that observations in the treatment and control groups are statistically indistinguishable with respect to the reported characteristics. The pseudo-R-squared value decreases significantly from 0.205 in the pre-match sample to just 0.012 in the post-match sample.

The second test examines whether the differences in means for each control variable between the treatment and control groups are statistically insignificant. As shown in Panel B of Table 2.4, none of the variables exhibit statistically significant differences, consistent with the results of the previous test. Overall, this suggests that the PSM method mitigates the impact of variables other than managerial ability on the holdings of risky financial assets. Thus, the likelihood increases that the observed differences in the percentage of risky assets are attributable to higher MA scores. Panel C reports the average treatment effect estimates, indicating that firms with high-ability management tend to hold more risky financial assets compared to those with lower-ability management, given that other firm characteristics are statistically indistinguishable. Then, the baseline regression is re-estimated on the propensity score-matched sample, and the results are presented in Panel D. These results suggest that, when all other covariates are statistically indistinguishable, managerial ability has a positive and significant effect on the holdings of risky financial assets.

[Insert Table 2.4 Here]

2.5 Additional tests

2.5.1 Cross-sectional analyses

We then conduct additional tests to explore whether the magnitude of the association between managerial ability and firms' risky financial assets varies under different conditions. Cross-sectional analyses are performed based on the following sample partitions: (1) fewer versus more financial constraints, (2) less versus more information asymmetry, (3) low versus high bank debt ratio, and (4) fewer versus more industry peers.

First, we explore whether the association between risky financial assets and managerial ability is stronger in financially constrained or less constrained firms. Duchin et al. (2017) observe that financial asset portfolios and risky financial asset holdings tend to increase as firms become less financially constrained. Other studies similarly show that financial constraints hinder risky projects (e.g., R&D) or lead financially constrained firms to discontinue such projects (Li, 2011). Based on previous studies, the Altman Z-Score (Altman, 1968), KZ Index (Kaplan & Zingales, 1997), and SA Index (Hadlock & Pierce, 2010) are widely used as measures of financial constraints. The results reported primarily focus on the Altman Z-Score, which provides a snapshot of corporate health and the probability of insolvency. Firms with high Z-Scores generally have high credit quality and easier access to long-term debt. It is hypothesised that managerial ability plays a more significant role in less financially constrained firms. The sample is partitioned based on the median of financial constraint measures in fiscal year t into a lower-than-median subsample (constrained) and a higher-than-median subsample (unconstrained). Columns (1) and (2) of Table 2.5 present the results from the cross-sectional test. The coefficient on managerial ability is significantly positive at the 5% level in the high Altman Z-Score subsample and not statistically significant in the other subsample. This suggests that managerial ability has a greater impact on risky financial assets when firms are less financially constrained. However, a concern is that the Altman Z-Score primarily measures corporate default risk, although it could also reflect aspects of financial constraints, as firms with lower Z-Scores typically face higher financial distress and greater limitations in accessing external financing. Therefore, the KZ Index and SA Index are used to measure financial constraints for robustness in Appendix 2C. The estimated coefficients remain statistically significant when firms are less financially constrained. Furthermore, as noted by Duchin et al. (2017), the size of the overall financial asset portfolio is a key measure of financial constraints. The result remains consistent when the sample is partitioned based on the median of financial assets to total book assets, indicating that financially constrained firms are less likely to invest in risky assets compared to less constrained firms. Definitions of the Z-Score, KZ index, and SA index are provided in Appendix 2.A.

Next, we examine the magnitude of the association between risky financial assets and managerial ability in firms with different levels of information asymmetry. Research suggests that higher ability managers mitigate information asymmetry and have greater access to financing resources, allowing them to invest more than their less capable peers (Andreou et al., 2016; De Franco et al., 2017). Tang (2009) notes that information asymmetry limits firms' access to credit markets, affects capital constraints, and influences investment decisions. Previous studies (Ascioglu et al., 2012; Venkatesh & Chiang, 1986) use idiosyncratic risk, illiquidity, and bid-ask spread to measure information asymmetry. The analysis primarily reports results based on idiosyncratic volatility, a measure of price variability caused by firm-specific information. Higher idiosyncratic volatility is directly related to greater information asymmetry, as it reflects the increased stock price volatility due to imperfect information (Arena et al., 2008; Wang, 1993). The sample is partitioned into lower-than-median and higher-than-median groups based on idiosyncratic volatility. Columns (3) and (4) of Table 2.5 present the cross-sectional test results. The coefficient on managerial ability is significantly positive at the 5% level in the low bid-ask spread subsample and not statistically significant in the high subsample. This suggests that high ability managers hold more risky financial assets when information disclosure is more transparent, and information asymmetry is less pronounced. For robustness, illiquidity is also used as an alternative measure in Appendix 2C, yielding consistent results.

Next, the magnitude of the relationship between risky financial assets and managerial ability is examined across firms with varying levels of bank debt ratio. Johnson (1998) highlights the role of banks in monitoring and reducing information asymmetries, suggesting that firms might achieve optimal leverage when borrowing from banks. Research on leverage and investment shows a negative relationship between leverage and investments (Aivazian et al., 2005), while a positive relationship is observed between bank loan ratios and firms' investments. When combined with the subsamples discussed earlier, firms with less information asymmetry may have better access to external financing, leading to fewer investment constraints and reduced forgoing of opportunities. Additionally, investing in risky financial assets may serve as a preferred conduit for firms to shift risks, as these assets are less visible and face fewer restrictions from banks (Chen & Duchin, 2019). It is worth noting that holding financial portfolios with risky assets might present a smaller agency issue compared to other forms of risk-taking behaviour. The sample is divided based on the median bank debt ratio in fiscal year t into a lower-than-median group and a higher-than-median group. Columns (5) and (6) of Table 2.5 present the cross-sectional test results. The coefficient on managerial ability is significantly positive at the 5% level in the high bank-debt ratio subsample and not statistically significant in the low bank-debt ratio subsample. This indicates that managerial ability has a stronger impact on holding risky financial assets in firms with higher levels of bank debt.

Lastly, we explore the magnitude of the relationship between risky financial assets and managerial ability in the context of varying levels of competition. Laksmana and Yang (2015) find that increased competition prompts managers to undertake riskier investments, as it compels them to take bold actions for the firm's long-term survival. Additionally, DeFond and Park (1999) observe that the frequency of CEO turnover is higher in more competitive industries when they have more peer comparisons. This aligns with the notion from Duchin et al. (2017) that experience in managing diversified financial portfolios is valued in the labour market, leading managers to make riskier investments for human-capital development and future job prospects. The sample is divided based on the median number of peers in fiscal year t into a lower-than-median group and a higher-than-median group. Columns (7) and (8) of Table 2.5 present the results of the cross-sectional test. The coefficient on managerial ability is significantly positive at the 5% level in the subsample with a higher number of industry peers and not statistically significant in the lower peer subsample. This suggests that managerial ability has a more pronounced effect on firms' risky financial portfolios when operating in industries with more peers.

[Insert Table 2.5 Here]

2.5.2 Firm performance and risky financial assets

The aforementioned results suggest that managerial ability is positively related to the proportion of firms' risky financial assets. Previous studies indicate that managerial ability positively impacts aspects such as earnings quality and subsequent performance (Chemmanur et al., 2009; Demerjian et al., 2013). However, the relationship between managerial ability and the performance of risky financial assets remains unresolved. Due to limited disclosure and data, it is not possible to directly assess the performance of firms' risky financial holdings or how managers manage these risky assets. Thus, in this section, we adopt an indirect approach to analyse the interaction between managerial ability, risky financial assets, and firm performance to determine whether risky financial assets harm firm value irrespective of managerial ability, or if these assets, when managed by high-ability managers, actually enhance firm value.

The role and behaviour of top managers are extensively examined in the context of agency theory, which addresses the conflicts that arise between shareholders and managers. Duchin et al. (2017) suggest that managers may invest in risky financial assets to advance their own interests, such as human capital development and potential future job opportunities, particularly if the labour market values their experience in managing diversified portfolios and risks. John et al. (2008) argue that managers might adopt conservative investment policies or even forgo value-enhancing risky projects to safeguard their careers. Existing studies indicate that agency issues are linked to risk-taking behaviour and may indirectly influence firm value and performance by altering

managerial behaviour. However, the conflict itself does not directly affect managerial ability or heterogeneity. Therefore, we also explore the possibility that high-ability managers are subject to agency problems, leading them to hold large proportions of risky securities for their own benefit, which could, in turn, harm firm value.

We use Tobin's q to measure how investors perceive the firm's value and growth potential, and return on assets (ROA) to assess the efficiency with which a firm uses its assets to generate profit, reflecting its performance. Industry, year, and firm fixed effects are included in all regressions. First, we partition the sample based on the median of risky financial assets into high-risk and low-risk groups. Table 2.6 reports the results of the firm value analyses. The coefficients of the MA score are significantly positive at the 5% level in the high-risk subsample but do not show statistical significance in the low-risk subsample. These results suggest that firms with more capable managers experience greater market valuation and achieve better returns on their assets and overall financial performance when holding risky financial securities. High-ability managers may be more adept at optimising the use of risky assets to maximise returns, contributing to a higher Tobin's q and ROA. This implies that their risk-taking behaviour aligns with creating shareholder value and driving growth. Additionally, these risky assets do not appear to harm firm value and performance even when firms are led by less capable managers.

[Insert Table 2.6 Here]

2.5.3 Managerial ability and CEO characteristics

Previous results indicate that more capable managers hold larger proportions of risky financial assets. We next perform additional tests to examine whether the magnitude of this effect varies with different CEO characteristics. Although our main variable of interest is managerial ability, which generally pertains to the entire management team, additional analyses can focus on a specific manager (Demerjian et al., 2012). Most researchers concentrate on the CEO, as they are the most powerful manager within the team and therefore the most likely to influence the managerial ability score and firm outcomes (Fee & Hadlock, 2003). Demerjian et al. (2012) focus on the CEO and conduct several validity tests, such as analysing CEO turnover announcements and changes in firm performance following a CEO switch, to assess the managerial ability score reflects managerial ability.

We first examine whether managerial ability affects the extent of risky financial asset holdings depending on the CEO's age. Gormley and Matsa (2016) find that younger CEOs, who are further from retirement, are more likely to be motivated by career concerns and therefore tend to 'play it safe'. From this perspective, younger CEOs have greater career-related incentives to minimise risks and avoid poor performance. Thus, we expect that the positive relationship between

managerial ability and risky financial assets is stronger when the CEO is older. However, another stream of literature presents a competing view that increasing age is associated with a decline in risk tolerance and a reduced willingness to endure uncertainty when making financial decisions (Brown, 1990; Grable, 2000; Morin & Suarez, 1983). Bertrand and Mullainathan (2003) suggest that managers may develop a preference for the 'quiet life' rather than engaging in empire-building activities. This preference likely increases with age, as pursuing risky projects can be seen as costly and energy-consuming (Chen et al., 2015; Yim, 2013). From this perspective, the relationship between managerial ability and risky financial assets would be weaker when the CEO is older.

Next, we examine whether managerial ability influences risky financial assets differently depending on CEO tenure. Existing studies frequently associate longer tenure with increased CEO power and accumulated experience. Gibbons and Murphy (1992) argue that career concerns diminish as tenure increases, which might lead longer-tenured CEOs to engage more in risk-taking and hold more risky financial assets. However, Chakraborty et al. (2007) suggest that CEOs with longer tenure are associated with less diversified human capital investments and thus have less motivation to manage risky projects. Additionally, longer tenure is often linked to CEO entrenchment, which may result in lower leverage levels due to a dislike of risk and performance pressures (Berger et al., 1997). Narayanan (1985) notes that managers may prefer short-term projects and payoffs to signal their ability, particularly when they are concerned about their career prospects. As tenure increases, however, a CEO's preference for short-term risk-taking activities may decrease, as they have already established a career track. In this context, it is expected that the relationship between managerial ability and risky financial assets weakens as CEO tenure lengthens.

Then, we test the interaction between CEO duality and managerial ability. CEO duality occurs when a single individual serves as both CEO and board chairperson, a practice often described as a ‘double-edged sword’ (Finkelstein & D’aveni, 1994). Krause et al. (2014) discuss CEO duality within the framework of agency theory, suggesting that it increases the risk of entrenchment, enabling CEO-chairs to reduce their exposure to risk. Li and Tang (2010) find that CEO duality can enhance risk-taking, particularly when combined with CEO hubris. This suggests that CEO-chair duality could influence the extent to which managerial ability impacts firm risk-taking. On the other hand, research indicates that more capable managers are often associated with greater transparency, less financial manipulation, lower financing costs, easier access to investments (Baik et al., 2011; Demerjian et al., 2013). High-ability managers tend to have a deeper understanding of the firm and are more adept at managing risks (Chen et al., 2015), which may lead them to invest in risky financial assets more judiciously. If this is the case, CEO-chair duality

may not significantly impact the relationship between managerial ability and risky financial assets.

Table 2.7 presents the results from regressions examining interaction terms. The dependent variable and control variables are consistent with those used in the baseline regression. Columns (1) to (3) report results from the interactions of managerial ability with CEO age, tenure, and CEO-chair duality, respectively. In columns (1) and (2), the coefficients on the interaction terms are significantly negative at the 5% level. This indicates that the positive association between managerial ability and risky financial assets is stronger when CEOs are younger and earlier in their careers. Managerial skills appear to have a more pronounced effect when the firm is led by a younger CEO. The coefficient on the interaction term between MA score and CEO-chair duality in column (3) is not statistically significant. This suggests that we are unable to find evidence to support the notion that CEO duality affects the relationship between managerial ability and risky financial positions.

[Insert Table 2.7 Here]

2.6 Conclusion

This chapter examines the role that managerial ability plays in determining the proportion of risky financial assets held by firms. Traditional theory suggests that managers with idiosyncratic characteristics have limited influence over corporate policies. Our findings demonstrate that firms' risk-taking decisions are influenced not only by managers' rational efforts to balance risk and return and maximise firm value but also by varying levels of managerial ability. Specifically, we observe that high-ability managers generally hold a greater proportion of risky financial assets, whereas low-ability managers invest less in such assets. We conduct cross-sectional tests to further explore the relationship between managerial ability and risky financial assets. Our results reveal that the impact of managerial ability on risky financial assets is more pronounced in firms that are less financially constrained, exhibit greater transparency in information disclosure, have higher levels of bank debt, and operate in more competitive industries. Additionally, when a significant portion of a firm's financial assets is allocated to risky assets, the market perceives higher firm value if the firm is led by high-ability managers, suggesting that these managers are more effective in managing risky financial positions. Further, we investigate how the association between managerial ability and risky financial assets varies with CEO characteristics, such as age, tenure, and duality. Our results indicate that this association is stronger when CEOs are younger and earlier in their careers.

In summary, the results presented in this chapter highlight the significant role of managerial ability in influencing risk-taking behaviour. High-ability managers are expected to invest more in risky financial assets because they are better equipped to manage these risks without negatively impacting firm value. In other words, high-ability managers are more risk-tolerant and allocate a larger share of financial assets to risky investments. Furthermore, since high-ability managers are shown to effectively manage risky financial assets, as evidenced by higher Tobin’s q and ROA, our findings also provide justification for firms to offer substantial compensation to attract and retain highly capable managers.

Table 2.1 Summary statistics

This table reports the descriptive statistics of the key variables applied in the baseline regression, including the number of observations, mean, median, standard deviation, minimum and maximum. The sample consists of 4,215 firm-year observations. Variable definitions are presented in the appendix 2.A.

	N	Mean	SD	Min	Median	Max
Percent of risky	4,215	0.126	0.222	0.000	0.000	0.972
MA score	4,215	0.052	0.175	-0.217	0.006	0.490
Size	4,215	9.115	1.112	4.860	9.064	11.157
Market-to-book	4,215	2.203	1.455	0.534	1.791	20.923
Cashflow/assets	4,215	0.091	0.077	-2.284	0.089	0.277
NWC/assets	4,215	0.016	0.123	-1.030	0.017	0.564
Capital exp/assets	4,215	0.048	0.048	0.002	0.033	0.468
Leverage	4,215	0.282	0.189	0.000	0.260	2.439
IndustryCF/assets	4,215	2.255	3.946	0.015	0.559	19.612
Dividend dummy	4,215	0.690	0.463	0.000	1.000	1.000
R&D/sales	4,215	0.052	0.142	0.000	0.006	3.938
Acquisition/assets	4,215	0.027	0.058	-0.007	0.002	0.328

Table 2.2 Univariate analysis.

This table reports the univariate analysis results for the main dependent variable and an array of firm-level factors of companies run by the low-ability management and those by the high-ability management at the firm-year level. We classify observations based on the median of MA scores calculated on the year level in the sample. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	MA score<median N=2,106		MA score>median N=2,109		Test of difference	
	Mean	Median	Mean	Median	Mean	Median
Percent of risky	0.074	0.000	0.177	0.021	-0.103***	-0.021***
Size	9.057	9.018	9.172	9.129	-0.115***	-0.111***
Market-to-book	1.882	1.626	2.524	1.992	-0.642***	-0.366***
Cashflow/assets	0.078	0.080	0.103	0.101	-0.026***	-0.021***
NWC/assets	0.020	0.021	0.012	0.010	0.008**	0.011***
Capital exp/assets	0.047	0.033	0.049	0.033	-0.001	0.000
Leverage	0.311	0.292	0.253	0.223	0.058***	0.069***
IndustryCF/assets	2.303	0.506	2.207	0.614	0.096	-0.108
Dividend dummy	0.714	1.000	0.665	1.000	0.049***	0.000***
R&D/sales	0.031	0.007	0.072	0.005	-0.040***	0.002***
Acquisition/assets	0.027	0.003	0.027	0.002	<0.000	0.001**

Table 2.3 Baseline regression

Managerial ability and percentage of risky financial assets. The table reports the effect of managerial ability has on risky financial assets holdings[1]. Control variables are lagged by one year relative to the dependent variable. Industry effects are constructed based on 2-digit SIC codes. Standard errors (in brackets) are heteroskedasticity and adjusted for clustering of observations at firm level. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively. Column (1) and (2) exclude covariates whereas (3) and (4) include. Column (2) and (4) also include firm fixed effects for robustness, in addition to industry and year fixed effects.

	DEP. VAR = ratio of risky financial assets			
	(1)	(2)	(3)	(4)
MA score	0.403***	0.059*	0.247***	0.079**
	(0.050)	(0.030)	(0.052)	(0.033)
Size			0.035***	0.005
			(0.011)	(0.015)
Market-to-book			0.017**	-0.000
			(0.007)	(0.005)
Cashflow/assets			0.106	0.056
			(0.091)	(0.053)
NWC/assets			-0.177**	-0.116
			(0.071)	(0.083)
Capital exp/assets			0.176	0.201
			(0.218)	(0.170)
Leverage			-0.161***	-0.057
			(0.045)	(0.038)
Industry CF/assets			0.001	-0.008
			(0.008)	(0.006)
Dividend dummy			-0.042**	0.026*
			(0.018)	(0.015)
R&D/sales			0.322**	0.080
			(0.125)	(0.057)
Acquisition/assets			-0.170***	-0.047
			(0.065)	(0.044)
Firm FE	NO	YES	NO	YES
Year FE	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES
Industry-Year FE	YES	YES	YES	YES
Adjusted R^2	0.208	0.103	0.314	0.128
Observations	5,023	5,023	4,215	4,215

[1] In Appendix 2B, we use the ratio of risky financial assets to total book assets as an alternative dependent variable, and the results remain consistent.

Table 2.4 Propensity score matching estimates

This table presents statistics of post-match differences in propensity score matching. Panel A shows parameter estimates from the logistic regression model used to estimate propensity scores for firms in the group with higher-than-median MA scores and those in the group with lower-than-median MA scores. In Panel B, columns (1) and (2) report sample average of firm characteristics in the two groups, respectively. Columns (3) and (4) show the univariate comparisons of firm characteristics and the corresponding t-statistics, respectively. Panel C reports the average treatment effect estimates, Panel D reports estimation based on the propensity-score-matched sample. All regressions control for year and industry fixed effects. Robust standard errors are clustered at the firm level and are reported in parentheses. Definitions of all variables are provided in the Appendix 2.A. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

Panel A. Pre-match propensity score and post-match diagnostic regression

	DEP. VAR: Dummy equals one for firms with higher-than-median MA score and zero otherwise	
	Pre-match	Post-match
	(1)	(2)
Size	0.479***	-0.009
	(0.078)	(0.084)
Market-to-book	0.441***	0.054
	(0.077)	(0.064)
Cashflow/assets	7.173***	-0.344
	(1.39)	(1.226)
NWC/assets	-0.077	0.399
	(0.637)	(0.692)
Capital exp/assets	1.621	-0.711
	(1.717)	(1.958)
Leverage	-0.793*	-0.175
	(0.468)	(0.496)
IndustryCF/assets	-0.009	0.008
	(0.011)	(0.014)
Dividend dummy	0.077	0.031
	(0.162)	(0.168)
R&D/sales	5.935**	-0.265
	(2.694)	(0.776)
Acquisition/assets	1.255*	0.245
	(0.652)	(0.846)
Year FE	YES	YES
Industry FE	YES	YES
Pseudo R^2	0.205	0.012
Observations	4,215	1,986

Panel B. Differences in firm characteristics

	Obs. with lower-than-median score (N=993)	Obs. with higher-than-median score (N=993)	Diff.	t-stat
	(1)	(2)	(3)	(4)
Size	9.155	9.161	-0.006	-0.128
Market-to-book	2.095	2.118	-0.023	-0.427
Cashflow/assets	0.090	0.090	0.000	-0.019
NWC/assets	0.015	0.018	-0.003	-0.601
Capital exp/assets	0.050	0.048	0.002	0.705
Leverage	0.290	0.287	0.004	0.403

IndustryCF/assets	2.333	2.441	-0.108	-0.591
Dividend dummy	0.690	0.702	-0.0012	-0.585
R&D/sales	0.046	0.045	0.001	0.150
Acquisition/assets	0.027	0.028	-0.001	-0.412

Panel C. propensity score matching estimate

	Obs. with lower-than-median score	Obs. with higher-than-median score	Diff.	t-stat
	(N=993)	(N=993)		
%Risky FA	0.093	0.147	-0.053***	-5.513

Panel D. Regression on propensity score matched sample

	DEP. VAR = ratio of risky financial assets	
	(1)	(2)
MA score	0.246***	0.116**
	(0.063)	(0.052)
Firm controls	YES	YES
Firm FE	NO	YES
Year FE	YES	YES
Industry FE	YES	YES
Adjusted R^2	0.346	0.240
Observations	1,986	1,986

Table 2.5 Cross-sectional analyses

This table explores cross-sectional differences of the effect of managerial ability on risky financial asset holdings. The dependent variable is the ratio of risky financial assets to total financial portfolios. The main independent variable is managerial ability score (MA score), In columns (1) and (2), we examine whether the positive effect on is different for firms with different financial constraints. In columns (3) and (4), we examine whether the positive effect is different for firms with different levels of information asymmetry. In columns (5) and (6), we examine the effects for firms with different levels of bank debt ratios. In columns (7) and (8), we examine the effects for firms with different degrees of competition. All regressions control for firm, industry and year fixed effects. Robust standard errors are clustered at the firm level and are reported in parentheses. Definitions of all variables are provided in the Appendix 2.A. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	Financial constraint[2]		Information asymmetry	
	(1)	(2)	(3)	(4)
	constrained	Less constrained	Low	High
MA score	-0.007	0.075**	0.066**	-0.073
	(0.041)	(0.038)	(0.031)	(0.071)
Firm Controls	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES
Adjusted R^2	0.777	0.794	0.780	0.721
Observations	2,208	1,924	3,088	744
	Bank debt ratio		Peers	
	(5)	(6)	(7)	(8)
	Low	High	Less	More
MA score	0.003	0.062**	0.021	0.150**
	(0.040)	(0.031)	(0.027)	(0.060)
Firm controls	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES
Adjusted R^2	0.793	0.678	0.782	0.734
Observations	1,719	1,717	3,155	1,011

[2] In Appendix 2C, we use the KZ index and SA index for robustness, and the results remain consistent.

Table 2.6 Firm performance and risky financial assets

This table examines firm performance, risky financial asset holdings, and managerial ability. The main independent variable is managerial ability score (MA score), in columns (1) and (2), the dependent variable is Tobin's Q. in columns (3) and (4), the dependent variable is ROA. All regressions control for firm, industry and year fixed effects. Robust standard errors are clustered at the firm level and are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	Tobin's Q	
	(1)	(2)
	Low risk	High risk
MA score	0.249	1.035**
	(0.247)	(0.467)
Firm controls	YES	YES
Firm FE	YES	YES
Year FE	YES	YES
Industry FE	YES	YES
Adjusted R^2	0.810	0.707
Observations	1,880	1,688
	ROA	
	(3)	(4)
	Low risk	High risk
MA score	0.001	0.049**
	(0.019)	(0.022)
Firm Controls	YES	YES
Firm FE	YES	YES
Year FE	YES	YES
Industry FE	YES	YES
Adjusted R^2	0.426	0.313
Observations	1,956	1,807

Table 2.7 CEO characteristics and risky financial assets

This table estimates the role of different CEO characteristics in the relationship between managerial ability and risky financial assets. Column (1) reports the results on whether managerial ability affects risky financial assets differently with different CEO age. Column (2) reports the results on whether the effect of managerial ability on risky financial asset holdings is different with different CEO tenure. Column (3) reports the results on whether the effect is different for individuals who are both CEO and board chairperson. All regressions control for year, industry, and industry-year fixed effects. Robust standard errors are clustered at the firm level and are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	DEP. VAR = ratio of risky financial assets		
	(1)	(2)	(3)
	CEO age	CEO tenure	CEO duality
MA score	0.905***	0.316***	0.277***
	(0.320)	(0.064)	(0.071)
MA score * CEO age	-0.012**		
	(0.006)		
MA score * CEO tenure		-0.010**	
		(0.005)	
MA score * CEO chair			-0.062
			(0.082)
CEO age	-0.001		
	(0.001)		
CEO tenure		0.001	
		(0.001)	
CEO chair			-0.027*
			(0.014)
Firm controls	YES	YES	YES
Year FE	YES	YES	YES
Industry FE	YES	YES	YES
Industry-Year FE	YES	YES	YES
Adjusted R^2	0.219	0.218	0.218
Observations	4,085	4,063	4,086

Chapter 3 The unintended consequences of disloyal managers on earnings management

We investigate how quasi-exogenous changes in corporate governance, specifically the allocation of new business opportunities between shareholders and management, may affect corporate financial reporting environments in terms of earnings management. By examining the staggered introduction of Corporate Opportunity Waivers (COW) since 2000, we find that firms incorporated in states that eventually adopted it have reduced earnings management in the form of discretionary accruals. We further show that the statute's negative effect on earnings management is more pronounced for firms with younger managers facing ex-ante career concerns and greater pressure for short-term profitability. Overall, our findings suggest that adopting COW might not necessarily be detrimental to firms; rather it could foster a climate conducive to more precise and transparent financial reporting.

3.1 Introduction

Corporate governance is a fundamental concept, addressing the mechanisms established to mitigate the agency problem arising from the separation of ownership and control in companies, where managers' interest can depart from shareholders and may pursue their own interests rather than those of the shareholders (Core et al., 2003; Jensen, 1993; Shleifer & Vishny, 1997). Central to these issues is the concept of information asymmetry, which is considered the primary source of agency problems. Corporate governance plays a crucial role in shaping the information environment of a company. Good governance helps to create a high-quality information environment where shareholders can make well-informed decisions. As a result, the information environment of a firm becomes a critical factor influencing the design of corporate governance mechanisms aimed at monitoring managers (Armstrong et al., 2010). This relationship between corporate governance structures and information environments has attracted attention from regulators, policy makers, and scholars alike. While the connection between corporate

governance and the various attributes of a firm's information environment is undeniable, the precise nature of this relationship remains incompletely understood (e.g., Armstrong et al. 2010; Dechow et al. 2010). The complexity of establishing the link is compounded by the endogenous nature of this relationship (Armstrong et al., 2010; Beyer et al., 2010). Not surprisingly, empirical studies on the relationship between corporate governance structures and information environments have produced mixed findings (e.g., Ajinkya et al. 2005; Armstrong et al. 2012; Bushman et al. 2004; Warfield et al. 1995). Consequently, the specific nature of this relationship remains an open empirical question that warrants further examination.

This study contributes to our understanding of the connection between corporate governance structures and information environments by investigating how a revolution in the standards of corporate governance which significantly changes the fiduciary duties, a pivotal element of a firm's overall corporate governance framework, may influence their financial reporting outcomes in terms of earnings management. Notably, in the year 2000, Delaware introduced a significant departure from the traditional long-standing duty of loyalty by granting companies incorporated in the state the right to waive the corporate opportunities doctrine, which prevents managers to appropriate any business opportunity that could benefit the firm for their own interest. Subsequently, eight additional states followed Delaware's lead, adopting similar provisions allowing firms to enact "corporate opportunity waivers" (COW) to relinquish the duty of loyalty. Since corporate governance mechanisms are designed to mitigate agency conflicts by aligning management's interests with those of shareholders, subjugating personal interests, and preventing the misappropriation of business opportunities, we view the implementation of waivers as a variation in firms' corporate governance structures. This allows us to identify the impact of changes in corporate governance on their information environments.

In line with the traditional "expropriation" view, waiver of the corporate opportunity doctrine can increase earnings management. With the enactment of COW representing a substantial change in the legal framework of corporate governance and empowering managers with greater flexibility to pursue external corporate opportunities without offering them to the corporation, they may prioritise personal gain over the interests of the corporation, not act in the best interest of firm,

and usurp profitable opportunities for their own. The exacerbation of conflict of interest may lead to reduced effort in their home firms and potential underperformance. In addition to usurpation of profitable projects, executives distracted by more outside business opportunities might decrease exposure in home firms which can then significantly affect firm performance (Bennedsen et al., 2012). The time commitment required for outside opportunities detracts from executives' ability to focus on the high demands of their position with the firm (Lublin, 2016). When executives overextend themselves by pursuing more external opportunities for personal benefits such as perks or reputation, they may neglect their primary duties and shift time and energy to the time-consuming outside projects, leading to less productivity in their home firms (Conyon & Read, 2006; Khan & Mauldin, 2021; Perry & Peyer, 2005; Rosenstein & Wyatt, 1994). In order to conceal lack of effort or even unethical behaviour, management might engage in manipulation in financial reporting, such as inflating revenues or understating expenses to meet heightened earnings targets (Davidson et al., 2004). Thus, after the enactment of the waivers, managers may be more likely to use earnings management as a camouflage to hide any losses that have arisen from misappropriation of profitable opportunities or reduced diligence.

This research suggests that external business opportunities have the potential to mitigate the firm-specific risks associated with managerial decision-making, thereby incentivizing managers to assume more risk. Additionally, the increased diversity of managers' personal portfolios resulting from external business opportunities could enhance their risk tolerance, thereby fostering increased risk-taking behaviours (Hung et al., 2012). Consequently, after the enactment of COW, managers may be more likely to manipulate financial results to hide any losses that have arisen from these risky investments. Waiver enactment may also increase the likelihood of earnings management, as managers may manipulate financial reporting to meet the heightened earnings targets expected by shareholders. With greater autonomy to pursue external opportunities, managers may increase research and development (R&D) expenditure as a means of identifying an appropriable opportunity (Fich et al., 2023).

In the context of career concerns, it is important to note that with greater autonomy to pursue external opportunities, managers may face reduced career concerns and pressure to meet short-

term earnings targets (Gibbons & Murphy, 1992). This may decrease the likelihood of earnings management, as managers may be less prone to manipulating financial results to meet or exceed earnings expectations given their undiversified human capital tied to their firms. The managerial incentive contract places an inherent risk burden on both their financial assets and human capital, cultivating a motivation for managers to diversify their portfolios (Hung et al., 2012). Furthermore, these career concerns tend to be particularly salient in labour markets relying excessively on current performance to gauge managerial ability and determine compensation (Brown, 2015). As a result, managers might be motivated to proactively take actions aimed at influencing market beliefs about their ability, bolstering their reputation, job security, and career prospects. Managers' concerns regarding their reputation and career prospects have been widely recognized as significant factors influencing financial reporting decisions and key drivers of earnings management (DeFond & Park, 1997; Graham et al., 2005). Healy and Wahlen (1999) document that some managers manipulate earnings to window-dress financial statements so as to increase their job security. Graham et al. (2005) find that a significant portion of surveyed managers acknowledge that career concerns and external reputation play an important role in motivating them to engage in earnings management. The relaxation of the corporate opportunity doctrine, along with its potential implications for managers and corporate governance, could foster a climate conducive to more precise and transparent financial reporting.

Therefore, there are competing predictions regarding how corporate governance mechanisms in general, and oversight from the regulator for corporate control in particular, may affect firms' earnings management decisions. We examine the relation between these two constructs using variation in firms' corporate governance structures that has resulted from the passage of COW laws by a number of U.S. states between 2000 and 2016 as a pseudo-natural experiment. An important advantage of this setting is that the enactment of COW has substantive effects on the diminishing of duty of loyalty and thus makes a notable shift in the corporate law that underpins corporate governance. Specifically, adopting COW reduces executives' liability exposure for breaching a particular duty of loyalty, namely taking or withholding corporate opportunities (Rauterberg & Talley, 2017). Further, the adoption of COW laws is exogenous and not particularly

intended for reducing earnings management. Additionally, the staggered state-level adoption of COW could introduce cross-sectional as well as time variations in governance imposed on directors of firms incorporated in different states (Fich et al., 2023).

Following Bertrand and Mullainathan (2003), we employ a difference-in-differences (DID) methodology to examine the waivers' effect on earnings management. The main sample, consisting of 84,011 firm-year observations from 1996 to 2020, employs performance-matched discretionary accruals as the main proxy for earnings management. The baseline results suggest that firms incorporated in states with the enactment of the waiver will experience a significant decrease in discretionary accruals compared to those in states without the legislation. Specifically, the adoption of the waiver is associated with a 5.37% standard deviation decrease in earnings management.

A causal interpretation of our main results relies heavily on the adoption of COW being exogenous and not driven by ex-ante earnings management of incorporated firms. We conduct the Cox proportional hazard model to examine the timing of the COW adoption at the state and year levels to mitigate this concern. By using the average level of discretionary accruals in a given incorporated state and further including state-level factors, we find that the passage of COW is unlikely to be determined by state-level earnings management and macro-level characteristics across different states prior to the adoption of the waivers.

We next conduct a dynamic treatment model to address the concern about pre-treatment differences between the treated and control firms and the parallel trends assumption. The results suggest that the effect one year prior to the waivers' adoption is statistically insignificant, implying that there are no significant differences in pre-trends between the two groups and no declining or increasing trends in discretionary accruals before the treatment. The downward movements in earnings management only occur after the passage of COW. Results from the dynamic treatment model also help alleviate potential endogeneity concerns around reverse causality.

We also conduct a series of additional analyses to verify our main findings. To further control for fundamental differences in firm-level characteristics between treatment and control groups and

allay the concern that the negative effect of COW is driven by these factors which might affect a firm's choice of state to incorporate in, we re-estimate the baseline regression and dynamic effect model, based on the sample of matched treatment and control groups that show no distinguishable differences. Regarding concerns over the reliability of the standard two-way fixed effect and staggered DID models, we follow Callaway and Sant' Anna (2021) and Baker et al. (2022) to employ the stacked DID design to control for the heterogenous treatment effects.

Another natural concern is whether our results could be driven by other confounding state-level legal adoptions. In this section, we examine whether such legal changes have any impact on the effect of COW laws. In particular, we further control for universal demand laws (UD), business combination laws (BC), poison pill laws (PP) and directors' duties laws (DD), inevitable disclosure doctrine (IDD), and IDD rejection (RIDD), but we fail to find any evidence of our main results being subject to the impact of confounding legal changes.

We further explore the underlying mechanism of our results by examining cross-sectional variation in managers' ex-ante career concerns and pressures exerted on managers to meet short-term thresholds. With the waiver, firms gain a statutory right to be exempt from the corporate opportunity doctrine, granting managers increased access to external investment opportunities without board consent. This can significantly reduce managers' career concerns and short-term pressures, subsequently diminishing their incentives to engage in earnings management. We hypothesize that the negative impact of COW on earnings management is more pronounced when managers face higher levels of career concern and greater pressure to improve short-term profitability. Consistent with the view that young or newly appointed managers prioritize the labour market's assessment of their competence, making them more inclined to undertake costly actions to shape the market's perception of their abilities (Ali & Zhang, 2015; Baginski et al., 2018; Gibbons & Murphy, 1992), we find that the main results are more pronounced for firms with managers facing severe job security concerns and pressures for short-term performance incentives.

Last, we consider two alternative explanations of the main findings. As documented by Cohen et al. (2008), there is a substitution effect among accrual-based and real earnings management. Therefore, our main findings may be subject to a concern that any decline in accrual manipulation after COW is simply a reflection of such a substitution among different forms of earnings management. Our results reject the notion and provide further support for our main arguments since we are unable to observe any significant changes in real earnings management.

An additional possible reason for the decrease in earnings management might be an upsurge in monitoring subsequent to the waiver. Previous research has shown a trade-off relationship between regulation and conventional monitoring methods (Becher et al., 2005; Berry et al., 2006; Caprio et al., 2007; Kole & Lehn, 1999). Hence, it is plausible to expect that boards might proactively enhance their oversight in reaction to the waiver, thereby reducing managers' opportunistic earnings manipulation. Our further analysis confirms that the main effect is unlikely driven by the substitution between regulation and conventional monitoring methods.

Our contribution of this chapter is twofold. Firstly, we contribute to the existing literature that explores the relationship between firms' corporate governance structures and their information environments. The extant empirical studies on this relationship have yielded mixed findings (e.g., Ajinkya et al. 2005; Armstrong et al. 2012; Bushman et al. 2004; Warfield et al. 1995). One reasonable explanation for these inconsistencies is the endogenous nature of the connection between a firm's governance structure and its information environment. These two elements are often jointly determined, as highlighted by Armstrong et al. (2010) and Armstrong et al. (2012). By using the passage of the corporate opportunity waiver as plausibly exogenous legal changes to states' corporate laws underpinning the corporate governance framework, our results are less susceptible to endogeneity concerns.

Secondly, our research contributes to the broader corpus of literature examining the tangible consequences of corporate law reforms, particularly in the context of the varied effects of uniform legislation. With corporate opportunity doctrine and the waivers continuing to be an important topic and being addressed in several cases in recent years, we are the first to examine

the effect of COW on corporate accounting decisions and accrual-based earnings management (AEM) practices, making a significant contribution to the emerging body of research exploring the ramifications of enacting corporate opportunity waivers (Eldar & Grennan, 2023; Fich et al., 2023; Rauterberg & Talley, 2017). Our results suggest that in some cases the relaxation of legal principles—the duty of loyalty in corporate governance framework can have a favourable impact on firms' accounting practices.

As documented in previous studies, its introduction may enhance contractual flexibility, enabling corporations to broaden their investor base and attract additional capital investments (Bénabou & Tirole, 2010; Chu & Zhao, 2021). Geng et al., (2021) find that COW promote intra-industry board overlap, resulting in increased sales revenues, improved operating margins, and higher firm profitability. However, it is important to note that the adoption of COW laws, coupled with weakened fiduciary duty of loyalty, may exacerbate agency conflicts and have detrimental effects on corporations. Empirical evidence (Fich et al., 2023) demonstrates that the implementation of COW laws reduces firms' expenditure on R&D because corporate managers are more inclined to appropriate R&D-related business opportunities for themselves, consequently diminishing the returns on innovation investments for shareholders. Therefore, the ultimate impact of the waiver remains ambiguous and warrants further investigation. Our study examines the influence of the waiver within the context of a firm's financial reporting decisions. Our results unveil a noteworthy observation: in specific scenarios, the present value of a CEO's anticipated future job security benefits may outweigh the pressures placed on managers to meet short-term performance thresholds. Overall, our findings suggest that the adoption of COW plays a pivotal role in shaping CEOs' decision-making processes and reveals its genuine impact on firms' strategic financial reporting.

The remainder of the chapter is organised as follows. Section 2 reviews the related literature and develops the empirical hypothesis. Section 3 describes the data and sample selection, empirical methodology, and summary statistics. Section 4 reports baseline and other supplementary test results and provides interpretation. Section 5 presents some additional robustness tests. Section 6 concludes.

3.2 Related literature

3.2.1 Fiduciary duties and profit maximisation

The case of *Bodell v. General Gas & Electric Corp*. in 1926 that was affirmed by the Delaware Supreme Court might be the first to recognise the idea that directors of firms owed fiduciary duties to shareholders (Holland, 2008). Within the framework of fiduciary duties, corporate fiduciaries owe firms and shareholders two principal duties to ensure they faithfully and competently serve the interests of all the corporation's owners: the duty of care and the duty of loyalty.

The American Law Institute's Principles of Corporate Governance defines the duty of care as the obligation for corporate directors and officers to perform their roles in good faith and in a manner they reasonably believe to be in the best interests of the corporation. It requires corporate fiduciaries to apply informed business judgment in managing the company (Rauterberg & Talley, 2017). The duty of care regime applies to enterprise business decisions without considering conflicting interests, while the duty of loyalty is invoked when conflicting interests are presumed or have demonstrably influenced a corporate decision (Palmiter, 1989). The traditional duty of loyalty forbids management from improperly benefiting themselves in dealing with corporate assets or shareholders, mandates that they focus their energies solely on benefiting the corporation and *pro tanto* the stockholders, and requires agents to act as the principals' alter ego, making decisions as the principal would for themselves. It is widely accepted that the duty of loyalty has long been the centrepiece and enforced more rigorously than the duty of care (Rauterberg & Talley, 2017; Velasco, 2018).

Fiduciary duties constitute an integral part of corporate law. While directors have the legal responsibility granted by corporate law to manage firms, fiduciary duties are also imposed on them to discipline their behaviour. The corporate law and corporate governance mechanisms provide shareholders with various means to monitor executives and align their interests with those of shareholders. Taking incentives and possible penalties into consideration, executives

are motivated to perform in a way that could benefit shareholders and pursue a profitable bottom line with little regard on how to achieve it. In this case, corporate law has successfully monitored the behaviour of directors and executives primarily by imposing fiduciary duties to ensure that shareholders' interests are paramount (Rosenberg, 2012).

Hill and McDonnell (2006) argued that directors and officer eventually owe just one fiduciary duty to the firm, id est, the duty to pursue diligently the best interests of the firm and its shareholders. Legal scholars have attributed the widely held tenet that the purpose of corporations is profit maximisation to the Michigan Supreme Court's 1919 decision in *Dodge v. Ford Motor co* (Stout, 2008). Smith (1997) also noted that the idea of shareholder primacy, which means "corporate directors have a fiduciary duty to make decisions that are in the best interests of its shareholders", is most frequently attributed to *Dodge v. Ford Motor co*. This case centred on Henry Ford's decision to withhold a special shareholder dividend and reinvest the funds in the firm to employ more men and benefit employees. Nevertheless, the Michigan Supreme Court rejected Ford's decision that would compromise shareholders' profits in the name of social responsibility and ordered the firm to pay dividends. For decades, it is generally agreed that the duty of directors is to maximise profits and corporate executives should make decisions that they believe are "in the best interests of the corporation, with a view towards maximising corporate profit and shareholder gain" (Eisenberg, 2006; Friedman, 2007; Rosenberg, 2012). Acevedo (2011) pointed out that during the entire twentieth century, firms' executives accepted the idea of shareholder profit maximisation to justify their decisions.

3.2.2 Unintended impact of strict fiduciary duties

Law studies have long noted this crucial point that when managers strive to maximise shareholders' wealth in the light of fiduciary duties imposed on them but without being regulated by sufficiently strict legislation, they might exercise discretion to break the law and engage in socially undesirable behaviour in order to maximise profits and assert that their choices are based on loyalty to firms and shareholders (Acevedo, 2011; Beveridge, 1995; Rosenberg, 2012). Through strict enforcement of the duty of loyalty and shareholder primacy requirement, the

interests of shareholders could be successfully addressed by the corporate law. However, it does have some neglected even negative aspects. To avoid possible shareholders' accusations of breach of fiduciary duty, executives will seek a way to pursue the profitable bottom line. Sheehy (2004) noted that firms which endeavour to maximise profits may engage in improper practices such as "destroying the environment, poisoning employees, and undermining societies" and expose society to the corresponding costs. Acevedo (2011) mentioned the case of *O'Gilvie v. International Playtex, Inc*. in which the plaintiff died although the firm was aware that its product could cause toxic shock syndrome and stated that while the principle of profit maximisation might bring economic benefits to some extent, it has also caused undesirable even socially destructive outcomes, including personal injury and death.

In addition to the negative consequences on entities outside the corporation, the excess dedication to traditional fiduciary duties might influence the firm per se. Hill and McDonnell (2007) referred to the case of *Kamin v. American Express Co*. which involved a substantive decision on whether to cost the firm $8 million to avoid reporting $25 million in accounting losses. American Express purchased shares of Donaldson, Lufken & Jenrette (DLJ) as an investment, the value of which has declined significantly. The plaintiffs argued that directors of American Express should have sold the shares at a loss to gain a capital loss deduction that would have generated $8 million in tax savings. However, the firm has distributed the stock as an in-kind dividend to shareholders just to improve reported earnings in financial statements and sustain the stock price. Directors of the firm chose to forego the real monetary savings solely for the purpose of avoiding paper losses which might lead to poor market reaction and New York trial court considered the choice entirely appropriate. Gevurtz (2003) contended that the court decision has given earnings management such a carte blanche that could ultimately cause firms to undertake transactions without real meaning but are simply designed to manipulate reported earnings. The discussion of Woolf (2001) centred on venture capital firms. He noted that under strict enforcement of the duty of loyalty, venture capitalists would be unable to diversify idiosyncratic risk away by investing over multiple competing firms, making it more likely that they would invest less in riskier projects which could have generated significant, positive economic and social

benefit. In this regard, fiduciary duties bring negative costs by restricting directors, officers, and venture capital companies from investing their human and economic capital in other ventures. It is argued that this might hinder innovation and growth in high-tech, communications, healthcare, and bio-tech industries, where venture capital firms typically concentrate their funding.

Some law scholars have tried to draw a more direct line between short-term orientation and shareholder primacy. As mentioned by Professor Kent Greenfield in the conference, with the growing concentration of stock ownership by institutional investors who have special incentives to maximise the short-term profits, corporations are increasingly focusing on both shareholder primacy and short-term performance, which are the two symptoms of a problem with corporation law at its root (Berzon et al., 2008). Duruigbo (2011) stated that managers are faced with pressure and some of them, in response to investors' pressure or to enhance their own positions, endeavour to obtain short-term profitability while neglecting long-term objectives. In this case, these investors may hold shares for longer periods as long as managers satisfy their requirements for earnings period by period. He linked the dominance of short-term thinking and stock trading to the 2010 Gulf Oil calamity. The problem was exacerbated by the current system of managing public firms, with its focus on quarterly reported earnings and shareholder primacy. Likewise, Strine Jr (2010) stated that "institutional investors often have a myopic concern for short-term performance" and then managers are less likely to consider how the company's long-term performance would be affected.

Hence, under the traditional strict fiduciary duties, directors and managers might conduct decisions to deliver higher short-term profits even with the possibility of eschewing long-term corporate sustainability. Every level of management, including directors, executives and line managers, is under intense pressure to deliver short-term profitability.

3.2.3 Corporate opportunity waivers

Corporate opportunities doctrine (COD) is an integral part of the fiduciary duty of loyalty. Corporate fiduciaries, directors and officers, are not permitted to appropriate for themselves a new business opportunity that belongs to the firm, unless the firm has properly rejected the

opportunity. Decisions addressing the corporate opportunity doctrine have a long history in Delaware case law, for instance, the most famous case from Delaware in 1939, *Guth v. Loft Inc*. (Currie & Emeritz, 2020). According to the Delaware case *Broz v. Cellular Info. Systems, Inc*., the corporate opportunity doctrine holds that a corporate officer or director may not take a business opportunity for his own if: (1) the corporation is financially able to exploit the opportunity; (2) the opportunity is within the corporation's line of business; (3) the corporation has an interest or expectancy in the opportunity; and (4) by taking the opportunity for his own, the corporate fiduciary will thereby be placed in a position inimicable to his duties to the corporation.

However, in 2000, Delaware surprisingly deviated from tradition and entitled companies incorporated in Delaware the right to waive corporate opportunities doctrine. Eight more states followed Delaware and adopted similar provisions to permit firms to execute "corporate opportunity waivers" (COW) to waive this so-called duty of loyalty. Table 3.1 reports the states and the dates when firms were first permitted to adopt the COWs. The duty of loyalty, as the very core of fiduciary duties, is not strictly enforced as is generally believed and the weakening of the duty of loyalty has accelerated significantly (Velasco, 2018).

[Insert Table 3.1 here]

Rauterberg and Talley (2017) have pointed out that the fact is hundreds of public firms have disclosed or executed COW and disclosures have surpassed 1,000 per year by 2014, based on the dataset of U.S. public firms' filings with the Securities and Exchange Commission (SEC). When granted the statutory right, public firms have a strong desire to adjust the duty of loyalty and on average, adopters of COW are growing, profitable companies with robust cash-flow potential. Using event study analysis to measure market reaction to the first public disclosure an issuer makes about the COW, it is found that COW announcements forecast a favourable market reaction, with cumulative abnormal returns ranging from 0.5 to 1.3 percent.

In addition to Rauterberg and Talley's (2017) pioneering systematic analysis of how corporations respond to these statutory reforms, emerging studies have investigated the impact of the waivers on firm behaviour as well. Fich et al. (2023) constructed a sample of public U.S. firms spanning

from 1996 to 2017 to investigate the effect of this diminishing duty of loyalty on shareholders' wealth. Their findings align with the agency conflict channel, indicating that for small, emerging firms where agency conflicts are less pronounced, contracting flexibility of the waivers is value-increasing. However, larger public firms incorporated in states that have adopted COW tend to invest less in R&D, produce fewer patents, and less valuable patents after the enactment. They find that the inventor mobility increases, and the most talented inventors move from public firms to startups, and the contribution of innovation activities to the value of the original firm decreases. These firms turn to acquisitions instead, which tend to elicit a lower market reaction to acquisition announcements. Meanwhile, the agency conflict mitigation devices such as managerial ownership and independent boards reduce the negative effects of the waivers. Geng et al. (2021) exploit the COW legislation to investigate the causal effects of board overlap on corporate outcomes. The waivers trigger a significant increase in intra-industry board overlap for firms with high R&D intensity. Specifically, intra-industry interlocking directors accounted for 4.4% of board directors in the year before the enactment, and significantly increased to 8.2% five years after the enactment. Then, firms experiencing an increase in intra-industry board overlap show a considerable increase in profitability as proxied by a higher return on assets, albeit a decrease in capital expenditure investment and firm innovation. The reduced competition in new products and investment product innovation are consistent with the market power hypothesis which predicts that the board overlap in response to the waivers adopt a segmentation strategy to reduce investment and soften firm rivalry. Similarly, Eldar and Grennan (2024) examine common ownership for startups by venture capital (VC) investors and its impact on startup growth using the staggered adoption of COW. They find that startups incorporated in states that have adopted COW are more likely to have a within-industry common owner following the legislation. Moreover, the increase in common ownership is associated with greater possibility of raising capital through an additional round of VC funding, exiting through an IPO at a higher valuation, and lower possibility of failure. Their findings suggest that common ownership in response to the law change allows startups to generate profits by sharing valuable information and allocating opportunities among startups due to accumulated expertise. Directors serving on multiple boards are an

important mechanism through which information spillover could promote efficient allocation of resources.

While Fich et al. (2023) focuses on inefficient merger deals, Li and Ni (2022) investigate the casual effect of COW on takeover targets and find that the adoption of waivers reduces the likelihood of receiving takeover bids for firms incorporated in states that have eventually executed COW. Furthermore, these post-COW deals that are accepted by takeover targets have higher takeover premiums and announcement returns. In the absence of the traditional strict duty of loyalty, it is possible that managers with discretionary power may feel more obligated to consider the consequences of firm merger deals. This could lead them to align their interests with those of other stakeholders by rejecting takeover bids or filtering out inefficient deals, ultimately retaining only those that satisfy both shareholder and stakeholder interests. Their findings suggest that the benefits of waiving the duty of loyalty can outweigh the costs in situations where conflicts between shareholders and other stakeholders are significant, as the enactment of COW allows managers to consider the interests of both shareholders and other groups.

These recent studies suggest that the adoption of COW generally benefits smaller firms held by venture capital and private equity, as originally intended by the legislatures, while the costs of waiving the duty of loyalty might outweigh the benefits in large public firms unless agency conflict mitigation devices are in place or conflicts between shareholders and stakeholders are significant (Eldar & Grennan, 2024; Fich et al., 2023; Geng et al., 2021; Harford & Tran, 2021; Li & Ni, 2022).

3.2.4 Short-term pressure, career concern and earnings management

Earnings management, as an important corporate practice, refers to disclosure management that purposefully intervene in the external financial reporting process for the intent of gaining some private benefit, rather than simply facilitating the neutral operation of the reporting process (Schipper, 1989). Healy and Wahlen (1999) define that earnings management relates to the use of managerial judgement in financial reporting and transaction structures to alter financial report to mislead stakeholder about the firm economic performance or to influence the outcome of

contracts that depend on the reported accounting figures. Extensive literature has documented motivations and determinants for firms to conduct earnings management. Studies have widely centred the attention on incentives for manipulation, including incentives related to market expectation and valuation, executive compensation, factors related to language and culture, ownership structure, as well as legal environment (Badertscher, 2011; Cheng & Warfield, 2005; Huang et al., 2020; Kim et al., 2017). Extant studies also show that discretionary power could be used in financial reporting practices and then earnings are manipulated to pursue short-term objectives (Dechow & Sloan, 1991; Graham et al., 2005; Huang et al., 2020).

As aforementioned managers are faced with pressure from shareholders to improve short-term profits and sustain stock prices, and they have concerns about job security and career prospects as the labour market use current earnings and stock prices to assess their ability (Baginski et al.,2018; Duruigbo, 2011; Pae et al., 2015). Managers' concerns arise prominently when the labour market relies on present performance proxies including earnings and stock prices to gauge managerial ability and determine current and future compensation. This assessment cause managers significant concerns as it affects their career prospects (Baginski et al.,2018; Pae et al., 2015). As a result, managers might be motivated by these concerns -referred to as career concerns-to proactively take actions aimed at influencing market beliefs about their ability, bolstering reputation, job security and career prospects (Gibbons & Murphy, 1992).

Managers concerns regarding their reputation and career prospects have been widely recognised as significant factors influencing financial reporting decisions as well as key drivers of earnings management (Brown, 2015; DeFond & Park,1997; Graham et al., 2005; Hermalin & Weisbach, 2007). Healy and Wahlen (1999) review that some managers manipulate earnings to window-dress financial statements to increase their job security. They note that managers are concerned about firms not meeting investors' expectations and are under pressure to impact short-term stock price performance. Graham et al. (2005) adopted a combination of field interviews and a survey instrument to investigate financial executives' views and motives for earnings management. Their findings suggest it might be a fait accompli that firms focus on short-term earnings targets such as seasonally lagged quarterly earnings figures. A significant portion of the

survey managers acknowledge that career concerns and external reputation play an important role in motivating them to engage in earnings management. It is admitted by managers that they would forgo positive NPV projects or sacrifice long-term value to meet short-term goals. To be specific, 80% of surveyed executives admit they would reduce discretionary expenditures on R&D, advertising and maintenance to meet earnings thresholds. More than half of the participants admit they would postpone a new project to meet a target even if it brings about decreases in value. They are concerned about being perceived as incompetent executives or managerial failures by the labour market, which can in turn impact their career mobility.

Ali and Zhang (2015) find that due to career concerns newly appointed CEOs have greater incentives to engage in overstating earnings, trying to have a favourable impact on the market's perception of their competency. Managers fear potential repercussions to their entire career prospects if they are perceived as low-ability managers due to reporting poor performance. Similarly, Pae et al. (2015) find that CEOs with shorter tenures exhibit greater concern regarding the market's evaluation of their managerial capabilities, and are more motivated to achieve earnings targets, as this can result in positive assessments and enhance career prospects. Specifically, under market assessment pressure, they find that managers tend to guide the market expectations of earnings downwards to enhance the chances of meeting or beating these expectations. Using eight proxies measuring career concerns, Baginski et al. (2018) investigate mangers' disclosure behaviour and how they release firms' private information. Their findings demonstrate that managers tend to postpone the disclosure of negative news compared to positive news, which indicates potential earnings management (Kim et al., 2021), particularly when facing higher levels of career concerns.

Davidson et al. (2007) note that these career concerns, both within the company and in the external job market, can serve as a motivation for managers to proactively address shareholders' needs. This implies that managers may be inclined to pander to the short-term demands of investors or analysts to deliver earnings and avoid short-term turmoil (Graham et al., 2005). Some managers, prompted by investors needs or personal career prospect motives, might prioritise short-term reported earnings (Duruigbo, 2011). As the case of *Kamin v. American Express Co*.

mentioned above, Gevurtz (2003) argues that managers engage in actions devoid of real meaning and sacrifice actual monetary savings, solely aimed at maintaining the stock price.

These empirical studies suggest that faced with career concerns and pressure to pursue short-term profits, manager resort to earnings management to demonstrate competence, enhance reputation, and job security. However, earnings management can entail substantial costs for both the manager and the firm, potentially endangering managers themselves if detected, with accrual earnings management being more easily detectable and carrying greater risk (Badertscher, 2011; Braam et al., 2015; Graham et al., 2005; Zang, 2012). Reduced career concerns are anticipated to alleviate pressures imposed on managers, thus diminishing their incentives to engage in earnings management. Brown (2015) provides evidence suggesting that insurance offered by ex ante severance packages could alleviate executives' career concerns, consequently leading to reduced earnings management.

3.2.5 Hypothesis development

3.2.5.1 Waiver and agency conflict

As suggested, the waiver of corporate opportunity doctrine can increase engagement in earnings management by providing managers with greater flexibility and autonomy to pursue external corporate opportunities without having to first offer them to the corporation. In line with traditional agency theory (Jensen & Meckling, 1976) waiver enactment can create conflicts of interest, as managers may be motivated to prioritize their personal gain over the interests of the corporation. Fich et al. (2023) show that waiver laws can create a misalignment between the interests of managers and shareholders. Specifically, these laws relieve managers of their obligation to prioritize the maximization of shareholder wealth. Managers may no longer be incentivised to act in the best interests of shareholders, increasing the likelihood of appropriating profitable projects for themselves or reducing their effort and time commitment to their home firms which can result in subpar performance (Bennedsen et al., 2012; Conyon & Read, 2006; Lublin, 2016). Consequently, managers might manipulate financial reporting, such as inflating

revenues or understating expenses, to disguise their lack of effort in overseeing the company or potentially even concealing unethical behaviour (Davidson et al., 2004).

However, implementing the waivers does not imply granted managers unbridled discretion. Rauterberg and Talley (2017) find that most statutes subject the decision to adopt COW to a "back door" examination of the duty of loyalty. If an interested executive attempts to exploit their influence within the firm to push for COW, the courts retain the authority to invalidate the waivers due to conflicts of interest and self-dealing. Legal cases have corroborated that the passage of the law does not necessarily permit managers to act perfidiously. In the case of *Leased Access Preservation Assoc. v. Thomas, C.A.*, a director successfully bid against his firm for a contract to operate a television channel. The Delaware Court determined that, despite his resignation, he may have appropriated a corporate opportunity by leveraging corporate information. In addition, firms can incorporate additional regulations when including the waivers in charters. For instance, Alarm.com Inc. specifies that the waivers shall not be applicable to specific employees of the corporation or its subsidiaries. Hence, while the introduction of COW and its potential advantages may coexist with the pervasive issue of agency costs, it does not inherently suggest that managers are empowered to act unscrupulously, nor does it imply a deterioration in corporate governance or a substantial escalation of agency problems.

3.2.5.2 Waiver and external opportunities

Managers career concerns are closely related to the impact of their performance on compensation. As noted by Bolton et al. (2006), managers' compensation can be heavily weighted on short-term stock price performance. The managerial incentive contract places an inherent risk burden on both their financial assets and human capital. These heightened levels of risk exposure to the organisation not only cultivate motivations for portfolio diversification among managers (Hung et al., 2012) but, more significantly, substantially elevate their apprehensions regarding job stability (Nohel & Todd, 2005). In addition, the external labour market, investors, and analysts use current earnings and stock prices to assess managers' ability (Baginski et al.,2018; Duruigbo, 2011; Graham et al, 2005; Pae et al., 2015). Likewise, Woolf (2001) mentions

that under strict enforcement of the duty of loyalty, director or officers would be unable to invest their human and economic capital over multiple projects or firms to diversify idiosyncratic risk away. Thus, when their human capital and financial capital are heavily tied to their home firms' compensation packages, managers might be inclined to engage in earnings manipulation to meet short-term earnings thresholds or sustain stock prices.

With greater autonomy to pursue external opportunities, managers may face reduced career concerns and pressure to meet short-term earnings targets. This can decrease the likelihood of earnings management, as managers may be less likely to manipulate financial results to meet or exceed earnings expectations given their undiversified human capital tied up in firms.

As reviewed above, concerns are particularly salient in a labour market which relies on current performance to gauge managerial ability and determine compensation (Baginski et al., 2018; Pae et al., 2016). Hermalin and Weisbach (2007) construct a model linking managers' career concerns to reporting quality of firms. They posit that managers' abilities are evaluated based on the currently available information, potentially resulting in replacement if the assessment falls below a certain threshold. Moreover, managers are under fiduciary duty of loyal to maximise shareholder wealth, which is closely related to short-term profitability (Acevedo, 2011; Duruigbo, 2011; Rosenberg, 2012; Sheehy, 2004). The strict enforcement of traditional fiduciary duties could result in undue shareholder primacy and excess emphasis on short-term performance. Previous research in the fields of accounting and finance has identified several other factors that contribute to short-term thinking among managers, including pressure from stakeholders and financial incentives that prioritise short-term gains over long-term value creation (Bhojraj et al., 2009; Brochet et al., 2015; Bushee, 1998; Edmans et al., 2014). These studies have established a negative relationship between short-term thinking and future shareholder value. As a result, managers might be motivated to proactively take actions to address shareholders' needs and respond to the market pressure to maintain job security and reputation by manipulating earnings (Davidson et al., 2007; Gibbons & Murphy, 1992).

Following the waiver, additional external avenues for managers to diversify their investment portfolios and carve out their career trajectories are opened up. This, in turn, may mitigate their career-related concerns and alleviate the imperative to meet immediate earnings objectives and uphold stock prices. Consequently, the relaxation of the corporate opportunity doctrine could diminish the incentives for manipulating short-term earnings and foster a climate conducive to more precise and transparent financial reporting.

3.3 Data and methodology

3.3.1 Data and sample selection

Our study employs a sample of firms with publicly traded stock over the 1996 to 2020 period. The sample period starts four years before the first adoption of COW when Delaware granted incorporated firms a statutory right to waive the duty of loyalty in 2000 and ends four years after Washington executed COW in 2016. The sample excludes firms in the finance (SIC 6000-6999) and utility (SIC 4000-4999) industries and observations with missing values of key variables. Firm-level variables are obtained from Compustat. All continuous variables are winsorised at the 1st and 99th percentiles to mitigate the potential impact of outliers. Our final sample consists of 84,011 firm-year observations.

3.3.2 Measuring earnings management

We follow previous studies (Dechow et al., 1995; Fang et al., 2016; Jones, 1991; Kothari et al., 2005; Ni, 2020) to use performance-matched discretionary accruals as the primary measure of earnings management. To construct this measure, we first estimate the following cross-sectional model within each fiscal year and Fama-French 48 industry:

$$\frac{TA_{i,t}}{Assets_{i,t-1}} = a_0 + a_1 \frac{1}{Assets_{i,t-1}} + a_2 \frac{\Delta REV_{i,t}}{Assets_{i,t-1}} + a_3 \frac{PPE_{i,t}}{Assets_{i,t-1}} + \varepsilon_{i,t}$$

where TA denotes total accruals, computed as the difference between net income and cash flow from operations; ΔREV is the difference in sales revenues; and PPE is gross property, plant, and equipment. Next, we use the following model and the estimated coefficients from the above equation to compute the fitted normal accruals:

$$NA_{i,t} = \hat{a}_0 + \hat{a}_1 \frac{1}{Assets_{i,t-1}} + \hat{a}_2 \frac{\Delta REV_{i,t} - \Delta AR_{i,t}}{Assets_{i,t-1}} + \hat{a}_3 \frac{PPE_{i,t}}{Assets_{i,t-1}} + \varepsilon_{i,t}$$

Following Dechow et al (1995), the change in accounts receivable is subtracted from the change in sales revenue, as credit sales can present an opportunity for accounting distortion. After

obtaining the fitted normal accruals from the above equation, we calculate firm-year-specific discretionary accruals as:

$$DAC_{i,t} = \frac{TA_{i,t}}{Assets_{i,t-1}} - NA_{i,t}$$

After obtaining discretionary accruals from the Modified Jones model, we adjust the estimated discretionary accruals for performance. We match the firm-year observation with another from the same industry and fiscal year with the closest ROA. Then we use discretionary accruals minus the median discretionary accruals for firms in the same ROA decile, which is determined by sorting firms in each industry-year combination according to their prior year's ROA.

3.3.3 Empirical design

We adopt a difference-in-differences research design to examine the impact of the passage of COW on earnings management at the firm-level. Specifically, the baseline regression model is expressed as follows:

$$Accruals_{jst} = \alpha + \beta COW_{st} + \gamma X_{jst} + f_j + \tau_t + \varepsilon_{jst} \qquad (3.1)$$

where j indexes firms, s indexes states of incorporation, and t indexes the year. $Accruals$ refers to the measure of accrual-based earnings management, the performance-matched discretionary accruals ACCR_K. COW is the main variable of interest, which is a dummy variable equal to one if the state has executed corporate opportunity waivers in year t and zero otherwise. The coefficient β captures the average treatment effect of COW on earnings management. Our model also includes a set of control varables X_{jst}, firm fixed effects f_j, and year fixed effects τ_t. The firm fixed effects control for time-invariant omitted firm characterstics. Year fixed effects account for macroeconomic conditions that could affect earnings management and the likelihood that a state adopts the COW. Standard errors for all regressions are robust for heteroscedasticity and clustered by the state of incorporation to account for potential time-varying correlations in unobserved factors that have an impact on different firms within a given state of incorporation (Bertrand et al., 2004).

Following prior studies by Cheng et al. (2016), Huang et al. (2020), and Ni (2020), we introduce a vector of firm-level control variables into our baseline model, including firm size (SIZE), leverage (LEV), return on assets (ROA), market-to-book ratio (MTB), firm age (FIRM AGE), cash flow (CASHFLOW), and auditing by one of the Big-5 firms (BIG5). Detailed variable definitions are provided in the Appendix 3.A.

Table 3.2 presents summary statistics for all variables included in the baseline model. After requiring that firm-year observations have non-missing control variables and performance-matched discretionary accruals, 84,011 observations remain for performance-matched discretionary accruals and control variables. The table shows that the average performance-matched accruals of the sample is 0.02, the average firm size is 4.70, and the average leverage is 0.437. An average firm in our sample has a return on assets of -0.410, a market-to-book ratio of 4.276, a firm age of about 17.7 years, and a cash flow of -0.417. Our summary statistics are comparable to those reported by Gao et al. (2018), He (2015), Kim et al. (2022), Kim et al. (2012), Ni (2020), and Zang (2012).

[Insert Table 3.2 here]

3.4 Empirical findings

3.4.1 Determinants of COW adoption

Our research design relies heavily on the assumption that the impetus of COW is an exogenous shock; however, a natural concern is this legal change could be driven by the underlying economic and political conditions. In particular, a number of states adopted COW during the 2000s, which may have coincided with certain economic factors affecting those states at the time. To alleviate this concern, we estimate a Cox proportional hazard model to examine whether the adoption of COW is correlated with state-level economic and political considerations. Additionally, we examine whether the level of accrual-based earnings management contributes to the adoption of COW laws.

Table 3.3 presents the results from a Cox proportional hazard model that examines the passage of COW using panel data at the state-of-incorporation and year levels. A "failure event" is defined as the adoption of constituency in a given incorporated state. Predictor variables are lagged by one year relative to the passage of COW. In column (1), we start by only using the average level of performance-matched discretionary accruals (Incorporated-state Average, ACCR_K) in a given incorporated state as the explanatory variable. The coefficient estimate is positive but insignificant, indicating that the average state-level of discretionary accruals does not predict the passage of COW in a given incorporated state. Column (2) further includes several state-level explanatory variables calculated on a yearly basis, including the natural logarithm of GDP, GDP growth, the unemployment rate, the natural log of the state population, the union membership rate, and the ratio of Democrat-to-Republican representatives in the U.S. House of Representatives. Column (2) shows that none of these variables are statistically significant, indicating that the enactment of COW is unlikely determined by these state-level economic or political characteristics prior to its adoption, nor by the pre-existing state-level earnings

management or the firms' accrual-based earnings management. All these columns include year fixed effects.[3]

[Insert Table 3.3 here]

3.4.2 The effect of COW on earnings management.

In this section, we examine firms' earnings management decisions using a difference-in-differences estimation in which we employ our COW indicator as the key independent variable. In the two models presented in Table 3.4, the dependent variable is ACCR_K, referring to performance-matched discretionary accruals. Column (1) estimates the baseline relation between the introduction of COW and earnings management. The estimated coefficient on COW is negative and significant at the 1% level. In column (2), we include a full set of control variables, and the coefficient estimate remains negative and significant at the 1% level. The adoption of COW is associated with a 5.44% (=0.019/0.349*100%) decrease in the standard deviation of accrual earnings management. The baseline results indicate a statistically significant decrease in discretionary accruals subsequent to the legislation for firms incorporated in states that have eventually passed the waiver relative to other firms. This is consistent with our hypothesis that the relaxation of the duty of loyalty could provide managers with more access to business opportunities, which can in turn reduce concerns and incentives to manipulate financial results to meet or exceed earnings expectations.

[Insert Table 3.4 here]

[3] We also introduce some state-of-incorporation-level variables, including the natural log of GDP, GDP growth, and the natural log of the population (from the U.S. Bureau of Economic Analysis), the unemployment rate (from the U.S. Bureau of Labour Statistics), the union membership rate (from The Union Membership and Coverage Database), and political balance (from the Annual Statistical Abstracts of the U.S. Census Bureau).

3.4.3 Timing of changes in earnings management surrounding COW adoption

With difference-in-differences (DiD) methods, our baseline results suggest that the passage of COW is associated with a decline in accrual-based earnings management. However, our findings' validity relies heavily on the parallel trends assumption (Abadie, 2005). Failure to fulfil this assumption may lead to an incorrect interpretation of our results, such as the post-COW changes representing trending differences between the treatment and control groups from prior to the COW adoption and not being caused by COW per se. Accordingly, we follow Bertrand and Mullainathan (2003) and conduct the dynamic treatment model to mitigate endogeneity concerns regarding reverse causality; we hence provide support for the parallel trends assumption. Specifically, we examine the timing of changes in earnings management relative to the timing of the adoption of COW as follows:

$$Accruals_{jst} = \mu_0 + \mu_1 COW_{st}^{-1/-2} + \mu_2 COW_{st}^{0} + \mu_3 COW_{st}^{+1} + \mu_4 COW_{st}^{2+} + \gamma X_{jst} + f_j + \tau_t + \varepsilon_{jst} \quad (3.2)$$

where the main explanatory variable COW in Equation (3.1) is replaced by a set of four dummy variables. Following Chy et al. (2021), we use $COW^{-1/-2}$ which is a period dummy variable that is set to one if it is one or two years prior to the COW enactment and zero otherwise. COW^{0}, COW^{1}, and COW^{2+}, are set to one for (1) the current year of, (2) one year after, (3) two or more years after the adoption of COW in the incorporate state. This dynamic analysis further allows us to decompose the effect of COW into different time periods and examine the timing of earnings management changes relative to the timing of the passage of COW.

Table 3.5 reports the estimation results of the dynamic treatment model. The coefficient estimates of $COW^{-1/-2}$ in either column show insignificance, implying that there is no trend of declining or increasing earnings management before the adoption of the waivers. The discretionary accruals decrease only after the passage of COW and there are no significant pre-trends between the treated and control firms. For robustness, we also decompose the main explanatory variable COW into five period-specific treatment dummy variables to include COW^{-2}, COW^{-1}, COW^{0}, COW^{1}, COW^{2+}, and the results remain consistent, as shown in

Appendix 3B. These findings provide support to our DID design where the parallel trends assumption is likely satisfied; they also suggest that our baseline results are unlikely to be subject to reverse causality issues.

[Insert Table 3.5 here]

3.4.4 The effect of covariate balance

We have demonstrated a significant negative association between the passage of COW and accrual-based earnings management. However, our baseline results could be driven by firms' fundamental differences among those incorporated in states that adopted COW. To alleviate this selection problem, we construct a sample of matched treatment and control firms using the propensity score matching strategy and re-estimate our baseline regression.

To construct our matching sample, we follow Serfling (2016) closely and retain all observations for treatment and control firms in year t-1 relative to the passage of COW. Also, we require that both groups of firms have at least one observation before and after the adoption of the law within the (-5, +5) window. We then use a logistic regression to estimate the probability of being a treated firm, by controlling for the same vector of firm-level variables as in the baseline regression. As noted by Shipman et al. (2017), the most common design choice is one-to-one matching without replacement. Over 80% of the surveyed studies disclose using this matching method. Following Ni (2020), we match each treated firm in year t-1 to a control firm without replacement, based on the same year, same industry, and the closest propensity score (caliper=0.01). Each treated firm in year t-1 is matched to a control firm without replacement, based on the same year, same industry, and the closest propensity score (caliper=0.01). Only the control firm with the closest propensity score is retained when a treated firm is matched to several control firms. After excluding observations that do not satisfy the common support condition, our matched sample ends up with 1,671 unique pairs of matched firms. In columns (1) and (2) in Panel A of Table 3.6, we report the estimation results of logit regressions modelling the incidence of COW enactment

on the pre-matched and post-matched samples, respectively. As shown in column (2), none of the control variables is statistically significant. In Panel B, the sample means of the control variables for the matched treated and control firms are insignificantly different, implying a successful matching.

We re-estimate the baseline regression analyses as shown in Equation (3.1) and (3.2) using the matched sample. Consistent with our main finding, firms incorporated in states that pass the law show a significant decline in earnings management as shown in Panel C of Table 3.6. The results indicate that our baseline results are unlikely subject to differences in firm-level characteristics between treated and control firms.

[Insert Table 3.6 here]

3.4.5 Controlling for confounding law changes

Within our sample period, there are other state-level legal adoptions that are potentially confounding, so a natural concern is whether our results could be driven by other legal changes. In this section, we examine whether these may have any impact on the effect of COW. The staggered passage of universal demand laws (UD) between 1989 and 2005 made the filing of derivative lawsuits significantly more difficult and led to reduced litigation risk and poorer governance for firms (Appel, 2019). In line with this, Huang et al. (2020) document an increase in real earnings management after the adoption of UD laws. We control for the possible impact of the confounding effects of these UD laws by adding the indicator variable UD, which equals one if a firm's state of incorporation has adopted UD laws, and zero otherwise.

Previous studies have documented the significant role of antitakeover protection on information environments and reporting quality (Armstrong et al., 2012; Zhao & Chen, 2009). To control for the potentially confounding effects of antitakeover laws, we also add indicator variables for business combination laws (BC), poison pill laws (PP), and directors' duties laws (DD) incrementally into our baseline equation, in line with prior studies (Karpoff & Wittry, 2018; Ni, 2020; Ni et al., 2020).

As shown by Gao et al. (2018), reduced outside employment opportunities for employees leads to a significant decrease in firms' manipulating earnings upwards to retain them. To investigate whether our main results are affected by these legal changes, we control for the effect of IDD and IDD rejection (RIDD), and also incrementally include the IDD and RIDD indicators into our baseline estimation.

The estimation results are presented in Table 3.7, where the dependent variable is performance-matched discretionary accruals (ACCR_K). We still obtain negative and significant coefficients on COW after controlling for these concurrent legal changes across the table with different model configurations. These suggest that the effect of COW laws on accrual-based earnings management are unlikely affected by confounding legal changes. It is noteworthy that we obtain significant positive coefficients on universal demand laws, which in line with Huang et al. (2020). These findings suggest the adoption of COW reduces the negative impact of UD laws on the corporate information environment.

[Insert Table 3.7 here]

3.5 Additional analyses and robustness tests

3.5.1 Cross-sectional analysis

In this section, we explore cross-sectional heterogeneity to strengthen our inference on the causality between the adoption of COW and earnings management, as well as to illuminate any potential mechanisms underlying the negative relationship. After the waivers, firms are granted a statutory right to be exempt from the corporate opportunity doctrine, which allows managers greater access to external investment opportunities to diversify their human capital without the board's consent. This may significantly reduce managers' career concerns and pressures for short-term profitability, which, in turn, lead to a decrease in their incentives to engage in earnings management. Thus, we hypothesize that the negative effect of COW on earnings management

should be more pronounced when managers bear higher levels of career concern and greater pressures to improve short-term profitability, ex ante.

We employ a two-fold test to verify the hypothesis. The first set of analyses explores managers' ex-ante career concerns. To proxy these, we employ two measures commonly used in prior literature: CEO age and CEO tenure. When managers are further from retirement or in the early years of service, with the firm and market still assessing their abilities, the earnings reported during this period would have a greater effect on the market's assessment of their competence (Gibbons & Murphy, 1992; Li et al., 2017). The benefits of favourably influencing the market's evaluation of their competence are higher, as it impacts future compensation, reappointments or dismissal, and managerial autonomy (Hermalin & Weisbach, 1998). Career concerns can distort managers' actions in some circumstances (Holmstrom, 1999). Firm decisions are expected to be more influenced by managers with greater concerns about the labour market's perception, reputation, and career prospects (Li et al., 2017). Not yet having established a robust career track and motivated to build a reputation and invest in their human capital within a specific firm, these individuals are more inclined to undertake costly actions to shape the board's and the market's perception of their abilities (Ali & Zhang, 2015; Baginski et al., 2018; Gibbons & Murphy, 1992).

The second set of tests analyses the ex-ante pressures exerted on managers to meet short-term thresholds. As documented in prior studies, meeting short-term earnings targets serves as a dominant incentive for managers to engage in financial reporting manipulation. Specifically, they may utilize earnings management to avoid falling short of the consensus analyst forecast (Burgstahler & Eames, 2006; Degeorge et al., 1999; Graham et al., 2005; Huang et al., 2020). Roychowdhury (2006) presents evidence suggesting that suspect firms narrowly beating analyst forecasts engage in manipulation activities to enhance reported earnings. Managers facing pressure are incentivized to conceal unfavourable outcomes and enhance short-term profitability, aiming to prevent transient investors from divesting of their stock (An & Zhang, 2013; Duruigbo, 2011). Such investors disproportionately emphasize short-term performance, potentially leading managers to take actions that boost short-term earnings at the cost of long-

run value (Bushee, 2001). Therefore, with more opportunities to invest externally, the waivers may directly diversify their human capital and disperse their concerns about job security, which, in turn, may indirectly mitigate the short-term pressure from such stakeholders.

We use two proxies to measure these pressures exerted on managers. The first is an indicator variable set to one when earnings narrowly meet or beat the latest analyst consensus earnings forecast, as a measure of short-term pressure. Following Brochet et al. (2015), we calculate the difference between shares held by dedicated and quasi-index investors minus shares held by transient investors. A greater difference represents a smaller proportion of transient investors. Then we set the second indicator as equal to one if the investor horizon exceeds the median, to measure the lower level of pressure for short-term earnings.

Table 3.8 presents the results of the cross-sectional analysis. Positive coefficients of the interaction terms in columns (1) and (2) indicate that the negative impact on opportunistic earnings management is more pronounced for firms with younger and recently appointed CEOs. Columns (3) and (4) indicate a more pronounced negative impact on earnings management for firms that have narrowly met or beaten analyst forecasts and a higher proportion of investors with short-term horizons, respectively. The findings confirm the hypothesis that earnings management declines following the adoption of the waivers, potentially because managers' career concerns and pressures for short-term performance are alleviated.

[Insert Table 3.8 here]

3.5.2 Additional robustness tests

Table 3.9 presents results from several robustness tests. Panel A examines whether the negative relation between the adoption of COW and earnings management remains robust for several specific subsamples. For each subsample, performance-matched discretionary accruals are used as the dependent variable.

As documented by Basu and Liang (2019) and Romano (2006), a large proportion of U.S. listed firms are incorporated in Delaware given the favourable regulatory environment. In our sample

period, over 62.76% (=52,726/84,011) of firm-year observation are from Delaware. Therefore, our main results could be driven by those firms being incorporated in Delaware or "the Delaware effect". To address this concern, we re-estimate the baseline regression by excluding Delaware-incorporated firms and report the results in column (1). The estimated coefficient of COW remains negative and significant at the 5% level, which alleviates the concern that being Delaware-incorporated drives our findings.

Compustat only provides data on the most recent but not historical states of incorporation. This raises a concern that endogenous re-incorporation decisions may affect the estimation of the effect of COW laws. To address this, we exclude firms that have changed the state of incorporation during the sample period.[4] The coefficient of COW is significantly negative at the 1% level in column (2), suggesting that the results remain intact and not subject to the re-incorporation issue.

As pointed out by Serfling (2016), using an extended sample period may create noise around identification of the effect of legal changes. We re-estimate our baseline model by excluding observations in the year of COW adoption, which is treated as the transition year. The estimated coefficient of COW remains negative and significant at the 1% level, as shown in column (3).

In line with Basu and Liang (2019) and Ni (2020), we have also taken measures to restrict the sales growth rate to be between −50% and 100%. This step is crucial in eliminating firm-years that may have undergone non-articulating transactions, such as mergers and acquisitions or significant divestitures, which can significantly impact accruals through channels other than COW laws, as discussed in Hribar and Collins (2002). The sales growth is defined as the difference between current-period sales and prior-period sales scaled by the market value of equity at the beginning of the year. The estimated coefficient of COW remains significantly negative in column (4), suggesting that extreme performance is unlikely to affect the main results.

[4] We use the historical state of incorporation data provided by Spamann and Wilkinson, who compile it from SEC's EDGAR database for historic incorporation information for all publicly traded stock of U.S. corporations.

As documented by Rauterberg and Talley (2017), the hi-tech industry has more waivers by proportion than their representation among public firms. Additionally, high-tech firms are more inclined than low-tech firms to reward managers who use discretionary accruals to meet earnings forecasts, as an income-increasing earnings management method. Therefore, our results could be affected by these firms from the hi-tech industry. To alleviate this concern, we re-examine the effect of COW adoption on earnings management after excluding high-tech industries. We obtain significant negative coefficient on COW in column (5) and our results remain unchanged.

In Panel B, we investigate whether the main results are sensitive to shorter windows around the event year. From columns (6) to (8), observations of firms incorporated in states which eventually passed COW are required to be within ±3, ±5, and ±10 years around the passage of COW, respectively. The estimated coefficients of COW are still negative and significant at the 1% level, and the effect becomes stronger than the baseline results for some shorter event windows.

In Panel C, we examine whether the negative relation between the adoption of COW and earnings management is robust to alternative model specifications. The baseline model specification clusters standard errors at the state-of-incorporation level and controls for firm and year fixed effects. In column (9), we replace year fixed effect with the interaction of SIC industry and year fixed effect, to capture time-varying trends within the industry and re-estimate the baseline regression. In column (10), we adopt a two-way cluster strategy, clustering robust standard errors at both the state-of-incorporation level and year level in the baseline model. The estimation results indicate that the main findings remain unchanged and are robust to alternative model specifications.

In Panel D, we re-examine the main results by using five alternative measures of accrual-based earnings management. In column (11), we employ the measure of accruals quality (ACCR_F), which is the standard deviation of the firm-level residuals from the Jones (1991) and Dechow and Dichev (2002) models. In column (12), we employ the measure of earnings management from the standard Jones (1991) model, which decomposes accruals into discretionary and non-discretionary accruals. In column (13), we employ a modified version of the Jones model

proposed by Dechow et al. (1995), which is designed to reduce the measurement error of discretionary accruals when discretion is applied over revenues. In column (14), we employ a non-regression-based measure of current accruals, and total accruals in column (15). We still obtain negative and significant coefficients on COW when using alternative accrual measures as the dependent variable.

In Panel E, we present the results from a stacked DID estimation, considering that recent studies cast doubt on the reliability of staggered DID models to produce unbiased estimates (Baker et al., 2022; Callaway & Sant'Anna, 2021; Fich et al., 2023). The issue of heterogeneous treatment arises when observations treated later serve as controls before treatment implementation, while observations treated earlier function as controls after treatment is implemented. The treatment effect from may be heterogeneous across groups and time periods, which may result in misleading staggered DID estimates (Baker et al., 2022). To address this concern, we follow the stacked DID design introduced by Baker et al. (2022) and Callaway and Sant'Anna (2021) which can generate event-specific cohorts which include treated firms and "clean" control firms. These "clean" control firms do not experience the COW enactment within the estimation window or outside the sample window. This design ensures that early-treated firms are not used as controls for later-treated firms, thus mitigating the heterogeneous treatment issues. The robust estimates obtained from the stacked DID estimation yield inferences consistent with those from our baseline tests.

Results from these robustness tests show that estimated coefficients of COW remain negative and significant throughout these columns despite different sample sizes, specifications, and alternative measures of earnings management.

[Insert Table 3.9 here]

3.5.3 Placebo test

Our results show that firms incorporated in states that adopted the COW laws have lower accrual-based earnings management in post-passage periods. We conduct two falsification

tests to mitigate the concerns that the negative association might be spurious, or simply reflects a general trend.

First, we generate a new indicator COW by using the year three years before the actual event year as the pseudo-event year and re-estimate our baseline model with the new indicator. Table 3.10 presents the results and the estimated coefficient on COW is statistically insignificant, suggesting our results are unlikely be driven by chance.

Then, we conduct an additional placebo test by randomising the assignment of treated states and generate 5,000 simulated samples. We retain the actual enactment years of the COW and randomly assign them to 9 out of the total 51 states. By repeating the randomisation process 5,000 times, we obtain 5,000 simulated samples and then re-estimate the baseline specification in Equation (3.1) for each sample. We retain the placebo coefficient estimates based on the simulated samples and Figure 3.1 reports their distribution. The actual baseline estimated coefficient for COW is -0.019, which is smaller than the placebo estimates in 97.56% (=4878/5000) of cases, implying that our main results are unlikely to be driven by chance or a general trend.

[Insert Figure 3.1 here]

[Insert Table 3.10 here]

3.5.4 The effect of COW on real earnings management

Cohen et al. (2008) discover that managers have shifted their focus from accrual-based to real earnings management in the period following the implementation of the Sarbanes-Oxley Act (SOX). This finding suggests that, in the post-SOX period with its highly publicized accounting scandals, there was an greater need to avoid detection of accrual-based earnings management, leading managers to turn to real earnings management activities. Therefore, our main findings may be subject to a concern that the decline in accrual manipulation after COW is simply a

reflection of enhanced regulatory scrutiny in the post-SOX period. Also, previous studies have documented a substitution effect among accrual manipulations and real earnings management (Cohen & Zarowin, 2010; Zang, 2012). Corporations might switch toward real earnings management when the costs of accrual-based management increase (Badertscher, 2011; Cohen & Zarowin, 2010; Graham et al., 2005; Zang, 2012). This would be due to the fact that activities related to real earnings management are less likely to come under scrutiny by auditors and regulators, so have a higher likelihood of remaining undetected. It could be a research concern that firms reduce accruals management to strategically segue into real transactions management. Hence, we use the cash flow from operations, abnormal levels of production costs, and discretionary expenses as proxies for real earnings management, to test whether it could be an issue. In columns (1)-(6), none of the estimated coefficients on COW are significant, suggesting that accrual-based earnings management decreases after the adoption of COW and real earnings management appears unaffected.

[Insert Table 3.11 here]

3.5.5 Waiver and corporate governance

Another potential explanation for reduced earnings management could be increased monitoring after the waiver. As documented in prior studies, there is a substitute relationship between regulation and traditional monitoring mechanisms (Becher et al., 2005; Berry et al., 2006; Caprio et al., 2007; Kole & Lehn, 1999). Therefore, it would be reasonable to expect that boards would voluntarily strengthen monitoring in response to the waiver, thereby curtailing managers' opportunistic earnings manipulation. To empirically examine whether corporate governance is a possible explanation for the negative effect of COW on earnings management, we employ four measures of corporate governance. The first is an aggregate proxy of corporate governance, the E-index, with higher values signifying worse corporate governance (Bebchuk et al., 2009). We also consider the percentage of independent directors, institutional ownership, and analysts following the firm. The negative effect of COW is expected to be more pronounced when firms

have weaker ex-ante monitoring if corporate governance plays an active role in deterring earnings manipulation.

We report our results in Table 3.12, and none of the coefficients on the interaction terms between COW and corporate governance measurements are found to be statistically significant. The results suggest that corporate governance is unlikely to play a significant role in explaining our main findings.

[Insert Table 3.12 here]

3.6 Conclusion

The enactment of COW from the year 2000 permits firms to waive an important part of the fiduciary duty of loyalty—the corporate opportunity doctrine—which has refrained managers from appropriating new business opportunities for themselves without first presenting them to their employers. The legislation allows for more external opportunities for managers, which could reduce their career concerns and pressure to meet short-term earnings targets. We thereby expect a decrease in earnings management since managers might be less likely to manipulate accounting figures to cater to earnings expectations.

Scholarly study into the staggered adoption of COW across different U.S. states has revealed a significant decrease in earnings management for firms incorporated in states that have eventually adopted the waiver. The results further show that the negative effect on earnings management is more pronounced for managers faced with greater career concerns and pressures to boost short-term profits. Our findings on the association between the waivers and accrual-based earnings management remain robust to a set of additional analyses. Moreover, we are unable to find evidence indicating that firms reduce accruals management when shifting to real transactions management, nor can we find evidence supporting the argument that corporate governance plays a significant role in curtailing earnings manipulation. Our findings might provide some implications for firms that introducing the waivers may not necessarily be detrimental to them; instead, they could yield plausible benefits for such corporations, such as fostering more transparent financial reporting practices.

Figure 3.1 Placebo tests

This figure plots the distribution of the coefficients of COW estimates from the placebo tests by randomly assigning the treatment state and control states. We ensure that the number of pseudo treatment state and pseudo control states are the same as the number of actual treatment states and control states as used in our baseline regressions. We re-estimate the baseline regression model and store the coefficient and standard error estimates for each placebo sample. This procedure is repeated for 5,000 times.

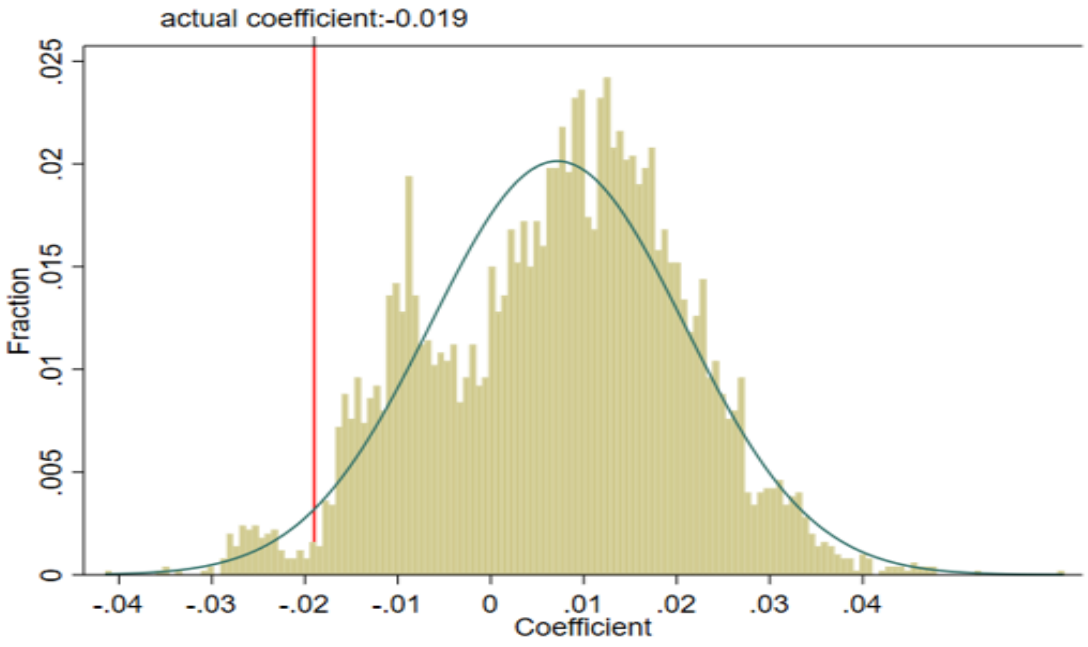

Table 3.1 Corporate Opportunity Waivers (COW) adopted states

This table lists in chronological order the adoption of COW by nine states from 2000 to 2016. The list is obtained from Rauterberg and Talley (2017).

Year of Adoption	State	Implementing Statute	Number of firms affected
2000	Delaware	Del. Code Ann. tit. 8, § 122(17)	7,061
2001	Oklahoma	Okla. Stat. Ann. tit. 18, § 1016(17)	43
2003	Missouri	Mo. Ann. Stat. § 351.385(16)	33
2005	Kansas	Kan. Stat. Ann. § 17-6102 (17)	15
2006	Texas	Tex. Bus. Orgs. Code Ann. § 2.101(21)	167
2007	Nevada	Nev. Rev. Stat. Ann. § 78.070(8)	969
2011	New Jersey	NJ Stat. Ann. 14A:3-1(q)	114
2014	Maryland	Md. Code Ann., Corps. & Ass'ns § 2-103(15)	76
2016	Washington	Wash. Rev. Code Ann. § 23B.02.020(5)(k)	110

Table 3.2 Summary statistics

This table reports the descriptive statistics for the variables used in the baseline regression models and presents the number of observations, the mean, standard deviation, 25th percentile, median and 75th percentile. The sample period is from 1996 to 2020. Variables are winsorised at the 1st and 99th percentiles. Detailed variable definitions are provided in the Appendix 3.A.

	N	Mean	SD	P25	Median	P75
ACCR_K	84,011	0.020	0.349	-0.072	0.000	0.072
COW	84,011	0.562	0.496	0.000	1.000	1.000
SIZE	84,011	4.700	2.683	3.012	4.787	6.556
LEV	84,011	0.437	1.308	0.000	0.044	0.296
ROA	84,011	-0.410	1.363	-0.230	0.006	0.064
MTB	84,011	4.276	9.108	1.168	1.718	3.099
FIRM AGE	84,011	17.745	13.754	7.000	13.000	24.000
CASHFLOW	84,011	-0.417	1.726	-0.181	0.049	0.116
BIG5	84,011	0.628	0.483	0.000	1.000	1.000

Table 3.3 Determinants of adoption of Corporate Opportunity Waivers

This table presents results from a Cox proportional hazard model analysing the hazard of a state executing COW. The "failure event" is the adoption of COW in a given incorporated state. Once a state adopts COW, it is excluded from the sample. Explanatory variables are lagged by one year and measured as of year t – 1. Column (1) only includes the average level of performance-matched discretionary accruals (Incorporated-state Average ACCR_K) in an incorporated state. Column (2) includes a number of state-level factors, including state GDP, state-of-incorporation level GDP growth, population, unemployment rate, union membership rate and political balance. Year fixed effects are included, and robust standard errors are clustered at the state-of-incorporation level. Detailed variables definitions are provided in the Appendix 3.A. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	DEP. VAR = Failure Event	
	(1)	(2)
Incorporated-state Average ACCR_K	0.674	0.492
	(1.342)	(0.821)
Incorporated-state GDP Growth		7.723
		(1.006)
Incorporated-state log(GDP)		3.059
		(1.633)
Incorporated-state unemployment rate		-0.094
		(-0.438)
Incorporated-state log(population)		-2.704
		(-1.445)
Incorporated-state union membership rate		0.039
		(0.527)
Incorporated-state political balance		-0.239
		(-0.198)
Year FE	YES	YES
Pseudo R^2	0.043	0.128
Observations	809	793

Table 3.4 Corporate opportunity waivers and earnings management

This table reports results from OLS regressions examining the association between corporate opportunity waiver and earnings management from 1996 to 2020. The sample excludes financial and utility industries (SIC 4000–4999 and SIC 6000–6999). The dependent variable is *ACCR_K*, referring to performance-matched discretionary accruals. COW is the main independent variable, which is an indicator variable set to one if the state in which a firm is incorporated has adopted COW, and zero otherwise. Column (1) reports results examining the association between the waiver and earnings management, only including the independent and dependent variables, firm and year fixed effects. Column (2) includes the vector of firm-level control variables. All regressions control for firm and year fixed effects. Robust standard errors are clustered at the state-of-incorporation level and t-statistics are reported in parentheses. Continuous variables are winsorised at the 1st and 99th percentiles. Definitions of variables are provided in the Appendix 3.A. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	DEP. VAR = ACCR_K	
	(1)	(2)
COW	-0.014***	-0.019***
	(-4.363)	(-4.807)
SIZE		-0.014*
		(-1.939)
LEV		0.006***
		(5.116)
ROA		0.058***
		(7.962)
MTB		0.008***
		(6.843)
FIRM AGE		-0.003***
		(-3.940)
CASHFLOW		0.031***
		(5.517)
BIG5		-0.006**
		(-2.275)
Firm FE	YES	YES
Year FE	YES	YES
Adjusted R^2	0.033	0.070
Observations	111,048	84,011

Table 3.5 Dynamic treatment analysis

This table shows results from dynamic treatment model examining the pre-treatment trends between treatment and control groups. The sample period covers 1996 through 2020. The dependent variable is *ACCR_K*, referring to performance-matched discretionary accruals. $\mathrm{COW}^{-1/-2}$ is an indicator variable set to one if it is one year or two years before the adoption of COW and zero otherwise. COW^{0} is an indicator variable set to one if it is the adoption year of COW and zero otherwise. COW^{+1} is an indicator variable set to one if it is the one year after the adoption of COW and zero otherwise. COW^{2+} is an indicator variable set to one if it is two or more years after the adoption of COW and zero otherwise. Column (1) reports results without including control variables, while Column (2) controls for the same set of control variables as those in the baseline. All columns control for firm and year fixed effects. Robust standard errors are clustered at the state-of-incorporation level and t-statistics are reported in parentheses. Continuous variables are winsorised at the 1st and 99th percentiles. Definitions of variables are provided in the Appendix 3.A. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	DEP. VAR = ACCR_K	
	(1)	(2)
$COW^{-1/-2}$	0.000	0.005
	(0.114)	(1.041)
COW^{0}	-0.002	-0.001
	(-0.395)	(-0.091)
COW^{+1}	-0.024***	-0.027***
	(-2.844)	(-3.013)
COW^{2+}	-0.017***	-0.020***
	(-3.456)	(-4.086)
Firm controls	NO	YES
Firm FE	YES	YES
Year FE	YES	YES
Adjusted R^2	0.033	0.070
Observations	111,048	84,011

Table 3.6 Propensity-score matching

This table reports the results of estimating effect of the adoption of COW on earnings management using the propensity score matching method. Panel A reports the estimation results of logit regressions modelling the incidence of COW enactment on the pre-matched and post-matched samples, respectively. Panel B presents the sample means of firm-level characteristics for matched treatment and control groups in year t-1, the univariate comparisons of firm factors and the t-statistics. The firm characteristics are not statistically different across treatment and control groups. Panel C presents the estimation results estimating the effect of the adoption of COW on earnings management, based on propensity score matched samples over the ±5 years around the passage of COW. The dependent variable is *ACCR_K*, referring to the performance-matched discretionary accruals. In columns (1) and (2), the main independent variable of interest is *COW*, an indicator variable set to one if a firm's state of incorporation has executed COW, and zero otherwise. Columns (3) and (4) present results from dynamic treatment model. $\mathrm{COW}^{-1/-2}$ is an indicator variable set to one if it is one year or two years before the adoption of COW and zero otherwise. COW^{0} is an indicator variable set to one if it is the adoption year of COW and zero otherwise. COW^{+1} is an indicator variable set to one if it is the one year after the adoption of COW and zero otherwise. COW^{2+} is an indicator variable set to one if it is two or more years after the adoption of COW and zero otherwise. Column (1) and (3) report results without including control variables, while Columns (2) and (4) control for the same set of control variables as those in the baseline. All regressions control for firm and year fixed effects. Robust standard errors are clustered at the state-of-incorporation level and t-statistics are reported in parentheses. All variable definitions are provided in the Appendix 3.A. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Panel A. Matching Regression and Diagnostics		
	Logit regressions	
	Pre-matched	Post-matched
	(1)	(2)
Size	0.147***	0.024
	(7.568)	(0.953)
LEV	0.024	0.005
	(1.036)	(0.143)
ROA	-0.110	-0.071
	(-1.243)	(-0.654)
MTB	0.021***	0.003
	(4.966)	(0.546)
FIRM AGE	-0.036***	-0.004
	(-12.623)	(-1.128)
CASHFLOW	0.047	0.062
	(0.702)	(0.702)
BIG5	0.096	0.015
	(1.159)	(0.146)
Industry FE	YES	YES
Firm FE	YES	YES
Pseudo R^2	0.444	0.001
Observations	16,642	3,342

Panel B. Balance test				
	Treated Group (N=1,671)	Control Group (N=1,671)	Difference	t-stat
SIZE	4.018	3.964	0.053	0.640
LEV	0.397	0.394	0.003	0.080
ROA	-0.370	-0.380	0.009	0.230
MTB	4.741	4.729	0.011	0.040
FIRM AGE	14.691	14.977	-0.286	-0.690
CASHFLOW	-0.348	-0.369	0.021	0.390
BIG5	0.668	0.660	0.009	0.510

Panel C. Matched sample baseline				
	DEP. VAR = ACCR_K			
	(1)	(2)	(3)	(4)
COW	-0.023***	-0.020***		
	(-3.846)	(-3.181)		
$COW^{-1/-2}$			0.006	0.012
			(0.756)	(1.079)
COW^{0}			-0.021	-0.014
			(-1.121)	(-0.691)
COW^{+1}			-0.026***	-0.018**
			(-3.028)	(-2.645)
COW^{2+}			-0.017**	-0.010
			(-2.037)	(-1.098)
Firm controls	NO	YES	NO	YES
Firm FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Adjusted R^2	0.001	0.045	0.001	0.045
Observations	22,611	20,660	22,611	20,660

Table 3.7 Controlling for confounding law changes

This table reports the results of estimation the effect of COW on earnings management by controlling for confounding legal changes. In columns (1) to (6), the dependent variable is *ACCR_K*, which is the performance-matched discretionary accruals. The main independent variable of interest is *COW*, an indicator variable set to one if a firm's state of incorporation has adopted COW, and zero otherwise. In columns (1) to (6), we control for the effect of universal demand laws (UD), business combination laws (BC), poison pill laws (PP), directors' duties laws (DD), Inevitable Disclosure Doctrine (IDD) and the rejection of IDD (RIDD) by gradually including indicators of these concurrent laws. All regressions include the same vector of control variables as in the baseline regression, and control for the firm fixed effects and year fixed effects. Robust standard errors are clustered at the state-of-incorporation level and t-statistics are reported in parentheses. All variable definitions are provided in the Appendix 3.A. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

	DEP.VAR = ACCR_K					
	(1)	(2)	(3)	(4)	(5)	(6)
	UD	BC	PP	DD	IDD	RIDD
COW	-0.018***	-0.018***	-0.018***	-0.018***	-0.018***	-0.018***
	(-4.481)	(-4.488)	(-4.838)	(-4.715)	(-4.953)	(-4.971)
UD	0.030***	0.028***	0.028***	0.028***	0.028***	0.027***
	(3.650)	(3.209)	(3.131)	(3.123)	(3.110)	(3.125)
BC		0.008	0.008	0.010	0.010	-0.024***
		(0.694)	(0.670)	(0.849)	(0.847)	(-4.683)
PP			-0.014	-0.013	-0.013	-0.013
			(-0.778)	(-0.789)	(-0.803)	(-0.801)
DD				-0.006	-0.006	-0.007
				(-0.307)	(-0.307)	(-0.329)
IDD					-0.004	-0.004
					(-0.176)	(-0.179)
RIDD						0.041***
						(4.582)
Firm controls	YES	YES	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES
Adjusted R^2	0.070	0.070	0.070	0.070	0.070	0.070
Observations	84,011	84,011	84,011	84,011	84,011	84,011

Table 3.8 Cross-sectional analysis

This table explores cross-sectional differences of the effect of COW adoption on earnings management. Dependent variable is ACCR_K, which is the performance-matched discretionary accrual. *COW* is an indicator variable set to one if the state in which a firm is incorporated has adopted COW, and zero otherwise. We examine whether the negative effect is stronger when managers face higher levels of concerns and pressures to improve short-term performance, as proxied by CEO age, tenure, meeting or beating expectations, and investor horizon, respectively. All regressions control for firm-level factors, firm and year fixed effects. Robust standard errors are clustered at the state-of-incorporation level and t-statistics are reported in parentheses. Definitions of variables are provided in the Appendix 3.A. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	DEP. VAR = ACCR_K			
	(1) CEO AGE	(2) CEO TENURE	(3) MBEAT	(4) LONG-TERM INVESTOR
COW	-0.014***	-0.007**	-0.021***	-0.012**
	(-3.265)	(-2.052)	(-3.990)	(-2.452)
CEO AGE	-0.003			
	(-1.321)			
COW*CEO AGE	0.005**			
	(2.097)			
CEO TENURE		-0.002		
		(-0.694)		
COW*CEO TENURE		0.005**		
		(2.489)		
MBEAT			0.057***	
			(8.338)	
COW*MBEAT			-0.016**	
			(-2.440)	
LONG-TERM INVESTOR				-0.009***
				(-3.002)
COW*LONG-TERM INVESTOR				0.006**
				(2.200)
Firm controls	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Adjusted R^2	0.087	0.092	0.115	0.089
Observations	23,951	25,901	53,100	27,269

Table 3.9 Robustness tests

This table presents the results from robustness tests of the negative relation between the adoption of COW and earnings management. Panel A reports results based on several specific subsamples. For each subsample, *ACCR_K*, which is the performance-matched discretionary accruals, is used as the dependent variable. The main independent variable of interest is COW, an indicator variable equal to one if a firm's state of incorporation has eventually adopted COW, and zero otherwise. In column (1), we exclude firms incorporated in Delaware. In column (2), we exclude firms that have changed the state of incorporation during the sample period. In column (3), we treat the year of COW adoption as the transition year and drop firm-year observations in these years. In column (4), we exclude observations with a growth rate less than -50% or above 100%. In column (5), we exclude high-tech industries. Industries are identified as high tech when SIC codes are 3570-3577 (computer and office equipment), 3600-3674 (electronic and other electrical equipment and components, except computer equipment), 3812-3845 (measuring, analysing, and controlling instruments), 7371-7379 (computer programming and data processing), and 8731-8734 (research, development, and testing services). Panel B reports the results from examining the sensitivity of main results to using shorter event windows. We require that observations of firms incorporated in states which have eventually passed the COW be in the ±3, ±5, and ±10 years around the enactment of the COW, respectively. For each event window, *ACCR_K* is used as the dependent variable. Panel C reports results from estimating the effect of the adoption of the COW on earnings management based on alternative model specifications. Column (9) replaces year fixed effect with industry-by-year fixed effect, using *ACCR_K* as the dependent variable. Column (10) applies a two-way (state-of-incorporation and year) cluster method, using *ACCR_K* as the dependent variable. Panel D reports the results from re-examining the main results by considering alternative measures. Column (11) uses the standard deviation of the firm-level residuals from the Jones and Dechow and Dichev models (ACCR_F), Column (12) uses accruals from Jones Model (ACCR_J), Column (13) uses accruals from the Modified Jones Model (ACCR_MJ). Column (14) uses current accruals and Column (15) uses total accruals. Panel E reports a robust estimate of average treatment effect using a stacked DID design, ensuring that early-treated firms are not used as controls for later-treated firms. All regressions include the same vector of control variables as in the baseline regression, and control for the firm fixed effects and year fixed effects except for specific interpretation. Robust standard errors are clustered at the state-of-incorporation level and t-statistics are reported in parentheses. All variable definitions are provided in the Appendix 3.A. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Panel A. Alternative subsample tests

	DEP.VAR = ACCR_K				
	(1)	(2)	(3)	(4)	(5)
	Excluding DE	Excluding firms change incorporation states	Excluding current year	−0.5 ≤ Sales growth ≤1	Excluding Hi-Tech
COW	-0.011**	-0.020***	-0.016***	-0.009***	-0.010**
	(-2.197)	(-4.447)	(-3.235)	(-3.224)	(-2.211)
Firm controls	YES	YES	YES	YES	YES

Firm FE	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES
Adjusted R^2	0.08	0.123	0.070	0.064	0.068
Observations	31,285	72,527	80,737	70,426	62,388

Panel B. Different event windows

	DEP.VAR = ACCR_K		
	(6)	(7)	(8)
	3 years around the event year	5 years around the event year	10 years around the event year
COW	-0.037***	-0.029***	-0.022***
	(-5.113)	(-6.833)	(-6.039)
Firm controls	YES	YES	YES
Firm FE	YES	YES	YES
Year FE	YES	YES	YES
Adjusted R^2	0.084	0.077	0.067
Observations	41,147	50,392	64,173

Panel C. Alternative model specifications

	DEP.VAR = ACCR_K	
	(9)	(10)
	Year-Industry FE	Two-way clustering
COW	-0.020***	-0.019***
	(-5.022)	(-4.219)
Firm controls	YES	YES
Firm FE	YES	YES
Year-Industry FE	YES	NO
Year FE	NO	YES
Adjusted R^2	0.064	0.070
Observations	83,941	84,011

Panel D. Alternative measures of earnings management

	ACCR_F	ACCR_J	ACCR_MJ	Current accruals	Total accruals
	(11)	(12)	(13)	(14)	(15)
COW	-0.006**	-0.017***	-0.018***	-0.021***	-0.015***

	(-2.613)	(-5.075)	(-4.609)	(-3.016)	(-3.066)
Firm controls	YES	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES
Adjusted R^2	0.727	0.071	0.073	0.118	0.118
Observations	51654	84,416	84,011	85,555	85,555

Panel E. Average Treatment Effect on Treated	
	DEP.VAR = ACCR_K
	(16)
COW	-0.052***
	(-4.23)
Observations	60,411

Table 3.10 Placebo test using "pseudo-event"

This table reports falsification test results for the DID analysis. Column (1) reports the result of a placebo test by choosing the year three years before the actual event year as the pseudo-event year. The dependent variable is *ACCR_K*, the performance-matched discretionary accruals. All regressions control for firm and year fixed effects. Robust standard errors are clustered at the state-of-incorporation level and t-statistics are reported in parentheses. All variable definitions are provided in the Appendix 3.A. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

	DEP.VAR=ACCR_K
	(1)
COW	-0.006
	(-1.189)
Firm controls	YES
Firm FE	YES
Year FE	YES
Adjusted R^2	0.070
Observations	84,011

Table 3.11 Corporate opportunity waivers and real earnings management

This table estimates the association between adoption of COW and real earnings management. The sample period spans from 1996 to 2020. All regressions control for firm- and year-fixed effects. Robust standard errors are clustered at the state-of-incorporation level and t-statistics are reported in parentheses. Definitions of variables are provided in the Appendix 3.A. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

DEP.VAR =	RM_CFO	RM_PROD	RM_SGA	RM1	RM2	RM3
	(1)	(2)	(3)	(4)	(5)	(6)
COW	-0.149	-0.004	-0.032	0.100	0.014	0.022
	(-0.299)	(-0.747)	(-0.069)	(0.361)	(0.060)	(0.143)
Firm controls	YES	YES	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES
Adjusted R^2	0.629	0.388	0.809	0.844	0.824	0.842
Observations	85,302	84,718	20,769	20,168	20,194	19,601

Table 3.12 Corporate governance

This table examines whether the negative effect on earnings management is related with the degree of corporate governance and the potential increased monitoring after the waivers. Columns (1) to (4) use E-index, the percentage of independent directors, institutional ownership, and the number of analysts following the firm as proxies for the monitoring quality, respectively. All regressions control for firm- and year-fixed effects. Robust standard errors are clustered at the state-of-incorporation level and t-statistics are reported in parentheses. Definitions of variables are provided in the Appendix 3.A. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	DEP.VAR=ACCR_K			
	(1)	(2)	(3)	(4)
	E-Index	BD_IND	Inst_Own	N_Analyst
COW	-0.007**	-0.007**	-0.026***	-0.023***
	(-2.055)	(-2.389)	(-3.001)	(-2.914)
E-Index	-0.003			
	(-1.104)			
COW*E-Index	0.002			
	(0.535)			
BD_IND		-0.004*		
		(-1.912)		
COW*BD_IND		0.003		
		(1.409)		
Inst_Own			-0.012	
			(-1.112)	
COW*Inst_Own			-0.000	
			(-0.028)	
N_Analyst				-0.031**
				(-2.512)
COW*N_Analyst				-0.008
				(-0.755)
Firm controls	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Adjusted R^2	0.045	0.066	0.116	0.126
Observations	19,044	18,339	50,770	41,534

Chapter 4 Auditor liability on clients' dividend policy

We investigate the impact of quasi-exogenous changes in auditor liability to third parties (TPAL) on client firms' dividend payout policy. Employing a difference-in-differences regression design and exploiting staggered state-level shocks in the U.S., we find that an increase in auditors' liability is associated with a decrease in client firms' dividend payouts, while a decrease in auditors' liability leads to an increase in client firms' dividend payouts. Our findings remain robust across a battery of sensitivity tests. In addition, the effect is more pronounced when firms face more severe ex-ante free cash flow problems and exhibit weaker corporate governance. Overall, these findings show that auditors' liability has important implications for client firms' dividend policy and provide support to the argument that the necessity for using dividends could be substituted when sufficient governance mechanisms are in place to discipline managerial behaviour.

4.1 Introduction

Dividend payout policy is one of the most important financial decisions that firms must make regularly (Jordan et al., 2018). As an integral component of broader financial strategies, payout policy affects firms' valuation and interacts with investment decisions, tax strategies, and capital structure (Farre-Mensa et al., 2014). While dividend remains one of the most puzzling issues in corporate finance, existing literature has identified several theories related to corporate payout policies, such as signalling, tax and agency costs (Baker et al., 2002), as well as factors that could influence payouts, including compensation, stock liquidity and organisational form (De Cesari & Ozkan, 2015; Jiang et al., 2017; Jordan et al., 2018).

Within the prominent theories, dividend policy aligns more closely with agency problems (Allen & Michaely, 2003; Leary & Michaely, 2011). Managers have incentives to underpay dividends and invest cash flow towards value-destroying projects to serve their private benefits (Jensen 1986). Research suggests that firms that are more likely to be susceptible to agency costs of free cash

flow tend to pay higher dividends and smooth more (Hansen et al., 1994; Leary and Michaely, 2011). Dividend policy can serve as a tool to align managers' interest and alleviate agency problems (Easterbrook, 1984; Jensen, 1986; Lambrecht and Myers, 2012).

In terms of agency-based models of payout policy, La Porta et al. (2000) propose two alternative models that dividends can function either as a substitute for alternative governance mechanisms or as an outcome of governance mechanisms. The outcome view posits that corporate governance mechanisms serve to enforce a payout policy to discipline management, thus restricting their ability to make suboptimal investments or squander cash flows (Allen et al., 2000; Koo et al., 2017; Lambrecht & Myers, 2012). In contrast, the substitute view suggests that firms use dividends to mitigate agency costs resulting from inadequate governance and may consider dividends and mechanisms as substitutes when sufficient other governance mechanisms are in place to control management behaviour (Bebchuk et al., 2009; Hail et al., 2014; Hu & Kumar, 2004).

To investigate on the dynamics between governance and dividend policy, we employ exogenous shocks in third-party auditor liability for ordinary negligence (from Privity-to-Restatement-to-Foreseeability), which evolves at the state level, as a method of identification. Third parties such as banks and private lenders can only sue auditors under Section 10b-5 of federal law for fraud, whereas they can hold auditors accountable for ordinary negligence under common law. Third-party auditor liability (TPAL) measures the breadth of the class of third parties who can hold the auditor responsible for negligence (Anantharaman et al. 2016). Privity goes furthest in limiting the scope of third parties to whom auditors have legal liability, indicating the lowest level of auditor liability and litigation risk, whereas Foreseeability is the most extensive, indicating the highest level of auditor liability and litigation risk (Anantharaman et al. 2016; Chy et al., 2021; Gaver et al., 2012). Third-party auditor liability is closely linked to external corporate governance because auditors in states with high third-party liability and litigation risk tend to engage in more rigorous external monitoring practices (Al-Hadi et al., 2023).

Litigation damage claims against auditors have the potential to result in substantial financial repercussions, encompassing out-of-pocket monetary penalties, litigations fees, time cost and reputation damage. These claims, irrespective of the audit firm's size, pose a threat to the viability. The legal system including both statutory law and common law, influences auditor behaviour and quality by establishing the standard of care to which auditors are legally obligated to adhere to avert potential litigation arising from deficient audits (DeFond & Francis, 2005; Gaver et al., 2012). As such, alterations in legal environment can incentivise auditors to adopt strategies countering litigation threats, thereby impacting their strategies and behaviour and subsequently affect choices of other entities (Al-Hadi & Habib, 2023; Habib et al., 2014). In the discourse on auditors' liability, a fundamental issue pertains to whom auditors should be held accountable under common law for ordinary negligence (Chan & Wong, 2002).

External auditors play a crucial role as an integral part of external corporate governance mosaic (Aguilera et al., 2015; Cohen et al., 2002; Desender et al., 2013; Fan & Wong, 2005). They offer independent verification of the credibility of accounting information, being esteemed for their ability to detect misstatements, enhance resource allocation and contracting efficiency (DeFond & Zhang, 2014; Pittman & Zhao, 2018). Empirical studies document evidence that higher auditor litigation risk contributes to enhanced audit and financial reporting quality (Al-Hadi et al., 2023; Anantharaman et al., 2016; DeFond and Francis, 2005; Gaver et al., 2012; Khurana & Raman, 2004; Lennox & Li, 2014; Pittman & Zhao, 2018), which is then expected to alleviate information asymmetry, a primary source of agency problems (Armstrong et al., 2010). Serving as a monitoring device with the potential to collaborate with other governance actors to enhance financial reporting and deter fraudulent activities, auditors play a pivotal role in ensuring effective corporate governance to mitigate agency problems (Cohen et al., 2002; Defond and Zhang, 2014; Fan and Wong, 2005).

Therefore, a more stringent legal environment and higher litigation risk can serve as incentives for auditors to bolster their roles as external monitors (Chy et al., 2021; Chy & Hope, 2021). The rationale for the effect of auditor litigation risk on dividend payout lies in the dynamics between corporate governance and payout policy. In response to increased litigation risk, auditors in high

third-party auditor liability (TPAL) states intensify the scrutiny of client firms' reporting to mitigate litigation risk and safeguard their reputation, playing stronger external governance roles (Al-Hadi et al., 2023; DeFond & Zhang, 2014; Yu, 2011). Based on the two alternative views within the agency-based model, there are competing predictions regarding the influence of auditor liability on the payout policy of client firms. Aligned with the outcome view (La Porta et al., 2000; Koo et al., 2017), auditors enhance auditing and monitoring in response to increased auditor liability, which could make misbehaviour such as appropriating funds more visible and decrease the likelihood of squandering free cash flow. In this case, the heightened level of external governance mechanism enables firms to curtail managers' incentives to retain excessive cash for personal benefits and encourage higher dividend payments. In contrast, the substitute view proposes that in the presence of sufficient corporate governance mechanisms to discipline managerial behaviour, the necessity for using dividends could be substituted (Grinstein & Michaely, 2005). As auditors enhance monitoring due to increased liability, an improved information environment with robust governance, alleviates the pressure on managers and reduces the need for costly dividend payouts to convey commitment to prevent overinvestment or establish a reputation (Hail et al., 2014; Hu & Kumar, 2004).

We utilise the variations in third-party auditor liability as a plausible exogenous shock to the strength of external governance. This setting allows us to isolate changes in auditor liability and external monitoring that are unrelated to other factors that might simultaneously affect firms' payout decisions, as the TPAL shocks are not specifically designed to impact dividend payments. Throughout our sample period, 24 states experience an expansion of auditor liability, while two states witness a reduction.

We employ a difference-in-differences (DID) methodology to examine the effect on payout policy. The main sample consists of 33,236 firm-year observations, 25,163 for positive shocks and 11,738 for negative shocks. The baseline results indicate that the client's cash dividend payments decline by 18% relative to sample mean when the state moves to a higher auditor liability regime. Furthermore, we conduct separate analyses for positive and negative shocks, suggesting that the impact on cash dividends holds and is symmetrical. We then implement a dynamic treatment

model to address concerns about pre-existing differences between the treatment and control groups. The results reveal no significant differences in pre-trends between the two groups, suggesting that the downward movements in dividends only occur after the shift in auditor liability.

To further account for the fundamental differences in firm-level characteristics between the treatment and control groups and allay the concern about endogenous matching of firms with their choices of headquarters and incorporation states, we re-examine the regression analyses for positive and negative shocks using the matched sample. We then control for several other state-level laws to address the concern that our results could be biased by the effects of concurrent law changes. To explore the underlying mechanism through which auditor liability affects client firms' dividend payout, we conduct two sets of tests exploiting cross-sectional variation in clients' corporate governance and severity of free cash flow problems. In line with the substitute view, we find that the negative relationship is more pronounced among firms with weaker governance and more severe free cash flow problems. We subject our results to a battery of robustness tests to reinforce the key inferences. Our findings remain robust to a more recent sample period from 1999 to 2020, alternative legal liability jurisdiction assumption, changes in the sample period and size, alternative model specifications, alternative measures for auditor liability to third parties, falsification tests by selecting the year three years prior to the actual treatment year as the pseudo-event year and persist when limiting the sample solely to the treatment firms.

Our study first contributes to the broad literature on factors affecting firms' payout policies. Specifically, we focus on the dynamics between corporate governance and dividend payouts within the agency-based model. Significant divergences persist in the literature regarding the impact of corporate governance on payout policy and whether dividends serve as an outcome or a substitute for governance mechanisms (Farre-Mensa et al., 2014; Hail et al., 2014; John et al., 2015; La Porta et al., 2000; Lambrecht & Myers, 2012). We use variations in third-party auditor liability (TPAL) as indicators of changes in the strength of external governance, as auditors intensify their monitoring in response to increased liability, with our findings providing evidence for the substitute view. In addition, our identification strategy, relying on exogenous shocks to

auditor liability, has the advantage of mitigating concerns related to endogeneity issues and increasing assurance that the observed relation between auditor liability and the reduction in clients' dividend payments is a causal one. While prior studies find that internal governance and institutional investors are significantly associated with firms' dividend payouts, to the best of our knowledge, no studies have explicitly examined the relationship between the strengthened monitoring role of external auditors and payout policy.

We also contribute to growing literature such as Anantharaman et al. (2016), Venkataraman et al. (2008) and Khurana and Raman (2004), by showing that the influence of auditor liability, particularly the state-level TPAL regimes, extends beyond variations in auditors' behaviour and reporting quality, and might give rise to changes in their clients' dividend policy, which plays a crucial role in the functioning of firms and the interaction with broader financial market (Farre-Mensa et al., 2014).

The rest of the chapter is structured as follows. Section 2 provides a review of the related literature and develops the empirical hypothesis. Section 3 describes data and methodology, along with presenting summary statistics. Section 4 reports and interprets baseline results and other supplementary tests. Section 5 covers additional robustness tests. Section 6 concludes the chapter.

4.2 Related literature

4.2.1 Auditor liability to third parties under statutory law

Auditors have legal liability towards both their clients in contractual relationships and third-party users of their clients' financial statements. In terms of clients, auditors could be held liable for breaching contractual obligations and for acts of negligence, gross negligence, as well as fraud, under contract law and tort law. The responsibilities of public accountants have considerably grown in complexity, with the emergence of new standards since 1931. This development traces back to the landmark decision made in *Ultramares Corporation v Touche* case, which established that public accountants are liable to third parties for gross negligence amounting to fraud but not for ordinary negligence (Causey, 1976; Leibman & Kelly, 1992; Mess, 1976). In this case, Judge Cardozo held that public accountants have a duty to their clients and meanwhile owe a duty to clients, creditors, and investors to perform without fraud. This case provides seminal opinions on accountant liability that a requirement of privity, not of contract but of relationship, was established. Auditors would be held liable to a third party for deceit and fraudulent or gross negligence that could be evidence to justify an inference of fraud (Mess, 1976).

Under statutory law, Section 10b and related rule 10b-5 of the Securities Exchange Act (SEC) of 1934 might be the most common federal law source of third-party lawsuits against auditors, which have extended the liability of auditors as secondary actors and been interpreted judicially to provide that investors could bring civil actions against auditors and others who make untrue statements of material facts or omit to state material facts (Al-Hadi et al., 2023; Causey, 1976; Anantharaman et al. 2016). However, the U. S. Supreme Court made the decision in *Ernst & Ernst v. Hochfelder* in 1976 that auditors are liable under Section 10b-5 only for fraud or gross negligence, and simple negligence would be insufficient grounds for liability, implying that the potential legal actions that third parties could initiate against auditors has been significantly restricted (Schnepper, 1977).

4.2.2 Auditor liability to third parties under common law

In the United States federal court system, there are 12 regional circuits, each comprising multiple district courts and one court of appeals. The district courts serve as the lower courts, while the courts of appeals function as the intermediate courts. The Supreme Court represents the highest court in the federal system (Honigsberg et al., 2020). In general, each court is obligated to adhere to the decisions and interpretations made by the courts higher in its judicial hierarchy (Honigsberg et al., 2020; Chy and Hope, 2021).

Auditors' liability towards third parties is regulated by statutory law and common law (Anantharaman et al. 2016). While statutory law addresses liability for fraud or gross negligence at the federal level, ordinary negligence is subject to common law liability regulated by state courts and is grounded in principles set by precedent cases at the state level. The concept of stare decisis, or legal precedent, refers to the policy followed by common law courts to uphold and follow the principles established by earlier case decisions. Judges in state courts throughout the country apply different legal standards for auditors' liability, establishing diverse legal precedents across states (Pacini et al., 2000). The extent of an auditor's obligation to third parties for negligent misstatements is determined by state law rather than federal law. Every state has its own legal framework and set of securities laws that define different levels of auditors' liability to third parties (Pacini et al., 2000).

Auditors face significant liability under state-level common law due to the relatively easier burden of proof for demonstrating ordinary negligence compared to proving fraud (Anantharaman et al., 2016). Most lawsuits filed by third parties against auditors primarily rely on the tort of negligent misrepresentation rather than federal securities laws (Reinstein et al., 2020). Audit firms assert that state law cases represent their most critical source of litigation risk (Center for Audit Quality, 2008). Donelson (2013) states that the primary legal exposure for auditors involves state law claims concerning negligence or a breach of the duty of care towards clients or third parties. Among the total large settlements for the current big four auditors and the next two largest auditors from 1996 to 2007, 57.8%, equivalent to $2.377 billion, is associated with state law

cases. Anantharaman et al. (2016) also hand-collect cases over 2000 to 2009 involving any of the big four auditors as defendants and document that 43.7% of the claims pertain to ordinary negligence. The evidence from reported lawsuits substantiates the audit firms' claim that they are exposed to significant liability under common law.

4.2.3 Four principles under common law

Under common law, auditors' legal liability to third parties at the state level is determined by legal precedents. State courts have typically evolved and applied four standards to define the scope of third parties to whom auditors owe a duty of care: (1) privity; (2) near-privity; (3) restatement of torts; and (4) the reasonable foreseeability (Al-Hadi et al., 2023; Anantharaman et al. 2016; Chung et al., 2010; Pacini et al., 2000; Reinstein et al., 2020).

The strict privity is the most stringent standard, as it necessitates a direct contractual relationship between an auditor and a third party for the latter to file a lawsuit against the audit firm for ordinary negligence. Only the parties to the contract can sue the auditor for ordinary negligence in the privity standards. Strict privity was first established as a legal standard in the case of *Landell v. Lybrand* in 1919. The Pennsylvania Supreme Court made the decision in line with traditional common law, which denied liability to third parties in cases where only economic loss was involved and there was no contractual relationship or privity between the parties (Mess, 1976).

The near-privity standard requires the party filing a lawsuit to be an intended third-party beneficiary of the contract, implying the auditors must have been aware that the audited reports were intended for a specific purpose, and the known parties must have had the intention to depend on these reports (Al-Hadi et al., 2023; Gaver et al., 2012). The near-privity rule was initially employed in the case of *Ultramares Corp. v. Touche* to define the extent of an auditor's duty to third parties for negligent misrepresentation, and then clarified by the New York Court of Appeals in the *Credit Alliance v. Arthur Andersen & Co*. case. The court rejected the negligence claim of Ultramares but established an exception to strict privity called the primary benefit rule. Under this rule, the plaintiff must be an intended third-party beneficiary in order to pursue a claim (Pacini et al., 2000; Reinstein et al., 2020).

Different from the near-privity standard, the restatement of torts rule does not necessitate the auditor's knowledge of the specific identities of third parties. Instead, it focuses on their inclusion within a limited group known to the auditor, broadening the scope of third parties who can hold auditors liable. This expanded scope includes all individuals or entities intended to benefit from the audited information, including creditors (Anantharaman et al. 2016; Chy et al., 2021; Vick, 1993).

Auditor liability to third parties expanded further in 1983 due to the decision in *Rosenblum v. Adler*, where the New Jersey Supreme Court adopted the reasonable foreseeability rule. Under this standard, auditors could face legal action from any third party they could reasonably foresee as recipients of the audited statements (Scherl, 1994). This duty extends only to those users whose decisions are influenced by audited statements obtained directly from the audited entity for a proper business purpose (Pacini et al., 2000).

Covering a spectrum from privity to reasonable foreseeability, the four standards for auditor liability to third parties exist on a continuum, with privity being the most stringent and reasonable foreseeability being the most expansive (Anantharaman et al., 2016; Chy and Hope, 2021). The legal standards regarding auditor liability to third parties vary significantly among different states. As the scope of third parties for which auditors bear liability expands, the potential risks of litigation and costs incurred also increase. Within our sample period, 24 states witness an expansion of auditor liability, while two states witness a reduction. Table 4.1 lists all applicable precedent-setting court rulings as shocks to auditor liability in our sample period from 1965 to 1998.

[Insert Table 4.1 Here]

4.2.4 Auditors' liability and strengthened monitoring role

The overall legal environment influences the conduct of auditors and firms, impacting their propensity to engage in certain activities. In addition to the out-of-pocket monetary penalties for officers and directors and costs incurred by litigation per se, litigation also involves other costs,

including damage to reputation, time lost, and the stress associated with being a defendant in a lawsuit (Black et al, 2006; Klausner & Hegland, 2010). The legal system plays essential roles in regulating behaviour to deter misconduct, resolving conflicts, and assisting in the recovery of damages (Habib et al., 2014). Previous studies focusing on the US highlight the importance of litigation risk. The lawsuits against auditors, under both statutory law and common law, can affect the auditors' behaviour as well as various aspects of different entities, including audit fees, audit planning decisions and clients' choices (Al-Hadi & Habib, 2023; Habib et al., 2014). Therefore, legal environment and litigation risk plays a significant role as an external mechanism for governance (Aguilera et al., 2015).

Auditors play a crucial role in effective corporate governance to mitigate agency problems (Defond & Zhang, 2014; Fan & Wong, 2005). Cohen et al. (2002) argue that auditors are an integral part of the corporate governance landscape, functioning as a monitoring device with the potential to collaborate with other governance actors to improve financial reporting and deter fraud. Chy and Hope (2021) underscore the impact of auditors, as external monitors, on both the financial reporting and the real operations of client firms. Increased scrutiny could act as an additional external monitoring force and auditors facing higher litigation risk increase effort and monitoring (Al-Hadi et al., 2023). Recent empirical studies have shown that increased auditor liability is expected to strengthen the auditor's monitoring role. Chy et al. (2021) mention that auditors play a monitoring role and higher litigation risk acts as a motivator for them to enhance their monitoring of clients' financial reporting process and the ensuing reports. Al-Hadi et al. (2023) present further evidence regarding how the legal environment at the state level impacts corporate reporting and other related outcomes. By using a TPAL index on a scale of 1 to 9 to measure the liability on a continuum based on the rules implemented in each state, which was developed and updated by Pacini et al. (2000) and Gaver et al. (2012), the study reveals a negative relationship between state-level TPAL and the occurrence of financial restatements by client firms. The negative relationship remains consistent within a subset of firms that experience income-increasing and accounting-related financial restatements, and become more pronounced when firms are subject to greater litigation risk from being audited by non-specialist auditors. The

findings provide corroborative evidence that auditors operating in jurisdictions with high TPAL are motivated by reputation and litigation risk to exert greater effort towards auditing and monitoring.

4.2.5 TPAL and the effects on auditor and firm behaviour

Regarding auditors' liability to third parties, common law only necessitates proof of the auditor's ordinary negligence. Chan and Wong (2002) mention that the accounting profession has faced a growing number of third-party lawsuits for ordinary negligence. Auditors, under common law, are exposed to substantial liability to third parties, and the liability is based on court cases and legal precedents applicable at the state level (Anantharaman et al., 2016; Donelson, 2013; Pacini et al., 2000). Each state has its unique legal framework that delineate varying levels of auditors' liability to third parties (Pacini et al., 2000). Contemporary studies have indicated that the auditor liability and the variability in auditors' litigation risk have implications for the behaviour and strategies of both auditors and client firms. The extent of third-party liability at the state level plays an important role in shaping behaviour of auditors and clients.

Anantharaman et al. (2016) employ a state-level score to capture the variation in third-party liability standards across U.S. states and measure the auditor litigation exposure, with higher scores representing a broader definition of third parties who can hold auditors accountable for negligence. Their findings indicate that auditors are more inclined to issue a modified going concern (GC) report to financially distressed client firms located in states with a more expansive liability standard that hold auditors liable to a larger class of third parties, compared to firms in states with lower liability standards. They additionally exploit shocks in New Jersey and California, where liability has been restricted, as a natural experiment to strengthen the findings and document that the likelihood of auditors rendering a modified opinion for clients in these two states exhibits a significant decrease following the reduction in auditors' litigation exposure.

Increased legal liability for audit failures induces auditors to adopt a more conservative approach in assessing the financial statements of client firms (DeFond & Zhang, 2014). Although

Anantharaman et al. (2016) couldn't definitively differentiate between auditor effort and conservatism, Chy and Hope (2021) indicate that firms headquartered or incorporated in states that undergo an increase in auditor liability are less inclined to meet or beat earnings thresholds or engage in financial statement restatements, and more prone to receiving modified going-concern opinions. This suggests that these liability shocks may contribute to heightened auditor conservatism. In addition to the impact on financial restatements (Al-Hadi et al., 2023; Chy & Hope, 2021), variations in TPAL can also affect client firms' real operations. Chy and Hope (2021) exploit exogenous shocks in state-level auditor legal liability as a method to measure auditor conservatism and find that increased auditor conservatism is associated with a decrease in corporate innovation, as evidenced by a decline in patents and citations. Furthermore, their findings reveal that the negative effect is likely to be more pronounced when client firms face higher pressure from equity and debt market to prioritise short-term earnings, as well as when firms are exposed to greater litigation risk and among clients of large audit firms. The study emphasises the role of auditors as external monitors, demonstrating that they not only influence clients' financial reporting quality but also influence changes in their actual business operations.

Exploiting these state-level staggered shocks to third-party auditor legal liability, Chy et al. (2021) reveal that an increase in auditor litigation risk enhances client firms' access to bank financing. Specifically, it results in a higher likelihood of securing bank loans and an increase in the average amount of bank loans received. Furthermore, the effect is more pronounced for client firms with elevated agency costs of debt, higher litigation risk, more financial constraints, and when creditors derive more benefits from the enhanced insurance value provided by auditors. The increased litigation risk improves audit and financial reporting quality for clients, thereby alleviating the agency costs of debt. This is evidenced by a decrease in discretionary and total accruals, a lower likelihood of restatements and an improved ability of accruals to forecast future cash flows. These findings suggest that the impact of higher litigation risk extends beyond the realms of financial reporting quality, providing a significant economic benefit to client firms through improved access to more affordable debt financing.

4.2.6 Dividend payouts and agency theory

Dividend remains one of the most puzzling issues in corporate finance. Miller and Modigliani's (1961) dividend irrelevance theory suggests that in a perfect and complete capital market, a managed dividend policy has no impact on firm value. According to this theory, shareholder wealth is contingent on the income derived from optimal investment decisions, rather than by how managers distribute income. The relevance of payout policy arises when one or more assumptions, as posited by dividend irrelevance theory, are violated. Farre-Mensa et al. (2014) outline some of the more important assumptions underpinning their paradigm: (1) no taxes; (2) symmetric information across all market participants; (3) complete contracting possibilities; (4) no transaction or issuance costs; (5) competitive product and financial markets; and (6) rational investors and managers.

Researchers have devised several theories, such as signalling, tax-preference, agency costs and other intricate concepts, in an attempt to shed light on why firms pay dividends and why these decisions matter to market participants (Baker et al., 2002). The prominent dividend policy theories are related to the relaxation of Miller and Modigliani's (1961) assumptions of perfect capital markets, addressing dividends within the context of diverse market imperfections.

The surveys conducted by Allen and Michaely (2003) and Leary and Michaely (2011) suggest that dividend policy aligns more closely with agency problems rather than other theories. Regarding Miller and Modigliani's assumption of complete contracting possibilities, it's acknowledged that complete contracts are seldom feasible and that conflicts of interest prevail across many situations. Previous literature has examined the impact of these conflicts of interest on payout policy or how payout policy affects them (Easterbrook, 1984; Jensen, 1986; Jensen & Meckling, 1976). Farre-Mensa et al. (2014) summarise that dividend policy may interact with the conflicts of interest among managers and shareholders, known as the free cash flow problem, or among shareholders and labour, or shareholders and bondholders. Michaely and Roberts (2012) compare the dividend policies between publicly and privately held firms in the United Kingdom to explicitly indicates that agency considerations play a role in shaping public firms' dividend policy.

They show that public firms tend to offer higher dividends and exhibit a greater inclination towards maintaining consistent dividends and are more resistance towards omitting, cutting, or initiating dividends compared to similar private firms who face fewer agency-related issues. Moreover, firms transitioning from private to public increase dividends around the transition period.

Previous research has observed that firms employ dividend policy to mitigate the agency problems (Lambrecht & Myers, 2012). For instance, maintaining a consistent and high dividend necessitates firms to seek external capital to cover any financing requirements. This ongoing interaction with external financial markets serves as a mechanism of discipline to decrease agency costs (Easterbrook, 1984; Jensen, 1986; Michaely & Roberts, 2012). Easterbrook also suggests that all mechanisms used to control agency costs, including the dividend-induced monitoring, are costly. Thus, one might anticipate the substitution among various monitoring mechanisms for controlling agency-related costs.

Conflicts of interest between shareholders and managers regarding payout policies become particularly pronounced when the firm generates significant free cash flow (Jensen, 1986). Studies have noted the relationship between dividend policy and agency costs, particularly those associated with free cash flow problems. Leary and Michaely (2011) find that the pattern of maintaining a stable dividend policy is more prevalent in firms facing higher agency costs, id est, larger, older, lower market-to-book firms, those with weaker governance, and firms identified as cash cows. Koo et al. (2017) document that the impact of reporting quality on dividends is manifested through its role in limiting free cash flow issues and alleviating underpayment of dividends. As a significant agency conflict, the free cash flow problem suggests that managers, having excessive cash flow beyond what is necessary for firm projects, might not act in the shareholders' best interests. In such situations, managers might opt to underpay dividends, squander funds in inefficient projects, and prioritise personal gains (Koo et al., 2017). Distributing high dividends resembles a strategy that disgorges "free cash flow" to prevent managers from potentially misusing funds (Hansen et al., 1994).

4.2.7 Agency-based models and auditor's strengthened monitoring role

Within the agency framework, La Porta et al. (2000) propose two alternative agency models centred around the legal environment and dividends, id est, the outcome model and substitute model. They advance the notion that dividends can function either as an outcome of governance mechanisms or as a substitute. In the context of outcome model, corporate governance mechanisms serve to enforce a payout policy to discipline management, thereby limiting their ability to invest suboptimally. Alternatively, firms may believe that there are sufficient other governance mechanisms in place to control management behaviour, viewing dividends and these mechanisms as substitutes. This research is the pioneering study that formally introduces these two competing perspectives on the interaction between governance and dividend policy. Subsequent research has increasingly focused on examining dynamics between governance and payout.

The model constructed by Lambrecht and Myers (2012) predicts that target payout increases with stronger corporate governance. The findings from Koo et al. (2017) suggest that financial reporting quality functions as a governance mechanism, prompting managers to issue higher dividends and supporting the perspective that dividends are the outcome of improved monitoring. Allen et al. (2000) note that institutional investors have become increasingly involved in corporate governance and are large enough to provide monitoring. When a firm pays higher dividends, it attracts disproportionately larger ownership by institutions, and these institutions in turn are more likely to play a larger role in overseeing management than dispersed retail investors and may impose a large penalty in response to dividend cuts. Institutions have a relative advantage in monitoring firms or in detecting firm quality. They can affect changes in operating policy or managerial effort by selling large share blocks to potential raiders more quickly and cheaply, voting and so forth. As they explain that the presence of institutional investors reinforces the high dividend policy, so their findings are in support of outcome view.

There are notable disagreements within the literature concerning the impact of corporate governance on payout policy, challenging the conclusion that dividends serve as an outcome of

governance. In line with the substitution model, empirical studies provide evidence supporting the idea that firms utilise dividends to mitigate agency costs arising from inadequate governance.

Findings from Hail et al. (2014) lend support to the FCF-centric theories of dividend policy, specifically the substitute rather than the outcome model of agency. Constructing a large global dataset with dividend payment information for firms in 49 countries over the 1993–2008 period, they examine the shifts in firms' dividend payout behaviour surrounding the mandatory adoption of International Financial Reporting Standards (IFRS) and the initial enforcement of new insider trading laws. These two exogenous shocks serve as proxies for a general enhancement of the information environment and the corporate governance structure. The findings indicate that following these two events, firms exhibit a decreased likelihood of paying dividends, but an increased likelihood of cutting such payments, with the effects more pronounced when inherent agency issues or informational shocks are stronger. The reduction in dividend payouts is more conspicuous in settings where investor protection is weak, aligning with the substitute model of agency. The results imply that improved public information with better corporate governance alleviates the pressure on managers to convey commitment to avoid overinvestment through costly dividend payouts, consistent with lower agency costs of FCF.

The issue of managerial entrenchment is widely acknowledged as a governance concern and the increases in the entrenchment index are associated with substantial reductions in firm valuation and significant negative abnormal returns (Bebchuk et al., 2009). Entrenchment is costly to the shareholders, as entrenched managers may pursue negative NPV projects if personal benefits are derived. Hu and Kumar (2004) employ various CEO- and board-related variables to proxy CEO power and the effectiveness of internal governance mechanisms. The findings indicate a significantly positive relationship between both the likelihood and the level of payouts and factors contributing to higher executive entrenchment levels. This underscores the idea that shareholders may perceive less necessity in using payouts as a disciplining mechanism when they possess strong voting positions or board representation. Similarly, Officer (2011) demonstrates that firms with characteristics considered to indicate weak governance, including entrenched managers and low ownership levels by insiders and key external monitors, are more

inclined to distribute dividends. In the case of firms initiating dividends following the tax law change, those with weak governance experience notably higher positive average dividend initiation announcement returns.

John et al. (2015) investigate how firms structure payout and debt commitments to address governance weaknesses and provide evidence that financial policies can function as an alternative to conventional governance mechanisms. Corporate governance mechanisms aim to address managerial agency problems and ensure shareholders receive appropriate returns. Precommitment to cash distributions offers firms an alternative approach of addressing agency issues. By considering antitakeover provisions as indicators of corporate governance weaknesses and using proxies to gauge the intensity of oversight of the manager by external and internal monitors, they find that firms under weak traditional monitoring mechanisms are more inclined to use dividends and allocate a larger proportion of payouts to regular cash dividends to resolve governance weakness. Conversely, managers have the flexibility to retain cash in the firm with strong governance or opt for discretionary payouts including repurchases and special dividends.

As aforementioned, both auditors and legal environment serve as external corporate governance mechanisms (Aguilera et al., 2015; Tirole, 2010). Auditor playing a monitoring role, with the legal environment and higher litigation risk acting as motivators for them to enhance their monitoring of client firms' activities and reporting process (Al-Hadi et al., 2023; Chy et al., 2021). Thus, the increased auditor liability to third parties is considered to enhance auditor's oversight activities in a more stringent legal environment and strengthen the monitoring role as an external corporate governance mechanism. However, the dynamics between governance and payout may vary. Enhancing monitoring to address agency problems and potentially alleviate free cash problems could exert distinct influences on dividend policy. La Porta et al. (2000) formally introduce outcome and substitute views as two competing perspectives. Governance serves to discipline management and decrease the likelihood of squandering corporate cash. Thus, a higher level of governance can lead to an increased level of dividend payouts (Lambrecht & Myers, 2012; Koo et al, 2017). In contrast, the substitute view suggests that a higher level of governance can reduce

the necessity for managers to pay high dividends. Since all forms of controlling agency costs are themselves costly, there might be substitution among agency-cost control mechanisms (Easterbrook, 1984; Allen et al., 2000). Thus, the need to use dividends might be reduced in the presence of adequate governance mechanisms.

Based on preceding discussion, we develop following hypotheses according to agency-based models of dividend payouts:

H1A: Higher TPAL strengthens auditor's monitoring role as an external governance mechanism, thereby increasing client firms' dividend payouts as an outcome of strong corporate governance.

H1B: Higher TPAL strengthens auditor's monitoring role as an external governance mechanism, thereby reducing the needs for client firms' managers to pay high dividends as a substitute of corporate governance.

.

4.3 Data and methodology

4.3.1 Data and sample selection

Our sample first includes all Compustat firms spanning from 1965 to 1998, which starts three years before the first auditor legal liability shock in 1968 when Rhode Island formally expanded auditor's legal liability and ends three years after New Jersey limited the liability in 1995. The sample period includes the most recent data and limits concerns about potential noises over longer horizons. Financial (SIC 6000–6999) and utility (SIC 4000–4999) industries are then excluded. In addition, observations with missing values of main variables are excluded. Since our identification requires information on the state of location and incorporation, companies without this information are also dropped. Then we proceed to exclude companies that are located or incorporated outside of the U.S. Due to Compustat backfilling headquarters data with the latest information, potential biases may arise from misstatements regarding headquarters location. As a result, we opt to utilise the data on historical headquarters for more accurate analysis (Jennings et al., 2017).

According to Grullon and Michaely (2002), Desai and Jin (2011), and Koo et al. (2017), we measure dividend payments (DIV) as cash dividend (DVC) declared on the common stock scaled by the market value of the common stock at year-end (PRCC_F*CSHO). Share repurchases (REPURCHASE) as dollar amounts spent on repurchases are calculated using Purchase of Common and Preferred Stock (PRSTKC) after adjusting for the decrease in Preferred Stock Redemption (PSTKRV) from previous year, scaled by the market value. Total corporate payouts (PAYOUT) are measured as the sum value of cash dividend and amount of share repurchases divided by the market value of stock. Firm-level variables applied in main tests are obtained from Compustat. Following Grinstein and Michaely (2005), dividend yield defined as dividend divided by book assets is used as the alternative measure in robustness checks. All continuous variables are winsorised at the 1st and 99th percentiles to deal with potential outliers. Detailed definitions for constructing variables are contained in the Appendix 4.A.

4.3.2 Empirical design

Following studies by Anantharaman et al. (2016) and Chy et al. (2021), we use as difference-differences model to assess the effect of the staggered passage of TPAL on dividend payout policies. Specifically, the baseline regression is estimated as follows:

$$Payout_{jst} = \alpha + \beta TPAL_{st} + \gamma X_{jst} + f_j + \tau_t + \varepsilon_{jst} \qquad (4.1)$$

where j indicates firms, s indicates states of location, and t refers to the year. Payout refers to each of the three measures of dividend payout, including PAYOUT, the total corporate payouts as the sum value of cash dividend and dollar amount of share repurchases scaled by the market value of stock, and DIV, cash dividend scaled by the market value, and REPURCHASE, dollar amounts spent on repurchases scaled by the market value.

Our main explanatory variable is TPAL, which is a dummy variable that represents changes in auditor legal liability within the state where a firm is either incorporated or headquartered. To elaborate, TPAL shifts from zero to one when a state expands auditors' legal liability to third parties. Conversely, it switches from one to zero when a state limits auditors' legal liability to third parties. More specifically, New Jersey expanded auditors' liability in 1983 and reduced it in 1995. Thus, TPAL moves from zero to one and subsequently to zero to capture legal changes. TPAL remains zero for states that do not witness any changes to auditor's liability throughout the sample period. The coefficient of interest is β, representing the difference-indifferences estimate for the causal effect of auditors' legal liability on client firms' dividend payouts.

In addition to TPAL, which combines both positive and negative changes to auditors' liabilities to third parties, we enhance the casual relationship between auditors' liability and dividend payout by separately investigating expansions and reductions. Excluding all firms headquartered or incorporated in California or New Jersey, we construct an indicator variable, POSITIVE, which is equal to one when and after states expand auditors' liability, and zero otherwise. Further, by focusing on the two states (California and New Jersey) that limited the liability during the sample period, we construct an indicator variable, NEGATIVE, which equals one when these states

decrease auditors' liability and zero otherwise. Substituting TPAL with POSITIVE and NEGATIVE, we re-examine the baseline regression, respectively.

f_j represents the firm fixed effects, serving to control for unobservable and time-invariant firm-level characteristics, thus preventing potential bias in the estimated coefficients of the fixed-effects models due to omitted time-invariant variables. τ_t is the year fixed effects, enabling control for underlying factors that vary over time but remain constant and common to all firms in a given year. Year fixed effects are introduced to account for macroeconomic characteristics that could influence corporate payout levels and the likelihood of a state increasing or reducing the TPAL. ε_{jst} is the error term. Following MacKinnon and Webb (2017), standard errors are clustered at firm-level to account for potential time-varying correlation or heteroskedasticity in the error terms specific to individual firms. We also cluster at state-level in robustness tests. X indicates a series of firm-level control variables. Similar to prior research by Barth and Kasznik (1999), De Cesari and Ozkan (2015), Jagannathan et al. (2000), and Koo et al. (2017), we control firm size (SIZE), leverage (LEV), market-to-book ratio (MTB), return on assets (ROA), operating cash flows (CASHFLOW), institutional ownership (INST), intangible assets (INTANG) and big 5 auditors (BIG5) in the baseline model. All continuous variables are winsorised at the 1st and 99th percentiles. Detailed descriptions and measurement of these variables are provided in the Appendix 4.A.

We exploit these shocks in auditor legal liability across states as the identification strategy, assuming that these changes are reasonably exogenous and uncorrelated to other factors influencing corporate payout policies. While we cannot entirely eliminate the possibility that the factors leading to the lawsuits, which signify a change in auditors' liability, might have some connections to the dividend payouts, it is still reasonable to assume that these legal changes are not intended to alter dividend policies directly. In this DID approach, firms headquartered or incorporated in states where auditors' liability undergoes shifts are categorised into the treatment group. Meanwhile, firms in states that do not experience changes in liability during the sample period are included in the control group. Furthermore, given that these shocks occur at different times across states, the control states include not only those that never experienced changes in auditor liability. Firms in the treatment group might initially be part of the control group

until they are later reassigned to the treatment group. During the sample period spanning from 1965 to 1998, twenty-four states expanded auditors' liability to third parties, while two states reduced it. These changes took place in states with diverse local conditions, including geographical locations, demographic and political disparities, in an unpredictable chronological order, which helps allay concerns about omitted variables.

Table 4.2 reports summary statistics for the key variables included in the analyses. After requiring that control variables have non-missing data, as well as dividend, repurchase and total payout, there are 33,236 firm-year observations in the final sample ranging from 1965 to 1998. The table shows that the average level of dividend payments to market value of the sample is 1.1%, the average ratio of share repurchases to market value is 1.1%, and the total payouts average 2.4% of market value.

The mean value of the dummy variable TPAL is approximately 0.5, suggesting a relatively even distribution of the firm-year observations in the sample between high and low auditors' liability. Further, the mean value for POSITIVE, which identifies firms located or incorporated in states that have expanded the liability, is 0.424, while the mean value for NEGATIVE is 0.241. It implies that a relatively smaller proportion of firms decreased auditors' liability.

An average firm has a firm size of 4.518, a leverage of 25%, a market to book ratio of 2.312, a return on assets of 8.5%, and a fraction of shares held by institutional holdings of 26.2%. The average operating cash flow and intangible assets account for 2.1% and 5.8% of total assets, respectively. Moreover, 70% of the firms are audited by Big-5 audit firms. Our summary statistics are comparable to those reported by Al-Hadi et al. (2023), Chy and Hope (2021), Chy et al. (2021), Desai and Jin (2011) and Ni et al. (2020).

[Insert Table 4.2 Here]

4.4 Empirical findings

4.4.1 The effect of TPAL on dividend payout

Table 4.3 reports the main estimation results of equation (4.1). Columns (1) to (3) estimate the relation between auditors' liability to third parties and dividend payouts, proxied by cash dividend payments, share repurchases and total corporate payouts.

In column (1), we regress cash dividend payments on TPAL, control variables, as well as firm and year fixed effects. The coefficient estimate on TPAL is negative and statistically significant at the 1% level, suggesting that greater auditors' liability to third parties reduces client firms' cash dividend payment. In terms of economic magnitude, the estimated coefficient shows that dividend payments decline by 0.2 percentage points when a firm is assigned to the treatment group, and a decrease in dividend payments of 18% (=0.002/0. 011*100%), relative to the sample mean, namely a 10% (=0.002/0.020*100%) decrease in standard deviation of cash dividend payout. Given that the mean market value of equity in the sample is approximately $756 million, this reduction suggests decreased dividend payments of $1.512 (=756 x 0.002) million for an average firm. In columns (2) and (3), we re-estimate the same regression analysis for share repurchases and total corporate payouts, respectively. The results indicate no statistically significant impact on these dividend measures. Collectively, these results indicate that the influence of increased auditors' liability on corporate payout policy primarily stems from its negative effect on cash dividend payments.

Repurchases are more irregular and more likely to be used at the managers' discretion to distribute temporary cash flows, making them less of a credible commitment device for distributing free cash flows and less effective in addressing the agency problem (Guay & Harford, 2000; Jagannathan et al., 2000). Moreover, our results show a negative impact on dividends, providing preliminary support for the substitute view of agency-based models. In such case, firms are more likely to use regular cash dividend payouts rather than repurchases to address governance issues (John et al., 2015).

4.4.2 Evidence from positive and negative shocks

Given that there are two states that reduced auditors' liability rather than expanding it during the sample period, we analyse these positive and negative shocks separately to enhance the casual relation between auditors' liability and dividend payouts based on the previous analysis.

In columns (4) to (6), we investigate the impact of positive changes in auditors' liability on dividend payouts, proxied by cash dividend payments, share repurchases and total corporate payouts. Unlike TPAL which combines all shocks, we construct the dummy variable Positive to capture the positive changes in auditors' liability by excluding firms headquartered or incorporated in California and New Jersey. The treatment group includes firms in states that expand the liability, while the control group consists of firms in states that experience no changes in liability during the sample period. The estimated coefficients indicate a negative and significant impact of increased auditors' liability on dividend payments, with no significant effect observed on share repurchases and total payouts.

In columns (7) to (9), we examine how negative changes in auditors' liability affect client' firms dividend payout policies. We construct an indicator variable Negative to account for negative shocks in auditors' liability by only including firms headquartered or incorporated in California and New Jersey in the treatment group. The control group comprises firms located or incorporated in states where no changes in auditors' liability occur. The sample period for negative shocks spans from 1989 to 1998, commencing three years before California reduced the liability and ending three years after New Jersey reduced it. The coefficient in column (7) is positive and significant at the 1% level, while coefficients in columns (8) to (9) show no significance, confirming our expectation that reduced auditors' liability to third parities has a positive effect on client firms' cash dividend payments. In line with previous baseline results, the impact of auditors' liability on corporate payout policies is predominantly on cash dividends rather than repurchases.

Analysing positive and negative shocks separately, these results indicate that the impact of auditors' liability to third parties on client firms' dividend payout is symmetrical. An increase in

the liability leads to a decrease in firms' dividend payouts, while a decrease results in increased payouts. The opposite treatment effects for opposing changes help reinforce the casual relationship between auditors' liability and dividend payouts. It suggests that the baseline results are not solely driven by either positive or negative changes, and it helps alleviate concerns that omitted factors, such as economic or political conditions, which could influence firms' dividend payout policies, might confound the effects of auditors' liability on how firms pay dividends.

[Insert Table 4.3 Here]

4.4.3 Test of the parallel trend assumption

The baseline regression results suggest that increased auditors' liability is associated with a downward inclination of dividend payouts. However, the concern arises from the possibility that there are pre-existing trending differences between the treatment and control groups, which are unrelated to either positive or negative shocks, and may explain the impact of auditors' liability on firms' dividend payouts. Thus, we follow Bertrand and Mullainathan (2003) and Chy et al. (2021) to conduct the dynamic treatment model to test the parallel trend assumption. We perform separate tests for both positive and negative changes to assess the differential trend between firms in treatment and control groups before the exogenous shocks took place.

Specifically, the models examine the timing of changes in dividend payments relative to the timing of the changes in auditors' liability as follows:

$$Payout_{jst} = \mu_0 + \mu_1 POSITIVE_{st}^{-2} + \mu_2 POSITIVE_{st}^{-1} + \mu_3 POSITIVE_{st}^{0} + \mu_4 POSITIVE_{st}^{+1} + \mu_5 POSITIVE_{st}^{2+} + \gamma X_{jst} + f_j + \tau_t + \varepsilon_{jst} \quad (4.2)$$

$$Payout_{jst} = \mu_0 + \mu_1 NEGATIVE_{st}^{-2} + \mu_2 NEGATIVE_{st}^{-1} + \mu_3 NEGATIVE_{st}^{0} + \mu_4 NEGATIVE_{st}^{+1} + \mu_5 NEGATIVE_{st}^{2+} + \gamma X_{jst} + f_j + \tau_t + \varepsilon_{jst} \quad (4.3)$$

In Equation (4.2), we replace the main explanatory variable, TPAL, with a set of five indicator variables: $POSITIVE^{-2}$, $POSITIVE^{-1}$, $POSITIVE^{0}$, $POSITIVE^{+1}$ and $POSITIVE^{2+}$, which are set to one for

(1) two years before, (2) one year before, (3) the current year of, (4) one year after, and (5) two or more years after the positive changes in auditors' liability in the sample period of 1965 to 1998. The estimated coefficients of $POSITIVE^{-2}$ and $POSITIVE^{-1}$ are of particular interest, as they capture the differential trend between the treatment and control groups before positive shocks. Likewise, we employ five dummy variables for negative changes in auditors' liability in Equation (4.3): $NEGATIVE^{-2}$, $NEGATIVE^{-1}$, $NEGATIVE^{0}$, $NEGATIVE^{+1}$ and $NEGATIVE^{2+}$. If there are pre-treatment differences that might account for the treatment effect of TPAL or if reverse causality is a potential issue, we would observe statistically significant coefficient estimates μ_1 and μ_2 and an upward or downward trend in dividend payouts preceding the shocks.

Table 4.4 reports results of the parallel trend assumption tests. As per previous analyses, for positive test in column (1), a firm is categorised as treated if its location or incorporation state has expanded the auditors' liability, with the exception of California and New Jersey. Firms in states that have never undergone any changes are classified in the control group. Regarding negative shocks in column (2), firms are classified as treated if their states of headquarter of incorporation is California or New Jersey. We find that coefficient estimates of interest are not statistically significant for either positive or negative shocks, indicating that there are no significant pre-treatment differences between the treatment and control groups. The estimated coefficients of $POSITIVE^{2+}$, $NEGATIVE^{0}$, $NEGATIVE^{+1}$ and $NEGATIVE^{2+}$ are significant and align with the expected directions, consistent with previous analyses. The results suggest that pre-existing differences might not explain the treatment effect of changes in auditors' liability, and dividend payments decrease (increase) only following the positive (negative) shocks, thus offering support for the parallel trend assumption in the research design.

[Insert Table 4.4 Here]

4.4.4 Matched sample analysis

The main findings from previous indicate that increased auditors' liability to third parties significantly reduces client firms' dividend payouts. However, the concern arises that there could be an endogenous matching of firms with their choices of headquarter and incorporation states, which may lead to the correlated omitted variable issues. The parameter estimates obtained through baseline regressions might be biased if there are fundamental differences between firms located or incorporated in states that ultimately change the auditors' liability and other firms in the control group. To address these endogenous matching concerns and potential bias due to confounding variables, we employ the propensity score matched-pair research design (Al-Hadi et al., 2022; Armstrong et al., 2012; Serfling, 2016).

Since we have states expanding or reducing the liability, we firstly retain all observations in treatment and control groups in one year before the change in TPAL and construct an indicator variable representing the treatment firms in year t-1 for positive and negative changes, respectively. Then we use a logit model that regresses the indicator variable on the same set of control variables as in the baseline regression and year fixed effect to estimate the probability of being a treated firm. Using the predicted propensity scores from the model, each treated firm in year t-1 is matched to a control firm from the same industry and year with the closet propensity score, without replacement. The maximum distance between propensity scores is set to 0.01. The results remain the same when relaxing the no-replacement restriction. The control firm with the closest propensity score is retained when a treated firm is matched to multiple control firms. The sample ends up with 384 pairs of matched firms for positive shocks and 240 pairs for negative shocks. We keep observations in the ±3 years around the positive and negative shocks, respectively.

Then we conduct a diagnostic test to examine the difference in means of each firm-level control variable between the matched treatment and control groups. Panel A of Table 4.5 reports results from t-tests for equality of means for positive shocks and negative shocks. As shown in Panel A, there are no significant differences with respect to firm-level control variables for positive and

negative shocks, respectively. Collectively, the balance tests indicate that the propensity score matching method effectively mitigates differences in observable firm-level characteristics between matched treatment and control groups. This suggests a successful selection of matched firms and helps explain that the differences in dividend payouts can be attributed to the change of auditors' liability rather than fundamental firm-level factors.

After performing diagnostic tests to validate the matching procedure, we proceed to re-examine the regression analyses for positive and negative shocks using the matched sample, respectively. The results presented in Panel B of Table 4.5 indicate that, after controlling for differences in control variables between treated and control firms, the main findings continue to hold: an increase in the auditors' liability corresponds to higher firms' dividend payouts, while a decrease leads to reduced payouts. The propensity score matching strategy helps improving the covariate balance, thereby thus lending more credibility to the parallel trend assumption.

[Insert Table 4.5 Here]

4.4.5 Controlling for confounding law changes

During our sample period, states might also adopt other laws and regulations that could affect dividend payout policies, potentially confounding our main results. Aforementioned tests have indicated a negative relation between the auditors' liability and dividend payouts. We next examine whether the inferences are biased by confounding law changes. To control for potential confounding effects, we include indicator variables for these laws in the baseline regression. For each law, an indicator variable is constructed and equal to one for years in which the law is effective, and zero otherwise. The estimation results are presented in Table 4.6.

The staggered adoption of universal demand laws (UD) by 23 U.S. states from 1989 to 2005 overlaps with the changes in auditors' liability to third parties. The implementation of UD laws prevents shareholders from filing frivolous litigations that consume managers' time and damage firm reputation associated with such litigations. Appel (2019) finds that firms adopt governance provisions that entrench managers and limit shareholder voice following adoption of UD laws. It

could be the case that with the impairment in corporate governance, self-interested managers are able to retain cash rather than paying dividend to shareholders (Nguyen et al., 2018). We first examine whether confounding state UD laws affect the results. In columns (1) and (5), the estimated coefficients of TPAL remain negative and significant at the 1% level after including the indicator of UD laws.

We then examine whether our results are confounded by the state adoption of anti-takeover provisions during the sample period, such as the business combinations laws (BC), poison pill laws (PP) and directors' duties laws (DD), which can affect corporate policies. Francis et al. (2011) find that the likelihood of dividend payments and the size of the dividend ratio decrease following the anti-takeover provisions. John et al. (2015) document that precommitment through dividend payouts and the ratio of dividends to cash payouts increase following the passage of state anti-takeover laws. To mitigate concern about possible confounding effects of these concurrent laws, we follow prior studies to control for them by gradually including indicator variables for these anti-takeover legislations in our regression (Karpoff & Wittry, 2018; Nguyen et al., 2020; Ni, 2020; Ni et al., 2020). The coefficients of these anti-takeover laws are insignificant in Columns (2) to (4) and the coefficient estimate of BC is only significant at the 10% level in Column (5). The estimated coefficients of TPAL remain negative and significant at the 1% level.

In column (5), we consider the potential confounding effect of the inevitable disclosure doctrine (IDD) on the main results. The enactment of IDD could potentially mitigate the uncertainties linked to the departure of high-valued employees to rival firms and the costs incurred in preventing the loss of crucial human capital resources. Chowdhury and Doukas (2022) indicate that the IDD implementation might improve the prospects of future firm performance, subsequently increasing the likelihood of dividend payments. The positive coefficient on IDD is consistent with the findings of Chowdhury and Doukas (2022). Column (5) includes all these indicator variables of laws and the estimated coefficient on TPAL remains negative and significant at the 1% level, suggesting that our results are substantially unchanged and robust to controlling for the adoption of these concurrent laws. The impact of changes in auditors' liability on dividend payouts is significant and can not be overlooked, and the effect of concurrent law changes is

unlikely to pose a concern. In Appendix 4B and 4C, we replace the independent variable TPAL with POSITIVE and NEGATIVE to examine positive and negative shocks separately. Our main findings persist in these analyses.

[Insert Table 4.6 Here]

4.4.6 Cross-sectional analysis

In this section, we utilise cross-sectional heterogeneity to enhance the causal inference regarding the link between the third-party auditor law and dividend payouts. Additionally, this approach helps shed light on the potential mechanisms that contribute to the observed negative relationship. We have documented a significant negative association between the third-party auditor liability and client firms' dividend payout. We next perform a set of tests to examine whether the magnitude of the negative relationship varies with the likelihood of corporate governance and the free cash flow problem.

Auditors incorporated or headquartered in states with higher TPAL are supposed to experience increased liability and a more stringent legal environment, which could act as motivators for them to enhance their monitoring of client firms' activities and reporting process. This heightened level of monitoring can reduce the need for managers to use high dividends as a means to establish a favourable reputation or as a disciplinary device, as all forms of agency-cost control mechanisms are costly and there are adequate mechanisms in place (Allen et al., 2000; Easterbrook, 1984; Hail et al., 2014; John et al., 2015; Officer, 2011).

In firms with robust monitoring mechanisms, where free cash flow problem is effectively constrained, managers might perceive a diminished marginal benefit in paying high dividends, leading to reduced incentives for dividend payouts (Koo et al, 2017). If increased auditors' liability reduces the necessity of paying dividends by constraining the free cash flow problem, the negative effect of TPAL on dividend payouts should be stronger for firms that are more likely to suffer from the cash flow problem. If the heightened level of monitoring resulted from increased

TPAL reduces dividend payouts by substituting its discipling role, the negative effect should be more pronounced among firms with weaker corporate governance.

We employ a two-fold test to verify our hypotheses. The first set of tests analyses firms' ex-ante corporate governance using two proxies. The first one is an aggregate proxy of corporate governance, E-index, with higher values signifying worse corporate governance (Bebchuk et al., 2009). The second one, institutional HHI, is the measure of the concentration of institutional ownership measured by the Hirschman-Herfindahl index (Porras Prado et al., 2016). We partition the sample into two subgroups based on the year and industry median of E-index and institutional HHI, respectively, with the below-median subsample indicating the weaker governance.

The second set of tests analyses the severity of free cash flow problems in firms. Following previous studies (Koo et al., 2017; Leary and Michaely, 2011), we first identify firms with relatively more severe free cash flow issues based on both cash flow from operations and growth opportunities. For each year and industry, we group firms with above-median cash flow from operations and below-median Tobin's Q to form the subsample of firms (High FCF) that are likely to have more free cash flow problem. The remaining firms with below-median cash flow from operations and above-median Tobin's Q form the subsample (Low FCF) representing low free cash flow problems. Then, we identify mature firms as those more likely to be concerned with agency issues and free cash flow problems. Mature firms—large, with established revenue streams and not in the growth cycle—are more likely to be cash cows and susceptible to agency costs of free cash flow (DeAngelo et al., 2006; Farre-Mensa et al., 2014; Leary and Michaely, 2011). In addition, managers in these long-established might forgo value-enhancing projects to pursue a quiet life, thereby increasing available cash flows (Bertrand & Mullainathan 2003; Koo et al., 2017). Following Leary and Michaely (2011), we categorise firms with above-median age and above-median size to constitute the subsample of mature firms based on the year and industry median. The remaining firms, characterised by below-median age and below-median size, form the subsample representing less mature firms.

Table 4.7 reports the results of tests conditional on corporate governance and free cash flow problems. Panel A presents that coefficients of TPAL are only significantly negative in columns (2) and (3), indicating that the negative impact on dividend payouts is more pronounced for firms with weaker corporate governance. Panel B presents a stronger negative impact on dividend payouts for firms that are more likely to be subject to agency costs of free cash flow problems. Overall, the results confirm our hypothesis, demonstrating a reduction in dividend payments subsequent to an increase in TPAL, with a more pronounced negative effect observed among firms with weaker governance mechanisms and more severe free cash flow problems. These results align with the substitute view, suggesting that the decrease in dividends may be attributed to the increased monitoring level from auditors, potentially reducing the necessity of using high dividends as a discipling mechanism.

[Insert Table 4.7 Here]

4.5 Robustness

4.5.1 Recent period (1999 to 2020)

An important consideration in our primary analysis is the potential influence of dividend changes from the 1970s to the 1990s. Fama and French (2001) highlight a significant decline in the number and percentage of industrial firms paying dividends from 1978 to 1998. If this trend aligns with the escalation of auditor litigation risk, it could cast doubt on our baseline results. To mitigate this concern, we further examine the influence exerted by changes in auditors' liability on client firms' dividend payouts using the period from 1999 to 2020, as our sample period ends 1998. Column (1) of Table 4.8 presents results of re-estimating the baseline using a different period and it shows that our findings persist in the recent sample. Moreover, the estimated coefficient of the main variable of interest does not exhibit substantial differences compared to the main results presented in Table 4.8. During the recent period, client firms reduce dividend payments in states where their auditors' liability is more expansive.

4.5.2 Treatment states only

In the main analyses, we use firms located or incorporated in states that undergo changes in auditors' liability to third parties as the treatment group, and those in states that do not undergo changes as the control group. There is a concern that whether the treatment effect derives from firms in the treatment group, or it is affected by the choice of the control group. To ensure that the negative relationship from the baseline is not driven by the changes in dividend payouts for firms in the control group, we drop firm-year observations in the control group and retain firms in the treatment group only. The treatment firms comprise the control group before they receive treatment, id est, undergo changes in auditors' liability. Column (2) of Table 4.8 shows that client firms' decrease dividend payouts after auditors' liability is expanded in the treatment states, which is consistent with our main findings and the estimated coefficient is not significantly different from the baseline sample. Further, the results are not influenced by economic or political conditions in control states, given their exclusion from the test.

4.5.3 Delaware-incorporated firms and California-headquartered firms

It is worth noting that approximately 51.38% of firms in our sample are incorporated in Delaware which has not undergone any changes in auditors' liability. The prevalence of U.S. public firms incorporating in Delaware could pose a concern, as these entities might aim to take advantage of law institutions and exhibit systematic differences from other firms (Basu and Liang, 2019; Romano, 2006). To address this issue, we drop Delaware-incorporated firms and re-estimate the baseline regression. The estimated coefficient in column (3) remains significantly negative at the 1% level. Anantharaman et al. (2016) show that sample firms are most frequently headquartered in California. Similarly, approximately 14.84% of firms in our sample are located in California, which has reduced the auditors' liability in 1992. We limit the sample to firms that are not headquartered in California and the coefficient estimate shown in column (4) is negative and significant at the 1% level. In column (5), we exclude firms incorporated in Delaware or located in California and find the result continues to hold. Despite the loss of about half of the observations, our inferences from baseline are not sensitive to dropping Delaware-incorporated or California-headquartered firms.

4.5.4 Different event windows

We then examine whether the main results are sensitive to different windows around the shock. Firms could experience different changes during the sample period, since there are both positive and negative shocks and our measurement of auditor liability hinges on state of incorporation and historical state of headquarter. Thus, we conduct the analysis for positive and negative shocks respectively. Columns (6) to (10) require that observations of firms located or incorporated in states that have experienced changes in auditors' liability should fall within ±3, ±5 and ±10 years around the positive or negative shocks, respectively. The estimated coefficients for positive changes are still negative and significant at the 5% level, and those for negative changes remain positive and significant.

4.5.5 Alternative Model Specifications

In our main analyses, we control for firm and year fixed effects and cluster standard errors by client firm. In Panel C and Panel D of Table 4.8, we examine whether the negative relation between auditors' liability and dividend payouts is sensitive to alternative model specifications. In column (11), we replace year fixed effect with the interaction of SIC industry and year fixed effect to capture time-varying trends within the industry and re-estimate the baseline regression. In column (12), we follow Al-Hadi et al. (2023) to control for industry, year, and state fixed effects.

Our primary analyses cluster standard errors at the firm level, potentially making the regression error term autocorrelated within a firm over time. Since the key independent variable TPAL is measured at the state of incorporation and headquarter level, it could be argued that standard errors should be clustered at the state level. We then examine whether the main results are sensitive to alternative clustering choices. Following previous studies, we cluster at (1) the industry level, (2) the state of headquarter level, (3) the state of incorporation level. We also conduct a two-way clustering strategy and cluster robust standard errors at (1) the firm and industry-year levels, (2) the state of headquarter and incorporation levels, (3) the firm and state-year levels. These two-way clustering strategies address the potential correlation of residuals within a firm as well as across different firms. Results are presented in columns (13) to (18) that these estimated coefficients remain negative and significant, suggesting that the main inferences still hold and are robust to alternative model specifications.

4.5.6 Alternative TPAL measures

Prior studies (Al-Hadi et al., 2023; Anantharaman et al., 2016; Chy et al., 2021; Gaver et al., 2012) have employed other measures of auditors' liability to third parties. The first measure TPLIndex1to9, is an index ranging from 1 to 9, with 1 representing the most restrictive definition of third parties who can hold auditors liable for negligence and 9 representing the most expansive definition. The index is determined by the number of the various type of third parties to whom the auditor owes a duty. Pacini et al. (2000) first developed the index and then Gaver et al. (2012)

updated the index. Although the index was constructed for the 1993 to 2004 period, we follow Anantharaman et al. (2016), Chy et al. (2021) and Al-Hadi et al. (2023) to use the index for an extended period. The second measure TPALdummy, is a dummy variable equal to one if the state applies the restatement or reasonable foreseeability standards, and zero otherwise. Alternatively, the indicator variable takes the value of one if the TPLIndex1to9 is greater than or equal to 4. We then follow Chy et al. (2021) to convert TPLIndex1to9 into an index ranging from 1 to 6 to construct our third measure, TPLIndex1to6. The values 1 to 6 represent privity, near privity, restatement (restrictive view), restatement (typical view), restatement (expansive view) and reasonable foreseeability, respectively.

The mean value of TPALdummy in our recent sample from 1999 to 2020 is approximately 0.93, which is very close and comparable to the average values of 0.92 as reported in Chy et al. (2021) and 0.94 in Anantharaman et al. (2016), respectively. In terms of TPLIndex1to9, the measurement of auditor liability in Al-Hadi et al. (2023) hinges on the states where firms are headquartered, while our measurement hinges on both the incorporation and headquarter states of firms. The summary statistics of TPLIndex1to9 closely align with those reported in their research if we solely consider historical headquarters when constructing the index.

In columns (19) to (21) of Table 4.8, we replace our baseline independent variable TPAL with TPLIndex1to9, TPLIndex1to6 and TPALdummy, respectively, for a more recent sample period. The findings continue to hold, showing that the client firm reduces dividend payouts when the auditor liability to third parties is higher, and the magnitude of the estimated coefficients are not significantly different compared to the main results.

4.5.7 Choice of state jurisdiction

As courts typically adhere to the “most significant relationship” approach when determining the applicable state law in negligence claims, we follow the assumption that the state of most significant relationship between auditors and client firms occurs either in client firms’ states of incorporation or headquarter and use both states to construct our baseline independent variable TPAL (Anantharaman et al., 2016).

In this section, we follow Al-Hadi et al. (2023) to define a new variable TPAL_STATE at the state of client firms headquarter to test the sensitivity of results to auditor liability jurisdiction. TPAL_STATE changes from zero to one if the firm's state of location expands auditors' liability to third parties, and from one to zero if the headquarter reduces auditor liability. Column (22) reports the results of re-estimating the baseline regression and shows that our findings continue to hold.

[Insert Table 4.8 Here]

4.5.8 Placebo test

Our results have documented that firms incorporated or located in states that experience increased TPAL reduce dividend payments. Following previous studies (Anantharaman et al., 2016; Roberts & Whited, 2013), we run the falsification test to provide some assurance that our negative association reflects the legislative shift rather than a spurious or general trend. We deliberately alter the event year and generate a new indicator TPAL by using the year three years before the actual event year. We also generate corresponding new indicators POSITIVE and NEGATIVE to analyse positive and negative shocks, respectively. We re-estimate baseline model with new indicators and present results in Table 4.9. The estimated coefficients in columns (1) to (3) are statistically indistinguishable, implying our results are unlikely be driven by chance and supporting the validity of the negative association.

[Insert Table 4.9 Here]

4.6 Conclusion

The auditing industry has witnessed a substantial number of third-party liability lawsuits and faced enormous damage claims for ordinary negligence under common law (Anantharaman et al., 2016; Chan & Wong, 2002; Donelson, 2013). Changes in auditor liability can have significant implications for client firms' strategic decisions, as auditors play an integral role in the corporate governance landscape.

Leveraging state-level staggered shocks to auditors' liability to third parties across U.S., we investigate whether different TPAL regimes lead to variations in client firms' dividend payout policies. We find that increased auditor liability is significantly negatively related to client firms' cash dividends. Moreover, our findings show symmetrical results, id est, an increase in liability leads to reduced dividend payouts, while a decrease corresponds to increased payouts. To further shed light on the underlying mechanisms, we conduct a cross-sectional analysis and find that the negative effect on dividend payouts is more pronounced for firms with more severe free cash flow problems and weaker corporate governance. Our results remain robust to a set of additional robustness tests including a more recent sample period, different event windows, alternative measures, and model specifications.

These findings provide some implications for the role of auditor liability in corporate financial strategies by demonstrating that increased liability could lead to decreases in dividend payouts. Investors might need more information disclosure to better understand the flow of increased/decreased dividends. Moreover, there is still no consensus on whether auditor liability is beneficial or detrimental to financial markets and investors. Understanding firm behaviour in response to TPAL changes can provide policymakers with more information on adjusting regulations to balance corporate governance, financial flexibility and shareholder value. The results also offer some evidence on the competing agency theory of dividend puzzles by showing that increased auditor monitoring reduces client firms' dividends through mitigating free cash flow problems and substituting the necessity for employing a high dividend policy.

Table 4.1 Changes in auditor liability to third parties.

This table lists in chronological order the auditor legal liability shocks for the sample period from 1965 to 1998. The list is obtained from Chy and Hope (2021) and Chy et al. (2021).

Change Year	State	Liability	Implementing Statute
1968	RI	Increase	Rusch Factors, Inc. v. Levin, 284 F. Supp. 85, D.R.I. 1968
1969	IA	Increase	Ryan v. Kanne, 170 N.W. 2d 395 (Iowa 1969).
1971	TX	Increase	Shatterproof Glass Corporation v. James, 466 S.W.2d 873 (Tex. Civ. App. 1971).
1974	ND	Increase	Bunge Corporation v. Eide, 372 F. Supp. 1058 (D.N.D. 1974).
1976	MN	Increase	Bonhiver v. Graff, 248 N.W.2d 291, 311 Minn. 111 (1976).
1978	PA	Increase	Sharp v. Coopers and Lybrand, 457 F. Supp. 879 (E.D. Pa. 1978).
1979	NE	Increase	Seedkem, Inc. v. Safranek, 466 F. Supp. 340 (D. Neb. 1979).
1981	KY	Increase	Ingram Industries, Inc. v. Nowicki, 527 F. Supp. 683 (E.D. Ky. 1981).
1982	NH	Increase	Spherex, Inc. v. Alexander Grant and Co., 122 N.H. 898, 451 A.2d 1308 (1982).
1982	OH	Increase	Haddon View Inv. Co. v. C. and L., 70 Ohio St. 2d 154, 436 N.E.2d 212, 24 O.O.3d 268 (1982).
1983	HI	Increase	Matter of Hawaii Corp., 567 F. Supp. 609 (D. Haw. 1983).
1983	NJ	Increase	Rosenblum v. Adler, 461 A.2d 138, 93 N.J. 324, 93 N.H. 324 (1983).
1983	WI	Increase	Citizens State Bank v. Timm, Schmidt and Co., 335 N.W.2d 361, 113 Wis. 2d 376, 113 Wis. 361 (1983).
1987	GA	Increase	Badische Corp. v. Caylor, 356 S.E.2d 198, 257 Ga. 131 (1987).
1987	MS	Increase	Touche Ross and Co. v. Commercial Union Ins. Co., 514 So. 2d 315 (Miss. 1987).
1988	NC	Increase	Raritan River Steel v. Cherry, Bekaert and Holland, 367 S.E.2d 609, 322 N.C. 200 (1988).
1989	WV	Increase	First Nat. Bank of Bluefield v. Crawford, 386 S.E.2d 310 (W. Va. 1989).
1989	MI	Increase	Law Office of Stockler v. Rose, 436 N.W.2d 70, 174 Mich. App. 14 (Ct. App. 1989).
1990	MT	Increase	Thayer v. Hicks, 793 P.2d 784, 243 Mont. 138 (1990).
1990	LA	Increase	First Nat. Bank of Commerce v. Monco Agency Inc., 911 F.2d 1053 (5th Cir. 1990).
1990	FL	Increase	First Fla. Bank, NA v. Max Mitchell and Co., 558 So. 2d 9 (Fla. 1990).
1991	TN	Increase	Bethlehem Steel Corp. v. Ernst and Whinney, 822 S.W.2d 592 (Tenn. 1991).
1992	CA	Decrease	Bily v. Arthur Young and Co., 834 P.2d 745, 3 Cal. 4th 370, 11 Cal. Rptr. 2d 51 (1992).
1993	MO	Increase	MidAmerican Bank and Trust Co. v. Harrison, 851 S.W.2d 563 (Mo. Ct. App. 1993).
1994	AL	Increase	Boykin v. Arthur Andersen and Co., 639 So. 2d 504 (Ala. 1994).
1995	NJ	Decrease	Accountant Liability Act (Effective from March, 1995)

Table 4.2 Summary statistics

This table reports the descriptive statistics for the variables used in the baseline regression models and presents the number of observations, the mean, standard deviation, 25th percentile, median and 75th percentile. The sample period is from 1965 to 1998. Variables are winsorised at the 1st and 99th percentiles. Detailed variable definitions are provided in the Appendix 4.A.

	N	Mean	SD	P25	Median	P75
DIV	33,236	0.011	0.020	0.000	0.000	0.017
REPURCHASE	33,236	0.011	0.064	0.000	0.000	0.005
PAYOUT	33,236	0.024	0.076	0.000	0.004	0.032
TPAL	33,236	0.461	0.498	0.000	0.000	1.000
POSITIVE	25,163	0.424	0.494	0.000	0.000	1.000
NEGATIVE	11,738	0.241	0.428	0.000	0.000	0.000
SIZE	33,236	4.518	1.892	3.228	4.393	5.694
LEV	33,236	0.250	0.247	0.067	0.211	0.362
MTB	33,236	2.312	4.403	0.950	1.576	2.727
ROA	33,236	0.085	0.260	0.058	0.126	0.185
INST	33,236	0.262	0.218	0.072	0.211	0.416
CASHFLOW	33,236	0.021	0.275	0.018	0.067	0.107
INTANG	33,236	0.058	0.109	0.000	0.005	0.067
BIG5	33,236	0.701	0.458	0.000	1.000	1.000

Table 4.3 Auditor liability to third parties and dividend payouts.

This table reports the effect of changes in auditor liability on client firms' dividend payout policies. The sample period spans from 1965 to 1998. Financial and utility industries (SIC 4000–4999 and SIC 6000–6999) are excluded from the sample. In column (1), the dependent variable is DIV, which is the ratio of cash dividend to the market value of common equity. In column (2), the dependent variable is REP, which is the ratio of the dollar amount of stock repurchases in a fiscal year to the market value of common equity. In column (3), the dependent variable is PAYOUT, referring to the total corporate payouts (DIV+REP). In columns (1) to (3), the main independent variable is TPAL, an indicator variable set to one if the state in which a firm is located or incorporated has expanded auditor liability to third parties. It moves from one to zero when states reduce auditor liability and remains zero for the states without any changes during the sample period. Columns (4) to (9) report the effects of positive and negative changes in auditor liability on firms' dividend payouts separately. In columns (4) to (6), the sample period is 1965 to 1998 and the sample excludes firms located or incorporated in New Jersey or California. The independent variable is POSITIVE, an indicator variable which is set to one when and after states expanded auditor liability, and zero otherwise. In columns (7) and (9), the sample period is 1989 to 1998 and the sample excludes firms located or incorporated in states that have expanded auditor liability. The independent variable is NEGATIVE, an indicator variable set to one when states reduce auditor liability, and zero otherwise. All regressions control for firm-level control variables, firm and year fixed effects. Robust standard errors are clustered at the firm level and t-statistics are reported in parentheses. Continuous variables are winsorised at the 1st and 99th percentiles. Definitions of variables are provided in the Appendix 4.A. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	DIV	REP	PAYOUT	DIV	REP	PAYOUT	DIV	REP	PAYOUT
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
TPAL	-0.002***	0.001	0.000						
	(-3.727)	(0.619)	(-0.252)						
POSITIVE				-0.003***	-0.001	-0.004			
				(-3.076)	(-0.548)	(-1.542)			
NEGATIVE							0.002***	-0.002	0.000
							(2.668)	(-0.668)	(0.088)
SIZE	0.003***	0.000	0.004***	0.004***	0.000	0.006***	0.003***	-0.007***	-0.003
	(11.199)	(-0.332)	(3.086)	(9.996)	(0.126)	(3.582)	(6.251)	(-2.996)	(-0.922)
LEV	-0.007***	0.003	-0.011**	-0.007***	0.004	-0.009	-0.006***	0.020***	0.006
	(-7.404)	(0.591)	(-2.192)	(-6.463)	(0.759)	(-1.530)	(-4.798)	(3.099)	(0.743)
MTB	-0.000***	0.000	-0.000**	-0.000***	0.000	0.000	-0.000*	0.000	0.000
	(-4.782)	(-1.089)	(-2.118)	(-4.784)	(-0.153)	(-1.330)	(-1.804)	(-0.950)	(-1.203)
ROA	0.037***	0.008	0.128***	0.035***	0.008	0.125***	0.032**	0.024***	0.128**
	(3.495)	(1.501)	(3.817)	(2.954)	(1.302)	(3.439)	(2.062)	(2.727)	(2.253)
INST	-0.005***	-0.009*	-0.021***	-0.005***	-0.012**	-0.026***	-0.006***	-0.011	-0.027**
	(-3.558)	(-1.793)	(-3.677)	(-3.462)	(-2.118)	(-3.858)	(-3.080)	(-1.163)	(-2.550)
CASHFLOW	-0.041***	0.004	-0.120***	-0.041***	0.010*	-0.115***	-0.034**	0.002	-0.099*
	(-3.992)	(0.809)	(-3.624)	(-3.446)	(1.703)	(-3.147)	(-2.363)	(0.234)	(-1.906)
INTANG	-0.006***	-0.005	-0.005	-0.007***	-0.002	-0.007	-0.004	-0.009	-0.01
	(-2.835)	(-0.495)	(-0.507)	(-2.864)	(-0.194)	(-0.574)	(-1.094)	(-0.632)	(-0.595)
BIG5	0.000	0.002	0.002	0.000	0.002	0.003	-0.001	0.003	0.000
	(0.201)	(0.962)	(1.056)	(0.182)	(0.977)	(1.186)	(-1.618)	(0.725)	(0.089)
Firm FE	YES	YES	YES	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES	YES	YES	YES
Adjusted R^2	0.665	0.070	0.143	0.646	0.065	0.137	0.685	0.090	0.159
Observations	33,236	33,236	33,236	25,163	25,163	25,163	11,738	11,738	11,738

Table 4.4 Dynamic test

This table shows results from the tests of the parallel trend assumption in the difference-in-differences design which examines the pre-treatment trends between treatment and control groups. The dependent variable is DIV, which is the ratio of cash dividend to the market value of common equity. The sample period covers 1965 through 1998 in column (1) and 1989 through 1998 in column (2). $POSITIVE^{-2}$ ($NEGATIVE^{-2}$) is an indicator variable that equals one if it is two years before the increase (decrease) of auditor liability and zero otherwise. $POSITIVE^{-1}$ ($NEGATIVE^{-1}$) is an indicator variable that equals one if it is one year before the increase (decrease) of auditor liability and zero otherwise. $POSITIVE^{0}$ ($NEGATIVE^{0}$) is an indicator variable that equals one if it is the year that auditor liability increases (decreases) and zero otherwise. $POSITIVE^{+1}$ ($NEGATIVE^{+1}$) is an indicator variable set to one if it is the one year after the increase (decrease) of auditor liability and zero otherwise. $POSITIVE^{2+}$ ($NEGATIVE^{2+}$) is an indicator variable set to one if it is two or more years after the increase (decrease) of auditor liability and zero otherwise. Column (1) excludes firms located or incorporated in New Jersey or California. Column (2) excludes firms located or incorporated in states that have expanded auditor liability during the sample period. All columns control for firm-level factors, firm and year fixed effects. Robust standard errors are clustered at the firm level and t-statistics are reported in parentheses. Continuous variables are winsorised at the 1st and 99th percentiles. Definitions of variables and details of changes in auditor liability are provided in the Appendix 4.A. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	DEP. VAR = DIV	
	(1)	(2)
$POSITIVE^{-2}$	0.001	
	(1.049)	
$POSITIVE^{-1}$	-0.001	
	(-0.718)	
$POSITIVE^{0}$	-0.002	
	(-1.564)	
$POSITIVE^{+1}$	-0.002	
	(-1.639)	
$POSITIVE^{2+}$	-0.003**	
	(-2.453)	
$NEGATIVE^{-2}$		0.000
		(0.053)
$NEGATIVE^{-1}$		0.001
		(0.929)
$NEGATIVE^{0}$		0.002**
		(1.993)
$NEGATIVE^{+1}$		0.002*
		(1.910)
$NEGATIVE^{2+}$		0.002**
		(2.363)
Firm controls	YES	YES
Firm FE	YES	YES
Year FE	YES	YES
Adjusted R^2	0.646	0.685
Observations	25,163	11,738

Table 4.5 Propensity-score matching

This table reports the results of estimating effect of the changes in auditor liability to third parties on dividend payouts using the propensity score matching method. Panel A presents the sample means of firm-level characteristics for matched treatment and control groups in year t-1, the univariate comparisons of firm factors and the t-statistics for positive and negative shocks respectively. The firm characteristics are not statistically different across treatment and control groups. Panel B presents the estimation results estimating the effect of the changes in auditor liability to third parties on dividend payouts, based on propensity score matched samples over the ±3 years around the passage of COW. The dependent variable is DIV, which is the ratio of cash dividend to the market value of common equity. In column (1), the main independent variable of interest is POSITIVE, an indicator variable which is set to one when and after states expanded auditor liability, and zero otherwise. In column (2), the independent variable is NEGATIVE, an indicator variable set to one when states reduce auditor liability, and zero otherwise. All regressions control for firm and year fixed effects. Robust standard errors are clustered at the firm level and t-statistics are reported in parentheses. All variable definitions are provided in the Appendix 4.A. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Panel A. Balance test

	Treated Group		Control Group		Difference		t-stat	
	Positive (N=384)	Negative (N=240)	Positive (N=384)	Negative (N=240)	Positive	Negative	Positive	Negative
SIZE	4.423	4.313	4.303	4.263	0.120	0.050	0.930	0.260
LEV	0.275	0.198	0.283	0.198	-0.008	0.000	-0.540	0.010
MTB	2.159	3.082	1.789	2.642	0.370	0.440	1.500	0.980
ROA	0.113	0.072	0.101	0.069	0.012	0.003	1.120	0.160
INST	0.205	0.279	0.194	0.267	0.011	0.012	0.870	0.600
CASHFLOW	0.042	0.022	0.033	0.023	0.009	-0.001	1.020	-0.100
INTANG	0.046	0.046	0.048	0.042	-0.002	0.004	-0.280	0.450
BIG5	0.677	0.748	0.688	0.723	-0.011	0.025	-0.310	0.560

Panel B. Matched sample baseline

	DEP. VAR = DIV	
	(1)	(2)
POSITIVE	-0.002**	
	(-2.036)	
NEGATIVE		0.003**
		(2.393)
Firm controls	YES	YES
Firm FE	YES	YES
Year FE	YES	YES
Adjusted R^2	0.717	0.661
Observations	3,703	2,170

Table 4.6 Controlling for confounding law changes

This table reports the results of estimation the effect of changes in auditor liability to third parties on dividend payouts by controlling for confounding legal changes. In columns (1) to (5), the dependent variable is DIV, which is the ratio of cash dividend to the market value of common equity. The main independent variable of interest is TPAL, an indicator variable set to one if the state in which a firm is located or incorporated has expanded auditor liability to third parties. It moves from one to zero when states reduce auditor liability and remains zero for the states without any changes during the sample period. In columns (1) to (5), we control for the effect of universal demand laws (UD), business combination laws (BC), poison pill laws (PP), directors' duties laws (DD), and inevitable disclosure doctrine (IDD) by gradually including indicators of these concurrent laws. All regressions include the same vector of control variables as in the baseline regression, and control for the firm fixed effects and year fixed effects. Robust standard errors are clustered at the firm level and t-statistics are reported in parentheses. All variable definitions are provided in the Appendix 4.A. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

	DEP. VAR = DIV				
	(1)	(2)	(3)	(4)	(5)
	UD	BC	PP	DD	IDD
TPAL	-0.002***	-0.002***	-0.002***	-0.002***	-0.002***
	(-3.378)	(-3.373)	(-3.298)	(-3.303)	(-3.268)
UD	-0.001	-0.001	-0.001	-0.001	-0.001
	(-1.073)	(-1.066)	(-0.904)	(-0.960)	(-0.886)
BC		-0.001	-0.001	-0.001	-0.001
		(-1.037)	(-1.192)	(-1.353)	(-1.484)
PP			-0.001	-0.001	-0.001
			(-0.973)	(-1.472)	(-1.480)
DD				0.001	0.000
				(0.999)	(0.660)
IDD					0.002***
					(2.627)
Firm controls	YES	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES
Adjusted R^2	0.665	0.665	0.665	0.665	0.665
Observations	33,236	33,236	33,236	33,236	33,236

Table 4.7 Cross-sectional analysis

This table explores cross-sectional differences of the effect of TPAL on dividend payouts. Dependent variable is DIV, which is the ratio of cash dividend to the market value of common equity. The main independent variable of interest is TPAL, an indicator variable set to one if the state in which a firm is located or incorporated has expanded auditor liability to third parties. It moves from one to zero when states reduce auditor liability and remains zero for the states without any changes during the sample period. We examine whether the negative effect is more pronounced for firms with weaker corporate governance and that are more likely to experience cash flow problems. All regressions control for firm-level factors, firm and year fixed effects. Robust standard errors are clustered at the firm level and t-statistics are reported in parentheses. Definitions of variables are provided in the Appendix 4.A. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

Panel A. Corporate governance

	DEP. VAR = DIV			
	(1)	(2)	(3)	(4)
	Low E-index	High E-index	Low institutional ownership	High institutional ownership
TPAL	0.002	-0.003**	-0.002***	-0.001
	(-1.313)	(-1.995)	(-3.458)	(-1.477)
Firm controls	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Adjusted R^2	0.689	0.725	0.710	0.669
Observations	2,368	1,321	17,466	14,665

Panel B. Free cash flow

	DEP. VAR = DIV			
	(5)	(6)	(7)	(8)
	Low FCF	High FCF	Less mature	More mature
TPAL	0.000	-0.003***	-0.001	-0.003***
	(-0.489)	(-2.938)	(-0.706)	(-3.371)
Firm controls	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Adjusted R^2	0.690	0.762	0.630	0.686
Observations	5,018	5,437	10,386	10,297

Table 4.8 Robustness tests

This table reports the results from robustness tests of the relation between the changes in auditor liability to third parties and client firms' dividend payouts. Panel A reports results based on different samples. For each sample, the dependent variable is DIV, the ratio of cash dividend to the market value of common equity. The independent variable TPAL captures changes in auditor liability and equals one for firms located or incorporated in states that have expanded liability, and shifts from one to zero when states reduce liability. Column (1) reports the estimates for effects using a more recent sample period of 1999 to 2020. Column (2) uses firm-year observations for the treatment states only. Column (3) excludes firms incorporated in Delaware, column (4) excludes firms headquartered in California, and column (5) excludes Delaware-incorporated and California-located firms. Panel B reports the results from examining the sensitivity of main results to using different event windows. We require that observations of firms located or incorporated in states that have experienced changes in auditors' liability should fall within ±3, ±5 and ±10 years around the positive or negative shocks, respectively. For each event window, DIV is used as the dependent variable. Panel C reports results from estimating the effect controlling for alternative fixed effects. Column (11) replaces year fixed effect with industry-by-year fixed effect. Column (12) controls for year, state and industry fixed effects. Panel D tests the sensitivity of the main results to alternative clustering choices. Panel E reports the estimates for the effect of changes in auditor liability on dividend payouts using three alternative auditor liability measures. The sample period spans from 1999 to 2020. Panel F reports the estimates from testing the sensitivity of main results to auditor liability jurisdiction. The independent variable TPAL_STATE is defined at the state of client firms headquarter. All regressions include the same vector of control variables as in the baseline regression, and control for the firm fixed effects and year fixed effects except for specific interpretation. Robust standard errors are clustered at the firm level and t-statistics are reported in parentheses except for specific interpretation. All variable definitions are provided in the Appendix 4.A. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Panel A. Alternative sample tests

	DEP. VAR = DIV				
	(1)	(2)	(3)	(4)	(5)
	Recent period	Treatment states only	Excluding DE	Excluding CA	Excluding DE and CA
TPAL	-0.002**	-0.002***	-0.003***	-0.002***	-0.003***
	(-2.202)	(-3.921)	(-4.398)	(-2.779)	(-3.591)
Firm controls	YES	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES
Adjusted R^2	0.538	0.675	0.657	0.643	0.635
Observations	51,952	23,058	17,061	29,852	15,368

Panel B. Different event windows						
	DEP. VAR = DIV					
	(6)	(7)	(8)	(9)	(10)	
	3 years		5 years		10 years	
POSITIVE	-0.002**		-0.002**		-0.002**	
	(-2.277)		(-2.069)		(-2.298)	
NEGATIVE		0.002**		0.002***		0.002***
		(2.503)		(2.646)		(2.748)
Firm controls	YES	YES	YES	YES	Y	Y
Firm FE	YES	YES	YES	YES	Y	Y
Year FE	YES	YES	YES	YES	Y	Y
Adjusted R^2	0.64	0.663	0.637	0.666	0.622	0.671
Observations	15589	10951	17167	12139	20532	12736

Panel C. Alternative fixed effects		
	DEP. VAR = DIV	
	(11)	(12)
	Year-Industry FE	State-Year-Industry FE
TPAL	-0.002***	-0.001***
	(-3.500)	(-3.008)
Firm controls	YES	YES
Year-Industry FE	YES	NO
Firm FE	YES	NO
State FE	NO	YES
Industry FE	NO	YES
Year FE	NO	YES
Adjusted R^2	0.668	0.273
Observations	33,236	36,380

Panel D. Alternative clustering strategies

	DEP. VAR = DIV					
	(13)	(14)	(15)	(16)	(17)	(18)
	Ind clustering	Headquarter clustering	Incorp clustering	Firm and Year-Ind clustering	Headquarter and incorp clustering	Firm and State-Year clustering
TPAL	-0.002***	-0.002***	-0.002**	-0.002***	-0.002**	-0.002***
	(-3.764)	(-3.308)	(-2.353)	(-3.691)	(-2.447)	(-3.326)
Firm controls	YES	YES	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES
Adjusted R^2	0.665	0.665	0.665	0.665	0.665	0.665
Observations	33,236	33,236	33,236	33,236	33,236	33,236
Panel E. Alternative TPAL measures						
	DEP. VAR = DIV					
	(19)	(20)	(21)			
	TPLIndex1to9	TPLIndex1to6	TPALdummy			
TPLIndex1to9	-0.000***					
	(-2.702)					
TPLIndex1to6		-0.001***				
		(-3.136)				
TPALdummy			-0.003***			
			(-4.880)			
Firm controls	YES	YES	YES			
Industry FE	YES	YES	YES			
Year FE	YES	YES	YES			
Adjusted R^2	0.23	0.23	0.231			
Observations	55,620	55,620	55,620			
Panel F. Sensitivity to auditor legal liability jurisdiction						
	DEP. VAR = DIV					

	(22)
	Headquarter
TPAL_STATE	-0.002***
	(-3.405)
Firm controls	YES
Firm FE	YES
Year FE	YES
Adjusted R^2	0.664
Observations	33,236

Table 4.9 Placebo test

This table reports falsification test results for the DID analysis. Column (1) reports the baseline result of a placebo test by choosing the year three years before the actual event year as the pseudo-event year. Columns (2) and (3) report the effects of positive and negative changes in auditor liability on firms' dividend payouts separately by using the corresponding pseudo-event years for positive and negative shocks. Dependent variable is DIV, the ratio of cash dividend to the market value of common equity. All regressions control for firm-level factors, firm and year fixed effects. Robust standard errors are clustered at the firm level and t-statistics are reported in parentheses. Definitions of variables are provided in the Appendix 4.A. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	DEP. VAR = DIV		
	(1)	(2)	(3)
TPAL	-0.001		
	(-1.626)		
POSITIVE		-0.001	
		(-0.702)	
NEGATIVE			0.001
			(-1.012)
Firm controls	YES	YES	YES
Firm FE	YES	YES	YES
Year FE	YES	YES	YES
Adjusted R^2	0.664	0.646	0.684
Observations	33,236	24,935	11,738

Chapter 5 Conclusion

5.1 Summary of findings, contributions, and implications

5.1.1 Study one: Managerial ability and risky financial assets

This study investigates how the ability of an internal governance entity, specifically managers, influences the holding of risky financial assets by firms, using a sample based on firms that have been members of the S&P500 index at any given point between 2009 and 2019. The sample begins in 2009, as SFAS No.157 became effective, mandating corporations to disclose pertinent information used for assessing the fair value and fair value of financial assets.

While traditional theory provides limited room for managers with distinctive characteristics to have varying impacts on corporate policies (Bamber et al. 2010; Teraji 2018), we demonstrate that firms' decisions regarding risk-taking are affected not only by managers' rational efforts to balance the trade-off between risk and return to maximise firm value but also by variations in managerial ability of top management. Our findings reveal that, in general, high-ability management tends to hold a higher proportion of risky financial assets, whereas management with relatively lower ability tends to invest less in risky positions. Further, the results indicate that managerial ability has a more pronounced positive impact on risky financial assets holdings when firms face lower financial constraints, maintain transparency in information disclosure, possess higher levels of bank debt ratio, and operate in industries with more competitive peers. Moreover, we find that when a firm allocates a substantial proportion of its financial assets to risky assets, the market perceives a higher firm value if high-ability management is in charge, implying that high-ability managers are expected to efficiently manage the risky financial positions. Additionally, the positive relationship is stronger when managers are younger and in the early stages of their careers. These findings are in line with our hypothesis that high-ability managers are more inclined to hold risky financial positions as they possess the capability to undertake risks without adversely affecting firm value.

In addition to expanding the literature on the influence of managers in shaping corporate strategic decisions, this study contributes to the literature by underscoring the significance of the entire top management team rather than specific executives. Further, the study focuses on the capacity for efficiently converting firm resources into revenues, emphasising this aspect over specific personal characteristics and experiences. The notion of the managerial ability (MA score) proposed by Demerjian et al. (2012) is consistent with the idea that the primary objective of a firm is to pursue value maximisation for both the firm and its shareholders, aligning with the concept

of the dominant coalition (Cyert & March, 1963) and upper echelons theory (Hambrick & Mason, 1984) that posit strategic decisions are influenced by a group of top executives with diverse characteristics.

This study also contributes to the literature on the relatively novel measure of risk-taking and providing a more detailed composition of financial asset portfolios. We hand-collect data from annual report footnotes, focusing on nonoperating financial portfolios that encompass the traditional cash holdings measure (CHE) and long-term marketable securities—a component that has long been overlooked. Following the approach of Duchin et al. (2017), we expand the dataset to 2019 to construct the measure utilising risky financial assets, which are different from conventional risk-taking activities typically concentrated in specific firms and industries (Fang et al., 2014). Investing in risky financial assets could represent a more favourable approach to risk-taking, as manager might lean towards short-term projects with quicker payoffs, driven by concerns about their career prospects (Narayanan, 1995). Additionally, this study enriches the stream of literature on financialization (Allen et al., 2019; Cao et al., 2022; Cheng et al., 2023; Krippner, 2005) and explores whether managerial characteristics affect the financialization of non-financial corporations.

Our findings have important implications in different aspects. First, we illustrate the importance of focusing on the whole top management team and their interactions, rather than on specific executives alone. For shareholders and creditors, we provide evidence and draw attention to the fact that significant proportions of financial assets in nonfinancial firms are allocated to seemingly safe corporate cash holdings reported on annual reports, which may conceal their risky nature due to their easy access, invisibility, and potential for instant returns compared to traditional risky investments. Financial assets previously considered low-risk may carry more risk than initially thought. Investors might therefore need more detailed and transparent disclosures regarding the nature and risk level of financial assets classified as “cash holdings” to better diversify their own portfolios and adjust investment strategies accordingly. For creditors, credit agreements often include covenants related to liquidity and asset quality. Increased disclosure standards and monitoring of corporate financial investments might be necessary to reassess related covenants and terms. For policymakers and regulators, we further shed light on the shadow asset management activities within nonfinancial firms, where substantial financial assets are managed with limited regulation and disclosure requirements. There could be broader implications for financial stability when a significant number of firms hold risky assets under the guise of cash holdings. Policymakers and regulatory bodies could consider issuing guidelines on best practices for managing and disclosing corporate cash holdings, requiring firms to provide detailed breakdowns of the risk levels associated with these opaque assets.

5.1.2 Study two: The unintended consequences of disloyal managers on earnings management

Study two explores the influence of quasi-exogenous shocks in corporate governance, specifically focusing on the waivers related to corporate opportunities, on corporate financial reporting, particularly in the context of earnings management. Exploiting the staggered adoption of COW across different U.S. states, we find that firms incorporated in states that eventually adopted the waivers have witnessed a significant decrease in earnings management in the form of discretionary accruals. Additionally, the results suggest that the waivers influence earnings management to a greater extent when managers bear higher ex ante levels of career concern and greater pressure to improve short-term profits. Further, we address the concern that firms might shift to real earnings management when reducing accrual-based earnings management (Badertscher, 2011; Cohen et al., 2008), however, we are unable to find evidence indicating that firms shift to real transactions management. Moreover, we are unable to find evidence supporting the argument that the potential improvement in corporate governance curtails earnings manipulation.

Firstly, we contribute to the current body of literature on the relationship between corporate governance structures and information environments, which remains an open empirical question with conflicting findings (Ajinkya et al. 2005; Armstrong et al. 2012). Further, the findings contribute to the broader literature on corporate governance (Aguilera et al., 2015; Hilt, 2014) and the impact of legal environment, as an external corporate governance mechanism, on firms' behaviour. The legal system can affect the governance framework, for instance, by allowing the waiver of the core part of the corporate law that underpins the corporate governance and also affecting internal governance entities such as pressures imposed on manager. Moreover, our research contributes to the literature examining the tangible consequences of corporate law reforms, specifically the limited but emerging literature exploring corporate opportunity waivers.

The findings of this study have significant policy and practical implications regarding Corporate Opportunity Waivers (COWs) and the impact on earnings management. Our results suggest that it may not necessarily be detrimental for firms to adopt the waivers. While the potential advantages may coexist with the prevalent issue of agency costs, it does not inherently imply that managers are empowered to act unscrupulously. Instead, our findings indicate that the relaxation of the duty of loyalty might foster more precise and transparent financial reporting practices. This counters the traditional concerns that COWs might encourage opportunistic behaviour by managers.

For industry practitioners and firms, this study provides some justification for the enactment of COW. In addition to the U.S., Alberta, a province in Canada, has also introduced such waivers.

Firms might need to reassess more potential and unintended consequences of adopting COW to determine whether the adoption could be beneficial to their own firms. Similarly, industry practitioners might reconsider whether the waivers are likely to improve deal-making speed and revitalise the broader industry. The study also underscores the importance of considering the career concerns and pressures placed on managers to chase short-term profits when making decisions related to managing firms and evaluating financial reporting.

From the perspective of regulators, as issues related to corporate opportunities continue to be litigated and have been addressed in several cases in recent years, and the insights and academic findings regarding the waiver provisions continue to develop, our evidence provides additional evidence that they need to be aware that this topic is expected to be an important issue in the realm of corporate law. Regulators may need to require firms to disclose detailed information about their use of COWs, including how these waivers are expected to benefit their home firms and shareholders. Such disclosures could enhance transparency and enable stakeholders to make more informed decisions. Policymakers should also periodically review the impact of Corporate Opportunity Waivers on corporate governance and other firm outcomes, such as financial reporting practices. This review could involve assessing whether COWs have led to unintended consequences—positive or negative—and adjust regulations accordingly.

5.1.3 Study three: Auditor litigation risk and clients' dividend policy

Study three examines how changes in auditor liability to third parties influence client firms' dividend payout policy. In our analyses, we employ an external governance mechanism, namely auditors, focusing specifically on an exogenous shock to auditors' liability. Leveraging the state-level staggered shocks to TPAL based on the sample between 1965 and 1998, our findings present symmetrical results that an increase in auditors' liability leads to reduced cash dividends, while a decrease is linked to increased payouts. We are unable to find significant impact on repurchases or total payouts. Further, we find that the negative relation between auditors' liability and dividend payouts is more pronounced for firms with weaker corporate governance and more severe free cash flow problems. The findings are in line with the substitute view of the agency-based models of payout policy.

We first contribute to the ongoing discussion on the dynamics between governance mechanisms and corporate payout policy. Existing literature presents contradictory evidence regarding outcome and substitute views (Farre-Mensa et al., 2014; La Porta et al., 2000; Lambrecht and Myers, 2012; Hail et al., 2014). Our findings add to the literature on how external corporate governance could affect the corporate payouts and are in line with the substitute view that the necessity for using dividend could be substituted when sufficient governance mechanisms are in

place. Moreover, we contribute to the growing literature on the real consequences of changes in law and regulations. Specifically, we focus on the auditor side and answer the call from recent studies (Al-Hadi et al., 2022; Chy et al., 2021; DeFond & Zhang, 2014) to explore how the regulatory environment is likely to play an important role in shaping auditors' behaviour and then extends its influence beyond auditor efforts and quality to shape firms' strategic decisions.

Our study has implications in different aspects regarding the role of auditor liability in corporate financial strategies by demonstrating that increased liability could lead to decreases in dividend payouts. For firms that in response to changes in external legal environment and other governance mechanisms, they might need to consider costs of all monitoring mechanisms and strategically adjust their policies such as dividend payouts to strike a balance between costs and benefits. Investors also need more information disclosure to better understand the flow of increased/decreased dividends. Firms could improve transparency in their financial reporting and dividend policies to show shareholders how TPAL regimes impact financial decisions and resources reallocation.

For regulatory bodies, regulators have grappled with the question of auditor legal liability for decades. There is still no consensus on whether auditor liability is beneficial or detrimental to financial markets and investors. Understanding firm behaviour in response to TPAL changes can provide policymakers with more information on adjusting regulations to balance corporate governance, financial flexibility and shareholder value. Policymakers should periodically review the effects of TPAL regimes on further corporate outcomes, which can inform future regulatory adjustments. Our study provides them with some evidence on the impact extending beyond the auditors which they may need to take into consideration when evaluating liability frameworks, potentially leading to future adjustments regarding auditor liability and burden, and protection over third party interests.

5.2 Limitations and suggestions for future research

For study one, the first limitation lies in the limited dataset. We only hand-collet data on S&P 500 index firms, which are relatively large and well-run firms compared to other U.S. listed firms, posing a caveat regarding the generalisation of our findings. The second limitation arises from the limited disclosure and data, we are unable to directly assess the performance of firms' risky financial asset holdings. The third limitation stems from the identification strategy (Wintoki et al., 2012). The observed positive relation between managerial ability and percentage of risky financial assets could be biased due to the endogenous matching between firm and management team. For instance, there could some unobserved characteristics affecting both the selection of management members and CEOs, and the decision to hold risky financial position. Although we have conducted propensity score matching, the results would be more robust with additional identification strategies such as instrumental variable approach.

Future research could focus more on the composition of these financial assets, such as corporate bonds, mortgage-backed securities and international securities, included in both the traditional measure of cash holdings, namely CHE, and the long-term marketable securities that have long been neglected. In addition, researchers could employ other identification strategies to address the endogeneity issues such as instrumental variable approach and exploit an exogenous shock to investigate the determinants of firms' risky financial asset holdings. Further, future research can contribute more to the stream of literature on financialization, given its acknowledged importance in substantial existing literature, and ongoing discussions on its motivations and impacts (Cao et al., 2022; Krippner, 2005; Tori & Onaran, 2018). By leveraging this comprehensive measure of financial assets, which includes information on detailed asset classes, studies can explore whether the financialization is geared towards reducing operational uncertainty, shifting risk, evading strict regulations, or whether this growing phenomenon has an impact on physical investment and long-term economic growth, potentially transforming the economy from substantial to fictitious.

For study two, the first limitation is that we treat all firms incorporated in states that have eventually introduced the waivers as the treatment firms, regardless of their actual practices. Moreover, among firms that have adopted the waivers, they might incorporate additional regulations in charters. For instance, In the case of Alarm.com, the company explicitly states that the waivers shall not apply to officers or employees of the corporation or its subsidiaries. There exists practical difficulty of data collection if more detailed and accurate analysis is needed, as COW can be scattered across myriad corporate documents including charters, bylaws, contracts (Rauterberg & Talley, 2017).

Another limitation arises from the information on states of incorporation from Compustat, as it only provides the information on the most recent state of incorporation. Studies usually compare the performance of firms incorporated in different states to examine the effects of corporate law. Thus, it is necessary to gain the knowledge of where firms were incorporated at the moment of the adoption of the law. Although we drop firms that have changed the state of incorporation during the sample period to alleviate this concern, the key findings would be reinforced if historical state of incorporation is applied to our study to examine the impact of the waivers.

Future research could further the hand-coded process and machine-learning classifier noted by Rauterberg and Talley (2017) to identify firms that actually adopted COW and the specific parties included in their provisions, and then to investigate the impact of the waivers on firm outcomes at a more nuanced and detailed level. Additionally, since our study shows that the relaxation of the duty of loyalty can alleviate career concerns and pressures imposed on them to meet short-term targets, future research could conduct interviews and surveys, akin to Graham et al. (2005), to better understand their motivations, potentially unearthing new explanations for firm outcomes and shedding light on phenomena that have not received extensive attention in the literature. Further, future research can explore the interaction of the adoption of COW with other corporate governance mechanisms or the impact on other aspects of firm outcomes to contribute to the corporate opportunity waivers which continues to be an important issue in the corporate law.

For study three, the first limitation lies in the choice of state law. When deciding on the state law that applies in negligence claims, Anantharaman et al. (2016) designate the relevant law as that of the state of client incorporation, state of client headquarters, state of audit engagement office, or state of audit firm. However, due to the limited access to the latter two, we only focus on the headquarter and incorporation states of client firms. The second limitation arises from the sample period which is from 1965 to 1998. Although we follow Chy et al. (2021) and Al-Hadi et al. (2022) to use the TPAL index and for an extended and more recent period, the indices themselves were constructed for the 1993–2004 period. Thus, it might still be a concern that the legal precedents established by cases related to auditor liability after the sample period and original index period may be more influential in redefining scope of auditors' liability to third parties.

For future research, studies can address the limitations and analyse the precedent-setting cases relating to auditor liability in more recent period to explore whether there are more state-level variations in TPAL. Further, our study mainly focuses on the relation between governance and dividend payouts. Future studies could explore interactions among financing, investment, and payout policies (Almeida et al., 2016; Brav et al., 2005; Farre-Mensa et al., 2014), and then provide more profound implications regarding the auditor liability to third parties. Moreover, further

research is needed to explore the dynamics of increased or decreased dividend payments. It would be valuable to assess whether reduced dividends negatively impact shareholder value. Additionally, it is important to investigate whether firms reduce dividend payouts primarily to mitigate potential audit risks and manage associated costs, or to optimise their overall financial strategies.

Appendix 2.A Variable definitions

Variable	Definitions
Percent of risky	The ratio of risky financial assets to total financial assets. The data are from footnote of annual reports available on SEC database and firms' official websites. Total nonoperation financial portfolios consist of cash and cash equivalents, short-term investments (short-term marketable securities) and financial assets included in long-term investments (long-term marketable securities). We follow Duchin et al. (2017) to classify assets as either safe or risky, which follows the Federal Reserve's classification of securities as money-like and nonmoney-like. Securities that the Federal Reserve considers to be money-like are safe assets, while the remaining non-money-like assets are risky.
MA score	Managerial ability scores are proposed and updated by Demerjian et al. (2012).
Size	Firm size, the natural logarithm of total assets (AT).
Market to book	Market-to-book value. Total assets (AT) plus the market value of common equity (CSHO*PRCC_F) minus book value of common equity (CEQ), divided by total assets (AT).
Cashflow/assets	Cash flow to assets.
NWC/assets	Net working capital to assets.
Capital exp/assets	Capital expenditure to assets.
Leverage	Long-term debts plus debt in current liabilities, divided by total assets.
IndustryCF/assets	Industry cashflow risk to assets.
Dividend dummy	An indicator variable equals to one if the firm pays dividend.
R&D/sales	Research and development expenses, divided by sales.
Acquisition/assets	Acquisition expenditures, divided by total assets.
Tobin's Q	$\frac{\mathrm{AT} + (\mathrm{CSHO} * \mathrm{PRCC\_F}) - \mathrm{CEQ}}{AT}$
ROA	Earnings before extraordinary items divided by total assets (IB/AT)
CEO age	CEO age.
CEO tenure	Year minus the year that the individual became the CEO.
CEO chair	An indicator variable equals to one if CEO is also the Chairman.
Z-Score	Following Kim et al. (2017), Altman Z-Score =(1.2*(ACT-LCT) +1.4*RE+3.3*EBIT+0.999*SALE)/AT
KZ index	Following Lamont et al. (2001), KZ index=–1.001909*[(IB + DP)/l.PPENT] + 0.2826389*[(AT + PRCC_F × CSHO - CEQ - TXDB)/AT] + 3.139193*[(DLTT + DLC)/(DLTT + DLC + SEQ)] – 39.3678*[(DVC + DVP)/l.PPENT] – 1.314759*(CHE/l.PPENT)
SA index	Following Hadlock and Pierce (2010), SA index=–0.737*Size + $0.043*Size^2$ – 0.040*Age
Idio_volatility	The standard deviation of residuals from a regression of the firm's daily excess stock returns on the market factor (i.e. the value-weighted market.
Bank Debt Ratio	Bank Debt/Total Debt
Peers	Total number of peer firms for a particular firm operating in an industry, based on Fama-French 48 industry classification.

Appendix 2.B Alternative measure for baseline

	Dependent variable: risky financial assets/total assets			
	(1)	(2)	(3)	(4)
MA score	0.171***	0.027*	0.095***	0.028**
	(7.116)	(1.909)	(4.096)	(1.980)
Firm controls	NO	NO	YES	YES
	NO	NO	YES	YES
Firm FE	NO	YES	NO	YES
Year FE	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES
Industry-Year FE	YES	YES	YES	YES
Adj R^2	0.129	0.813	0.265	0.802
Observations	4,160	4,160	4,160	4,160

Appendix 2.C Alternative measure for cross-sectional

	KZ index	
	Less constrained	Constrained
	(1)	(2)
MA score	0.279***	0.143
	(4.003)	(1.485)
Firm Controls	YES	YES
Year FE	YES	YES
Industry FE	YES	YES
Industry-Year FE	YES	YES
Adj R^2	0.241	0.159
Observations	2,190	1,336
	SA index	
	Less constrained	Constrained
	(3)	(4)
MA score	0.260***	-0.173
	(5.075)	(-0.914)
Firm Controls	YES	YES
Year FE	YES	YES
Industry FE	YES	YES
Industry-Year FE	YES	YES
Adj R^2	0.216	-0.171
Observations	4,023	51
	Financial assets/Total assets	
	Low	High
	(3)	(4)
MA score	0.068	0.198***
	(1.417)	(2.947)
Firm Controls	YES	YES
Year FE	YES	YES
Industry FE	YES	YES
Industry-Year FE	YES	YES
Adj R^2	0.098	0.237
Observations	2,033	1,802
	Illiquidity	
	Low	High
	(5)	(6)
MA score	0.259***	0.288
	(4.885)	(1.206)
Firm Controls	YES	YES
Year FE	YES	YES
Industry FE	YES	YES
Industry-Year FE	YES	YES
Adj R^2	0.216	0.445
Observations	3,802	57

Appendix 3.A Variable definitions

Variable	Definitions
ACCR_K	Performance-matched discretionary accruals. Discretionary accruals from the modified Jones model, minus the median discretionary accruals from the modified Jones model for firms in the same ROA decile, which is determined by sorting firms in each industry-year combination according to their prior year's ROA. Discretionary accruals from modified Jones model are calculated as: $\frac{TA_{i,t}}{Assets_{i,t-1}} = a_0 + a_1\frac{1}{Assets_{i,t-1}} + a_2\frac{\Delta REV_{i,t}}{Assets_{i,t-1}} + a_3\frac{PPE_{i,t}}{Assets_{i,t-1}} + \varepsilon_{i,t}$ $NA_{i,t} = \hat{a}_0 + \hat{a}_1\frac{1}{Assets_{i,t-1}} + \hat{a}_2\frac{\Delta REV_{i,t} - \Delta AR_{i,t}}{Assets_{i,t-1}} + \hat{a}_3\frac{PPE_{i,t}}{Assets_{i,t-1}} + \varepsilon_{i,t}$ $DAC_{i,t} = \frac{TA_{i,t}}{Assets_{i,t-1}} - NA_{i,t}$ where TA denotes total accruals, computed as the difference between net income (NI) and cash flow from operations; ΔREV is the difference in sales revenues (SALE); and PPE is gross property, plant, and equipment (PPEGT).
COW	Corporate Opportunity Waivers. An indicator variable equals to one if a firm's state of incorporation has adopted Corporate Opportunity Waivers (COW), and zero otherwise.
SIZE	Firm size, the natural logarithm of total assets (AT).
LEV	Long term debt (DLTT) divided by the market value of common equity (CSHO*PRCC_F).
ROA	Earnings before extraordinary items (cash flow) divided by total assets (IBC/AT)
MTB	Market-to-book value. Total assets (AT) plus the market value of common equity (CSHO*PRCC_F) minus book value of common equity (CEQ), divided by total assets (AT).
FIRM AGE	Firm age, the current year minus the first year appears in Compustat + 1
CASHFLOW	Net income (NI) plus depreciation and amortization (DP) plus deferred income taxes (TXDI) plus deferred charges (dc), divided by total assets (AT).
BIG5	An indicator variable equals to 1 if the firm is audited by one of the Big-5 auditors.
UD	An indicator variable equals to one if a firm's state of incorporation has adopted Universal Demand (UD) laws, and zero otherwise.
BC	An indicator variable equals to one if a firm's state of incorporation has adopted Business Combination (BC) laws, and zero otherwise.
PP	An indicator variable equals to one if a firm's state of incorporation has adopted Poison Pill (PP) laws, and zero otherwise.
DD	An indicator variable equals to one if a firm's state of incorporation has adopted Directors' Duties (DD) laws, and zero otherwise.
IDD	An indicator variable equals to one if a firm's state of headquarter has adopted the Inevitable Disclosure Doctrine (IDD) in a given year, and zero otherwise.
RIDD	An indicator variable equals to one if a firm's state of headquarter has rejected the Inevitable Disclosure Doctrine (RIDD) in a given year, and zero otherwise.
CEO AGE	An indicator variable equals to one if the CEO age is above the median, and zero otherwise.
CEO TENURE	An indicator variable equals to one if the CEO tenure is above the median, and zero otherwise.
MBEAT	An indicator variable equals to one if the earnings exactly meet or beat the most recent consensus analysts' earnings forecast by one cent per share or less, and zero otherwise.
LONG-TERM INVESTOR	An indicator variable equals to one if the investor horizon is above the median, and zero otherwise. Investor horizon is calculated as the difference between the total amount of shares held by dedicated and quasi-index investors and the number of shares held by transient investors of a firm following Bushee's (2001) classification of institutional investor base, all divided by total shares.

E-Index	An indicator variable equals to one if the entrenchment index is above the median, and zero otherwise. The entrenchment index is based on six provisions: staggered boards, limits to shareholder bylaw amendments, poison pills, golden parachutes, and supermajority requirements for mergers and charter amendments (Bebchuk et al., 2009).
BD_IND	An indicator variable equals to one if the percentage of independent directors is above the median, and zero otherwise.
Inst_Own	An indicator variable equals to one if the institutional ownership is above the median, and zero otherwise. The institutional ownership is the number of shares held by institutional investors divided by the number of shares outstanding.
N_Analyst	An indicator variable equals to one if the number of analysts following is above the median, and zero otherwise.
Total Accruals	Total accruals, accruals divided by lagged total assets (AT). Accruals are calculated as $\Delta Current\ assets\ (ACT)$ minus $\Delta Cash\ (\mathrm{CH})$ minus $\Delta Current\ Liabilities\ (LCT)$ plus $\Delta Notes\ payable\ (NP)$ plus $\Delta Income\ taxes\ payable\ (TXP)$ minus depreciation and amortization (DP). $\frac{(\mathrm{D.ACT} - \mathrm{D.CH}) - (\mathrm{D.LCT} - \mathrm{D.NP} - \mathrm{D.TXP}) - DP}{L.AT}$
Current accruals	$\Delta Current\ assets\ (ACT)$ minus $\Delta Cash\ (\mathrm{CH})$ minus $\Delta Current\ Liabilities\ (LCT)$ plus $\Delta Notes\ payable\ (NP)$ plus $\Delta Income\ taxes\ payable\ (TXP)$, divided by lagged total assets (AT). $\frac{(\mathrm{D.ACT} - \mathrm{D.CH}) - (\mathrm{D.LCT} - \mathrm{D.NP} - \mathrm{D.TXP})}{L.AT}$
Accr_J	Discretionary accruals estimated using the Jones (1991) model. $TA_t = c_0 + c_1 \frac{1}{Assets_{t-1}} + c_2 \frac{Sales_t - Sales_{t-1}}{Assets_{t-1}} + c_3 \frac{PPE}{Assets_{t-1}} + \varepsilon_t$
Accr_MJ	Discretionary accruals estimated using the modified Jones model that has adjusted for the change in receivables.
ACCR_F	Accruals quality. The standard deviation of the firm-level residuals from the Dechow and Dichev (2002) model augmented with the fundamental variables from the Jones (1991) model, modified by McNichols (2002). The model is a regression of working capital accruals on one-year lagged, current, and one-year-ahead cash flows from operation, plus the change in revenue and property, plant, and equipment (PPE). The model is estimated cross-sectionally for each industry-year with at least 20 observations in a given year based on the Fama and French (1997) 48-industry classification. Residuals are collected from the model and the standard deviation for firm i over the years t – 5 to t – 1 are computed. The residuals from the model provide an inverse measure of accruals quality. Working capital accruals are calculated as: $working\ capital\ accruals_{i,t} = b_0 + b_1 CFO_{i,t-1} + b_2 CFO_{i,t} + b_3 CFO_{i,t+1} + b_4 \Delta REV_{i,t} + b_5 PPE_{i,t}$ where working capital accruals are measured as as $\Delta CA - \Delta CL - \Delta Cash + \Delta STDEBT$, where CA is current assets (ACT), CL is current liabilities (LCT), Cash is cash and cash equivalents (CHE), and STDEBT is debt in current liabilities (DLC); cash flows from operations are income before extraordinary Items (IB) minus total accruals, where total accruals are calculated by adjusting working capital accruals for depreciation and amortization expense (DP); ΔREV is the difference in sales revenues (SALE); and PPE is gross property, plant, and equipment (PPEGT).
RM_CFO	Residual from the cash flow from operations (CFO) model. $\frac{CFO_{i,t}}{Assets_{i,t-1}} = d_1 \frac{1}{Assets_{i,t-1}} + d_2 \frac{SALES_{i,t}}{Assets_{i,t-1}} + d_3 \frac{\Delta SALES_{i,t}}{Assets_{i,t-1}} + \varepsilon_{i,t}$
RM _PROD	Residual from production costs (PROD) model.

	$\frac{PROD_{i,t}}{Assets_{i,t-1}} = e_1 \frac{1}{Assets_{i,t-1}} + e_2 \frac{SALES_{i,t}}{Assets_{i,t-1}} + e_3 \frac{\Delta SALES_{i,t}}{Assets_{i,t-1}} + e_4 \frac{\Delta SALES_{i,t-1}}{Assets_{i,t-1}} + \varepsilon_{i,t}$
RM _SGA	Residual from discretionary expenses (SGA) model. $\frac{DISX_{i,t}}{Assets_{i,t-1}} = f_1 \frac{1}{Assets_{i,t-1}} + f_2 \frac{SALES_{i,t}}{Assets_{i,t-1}} + f_3 \frac{\Delta SALES_{i,t}}{Assets_{i,t-1}} + \varepsilon_{i,t}$
RM1	Real earnings management. Multiply abnormal discretionary expenses by negative one and add it to abnormal production costs. $-RM\_SGA + RM\_PROD$
RM2	Real earnings management. Multiply abnormal cash flows from operations and abnormal discretionary expenses by negative one and then aggregate them into one measure. $-RM\_CFO - RM\_SGA$
RM3	Real earnings management. Multiply abnormal cash flows from operations and abnormal discretionary expenses by negative one and plus abnormal production costs. $-RM\_CFO - RM\_SGA + RM\_PROD$

Appendix 3.B Alternative dynamic test

	DEP. VAR = ACCR_K	
	(1)	(2)
COW^{-2}	-0.003	0.007
	(-0.583)	(1.237)
COW^{-1}	0.004	0.003
	(0.439)	(0.297)
COW^{0}	-0.001	-0.001
	(-0.245)	(-0.119)
COW^{+1}	-0.023***	-0.027***
	(-2.981)	(-3.111)
COW^{2+}	-0.016***	-0.020***
	(-3.402)	(-4.265)
Firm controls	NO	YES
Firm FE	YES	YES
Year FE	YES	YES
Adjusted R^2	0.033	0.070
Observations	111,048	84,011

Appendix 4.A Variable definitions

Variable	Definitions
DIV	Cash dividend, the ratio of cash dividend (DVC) to the market value of common equity (PRCC_F × CSHO).
REPURCHASE	Repurchase volume, the ratio of the dollar amount of stock repurchases in a fiscal year (PRSTKC-ΔPSTKRV) to the market value of common equity (PRCC_F × CSHO).
PAYOUT	Total dividend payout, the ratio of the sum of (DVC+PRSTKC-ΔPSTKRV) to the market value of common equity (PRCC_F × CSHO).
TPAL	An indicator variable that moves from zero to one when states expand auditor liability to third parties; it moves from one to zero when states reduce auditor liability to third parties. It remains zero for the states that do not change auditors' liability during the sample period. This variable combines both positive and negative shocks.
POSITIVE	An indicator variable that equals one when states expand auditors' liability, zero otherwise.
NEGATIVE	An indicator variable that equals one when states reduce auditors' liability, zero otherwise.
SIZE	Firm size, the natural logarithm of total assets (AT).
LEV	Long term debt (DLTT) plus debt in Current liabilities (DLC) divided by the total assets (AT).
MTB	Market-to-book value. Market value of common equity (CSHO*PRCC_F) scaled by book value of assets.
ROA	Return on assets.
INST	Percentage of institutional ownership.
CASHFLOW	Cash flow scaled by total assets.
INTANG	Intangible assets scaled by total assets.
BIG5	an indicator variable that equals one if the firm is audited by Big-5 auditors
FIRM AGE	Firm age, the current year minus the first year appears in Compustat
UD	An indicator variable equals to one if a firm’s state of incorporation has adopted Universal Demand (UD) laws, and zero otherwise.
BC	An indicator variable equals to one if a firm’s state of incorporation has adopted Business Combination (BC) laws, and zero otherwise.
PP	An indicator variable equals to one if a firm’s state of incorporation has adopted Poison Pill (PP) laws, and zero otherwise.
DD	An indicator variable equals to one if a firm’s state of incorporation has adopted Directors' Duties (DD) laws, and zero otherwise.
IDD	An indicator variable equals to one if a firm's state of headquarter has adopted the Inevitable Disclosure Doctrine (IDD) in a given year, and zero otherwise.
E-Index	The entrenchment index. It is based on six provisions: staggered boards, limits to shareholder bylaw amendments, poison pills, golden parachutes, and supermajority requirements for mergers and charter amendments (Bebchuk et al., 2009).
Inst_Own	Institutional ownership concentration using Institutional HHI.

Appendix 4.B Confounding law-positive shocks

	DEP. VAR = DIV				
	(1)	(2)	(3)	(4)	(5)
	UD	BC	PP	DD	IDD
POSITIVE	-0.002***	-0.002***	-0.002***	-0.002***	-0.002**
	(-2.745)	(-2.790)	(-2.795)	(-2.761)	(-2.504)
UD	-0.001	-0.001	-0.001	-0.001	-0.001
	(-0.959)	(-0.940)	(-0.841)	(-0.926)	(-0.934)
BC		-0.001	-0.001	-0.001	-0.001
		(-1.030)	(-1.115)	(-1.328)	(-1.408)
PP			-0.000	-0.001	-0.001
			(-0.591)	(-1.270)	(-1.159)
DD				0.001	0.001
				(1.209)	(0.856)
IDD					0.003***
					(2.977)
Firm controls	YES	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES
Adjusted R^2	0.646	0.646	0.646	0.646	0.647
Observations	25,163	25,163	25,163	25,163	25,163

Appendix 4.C Confounding law-negative shocks

	DEP. VAR = DIV				
	(1)	(2)	(3)	(4)	(5)
	UD	BC	PP	DD	IDD
NEGATIVE	0.002**	0.002**	0.002**	0.002**	0.002**
	(2.364)	(2.342)	(2.321)	(2.291)	(2.386)
UD	-0.005**	-0.005**	-0.004***	-0.004***	-0.004***
	(-2.492)	(-2.512)	(-2.645)	(-2.652)	(-2.661)
BC		-0.001	-0.001	-0.004	-0.004
		(-0.578)	(-0.573)	(-1.193)	(-1.183)
PP			-0.002	-0.002	-0.002
			(-0.638)	(-0.648)	(-0.635)
DD				0.005	0.005
				(1.266)	(1.265)
IDD					0.001
					(0.607)
Firm controls	YES	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES
Adjusted R^2	0.685	0.685	0.685	0.685	0.685
Observations	11,738	11,738	11,738	11,738	11,738

List of References

Abadie, A. (2005). Semiparametric Difference-in-Differences Estimators. *The Review of Economic Studies*, *72*(1), 1–19. https://doi.org/10.1111/0034-6527.00321

Acemoglu, D., & Zilibotti, F. (1997). Was Prometheus Unbound by Chance? Risk, Diversification, and Growth. *Journal of Political Economy*, *105*(4), 709–751. https://doi.org/10.1086/262091

Acharya, V. V., Myers, S. C., & Rajan, R. G. (2011). The Internal Governance of Firms. *The Journal of Finance*, *66*(3), 689–720. https://doi.org/10.1111/j.1540-6261.2011.01649.x

Adams, R. B., & Funk, P. (2012). Beyond the Glass Ceiling: Does Gender Matter? *Management Science*, *58*(2), 219–235. https://doi.org/10.1287/mnsc.1110.1452

Aguilera, R. V., Desender, K., Bednar, M. K., & Lee, J. H. (2015). Connecting the Dots: Bringing External Corporate Governance into the Corporate Governance Puzzle. *Academy of Management Annals*, *9*(1), 483–573. https://doi.org/10.5465/19416520.2015.1024503

Aguilera, R. V., Filatotchev, I., Gospel, H., & Jackson, G. (2008). An Organizational Approach to Comparative Corporate Governance: Costs, Contingencies, and Complementarities. *Organization Science*, *19*(3), 475–492. https://doi.org/10.1287/orsc.1070.0322

Aivazian, V. A., Ge, Y., & Qiu, J. (2005). The impact of leverage on firm investment: Canadian evidence. *Journal of Corporate Finance*, *11*(1), 277–291. https://doi.org/10.1016/S0929-1199(03)00062-2

Ajinkya, B., Bhojraj, S., & Sengupta, P. (2005). The Association between Outside Directors, Institutional Investors and the Properties of Management Earnings Forecasts. *Journal of Accounting Research*, *43*(3), 343–376. https://doi.org/10.1111/j.1475-679x.2005.00174.x

Al-Hadi, A., & Habib, A. (2023). Consequences of state-level regulations in accounting, finance, and corporate governance: A review. *Advances in Accounting*, *60*, 100630. https://doi.org/10.1016/j.adiac.2022.100630

Al-Hadi, A., Taylor, G., Monzur Hasan, M., & Eulaiwi, B. (2023). Third-party auditor liability and financial restatements. *The British Accounting Review*, 101084. https://doi.org/10.1016/j.bar.2022.101084

Ali, A., & Zhang, W. (2015). CEO tenure and earnings management. *Journal of Accounting and Economics*, *59*(1), Article 1. https://doi.org/10.1016/j.jacceco.2014.11.004

Allen, F., Bernardo, A. E., & Welch, I. (2000). A Theory of Dividends Based on Tax Clienteles. *The Journal of Finance*, *55*(6), 2499–2536. https://doi.org/10.1111/0022-1082.00298

Allen, F., & Michaely, R. (2003). Chapter 7—Payout Policy. In G. M. Constantinides, M. Harris, & R. M. Stulz (Eds.), *Handbook of the Economics of Finance* (Vol. 1, pp. 337–429). Elsevier. https://doi.org/10.1016/S1574-0102(03)01011-2

Allen, F., Qian, Y., Tu, G., & Yu, F. (2019). Entrusted loans: A close look at China's shadow banking system. *Journal of Financial Economics*, *133*(1), 18–41. https://doi.org/10.1016/j.jfineco.2019.01.006

Almeida, H., Fos, V., & Kronlund, M. (2016). The real effects of share repurchases. *Journal of Financial Economics*, *119*(1), 168–185. https://doi.org/10.1016/j.jfineco.2015.08.008

Altman, E. I. (1968). Financial Ratios, Discriminant Analysis and the Prediction of Corporate Bankruptcy. *The Journal of Finance*, *23*(4), 589–609. https://doi.org/10.2307/2978933

An, H., & Zhang, T. (2013). Stock price synchronicity, crash risk, and institutional investors. *Journal of Corporate Finance*, *21*, 1–15. https://doi.org/10.1016/j.jcorpfin.2013.01.001

Anantharaman, D., Pittman, J. A., & Wans, N. (2016). State liability regimes within the United States and auditor reporting. *The Accounting Review*, *91*(6), 1545–1575.

Anderson, R., & Kavajecz, K. A. (1994). A historical perspective on the Federal Reserve's monetary aggregates: Definition, construction and targeting. *Federal Reserve Bank of St. Louis Proceedings*, *Mar*, 1–31.

Andreou, P. C., Philip, D., & Robejsek, P. (2016). Bank Liquidity Creation and Risk-Taking: Does Managerial Ability Matter? *Journal of Business Finance & Accounting*, *43*(1–2), 226–259. https://doi.org/10.1111/jbfa.12169

Appel, I. (2019). Governance by litigation. *Available at SSRN 2532278*.

Arena, M. P., Haggard, K. S., & Yan, X. (2008). Price momentum and idiosyncratic volatility. *Financial Review*, *43*(2), 159–190.

Armstrong, C. S., Balakrishnan, K., & Cohen, D. (2012). Corporate governance and the information environment: Evidence from state antitakeover laws. *Journal of Accounting and Economics*, *53*(1), 185–204. https://doi.org/10.1016/j.jacceco.2011.06.005

Armstrong, C. S., Guay, W. R., & Weber, J. P. (2010). The role of information and financial reporting in corporate governance and debt contracting. *Journal of Accounting and Economics*, *50*(2), 179–234. https://doi.org/10.1016/j.jacceco.2010.10.001

Ascioglu, A., Hegde, S. P., Krishnan, G. V., & McDermott, J. B. (2012). Earnings management and market liquidity. *Review of Quantitative Finance and Accounting*, *38*(2), 257–274. https://doi.org/10.1007/s11156-010-0225-9

Badertscher, B. A. (2011a). Overvaluation and the choice of alternative earnings management mechanisms. *The Accounting Review*, *86*(5), 1491–1518.

Badertscher, B. A. (2011b). Overvaluation and the choice of alternative earnings management mechanisms. *The Accounting Review*, *86*(5), 1491–1518.

Baginski, S. P., Campbell, J. L., Hinson, L. A., & Koo, D. S. (2018). Do Career Concerns Affect the Delay of Bad News Disclosure? *The Accounting Review*, *93*(2), 61–95. https://doi.org/10.2308/accr-51848

Baik, B., Farber, D. B., & Lee, S. (sunghan). (2011). CEO Ability and Management Earnings Forecasts*. *Contemporary Accounting Research*, *28*(5), 1645–1668. https://doi.org/10.1111/j.1911-3846.2011.01091.x

Baker, A. C., Larcker, D. F., & Wang, C. C. Y. (2022). How much should we trust staggered difference-in-differences estimates? *Journal of Financial Economics*, *144*(2), 370–395. https://doi.org/10.1016/j.jfineco.2022.01.004

Baker, H. K., Powell, G. E., & Veit, E. T. (2002). Revisiting managerial perspectives on dividend policy. *Journal of Economics and Finance*, *26*(3), 267–283. https://doi.org/10.1007/BF02759711

Bamber, L. S., Jiang, J. (Xuefeng), & Wang, I. Y. (2010). What's My Style? The Influence of Top Managers on Voluntary Corporate Financial Disclosure. *The Accounting Review*, *85*(4), 1131–1162. https://doi.org/10.2308/accr.2010.85.4.1131

Barth, M. E., & Kasznik, R. (1999). Share repurchases and intangible assets. *Journal of Accounting and Economics*, *28*(2), 211–241. https://doi.org/10.1016/S0165-4101(99)00020-8

Basu, S., & Liang, Y. (2019). Director–liability–reduction laws and conditional conservatism. *Journal of Accounting Research*, *57*(4), 889–917.

Bates, T. W., Kahle, K. M., & Stulz, R. M. (2009). Why Do U.S. Firms Hold So Much More Cash than They Used To? *The Journal of Finance*, *64*(5), 1985–2021. https://doi.org/10.1111/j.1540-6261.2009.01492.x

Bebchuk, L. A., & Hamdani, A. (2002). Optimal Defaults for Corporate Law Evolution. *Northwestern University Law Review*, *96*, 489.

Bebchuk, L., Cohen, A., & Ferrell, A. (2009). What Matters in Corporate Governance? *The Review of Financial Studies*, *22*(2), 783–827. https://doi.org/10.1093/rfs/hhn099

Becher, D. A., Campbell II, T. L., & Frye, M. B. (2005). Incentive Compensation for Bank Directors: The Impact of Deregulation. *The Journal of Business*, *78*(5), 1753–1778. https://doi.org/10.1086/431441

Becht, M., Bolton, P., & Röell, A. (2003). Chapter 1—Corporate Governance and Control. In G. M. Constantinides, M. Harris, & R. M. Stulz (Eds.), *Handbook of the Economics of Finance* (Vol. 1, pp. 1–109). Elsevier. https://doi.org/10.1016/S1574-0102(03)01005-7

Bénabou, R., & Tirole, J. (2010). Individual and Corporate Social Responsibility. *Economica*, *77*(305), 1–19. https://doi.org/10.1111/j.1468-0335.2009.00843.x

Bennedsen, M., Pérez-González, F., & Wolfenzon, D. (n.d.). *Evaluating the Impact of The Boss: Evidence from CEO Hospitalization Events*.

Berger, P. G., Ofek, E., & Yermack, D. L. (1997). Managerial Entrenchment and Capital Structure Decisions. *The Journal of Finance*, *52*(4), 1411–1438. https://doi.org/10.1111/j.1540-6261.1997.tb01115.x

Berry, T. K., Paige Fields, L., & Wilkins, M. S. (2006). The interaction among multiple governance mechanisms in young newly public firms. *Journal of Corporate Finance*, *12*(3), 449–466. https://doi.org/10.1016/j.jcorpfin.2005.08.003

Bertrand, M., Duflo, E., & Mullainathan, S. (2004). How much should we trust differences-in-differences estimates? *The Quarterly Journal of Economics*, *119*(1), 249–275.

Bertrand, M., & Mullainathan, S. (2003a). Enjoying the Quiet Life? Corporate Governance and Managerial Preferences. *Journal of Political Economy*, *111*(5), Article 5. https://doi.org/10.1086/376950

Bertrand, M., & Mullainathan, S. (2003b). Enjoying the quiet life? Corporate governance and managerial preferences. *Journal of Political Economy*, *111*(5), 1043–1075.

Bertrand, M., & Schoar, A. (2003). Managing with Style: The Effect of Managers on Firm Policies*. *The Quarterly Journal of Economics*, *118*(4), 1169–1208. https://doi.org/10.1162/003355303322552775

Beyer, A., Cohen, D. A., Lys, T. Z., & Walther, B. R. (2010). The financial reporting environment: Review of the recent literature. *Journal of Accounting and Economics*, *50*(2), 296–343. https://doi.org/10.1016/j.jacceco.2010.10.003

Black, B., Cheffins, B., & Klausner, M. (2006). Outside Director Liability. *Stanford Law Review*, *58*(4), 1055–1160.

Bonsall, S. B., Holzman, E. R., & Miller, B. P. (2017). Managerial Ability and Credit Risk Assessment. *Management Science*, *63*(5), 1425–1449. https://doi.org/10.1287/mnsc.2015.2403

Boubaker, S., Houcine, A., Ftiti, Z., & Masri, H. (2018). Does audit quality affect firms' investment efficiency? *Journal of the Operational Research Society*, *69*(10), 1688–1699. https://doi.org/10.1080/01605682.2018.1489357

Brown, D. P. (1990). Age Clienteles Induced by Liquidity Constraints. *International Economic Review*, *31*(4), 891–912. https://doi.org/10.2307/2527021

Brown, K. E. (2015). Ex Ante Severance Agreements and Earnings Management. *Contemporary Accounting Research*, *32*(3), 897–940. https://doi.org/10.1111/1911-3846.12103

Brudney, V. (1997). Contract and Fiduciary Duty in Corporate Law. *Boston College Law Review*, *38*(4), 595–666.

Burgstahler, D., & Eames, M. (2006). Management of earnings and analysts' forecasts to achieve zero and small positive earnings surprises. *Journal of Business Finance & Accounting*, *33*(5‐6), 633–652.

Bushee, B. J. (2001). Do Institutional Investors Prefer Near-Term Earnings over Long-Run Value?*. *Contemporary Accounting Research*, *18*(2), 207–246. https://doi.org/10.1506/J4GU-BHWH-8HME-LE0X

Bushman, R., Chen, Q., Engel, E., & Smith, A. (2004). Financial accounting information, organizational complexity and corporate governance systems. *Journal of Accounting and Economics*, *37*(2), 167–201. https://doi.org/10.1016/j.jacceco.2003.09.005

Bushman, R. M., & Smith, A. J. (2001). Financial accounting information and corporate governance. *Journal of Accounting and Economics*, *32*(1), 237–333. https://doi.org/10.1016/S0165-4101(01)00027-1

Cain, M. D., & McKeon, S. B. (2016). CEO Personal Risk-Taking and Corporate Policies. *Journal of Financial and Quantitative Analysis*, *51*(1), 139–164. https://doi.org/10.1017/S0022109016000041

Caliskan, D., & Doukas, J. A. (2015). CEO risk preferences and dividend policy decisions. *Journal of Corporate Finance*, *35*, 18–42. https://doi.org/10.1016/j.jcorpfin.2015.08.007

Callaway, B., & Sant'Anna, P. H. C. (2021). Difference-in-Differences with multiple time periods. *Journal of Econometrics*, *225*(2), 200–230. https://doi.org/10.1016/j.jeconom.2020.12.001

Cao, W., Chen, C., Jiang, D., Li, W., & Zhang, Y. (2022). Industrial policy and non-financial corporations' financialization: Evidence from China. *The European Journal of Finance*, *28*(4–5), 397–415. https://doi.org/10.1080/1351847X.2021.1918204

Caprio, G., Laeven, L., & Levine, R. (2007). Governance and bank valuation. *Journal of Financial Intermediation*, *16*(4), 584–617. https://doi.org/10.1016/j.jfi.2006.10.003

Caramanis, C., & Lennox, C. (2008). Audit effort and earnings management. *Journal of Accounting and Economics*, *45*(1), 116–138. https://doi.org/10.1016/j.jacceco.2007.05.002

Carpenter, M. A., Geletkanycz, M. A., & Sanders, Wm. G. (2004). Upper Echelons Research Revisited: Antecedents, Elements, and Consequences of Top Management Team Composition. *Journal of Management*, *30*(6), 749–778. https://doi.org/10.1016/j.jm.2004.06.001

Causey, D. Y. (1976). Newly Emerging Standards of Auditor Responsibility. *The Accounting Review*, *51*(1), 19–30.

Center for Audit Quality. (2008). *Report of the Major Public Company Audit Firms to the Department of the Treasury Advisory Committee on the Auditing Profession*. CAQ Washington, DC.

Chakraborty, A., Sheikh, S., & Subramanian, N. (2007). Termination risk and managerial risk taking. *Journal of Corporate Finance*, *13*(1), 170–188. https://doi.org/10.1016/j.jcorpfin.2006.04.001

Chan, D. K., & Wong, K. P. (2002). Scope of Auditors' Liability, Audit Quality, and Capital Investment. *Review of Accounting Studies*, *7*(1), 97–122. https://doi.org/10.1023/A:1017983614986

Chemmanur, T. J., Paeglis, I., & Simonyan, K. (2009). Management Quality, Financial and Investment Policies, and Asymmetric Information. *Journal of Financial and Quantitative Analysis*, *44*(5), 1045–1079. https://doi.org/10.1017/S0022109009990299

Chen, J., Liu, X., Song, W., & Zhou, S. (2020). General managerial skills and corporate social responsibility. *Journal of Empirical Finance*, *55*, 43–59. https://doi.org/10.1016/j.jempfin.2019.10.007

Chen, Y., Podolski, E. J., & Veeraraghavan, M. (2015). Does managerial ability facilitate corporate innovative success? *Journal of Empirical Finance*, *34*, 313–326. https://doi.org/10.1016/j.jempfin.2015.08.002

Chen, Z., & Duchin, R. (2019). Do Nonfinancial Firms Use Financial Assets to Risk-Shift? Evidence from the 2014 Oil Price Crisis. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.3284205

Cheng, C., Zhang, S., & Liu, G. (2023). Family business origin and investment preference: An empirical study of imprinting theory. *The British Accounting Review*, 101273. https://doi.org/10.1016/j.bar.2023.101273

Cheng, Q., Lee, J., & Shevlin, T. (2016). Internal governance and real earnings management. *The Accounting Review*, *91*(4), 1051–1085.

Cheng, Q., & Warfield, T. D. (2005). Equity incentives and earnings management. *The Accounting Review*, *80*(2), 441–476.

Chowdhury, R., & Doukas, J. A. (2022). Protection of trade secrets and value of cash holdings: Evidence from a natural experiment. *Journal of Banking & Finance*, *143*, 106617. https://doi.org/10.1016/j.jbankfin.2022.106617

Chu, Y., & Zhao, Y. (Eddie). (2021). The dark side of shareholder litigation: Evidence from corporate takeovers. *Financial Management*, *50*(3), 845–873. https://doi.org/10.1111/fima.12342

Chung, J., Farrar, J., Puri, P., & Thorne, L. (2010). Auditor liability to third parties after Sarbanes-Oxley: An international comparison of regulatory and legal reforms. *Journal of International Accounting, Auditing and Taxation*, *19*(1), 66–78. https://doi.org/10.1016/j.intaccaudtax.2009.12.005

Chy, M., De Franco, G., & Su, B. (2021). The effect of auditor litigation risk on clients' access to bank debt: Evidence from a quasi-experiment. *Journal of Accounting and Economics*, *71*(1), 101354. https://doi.org/10.1016/j.jacceco.2020.101354

Chy, M., & Hope, O.-K. (2021). Real effects of auditor conservatism. *Review of Accounting Studies*, *26*(2), 730–771.

Coffee, J. C., Jr. (2005). A Theory of Corporate Scandals: Why the USA and Europe Differ. *Oxford Review of Economic Policy*, *21*(2), 198–211. https://doi.org/10.1093/oxrep/gri012

Cohen, D. A., Dey, A., & Lys, T. Z. (2008). Real and Accrual–Based Earnings Management in the Pre–and Post–Sarbanes–Oxley Periods. *The Accounting Review*, *83*(3), 757–787. https://doi.org/10.2308/accr.2008.83.3.757

Cohen, D. A., & Zarowin, P. (2010). Accrual-based and real earnings management activities around seasoned equity offerings. *Journal of Accounting and Economics*, *50*(1), 2–19.

Cohen, J., Krishnamoorthy, G., & Wright, A. M. (2002). Corporate Governance and the Audit Process*. *Contemporary Accounting Research*, *19*(4), 573–594. https://doi.org/10.1506/983M-EPXG-4Y0R-J9YK

Conyon, M. J., & Read, L. E. (2006). A model of the supply of executives for outside directorships. *Journal of Corporate Finance*, *12*(3), 645–659. https://doi.org/10.1016/j.jcorpfin.2005.08.004

Core, J. E., Guay, W. R., & Verrecchia, R. E. (2003). Price versus Non–Price Performance Measures in Optimal CEO Compensation Contracts. *The Accounting Review*, *78*(4), 957–981. https://doi.org/10.2308/accr.2003.78.4.957

Cornaggia, K. J., Krishnan, G. V., & Wang, C. (2017). Managerial Ability and Credit Ratings. *Contemporary Accounting Research*, *34*(4), 2094–2122. https://doi.org/10.1111/1911-3846.12334

Croson, R., & Gneezy, U. (2009). Gender Differences in Preferences. *Journal of Economic Literature*, *47*(2), 448–474. https://doi.org/10.1257/jel.47.2.448

Currie, B., & Emeritz, N. (2020, February 27). Corporate Opportunity Doctrine: Litigation Continues into 2020. *The Harvard Law School Forum on Corporate Governance*. https://corpgov.law.harvard.edu/2020/02/27/corporate-opportunity-doctrine-litigation-continues-into-2020/

Custódio, C., Ferreira, M. A., & Matos, P. (2013). Generalists versus specialists: Lifetime work experience and chief executive officer pay. *Journal of Financial Economics*, *108*(2), 471–492. https://doi.org/10.1016/j.jfineco.2013.01.001

Custódio, C., Ferreira, M. A., & Matos, P. (2019). Do General Managerial Skills Spur Innovation? *Management Science*, *65*(2), 459–476. https://doi.org/10.1287/mnsc.2017.2828

Custódio, C., & Metzger, D. (2014). Financial expert CEOs: CEO's work experience and firm's financial policies. *Journal of Financial Economics*, *114*(1), 125–154. https://doi.org/10.1016/j.jfineco.2014.06.002

Cyert, R., & March, J. (1963). *A Behavioral Theory of the Firm*. NJ: Prentice Hall.

Davidson, W. N., Jiraporn, P., Kim, Y. S., & Nemec, C. (2004). Earnings Management Following Duality-Creating Successions: Ethnostatistics, Impression Management, and Agency Theory. *Academy of Management Journal*, *47*(2), 267–275. https://doi.org/10.5465/20159577

Davidson, W. N., Xie, B., Xu, W., & Ning, Y. (2007). The influence of executive age, career horizon and incentives on pre-turnover earnings management. *Journal of Management & Governance*, *11*(1), 45–60. https://doi.org/10.1007/s10997-007-9015-8

De Cesari, A., & Ozkan, N. (2015). Executive incentives and payout policy: Empirical evidence from Europe. *Journal of Banking & Finance*, *55*, 70–91. https://doi.org/10.1016/j.jbankfin.2014.12.011

De Franco, G., Hope, O.-K., & Lu, H. (2017). Managerial ability and bank-loan pricing. *Journal of Business Finance & Accounting*, *44*(9–10), 1315–1337. https://doi.org/10.1111/jbfa.12267

DeAngelo, H., DeAngelo, L., & Stulz, R. M. (2006). Dividend policy and the earned/contributed capital mix: A test of the life-cycle theory. *Journal of Financial Economics*, *81*(2), 227–254. https://doi.org/10.1016/j.jfineco.2005.07.005

Dechow, P., Ge, W., & Schrand, C. (2010). Understanding earnings quality: A review of the proxies, their determinants and their consequences. *Journal of Accounting and Economics*, *50*(2–3), Article 2–3. https://doi.org/10.1016/j.jacceco.2010.09.001

Dechow, P. M., & Dichev, I. D. (2002). The Quality of Accruals and Earnings: The Role of Accrual Estimation Errors. *The Accounting Review*, *77*(s-1), 35–59. https://doi.org/10.2308/accr.2002.77.s-1.35

Dechow, P. M., Sloan, R. G., & Sweeney, A. P. (1995). Detecting earnings management. *Accounting Review*, 193–225.

DeFond, M. L., & Francis, J. R. (2005). Audit Research after Sarbanes‐Oxley. *AUDITING: A Journal of Practice & Theory*, *24*(s-1), 5–30. https://doi.org/10.2308/aud.2005.24.s-1.5

DeFond, M. L., & Park, C. W. (1997). Smoothing income in anticipation of future earnings. *Journal of Accounting and Economics*, *23*(2), 115–139. https://doi.org/10.1016/S0165-4101(97)00004-9

DeFond, M. L., & Park, C. W. (1999). The effect of competition on CEO turnover1. *Journal of Accounting and Economics*, *27*(1), 35–56. https://doi.org/10.1016/S0165-4101(98)00044-5

DeFond, M., & Zhang, J. (2014). A review of archival auditing research. *Journal of Accounting and Economics*, *58*(2), 275–326. https://doi.org/10.1016/j.jacceco.2014.09.002

Degeorge, F., Patel, J., & Zeckhauser, R. (1999). Earnings management to exceed thresholds. *The Journal of Business*, *72*(1), 1–33.

Demerjian, P., Lev, B., Lewis, M. F., & McVay, S. E. (2013). Managerial Ability and Earnings Quality. *The Accounting Review*, *88*(2), 463–498. https://doi.org/10.2308/accr-50318

Demerjian, P., Lev, B., & McVay, S. (2012). Quantifying Managerial Ability: A New Measure and Validity Tests. *Management Science*, *58*(7), 1229–1248. https://doi.org/10.1287/mnsc.1110.1487

Demirag, I., Sudarsanam, S., & Wright, M. (2000). CORPORATE GOVERNANCE: OVERVIEW AND RESEARCH AGENDA. *The British Accounting Review*, *32*(4), 341–354. https://doi.org/10.1006/bare.2000.0146

Deng, M., Melumad, N., & Shibano, T. (2012). Auditors' Liability, Investments, and Capital Markets: A Potential Unintended Consequence of the Sarbanes-Oxley Act. *Journal of Accounting Research*, *50*(5), 1179–1215. https://doi.org/10.1111/j.1475-679X.2012.00458.x

Desai, M. A., & Jin, L. (2011). Institutional tax clienteles and payout policy. *Journal of Financial Economics*, *100*(1), 68–84. https://doi.org/10.1016/j.jfineco.2010.10.013

Desender, K. A., Aguilera, R. V., Crespi, R., & GarcÍa-cestona, M. (2013). When does ownership matter? Board characteristics and behavior. *Strategic Management Journal*, *34*(7), 823–842. https://doi.org/10.1002/smj.2046

Dittmar, A., & Duchin, R. (2016). Looking in the Rearview Mirror: The Effect of Managers' Professional Experience on Corporate Financial Policy. *The Review of Financial Studies*, *29*(3), 565–602. https://doi.org/10.1093/rfs/hhv051

Donelson, D. C. (2013). The Potential for Catastrophic Auditor Litigation. *American Law and Economics Review*, *15*(1), 333–380. https://doi.org/10.1093/aler/aht001

Duchin, R., Gilbert, T., Harford, J., & Hrdlicka, C. (2017). Precautionary Savings with Risky Assets: When Cash Is Not Cash. *The Journal of Finance*, *72*(2), 793–852. https://doi.org/10.1111/jofi.12490

Duruigbo, E. (2011). Tackling Shareholder Short-Termism and Managerial Myopia. *Kentucky Law Journal*, *100*(3), 531–584.

Dwyer, P. D., Gilkeson, J. H., & List, J. A. (2002). Gender differences in revealed risk taking: Evidence from mutual fund investors. *Economics Letters*, *76*(2), 151–158. https://doi.org/10.1016/S0165-1765(02)00045-9

Easterbrook, F. H. (1984). Two Agency-Cost Explanations of Dividends. *The American Economic Review*, *74*(4), 650–659.

Eisenberg, M. A. (2006). *The Duty of Good Faith in American Corporate Law* (1). *3*(1), Article 1. https://doi.org/10.1515/ECFR.2006.001

Eldar, O., & Grennan, J. (2024). Common Venture Capital Investors and Startup Growth. *The Review of Financial Studies*, hhad071. https://doi.org/10.1093/rfs/hhad071

Elston, J. (2019). Corporate governance: What we know and what we don't know. *Journal of Industrial and Business Economics*, *46*(2), 147–156. https://doi.org/10.1007/s40812-019-00115-z

Faccio, M., Marchica, M.-T., & Mura, R. (2011). Large Shareholder Diversification and Corporate Risk-Taking. *The Review of Financial Studies*, *24*(11), 3601–3641. https://doi.org/10.1093/rfs/hhr065

Faccio, M., Marchica, M.-T., & Mura, R. (2016). CEO gender, corporate risk-taking, and the efficiency of capital allocation. *Journal of Corporate Finance*, *39*, 193–209. https://doi.org/10.1016/j.jcorpfin.2016.02.008

Fama, E. F., & French, K. R. (2001). Disappearing dividends: Changing firm characteristics or lower propensity to pay? *Journal of Financial Economics*, *60*(1), 3–43. https://doi.org/10.1016/S0304-405X(01)00038-1

Fan, J. P. H., & Wong, T. J. (2005). Do External Auditors Perform a Corporate Governance Role in Emerging Markets? Evidence from East Asia. *Journal of Accounting Research*, *43*(1), 35–72. https://doi.org/10.1111/j.1475-679x.2004.00162.x

Fang, V. W., Huang, A. H., & Karpoff, J. M. (2016). Short Selling and Earnings Management: A Controlled Experiment. *The Journal of Finance*, *71*(3), 1251–1294. https://doi.org/10.1111/jofi.12369

Fang, V. W., Tian, X., & Tice, S. (2014). Does Stock Liquidity Enhance or Impede Firm Innovation? *The Journal of Finance*, *69*(5), 2085–2125. https://doi.org/10.1111/jofi.12187

Farre-Mensa, J., Michaely, R., & Schmalz, M. (2014). Payout Policy. *Annual Review of Financial Economics*, *6*(1), 75–134. https://doi.org/10.1146/annurev-financial-110613-034259

Fee, C. E., & Hadlock, C. J. (2003). Raids, Rewards, and Reputations in the Market for Managerial Talent. *The Review of Financial Studies*, *16*(4), 1315–1357. https://doi.org/10.1093/rfs/hhg031

Fee, C. E., Hadlock, C. J., & Pierce, J. R. (2013). Managers with and without Style: Evidence Using Exogenous Variation. *The Review of Financial Studies*, *26*(3), 567–601. https://doi.org/10.1093/rfs/hhs131

Fich, E. M., Harford, J., & Tran, A. L. (2023). Disloyal Managers and Shareholders' Wealth. *The Review of Financial Studies*, *36*(5), 1837–1888. https://doi.org/10.1093/rfs/hhac070

Filatotchev, I., & Nakajima, C. (2010). Internal and External Corporate Governance: An Interface between an Organization and its Environment. *British Journal of Management*, *21*(3), 591–606. https://doi.org/10.1111/j.1467-8551.2010.00712.x

Filatotchev, I., & Wright, M. (2005). *Corporate Governance Life-Cycle*. Edward Elgar.

Finkelstein, S., & D'aveni, R. A. (1994). CEO duality as a double-edged sword: How boards of directors balance entrenchment avoidance and unity of command. *Academy of Management Journal*, *37*(5), 1079–1108.

Flammer, C., & Kacperczyk, A. (2019). Corporate social responsibility as a defense against knowledge spillovers: Evidence from the inevitable disclosure doctrine. *Strategic Management Journal*, *40*(8), 1243–1267. https://doi.org/10.1002/smj.3025

Francis, B. B., Hasan, I., John, K., & Song, L. (2011). Corporate Governance and Dividend Payout Policy: A Test Using Antitakeover Legislation. *Financial Management*, *40*(1), 83–112. https://doi.org/10.1111/j.1755-053X.2010.01135.x

Francis, B. B., Hasan, I., John, K., & Waisman, M. (2010). The effect of state antitakeover laws on the firm's bondholders. *Journal of Financial Economics*, *96*(1), 127–154. https://doi.org/10.1016/j.jfineco.2009.12.006

Friedman, M. (2007). The Social Responsibility of Business Is to Increase Its Profits. In W. C. Zimmerli, M. Holzinger, & K. Richter (Eds.), *Corporate Ethics and Corporate Governance* (pp. 173–178). Springer Berlin Heidelberg. https://doi.org/10.1007/978-3-540-70818-6_14

Frijns, B., Gilbert, A., Lehnert, T., & Tourani-Rad, A. (2013). Uncertainty avoidance, risk tolerance and corporate takeover decisions. *Journal of Banking & Finance*, *37*(7), 2457–2471. https://doi.org/10.1016/j.jbankfin.2013.02.010

Gao, H., Zhang, H., & Zhang, J. (2018). Employee turnover likelihood and earnings management: Evidence from the inevitable disclosure doctrine. *Review of Accounting Studies*, *23*(4), 1424–1470.

Gaver, J. J., Paterson, J. S., & Pacini, C. J. (2012). The Influence of Auditor State-Level Legal Liability on Conservative Financial Reporting in the Property-Casualty Insurance Industry. *AUDITING: A Journal of Practice & Theory*, *31*(3), 95–124. https://doi.org/10.2308/ajpt-10292

Geng, H., Hau, H., Michaely, R., & Nguyen, B. (2021). Does Board Overlap Promote Coordination Between Firms? *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.3973387

Gibbons, R., & Murphy, K. J. (1992). Optimal Incentive Contracts in the Presence of Career Concerns: Theory and Evidence. *Journal of Political Economy*, *100*(3), 468–505. https://doi.org/10.1086/261826

Gillan, S. (2006). Recent Developments in Corporate Governance: An Overview. *Journal of Corporate Finance*, *12*(3), 381–402. https://doi.org/10.1016/j.jcorpfin.2005.11.002

Gillan, S., & Starks, L. T. (1998). *A Survey of Shareholder Activism: Motivation and Empirical Evidence* (SSRN Scholarly Paper 663523). https://doi.org/10.2139/ssrn.663523

Goldfarb, A., & Xiao, M. (2011). Who Thinks about the Competition? Managerial Ability and Strategic Entry in US Local Telephone Markets. *American Economic Review*, *101*(7), 3130–3161. https://doi.org/10.1257/aer.101.7.3130

Gormley, T. A., & Matsa, D. A. (2016). Playing it safe? Managerial preferences, risk, and agency conflicts. *Journal of Financial Economics*, *122*(3), 431–455. https://doi.org/10.1016/j.jfineco.2016.08.002

Grable, J. E. (2000). Financial Risk Tolerance and Additional Factors That Affect Risk Taking in Everyday Money Matters. *Journal of Business and Psychology*, *14*(4), 625–630. https://doi.org/10.1023/A:1022994314982

Graham, J. R., Harvey, C. R., & Puri, M. (2013). Managerial attitudes and corporate actions. *Journal of Financial Economics*, *109*(1), 103–121. https://doi.org/10.1016/j.jfineco.2013.01.010

Graham, J. R., Harvey, C. R., & Rajgopal, S. (2005a). The economic implications of corporate financial reporting. *Journal of Accounting and Economics*, *40*(1–3), 3–73.

Graham, J. R., Harvey, C. R., & Rajgopal, S. (2005b). The economic implications of corporate financial reporting. *Journal of Accounting and Economics*, *40*(1–3), 3–73.

Graham, J. R., & Narasimhan, K. (2004). *Corporate Survival and Managerial Experiences During the Great Depression* (SSRN Scholarly Paper 489694). https://doi.org/10.2139/ssrn.489694

Grinstein, Y., & Michaely, R. (2005). Institutional Holdings and Payout Policy. *The Journal of Finance*, *60*(3), 1389–1426. https://doi.org/10.1111/j.1540-6261.2005.00765.x

Grullon, G., & Michaely, R. (2002). Dividends, Share Repurchases, and the Substitution Hypothesis. *The Journal of Finance*, *57*(4), 1649–1684. https://doi.org/10.1111/1540-6261.00474

Guan, J. X., Li, O. Z., & Ma, J. (2018). Managerial Ability and the Shareholder Tax Sensitivity of Dividends. *Journal of Financial and Quantitative Analysis*, *53*(1), 335–364. https://doi.org/10.1017/S0022109017001004

Guay, W., & Harford, J. (2000). The cash-flow permanence and information content of dividend increases versus repurchases. *Journal of Financial Economics*, *57*(3), 385–415. https://doi.org/10.1016/S0304-405X(00)00062-3

Habib, A., Jiang, H., Bhuiyan, Md. B. U., & Islam, A. (2014). Litigation risk, financial reporting and auditing: A survey of the literature. *Research in Accounting Regulation*, *26*(2), 145–163. https://doi.org/10.1016/j.racreg.2014.09.005

Hadlock, C. J., & Pierce, J. R. (2010). New Evidence on Measuring Financial Constraints: Moving Beyond the KZ Index. *The Review of Financial Studies*, *23*(5), 1909–1940. https://doi.org/10.1093/rfs/hhq009

Hail, L., Tahoun, A., & Wang, C. (2014). Dividend Payouts and Information Shocks. *Journal of Accounting Research*, *52*(2), 403–456. https://doi.org/10.1111/1475-679X.12040

Hakimi, N., Van Knippenberg, D., & Giessner, S. (2010). Leader Empowering Behaviour: The Leader's Perspective. *British Journal of Management*, *21*(3), 701–716. https://doi.org/10.1111/j.1467-8551.2010.00703.x

Hambrick, D. C. (2007). Upper Echelons Theory: An Update. *Academy of Management Review*, *32*(2), 334–343. https://doi.org/10.5465/amr.2007.24345254

Hambrick, D. C., & Mason, P. A. (1984). Upper Echelons: The Organization as a Reflection of Its Top Managers. *Academy of Management Review*, *9*(2), 193–206. https://doi.org/10.5465/amr.1984.4277628

Hansen, R. S., Kumar, R., & Shome, D. K. (1994). Dividend Policy and Corporate Monitoring: Evidence from the Regulated Electric Utility Industry. *Financial Management*, *23*(1), 16–22. https://doi.org/10.2307/3666052

He, G. (2015). The effect of CEO inside debt holdings on financial reporting quality. *Review of Accounting Studies*, *20*(1), 501–536.

Healy, P. M., & Wahlen, J. M. (1999). A review of the earnings management literature and its implications for standard setting. *Accounting Horizons*, *13*(4), 365–383.

Hermalin, B. E., & Weisbach, M. S. (1998). Endogenously Chosen Boards of Directors and Their Monitoring of the CEO. *The American Economic Review*, *88*(1), 96–118.

Hill, C. A., & McDonnell, B. H. (2006). Disney, Good Faith, and Structural Bias. *Journal of Corporation Law*, *32*(4), Article 4.

Hillegeist, S. A. (1999). Financial Reporting and Auditing Under Alternative Damage Apportionment Rules. *The Accounting Review*, *74*(3), 347–369. https://doi.org/10.2308/accr.1999.74.3.347

Hilt, E. (2014). History of American Corporate Governance: Law, Institutions, and Politics. *Annual Review of Financial Economics*, *6*(1), 1–21. https://doi.org/10.1146/annurev-financial-110613-034509

Hirshleifer, D., Low, A., & Teoh, S. H. (2012). Are Overconfident CEOs Better Innovators? *The Journal of Finance*, *67*(4), 1457–1498. https://doi.org/10.1111/j.1540-6261.2012.01753.x

Hitt, M. A., & Tyler, B. B. (1991). Strategic decision models: Integrating different perspectives. *Strategic Management Journal*, *12*(5), 327–351. https://doi.org/10.1002/smj.4250120502

Holmström, B. (1999). Managerial Incentive Problems: A Dynamic Perspective. *The Review of Economic Studies*, *66*(1), 169–182. https://doi.org/10.1111/1467-937X.00083

Honigsberg, C., Rajgopal, S., & Srinivasan, S. (2020). The Changing Landscape of Auditors' Liability. *The Journal of Law and Economics*, *63*(2), 367–410. https://doi.org/10.1086/707238

Hope, O.-K., Thomas, W., & Vyas, D. (2011). Financial credibility, ownership, and financing constraints in private firms. *Journal of International Business Studies*, *42*(7), 935–957. https://doi.org/10.1057/jibs.2011.23

Hribar, P., & Collins, D. W. (2002). Errors in Estimating Accruals: Implications for Empirical Research. *Journal of Accounting Research*, *40*(1), 105–134. https://doi.org/10.1111/1475-679X.00041

Hu, A., & Kumar, P. (2004). Managerial Entrenchment and Payout Policy. *Journal of Financial and Quantitative Analysis*, *39*(4), 759–790. https://doi.org/10.1017/S0022109000003203

Huang, S., Roychowdhury, S., & Sletten, E. (2020a). Does Litigation Deter or Encourage Real Earnings Management? *The Accounting Review*, *95*(3), Article 3. https://doi.org/10.2308/accr-52589

Huang, S., Roychowdhury, S., & Sletten, E. (2020b). Does litigation deter or encourage real earnings management? *The Accounting Review*, *95*(3), 251–278.

Hung, M.-W., Liu, Y.-J., & Tsai, C.-F. (2012). Managerial personal diversification and portfolio equity incentives. *Journal of Corporate Finance*, *18*(1), 38–64. https://doi.org/10.1016/j.jcorpfin.2011.09.006

Jagannathan, M., Stephens, C. P., & Weisbach, M. S. (2000). Financial flexibility and the choice between dividends and stock repurchases. *Journal of Financial Economics*, *57*(3), 355–384. https://doi.org/10.1016/S0304-405X(00)00061-1

Jain, P., Jiang, C., & Mekhaimer, M. (2016). Executives' horizon, internal governance and stock market liquidity. *Journal of Corporate Finance*, *40*, 1–23. https://doi.org/10.1016/j.jcorpfin.2016.06.005

Jennings, J., Lee, J., & Matsumoto, D. A. (2017). The Effect of Industry Co-Location on Analysts' Information Acquisition Costs. *The Accounting Review*, *92*(6), 103–127. https://doi.org/10.2308/accr-51727

Jensen, M. C. (1986). Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers. *The American Economic Review*, *76*(2), 323–329.

Jensen, M. C. (1993). The Modern Industrial Revolution, Exit, and the Failure of Internal Control Systems. *The Journal of Finance*, *48*(3), 831–880. https://doi.org/10.1111/j.1540-6261.1993.tb04022.x

Jensen, M., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, *3*(4), 305–360.

Jiang, F., Ma, Y., & Shi, B. (2017). Stock liquidity and dividend payouts. *Journal of Corporate Finance*, *42*, 295–314. https://doi.org/10.1016/j.jcorpfin.2016.12.005

John, K., Knyazeva, A., & Knyazeva, D. (2015). Governance and Payout Precommitment. *Journal of Corporate Finance*, *33*, 101–117. https://doi.org/10.1016/j.jcorpfin.2015.05.004

John, K., Litov, L., & Yeung, B. (2008). Corporate Governance and Risk-Taking. *The Journal of Finance*, *63*(4), 1679–1728. https://doi.org/10.1111/j.1540-6261.2008.01372.x

Johnson, J. e. v., & Powell, P. l. (1994). Decision Making, Risk and Gender: Are Managers Different? *British Journal of Management*, *5*(2), 123–138. https://doi.org/10.1111/j.1467-8551.1994.tb00073.x

Johnson, M. F., Kasznik, R., & Nelson, K. K. (2001). The Impact of Securities Litigation Reform on the Disclosure of Forward-Looking Information By High Technology Firms. *Journal of Accounting Research*, *39*(2), 297–327. https://doi.org/10.1111/1475-679X.00014

Johnson, S. A. (1998). The Effect of Bank Debt on Optimal Capital Structure. *Financial Management*, *27*(1), 47–56. https://doi.org/10.2307/3666150

Jones, J. J. (1991). Earnings management during import relief investigations. *Journal of Accounting Research*, *29*(2), 193–228.

Jordan, B. D., Liu, M. H., & Wu, Q. (2018). Organizational Form and Corporate Payout Policy. *Journal of Financial and Quantitative Analysis*, *53*(2), 789–813. https://doi.org/10.1017/S0022109017001211

Kaplan, S. N., Klebanov, M. M., & Sorensen, M. (2012). Which CEO Characteristics and Abilities Matter? *The Journal of Finance*, *67*(3), 973–1007. https://doi.org/10.1111/j.1540-6261.2012.01739.x

Kaplan, S. N., & Zingales, L. (1997). Do Investment-Cash Flow Sensitivities Provide Useful Measures of Financing Constraints?*. *The Quarterly Journal of Economics*, *112*(1), 169–215. https://doi.org/10.1162/003355397555163

Karpoff, J. M., & Wittry, M. D. (2018a). Institutional and legal context in natural experiments: The case of state antitakeover laws. *The Journal of Finance*, *73*(2), 657–714.

Karpoff, J. M., & Wittry, M. D. (2018b). Institutional and legal context in natural experiments: The case of state antitakeover laws. *The Journal of Finance*, *73*(2), 657–714.

Khan, S., & Mauldin, E. (2021). Benefit or burden? A comparison of CFO and CEO outside directorships. *Journal of Business Finance & Accounting*, *48*(7–8), 1175–1214. https://doi.org/10.1111/jbfa.12512

Khurana, I. K., & Raman, K. K. (2004). Litigation Risk and the Financial Reporting Credibility of Big 4 versus Non‐Big 4 Audits: Evidence from Anglo‐American Countries. *The Accounting Review*, *79*(2), 473–495. https://doi.org/10.2308/accr.2004.79.2.473

Kim, J., Kim, Y., & Zhou, J. (2017). Languages and earnings management. *Journal of Accounting and Economics*, *63*(2–3), 288–306.

Kim, K., Patro, S., & Pereira, R. (2017). Option incentives, leverage, and risk-taking. *Journal of Corporate Finance*, *43*, 1–18. https://doi.org/10.1016/j.jcorpfin.2016.12.003

Kim, T., Kyung, H., & Ng, J. (2022). Top Management Team Incentive Dispersion and Earnings Quality. *Contemporary Accounting Research*.

Kim, Y., Park, M. S., & Wier, B. (2012). Is Earnings Quality Associated with Corporate Social Responsibility? *The Accounting Review*, *87*(3), 761–796. https://doi.org/10.2308/accr-10209

Klausner, M., & Hegland, J. (2010). *How Protective is D&O Insurance in Securities Class Actions?* (SSRN Scholarly Paper 2029356). https://papers.ssrn.com/abstract=2029356

Knight, C., & Haslam, S. A. (2010). Your Place or Mine? Organizational Identification and Comfort as Mediators of Relationships Between the Managerial Control of Workspace and Employees' Satisfaction and Well-being. *British Journal of Management*, *21*(3), 717–735. https://doi.org/10.1111/j.1467-8551.2009.00683.x

Koester, A., Shevlin, T., & Wangerin, D. (2017). The Role of Managerial Ability in Corporate Tax Avoidance. *Management Science*, *63*(10), 3285–3310. https://doi.org/10.1287/mnsc.2016.2510

Kogan, N., & Wallach, M. A. (1964). *Risk taking: A study in cognition and personality* (p. 278). Holt, Rinehart & Winston.

Koijen, R. S. j. (2014). The Cross-Section of Managerial Ability, Incentives, and Risk Preferences. *The Journal of Finance*, *69*(3), 1051–1098. https://doi.org/10.1111/jofi.12140

Kole, S. R., & Lehn, K. M. (1999). Deregulation and the adaptation of governance structure: The case of the U.S. airline industry. *Journal of Financial Economics*, *52*(1), 79–117. https://doi.org/10.1016/S0304-405X(99)00005-7

Koo, D. S., Ramalingegowda, S., & Yu, Y. (2017). The effect of financial reporting quality on corporate dividend policy. *Review of Accounting Studies*, *22*(2), 753–790. https://doi.org/10.1007/s11142-017-9393-3

Krause, R., Semadeni, M., & Cannella Jr, A. A. (2014). CEO duality: A review and research agenda. *Journal of Management*, *40*(1), 256–286.

Krippner, G. R. (2005). The financialization of the American economy. *Socio-Economic Review*, *3*(2), 173–208. https://doi.org/10.1093/SER/mwi008

La Porta, R., Lopez‐de‐Silanes, F., Shleifer, A., & Vishny, R. W. (1998). Law and Finance. *Journal of Political Economy*, *106*(6), 1113–1155. https://doi.org/10.1086/250042

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. W. (2000). Agency Problems and Dividend Policies around the World. *The Journal of Finance*, *55*(1), 1–33. https://doi.org/10.1111/0022-1082.00199

Laksmana, I., & Yang, Y. (2015). Product market competition and corporate investment decisions. *Review of Accounting and Finance*, *14*(2), 128–148. https://doi.org/10.1108/RAF-11-2013-0123

Lambrecht, B. M., & Myers, S. C. (2012). A Lintner Model of Payout and Managerial Rents. *The Journal of Finance*, *67*(5), 1761–1810. https://doi.org/10.1111/j.1540-6261.2012.01772.x

Lamont, O., Polk, C., & Saaá-Requejo, J. (2001). Financial Constraints and Stock Returns. *The Review of Financial Studies*, *14*(2), 529–554. https://doi.org/10.1093/rfs/14.2.529

Leary, M. T., & Michaely, R. (2011). Determinants of Dividend Smoothing: Empirical Evidence. *The Review of Financial Studies*, *24*(10), 3197–3249. https://doi.org/10.1093/rfs/hhr072

Leibman, J. H., & Kelly, A. S. (1992). Accountants' Liability to Third Parties for Negligent Misrepresentation: The Search for a New Limiting Principle. *American Business Law Journal*, *30*(3), 345–440.

Lennox, C., & Li, B. (2014). Accounting misstatements following lawsuits against auditors. *Journal of Accounting and Economics*, *57*(1), 58–75. https://doi.org/10.1016/j.jacceco.2013.10.002

Lennox, C., & Pittman, J. A. (2010). Big Five Audits and Accounting Fraud. *Contemporary Accounting Research*, *27*(1), 6–6.

Li, D., & Ni, X. (2024). *A Farewell to Loyalty, a Farewell to Care? Evidence from Takeover Targets*. 45. http://dx.doi.org/10.2139/ssrn.4097650

Li, J., & Tang, Y. (2010). CEO Hubris and Firm Risk Taking in China: The Moderating Role of Managerial Discretion. *Academy of Management Journal*, *53*(1), 45–68. https://doi.org/10.5465/amj.2010.48036912

Li, X., Low, A., & Makhija, A. K. (2017). Career concerns and the busy life of the young CEO. *Journal of Corporate Finance*, *47*, 88–109. https://doi.org/10.1016/j.jcorpfin.2017.09.006

Linck, J. S., Netter, J. M., & Yang, T. (2009). The Effects and Unintended Consequences of the Sarbanes-Oxley Act on the Supply and Demand for Directors. *The Review of Financial Studies*, *22*(8), 3287–3328. https://doi.org/10.1093/rfs/hhn084

Lins, K. V., Servaes, H., & Tufano, P. (2010). What drives corporate liquidity? An international survey of cash holdings and lines of credit. *Journal of Financial Economics*, *98*(1), 160–176. https://doi.org/10.1016/j.jfineco.2010.04.006

Liu, C., & Wang, T. (2006). Auditor Liability and Business Investment*. *Contemporary Accounting Research*, *23*(4), 1051–1071. https://doi.org/10.1506/E023-337T-180P-18U4

Lublin, J. S. (2016, March 29). Grooming Top Executives Includes Outside Board Experience. *Wall Street Journal*. http://www.wsj.com/articles/grooming-top-executives-includes-outside-board-experience-1459243802

MacCrimmon, K. R., & Wehrung, D. A. (1990). Characteristics of Risk Taking Executives. *Management Science*, *36*(4), 422–435. https://doi.org/10.1287/mnsc.36.4.422

MacKinnon, J. G., & Webb, M. D. (2017). Wild Bootstrap Inference for Wildly Different Cluster Sizes. *Journal of Applied Econometrics*, *32*(2), 233–254. https://doi.org/10.1002/jae.2508

Malmendier, U., & Tate, G. (2005). CEO Overconfidence and Corporate Investment. *The Journal of Finance*, *60*(6), 2661–2700. https://doi.org/10.1111/j.1540-6261.2005.00813.x

Malmendier, U., Tate, G., & Yan, J. (2011). Overconfidence and Early-Life Experiences: The Effect of Managerial Traits on Corporate Financial Policies. *The Journal of Finance*, *66*(5), 1687–1733. https://doi.org/10.1111/j.1540-6261.2011.01685.x

March, J. G., & Shapira, Z. (1987). Managerial Perspectives on Risk and Risk Taking. *Management Science*, *33*(11), 1404–1418. https://doi.org/10.1287/mnsc.33.11.1404

Mess, M. A. (1976). Accountants and the Common Law: Liability to Third Parties. *Notre Dame Lawyer*, *52*(5), 838–857.

Michaely, R., & Roberts, M. R. (2012). Corporate Dividend Policies: Lessons from Private Firms. *The Review of Financial Studies*, *25*(3), 711–746. https://doi.org/10.1093/rfs/hhr108

Miller, M. H., & Modigliani, F. (1961). Dividend Policy, Growth, and the Valuation of Shares. *The Journal of Business*, *34*(4), 411–433.

Mishra, D. R. (2014). The dark side of CEO ability: CEO general managerial skills and cost of equity capital. *Journal of Corporate Finance*, *29*, 390–409. https://doi.org/10.1016/j.jcorpfin.2014.10.003

Morin, R.-A., & Suarez, A. F. (1983). Risk Aversion Revisited. *The Journal of Finance*, *38*(4), 1201–1216. https://doi.org/10.1111/j.1540-6261.1983.tb02291.x

Nagar, V., Nanda, D., & Wysocki, P. (2003). Discretionary disclosure and stock-based incentives. *Journal of Accounting and Economics*, *34*(1), 283–309. https://doi.org/10.1016/S0165-4101(02)00075-7

Narayanan, M. P. (1985). Managerial Incentives for Short-term Results. *The Journal of Finance*, *40*(5), 1469–1484. https://doi.org/10.1111/j.1540-6261.1985.tb02395.x

Nguyen, H. T., Phan, H. V., & Sun, L. (Selina). (2018). Shareholder litigation rights and corporate cash holdings: Evidence from universal demand laws. *Journal of Corporate Finance*, *52*, 192–213. https://doi.org/10.1016/j.jcorpfin.2018.08.002

Nguyen, L., Vu, L., & Yin, X. (2020). The undesirable effect of audit quality: Evidence from firm innovation. *The British Accounting Review*, *52*(6), 100938.

Ni, X. (2020). Does stakeholder orientation matter for earnings management: Evidence from non-shareholder constituency statutes. *Journal of Corporate Finance*, *62*, 101606. https://doi.org/10.1016/j.jcorpfin.2020.101606

Ni, X., Song, W., & Yao, J. (2020). Stakeholder orientation and corporate payout policy: Insights from state legal shocks. *Journal of Banking & Finance*, *121*, 105970. https://doi.org/10.1016/j.jbankfin.2020.105970

Nohel, T., & Todd, S. (2005). Compensation for managers with career concerns: The role of stock options in optimal contracts. *Journal of Corporate Finance*, *11*(1), 229–251. https://doi.org/10.1016/S0929-1199(03)00047-6

Ocasio, W., & Joseph, J. (2005). Cultural adaptation and institutional change: The evolution of vocabularies of corporate governance, 1972–2003. *Poetics*, *33*(3), 163–178. https://doi.org/10.1016/j.poetic.2005.10.001

Officer, M. S. (2011). Overinvestment, corporate governance, and dividend initiations. *Journal of Corporate Finance*, *17*(3), 710–724. https://doi.org/10.1016/j.jcorpfin.2010.06.004

Pacini, C., Hillison, W., & Sinason, D. (2000a). Auditor liability to third parties: An international focus. *Managerial Auditing Journal*, *15*(8), 394–407. https://doi.org/10.1108/02686900010353980

Pacini, C., Hillison, W., & Sinason, D. (2000b). Three's a crowd: An examination of state statutes and court decisions that narrow accountant liability to third parties for negligence. *Advances in Accounting*, *17*, 151–185. https://doi.org/10.1016/S0882-6110(00)17010-5

Pacini, C., Martin, M. J., & Hamilton, L. (2000). At the Interface of Law and Accounting: An Examination of a Trend toward a Reduction in the Scope of Auditor Liability to Third Parties in the Common Law Countries. *American Business Law Journal*, *37*(2), 171–236.

Pae, S., Song, C. J., & Yi, A. C. (2016). Career Concerns and Management Earnings Guidance. *Contemporary Accounting Research*, *33*(3), 1172–1198. https://doi.org/10.1111/1911-3846.12182

Pae, S., & Yoo, S. (2001). Strategic Interaction in Auditing: An Analysis of Auditors' Legal Liability, Internal Control System Quality, and Audit Effort. *The Accounting Review*, *76*(3), 333–356. https://doi.org/10.2308/accr.2001.76.3.333

Palmiter, A. R. (1989). Reshaping the Corporate Fiduciary Model: A Director's Duty of Independence. *Texas Law Review*, *67*(7), 1351–1464.

Patterson, E., & Wright, D. (2003). Evidence of Fraud, Audit Risk and Audit Liability Regimes. *Review of Accounting Studies*, *8*(1), 105–131. https://doi.org/10.1023/A:1022652023592

Perry, T., & Peyer, U. (2005). Board Seat Accumulation by Executives: A Shareholder's Perspective. *The Journal of Finance*, *60*(4), 2083–2123. https://doi.org/10.1111/j.1540-6261.2005.00788.x

Pittman, J., & Zhao, Y. (2018). *The Impact of Financial Statement Audits on Non-Income-Increasing Misreporting: Evidence from Restatements* (SSRN Scholarly Paper 2912478). https://doi.org/10.2139/ssrn.2912478

Porras Prado, M., Saffi, P. A. C., & Sturgess, J. (2016). Ownership Structure, Limits to Arbitrage, and Stock Returns: Evidence from Equity Lending Markets. *The Review of Financial Studies*, *29*(12), 3211–3244. https://doi.org/10.1093/rfs/hhw058

Pratt, J. W. (1964). Risk aversion in the large and in the small. *Econometrica*, *32*(1–2), 122–136.

Rauterberg, G., & Talley, E. (2017). Contracting out of the fiduciary duty of loyalty: An empirical analysis of corporate opportunity waivers. *Colum. L. Rev.*, *117*, 1075.

Reinstein, A., Pacini, C. J., & Green, B. P. (2020). Examining the Current Legal Environment Facing the Public Accounting Profession: Recommendations for a Consistent U.S. Policy. *Journal of Accounting, Auditing & Finance*, *35*(1), 3–25. https://doi.org/10.1177/0148558X16680717

Roberts, M. R., & Whited, T. M. (2013). Endogeneity in Empirical Corporate Finance1. In G. M. Constantinides, M. Harris, & R. M. Stulz (Eds.), *Handbook of the Economics of Finance* (Vol. 2, pp. 493–572). Elsevier. https://doi.org/10.1016/B978-0-44-453594-8.00007-0

Romano, R. (2006). The states as a laboratory: Legal innovation and state competition for corporate charters. *Yale Journal on Regulation*, *23*(2), 209–248.

Rosenberg, D. (2012). Delaware's Expanding Duty of Loyalty and Illegal Conduct: A Step Towards Corporate Social Responsibility. *Santa Clara Law Review*, *52*, 81–104.

Rosenstein, S., & Wyatt, J. G. (1994). Shareholder wealth effects when an officer of one corporation joins the board of directors of another. *Managerial and Decision Economics*, *15*(4), 317–327. https://doi.org/10.1002/mde.4090150406

Roszkowski, M., & Davey, G. (2010). Risk Perception and Risk Tolerance Changes Attributable to the 2008 Economic Crisis: A Subtle but Critical Difference. *Journal of Financial Service Professionals*, *64*.

Roychowdhury, S. (2006). Earnings management through real activities manipulation. *Journal of Accounting and Economics*, *42*(3), 335–370. https://doi.org/10.1016/j.jacceco.2006.01.002

Scherl, J. B. (1994). Evolution of Auditor Liability to Noncontractual Third Parties: Balancing the Equities and Weighing the Consequences Comment. *American University Law Review*, *44*(1), 255–290.

Schnepper, J. A. (1977). The Accountant's Liability under Rule 10b-5 and Section 10(b) of the Securities Exchange Act of 1934: The Hole in Hochfelder. *The Accounting Review*, *52*(3), 653–657.

Schoar, A., & Zuo, L. (2017). Shaped by Booms and Busts: How the Economy Impacts CEO Careers and Management Styles. *The Review of Financial Studies*, *30*(5), 1425–1456. https://doi.org/10.1093/rfs/hhw111

Scott, K. E. (1983). Corporation Law and the American Law Institute Corporate Governance Project. *Stanford Law Review*, *35*(5), 927–948. https://doi.org/10.2307/1228708

Serfling, M. (2016). Firing Costs and Capital Structure Decisions: Firing Costs and Capital Structure Decisions. *The Journal of Finance*, *71*(5), Article 5. https://doi.org/10.1111/jofi.12403

Shapira, Z. (1986). Risk in managerial decision making. *Unpublished Manuscript, Hebrew University*, 1404–1418.

Shipman, J. E., Swanquist, Q. T., & Whited, R. L. (2017). Propensity Score Matching in Accounting Research. *The Accounting Review*, *92*(1), 213–244. https://doi.org/10.2308/accr-51449

Shleifer, A., & Vishny, R. W. (1997). A Survey of Corporate Governance. *The Journal of Finance*, *52*(2), 737–783. https://doi.org/10.1111/j.1540-6261.1997.tb04820.x

Short, H., Keasey, K., Wright, M., & Hull, A. (1999). Corporate governance: From accountability to enterprise. *Accounting and Business Research*, *29*(4), 337–352. https://doi.org/10.1080/00014788.1999.9729592

Tang, T. T. (2009). Information asymmetry and firms' credit market access: Evidence from Moody's credit rating format refinement. *Journal of Financial Economics*, *93*(2), 325–351. https://doi.org/10.1016/j.jfineco.2008.07.007

Teraji, S. (2018). *The Cognitive Basis of Institutions: A Synthesis of Behavioral and Institutional Economics*. Academic Press.

Thomsen, S., & Conyon, M. (2012). *Corporate Governance 1e*. McGraw Hill.

Tirole, J. (2010). *The Theory of Corporate Finance*. Princeton University Press.

Tori, D., & Onaran, Ö. (2018). The effects of financialization on investment: Evidence from firm-level data for the UK. *Cambridge Journal of Economics*, *42*(5), 1393–1416. https://doi.org/10.1093/cje/bex085

UK Corporate Governance Code. (2010). *The UK corporate governance code*. London: Financial Reporting Council.

Velasco, J. (2018). *The diminishing duty of loyalty*. 62.

Venkataraman, R., Weber, J. P., & Willenborg, M. (2008). Litigation Risk, Audit Quality, and Audit Fees: Evidence from Initial Public Offerings. *The Accounting Review*, *83*(5), 1315–1345. https://doi.org/10.2308/accr.2008.83.5.1315

Venkatesh, P. C., & Chiang, R. (1986). Information Asymmetry and the Dealer's Bid-Ask Spread: A Case Study of Earnings and Dividend Announcements. *The Journal of Finance*, *41*(5), 1089–1102. https://doi.org/10.1111/j.1540-6261.1986.tb02532.x

Vick, S. (1993). Bily v. Arthur Young & Co.: Is Limiting Auditor Liability to Third Parties Favoritism or Fair Play Notes and Comments. *Loyola of Los Angeles Law Review*, *26*(4), 1335–1374.

Wang, H., & Hanna, S. D. (1998). *Does Risk Tolerance Decrease with Age?* (SSRN Scholarly Paper 95489). https://doi.org/10.2139/ssrn.95489

Wang, J. (1993). A model of intertemporal asset prices under asymmetric information. *The Review of Economic Studies*, *60*(2), 249–282.

Warfield, T. D., Wild, J. J., & Wild, K. L. (1995). Managerial ownership, accounting choices, and informativeness of earnings. *Journal of Accounting and Economics*, *20*(1), 61–91. https://doi.org/10.1016/0165-4101(94)00393-J

Weber, J., Willenborg, M., & Zhang, J. (2008). Does Auditor Reputation Matter? The Case of KPMG Germany and ComROAD AG. *Journal of Accounting Research*, *46*(4), 941–972. https://doi.org/10.1111/j.1475-679X.2008.00298.x

Wintoki, M. B., Linck, J. S., & Netter, J. M. (2012). Endogeneity and the dynamics of internal corporate governance. *Journal of Financial Economics*, *105*(3), 581–606. https://doi.org/10.1016/j.jfineco.2012.03.005

Wright, P., Kroll, M., Krug, J. A., & Pettus, M. (2007). Influences of top management team incentives on firm risk taking. *Strategic Management Journal*, *28*(1), 81–89. https://doi.org/10.1002/smj.548

Yim, S. (2013). The acquisitiveness of youth: CEO age and acquisition behavior. *Journal of Financial Economics*, *108*(1), 250–273. https://doi.org/10.1016/j.jfineco.2012.11.003

Yu, H.-C. (2011). Legal systems and auditor independence. *Review of Accounting Studies*, *16*(2), 377–411. https://doi.org/10.1007/s11142-011-9141-z

Yung, K., & Chen, C. (2018). Managerial ability and firm risk-taking behavior. *Review of Quantitative Finance and Accounting*, *51*(4), 1005–1032. https://doi.org/10.1007/s11156-017-0695-0

Zang, A. Y. (2012). Evidence on the trade-off between real activities manipulation and accrual-based earnings management. *The Accounting Review*, *87*(2), 675–703.

Zhao, Y., & Chen, K. H. (2009). Earnings quality effect of state antitakeover statutes. *Journal of Accounting and Public Policy*, *28*(2), 92–117. https://doi.org/10.1016/j.jaccpubpol.2009.01.007

Zingales, L. (1998). Corporate gevernance,[w:] Newman P. In *The New Palgrave Dictionary of Economics and the Law* (pp. 497–502). London: Macmillan.