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ESSAYS ON UPPER ECHELONS THEORY AND TOP EXECUTIVE TURNOVER AND DISMISSAL

A thesis by

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Abstract

This thesis comprises an introduction (Chapter 1), three main chapters (Chapters 2 to 4) that focus on the studies of chief financial officer (CFO) and chief executive officer (CEO) turnover and dismissal, and a brief conclusion.

In Chapter 1, I provide an overview of the dissertation. The main theoretical aim of my dissertation is to contribute to executive turnover research within the upper echelons (Hambrick & Mason, 1984), as the theory explores how top executives influence the firm, and particularly the antecedents and consequences of turnover and succession. As the literature on CEO turnover and dismissal has garnered considerable attention from strategy scholars (Finkelstein, Hambrick & Cannella, 2009), I shift the focus from the CEO to the second-in-command officer in U.S. firms—the CFO. I demonstrate how significantly less attention has been paid to understanding the turnover and dismissal of CFOs and highlight the problems with not addressing this omission.

In Chapter 2, I establish an open-access CFO turnover and dismissal database in S&P 1500 firms from 2000 to 2022 (link), drawing on an existing CEO database paper published in the *Strategic Management Journal* (Gentry, Harrison, Quigley & Boivie, 2021). I first examine existing literature regarding CFO turnover and dismissal and uncover the importance of classifying CFO turnover events as either voluntary or involuntary. Together with three independent coders, we code each CFO turnover observation into twelve categorizations, including deaths/illnesses, dismissals, internal reassignments, resignations, retirements, and other miscellaneous types of turnover. Each coding decision is documented with an explicit reason and evidence. The final database comprises 10,561 observations and will be updated on a yearly basis following the submission of this thesis. In the empirical section, I qualitatively and quantitatively compare my CFO database with Gentry et al.'s CEO database and examine various performance antecedents for CEO and CFO turnover

and dismissal. Also, I examine the interdependence between CEO and CFO voluntary turnover. In doing so, I highlight important theoretical differences between CEO and CFO turnover and distil future research directions from these differences for advancing strategy research.

In Chapter 3, I draw on stigma theory and explore a socialized account of executive dismissal by examining a potential contagion effect between CEO and CFO dismissal. By merging Gentry et al.'s CEO database with our CFO database, I analyze how different types of CEO dismissal—those for performance-related (capability-based) reasons and those for behavior-related (integrity-based) reasons—impact the likelihood of CFO dismissal. I find that both CEO capability-based and integrity-based dismissal are associated with subsequent CFO dismissal. Also, CEO integrity-based dismissal shows a stronger effect on CFO dismissal. Further, I examine how the professional and personal ties between CEOs and CFOs moderate the relationship between CEO and CFO dismissals.

In Chapter 4, I investigate investor reactions to the dismissal of a CEO versus a CFO following signals of financial misconduct in the form of material weaknesses in financial reporting. Drawing on signalling theory, this study considers the within-role power differences between CEOs and CFOs as a potentially salient signal for investors, which significantly influence investor attributions of blame. I theorize that investors will react more positively to CEO dismissal when the CEO within-role power exceeds that of the CFO, and vice versa. I find support for my assertions using an event study analysis of 743 CEO and CFO dismissals in U.S. firms between 2005 and 2021.

Finally, I conclude my thesis in Chapter 5, summarizing the contributions of my studies and the implications for strategy scholarship.

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Declaration

I certify that this work contains no material which has been accepted for the award of any other degree or diploma in my name, in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text. In addition, I certify that no part of this work will, in the future, be used in a submission in my name, for any other degree or diploma in any university or other tertiary institution without the prior approval of the University of Adelaide and where applicable, any partner institution responsible for the joint award of this degree.

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Signature:

Chapter 1: Overview

The rise and fall of top executives have attracted significant attention in recent decades and is an important strand of upper echelons and corporate governance research (e.g., Finkelstein et al., 2009; Hambrick, Finkelstein & Mooney, 2005; Hambrick & Mason, 1984; Hilger et al., 2013). Indeed, scholars argue that decisions on executive turnover can have long-term consequences on firm performance and corporate policies (e.g. Huson, Parrino & Starks, 2001; Suk et al., 2021). Given executives in the top management team (TMT) represent the key group of organizational decision-makers that craft strategic initiatives, establish company culture, and promulgate goals throughout the firm (Gupta & Govindarajan, 1984; Hambrick & Mason, 1984; Helmich & Brown, 1972; Pfeffer & Davis-Blake, 1986), the turnover of executives can be a major destabilizing event.

The principal driver of executive turnover explored in the literature to date is that of firm performance (see Hilger et al., 2013). Further, the literature is almost entirely focused on chief executive officer (CEO) turnover, with particular emphasis on dismissal (Andrus, Withers, Courtright & Boivie, 2019), which leaves our understanding of the turnover drivers and outcomes of other individual non-CEO executives limited. Addressing this omission in the literature is essential for several reasons. First, the process of displacing an executive with a successor is a significant decision (Parrino, 1997) which requires the firm to devote substantial time and financial resources, costing between 90% and 200% of the executive's remuneration (Cascio & Boudreau, 2010). In even more striking terms, scholars have estimated that the expense associated with a C-suite executive turnover could escalate to as much as 40 times the salary of the departing executive (Downey, March, & Berkman, 2001). Second, the replacement of executives, initiated by the board or the executive themselves, can be either routine and voluntary (through resignation) or forced and involuntary (through dismissal) (Finkelstein et al., 2009; Fredrickson et al., 1988; Gentry et al., 2021). As such,

it is important to consider the drivers and outcomes of other types of turnover outside of dismissal to broaden our understanding of the executive labor market (Andrus et al., 2019). Third, it is imperative to expand the scope of turnover and dismissal studies to important individual non-CEO executives, since the actions and outcomes of the firm are not driven by the CEO alone but rather are driven by the entire TMT (Menz, 2012).

In my thesis, I aim to rectify this imbalance in research by expanding the scope of research beyond dismissal and a narrow focus on only CEOs by exploring various types of turnover and dismissal for a critical non-CEO turnover—the chief financial officer (CFO). Subsequently in this introductory overview, I will briefly review the existing literature on CEO turnover—which is anchored in executive labor market research. This review shows the dominance of CEO-related research and the lack of research on the non-CEO executive labor market, primarily due to limitations in data availability on non-CEO executives. Following this review, I explain why I have chosen to focus on CFOs and examine their turnover, rather than that of other TMT members.

1.1 The Executive Labor Market

The executive labor market—which is concerned with the supply and demand of company executives and the career outcomes of these individuals (Harrison, Boivie & Withers, 2023)—is a critical topic within upper echelons theory and the broader strategic leadership literature (for a review, see Withers et al., 2024). To date, research on the executive labor market has tended to focus on the antecedents and outcomes of CEO turnover and dismissal (Finkelstein et al., 2009), as well as CEO compensation (Devers, Cannella, Reilly, & Yoder, 2007), and the influence that CEOs have on the performance of the firm (Fitza, 2014; Hambrick & Quigley, 2014). While this research is extensive and has significantly advanced our understanding of the CEO's position in the executive labor market, we know little about the factors affecting the non-CEO executive labor market (Boivie et al., 2016)—particularly issues "dealing with turnover and dismissal" (Andrus et

al., 2019, p. 1153).

To the extent that prior research has considered turnover and dismissal in the broader executive labor market, a small number of studies have examined the factors affecting *collective* TMT turnover (e.g., Boeker, 1992; Wagner, Pfeffer, & O'Reilly, 1984; Wiersema & Bantel, 1993). Much less research, however, has considered the causes and dynamics driving the turnover and dismissal of individual non-CEO executives. More recently, scholars have sought to address this omission by examining the factors that may influence the departure of individual non-CEO executives (e.g., Boivie et al., 2016). For instance, Andrus and colleagues (2019) find that disruptions to the relational harmony of the TMT, such as an outside CEO succession and a higher number of turnovers within the TMT, increase the likelihood of a non-CEO executive exit. Similarly, Harrison et al. (2023) finds that non-CEO executives with ties to outside firms through interlocking directors are more likely to move to an interlocking firm. While these studies focus on the individual turnover of non-CEO executives, they do not distinguish between different non-CEO executives but instead treat them as a unitary group. Distinguishing between different non-CEO executives is important because, while they are collectively important to firm outcomes, each non-CEO executive performs a distinct role within the firm with different expectations from the CEO and other non-CEO executives (Georgakakis, Heyden, Oehmichen, & Ekanayake, 2022; Um, Guo, Lumineau, Shi, & Song, 2022).

According to Withers et al. (2024), the lack of research on the labor market outcomes of individual non-CEO executives is likely the result of limitations in data availability. Indeed, the limited number of studies that examine the turnover of individual non-CEO executives use data from the Execucomp database (e.g., Andrus et al., 2019; Boivie et al., 2016; Harrison et al., 2023), which does not contain information on all non-CEO executives. Many companies only report the five highest paid executives, as per the U.S. Securities and Exchange Commission (SEC) guidelines. As such, this data does not allow scholars to

reliably examine the turnover and dismissal of a specific non-CEO executive, as the rank-order of the five highest paid executives may change over time, leading some executives to drop in and out of the database. Further, ascertaining the underlying reason for an executive turnover—particularly that pertaining to dismissal—is very difficult given they are not all publicized (Gentry et al., 2021) and existing databases seldom capture such events. In sum, although specific non-CEO executives are likely to uniquely contribute to firm actions and outcomes in ways that are distinct from the CEO, our ability to examine the labor market outcomes of specific non-CEO executives is hindered by the lack of available data. In recent years, the CFO has emerged as a non-CEO executive of particular importance, as we next describe.

1.2 The Rising Role of the CFO

The role of the CFO first emerged in the 1960s in response to changes in business, capital markets, financing activities, and regulatory environments, as well as corporate diversification (Farag et al., 2011). Zorn (2004) conducted a comprehensive investigation into the evolution of the CFO role in American companies from 1963 to 2000. Initially, CFOs were perceived as back-office personnel, responsible for handling tasks like bookkeeping and tax statements, and CFOs served inconspicuously as treasurers or controllers within a corporation. However, the first pivotal change occurred in 1979 when a new accounting rule required companies to reduce reported earnings. This change prompted the reconstruction of the CFO role, which led to an increase in the number of CFOs and an expansion of their responsibilities to include managing shareholder relations and stock prices in U.S firms (Zorn, 2004).

Thereafter, CFOs began to play a more prominent role in ensuring the quality of financial reports and conveying firm strategy with financial operations to external investors (Feng et al., 2011; Mian, 2001). The early 2000s marked another significant turning point for CFOs. Due to corporate scandals in the early 2000s (e.g. Enron and WorldCom) and the

implementation of the Sarbanes–Oxley legislation in 2002, the CFO's responsibility within the executive team dramatically increased (Geiger & Taylor, 2003; Shi et al., 2019). In response to and to mitigate white-collar crime, the Sarbanes–Oxley Act—introduced in 2002—mandated that both the CFO and the CEO certify the accuracy of financial statements, thereby placing the CFO in a more accountable and publicly visible position (Barua et al., 2010).

Today, while the CEO remains the primary decision-maker responsible for overall firm performance and strategy, the CFO has taken on an important role in corporate financial management and strategic decisions (Datta & Iskandar-Datta, 2014; Zorn, 2004; Zorn et al., 2005). In most public companies, it is often the CFO, rather than other non-CEO top managers, who appears alongside the CEO to communicate with investors and security analysts, reflecting the CFO's integral role in investor relations and corporate transparency (Tulimieri & Banai, 2010). Therefore, CFOs deserve more research attention, since they form a critical strategic partnership with the CEO. To advance research on CFOs, I executed three separate but related studies, which I summarize in the next section.

1.3 Summary of Three Papers

In my first paper, I constructed a comprehensive database containing the turnover and dismissal of CFOs in S&P 1500 firms from 2000 to 2022. Given the unique interface CFOs form with CEOs as strategic partners in U.S. firms, I took inspiration from an open access database on CEO turnover and dismissal conducted by Gentry and colleagues (2021) and developed a complementary CFO turnover and dismissal database. In this paper, I document the motive underlying the development of this database and steps undertaken to code and categorize CFO turnover events. This was supported by a brief literature review of CFO turnover studies to show the importance of classifying voluntary resignation and involuntary dismissal for CFOs. This approach addresses a research gap, since most other studies overlook this critical distinction. Together with three independent coders, I

undertook an extensive search of online archival documentation and coded for various types of CFO departures, including deaths/illnesses, dismissals, internal reassignments, resignations, and other miscellaneous types of turnover events. Each coding decision was supported by four coders and documented with an explicit reason. The CFO database comprises 10,561 observations and will be updated on a yearly basis for at least five years following the submission of my thesis. After developing the database, I compare our CFO database with Gentry et al.'s (2021) CEO database to highlight the qualitative and quantitative differences between CEO and CFO turnover and dismissal. I also examine the interdependence between CEO and CFO voluntary resignations for new job opportunities. Additionally, I highlight novel applications and potential areas of future research for strategic management scholars.

In my second paper, I use the database developed in the first paper to examine the potential contagion effect between CEO and CFO dismissal. I contend that there will be a positive relationship between CEO and CFO dismissal, and this association may be influenced by their professional and personal ties. Specifically, drawing on stigma theory (Goffman, 1963), I first theorize that CEO capability-based and integrity-based dismissal will be positively associated with the subsequent CFO dismissal. Second, I theorize that increased professional ties between the CEO and CFO will strengthen the positive relationship between CEO capability-based dismissal and CFO dismissal, and increased personal ties will strengthen the positive relationship between CEO integrity-based dismissal and CFO dismissal. This study advances a novel socialized perspective of executive dismissal by exploring the different types of CEO dismissal that stigmatize CFOs and the mechanisms that amplify stigmatization.

In my third paper, I examine investor reactions to CEO and CFO dismissal events following signalled financial misconduct. Given the shared functional responsibilities of CEOs and CFOs in financial misconduct (under SOX), I contend that the within role power

differences between CEO and CFO may serve as a salient signal for investors that direct their attributions of blame. Specifically, drawing on role theory (Biddle, 1986), I argue that when the within-role power of the CEO is greater than that of the CFO, investors will attribute blame to the CEO. Conversely, when the within-role power of the CFO is greater than that of the CEO, investors will attribute blame to the CFO. This study advances a novel role perspective that accounts for differences in how investors attribute blame in the wake of signalled financial misconduct.

In summary, my thesis advances the understanding of executive turnover by addressing the critical yet underexplored area of CFO turnover and dismissal. By extending the scope beyond the CEO and examining both CEO and CFO turnover, my findings provide valuable insights into the top management team and executive labor market, especially for non-CEO executives. The establishment of a comprehensive CFO turnover and dismissal database lays the groundwork for future research and opens new avenues for exploring the strategic implications of non-CEO executive transitions. My work shows the importance of distinguishing between different types of turnover, along with their antecedents and organizational consequences. This offers both theoretical contributions and practical relevance for scholars and practitioners in strategic management and corporate governance.

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Chapter 2: A Database of Chief Financial Officer Turnover and Dismissal in S&P 1500 Firms, 2000-2022

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Contribution to the Paper	Established and refined the database, performed literature review, conducted qualitative and quantitative analyses, interpreted the data, wrote the manuscript.
Overall percentage (%)	65%
Certification:	This paper reports on original research I conducted during the period of my Higher Degree by Research candidature and is not subject to any obligations or contractual agreements with a third party that would constrain its inclusion in this thesis. I am the primary author of this paper.
Signature	Date: 03 OCT 2024

Co-Author Contributions

By signing the Statement of Authorship, each author certifies that:

i. the candidate's stated contribution to the publication is accurate (as detailed above);
ii. permission is granted for the candidate in include the publication in the thesis; and
iii. the sum of all co-author contributions is equal to 100% less the candidate's stated contribution.

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2.1 Abstract

Understanding why executives leave their jobs is an important topic in strategy research. Yet, due to limitations in data availability, we know little about the turnover and dismissal of executives beyond the CEO. To address this, we develop an open access database of CFO turnover and dismissal—given the unique interface CFOs form with CEOs as strategic partners—in S&P 1500 firms between 2000 and 2022. Specifically, we search for media documentation of CFO turnover events and code for various types of departure. We identify twelve categories of CFO turnover and provide evidence for our coding. We compare our CFO database with an open access CEO database and show distinct patterns of exit and interdependence between CFO and CEO departure. The results reveal important directions for strategy scholarship. The database is available on the OSF platform (link).

Keywords: CFO database, CFO turnover, CFO dismissal, open access database

2.2 Introduction

Executive turnover and dismissal is an enduring theme in strategic leadership and corporate governance research (Finkelstein, Hambrick, & Cannella, 2009). Given the central role that executives play in shaping firm actions and outcomes (Hambrick & Mason, 1984), changes in corporate leadership can be disruptive to organizational routines and the firm's strategic orientation (Bermiss & Murmann, 2014; Williams, Chen, & Agarwal, 2017). Moreover, replacing executives is extremely time-consuming and costly, with some estimating the cost to be up to 40 times the salary of the departing executive (Downey, March, & Berkman, 2001). It is not surprising, therefore, that scholars have devoted considerable attention to understanding the antecedents and outcomes of chief executive officer (CEO) turnover and dismissal as the firm's principal executive (Finkelstein et al., 2009; Kesner & Sebora, 1994). However, significantly less theoretical and empirical work has been devoted to understanding the factors affecting the non-CEO executive labor market and the mechanisms underlying the turnover and dismissal of individual non-CEO executives (Andrus, Withers, Courtwright, & Boivie, 2019; Boivie, Graffin, Oliver, & Withers, 2016).

Addressing this imbalance in research is important for strategy scholarship for several reasons. First, it has long been recognized by upper echelons research that firm actions and outcomes are influenced by other members of the top management team (TMT) and transcend the efforts of the CEO alone (Denis, Langley, & Sergi, 2012; Hambrick, 1994; Hambrick & Mason, 1984). As Harrison and Malhotra (2024, p. 2) state, "decisions affecting the organization are unlikely to be at the sole discretion of any single leader." Second, because CEO turnover is almost exclusively overseen by the company's board of directors (Kesner & Sebora, 1994), the mechanisms underlying non-CEO executive turnover are likely to be different (Andrus et al., 2019). In the case of non-CEO executive turnover, the CEO also tends to have significant autonomy over selection and dismissal decisions (Fee &

Hadlock, 2004). Furthermore, recent research suggests that the dismissal of non-CEO executives in response to corporate violations evokes different reactions among external stakeholders, such as investors, than that of CEO dismissal, since they send different signals to the market (Hersel, Gangloff, & Shropshire, 2023). Indeed, each non-CEO executive performs a distinct role within the firm with different functional expectations from the CEO (Georgakakis, Heyden, Oehmichen, & Ekanayake, 2022). Thus, a broader focus on individual non-CEO executives is "needed to enrich executive turnover and selection research" (Withers, Lee, Bermiss, & Boivie, 2024, p. 87).

Over the last two decades, the chief financial officer (CFO) has become particularly prominent in the TMT given the importance of the finance function and the central role of CFOs in strategic decision-making (Datta & Iskander-Datta, 2014; Tulimeiri & Banai, 2010). This centrality is reflected in practice with the increased presence of CFOs—instead of other non-CEO executives—in earnings conference calls with CEOs, where the CEO and CFO jointly communicate the firm's performance, strategic direction, and outlook to investors, financial analysts, and the public (Shi, Zhang, & Hoskisson, 2019). Thus, scholars have started to view the CEO-CFO interface as a strategic partnership, with the CEO and CFO working together to ensure a calculated approach to the firm's pursuits (Harrison & Malhotra, 2024). Considering the prevalence and strategic role of CFOs in today's corporations, investigating the turnover and dismissal dynamics of CFOs is critical for broadening our focus on, and understanding of, the non-CEO executive labor market. However, examining the turnover and dismissal of CFOs remains a fundamental challenge for scholars. As Withers et al. (2024, p. 74) state, one of the main reasons why there is significantly less research on the turnover and dismissal of non-CEO executives compared to CEOs is due to "limitations in data availability on other non-CEO executives (Krause, Roh, & Whitler, 2022)." The details of non-CEO turnover are seldom recorded in established databases (e.g., Audit Analytics), less publicized compared to CEO turnover, and require

careful collection, coding, and categorization to accurately capture (Gentry, Harrison, Quigley, & Boivie, 2021).

In this paper, we seek to address this challenge and catalyze research on the non-CEO executive labor market by developing a comprehensive, open access database on CFO turnover and dismissal. To do so, we manually gathered CFO turnover data in S&P 1500 firms from 2000 to 2022. We conducted an extensive search for all CFO turnover events during this period, searching for and documenting the causes of a CFO departure. Specifically, we coded CFO turnover into twelve mutually exclusive categories, including the current CFO, and provide a narrative description of each turnover event with links to media sources as supporting evidence for our categorization and to facilitate future development of the database.

Our paper contributes to the literature in two main ways. First, we extend the efforts of Gentry and colleagues (2021)—who developed an open access database on CEO turnover and dismissal—to the non-CEO executive domain by generating an open access database on CFO turnover and dismissal. In doing so, we provide strategy scholars with the necessary foundation to pursue empirical research on the non-CEO executive labor market, which "remains both empirically unexplored and theoretically underdeveloped to this point" (Withers et al., 2024, p. 85), and almost exclusively focused on CEOs (Andrus et al., 2019; Boivie et al., 2016). Second, through some preliminary analyses of our database and comparisons with CEO turnover and dismissal, we highlight important differences in the patterns and mechanisms driving different types of involuntary and voluntary exit between CFOs and CEOs. We also merge our CFO database with Gentry et al.'s (2021) CEO database and highlight an asymmetry in the interdependence between CFO and CEO exits to pursue a new opportunity as a specific theoretical application. We discuss how the differences we surface present opportunities for strategy scholars to both extend existing research and open new avenues of inquiry that were not previously possible.

2.3 Literature Review

2.3.1 An Overview of the CFO Turnover Literature

In this section, we provide a brief overview of the existing CFO turnover and dismissal literature and how it has been captured and measured in prior work. Our goal is not to present an exhaustive review and coding of all the related literature; rather, it is to highlight the importance of developing an open access database on CFO turnover and dismissal for strategy scholarship. Nonetheless, we conduct a broad search of the literature through the *Web of Science* database. Specifically, we searched for all papers published in A and A* ranked journals according to the Australian Business Deans Council (ABDC) list that considered CFO turnover.[1] We used the ABDC list to identify relevant journals as it is less restrictive than other journal ranking lists, which allowed for a more comprehensive search. Our search yielded an initial sample of 528 papers.

Given the breadth of our search strategy, many of the 528 papers that we identified did not explicitly measure CFO turnover of any kind. Two members of the author team examined the title, abstract, keywords, and methods used in each of these papers to filter the sample and retained only articles that examined and measured CFO turnover. A summary of the coding process, which documents the reason for exclusion, is provided with the database. Out of 528 articles, 224 papers made no reference to CFO turnover, 206 papers mentioned the CFO explicitly but did not consider turnover of any type, and 39 papers mentioned CFO turnover but did not measure it. After excluding these papers, we were left with a sample of 59 papers that highlight the type of turnover examined (i.e., whether it was general or specific), the data source used to identify and categorize turnover, and how turnover is analyzed. A summary of these papers is provided in Table 2.1.

[1] We performed a topic search (title, abstract, and key words) in the Web of Science for papers with the term "CFO" (or "chief financial officer") as well as words synonymous with turnover and dismissal, including: "depart," "dismiss," "fir*," "leave," "replace," "resign*," "step down," "succession," "successor," or "turnover."

Table 2.1 Empirical studies on CFO turnover

	Count	Percentage
Type of CFO turnover examined		
General turnover only	42	71.2
Specific type of turnover	17	28.8
Specific type of CFO turnover examined[a]		
Dismissal	4	6.8
Forced[b]	9	15.3
New position	1	1.7
Planned	1	1.7
Promotion	4	6.8
Quit	1	1.7
Reassigned	1	1.7
Resigned	2	3.4
Retirement	5	8.5
Routine	1	1.7
Unplanned	1	1.7
Vacant	1	1.7
Data source for identifying turnover		
Existing database	17	28.8
Firm disclosure and/or media reports	27	45.8
Database and firm disclosure and / or media reports	13	22.0
Not stated	2	3.4
Use of turnover in empirical analyses		
CFO turnover is dependent variable (DV)	30	50.8
CFO turnover is independent variable (IV)	16	27.1
CFO turnover is moderator (MV)	2	3.4
CFO turnover is IV and MV	2	3.4
CFO turnover is DV and IV	4	6.8
CFO turnover is control variable	5	8.5

Notes. A summary of all 59 papers extracted from our brief literature review and coding is provided in Appendix A. [a]Count of papers for specific type of CFO turnover examined exceeds 17 papers (the number of papers that examined a specific type of turnover), as some papers examined more than one specific type of turnover. [b]Forced includes CFO turnover labelled as "involuntary." [c]Resigned includes CFO turnover labelled as "voluntary resignation."

2.3.2 Approaches to Classifying CFO Turnover

Most studies (71.2 percent, 42 papers) examined and measured CFO turnover in general terms as an aggregate phenomenon. These studies utilized a variety of databases (e.g., Audit Analytics, BoardEx, Execucomp) and media sources (e.g., Factiva, LexisNexis) to identify turnover, but made no attempt to distinguish between specific types of CFO turnover, such as dismissal, resignation, and retirement. As such, the majority of studies on CFO turnover do not capture the specific labor market outcomes of these executives.

Of the remaining 28.8 percent of studies (17 papers) that examined a specific type

of CFO turnover, the most common type examined was that of *forced* CFO turnover, which was used in nine papers (e.g., Efendi, Files, Ouyang, & Swanson, 2013; Florackis & Sainani, 2018). Of these studies, eight detailed the criteria used to identify a forced turnover. The principal criterion used (in seven of eight studies) was an explicit announcement that the CFO had been "fired", "dismissed", "let go", or some other qualifier indicative of being dismissed from the company. The announcements were sourced from a combination of company disclosures (SEC filings) and media sources. However, in all these cases, other criteria were also used that captured different types of turnover which prior work under certain circumstances may classify as voluntary (see Gentry et al., 2021). These include instances where the announcement stated that the CFO was leaving for "family or personal reasons" (Wang, 2010) or when "no reason" was provided (Engel, Gao, & Wang, 2019), and retirements less than a specific age threshold, which ranged between 60 and 65 years old, if the CFO left the focal firm within six-months of the announcement (cf. Bernard, Ge, Matsumoto, & Toynbee, 2021; Collins, Masli, Reitenda, & Sanchez, 2009; Efendi et al., 2013; Wang, 2010). In all but two studies (Ferris & Sainani, 2021; Florackis & Sainani, 2018), different criteria were used to define forced turnovers and no study provided an explicit algorithm for how disclosures were sourced and coded.

Several other specific categories of CFO turnover examined in prior work also aggregated more than one type of turnover, often in contradiction to other studies. For instance, in the two cases of *resigned* in our sample (Efendi et al., 2013; Tan, Wang, Guo, & Chen, 2022), CFO turnover announcements stating "personal reasons" were used as a criterion to identify resignations, which stands in direct contrast to other studies that use personal reasons to identify forced turnover (e.g., Engel et al., 2019; Wang, 2010). Similarly, the *planned* category, which includes retirements and cases where the CFO takes a new position within the focal company, and the *unplanned* category, which includes cases where the CFO takes a position within another company, pursues other interests, and leaves for

adverse health or personal reasons (Chen, Li, & Lin, 2022), are all used as separate categories in other studies (e.g., Mian, 2001). A further two categories, namely *quit* (Mian, 2001) and *routine* (Wang, 2010) turnovers, aggregate turnovers due to dismissal, accepting a new position in another firm, and health reasons, among others.

The second most common type of turnover (examined in five papers) was that of *retirement*, which is a discrete category. Age was the main criterion to identify retirements across these studies (four out of five papers). However, there is no consensus on retirement age, with one paper using age 60 as the threshold (Bedard, Hoitash, & Hoitash, 2014), another using age 64 (Menon & Williams, 2008), and another still using age 65 (Bernard et al., 2021). The remaining paper that used age to identify retirement did not specify the age threshold used (Loyeung & Matolcsy, 2015). Finally, the last paper that classified retirements through media sources did not specify how retirement was coded (Mian, 2001). The third most common type of turnover examined (joint with dismissal, discussed below) was the discrete category of *promotion*, which was used in four papers. Despite the seemingly discrete nature of this category, there was no consensus in definition. Two studies captured CFO promotion as internal job transitions where the CFO becomes CEO, president, chair of the board (Mian, 2001), or COO (Engel et al., 2019). However, since it is difficult to ascertain the rank order of non-CEO executives, movements to other non-CEO executive positions (like COO) may not represent a promotion but may be more indicative of what Mian (2001) categorizes as a *reassignment* to another role within the focal firm. In contrast, the remaining two studies that examined promotion defined such cases as external job transitions to other companies as the CFO, CEO, or president (Brochet, Miller, & Srinivasan, 2014; Wang, 2010).

The joint third most common category was that of *dismissal*. While these studies used different labels for dismissal, they all used negative signals preceding a turnover event as evidence of a dismissal. For example, one study used financial restatements as a signal of

misconduct (Hersel et al., 2023), two used poor firm performance (Ferris & Sainani, 2021; Florackis & Sainani, 2018), and one used a combination of misconduct and poor firm performance (Chen et al., 2022). Evident in these coding efforts are different variants of dismissal, namely those due to poor firm performance and those due to personal issues like misconduct and other legal violations (see Gentry et al., 2021). In our sample, there were two other discrete categories of turnover classified by Mian (2001), these include *new position*, where the CFO position was newly instituted, and *vacant*, where the CFO role was previously unoccupied.

It is clear from the above summary of the CFO turnover and dismissal literature that: (a) there is no consistency in how CFO turnover has been categorized and measured in prior work; and (b) there is a general lack of granularity in coding to distinguish between discrete types of CFO turnover. Further, while some existing databases capture when a CFO turnover event occurs, which has allowed for the examination of general CFO turnover, the reasons why a CFO leaves the firm are not sufficiently captured in any existing database and requires manual collection and categorization by scholars. These are limiting factors that have hindered the advancement of research on the labor market of non-CEO executives like CFOs (Krause et al., 2022; Withers et al., 2024).

2.4 CFO Turnover and Dismissal Database

2.4.1 Database Construction

The construction of our database began with compiling a list of current and historical S&P 1500 firms from 2000 to 2022. The database begins in the year 2000, two years prior to the introduction of the SOX Act, since it was around this time that the CFO role became institutionalized within U.S. public firms (Zorn, 2004). To obtain information on CFO turnover for the 3,256 firms that span our sample period, we searched the BoardEx database

using the company name and ticker.[2] We used BoardEx (as opposed to Execucomp) since it provides a complete record of all company executives, including CFOs, as well as their tenure, start date, and exact turnover date (Bernard et al., 2021; Hoitash, Hoitash, & Johnstone, 2012). We used the following keywords when searching the organization section of BoardEx: "CFO," "chief financial officer," "finance," "financial officer," "controller," and "treasurer."

Our search contained 16,926 individuals and included such roles as treasurer, accountant, advisor, deputy CFO, group CFO, division CFO, subsidiary CFO, and regional CFO, among others. We were purposely wide at this stage as to not miss CFOs from firms that may use an alternative title (such as chief treasury officer). The first author then manually screened the results and retained only the principal CFO for each firm aligned to their tenure chronology (i.e., start date and turnover date). This screening led to an initial dataset of 10,561 CFO–firm pairs, including current CFOs. Each row of our data log contained the CFO's name (first, last), company name, job duty, seniority, start date as CFO, end date (i.e., turnover date) as CFO, company ticker, company ID, and director ID.

After finalizing this list of CFOs, the first author and three graduate research students then sought media coverage to better understand the nature of each CFO turnover event identified. Specifically, the CFO's name, company name, and reported turnover date were used in a Google News search to source media documentation that explicitly acknowledged the turnover event from reputable sources, including *Bloomberg*, *Wall Street Journal*, and *Fortune*, among others.[3] Where news media could not be sourced, earnings conference call

[2] In our database, we also provide other company identifiers to facilitate data merging with common databases such as Compustat and CRSP. To do this, we used the linking suite on the Wharton Research Data Service's platform and matched the unique *company ID* extracted from our search of BoardEx to a corresponding *GVKEY* and *PERMCO* (https://wrds-www.wharton.upenn.edu/pages/grid-items/linking-suite-wrds/). Through the linking suite we were able to match a total of 3088 firms, providing a coverage of 94.8 percent of our database.

[3] Other sources of information included reputable journalists and sell-side analysts, Wall Street Journal, Pittsburgh Business Times, The Business Journal, Business Wire, Yahoo, Forbes, and MarketWatch. Specific details for each source are provided in the database.

transcripts, company press releases, and SEC filings (8-K and 10-K reports) were consulted for turnover statements. Overall, the search process led to documentation for 8,294 CFO turnover events, excluding current CFOs and events that cannot be categorized due to a lack of information (e.g., insufficient data regarding CFO turnover or the absence of an appropriate media source).

2.4.2 Coding Scheme

Following the collection and collation of relevant media evidence, we then began coding CFO turnovers. To do so, we first developed a robust protocol that considered the various reasons for executive turnover, both CEO and CFO, using prior work as a starting point (e.g., Fee & Hadlock, 2004; Gentry et al., 2021; Mian, 2001). To create a coding protocol specific to CFOs, we followed Gentry et al. (2021) and solicited feedback from authors who had published at least one study on executive turnover in the last five-years. We approached and received feedback from four authors who suggested minor improvements to our coding scheme. Some suggestions were conflicting, such as whether to combine CFO death with illness,[4] which we carefully balanced. Our coding scheme, shown in Table 2.2, consists of twelve categories that provide granular distinctions between various types of CFO turnover. We then used the coding scheme and a specific protocol (presented in supplementary Appendix B) to train three graduate research students in the coding of media sources to classify turnover events. The first author, along with the three graduate research students, then independently coded the media sources. Each media source was randomly assigned to two coders. The intercoder agreement was 88 percent, indicating internal consistency. The 12 percent of disagreed cases were resolved through collective discussions between the four coders. To ensure the reliability of our coding, we hired another

[4] Distinct from Gentry et al. (2021), we combined CEO death and illness into a single category since they both represent turnover due to an exogenous health-related issue. However, notes provided in our database can be used to easily distinguish death from illness for researchers who may wish to separate these events.

graduate research student to code a random sample of 200 media sources. The intercoder agreement was 91 percent, indicating a substantial level of agreement comparable to other work (e.g., Gentry et al., 2021) and the overall efficacy of our coding.[5]

Codes 1 through 4 captured various forms of involuntary turnover. Code 1 captures CFO death or illness. We categorized deaths and illnesses as involuntary given their exogenous and sudden nature (Dittmar & Duchin, 2016). In such instances, a CFO either passes away while in tenure or leaves due to adverse health. Code 2 captures CFO dismissals due to poor performance. In such instances, media and company press releases were negative and cited poor firm performance, strategic issues, and decisions that indicate poor performance (e.g., cutbacks, management shake-ups, etc.), or individual job-related performance failings of the CFO. Code 3 captures CFO dismissals due to behavioral issues (i.e., policy breaches or misconduct). These turnovers signalled violations of company HR policy, regulations and laws, or inappropriate personal behavior. For example, Kaiser Aluminium stated in a press release that Kerry Shiba had resigned as CFO "because of a personal relationship with another employee, which the company determined to be inappropriate" (Hymowitz, 2007). While the word dismissal may not be explicitly used in such cases, we considered a resignation or retirement following a personal issue to be indicative of a dismissal. Code 4 captures dismissals with no disclosed reasons. In such instances, dismissal was inferred by the negative sentiment in the media announcement coupled with the immediacy of the turnover (within one-month of the announcement) (Efendi et al., 2013; Mergenthaler et al., 2012).

Codes 5 through 8 captured various forms of voluntary CFO turnover. In all instances of voluntary turnover, the media source expressed positive sentiment towards the CFO with an announced transition period (greater than one-month). Code 5 captures CFO retirements.

[5] Appendix B provides details of the coding inclusion and exclusion processes. Appendix C provides variable definitions of our established database. A turnover event was categorized into the primary reason based on the information provided in the media source.

While prior studies have used age to capture executive retirement (e.g., Jenter & Lewellen, 2015; Murphy & Zimmerman, 1993), age can be a crude proxy given the lack of consensus on retirement age in prior work. Therefore, following Gentry et al. (2021), we classified turnover as a voluntary retirement only when there was explicit mention of "retirement" in the media source in addition to positive sentiment. In most instances, retirements were announced several months prior to the effective turnover date logged in BoardEx. Code 6 captures voluntary turnover for personal reasons, such as "spending time with family." We classified turnovers as resignation for personal reasons if the CFO provided explicit reasoning in the announcement for leaving the company that the coders perceived as genuine and voluntary along with an announced transition period. Code 7 captures voluntary turnover for the pursuit of a new job opportunity. In such instances, the CFO assumed another executive role within three-months of leaving the company.[6] Often the CFO also stated the pursuit of new opportunities in the media source. Code 8 captures CFO resignations with no disclosed reasons. This category mirrors that of Code 6, albeit without the presence of any explicit reasoning for leaving the company provided by the CFO. For example, Simone Blank resigned as CFO of Sirona Dental Systems Inc. in October 2013 with no disclosed reasons. However, the firm announced a "succession plan" with a transition period and thanked Simone for her 15-years of "dedicated service" and "sound financial stewardship" (Dentsply Sirona, 2013).

Code 9 captures internal reassignments: a category unique to and prevalent among CFOs (Mian, 2001). In such instances, the CFO transitioned upwards to the role of CEO or laterally to another non-CEO executive role (Zhang, 2006). In our database, we distinguish between upwards and lateral movements to provide scholars with the flexibility to pursue specific research questions regarding the internal job mobility of CFOs. Code 10 captures

[6] We searched LinkedIn to track CFO career transitions as it is common for individuals to specify both the month and year of their departure from a previous position and the commencement of a new role.

other miscellaneous forms of CFO turnover, such as those attributed to a company delisting, merger and acquisition, or a change from an interim CFO to a new full-time CFO. Code 11 captures current CFOs. Finally, Code 12 captures missing data. In such instances (~4.5 percent of the cases) we were unable to source media evidence to sufficiently categorize a turnover. While the percentage of missing observations is higher than that reported in Gentry et al.'s (2021) CEO database, non-CEO executive turnover tends to be less publicized and thereby more difficult to obtain. Further, the proportion of missing CFO observations are not dissimilar from that reported in prior work (e.g., Mian, 2001). Nonetheless, these missing observations will be the basis of further investigation by the first author as the database is maintained, updated, and expanded each year.

A breakdown of turnover events by code and year is provided in Table 2.3. The full database is available to download, along with details about our coding procedure, instructions for use, and executable code for merging with other databases from the OSF platform (link).[7]

[7] Appendix D provides the STATA code of how to conditionally and entirely merge our CFO database with Gentry's CEO database (2021) for future studies.

Table 2.2 CFO turnover code, reason, and description

Code	Reason	Brief description	Example media announcement	Source	No.
1	Involuntary–CFO death or illness	The CFO died while in office or left for health reasons.	James Groberg from Volt Information Science Inc. died unexpectedly in April 2006.	The New York Times (2006)	44
2	Involuntary–CFO dismissed (performance)	The CFO was dismissed (or resigned) for reasons related to job performance. In such instances, the media sentiment was negative and cited poor individual and/or company performance in the turnover announcement (e.g., CFO missed financial target, stock price fell unexpectedly, earnings disappointment, and corporate downsizing due to performance).	John Panning was removed from Gevity HR Inc. The source indicated that the company had experienced two consecutive years of losses. "Lenders wouldn't touch the company. Nor would insurers, which are essential to Gevity's survival."	Makowski (2004)	568
3	Involuntary–CFO dismissed (behavior)	The CFO was dismissed (or resigned) for behavioral or policy-related problems. In such instances, the media sentiment was negative and cited violation of regulations, laws, personal misconduct (e.g., domestic violence), or firm misconduct (e.g., violation of HR policies such as sexual harassment).	Barry Sharp from AES corp. was dismissed following an internal accounting review for bad internal control. "AES announced that, following an internal accounting review, it was restating its net income downward by $556 million for the 13-month period ending the first quarter of 2005."	Taub & Katz (2006)	175
4	Involuntary–CFO dismissed (no reason disclosed)	The CFO was dismissed (or resigned) but no explicit performance or personal reasons were disclosed. In such instances, the media sentiment was negative, the CFO left the firm within 1-month, and typically no appreciation or compliment from the company was expressed towards the CFO for services to the firm during tenure.	Ted Hull was removed from 3D systems Corp. The stated reason was to "meet the company needs and to pursue his personal interests." This was not related to a specific performance or personal reason. Hull left the firm immediately (replaced by the chief accounting officer).	Mendoza (2015)	271
5	Voluntary–CFO retired	The CFO retired. In such instances, the media sentiment was positive (CFO was positively acknowledged and or positively acknowledged the firm) and the announcement explicitly stated retirement as reason for departure. Retirements tended to be announced several months prior to departure date.	Timothy Romenesko retired from AAR Corp. after 36 years of service. The announcement was positive with the CEO stating, "we are grateful to Tim for his 36 years of service and the key role in helping AAR become the industry leader we are today."	AAR (2017)	1378
6	Voluntary–CFO resigned (personal reasons)	The CFO resigned for personal reasons. In such instances, the media sentiment was positive (CFO was positively acknowledged and or positively acknowledged the firm), and the CFO provided an	Al Castino decided to leave Autodesk to spend more time with his family. The effective date was not determined during the announcement. "He has indicated that he	Autodesk (2008)	602

Code	Reason	Brief description	Example media announcement	Source	No.
		explicit personal reason for the departure (e.g., to spend more time with family, personal interests).	will remain as CFO while the company conducts a search for his replacement".		
7	Voluntary–CFO resigned (new job opportunity)	The CFO resigned to pursue a new job opportunity. In such instances, the media sentiment was positive or neutral (CFO was positively acknowledged), and took up a parallel or higher executive position within another company within 3-months.[a]	George Strickler left BorgWarner to join Visteon Corporation in November 2003.	BorgWarner (2003)	1270
8	Voluntary–CFO resigned (no reason disclosed)	The CFO resigned with no explicit reason disclosed. In such instances, the media sentiment was positive (CFO was positively acknowledged and or positively acknowledged the firm) and the company usually announced succession plan.	Dan Henry from American Express Corp. resigned from the company after 23 years' service but stayed to assist in the hiring and transition process of a new CFO. No explicit departure reason was given. The announcement was positive with the CEO stating Henry's contributions as "critically important to the success of our business."	Brugger (2013)	320
9	Internal role transition	The CFO left the position for another executive role within the focal company (e.g., promotion to CEO).[b]	Matthew T. Farrell, the COO and CFO in Church & Dwight Co., Inc., was promoted to CEO and elected to the company's Board of Directors in January 2016.	*Business Wire* (2015)	1723
10	Other	Interim CFOs, company delisting (merger or acquisition, ceased to exist, changed key identifiers, restructuring, privatization, and bankruptcy etc.).	Andrea Resnick served as an interim CFO in Tapestry Inc. in 2019. "Ms. Resnick previously served as the Company's interim CFO from August 2016 to February 2017 and from February 2019 to August 2019."	Wallmine (2023)	1943
11	Current CFO	Current CFO	The current CFO information is derived from BoardEX.	BoardEX	1792
12	Missing	Despite attempts to source relevant media sources and code media sources, there was no sufficient data to assign a code to the turnover event.[c]	na.	na.	475
Total					**10561**

Notes. [a]We searched LinkedIn and company websites to source information about the new job opportunity pursued by the departing CFO. [b]We created a dummy variable in the database to distinguish between upwards internal role transitions to CEO and lateral internal role transitions to another executive role. [c]We obtained relevant media sources for 95.5 percent of turnovers. Of these were able to successfully code all turnover events such that our missing code (Code 12) contains only instances where we were unable to source media evidence.

Table 2.3 CFO turnover events by code and year

	CFO turnover code												
Year	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**Total**
2000	0	9	2	3	20	10	44	1	39	11	N.A.	29	168
2001	2	18	5	3	34	7	28	1	58	10	N.A.	33	199
2002	1	10	14	9	27	17	38	4	65	10	N.A.	34	230
2003	1	22	18	6	39	22	55	11	57	17	N.A.	35	283
2004	2	22	12	9	42	25	42	11	83	49	N.A.	44	341
2005	4	23	23	13	59	28	79	21	85	76	N.A.	37	448
2006	5	19	15	15	61	31	69	17	78	128	N.A.	46	484
2007	2	25	10	13	73	48	83	17	118	174	N.A.	31	594
2008	5	50	6	20	68	33	79	10	86	134	N.A.	24	515
2009	2	34	8	19	57	15	50	11	66	109	N.A.	22	393
2010	3	27	7	10	40	22	42	12	65	94	N.A.	9	331
2011	1	14	1	7	47	27	41	14	85	87	N.A.	13	337
2012	0	32	2	11	53	28	52	14	87	87	N.A.	15	381
2013	0	27	6	15	79	27	50	13	73	92	N.A.	13	395
2014	2	19	6	10	79	38	51	14	89	84	N.A.	16	408
2015	1	29	7	10	94	23	75	14	82	115	N.A.	11	461
2016	1	28	8	18	81	39	65	20	87	128	N.A.	8	483
2017	4	26	5	17	82	33	55	20	56	125	N.A.	14	437
2018	0	28	6	17	95	35	51	22	77	104	N.A.	9	444
2019	2	36	8	10	63	27	61	25	79	110	N.A.	10	431
2020	2	30	2	14	74	28	56	16	71	104	N.A.	7	404
2021	3	18	3	10	62	18	58	12	81	73	N.A.	5	343
2022	1	22	1	12	49	20	46	20	56	22	N.A.	10	259
Total	44	568	175	271	1378	602	1270	320	1723	1943	1792	475	10561

Note. A total of 8294 CFO turnover events were documented between 2000 and 2022, excluding missing (475) and current CFOs (1792).

2.5 Advancing Strategic Management Research Using Our Database

In this section, we aim to demonstrate the value of our CFO turnover and dismissal database for strategy scholars by indicating how it can be used to advance corporate governance and executive labor market research. Our intention is not to present the entire range of our database's applications for strategy scholarship; rather, we focus on elevating what we see as fruitful areas for future research anchored in the existing literature on executive turnover and dismissal.

To do so, we first qualitatively compare the primary reasons for CFO versus CEO turnover between our CFO database and Gentry et al.'s (2021) CEO database. Through this comparison, we highlight fundamental differences in the reasons why CFOs and CEOs leave their jobs. Second, we quantitively examine and compare the mechanisms driving different types of CFO and CEO exit using a variety of antecedent variables. We uncover critical differences in the drivers of different types of CFO and CEO exit that are unaccounted for in prior work and provide opportunities for theoretically refining and extending existing research. Finally, we merge our CFO database with Gentry et al.'s (2021) CEO database to explore the potential interdependencies in exits to pursue a new opportunity between these executives as a specific theoretical application. Our analysis reveals an asymmetry in the interdependencies of voluntary exit for new opportunities between CFOs and CEOs, which indicate important social dynamics of such exits that are scant in the literature (Harrison et al., 2024) and have been previously difficult to explore. The following sub-sections are structured according to these three separate analyses.

2.5.1 Qualitative Comparison of CFO and CEO Turnover

In our qualitative comparison, we use the latest version of CFO and CEO turnover and dismissal databases, and exclude current executives and other miscellaneous types of turnover from both databases. The most common category of CFO turnover is that of *internal role transition* (Code 9), which accounts for 27.1 percent of observations. This

category captures internal job movements of the CFO into another executive role within the focal firm and encompasses both promotions to CEO, as well as lateral movements to other non-CEO executive positions. In our sample, 5.2 percent of internal role transitions were promotions to CEO, excluding interim CEO and subsidiary CEO, and the remaining 21.9 percent were lateral movements into another non-CEO executive role. Coupled with voluntary resignations for the pursuit of a *new job opportunity* (Code 7), which captures external job movements into another company and is the third largest category accounting for 20.0 percent of CFO turnovers, job movements overall account for 47.1 percent of CFO turnover.

By contrast, internal role transition is a non-existent category for CEOs and voluntary resignations for the pursuit of a new job opportunity account for only 3.3 percent of CEO turnovers. The most common category of CEO turnover is that of *retirement*, which accounts for approximately 62.8 percent of observations. For CFOs, the rate of retirement is less than half that of CEOs and accounts for 21.7 percent of turnover events. Taken together, these differences in the most common types of turnover demonstrate the greater job market mobility of CFOs relative to CEOs who tend to be older, at the pinnacle of their career, and more likely to leave the job market than transition into another role. Distinct from CEOs, therefore, examining the turnover of CFOs using our database can provide new insights into the internal and external labor market dynamics of individual non-CEO executives that have been historically difficult to explore (Withers et al., 2024) and are not possible to examine by focusing exclusively on CEO.

To address this shortcoming in existing work, future researchers can use our database to explore the conditions that lead to the CFO being internally promoted to CEO or externally advancing into executive positions in another firm. For instance, given that CFOs have functional responsibilities that are distinct from those of other non-CEO executives (Menz, 2012), future research may examine how the specific knowledge, skills, and abilities

of CFOs become valuable in the executive labor market, such as during economic downturns or in resource constrained contexts where the demand for CFO-specific skills like financial conservatism may be higher. This would shift the focus of current research from general explanations of how non-CEO executives become valued in the executive labor market, which do not distinguish between individual non-CEO executives (e.g., Boivie et al., 2016; Harrison, Boivie, & Withers, 2023), to novel role-based explanations that are specific to individual non-CEO executives and account for their functional idiosyncrasies (Georgakakis et al., 2022; Menz, 2012). A particularly fruitful area for future work would be to examine how the perceived fit between the functional role expectations of CFOs and firm context influence the outcomes of internal tournaments to become CEO. For example, firms with a history of engaging in risky strategic actions, such as mergers and acquisitions or R&D, may be less inclined to promote the CFO to the CEO position, given it is the role of the CFO to play devil's advocate and be the voice of dissent towards such activities (Shi et al., 2019).

2.5.2 Quantitative Comparison of CFO and CEO Turnover

In this section, we present our quantitative examination and comparison of the mechanisms driving different types of CFO and CEO exit using a variety of antecedents. Similar to the qualitative analysis, we exclude current executives and other miscellaneous types of turnover, and only compare specific types of CFO and CEO exit. Specifically, we focus on comparing the drivers of dismissal as a central type of turnover examined in corporate governance research (e.g., Boeker, 1992; Park, Chung, & Rajagopalan, 2021; Wiersema & Zhang, 2011), along with retirement and new opportunity exits that are important areas of work in executive labor market research (e.g., Bilgili, Campbell, Leary-Kelly, Ellstrand, & Johnson, 2020). To do so, we examine our CFO database and Gentry et al.'s (2021) CEO database independently and compare the results. Our analyses not only help validate the accuracy of our coding scheme by illustrating the alignment of specific antecedents to different types of exit, but also surface fundamental differences in the

mechanisms driving different types of exit between CFOs and CEOs.

In terms of the antecedents, we focus on the relationship between various measures of firm performance, which is widely acknowledged to be the principal determinant of executive dismissal (e.g., Gentry et al., 2021; Hilger, Mankel, & Richter, 2013). These performance variables include industry adjusted return on assets (ROA) as a measure of accounting performance, industry adjusted market return as measure of market performance, and analyst recommendation as a measure of performance expectations. Further, we also examine two additional firm performance variables relating to financial reporting policies and procedures according to the SOX Act, which are aligned to both the CFO and CEO role and may predict turnover, namely financial restatements and internal control weaknesses (Arthaud-Day, Certo, Dalton, & Dalton, 2006; Haislip, Masli, Richardson, & Sanchez, 2016).

Dependent variables. The dependent variables used in our analyses include the dismissal, retirement, and new opportunity coding from our CFO database and Gentry et al.'s (2021) CEO database. These include *CFO dismissal*, *CFO dismissal (performance)*, *CFO dismissal (behavior)*, *CFO retirement*, *CFO new opportunity*, *CEO dismissal*, *CEO dismissal (performance)*, *CEO dismissal (behavior)*, *CEO retirement*, and *CEO new opportunity*. *CFO dismissal* is a combination of CFO dismissal for performance, behavior, and no disclosed reasons. *CEO dismissal* is a combination of CEO dismissal for performance and behavior issues. All these variables were indicators coded as [1] if the CFO/CEO departs for the reason specified, and [0] otherwise.

Independent variables. We measured *industry adjusted ROA* as the focal firm's ROA minus the mean industry ROA based on two-digit GIC codes (Krause, Semadeni, & Cannella, 2013). Similarly, we measured *industry adjusted market return* as the focal firm's annual closing stock price minus the mean industry stock price. Following prior work (Wiersema & Zhang, 2011), we measured *analyst recommendation* as the mean

recommendation from all investment analysts covering the firm over a six-month period. The score is reverse-coded, so a higher score indicates a more positive recommendation. We measured *financial restatements*, which represent irregularities in financial reporting that causes the firm to restate its financial statements, as the number of material restatements occurring within one year before the executive departure. Similarly, *internal control weaknesses*, which capture weaknesses in financial reporting that may lead to material errors, was measured as the number of internal control weaknesses that occurred one year before the executive departure.

Control variables. We also included several control variables that may influence executive turnover. *Firm size*, measured as the natural logarithm of total assets, was included as the executives of larger, more established firms may experience increased turnover risk (Shen & Cannella, 2002). We include the *number of analysts* following the firm, since firms with a higher number of analysts are subject to greater scrutiny that can influence turnover (Huson, Parrino & Starks, 2001; Wiersema & Zhang, 2011). We also include *board size*, measured by the number of directors on the board, and *board independence*, measured by the proportion of independent directors on the board, due to the influence of these variables on monitoring (e.g., Andrus et al., 2019; Gentry et al., 2021). We also control for a series of executive-level controls that may influence turnover decisions (Boeker, 1992; Hilger et al., 2013), including *CFO* and *CEO age*, *gender*, and *salary*.[8]

[8] We use the natural logarithm of CFO and CEO salary to reduce the skewness of these variables.

Table 2.4 Descriptive statistics and correlations: CFO dismissal sample

Variable	Mean	SD	1	2	3	4	5	6	7	8
1. CFO dismissal	0.16	0.37								
2. CFO performance	0.09	0.28	0.75							
3. CFO behavior	0.03	0.17	0.33	-0.04						
4. CFO retirement	0.22	0.41	-0.22	-0.17	-0.07					
5. CFO new opportunity	0.21	0.20	-0.18	-0.14	-0.06	-0.28				
6. Industry adjusted ROA	0.02	0.20	-0.05	-0.06	0.01	0.08	-0.03			
7. Industry adjusted market return	-1.80	2.64	-0.01	-0.02	-0.01	0.00	-0.02	0.05		
8. Analyst recommendation	5.66	5.12	-0.05	-0.05	0.01	0.02	-0.00	0.11	0.01	
9. Number of analysts	11.67	8.08	-0.02	0.00	0.01	0.09	-0.02	0.13	-0.02	0.06
10. Firm size	7.89	1.93	-0.07	-0.04	0.00	0.12	-0.07	0.10	0.07	0.05
11. Board size	9.32	2.57	-0.06	-0.03	-0.04	0.10	-0.04	0.04	0.06	-0.02
12. Board independence	83.43	18.50	-0.02	-0.01	0.00	0.06	0.00	0.05	-0.02	0.06
13. Financial restatements	0.22	0.61	0.02	-0.01	0.08	-0.03	0.02	-0.06	-0.01	-0.03
14. Internal control weakness	0.36	1.87	0.06	0.02	0.12	-0.05	-0.00	-0.06	-0.05	-0.03
15. CFO age	52.77	7.25	-0.08	-0.05	-0.04	0.50	-0.24	0.05	0.04	0.00
16. CFO gender	0.90	0.30	-0.01	-0.01	0.01	0.02	-0.03	-0.02	-0.00	-0.01
17. CFO salary	6.05	0.51	-0.03	0.00	-0.00	0.10	-0.06	0.11	0.02	0.04
Variable	**Mean**	**SD**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
10. Firm size	7.89	1.93	0.60							
11. Board size	9.32	2.57	0.36	0.66						
12. Board independence	83.43	18.50	0.07	0.01	0.02					
13. Financial restatements	0.22	0.61	-0.03	-0.03	-0.01	0.00				
14. Internal control weakness	0.36	1.87	-0.07	-0.09	-0.09	0.00	0.24			
15. CFO age	52.77	7.25	0.02	0.10	0.10	0.02	-0.03	0.00		
16. CFO gender	0.90	0.30	-0.02	-0.01	0.00	-0.01	0.03	-0.01	0.07	
17. CFO salary	6.05	0.51	0.39	0.47	0.35	0.07	-0.00	-0.05	0.14	-0.02

Note. N = 6,351. Variables are winsorized at the 1% and 99% levels if there are outliers >3 standard deviations from the mean. Correlation coefficients $|0.04|$ are significant at the $p < 0.05$ level. Exact p-values and confidence intervals for pairwise correlations are available from the first author on request.

Table 2.5 Descriptive statistics and correlations: CEO dismissal sample

Variable	Mean	SD	1	2	3	4	5	6	7	8
1. CEO dismissal	0.31	0.46								
2. CEO performance	0.27	0.44	0.91							
3. CEO behavior	0.04	0.19	0.32	-0.10						
4. CEO retirement	0.63	0.48	-0.86	-0.79	-0.27					
5. CEO new opportunity	0.03	0.18	-0.10	-0.09	-0.03	-0.24				
6. Industry adjusted ROA	1.47	2.06	0.01	0.02	-0.02	-0.02	0.05			
7. Industry adjusted market return	-0.03	0.48	-0.16	-0.15	-0.05	0.14	0.01	0.09		
8. Analyst recommendation	5.54	5.06	-0.11	-0.12	0.01	0.08	0.02	0.04	0.10	
9. Number of analysts	11.32	8.14	0.03	0.03	0.02	-0.04	-0.01	-0.04	0.01	0.08
10. Firm size	7.73	1.91	-0.04	-0.04	-0.00	0.04	-0.03	-0.15	-0.01	0.06
11. Financial restatements	0.16	0.54	0.11	0.08	0.05	-0.09	-0.04	-0.02	-0.07	-0.06
12. Internal control weakness	0.23	1.85	0.06	0.05	0.05	-0.05	-0.02	0.00	-0.05	-0.03
13. Board size	9.62	2.63	-0.03	-0.01	-0.04	0.05	-0.04	-0.11	-0.01	-0.03
14. Board independence	85.11	18.88	-0.03	-0.04	0.01	0.02	-0.03	0.04	-0.00	-0.02
15. CEO age	59.62	7.85	-0.32	-0.28	-0.11	0.34	-0.14	-0.06	0.05	-0.01
16. CEO gender	0.97	0.17	-0.05	-0.06	0.02	0.05	-0.00	0.03	0.03	0.01
17. CEO salary	6.48	0.90	0.01	0.01	0.01	-0.00	-0.03	0.00	0.02	0.03
Variable	**Mean**	**SD**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
10. Firm size	7.73	1.91	0.59							
11. Financial restatements	0.16	0.54	-0.02	-0.01						
12. Internal control weakness	0.23	1.85	-0.05	-0.04	0.23					
13. Board size	9.62	2.63	0.32	0.63	0.00	-0.01				
14. Board independence	85.11	18.88	0.06	0.02	0.03	0.02	-0.07			
15. CEO age	59.62	7.85	-0.01	0.16	-0.03	-0.00	0.12	0.07		
16. CEO gender	0.97	0.17	0.02	-0.01	0.02	-0.01	-0.01	0.01	0.05	
17. CEO salary	6.48	0.90	0.19	0.33	0.02	-0.02	0.25	0.12	0.09	-0.03

Note. N = 6,013. Variables are winsorized at the 1% and 99% levels if there are outliers >3 standard deviations from the mean. Correlation coefficients $|0.04|$ are significant at the $p < 0.05$ level. Exact p-values and confidence intervals for pairwise correlations are available from the first author on request.

Estimation. Following prior studies (e.g., Agrawal & Cooper, 2017; Gentry et al., 2021; Wiersema & Zhang, 2011), we estimated the effect of the above-mentioned antecedents and control variables on each type of CFO and CEO turnover (dismissal, retirement, and new opportunity exits) using random effects logistic regression. This is because not all firms report a given type of turnover. Since these values remain constant, a fixed effects treatment would drop these observations from the analyses, potentially leading to biased estimation. A random effects specification relaxes the restriction that each panel must have an observed turnover event during the sample period. Therefore, the choice of random effects models is appropriate for probing the mechanisms of CFO and CEO exit. In our estimations, we use robust standard errors clustered at the company level. We also include industry and year fixed effects to control for unobserved heterogeneity across different industries and time.

Results. The descriptive statistics and correlations for the CFO and CEO database samples are presented in Tables 2.4 and 2.5, respectively. The correlations between industry adjusted ROA and overall CFO dismissal (r = -0.05) and CFO performance-related dismissal (r = -0.06) are negative. There are no correlations between industry adjusted ROA and any type of CEO dismissal. However, the correlations between industry adjusted market return and overall CEO dismissal (r = -0.16) and CEO performance-related dismissal (r = -0.15) are negative. There are no correlations between industry adjusted market return and any type of CFO dismissal. While these results are generally consistent with prior work regarding the relationship between performance and executive dismissal (Gentry et al., 2021; Hilger et al., 2013), they also raise important differences in the types of financial performance that boards may be sensitive to when considering dismissing the CFO versus CEO.

Correlations between average analyst recommendation and all CFO and CEO dismissal variables are negative (r = -0.05 to -0.12), except for behavior-related dismissals

where no correlations are observed. This suggests that boards may consider analysts' recommendations as a general measure to evaluate executives' performance, although the strength of the negative relationship is larger for CEO performance-related dismissal than that for CFOs. In contrast, financial restatements and internal control weaknesses are positively correlated with CFO and CEO behavior-related dismissals (r =0.05 to 0.12), although the strength of the positive relationship is larger for CFO behavior-related dismissal than that for CEOs. These relationships demonstrate the efficacy of our coding, as such violations represent policy breaches in financial reporting and are therefore reflective of a behavioral issue. These preliminary findings highlight distinct differences between CEO and CFO exit, as well as similarities, that indicate the value of our CFO database.

Table 2.6 Regression results comparing antecedents of CFO and CEO involuntary and voluntary turnover

	Dismissal				Dismissal (Performance)				Dismissal (Behavior)				Retirement				New opportunity			
	CFO		CEO		CFO		CEO		CFO		CEO		CFO		CEO		CFO		CEO	
Variable	***b(SE)***	***p***	***b(SE)***	***p***	***b(SE)***	***p***	***b(SE)***	***p***	***b(SE)***	***p***	***b(SE)***	***p***	***b(SE)***	***p***	***b(SE)***	***p***	***b(SE)***	***p***	***b(SE)***	***p***
Industry-adjust ROA	-1.01	0.007	0.02	0.419	-0.98	0.014	0.03	0.200	0.56	0.572	-0.06	0.260	1.37	0.003	-0.03	0.262	-0.26	0.379	0.11	0.046
	(0.38)		(0.03)		(0.40)		(0.03)		(0.99)		(0.05)		(0.45)		(0.02)		(0.30)		(0.06)	
Industry-adjust market return	0.03	0.242	-0.88	0.000	-0.00	0.928	-0.83	0.000	-0.01	0.915	-0.33	0.305	-0.04	0.132	0.76	0.000	0.00	0.993	0.16	0.561
	(0.02)		(0.16)		(0.03)		(0.16)		(0.05)		(0.32)		(0.03)		(0.14)		(0.02)		(0.27)	
Analyst recommendation	-0.03	0.006	-0.05	0.000	-0.04	0.010	-0.06	0.000	0.02	0.459	0.02	0.339	0.01	0.648	0.03	0.001	-0.00	0.989	0.02	0.451
	(0.01)		(0.01)		(0.01)		(0.01)		(0.03)		(0.02)		(0.01)		(0.01)		(0.01)		(0.03)	
Number of analysts	-0.00	0.978	0.02	0.017	0.02	0.135	0.02	0.045	0.02	0.440	0.02	0.277	0.021	0.030	-0.02	0.008	0.01	0.135	0.00	0.994
	(0.01)		(0.01)		(0.01)		(0.01)		(0.02)		(0.01)		(0.01)		(0.01)		(0.01)		(0.02)	
Firm size	-0.00	0.952	-0.04	0.459	-0.15	0.024	-0.07	0.199	0.24	0.054	0.14	0.113	0.15	0.004	0.02	0.702	-0.13	0.004	0.08	0.510
	(0.06)		(0.05)		(0.07)		(0.06)		(0.12)		(0.09)		(0.05)		(0.05)		(0.04)		(0.12)	
Financial restatements	0.04	0.656	0.32	0.001	-0.09	0.440	0.21	0.029	0.55	0.000	0.46	0.000	-0.10	0.360	-0.25	0.005	0.09	0.246	-0.86	0.028
	(0.09)		(0.09)		(0.12)		(0.09)		(0.16)		(0.12)		(0.10)		(0.09)		(0.08)		(0.39)	
Internal control weakness	0.08	0.033	0.05	0.163	0.04	0.191	0.04	0.271	0.12	0.022	0.04	0.175	-0.09	0.328	-0.04	0.246	-0.02	0.594	-0.22	0.141
	(0.04)		(0.04)		(0.03)		(0.04)		(0.05)		(0.03)		(0.09)		(0.03)		(0.03)		(0.15)	
Board size	-0.03	0.339	0.00	0.951	-0.01	0.728	0.04	0.202	-0.27	0.005	-0.14	0.035	0.01	0.789	0.03	0.275	0.04	0.130	-0.06	0.301
	(0.01)		(0.03)		(0.04)		(0.03)		(0.09)		(0.07)		(0.04)		(0.03)		(0.03)		(0.06)	
Board independence	-0.00	0.311	-0.01	0.121	-0.00	0.478	-0.01	0.052	0.00	0.998	0.01	0.628	0.01	0.007	0.01	0.138	0.00	0.633	-0.01	0.099
	(0.00)		(0.00)		(0.00)		(0.00)		(0.01)		(0.01)		(0.00)		(0.00)		(0.00)		(0.01)	
Executive age	-0.03	0.000	-0.13	0.000	-0.03	0.002	-0.12	0.000	-0.03	0.113	-0.08	0.000	0.29	0.000	0.12	0.000	-0.10	0.000	-0.15	0.000
	(0.01)		(0.01)		(0.01)		(0.01)		(0.02)		(0.02)		(0.02)		(0.01)		(0.01)		(0.02)	
Executive gender	-0.05	0.792	-0.44	0.156	-0.08	0.721	-0.56	0.073	0.33	0.549	0.832	0.432	-0.29	0.116	0.31	0.281	-0.11	0.465	0.30	0.714
	(0.18)		(0.31)		(0.22)		(0.31)		(0.55)		(1.06)		(0.19)		(0.28)		(0.16)		(0.80)	
Executive salary	0.04	0.746	0.20	0.050	0.43	0.085	0.19	0.065	0.18	0.596	0.171	0.504	-0.13	0.358	-0.13	0.117	-0.08	0.439	0.01	0.963
	(0.12)		(0.10)		(0.25)		(0.10)		(0.35)		(0.26)		(0.15)		(0.08)		(0.10)		(0.14)	
Year dummies	Included		Included		Included		Included		Included		Included		Included		Included		Included		Included	
Observations	3,135		2,613		3,135		2,613		2,760		2,413		3,135		2,613		3,135		2,613	
Number of firms	1,641		1,485		1,641		1,485		1,550		1,485		1,641		1,485		1,641		1,485	
Log-likelihood	-1136.14		-1275.94		-812.53		-1207.12		-219.56		-339.61		-1253.88		-1410.90		-1408.82		-260.62	
X^2	106.01		238.55		60.30		236.78		93.96		77.76		305.89		246.42		222.25		132.77	

Note. We excluded miscellaneous types of CEO and CFO turnover classifications. Standard errors (*SE*) reported in parentheses. *p* = exact p-value. The discrepancy in the number of observations and firms for the regression predicting dismissal (behavior) is due to some years being dropped from the estimation in STATA.

The results of the random effects logistic regression presented in Table 2.6 show similar patterns. The coefficients for industry adjusted ROA, as a measure of accounting-based performance, are negatively related to overall CFO dismissal (b = -1.01, p = 0.007) and CFO performance-related dismissal (b = -0.98, p = 0.014). Industry adjusted ROA does not seem to impact any type of CEO dismissal. Conversely, the coefficients for industry adjusted market return, as a measure of market-based performance, are negatively related to overall CEO dismissal (b = -0.88, p =0.000) and CEO performance-related dismissal (b = -0.83, p = 0.000), but does not impact any type of CFO dismissal. While this latter result is consistent with Gentry et al.'s (2021) findings, our observation that the opposite seems to be true for CFOs again suggests that boards may be sensitive to specific manifestations of financial performance and their alignment with the distinct role expectations of CFOs and CEOs. Our assumption is that boards view accounting performance as the responsibility of the CFO and market performance the responsibility of the CEO. While intuitive, such differences are unaccounted for in prior work (e.g., Finkelstein et al., 2009; Hilger et al., 2013), which tends to treat financial performance as a monolithic construct. As such, our database provides scholars with the opportunity to both nuance and extend our understanding of the performance-dismissal relationship.

The coefficients for analyst recommendation are negatively related to overall CFO (b = -0.05, p =0.000) and CEO dismissal (b = -0.03, p =0.006), and CFO (b = -0.04, p =0.006) and CEO performance-related dismissal (b = -0.06, p =0.000), but are not related to CFO or CEO behavior-related dismissal. These results are consistent with prior work (Gentry et al., 2021) and indicate that analyst recommendations are possibly a common indicator for boards when evaluating executive performance—albeit more so for CEOs with the increased magnitude of the relationship. We conjecture that this is because analysts' recommendations are likely to be informed by several factors and include many dimensions of performance that implicate the entire TMT.

In the case of financial restatements, we find that they are positively related to all types of CEO dismissal: overall (b = 0.32, p = 0.001), performance-related (b = 0.21, p = 0.029), and behavior-related (b = 0.46, p = 0.000), but are only positively related to CFO behavior-related dismissal (b = 0.55, p = 0.000). This suggests that boards may hold CEOs more accountable than CFOs for financial restatements, given they predict all types of dismissal. While these findings are partially consistent with prior work, which indicates a positive relationship between financial restatements and general CFO and CEO turnover (e.g., Arthaud-Day et al., 2006), our results suggest that financial restatements may not explain all types of CFO turnover. The coefficients for financial restatements on CFO and CEO new opportunity exits provide support to this claim and suggest meaningful differences. Specifically, we find that financial restatements are negatively related to CEO new opportunity exit (b = -0.86, p = 0.028), but unrelated to CFO new opportunity exit. Thus, it appears that restatements have differential job market consequences for CFOs and CEOs, with CFOs being seemingly unaffected in their ability to secure new jobs opportunities despite the negative valence of such events. The similarities and differences we have highlighted in this section underscore the importance of distinguishing between different types of CFO turnover and provide opportunities for future research using our database.

2.5.3 Quantitative Analysis of the Interdependence between CFO and CEO Turnover

In this section, we present a specific theoretical application of our database to highlight a meaningful difference in the interdependence between CFO and CEO turnover. Driven by insights from prior work, which suggest a heightened propensity for boards and new CEOs to "clean house" and replace other members of the TMT following the dismissal of an incumbent CEO for poor performance (Marcel & Cowen, 2014; Semadeni, Cannella, Fraser, & Lee, 2008), we explore whether such interdependencies may also exist for voluntary exits. In particular, we focus on exploring the potential asymmetry in

interdependence between CFO and CEO voluntary exit to pursue a new job opportunity. We suspect that CEO exits to pursue a new job opportunity will be positively associated with CFO exits to pursue a new job opportunity. This is because exiting CEOs may seek to make "executive transfers" and bring the CFO to the new firm given the unique interface CFOs form with CEOs as strategic partners (Harrison & Malhotra, 2024), or CFOs may preempt pending changes following the CEO exit that triggers a "job-jump". Different to "jumping ship", where an executive proactively leaves a troubled organization to avoid stigmatization (Marcel & Cowen, 2014), a job jump is not necessarily preceded by a negative event, such as poor financial performance or a restatement. However, we do not suspect CFO exits to pursue new opportunities will impact CEO exits to pursue new opportunities.

To test this, we fully merged our CFO database with Gentry et al.'s (2021) CEO database to create a panel dataset that documents the job status of both CEOs and CFOs across firms and years. This includes both current CFOs and CEOs and all types of turnover for a total dataset of 37,680 observations. Again, we estimated the interdependencies between CFO and CEO exits to pursue a new job opportunity by using random effects logistic regression. In the first model, we examine whether a CEO departure for a new job opportunity influences a subsequent CFO departure for a new job opportunity. Then, in the second model, we examine whether a CFO departure for a new job opportunity influences a subsequent CEO departure for a new job opportunity. We capture subsequent CFO and CEO new opportunity exits as those that occur within 12-months following the first executive departure.[9] To ensure the sequential nature of executive job transitions is accurately captured, we exclude instances where the CEO and CFO depart within the same month.

Dependent variables. The dependent variables used in our analyses are based on our coding of CFO voluntary exit and Gentry et al.'s (2021) CEO voluntary exit. *CFO new*

[9] We also provide the STATA code for merging the CFO and CEO databases, which allows future researchers to adjust the time gap between CEO and CFO any type of departure.

opportunity captures CFO exits to pursue a new job opportunity that occur within 12-months following a CEO exit to pursue a new job opportunity. *CEO new opportunity* captures CEO exits to pursue a new job opportunity that occur within 12-months following a CFO exit to pursue a new job opportunity. These variables are both indicators coded as [1] if there is an observed exit, and [0] otherwise.

Independent variables. The independent variables are preceding CEO and CFO exits to pursue a new job opportunity. *Preceding CEO new opportunity* captures CEO exits to pursue a new job opportunity that occur within a given year. *Preceding CFO new opportunity* captures CFO exits to pursue a new job opportunity that occur within a given year. These variables are both indicators coded as [1] if there is an observed exit, and [0] otherwise.[10]

Control variables. We used the same set of control variables detailed in our first quantitative analyses. We also include the dummy variables for CFO and CEO retirement and dismissal to account for the common type of turnover observed in both datasets.

[10] This includes observations of non-turnover, and turnover events not related to new job opportunities.

Table 2.7 Regression results comparing interdependence between CFO and CEO new opportunity exit

	New opportunity			
	CFO		CEO	
Variable	***b(SE)***	***p***	***b(SE)***	***p***
Preceding CEO new opportunity	1.35	0.001		
	(0.42)			
Preceding CFO new opportunity			0.32	0.602
			(0.62)	
CEO retirement	0.29	0.044		
	(0.14)			
CFO retirement			-0.17	0.816
			(0.71)	
CEO dismissal	0.60	0.000		
	(0.16)			
CFO dismissal			0.96	0.042
			(0.47)	
Industry adjusted ROA	-0.41	0.040	-0.11	0.865
	(0.20)		(0.65)	
Industry adjusted market return	0.00	0.398	0.00	0.033
	(0.00)		(0.00)	
Number of analysts	-0.01	0.123	-0.02	0.310
	(0.01)		(0.02)	
Analyst recommendation	0.00	0.574	-0.03	0.290
	(0.01)		(0.03)	
Firm size	-0.00	0.964	0.17	0.124
	(0.04)		(0.11)	
Accounting restatements	0.09	0.123	-0.72	0.080
	(0.06)		(0.41)	
Internal control weakness	-0.03	0.320	0.04	0.564
	(0.03)		(0.07)	
Board size	0.05	0.022	-0.07	0.359
	(0.02)		(0.07)	
Board independence	0.00	0.210	-0.01	0.126
	(0.00)		(0.01)	
Executive age	-0.05	0.000	-0.07	0.000
	(0.01)		(0.01)	
Executive gender	-0.12	0.345	0.08	0.873
	(0.12)		(0.53)	
Executive salary	-0.53	0.000	-0.26	0.002
	(0.07)		(0.08)	
Year dummies	Included		Included	
Industry dummies	Included		Included	
Observations	27,400		31,320	
Number of firms	2,377		2,498	
Log-likelihood	-3432.39		-545.31	
X^2	410.08		160.82	

Note. Results based on full sample, including current executives. Standard errors (*SE*) reported in parentheses. *p* = exact p-value. For individual-level control, we use CFO age, gender and salary to regress on CFO exit for new opportunity, and CEO age, gender and salary to regress on CEO exit for new opportunity.

Results. The results of our analyses are presented in Table 2.7. We find that a CEO new opportunity exit is positively associated with a subsequent CFO new opportunity exit ($b = 1.35$, $p = 0.001$). Specifically, when the CEO leaves the focal firm to pursue a new job

opportunity, the odds that the CFO will also exit the firm to pursue a new job opportunity are 3.86 times greater than if the CEO does not depart to pursue a new job opportunity. However, a CFO new opportunity exit does not appear to have any impact on a subsequent CEO new opportunity exit (b = 0.32, p = 0.602). Although this asymmetry in the interdependence between CFO and CEO new opportunity exits is not entirely unexpected, the difference in influence raises several intriguing questions that open new avenues for research on the labor market outcomes of non-CEO executives. In terms of the other types of turnover we include as controls, we find that CEO dismissal is positively associated with a subsequent CFO new opportunity exit (b = 0.60, p = 0.000), and CFO dismissal is positively associated with a subsequent CEO new opportunity exit (b = 0.96, p = 0.042). These findings are consistent with prior work which suggests that executives may "jump ship" in light of bad news (Marcel & Cowen, 2014; Semadeni et al., 2008). No other type of CFO turnover meaningfully impacts CEO new opportunity exit. These asymmetry between CEO and CFO pursues a new job opportunity can provide further insights in the executive labor market research.

As we alluded above, we conjecture that two different mechanisms may explain the interdependence in new job opportunity turnover for CFOs. The first mechanism is what we refer to as "executive transfers", where a focal CEO seeks to transfer existing members of the TMT over to the new firm to join them in the executive team. One specific example of this in our database is when Charles Scharf, CEO of Bank of New York Mellon Corp., left the company in October 2019 to become CEO of Wells Fargo, and the current CFO Mike Santomassimo left the focal company to join Scharf at Wells Fargo as CFO in September 2020. The second mechanism is what we refer to as a "job-jump", where a focal CFO secures a new job in anticipation of a potential change in the focal firm following a CEO new opportunity exit. One example of this is when Stephen Odland, CEO of AutoZone, left the company to become CEO of Office Depot in March 2005 and current CFO Mike Archbold

left the company in September 2005 to become CFO at Saks Fifth Avenue Enterprises.

Such socialized accounts of executive voluntary turnover remain theoretically and empirically unexplored. Future researchers could therefore use our database to expand the initial analyses we have presented to explore in greater detail the potential mechanisms explaining the interdependence in new job opportunity turnover for CFOs. For example, scholars can theorize and examine how various faultlines between CFOs and CEOs, such as those based on age, background, experience, and other demographic variables (e.g., Georgakakis, Greve, & Ruigrok, 2017), may differentially shape the interdependency we observe and the mechanism of new opportunity exit. Does the presence of such faultlines increase the likelihood of a job-jump and decrease the likelihood of an executive transfer? Similarly, future research may examine whether the existence of professional and personal ties between the CFO and CEO also impact this interdependence. For example, are CFOs with strong social ties to CEOs more likely to transfer than CFOs that do not possess such social ties? Our CFO database allows researchers to explore such questions and in doing so expands the scope of executive labor market research to new territory.

2.6 Implications and Future Research

Our open access database of CFO turnover and dismissal in S&P 1500 firms contributes to the literature in two ways. First, and foremost, our novel, hand-collected database addresses the void in data availability on individual non-CEO executives, which scholars have positioned as being the major limiting factor hindering the advancement of non-CEO executive labor market research (see Krause et al., 2022; Withers et al., 2024). Thus, our database on CFO turnover and dismissal represents an important first step towards addressing the imbalance in executive research, which is currently heavily focused on CEOs (Andrus et al., 2019; Boivie et al., 2016), by providing scholars with the necessary data foundation to pursue labor market and corporate governance research on an important non-CEO executive, namely the CFO.

Second, and more importantly, we demonstrate the theoretical importance of our database for advancing existing and opening entirely new streams of research through the qualitative and quantitative analyses we present. In terms of executive labor market research, our initial qualitative analysis revealed important differences in the main reasons why CFOs leave their jobs compared to CEOs. Distinct from CEOs, who tend to retire from the labor market, most CFO turnovers occur due to internal and external job changes into another executive role. As such, our database provides scholars with the opportunity to examine unexplored questions regarding the internal and external job mobility of CFOs that is not possible by focusing exclusively on CEOs. For instance, scholars may use our database to examine the factors influencing CFO promotion to CEO and what environmental and contextual factors that increase the likelihood of the CFO being internally or externally promoted to CEO. Further, drawing on the idea of market frictions (Withers et al., 2024), scholars can examine whether CFOs possess greater interfirm mobility than other executives, given they possess knowledge, skills, and abilities that tend to be more generalizable across industries and firms than those of other non-CEO executives may be more firm-specific, like COOs.

In terms of corporate governance research, scholars may use our database to expand and build upon the quantitative analyses we present that examines the mechanisms driving different types of CFO and CEO exit. In particular, our analyses suggest that boards view accounting performance as the CFO's responsibility and market performance as the CEO's responsibility. These findings support the notion that boards may be sensitive to the alignment between different types of firm performance and the specific role expectations of executives. Such differences offer opportunities for scholars to further nuance our understanding of the performance-dismissal relationship, which may account for the some of the inconsistencies reported in prior work (Hilger et al. 2013). An interesting extension would be for future research to examine what happens when the firm exhibits both poor

accounting and market performance: do boards dismiss the CFO and CEO simultaneously? Do historical patterns of accounting and market performance influence the sequencing of CFO and CEO dismissal?

Future work using our database may also seek to build on the preliminary results we presented regarding the asymmetry in the interdependence between CFO and CEO new opportunity exits. Here we also conjecture that two distinct mechanisms may explain why CEO new opportunity exits are positively associated with CFO new opportunity exits, namely an executive transfer or a job jump. Our database provides scholars with the foundation to explore such novel mechanisms and interdependencies between CFOs and CEOs, thereby expanding the scope of executive labor market research to new territory.

Notwithstanding the future research implications of the analyses we present, our database can also be used to expand our understanding of the consequences of different types of CFO and CEO turnover for the firm. In particular, executive dismissal is often used as a corrective action to remedy poor performance and other kinds of organizational violations (e.g., Hersel et al., 2023; Hersel, Helmuth, Zorn, Shropshire, & Ridge, 2019). Given prior work reports both positive and negative effects of CFO and CEO dismissal on investor reactions (cf. Denis & Denis, 1995; Khanna & Poulsen 1995; Mian 2001; Worrell, Davidson, & Glascock, 1993), future research can use our CFO database and Gentry et al.'s (2021) CEO database to potentially resolve these inconsistencies. For example, are there differences in the types of violation that CFO versus CEO dismissal is the best form of corrective action? Such research has important implications for our understanding of dismissal as an impression management tactic used by corporate boards.

2.7 Concluding Discussion

In this paper, we developed an open access database on CFO turnover and dismissal to help address the data limitation that currently hinders research progress on the non-CEO executive labor market. Pursuing such research has been difficult as collecting detailed

turnover and dismissal data on non-CEO executives is extremely labor intensive. Our database represents a critical first step in filling this data void. Compared to existing databases that only provide the date and limited information of an executive turnover (e.g., Audit Analytics, BoardEx, Execucomp), our database provides the turnover details of CFO departure events with supporting evidence for our coding. Further, we highlight many future research directions and opportunities for new theorizing that scholars can pursue using our database. The granularity of our coding process to distinguish between the various types of CFO turnover affords researchers significant flexibility to conduct replicable, transparent, and cumulative research in a variety of theoretical and empirical domains beyond the scope of that outlined in this paper.

In the spirit of openness, we seek to make it a precondition to using our database that any modifications and extensions are also shared and made open access to facilitate the cumulation of research efforts. As a "living" database, we aim to update our database with new observations each year by including new turnover events, checking missing observations, and building in feedback from the scholarly community. We hope our efforts stimulate impactful future work.

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Chapter 3: Guilt-By-Association: The Contagion Between CEO and CFO Dismissal

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Contribution to the Paper	I planned the article and methodology, conducted the literature review, collected and analyzed the data, and wrote the manuscript.		
Overall percentage (%)	70%		
Certification:	This paper reports on original research I conducted during the period of my Higher Degree by Research candidature and is not subject to any obligations or contractual agreements with a third party that would constrain its inclusion in this thesis. I am the primary author of this paper.		
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Co-Author Contributions

By signing the Statement of Authorship, each author certifies that:

i. the candidate's stated contribution to the publication is accurate (as detailed above);

ii. permission is granted for the candidate in include the publication in the thesis; and

iii. the sum of all co-author contributions is equal to 100% less the candidate's stated contribution.

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3.1 Abstract

Drawing on stigma theory, this study aims to examine the phenomenon of executive dismissal contagion, with a specific focus on the effect of different types of CEO dismissal—capability-based and integrity-based—on subsequent CFO dismissal. We theorize and find evidence to suggest that integrity-based dismissals have a stronger stigmatizing effect on CFO dismissal than capability-based dismissals. Further, we develop contingency arguments regarding the moderating role of CEO-CFO professional and personal ties on the effect of CEO capability- and integrity-based dismissal on CFO dismissal. We argue that stronger (weaker) ties will increase (decrease) the stigmatizing effect of these CEO dismissals on the CFO. We use a large sample of CEO and CFO turnover and dismissal events in S&P 1500 firms from 2000 to 2021. This study enhances our understanding of executive turnover, social interaction, and contagion effect. Our findings provide a nuanced perspective on the interrelationships between CEO and CFO dismissal.

Keywords: CEO, CFO, turnover, dismissal, contagion effect, stigma theory, professional tie, personal tie

3.2 Introduction

One of the primary goals of management and strategy researchers is to understand the antecedents and consequences of executive turnover and dismissal (Gentry et al., 2021; Hilger et al., 2013; Shen & Cannella, 2002). Prior studies have tended to focus on the role of firm performance, financial misconduct, and board governance mechanisms on CEO dismissal (Gangloff et al., 2016; Park et al., 2020; Uhde et al., 2017; Wiersema et al., 2011). However, less research has been devoted to understanding how CEO dismissals impact the subsequent dismissal of non-CEO executives, such as the CFO. This is important, as prior work suggests that boards tend to "clean house" following firm violations (i.e., performance and misconduct) in which the behaviors of the CEO may spillover to other executives (Marcel & Cowen, 2014). Given the CEO-CFO interface as a strategic partnership, the CEO and CFO collaborate to ensure a well-calculated approach to the firm's objectives (Harrison & Malhotra, 2024). Thus, the aim of this study is to examine how different types of CEO dismissal have a stigmatizing effect on the CFO as the CEOs' strategic partner.

Integrating stigma theory, originally developed by Goffman (1963) and more recently extended by Schepker & Barker (2018), with upper echelons theory (Hambrick & Mason, 1984), we first argue that CEO dismissals—both capability-based (i.e., the removal of a CEO due to perceived inadequacies or failures in their skills, competence, or ability to effectively lead the organization) and integrity-based (i.e., the removal of a CEO due to behavioral violations, misconduct, or breaches of policies that compromise their moral standing and the firm reputation)—are stigmatizing events for CFOs given their close relationship with the CEO. However, we theorize that the stigmatizing effect of integrity-based dismissals on CFOs will be more pronounced than that of capability-based dismissals. This is because CEO integrity-based dismissal triggers the bad apple effect, where behavioral misconduct is seen as more damaging to the firm reputation, making CFOs more susceptible to guilt by association compared to capability-based dismissals. Further, we

propose that CEO-CFO professional and personal ties are the moderators to these main effects. The professional ties, formed in the formal workplace, suggest shared responsibility in strategic decisions and financial management between the CEO and CFO, making CFOs more likely to be implicated in CEO capability-based dismissals. On the other hand, the personal ties, developed outside the workplace, foster a more intensive personal connection between the CEO and CFO, which may lead the board to question the CFO's ethics in CEO integrity-based dismissals.

To test our arguments, we use Gentry et al.'s (2021) open access database on CEO to isolate capability-based and integrity-based dismissals and merge all CEO turnover events with our established CFO database. The final sample includes 5,044 CEO-CFO dyads from S&P 1500 US firms. Our results reveal that CEO violations—both capability- and integrity-based—have negative consequences for CFOs. Even when CFOs are not explicitly criticized during their dismissal announcements[11], they still face penalties, such as dismissal. Further, we find that the association is more pronounced when the CEO and CFO have close professional and personal ties. Specifically, increased professional ties strengthen the relationship between CEO capability-based dismissal and CFO dismissal. Increased personal ties strengthen the relationship between CEO integrity-based dismissal and CFO dismissal. We show that the contagion effect between the CEO and CFO occurs in cases of dismissal, rather than voluntary resignation, reflecting the stigmatization that permeates the upper echelons of the executive hierarchy. This is because of the perception that the CEO and CFO are often seen as jointly responsible for collusion within the firm.

Our study makes several contributions to the literature. First, drawing on stigma theory, our study advances a novel socialized perspective of non-CEO executive dismissal that highlights the interconnections between different types of CEO dismissal and CFO

[11] Boards may decide to dismiss both executives together or in tandem, as executive dismissal announcements are sometimes occurred simultaneously or separately to maintain smooth transition.

dismissal. Despite CFOs being innocent, boards find CFOs “guilty-by-association”, especially when the CEO dismissal is based on integrity issues. This finding challenges traditional views of executive turnover as an isolated event, prompting a reconsideration of firm succession and operational policies. Moreover, our finding offers essential guidance for companies, emphasizing the need to evaluate leadership transitions in the context of executive integrity and isolate these events to mitigate the impact on other key executives within the organization. Most importantly, our study extends the literature on stigmatization by shifting the focus from organizational and group-level stigma to the individual level within the top management team. We show that personal and professional ties can intensify the contagion effect between the CEO and CFO. This underscores the importance of interpersonal dynamics within the executive suite, challenging traditional governance practices. Thus, our findings call for a broader perspective on succession planning, where both internal and external stakeholders must recognize the risks of stigma transfer and its implications for leadership stability.

3.3 Theory and Hypotheses

3.3.1 Unravelling the Executive Stigmatization

An intriguing phenomenon explaining the CEO and CFO relationship is ingratiation. Specifically, when a less powerful individual seeks to win favor with a more powerful individual through ingratiation, the less powerful individual tends to become more likable and thereby, receives more advantages (Appelbaum & Hughes, 1998). Within the corporate hierarchy, individuals with less power, such as CFOs, often employ ingratiation towards those with more power, such as CEOs, as ingratiation with superiors can lead to positive evaluations from superiors (Shi et al., 2019). Conversely, when a CEO is in jeopardy, non-CEO executives, including CFOs, may become stigmatized. The closer the relationship between the CEO and the CFO, the greater the potential negative impact on the CFO. Therefore, understanding the origins of stigma and corresponding strategies to address it is

critical (Meisenbach, 2010).

In 1963, Goffman introduced the concept of stigma and defined it as "an attribute that is deeply discrediting", in which a stigmatized person is reduced "from a whole and usual person to a tainted, discounted one" (p. 3). In management research, stigma has been categorized by different levels of analysis, from organizational to individual level (Zhang et al., 2021) and described as the "denigration or stain the person experiences" (Wiesenfeld et al., 2008, p.232). Stigma refers to the damage to an actor's identity deriving from proximity to socially discrediting events, characteristics, or associations (Devers et al., 2009). Specifically, an executive may become stigmatized due to failure, scandal, or perceived incompetence, with this devaluation serving as the foundation for diminished professional standing and compromised future career prospects (Wiesenfeld et al., 2008).

Stigma has a significantly negative effect on the image and reputation of the associated individual, which diminishes the legitimacy and standing of those connected to individuals who engage in violations (Wiesenfeld et al., 2008). In a corporate context, stigma theory suggests that the actions of CEOs may have negative spillover effects on other members of the TMT, who may be perceived as guilty without tangible evidence (Deem & Ramsey, 2016). Thus, the involuntary departure of a CEO, as the highest-ranking executive in the firm, can stigmatize and negatively impact other top executives, such as the CFO, due to their close connections. This, in turn, adversely affects their career progression and reputation.

3.3.2 Two Types of CEO Dismissal and the Subsequent CFO Dismissal

Despite the theoretical implications of stigma being explored at the organizational-level (e.g., Hudson et al., 2022), which emphasize mechanisms causes organizational stigma and its implications at different levels, there is little research that examines the mechanisms of stigmatization at the individual-level, such as CEO and CFO executives. This omission is surprising, even though some research has shown patterns of CEO and CFO turnover (e.g.,

Fee & Hadlock, 2004; Hilger, et al., 2013; Mian, 2001). Kulik et al. (2008) shows when someone departs under a cloud of failure, other coworkers within the firm may face the burden. Following prior literature (e.g., Comyns & Franklin-Johnson, 2018; Galloway et al., 2023), we suggest dismissals can implicate individuals through a process of "singling out", the stigmatized executive may face negative consequences due to the spillover caused by their partnership with CEO.

Capability-based dismissals encompass situations where the CEO is removed from their position due to job-related performance (Cadman et al., 2016; Gentry et al., 2021). When a CEO's performance is below expectations, it is often a signal that they are incapable of carrying out their responsibilities effectively (Shimizu & Hitt, 2004), which damages organizational legitimacy and undermines confidence from internal and external stakeholders (Arthaud-Day et al., 2006; Cowen & Marcel, 2011; Karpoff & Lott, 1993). In response, the board might dismiss the CEO, which could also implicate other executives, such as the CFO, due to their close strategic and financial collaboration with the CEO (Arthaud-Day et al., 2006; Condie et al., 2023, Shimizu & Hitt, 2004). Similarly, integrity-based dismissals involve circumstances where a CEO termination is triggered by issues related to personal behavior or policy violations. Ethical and legal violations are often viewed with indignation and result in a significant repercussion for the violator (Tetlock, 2002), which intensifies the level of stigmatization associated with the actions (Wiesenfeld et al., 2008). Following Haislip et al. (2015), we posit that such dismissals can cast doubt on the entire leadership, affecting the CFO who is also integral to corporate governance. Given the CFO's integrity is especially vital due to their critical role in financial oversight and decision, any implication of potential involvement in the CEO's ethical breaches could severely impact on their career (Clayton, 2013; Stango, 2006). Thus, we hypothesize that both types of CEO dismissal can influence the subsequent CFO dismissal:

Hypothesis 1: *CEO capability-based dismissal and integrity-based dismissal are*

positively related to CFO dismissal.

Integrity-based issues occur when the CEO breaches corporate policies or engages in criminal behaviors, often resulting in immediate dismissal (Gentry et al., 2021). This sudden change concerns stakeholders and exacerbates market uncertainty (Giannetti & Wang, 2016; Resnick, 2004). The dismissal can act as an indicator of more profound issues within the corporate management structure (Connelly et al., 2016). Conversely, capability-based dismissal can sometimes be viewed as part of the natural process of corporate downturn and restructuring, resulting in a refocusing and redefining of the firm business activities (Wiersema, 1995). This is sometimes caused by external factors outside the executives' control (Akpoviroro & Owotutu, 2018), so despite dismissal, the board does not always place all the blame on executives. For boards, restoring trust is often more challenging following CEO integrity violations compared to competence violations (Kim, Ferrin, Cooper, & Dirks, 2004). Such a breach is often viewed as a reflection of their character (e.g., Schepker & Barker, 2018), and a CEO personal behaviour and commitment to ethical standards should be within their own controls. Such integrity-related violations are unexpected by the board, which require the board to conduct a comprehensive reassessment of the entire management team to maintain the organization's reputation (Cowen & Marcel, 2011; Gentry et al., 2021). Although CEO capability-based dismissal is impactful, we suggest that CEO integrity-based dismissal can influence CFO dismissal, and its impact is stronger than that of CEO capability-based dismissal.

Hypothesis 2: *Compared to CEO capability-based dismissal, CEO integrity-based dismissal is associated with a stronger likelihood of CFO dismissal.*

3.3.3 Executive Ties and Contagion Effect

Individuals tend to share information within networks and engage in reciprocal exchanges with their social connections (Penrose, 1959). Strong connections allow individuals to access private information and scarce resources, which may lead them to be

viewed as an integral group (Butler & Gurun, 2012, Bianchi et al., 2023; Geletkanycz & Hambrick,1997). The professional and personal ties between the CEO and CFO give rise to both professional information sharing and personal connections (Kuang et al., 2022). Shi et al. (2019) also finds that CFOs with a strong intention to ingratiate themselves with CEOs tend to seek benefits. Under favorable circumstances, a strong relationship between the CEO and CFO can foster more cohesive decision-making and partnership, benefiting the CFO and increasing the likelihood of retaining their position or receiving a promotion (Adler & Kwon, 2002; Karahanna & Preston, 2013; Leana & Van Buren, 1999). In contrast, the close relationship between the CEO and CFO could have negative consequences in unfavorable circumstances. For example, if a CEO is dismissed due to capability-based or integrity-based issues, the CFO might also be held accountable due to their close tie with the CEO. Thus, the social ties between the CEO and the CFO can act as a double-edged sword for the CFO's career consequences (Kuang et al., 2022).

Wilbanks et al., (2017) suggest that CEO-CFO professional ties refer to the relationships developed in a formal workplace environment. A close relationship between a CEO and CFO in a professional context means they collaborate closely on strategic decisions and financial management. This collaborative experience can foster the development of professional bonds, which in turn, enhances the sharing of generic occupational information, including those aspects related to strategic planning and operations (Gibbons, 2004; Souza et al., 2016). Thus, in cases where a CEO is dismissed due to capability-based issues, this close professional relationship can result in the perception that the CFO may also be incapable. This perception arises because both the CEO and CFO are integral to the same decision-making processes and share responsibility for performance. We therefore expect that the CEO-CFO professional tie will moderate the positive relationship between CEO capability-based dismissal and CFO dismissal, such that a CFO's dismissal risk is amplified when they have strong professional ties.

Hypothesis 3a: *CEO-CFO professional ties will moderate the positive relationship between CEO capability-based dismissal and CFO dismissal, with stronger professional ties strengthening this relationship.*

Distinct from professional ties, personal ties between the CEO and CFO can also exist, as evidenced by their participation in shared activities, such as attending the same university, belonging to the same social clubs, and engaging in philanthropic efforts (Krishnan et al., 2011; Kuang et al., 2022). These activities provide chances for the CEO and CFO to understand each other on a more personal level. In the case where a CEO is dismissed due to integrity-based issues, such relations likely cast a negative shadow on the CFO, even if the CFO is innocent of any wrongdoing (Fang et al., 2022). There may be perceived biases arising from their relationship, as stakeholders might believe they act in concert (Pozner, 2008). Stakeholders may suspect the CFO's personal virtues and moral ethics could be unduly affected by the CEO given their personal relationship. Such suspicions could arise from the belief that the CFO is complicit in the CEO's unethical actions and has adopted the CEO's discredited views and unethical approach. We therefore expect that CEO-CFO personal ties will moderate the relationship between CEO integrity-based dismissal and CFO dismissal, such that a CFO's dismissal risk is amplified when they have strong personal ties.

Hypothesis 3b: *CEO-CFO personal ties will moderate the positive relationship between CEO integrity-based dismissal and CFO dismissal, with stronger personal ties strengthening this relationship.*

3.4 Methods

3.4.1 Data and Sample

We test our hypotheses using a sample of CEO and CFO turnover and dismissal events from S&P 1500 firms between 2000 and 2021. We start with the open-access database of CEO turnover and dismissal events in S&P 1500 firms collected by Gentry et

al. (2021),[12] which includes CEO turnover events starting from 2000, following a robust protocol and coding scheme. We identify 6,588 instances of CEO turnover and dismissal in Gentry et al.'s (2021) database, with CEO dismissals accounting for 23.4% of total observations in Gentry et al.'s (2021) database.

Gentry and his colleagues demonstrate that it is problematic to treat executive turnover in a coarse manner since the mechanism causing each type of voluntary and involuntary turnover may be different. Thus, we follow the approach used in Gentry et al. (2021) and hand collect data on CFO turnover and dismissal in S&P 1500 firms. The dismissal information is available from media reporting in Google News, reliable sources of documentation including SEC filings (Form 8-K, 10-Q quarterly report, and 10-K annual reports), earnings conference call transcripts, company press releases, official announcements posted on corporate websites, and trusted media outlets such as Bloomberg, Wall Street Journal, Fortune, and among others.[13] In instances where there is an absence of media documentation, we examine CFO profiles from LinkedIn and bibliography websites. We finally collect a dataset on 8,294 instances of CFO turnover and dismissal, with CFO dismissals accounting for 12.3% of total observations.

Next, we combine CEO and CFO turnover and dismissal datasets by merging each unique company identifier and executive identifier. The CEO turnover and dismissal database was constructed from ExecuComp, where the unique company identifier and executive identifier are "GVKEY" and "Executive ID", respectively. On the contrary, our CFO turnover and dismissal database was constructed via BoardEx,[14] where the unique

[12] Gentry et al.'s (2021) open-access database for CEO dismissal can be accessed from the following link: https://doi.org/10.5281/zenodo.4543893.

[13] Other sources of information included: reputable journalists and sell-side analysts, Pittsburgh Business Times, The Business Journal, Business Wire, Yahoo, Forbes, and MarketWatch. Specific detail for each source is provided in our CFO database.

[14] The BoardEx database provides greater advantages for CFO when compared to ExecuComp who only focuses on providing annual data for the company's five highest-paid executives. Indeed, BoardEx provides extensive search capabilities of non-CEO executives in case where CFOs may not invariably be included in the list on ExecuComp, especially preceding and during the year of a CFO departure.

company identifier and executive identifier are “Company ID” and “Director ID”, respectively. We then convert the BoardEx identifiers into Execucomp identifiers to merge two datasets.

To ensure a valid association between CEO and CFO dismissal, we examine CFO career outcome within a specific time frame, where CEO turnover precedes CFO turnover by less than 12 months. Our choice of a 12-month gap aligns with the calendar year, providing a crucial phase for a successor CEO to evaluate the team and strategize key decisions (Giambatista et al., 2005). We have 5,044 observations, capturing CFO career outcomes (e.g., voluntary resignations, involuntary dismissals, remain in the role) following a prior CEO departure.

3.4.2 Variables Description

***Dependent variable*:** To capture all CFO dismissal events, we define our dependent variable of CFO dismissal using Codes 2, 3, and 4 in our comprehensive CFO turnover and dismissal database. Code 2 refers to CFO dismissal attributed to performance. In such instances, both media reports and company press releases indicate negative sentiment, citing deficient corporate performance or strategic decisions that mandate the forced departure of executives (e.g., workforce downsizing, management reshuffles, etc.). Code 3 includes CFO dismissal due to behavioral issues, such as policy breaches or misconduct. These turnovers typically represent violations of company HR policies, regulations, laws, or personal behavior. For example, Kerry A. Shiba’s resignation from his position as the CFO of Kaiser Aluminum was attributed to “a personal relationship with another employee, which the company determined to be inappropriate” (Hymowitz, 2007). Code 4 encompasses CFO dismissals with no explicit reason. In these cases, a dismissal was confirmed based on the following factors: (1) the immediate departure with no transition period, and (2) the absence of positive sentiment expressed in media announcements (Efendi et al., 2013; Mergenthaler et al., 2012). For instance, the CFO Mark Kerschner abruptly exited from CDI Corp in

August 2011, and no public statements were made about his departure. We code CFO dismissal as a binary variable that equals [1] if an involuntary CFO turnover occurred, and [0] otherwise, including current CFOs.

***Independent variables*:** Using Gentry's CEO database (2021), we identify two types of CEO dismissals from Code 3 and Code 4: one driven by objective performance failure, and the other by subjective behavioral failure. We examine these two types of dismissals to ensure the events refer to capability-based dismissals and integrity-based dismissals, respectively. As discussed, *CEO capability-based dismissal* refers to situations where the CEO is dismissed due to job-related performance issues, including poor financial performance, strategies, or failure to meet certain goals, etc. This kind of dismissal is generally based on corporate performance metrics and can be traced directly to a CEO's leadership. For instance, John McGlade's departure from Air Products & Chemicals Inc in July 2014 was due to the company's failure to achieve the set target of a 20 percent operating margin, as well as its inability to reach the goal of $15 billion in annual sales. We code *CEO capability-based dismissal* as an indicator variable that equals [1] if there was a capability-based dismissal event and [0] otherwise.

CEO integrity-based dismissal refers to situations where the CEO is dismissed because of subjective behaviors or actions that are considered unacceptable or damaging to the company's reputation. As mentioned, these CEO behavioural dismissals include unethical practices, violations of company policies, improper personal conduct, or other forms of misconduct. For instance, George Maloney was involuntarily terminated from his position at Bard (C.R.) Inc. with the stated reason being that Maloney had been indicted on charges related to the unlawful usage of heart catheter products. We code *CEO integrity-based dismissal* as an indicator variable that equals [1] if there was an integrity-based dismissal event, and [0] otherwise.

***Moderator variables*:** We use CEO and CFO tenure overlap to measure the *CEO-*

CFO professional ties (e.g., Ke, et al., 2019; Kuang et al., 2022). The overlap of CEO and CFO tenures within the firm indicates how long the CEO and CFO have worked together as strategic partners. To calculate this overlap, we obtain both the CEO and CFO start and end dates from BoardEx and calculate the overlap in months[15]. *CEO-CFO personal ties* are defined as non-familial, informal ties between executives in their academic background (i.e., originate from the same university), and activity connections (i.e., social activities, including the affiliation to not-for-profit organizations, or club memberships, etc.) (Krishnan et al., 2011). We calculate the frequency of each association and generate an aggregate index indicative of the personal ties between CEO and CFO.

***Control variables*:** We include several control variables that have been shown to impact CFO dismissal based on firm-, board-, and executive-level control variables. At the firm-level, we control for *firm performance* and *firm size*, as these elements are considered as important factors in executive dismissal studies (Conyon & Florou, 2002; Ocasio, 1999). *Firm performance* was operationalized as *return on equity*, measured as net income divided by shareholders' equity (Fooladi et al., 2011). *Firm size* was measured as the natural logarithm of annual sales to adjust for skewness (Boivie et al., 2016). *The number of analysts* is associated with executive dismissal, as a high number of security analysts covering the firm can lead to increased executive dismissal (Farrell & Whidbee, 2003). Similarly, analysts' consensus recommendation can influence executives' career (Mergenthaler et al., 2012), so we included *negative analyst recommendations*. We also control for *number of institutional shareholders*, measured as the number of institutional shareholders[16], and for *institutional ownership concentration*, measured as the concentration of ownership among institutional investors, using the Herfindahl-Hirschman Index. This is important because large institutional shareholders can encourage the board to take corrective action and

[15] We standardize CEO-CFO tenure overlap to aid interpretation.
[16] Institutional shareholders are selected by those who occupy 5% or more of shares.

terminate underperforming executives (Koh, 2003; Parrino et al., 2003).

At the board-level, we control for *board size*, measured as the number of directors on the board, because larger boards have various approaches and ample resources to monitor the firm (Gentry et al., 2021). We control for *board independence*, measured as the percentage of independent directors on the board, because independent directors can provide active monitoring and elevate the likelihood of executive dismissal in response to poor firm performance (Hilger et al., 2013). We also include *board age diversity* and *board gender diversity* because they improve board oversight of corporate activities (Beji et al., 2021, Habib & Hossain, 2013).

At the executive-level, female executives are at a higher risk of dismissal than their male counterparts, we include *CEO gender* and *CFO gender*, using the code [1] for males and [0] for females (e.g., Gupta et al., 2020; Haislip et al 2015). Executive age is also a critical consideration for the board during appointment decisions, which has a consequential role in executive succession and selection procedures (Davidson et al., 2006). We therefore control for *CEO age* and *CFO age*. To account for the potential influence of executive power on dismissal, we control for *CFO on board* as a binary code [1] for the CFO is the board member and [0] otherwise; and *CEO duality* as binary code [1] for the CEO is the board chairman and [0] otherwise (Boeker, 1992).

3.4.3 Model Specification

To examine the association between CEO and CFO dismissal, we follow previous studies (e.g., Frye & Pham, 2020; Hu & Lin, 2015; Hubbard et al., 2017; Lau et al., 2009; Wang et al., 2017) and use logistic regression. We also include year and industry fixed effects (industry dummies are based on 2-digit GIC industry codes). We apply our empirical models with a one-year lag of the explanatory and control variables to overcome potential reverse causality (Wooldridge, 2010). We cluster standard errors at the firm level (Petersen, 2009).

3.5 Results

Table 3.1 reports the descriptive statistics and correlations among the regression variables. The findings indicate a significantly positive correlation between *CFO dismissal* and both categories of CEO dismissal (capability-based dismissal, $r = 0.14$; integrity-based dismissal, $r = 0.10$), offering preliminary support for our hypotheses 1 and 2.[17] We first run an OLS regression to show that the VIFs are ranging from 1.01 to 1.91 and are below the threshold of 4 (O'Brien, 2007), so multicollinearity is not an issue in our study.

[17] The correlation table also shows valuable information. For example, the correlation between return on equity and CFO dismissal is negative and significant (r = -0.05). Besides, the closer the professional affiliations between the CEO and CFO, the less likely the CFO will be dismissed under typical circumstances (r = -0.07). CFO age is negatively correlated with CFO dismissal (r = -0.08), indicating the increased experience and expertise with age, will make the CFO more valuable to the company.

Table 3.1 Descriptive statistics and correlations

Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10
1. CFO dismissal	0.11	0.31										
2. CEO capability-based dismissal	0.20	0.40	0.14									
3. CEO integrity-based dismissal	0.03	0.18	0.10	-0.10								
4. Professional tie	0.00	1.00	-0.07	-0.13	-0.05							
5. Personal tie	0.00	1.00	0.02	0.01	-0.00	-0.01						
6. CEO age	60.60	8.43	-0.09	-0.20	-0.12	0.16	-0.28					
7. CFO age	53.03	7.11	-0.08	-0.05	-0.08	0.27	-0.22	0.33				
8. CEO gender	0.96	0.19	-0.02	-0.06	0.03	0.04	-0.02	0.06	0.01			
9. CFO gender	0.89	0.31	-0.01	-0.02	-0.03	0.07	-0.03	0.03	0.07	0.06		
10. Board gender diversity	0.86	0.11	0.02	-0.02	0.05	0.01	-0.04	-0.07	-0.10	0.28	0.09	
11. Board age diversity	7.34	2.29	0.06	0.06	0.06	-0.02	0.04	-0.15	-0.11	0.02	-0.03	0.14
12. Firm size	7.40	1.67	0.02	0.01	-0.01	-0.00	-0.08	0.16	0.18	0.01	-0.03	-0.31
13. Board size	9.40	2.37	-0.04	-0.02	-0.04	0.03	-0.11	0.17	0.13	0.03	-0.01	-0.21
14. Board independence	0.85	0.17	-0.04	-0.05	-0.03	0.09	-0.05	0.07	0.05	-0.01	0.00	-0.12
15. CEO duality	0.30	0.46	-0.04	-0.05	0.00	0.09	-0.10	0.18	0.12	0.05	-0.01	-0.06
16. CFO on board	0.07	0.25	-0.02	-0.01	-0.01	0.03	0.02	0.04	0.10	0.02	0.00	-0.08
17. Number of analysts	11.18	6.39	0.02	-0.00	0.04	0.02	-0.10	0.07	0.11	0.05	-0.01	-0.11
18. Analysts recommendation	2.48	0.38	0.03	0.05	0.01	0.02	0.03	-0.04	-0.05	-0.02	-0.03	-0.08
19. Return on equity	0.26	14.30	-0.05	-0.01	-0.07	0.03	-0.04	0.03	0.03	-0.01	0.00	-0.04
20. Number of institutional holders	2.54	1.84	0.06	0.05	-0.01	0.04	0.05	0.01	0.02	-0.01	-0.00	-0.09
21. Institutional concentration	0.11	0.20	0.03	0.04	-0.01	-0.09	-0.02	-0.08	-0.07	-0.01	0.01	0.10
Variable	**Mean**	**SD**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**
12. Firm size	7.40	1.67	-0.17									
13. Board size	9.40	2.37	-0.07	0.41								
14. Board independence	0.85	0.17	-0.09	0.09	-0.00							
15. CEO duality	0.30	0.46	-0.12	0.23	0.18	0.10						
16. CFO on board	0.07	0.25	-0.01	0.10	0.05	-0.00	0.18					
17. Number of analysts	11.18	6.39	-0.10	0.52	0.30	0.06	0.18	0.06				
18. Analysts recommendation	2.48	0.38	-0.02	-0.01	0.01	-0.01	0.03	-0.02	-0.04			
19. Return on equity	0.26	14.30	-0.02	0.04	0.04	-0.00	0.02	-0.00	0.04	-0.01		
20. Number of institutional holders	2.54	1.84	-0.03	-0.11	-0.13	0.07	-0.05	-0.00	-0.16	-0.02	0.03	
21. Institutional concentration	0.11	0.20	0.11	-0.12	-0.09	-0.09	-0.14	-0.07	-0.08	0.02	-0.01	-0.35

Note: N =5,044. Variables are winsorized at the 1% and 99% levels if there are outliers >3 standard deviations from the mean. Correlation coefficients $|0.04|$ are significant at the $p < 0.05$ level. Exact p-values and confidence intervals for pairwise correlations are available from the author on request.

Table 3.2 Model 1 presents the baseline results that includes only control variables. Models 2 to 4 examine the main effect of both types of CEO dismissal. Model 2 reports the main effect of CEO capability-based dismissal on CFO dismissal. In support of our prediction, we find that CEO capability-based dismissal has a positive and significant impact on CFO dismissal (b = 0.74, p = 0.000). The result is also economically significant. The estimated coefficient on CEO capability-based dismissal indicates that for every unit increases in the CEO capability-based dismissal, the odds of CFO dismissal increase by approximately 110%. Model 3 reports the main effect of CEO integrity-based dismissal on CFO dismissal to test Hypothesis 2. The results demonstrate a statistically significant relationship between CEO integrity-based dismissal and CFO dismissal (b = 0.97, p = 0.000). We find that the occurrence of CEO integrity-based dismissal increases the odds of CFO dismissal by approximately 163%. Thus, Hypothesis 1 is supported.

Model 4 includes both CEO capability and integrity-based dismissals. Consistent with Hypothesis 3, the results show that CEO integrity-based dismissal has a stronger positive effect on CFO dismissal (b = 1.29, p = 0.000) than CEO capability-based dismissal (b = 0.87, p = 0.000). Specifically, the odds of CFO dismissal are approximately 3.6 times higher in integrity-related dismissals, compared to 2.4 times in capability-related dismissals. Thus, Hypothesis 2 is supported.[18]

Models 5 to 7 report the interaction effects of both types of CEO dismissal with CEO-CFO professional and personal ties to test Hypotheses 3a and 3b. In Model 5, we find a significant interaction coefficient between CEO capability-based dismissal and CEO-CFO professional ties (b = 0.28, p = 0.035). The result is consistent with the prediction in Hypothesis 3a, indicating that strong professional ties between the CEO and CFO can

[18] In our further analysis of 228 CEO-CFO dismissal events, over 83% of CFOs were dismissed alongside the CEO, despite not being explicitly mentioned in the dismissal disclosures. Only 2 CFOs were dismissed solely due to their own performance or misconduct following integrity-based CEO dismissals. Our findings indicate a contagion effect between CEO and CFO dismissals.

amplify the likelihood of CFO dismissal when the CEO is dismissed due to lack of capability. Similarly, in support of Hypothesis 3b, we find that the interaction term between CEO integrity-based dismissal and CEO-CFO personal ties is positive and significant (Model 6: $b = 0.55$, $p = 0.033$), indicating that strong personal ties between the CEO and CFO can amplify the likelihood of CFO dismissal when the CEO is dismissed due to lack of integrity. Model 7 is a full model and shows consistent results.

Table 3.2 Main regression results

	CFO DISMISSAL						
Variable	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**
CEO capability-based dismissal		0.741***		0.868***	0.758***		0.884***
		(5.16)		(6.00)	(5.28)		(6.13)
CEO integrity-based dismissal			0.969***	1.285***		0.927***	1.228***
			(3.63)	(4.74)		(3.42)	(4.46)
Professional tie		-0.085	-0.096	-0.078	-0.165**	-0.098	-0.157*
		(-1.23)	(-1.42)	(-1.10)	(-2.08)	(-1.44)	(-1.90)
Personal tie		-0.020	-0.035	-0.009	-0.023	-0.088	-0.066
		(-0.26)	(-0.47)	(-0.12)	(-0.29)	(-1.14)	(-0.85)
CEO capability-based dismissal X professional tie					0.281**		0.264*
					(2.11)		(1.95)
CEO integrity-based dismissal X personal tie						0.551**	0.564**
						(2.13)	(2.15)
CEO age	-0.005	-0.010	-0.015*	-0.005	-0.011	-0.015*	-0.005
	(-0.62)	(-1.05)	(-1.67)	(-0.49)	(-1.12)	(-1.65)	(-0.53)
CFO age	-0.033***	-0.027**	-0.024**	-0.025**	-0.026**	-0.024**	-0.025**
	(-3.24)	(-2.34)	(-2.12)	(-2.21)	(-2.29)	(-2.19)	(-2.24)
CEO gender	-0.383	-0.202	-0.294	-0.235	-0.158	-0.300	-0.197
	(-1.16)	(-0.58)	(-0.84)	(-0.66)	(-0.45)	(-0.86)	(-0.55)
CFO gender	0.053	-0.006	0.010	0.012	-0.009	0.029	0.030
	(0.22)	(-0.02)	(0.04)	(0.05)	(-0.03)	(0.10)	(0.11)
Board gender diversity	0.857	0.784	0.784	0.637	0.792	0.768	0.636
	(1.04)	(0.85)	(0.89)	(0.70)	(0.86)	(0.86)	(0.69)
Board age diversity	0.069**	0.048	0.046	0.044	0.051	0.043	0.044
	(2.30)	(1.49)	(1.41)	(1.33)	(1.58)	(1.32)	(1.32)
Return on equity	-0.038**	-0.042***	-0.038**	-0.035**	-0.042***	-0.035*	-0.033**
	(-2.50)	(-3.26)	(-2.21)	(-2.35)	(-3.30)	(-1.92)	(-2.07)
Number of institutional holders	0.121***	0.148***	0.161***	0.149***	0.148***	0.153***	0.142***
	(2.75)	(3.22)	(3.49)	(3.19)	(3.25)	(3.31)	(3.04)
Institutional concentration	0.758**	0.807**	0.960***	0.847**	0.843**	0.910**	0.830**
	(2.21)	(2.21)	(2.67)	(2.35)	(2.32)	(2.53)	(2.30)
Firm size	0.176***	0.174**	0.185**	0.172**	0.176**	0.183**	0.172**
	(2.74)	(2.35)	(2.54)	(2.34)	(2.39)	(2.49)	(2.32)
Board size	-0.040	-0.055	-0.052	-0.051	-0.058	-0.052	-0.055
	(-1.12)	(-1.35)	(-1.29)	(-1.27)	(-1.44)	(-1.29)	(-1.36)
Board independence	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005
	(-1.22)	(-1.17)	(-1.24)	(-1.04)	(-1.14)	(-1.26)	(-1.03)
CEO duality	-0.185	-0.142	-0.169	-0.178	-0.139	-0.156	-0.160
	(-1.05)	(-0.74)	(-0.89)	(-0.91)	(-0.72)	(-0.81)	(-0.81)
CFO on board	-0.281	-0.262	-0.246	-0.252	-0.247	-0.253	-0.243
	(-0.97)	(-0.86)	(-0.81)	(-0.82)	(-0.82)	(-0.83)	(-0.80)
Number of analysts	0.009	0.013	0.010	0.010	0.013	0.009	0.008
	(0.79)	(1.19)	(0.98)	(0.92)	(1.18)	(0.81)	(0.74)
Negative analyst recommendation	0.308*	0.224	0.274	0.221	0.217	0.271	0.212
	(1.77)	(1.20)	(1.51)	(1.19)	(1.16)	(1.50)	(1.14)
Constant	-3.169**	-3.722**	-3.530**	-3.968**	-3.755**	-3.412**	-3.888**
	(-2.18)	(-2.20)	(-2.13)	(-2.33)	(-2.22)	(-2.05)	(-2.27)
Observations	2,781	2,395	2,395	2,395	2,395	2,395	2,395
Log likelihood	-979.30	-808.34	-814.98	-798.48	-806.55	-812.19	-794.05
Wald Chi^2	116.13	149.80	128.45	168.50	150.05	130.55	169.44

Notes: Year dummies and 2-digit GIC industry dummies are included. Z-values are provided in parenthesis below coefficient estimates. P-values are indicated as *, **, *** at 0.05, 0.01, and 0.001 significance. All models use robust standard error clustered by firm.

It is noted that in logit or probit models, statistical inferences based on the significance of the coefficient on an interaction term might not be accurate because the model specification is nonlinear (Norton et al., 2004). The sign of the marginal effect of CEO *capability-based dismissal* X *CEO-CFO professional tie*, and *CEO integrity-based dismissal* X *CEO-CFO personal tie* might not match the estimated sign of the coefficient. To address this concern, we go beyond just interpreting the sign and significance of the coefficient for interaction terms and analyze changes in probabilities at meaningful values of the variables with graphical presentation that visualizes the marginal effects under different conditions (Busenbark et al., 2022; Hoetker, 2007).

To further illustrate the moderation effects, we graph the marginal effect of professional and personal ties on the relationship of CEO capability-based and integrity-based dismissal on CFO dismissal, respectively, in Figure 3.1 and Figure 3.2. Figure 3.1 indicates that an increase in CEO capability-based dismissal progressively elevates the probability of CFO dismissal across different percentiles of CEO-CFO professional ties. Specifically, the probability of CFO dismissal increases from 1.1% at the minimum professional ties to 14.0% at its maximum. These results also suggest that the magnitude of the relationship between CEO capability-based dismissal and CFO dismissal depends on the different levels of CEO-CFO professional ties.

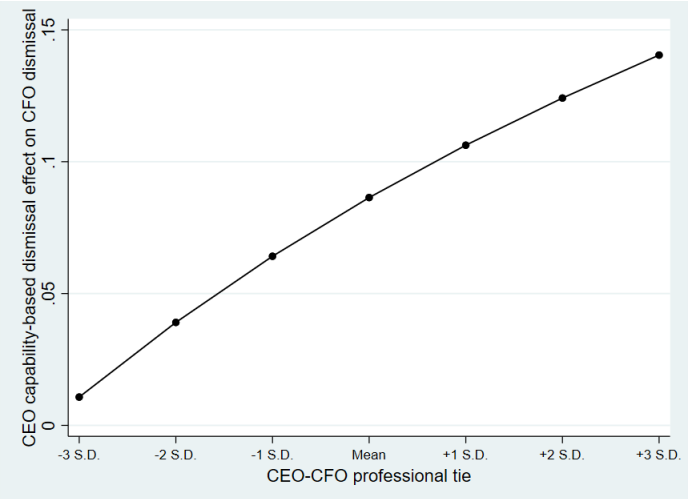

Figure 3.1 Plot of interaction between (a) CEO-CFO professional tie (b) CEO capability-based dismissal and (c) CFO dismissal

Figure 3.2 indicates that when CEO-CFO personal tie is at zero, the estimated marginal effect of CEO integrity-based dismissal on CFO dismissal is 4.6%, this effect is not statistically significant (p=0.217). As the level of CEO-CFO personal ties escalates from zero to low, medium, and high, the probability of CFO dismissal increases significantly. At low personal ties, the marginal effect is a 13.8% increase in CFO dismissal probability. This effect is amplified to a 21.1% increase at medium, and to a 26.1% increase at high personal ties.

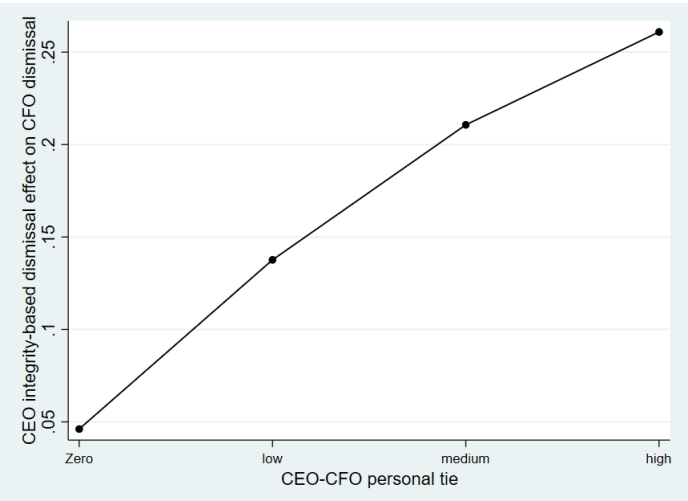

Figure 3.2 Plot of interaction between (a) CEO-CFO personal tie (b) CEO integrity-based dismissal and (c) CFO dismissal

3.6 Additional Analysis

We employ several supplementary analyses to further support our findings. First, reverse causality is possible that CFO dismissal would lead to subsequent CEO dismissal. To empirically investigate which direction of causality dominates, we conduct a causality analysis to examine the nature of relation between CFO dismissal and CEO dismissal. Specifically, we test the relationship between each type of CFO dismissal and subsequent CEO dismissal with the same moderators and control variables. We find a weaker relationship between both types of CFO dismissal and subsequent CEO dismissal, and no significant effects with the inclusion of CFO-CEO professional and personal ties.

Second, CEO external replacement can bring new strategic visions and help the organization not only in mitigating the detrimental disruptions associated with former CEO dismissal, but also facilitating the expeditious execution of necessary changes (Brady & Helmich, 1984; Shen & Cannella, 2002). CEOs from external replacement often comes with the explicit intention of executives' upheaval and strategic transformations (Shen & Cannella, 2002; Zajac, 1990). Thus, it is crucial to substantiate that the primary reason behind CFO dismissals is primarily due to CEO-CFO contagion effect, rather than a managerial upheaval triggered by an outsider CEO. To demonstrate, we identified 1,014 events for CEO capability-based dismissal and 160 events for CEO integrity-based dismissal in our merged dataset. We manually examine and find that 42% and 37% of CEO successions were insider replacement and interim CEO replacement, so there was only one-fifth confirmed replacements are outsider replacement. Moreover, we separate two groups with external and internal CEO replacement, and we found the effect of both groups of CEO dismissal and replaced by internal replacement vs. external replacement on subsequent CFO dismissal, are significant.

Third, we include additional control variables in our regression model to account for CEO and CFO heterogeneity. We re-estimate our analysis by substituting the original

individual controls for CEO and CFO with the differences in gender, age, educational background, individual networks, and power.[19] Our results continue to show consistent results.

Last, boards may choose to remove both the CEO and CFO concurrently or opt for a stepwise sequence to ensure a smooth transition. By including board size, board independence, board age and gender diversity in our main model, we add more board-level controls.[20] We use the time gap between CEO and CFO turnover and dismissal as the dependent variable in a Cox proportional hazard regression analysis for time-to-event data, where covariates may change their values over time (Fisher & Lin, 1999). We observed no specific patterns or significant values for each covariate. This suggests that the time gap between CEO and CFO dismissals is not predictable based on board-level predictors, indicating that our sample does not exhibit bias related to specific types of board characteristics.

3.7 Endogeneity Analysis

We employ the following tests to address the potential endogeneity concerns resulting from omitted variables bias, selection bias, and reverse causality problems.

***Propensity score matching (PSM) model*:** Our main analysis may raise concern about bias stemming from observable confounding factors. For example, sample selection bias can arise from firms that dismiss executives following specific incidents or financial downturns. To provide more evidence that our results are not driven by observable firm characteristics, we use a PSM approach to control for confounding factors, following prior research (Mount & Baer, 2022). PSM is beneficial when random assignment is not possible and aims to obtain matches between a treatment (CEO capability-based dismissal, CEO

[19] The power difference of CEO and CFO was captured by differences of their annual compensation. (Source: Execucomp).
[20] Board level controls includes board nationality mix, board member academic background, board members' prior employment, board members' compensation diversity (Source: BoardEx).

integrity-based dismissal) and a control (CEO non-capability turnover, CEO non-integrity turnover) group using a set of covariates to match observations based on their estimated treatment probabilities. The application of PSM mitigates the impact of unobserved heterogeneity, decreases the propensity for Type I errors, and furnishes more cautiously calibrated estimates compared to regression approaches (Dehejia & Wahba, 2002). We apply a Kernel matching method because it permits subsequent analysis using multivariate models and using information from all non-treated cases, which offers advantages in terms of using more information and not losing study subjects (Guo et al., 2006).

To generate a propensity-matched sample, we first distinguish CEO turnover events. Next, we match observations between the treatment and control group using the "psmatch2" command in STATA 16 and regress the probability of a CEO's dismissal on all control variables specified from our main analysis. To determine the appropriateness of our matching approach, we consider the means of the matched variables. The means of the matched control variables were not significantly different between the treatment group and control group, indicating the success of the approach. The PSM results in Table 3.3 are consistent with our main analysis, suggesting that our results are not driven by the selection bias caused by the difference in observable variables.

Table 3.3 PSM regression results

	CFO DISMISSAL			
Variable	**(1)**	**(2)**	**(3)**	**(4)**
Professional tie	-0.085	-0.165**	-0.100	-0.101
	(-1.23)	(-2.08)	(-1.47)	(-1.49)
Personal ties	-0.020	-0.023	-0.030	-0.083
	(-0.26)	(-0.29)	(-0.40)	(-1.07)
CEO age	-0.010	-0.011	-0.015*	-0.015
	(-1.05)	(-1.12)	(-1.66)	(-1.63)
CFO age	-0.027**	-0.026**	-0.023**	-0.024**
	(-2.34)	(-2.29)	(-2.11)	(-2.18)
CEO gender	-0.202	-0.158	-0.292	-0.299
	(-0.58)	(-0.45)	(-0.83)	(-0.85)
CFO gender	-0.006	-0.009	0.046	0.067
	(-0.02)	(-0.03)	(0.17)	(0.24)
Board gender diversity	0.784	0.792	0.764	0.746
	(0.85)	(0.86)	(0.86)	(0.83)
Board age diversity	0.048	0.051	0.048	0.045
	(1.49)	(1.58)	(1.47)	(1.38)
Return on equity	-0.042***	-0.042***	-0.006	-0.004
	(-3.26)	(-3.30)	(-0.42)	(-0.24)
Number of institutional holders	0.148***	0.148***	0.160***	0.152***
	(3.22)	(3.25)	(3.45)	(3.28)
Institutional concentration	0.807**	0.843**	0.951***	0.901**
	(2.21)	(2.32)	(2.64)	(2.50)
Firm size	0.174**	0.176**	0.178**	0.176**
	(2.35)	(2.39)	(2.44)	(2.38)
Board size	-0.055	-0.058	-0.053	-0.053
	(-1.35)	(-1.44)	(-1.31)	(-1.31)
Board independence	-0.005	-0.005	-0.006	-0.006
	(-1.17)	(-1.14)	(-1.28)	(-1.30)
CEO duality	-0.142	-0.139	-0.158	-0.143
	(-0.74)	(-0.72)	(-0.82)	(-0.75)
CFO on board	-0.262	-0.247	-0.247	-0.254
	(-0.86)	(-0.82)	(-0.81)	(-0.84)
Number of analysts	0.013	0.013	0.011	0.009
	(1.19)	(1.18)	(1.02)	(0.84)
Negative analyst recommendation	0.224	0.217	0.263	0.261
	(1.20)	(1.16)	(1.46)	(1.45)
CEO capability-based dismissal	0.741***	0.758***		
	(5.16)	(5.28)		
CEO capability-based dismissal X professional tie		0.281**		
		(2.11)		
CEO integrity-based dismissal			0.976***	0.936***
			(3.65)	(3.46)
CEO integrity-based dismissal X personal ties				0.553**
				(2.13)
Constant	-3.722**	-3.755**	-3.426**	-3.309**
	(-2.20)	(-2.22)	(-2.06)	(-1.98)
Observations	2,395	2,395	2,391	2,391
Log likelihood	-808.34	-806.55	-812.86	-810.05
Wald chi^2	149.80	150.05	113.10	116.51

Notes: Year dummies and 2-digit GIC industry dummies are included. Z values are provided in parenthesis below coefficient estimates. P values are indicated as * ** *** at 0.05, 0.01, and 0.001 significance. All models use robust standard error clustered by firm.

Heckman two-stage model: We further employ Heckman (1979) two-stage regression to further correct for self-selection bias. This method relies on instrumental

variable(s) (IVs) that must meet two key criteria: (1) IVs should have a strong correlation with the endogenous explanatory variables in the first stage equation, and (2) IVs should not have a direct influence on the outcome variable in the second stage equation. The first stage of the Heckman model aims to predict how IVs affect CEO capability-based dismissal or CEO integrity-based dismissal. Following prior executive dismissal studies, we use CEO age as our IV for CEO capability-based dismissal, because CEOs approaching retirement age are more likely to voluntarily leave rather than dismissal (Chiu & Sharfman, 2018). We also use the total number of company litigations in a given year as IV for CEO integrity-based dismissal (Aharony et al., 2015), because CEOs are held accountable for alleged corporate wrongdoing, which increases their likelihood of losing employment. We apply Wu-Hausman test and F-test, which have been shown to be statistically significant in confirming the strong exogeneity of the IV (Larcker & Rusticus, 2010).

The first stage regression is aimed to model the probability of selection into the sample using a probit regression model and regress the likelihood of CEO capability-based dismissal (CEO integrity-based dismissal) on CEO age (company litigation) and a set of control variables from our main analysis. As expected, we find that the IVs have a strong correlation with the endogenous explanatory variables, thereby satisfying the first criterion. Using the results from the first stage, we calculate the Inverse Mills Ratio (IMR) for each observation. The IMR variable is then included as an additional explanatory variable in our second-stage model to account for potential sample selection bias (Zhu & Shen, 2016).[21] In Table 3.4, the Inverse Mills Ratios (imr1, imr2) are insignificantly associated with the CFO dismissal, thereby satisfying the second criterion. The findings from the two-stage Heckman procedure align with our main regression, suggesting that corrections for self-selection bias do not alter our initial results.

[21] The inclusion of IMR helps correct for potential sample selection bias. If the IMR is shown statistically significant in this stage, it demonstrates the existence of sample selection bias, so the application of the Heckman correction becomes necessary.

Table 3.4 Heckman two-stage model

	CFO DISMISSAL			
Variable	**(1)**	**(2)**	**(3)**	**(4)**
Professional tie	-0.081	-0.168*	-0.082	-0.084
	(-1.16)	(-2.11)	(-1.19)	(-1.20)
Personal tie	-0.013	-0.015	-0.040	-0.094
	(-0.17)	(-0.19)	(-0.53)	(-1.20)
CEO age	-0.188	-0.207	-0.044	-0.043
	(-1.68)	(-1.88)	(-0.97)	(-0.95)
CFO age	-0.004	-0.002	-0.048	-0.048
	(-0.24)	(-0.09)	(-1.17)	(-1.17)
CEO gender	-1.474	-1.562	0.456	0.449
	(-1.76)	(-1.89)	(0.36)	(0.35)
CFO gender	0.203	0.221	-0.311	-0.288
	(0.67)	(0.73)	(-0.47)	(-0.43)
Board gender diversity	1.892	2.021	2.240	2.216
	(1.62)	(1.74)	(0.82)	(0.80)
Board age diversity	0.110*	0.120*	0.120	0.117
	(2.17)	(2.39)	(0.94)	(0.90)
Return on equity	-0.071**	-0.073**	-0.084	-0.081
	(-3.32)	(-3.49)	(-1.11)	(-1.06)
Number of institutional holders	0.471*	0.506*	0.149**	0.142**
	(2.24)	(2.44)	(3.06)	(2.89)
Institutional concentration	3.062*	3.342*	0.299	0.249
	(2.14)	(2.37)	(0.31)	(0.25)
Firm size	0.500*	0.537**	0.199**	0.196*
	(2.36)	(2.58)	(2.59)	(2.53)
Board size	-0.142*	-0.154*	-0.114	-0.114
	(-2.10)	(-2.31)	(-0.98)	(-0.97)
Board independence	-0.027	-0.030*	-0.012	-0.012
	(-1.89)	(-2.06)	(-1.20)	(-1.19)
CEO duality	-0.258	-0.267	0.107	0.121
	(-1.25)	(-1.28)	(0.21)	(0.23)
CFO on board	-0.603	-0.623	-0.282	-0.290
	(-1.71)	(-1.79)	(-0.89)	(-0.91)
Number of analysts	0.022	0.022	0.029	0.027
	(1.80)	(1.87)	(0.74)	(0.68)
Negative analyst recommendation	0.930	0.997*	0.171	0.169
	(1.89)	(2.05)	(0.88)	(0.87)
imr1	6.940	7.676		
	(1.59)	(1.78)		
imr2			1.747	1.739
			(0.60)	(0.59)
CEO capability-based dismissal	0.758**	0.778**		
	(5.22)	(5.36)		
CEO capability-based dismissal X professional tie		0.306*		
		(2.25)		
CEO integrity-based dismissal			0.970**	0.928**
			(3.60)	(3.40)
CEO integrity-based dismissal X personal tie				0.564*
				(2.15)
Constant	-8.666*	-9.237**	-6.403	-6.267
	(-2.43)	(-2.61)	(-1.11)	(-1.07)
Observations	2,395	2,395	2,351	2,351
Log likelihood	-806.98	-804.89	-795.18	-792.28
Wald chi^2	160.28	165.40	129.63	131.48

Notes: Year dummies and 2-digit GIC industry dummies are included. Z values are provided in parenthesis below coefficient estimates. P values are indicated as * ** at 0.05, 0.01 significance. All models use robust standard error clustered by firm.

3.8 Discussion

In this study, our primary goal is to develop a theoretical understanding and offer empirical evidence on whether and how CEO dismissal due to capability and integrity failure is associated with CFO dismissal. We integrate insights from upper echelons theory and stigma theory to build and test this association, suggesting that the CEO capability and integrity failure can influence the career prospects of a CFO, which reflects the contagion effect between executives. Consistent with our theorizing, we find that both CEO capability-based dismissal and integrity-based dismissal are positively associated with the probability of CFO dismissal. We also introduce ties between the CEO and CFO, namely CEO-CFO professional and personal ties, as our moderators, to examine their role in executives' dismissal. We find differential effects of CEO capability-based dismissal and integrity-based dismissal on CFO dismissal depending on whether CEO-CFO professional and personal ties are high or low. These results have important theoretical and practical implications, as we state below.

3.8.1 Theoretical Implications

Theoretically, our study contributes to the existing literature in two main ways. First, we add to the literature on executive turnover and stigmatization by incorporating research on the dismissal of the top two executives in U.S. firms to explain corporate boards' dismissal decisions on retaining or sweeping the firm "captains." While prior studies have identified that stigma by association, suggesting that an individual is stigmatized by others as a function of his or her association with a marked individual (Neuberg et al., 1994), this effect within the upper echelons' framework of executive influence has not yet been addressed. We advance our understanding of this complex dynamic in upper echelons research and empirically unveil the profound influence of CEO failure and its impact on CFO dismissal. This effect is more pronounced in situations where the CEO is dismissed

because of integrity-based issues, which can result in the CFO being stigmatized significantly, tarnishing their reputation, and leading to subsequent dismissals. Our study also emphasizes the importance of strategic management in terms of executive succession, particularly during turbulent times when firms face either performance downturn or unethical scandals.

Second, our study provides new insights into the impact of CEO-CFO professional and personal ties on this contagion effect of CEO and CFO dismissal, as the literature is inconclusive on the role of CEO-CFO affiliation. On the one hand, close CEO-CFO ties could have a positive impact on firm outcomes. For example, the intensive relationship between the CEO and CFO can generate more cohesive decision-making and enhance firm performance (Adler & Kwon 2002; Karahanna & Preston, 2013). On the other hand, these close CEO-CFO ties could have negative consequences, as we demonstrate in this study. Our study resolves these inconclusive predictions by drawing on stigma theory and providing empirical evidence on how professional or personal ties between the CEO and CFO impact the relationship of CEO dismissal on CFO dismissal. Beyond advocating for a broader perspective on corporate governance and succession planning, our study elaborates the importance of re-evaluating succession policies — these turnover and succession attempts must consider not only the contagion effects among executives, but also the nuanced influences of the CEO-CFO professional and personal interactions inside and outside the organization.

3.8.2 Practical Implications

Our findings provide significant practical implications for executives, board members, and investors. For executives themselves, while the professional tie between a CEO and CFO is beyond the CFO control, it is important for the CFO to maintain an appropriate personal distance from the CEO, in order to reduce the risk of being stigmatized if the CFO perceives that the CEO's competence and ethical integrity may not always be

consistent or achieving the standard. When a CEO is dismissed, it is important for the CFO to adapt to the changing dynamics and provide financial expertise and insights, which will help navigate the company through the transitional period. The CFO may need to review and adjust financial planning and budgeting processes to align with the new CEO strategic objectives, and actively engage with investors and other stakeholders to address concerns and provide reassurance about the firm financial stability.

For boards of directors, our findings not only guide corporate boards in shaping their executive teams social and professional networks, but also provide a warning about the consequences of interconnected networks between executives. To mitigate this bias, we suggest that boards be aware of the CEO-CFO ties affecting their decisions so they can take active steps to reduce its influence. Furthermore, by revealing the enhanced management upheaval and strategic reorientation risk associated with CEO integrity-based dismissals, we also suggest boards implement more rigorous ethics and integrity training programs, as well as enhance their crisis management strategies in cases of CEO dismissal.

For investors, CEO and CFO dismissal can spark apprehension about corporate governance and internal stability. This can result in circumspection regarding the firm financial performance or integrity and could potentially erode investor confidence. Our study suggests that during situations involving CEO dismissals due to either capability or integrity-based issues, investors should seek more insights and play an active role in the board decision-making processes. By closely scrutinizing the firm communication regarding the strategic plans of the new CEO, as well as assessing the capabilities and integrity of the remaining leadership team, investors can better gauge their confidence in the firm capacity to navigate through adversity.

3.8.3 Limitation and Future Research

While this study makes a substantial contribution to our understanding of the executive contagion effect, as with all studies, our findings are subject to several limitations

that may be addressed in future research. First, our analysis is based solely on publicly listed U.S. firms. The cultural, regulatory, and corporate governance environment in the US might differ from that of other countries, and this could limit the generalizability of our findings to other contexts. We encourage future research to explore firms outside the U.S. Second, the categorization of CEO and CFO dismissals may not capture the full complexity of reasons behind these dismissals. The distinction between capability-based and integrity-based dismissals might overlook some subtle variations, and there may be other types of dismissals that are not fully covered by our classification. Future research could use other types of dismissal (e.g., strategic disengagement, scapegoating) to explore how these dismissals interact with other executive dismissal. Third, our study explores the professional and personal ties between CEOs and CFOs, we acknowledge that the exact nature and depth of these relationships can be challenging to quantify and fully comprehend. In other words, there may be some unobserved or unmeasurable factors that could also influence these dynamics. We encourage future researchers to explore other factors that might moderate the effect of CEO and CFO turnover and dismissals. Such factors may include external factors such as the overall economic conditions (e.g., market munificence, competitive environment, etc.), and internal factors (e.g., geographical scope; industry stability; and firm profitability, etc.). Another direction for future research involves an investigation of possible interactions between CEO and CFO dismissals and executive characteristics such as tenure, ability on various strategic outcomes. Furthermore, we believe it would be worthwhile to shift the focus from our current study to explore CFO retention following CEO dismissal. This is particularly intriguing given that the "cleaning house" approach often appears to be the default. Hence, why some CFO survives while majority of others do not, deserves more attention.

3.9 References

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Chapter 4: Know Your Role? CEO-CFO Power and Investor Reactions to Dismissal Following Signalled Financial Misconduct

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4.1 Abstract

Drawing on role theory, this study proposes that the within-role difference between CEO versus CFO power—the difference in power relative to that expected for their role—can provide insights into investors' reactions to CEO versus CFO dismissal following signalled financial misconduct. We argue that, because CEOs and CFOs are both functionally responsible for financial misconduct, the within-role difference between CEO and CFO power will be a salient signal to investors influencing their attributions of blame. Through an event study analysis of 743 dismissals (CEO vs. CFO) in U.S. firms between 2005 and 2021, we show that when the within-role power of the CEO is higher than the within-role power of the CFO, investors react more positively to CEO dismissal. Conversely, when the within-role power of the CFO is higher than the within-role power of the CEO, investors react more positively to CFO dismissal. We discuss the implications of our results for the literature on executive dismissal, upper echelons theory, and role theory.

Key words: CEO dismissal, CFO dismissal, role theory, power, financial misconduct

4.2 Introduction

The question of how firms respond to signals of financial misconduct is a central problem for organizational and strategy scholars (Connelly et al., 2016; Gangloff et al., 2016; Greve et al., 2010). Signals of financial misconduct, such as material weaknesses in financial reporting and restatements (e.g., Arthaud-Day et al., 2006; Donelson et al., 2017; SEC, 2003), can have negative consequences for the focal firm, resulting in legal penalties, reputational damage, and stock price drops (Gomulya & Mishina, 2017; Yiu et al., 2014; Zavyalova et al., 2012). Executive dismissal is a common action deployed by corporate boards to restore investor confidence following such signals (Gomulya & Boeker, 2014, Hersel et al., 2019). Drawing on signalling theory, prior work on this topic suggests that the utility of an executive dismissal—CEO versus CFO—depends on the degree of congruence between the specific circumstances of the financial misconduct and the dismissed executive (Hersel et al., 2023).

According to prior research, congruence is critical as it enables the corroboration of signalled content, thereby amplifying the credibility of a given action taken in response (Connelly et al., 2011). However, audiences often receive multiple signals from a sender that can complicate signal processing (Paruchuri et al., 2021), such that a congruent executive dismissal deployed in response to signalled financial misconduct may not assuage shareholders' concerns. Consider REIT Inc.'s dismissal of its CFO, Brian Block, and Chief Accounting Officer, Lisa Pavelka McAlister, in response to a $23 million first-quarter overstatement of income on October 28, 2014. During a conference call, CEO, Nicholas Schorsch, emphasized the isolated nature of the incident and stated that: "mistakes were made, identified, and the people involved were identified. It will be fully corrected. It's not something I am proud of or happy about" (Kelly, 2004). Yet, despite the high degree of congruence between the disclosed misconduct and functional role expectations of the dismissed executives (finance & accounting), REIT's stock fell by approximately $4 billion

(Whelan, 2014). This raises the question of why some functionally congruent executive dismissals to a signalled financial misconduct *do not* restore investor confidence, while others do?

In this study, we posit that differences in executives' power to that expected for their role may be an important boundary condition. This is important for at least two reasons. First, *both* the CEO and CFO represent functionally congruent dismissal candidates in the context of financial misconduct, which creates ambiguity for investors by allowing multiple interpretations of the violation (Paruchuri et al., 2021). Indeed, the Sarbanes-Oxley Act (SOX) of 2002 requires the CEO and CFO to certify their firm's financial reporting, thereby creating a normative expectation that these executives hold equal responsibility. Second, according to the structural perspective of role theory, *power*—as exemplified by formal positions and control over resources—is a critical social structure that can influence how individuals assume and audiences perceive roles (Biddle, 1979, 1986; Georgakakis et al., 2022). Understanding the variation in investor reactions to functionally congruent executive dismissals following a signalled financial misconduct, therefore, may be limited by overlooking differences in executive power.

Thus, drawing on role theory, we consider the within-role difference in CEO versus CFO power as a salient signal of their ability to exert influence and act autonomously that may be important for investors when evaluating a dismissal following financial misconduct. While the CEO and CFO are functionally congruent dismissal candidates in such instances, we propose that when the within-role power of the CEO is higher than the within-role power of the CFO, investors will react more positively to a CEO dismissal. However, when the within-role power of the CFO is higher than the within-role power of the CEO, investors will react more positively to a CFO dismissal. To test our ideas, we collected data on CEO and CFO dismissals in S&P 1500 firms following material weaknesses in financial reporting. Material weaknesses, like financial restatements, violate accounting norms and

raise suspicions of misconduct among investors (Beneish et al., 2008; Donelson et al., 2017; Hoitash et al., 2012). Further, as an investor provision, the SOX Act (Section 404) requires executives to report on the effectiveness of internal controls and disclose material weaknesses. As such, given the centrality of CEOs and CFOs under SOX, material weaknesses represent an ideal context for testing our theory.

Our paper makes three contributions. First, we contribute to our understanding of CEO versus CFO dismissal as a corrective action for restoring investor confidence following financial misconduct. Specifically, by exploring the within-role differences in executives' power as an overlooked role signal, our study explains the variation in investor confidence to functionally congruent executive dismissals that is unaccounted for in prior work on executive dismissal. Second, and related, our findings extend the CEO effect literature central to upper echelons theory (Crossland & Hambrick, 2007; Quigley et al., 2017) by elaborating a novel CFO dismissal effect for restoring investor confidence. Third, we augment role theory by integrating the functional and structural perspectives to examine the CEO-CFO interface. Whereas existing research focuses on functional characteristics shaping executive role expectations (Um et al., 2022; Xu et al., 2022), we highlight how within-role differences in executives' power influence role expectations and attributions of blame among investors.

4.3 Theory and Hypotheses

4.3.1 Role Theory and CEO-CFO Role Expectations

According to role theory, individuals have various roles that they play in their daily life (Biddle, 1979). The key idea underlying the theory is that role expectations, defined as the norms, beliefs, and rules associated with a social position, define appropriate and permitted forms of behavior (Anglin et al., 2022; Biddle, 1986). A *role*, therefore, is a shared set of expectations that not only shape the way in which a role occupant behaves and perceives themselves, but also define the normative behaviors and characteristics that

audiences—such as investors—expect of the occupant (Friedman & Podolny, 1992; Rizzo et al., 1970). The theory postulates that audiences' role expectations derive from their experiences with individuals that occupy a given role within a social system. Past research in this regard has tended to focus on role stereotypes based on gender and how sex differences influence the perceived roles of women versus men in society (e.g., Eagly, 1987; Eagly & Wood, 2012). In the context of top executives, for example, research has shown that female leaders encounter more disapproval than male leaders due to the masculine construal of the leadership role, which emphasizes self-confidence, aggression, and competitiveness as important characteristics that conflict with their "female" gender role (Eagly & Karau, 2002).

A central tenet of role theory, therefore, is that individuals must exhibit certain characteristics and behaviors to be considered effective in a leadership position. From the functionalist and structuralist perspectives of role theory, which, respectively, view roles as being prescribed through one's *functional* title—such as CEO and CFO—that signal distinct areas of responsibility (Jensen et al., 2012) and *power* that signals agency (Georgakakis et al., 2022), congruence with role expectations is critical as it influences how audiences perceive and act towards an individual. Incongruent signals between audiences' expectations of a role and the functional and structural characteristics of the role occupant are evaluated negatively, while signals that are congruent are evaluated positively. Most existing research, however, has tended to treat different executive roles unilaterally (Um et al. 2022), thereby neglecting the potential *within-role* differences in role expectations between executives that hold distinct functional titles and or vary in their power. For example, Koenig et al. (2011) aggregate results from studies of CEOs, middle managers, military officers, school administrators, and athletic directors among other types of "leader" in a meta-analytic study to examine the masculine stereotype of the generalized leadership role.

The increasing functional specialization within TMTs, exemplified by the

emergence of roles such as the CFO, chief operating officer (COO), and chief information officer (CIO) among others (Menz, 2012), signal distinct areas of executive responsibility to external stakeholders, which inform their sensemaking of organizational situations. Functionally, the CEO is the firm's primary corporate decision-maker with overall responsibility for strategic actions and outcomes (Finkelstein et al., 2009). The CFO, in contrast, is responsible for the firm's financial reports and reporting decisions (Gupta et al., 2020). Indeed, recent research drawing on the functionalist perspective of role theory highlights the importance of the within-role expectations of CEOs and CFOs to role occupants and audiences. Xu et al. (2022), for instance, show that CEOs are more likely to engage in corporate philanthropy, whereas CFOs are less likely. They argue that this is because CEOs will be sensitive to the value of corporate philanthropy while CFOs will be sensitive to the cost. Similarly, Um et al. (2022) find that when CFOs act outside of their functional role expectations, banks negatively perceive the firm and employ more debt contract covenants to mitigate the perceived hazard.

Although existing work predicts that within-role functional congruence will be a positive signal to audiences when evaluating the efficacy of a CEO versus CFO dismissal in response to financial misconduct, it does not explain why or when a functionally congruent executive dismissal can have a negative effect—as the earlier REIT Inc. example demonstrates. Scholars, however, have overlooked the structural perspective of role theory and the within-role differences in executive's power as an equally important role signal (Anglin et al., 2022). Despite occupying distinct functional roles, CEOs and CFOs exhibit significant overlap in their functional role expectations—particularly in the context of financial misconduct. The SOX Act, for example, implicates and legitimizes the CEO and CFO as functionally responsible for the firm's financial reporting. Further, like CEOs, CFOs also bear responsibility for strategic decisions and often appear publicly with the CEO to communicate the firm's strategy (Datta & Iskandar-Datta, 2014; Shi et al., 2019). As such,

executive power is likely to factor into investors' sensemaking of CEO versus CFO dismissal following financial misconduct given the overlap in functional role signals.

In contrast to the functional perspective, which assumes that roles are explicitly defined by functional title, the structural perspective emphasizes power differences between actors of a social system as a critical signal of an individual's role (Biddle, 1986). Among executives this is important as power is central to strategic choice and determines one's ability to exert their will and act autonomously (Pfeffer, 1981). According to the structural perspective, power differences result from the various formal positions and social structures that provide a given executive with the legislative right to influence others and make decisions on behalf of the firm (Georgakakis et al., 2022). These include the number of formal titles, committee and board memberships, and compensation (Daily & Johnson, 1997; Finkelstein, 1992). Several studies have shown that powerful CEOs influence board decisions and composition, leading to greater CEO entrenchment (e.g., Finkelstein & D'Aveni, 1994; Joseph et al., 2014; Westphal & Zajac, 1995), as well as the hiring, firing, and compensation of other executives (Cannella & Shen, 2001; Graffin et al., 2008). In addition to the effects that powerful CEOs have on other executives, powerful non-CEO executives have also been shown to influence the outcomes of CEOs. For instance, Shen & Cannella (2002) show that less powerful CEOs relative to executive directors exhibit a higher risk of dismissal and job contestation from other executives.

Although the structural perspective suggests that within-role differences in power will influence how executives assume roles, executive power differences remain an unexplored role signal that may affect investor reactions to dismissal. To address this lacuna, we draw on role theory and the literature on executive power to argue that within-role differences in CEO versus CFO power will determine how investors react to CEO versus CFO dismissal following financial misconduct. We examine this issue in the context of material weaknesses in financial reporting.

4.3.2 Material Weaknesses in Financial Reporting

Material weaknesses are a pervasive signal of potential financial misconduct. A material weakness is "a significant deficiency, or combination of significant deficiencies [in financial reporting], that results in more than a remote likelihood that a material misstatement of the annual or interim financial statements will not be prevented or detected" (PCAOB, 2004). Following a series of high-profile accounting scandals, starting with Enron and the subsequent Andersen collapse, the U.S. Congress passed the SOX Act on July 30, 2002. Under SOX, CEOs and CFOs are responsible for establishing, maintaining, and evaluating the firm's internal control effectiveness. Section 404 requires management to report on the effectiveness of the firm's internal control structure and provide an overview of financial reporting procedures in annual reports (SEC 2003, 2004). This includes the methods and measures adopted to safeguard assets and ensure the accuracy and reliability of accounting data, operational efficiency, and adherence to regulations, such as internal audit committees (Krishnan, 2005). External auditors are then required to attest to the accuracy of management's assertion that internal controls are operational and effective. Auditors must issue an adverse opinion on internal control effectiveness if one or more material weaknesses exist.

Several studies have documented the association between material weaknesses and various reporting practices that are indicative of potential financial misconduct. For example, scholars have shown that adverse SOX 404 disclosures are associated with accounting practices that are used to present an overly positive view of the firm's financial position (e.g., Chan et al., 2008; Doyle et al., 2007). More direct evidence of the link between material weaknesses and financial misconduct by executives comes from Donelson et al.'s (2017) study of future fraud revelations in U.S. companies. They find that material weaknesses are associated with a higher risk of future financial fraud. In contrast, firms with a strong internal control environment are associated with improvements in financial

reporting quality (Ashbaugh-Skaife et al., 2008; Doyle et al., 2007). Taken together, these insights support the Public Company Accounting Oversight Board's (PCAOB) assertion that an effective internal control environment reduces the risk of fraud (PCAOB, 2004).

To redress the concerns of financial misconduct associated with material weaknesses, studies suggest that boards use CEO and CFO dismissals as a strategy (e.g., Haislip et al., 2015; Johnson et al., 2011; Li et al., 2010). For instance, Rice et al. (2015) show that CEO and CFO turnover is more likely in restating firms with reported material weaknesses than restating firms without reported material weaknesses. Similarly, Haislip et al. (2016) find that firms with material weaknesses are associated with higher CEO and CFO turnover than firms without material weaknesses. Thus, this literature suggests that firms seek to disassociate from the CEO and CFO as responsible executives in a bid to attenuate external stakeholder concerns. This is consistent with research showing that external auditors increase their fees (Raghunandan & Rama, 2006) and investors increase their perceptions of risk (Rose et al., 2010) for firms with disclosed material weaknesses. We extend this line of work by considering how the within-role differences in power between the CEO and CFO will influence investor reactions to executive dismissals following material weaknesses. Specifically, we develop two hypotheses regarding when investors will favor CEO dismissal over CFO dismissal, and vice-versa, as a signal of remediation.

4.3.3 CEO-CFO Power and Investor Reactions to Dismissal Following Material Weaknesses

According to Finkelstein (1992), executives have power over other members of the TMT when they are endowed with positions of formal authority, such as member or chair of the board or audit committee. Consistent with this observation, past studies have emphasized how powerful CEOs relative to the board and other executives endows them with significant autonomy and discretion (e.g., Haleblian & Finkelstein 1993; Joseph et al., 2014; Krause et al., 2015). Not surprisingly, CEOs that have higher relative power are able

to exert a higher degree of control over boards and their subordinates. For instance, CEOs that exert control over the board have been shown to be less likely than other executives to be dismissed following poor performance (Boeker, 1992). This suggests that powerful CEOs can "scapegoat" and divert blame to other members of the TMT for organizational violations.

Indeed, in the context of financial misconduct, research suggests that firms with an Accounting and Audit Enforcement Release (AAER) by the SEC tend to have more powerful CEOs than firms without an AAER (Feng et al., 2011). According to Friedman (2014), a major implication of CEO power is that they can use it to pressure CFOs to manipulate financial reports. CEOs using their relative power to exert pressure on CFOs to misreport and inflate performance measures is also anecdotally prevalent (e.g., Masters, 2005; SEC 2005). For instance, in the REIT example discussed earlier, it was alleged that the CEO [Nicholas Schorsch] had ordered the CFO and chief accounting officer to manipulate financial results to cover up first quarter errors (Whelan, 2014). Following a signalled financial misconduct, therefore, we expect that investors will believe CEOs with higher within-role power than CFOs to be more culpable for the violation. This is because they may perceive less powerful CFOs as having less fiduciary discretion and to be acting under the directives of the more powerful CEO. Thus, we hypothesize that investors will react more positively to CEO dismissal as a remediation strategy when CEO within-role power is higher than CFO within-role power.

Hypothesis 1. *When CEO within-role power is higher than CFO within-role power, investors will react more positively to a CEO dismissal than a CFO dismissal following a signalled financial misconduct.*

Notwithstanding the natural power of CEOs because of their preeminent organizational position (Finkelstein, 1992), CFOs can have higher relative power than the CEO if they occupy a higher number of formal positions to that expected for their role than

the CEO does to that expected for their role. For instance, if the CFO has high pay and occupies additional role titles, such as treasurer, audit committee member, and board member among others, they are likely to have—and be perceived among investors as having—significant latitude to exercise their autonomy over various aspects of the firm's business, particularly in relation to financial reporting. Under such conditions, CFOs are less likely to be considered an agent for the CEO as they have higher discretion to that expected for their role. Indeed, studies have shown that powerful CFOs, such as those that have full control over the reporting system and higher tenure than CEOs, are less susceptible to CEO pressure (e.g., Bishop et al., 2017; Friedman, 2014). Thus, we expect that when CFO within-role power is higher than CEO within-role power, investors will attribute any signal of financial misconduct to the CFO. We hypothesize, therefore, that investors will react more positively to CFO dismissal as a remediation strategy.

Hypothesis 2. *When CFO within-role power is higher than CEO within-role power, investors will react more positively to a CFO dismissal than a CEO dismissal following a signalled financial misconduct.*

4.4 Methods

4.4.1 Data and Sample

We obtained data on firms' material weaknesses in financial reporting from Audit Analytics. This empirical setting is well suited for testing our hypotheses for several reasons. First, the legislative purpose of reporting material weaknesses required by SOX is to mitigate the likelihood of financial misconduct and increase investor confidence (Hoitash et al., 2012; SEC, 2003). Indeed, the PCAOB explicitly link strong internal accounting controls with a reduced risk of fraud (PCAOB, 2017). As such, material weaknesses represent a salient signal of potential financial misconduct to investors. Second, there is also empirical evidence which shows that material weaknesses increase the risk of actual financial fraud by executives (Donelson et al., 2017) and cause reputational damage among investors (Beneish

et al., 2008). Third, the normative responsibility for internal control effectiveness is functionally aligned to both the CEO and CFO. Therefore, the within-role power between the CEO versus the CFO is likely to be a key signal for investors when evaluating the efficacy of CEO versus CFO dismissal in response to material weaknesses, which is central to the underlying logic of our arguments.

To examine the effect of CEO versus CFO within-role power on investor reactions to CEO versus CFO dismissal, we followed prior studies and used the number of titles (e.g., *president*, *vice president*, *chair*, *COO*), memberships (e.g., *audit committee*, *board membership*), and compensation (*CEO salary*, *CFO salary*) as important structural signals of CEO and CFO power (Daily & Johnson 1997; Finkelstein, 1992). We obtained this data from Execucomp. In terms of dismissals, we obtained data on CEO dismissals from Gentry et al.'s (2021) CEO turnover database within S&P 1500 firms. Following a similar protocol to Gentry et al. (2021), we manually collected data on CFO dismissals by identifying negative sentiment in media announcements of CFO turnovers from reputable sources—*Bloomberg*, *Forbes*, *Fortune*, *The Wall Street Journal*, and *The Washington Post*—to distinguish dismissal from other turnover events. Where news media could not be sourced, conference call transcripts, company press releases, and SEC filings (8-K and 10-K reports) were consulted for turnover announcements.

Our sample construction started with all CEO dismissals from S&P 1500 firms between 2000 and 2021 obtained from Gentry et al. (2021)'s CEO database. We then merged this data with our manually collected data on CFO dismissals over the same period. After identifying CEO and CFO dismissals, we merged this data with data on material weaknesses in financial reporting (i.e., SOX 404 disclosures) obtained from Audit Analytics, which came into effect in 2005. We used filing dates to identify firms with a disclosed material weakness (or weaknesses) that occurred prior to an executive dismissal. We identified a total of 1,793 executive dismissal events (742 CEO dismissals; 1,051 CFO dismissals) between

2005 and 2021. Finally, we included firm financial, governance, executive, and stock return data from Compustat, CRSP, BoardEx, and Execucomp, and removed dismissal events with missing observations. This led to a final sample of 743 dismissal events (405 CEO dismissals; 338 CFO dismissals) from 2005 through 2021.

4.4.2 Measures

Dependent variables. We theorized that investor reactions to CEO versus CFO dismissal following material weaknesses will be influenced by the within-role power difference between the CEO and CFO. Following prior research on investor reactions to executive turnover and dismissal (Connelly et al., 2016; Gangloff et al., 2016; Hersel et al., 2023), we utilized cumulative abnormal returns (CAR) surrounding the dismissal event as our dependent variable. We used the event study method to calculate CAR surrounding the event day when either the CEO or CFO was dismissed (MacKinlay, 1997; McWilliams & Siegel, 1997). This allowed us to capture the effect of a dismissal on investor reactions for firms with material weaknesses in financial reporting. This design provides a clean causal estimate that overcomes issues of endogeneity, as any change in stock price around the day of a dismissal can be directly attributed to this information.

Specifically, we calculated a *three-day CAR* (*t* = -1 to +1) starting the day prior to the dismissal to account for possible leakage of information (Michaelides et al. 2015) as our main dependent variable. We calculated CAR for each firm *i* as the accumulation of abnormal returns over the three-day event window using a market-adjusted model, $AR_{it} = R_{it} - R_{mt}$, where R_{it} is the return for firm *i* on day *t*, and R_{mt} is the expected market return estimated using a 260-day trading window ending 50 days prior to the event (MacKinlay, 1997). The abnormal stock returns over the event window represent the deviation between the actual and expected returns based on the firm's historical stock performance. We used the analytic module of Wharton Research Data Services (WRDS) to derive the three-day CARs and multiplied these values by 100 to yield percentages.

We also included three-day buy-and-hold abnormal returns (BHAR) as an alternative dependent variable capturing investor reaction. To calculate BHAR, we followed the approach implemented by Barber & Lyon (1997) and computed expected stock returns based on analysts' stock recommendations, again using a 260-day trading window ending 50 days prior to the dismissal event. We calculated *three-day BHAR* (t = -1 to +1) in a similar way to *three-day CAR* as the deviation between the actual (R_{it}) accumulated abnormal returns over the three-day event window and expected returns (R_{mt}), albeit expected returns were calculated using the benchmark portfolio.

Independent variables. To test our hypotheses, which posited an interactive effect between dismissal type (CEO vs. CFO) and the within-role power of the CEO versus the CFO on investor reactions, we created two variables. *CEO versus CFO dismissal* is a dummy variable that captures whether the CEO [1], or CFO [0] was dismissed following material weaknesses in financial reporting. In this study, we exclude cases where the CEO and CFO are dismissed simultaneously and none of them is dismissed. Distinguishing dismissals from other types of executive turnover—such as resignation and retirement—is difficult, as firms tend not to explicitly state that departing executives are being dismissed (Shen & Cannella, 2002b). As mentioned earlier, we address this issue by following Gentry et al. (2021) and distinguishing CFO dismissals from other turnover events by sourcing and analyzing media coverage of turnover announcements. CEO dismissals were obtained from Gentry et al.'s CEO turnover database.

CEO versus CFO within-role power is a continuous variable that captures the within-role difference in power between the CEO and CFO of the firm. Following prior studies, we identified the number of titles, committee membership, board membership, audit membership, and compensation as dimensions of CEOs' and CFOs' structural power (Finkelstein, 1992). To create our relative measure, we first standardized each dimension of CEO and CFO power relative to their role (i.e., within-role) by deriving z-scores. We then

summed the z-scores across each dimension for the CEO and CFO separately to create a simple index of their within-role power. We calculated power this way, rather than in absolute terms, as CEOs tend to be more powerful than CFOs by default. As such, capturing within-role power allows us to identify powerful CFOs that otherwise may be overshadowed by the natural power of the CEO. For example, in our sample approximately 95% of CEOs (703) were more powerful than the CFO in absolute terms; however, 57.7% of CFOs (429) were more powerful than the CEO in relative (within-role) terms. CEO versus CFO relative power was given by the difference between CEO within-role power and CFO within-role power. Positive (negative) values indicate that the CEO (CFO) has more power relative to their title than the CFO (CEO) does relative to their title.

Control variables. We also included several control variables to capture factors that could influence investor reactions to CEO versus CFO dismissal. These included CEO and CFO tenure as an alternative, non-structural source of power, board governance characteristics, and firm specific characteristics. CEO and CFO tenure are important as executives with longer tenure have had greater opportunity to shape corporate management structures to enhance their power. CEO and CFO tenure were measured as the number of years in the role of CEO and CFO, respectively, within the focal firm. We standardized this alternative dimension of power by deriving z-scores to again capture within-role differences.

In terms of board governance characteristics, we included variables that have been shown to influence executives' ability to exert their power on the firm and decision-making (Bebchuk et al., 2009; Krause et al., 2016; Westphal & Graebner, 2010), namely *board size*, *independent directors*, *entrenchment*, and *analysts following*. Board size was measured as the total number of board directors in the year prior to a dismissal. Independent directors were measured as the ratio of non-executive directors to board size. We also captured how entrenched the TMT and board members are through Bebchuk et al.'s entrenchment index, which considers six provisions (staggered boards, poison pills, golden parachutes, and

supermajority requirements for charter amendments, bylaw amendments, and mergers) that protect incumbent executives from removal. As external monitors of the firm, we also include analysts following, measured as the number of analysts following the firm in the fiscal quarter prior to a dismissal.

Finally, in terms of firm characteristics, we controlled for variables that may be a key concern of investors, namely firm performance and size (Gangloff et al., 2016; Shen & Cannella, 2002b). We included *number of employees*, measured as the log of total employees, and *total assets*, measured as the log of total assets, to capture firm size. For firm performance, we included *sales revenue,* measured as the dollar value of total sales over turnover, *return on assets*, measured as net income over total assets, and *firm leverage*, measured as total debt over total assets, all captured in the year prior to a dismissal. We also controlled for year and industry fixed effects.

4.4.3 Estimation

To execute our event study methodology, we conducted ordinary least squares regression (OLS) using three-day CAR and BHAR as separate dependent variables. Specifically, we estimated the following model:

$$CAR/BHAR_{ij} = \alpha + \beta_0 Controls + \beta_1 CEO\ versus\ CFO\ dismissal_{ij} + \beta_2 CEO\ versus\ CFO\ relative\ power_{ij} + \beta_3 (CEO\ versus\ CFO\ dismissal_{ij} \times CEO\ versus\ CFO\ relative\ power_{ij}) + \varepsilon_{ij}$$

where, $CAR/BHAR_{ij}$ is the three-day event window CAR (BHAR) for firm i surrounding dismissal j. To formally test our hypotheses, we used a marginal effects approach based on estimates from this model to calculate the effect of a change in CEO versus CFO dismissal—i.e., a move from CFO [0] to CEO [1] dismissal—on CAR (BHAR) ($\partial y/\partial x$) at different levels of CEO versus CFO within-role power ranging between -3 S.D and +3 S.D. A marginal effects approach is beneficial as it allows us to uncover nuanced

insights about how CEO versus CFO dismissal may differentially impact investor reactions when CEO within-role power is higher than CFO within-role power, and vice-versa (Busenbark et al. 2022). As such, it is well-suited for examining our theoretical assertions.

4.5 Results

The means, standard deviations (S.D), and correlations are presented in Table 4.1. The mean of *three-day CAR*, our main dependent variable capturing investor reactions to CEO versus CFO dismissal following material weaknesses, is -0.773%, which is equivalent to a loss of over $700 million dollars for a firm with a market capitalization of a $100 billion. A similar value is reported for our alternative dependent variable, which indicates that investors take material weaknesses seriously. The mean *CEO versus CFO within-role power* is 1.184, indicating that CEOs are on average relatively more powerful than CFOs. Excluding the expected high correlation between the three-day CAR and BHAR (r = 0.997), none of the other bivariate correlations were higher than 0.671.

Table 4.1 Descriptive statistics and correlations

Variable	Mean	SD	1	2	3	4	5	6	7
1. Three-day CAR	-0.773	7.491							
2. Three-day BHAR	-0.794	7.708	0.997						
3. CEO versus CFO dismissal	0.545	0.498	0.022	0.025					
4. CEO versus CFO within-role power	1.184	3.991	0.008	0.005	-0.049				
5. CEO tenure	-0.140	0.910	0.055	0.056	0.071	-0.071			
6. CFO tenure	-0.108	0.946	0.032	0.033	-0.053	-0.075	0.170		
7. CEO pay	0.094	0.881	0.049	0.042	-0.013	0.175	0.087	0.031	
8. CFO pay	0.025	0.770	0.058	0.052	0.037	0.075	0.120	0.061	0.671
9. Board size	9.292	2.519	0.088	0.083	0.016	0.108	-0.024	-0.039	0.287
10. Independent directors	0.702	0.302	-0.004	0.003	0.254	-0.037	0.072	-0.017	-0.053
11. Entrenchment	3.859	1.027	0.097	0.100	-0.042	-0.049	-0.015	0.142	-0.126
12. Analysts following	13.063	8.378	0.008	-0.009	0.032	0.077	0.054	-0.009	0.476
13. Number of employees	1.949	1.790	0.096	0.089	0.066	0.155	0.022	-0.076	0.370
14. Total assets	8.168	1.672	0.063	0.054	-0.022	0.195	0.013	-0.027	0.605
15. Sales revenue	8986.975	21123.930	0.063	0.061	-0.004	0.153	0.040	-0.006	0.434
16. Return on assets	0.021	0.115	0.004	0.001	-0.041	0.019	0.066	0.061	0.093
17. Firm leverage	1.702	15.918	-0.020	-0.019	-0.040	0.005	-0.053	-0.014	0.017
Variable	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
9. Board size	0.278								
10. Independent directors	-0.065	-0.009							
11. Entrenchment	-0.152	0.049	-0.080						
12. Analysts following	0.463	0.307	0.009	-0.168					
13. Number of employees	0.338	0.449	-0.004	-0.104	0.393				
14. Total assets	0.614	0.551	-0.002	-0.130	0.597	0.600			
15. Sales revenue	0.479	0.414	-0.013	-0.111	0.330	0.492	0.638		
16. Return on assets	0.083	0.073	-0.011	0.026	0.169	0.145	0.078	0.066	
17. Firm leverage	-0.001	0.042	0.035	0.010	0.016	0.126	0.072	0.101	-0.025

Note. Correlations above $|0.071|$ are significant at 0.05 level.

Table 4.2 OLS analyses predicting investor reaction

	DV: Three-day CAR		DV: Three-day BHAR	
Variable	**Model 1**	**Model 2**	**Model 3**	**Model 4**
CEO tenure	0.649*	0.605	0.689*	0.635
	(0.379)	(0.378)	(0.393)	(0.392)
CFO tenure	-0.701*	-0.770*	-0.776*	-0.838**
	(0.406)	(0.408)	(0.422)	(0.423)
Board size	0.400*	0.404*	0.406*	0.409*
	(0.229)	(0.228)	(0.238)	(0.237)
Independent directors	-1.654	-1.109	-1.587	-1.037
	(2.141)	(2.137)	(2.222)	(2.219)
Entrenchment	1.257***	1.323***	1.388***	1.464***
	(0.373)	(0.372)	(0.387)	(0.386)
Analysts following	-0.087	-0.094	-0.106*	-0.112*
	(0.060)	(0.061)	(0.063)	(0.063)
Number of employees	0.738	0.685	0.752	0.694
	(0.490)	(0.488)	(0.509)	(0.506)
Total assets	-0.998	-1.056*	-1.041	-1.101*
	(0.636)	(0.633)	(0.661)	(0.657)
Sales revenue	0.000	0.000**	0.000*	0.000**
	(0.000)	(0.000)	(0.000)	(0.000)
Return on assets	-3.589	-3.595	-3.862	-3.869
	(2.646)	(2.630)	(2.747)	(2.730)
Firm leverage	0.002	0.002	0.003	0.002
	(0.020)	(0.020)	(0.021)	(0.021)
CEO versus CFO dismissal		0.020		0.074
		(0.649)		(0.674)
CEO versus CFO within-role power		-0.373***		-0.396***
		(0.130)		(0.135)
CEO versus CFO dismissal X CEO versus CFO within-role power		0.456***		0.448***
		(0.166)		(0.173)
Intercept	0.848	1.479	1.434	1.965
	(7.479)	(7.464)	(7.763)	(7.748)
Year fixed effects	Included	Included	Included	Included
Industry fixed effects	Included	Included	Included	Included
Observations	743	743	743	743
R-squared	0.444	0.454	0.434	0.444

Notes. Standard errors reported in parentheses.
*$p < 0.10$; **$p < 0.05$; ***$p < 0.01$.

Table 4.2 presents the results of our main OLS regression analyses using *three-day CAR* (Models 1 and 2) and *three-day BHAR* (Models 3 and 4) as dependent variables. Models 1 and 3 include only controls. In Models 2 and 4, we include the main effects of *CEO versus CFO dismissal* and *CEO versus CFO within-role power*, as well as the interaction term, which we use to test our hypotheses using marginal effects. In support of our general assertion that *CEO versus CFO dismissal* and *CEO versus CFO within-role power* interact to predict investor reactions following material weaknesses in financial

reporting, we find a significant positive interaction term in Model 2 (b = 0.456, p = 0.006) and Model 4 (b = 0.448, p = 0.009). The coefficients indicate that the effect of a CEO dismissal relative to a CFO dismissal increases CAR by 0.46% and 0.45%, respectively, when CEO within-role power is higher than CFO within-role power. That is, investors react more positively to a CEO than CFO dismissal following material weaknesses when CEO within-role power is higher.

To unpack the interaction term further and formally test our hypotheses, we perform a marginal effects analysis. Specifically, we examine the impact of *CEO versus CFO dismissal* at various levels of *CEO versus CFO within-role power*, moving in one standard deviation increments from -3 S.D to +3 S.D, on three-day CAR and BHAR. At below mean levels of *CEO versus CFO within-role power* (i.e., -3 S.D to -1 S.D) CFO power is higher than CEO power, whereas at above mean levels (i.e., +1 S.D to +3 S.D) CEO power is higher than CFO power. The marginal effect results are presented in Table 4.3.

Table 4.3 Marginal effects analyses

	DV: Three-day CAR[a]			
CEO versus CFO within-role power	***ΔCAR***	***SE***	***t(p)***	***[95% CI]***
-3 S.D.	-4.903**	2.055	-2.39 (0.017)	[-8.939, -0.868]
-2 S.D.	-3.083**	1.437	-2.15 (0.032)	[-5.905, -0.261]
-1 S.D.	-1.262	0.889	-1.42 (0.156)	[-3.008, 0.483]
Mean	0.558	0.630	0.89 (0.376)	[-0.679, 1.795]
+1 S.D.	2.379**	0.941	2.53 (0.012)	[0.530, 4.227]
+2 S.D.	4.199***	1.502	2.80 (0.005)	[1.249, 7.150]
+3 S.D.	6.020***	2.123	2.84 (0.005)	[1.849, 10.190]
	DV: Three-day BHAR[b]			
CEO versus CFO within-role power	***ΔBHAR***	***SE***	***t(p)***	***[95% CI]***
-3 S.D.	-4.757**	2.133	-2.23 (0.026)	[-8.946, -0.568]
-2 S.D.	-2.971**	1.491	-1.99 (0.047)	[-5.900, -0.041]
-1 S.D.	-1.184	0.922	-1.28 (0.200)	[-2.996, 0.628]
Mean	0.602	0.654	0.92 (0.357)	[-0.682, 1.887]
+1 S.D.	2.388**	0.977	2.45 (0.015)	[0.470, 4.307]
+2 S.D.	4.175***	1.559	2.68 (0.008)	[1.113, 7.238]
+3 S.D.	5.962***	2.204	2.70 (0.007)	[1.632, 10.291]

Notes. [a]Estimates based on Model 2, Table 2. [b]Estimates based on Model 4, Table 2. *SE* = standard error; *t* = t-statistic; *p* = exact p-value; *95% CI* = 95% confidence interval.
*p < 0.10; **p < 0.05; ***p < 0.01.

In support of Hypothesis 1, we find significant positive coefficients for *CEO versus CFO dismissal* on *three-day CAR* when *CEO versus CFO within-role power* is above mean

levels (+1 S.D: ΔCAR = 2.379, p = 0.012; 2 S.D: ΔCAR = 4.199, p = 0.005; 3 S.D: ΔCAR = 6.020, p = 0.005). Hypothesis 1 predicts that CEO dismissal will be more beneficial than CFO dismissal for restoring investor confidence following material weaknesses when CEO within-role power is higher than CFO within-role power. The coefficients indicate that dismissing the CEO (rather than CFO) increases *three-day CAR* by 2.4% when CEO within-role power is 1 S.D higher than CFO power, 4.2% when CEO within-role power is 2 S.D higher, and 6% when CEO within-role power is 3 S.D higher. This translates into a loss of approximately $2.4 billion, $4.2 billion, and $6 billion, respectively, for a firm with a market capitalization of a $100 billion. These results are replicated when using *three-day BHAR* as the dependent variable. Figure 4.1 plots the effects. The graphs show that when CEO within-role power is higher than CFO within-role power, the effect of CEO dismissal (relative to CFO dismissal) on CAR/BHAR is above the horizontal zero line.

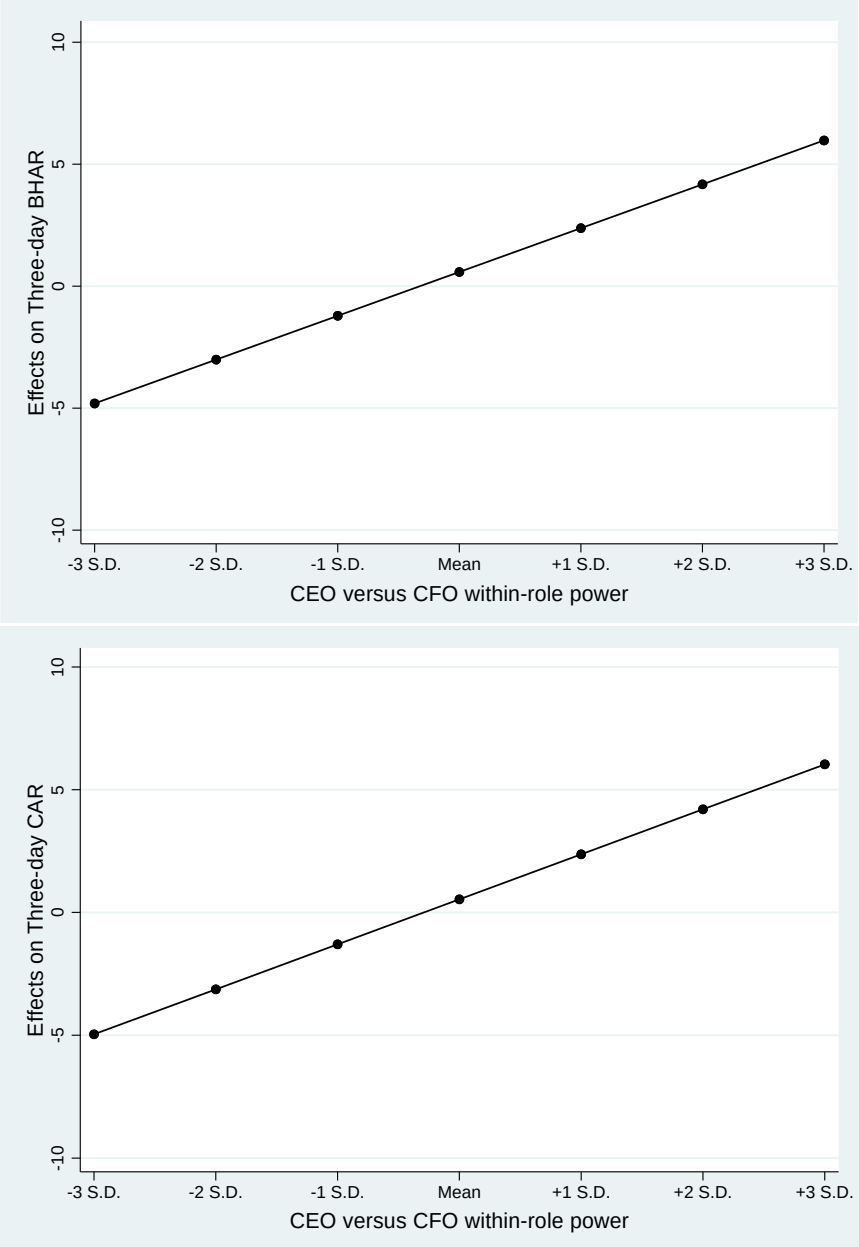

Figure 4.1 Plots of marginal effects (Three-day CAR and BHAR)

In support for Hypothesis 2, we find significant negative coefficients for *CEO versus CFO dismissal* on *three-day CAR* when *CEO versus CFO within-role power* is below -1 S.D (-2 S.D: ΔCAR = -3.083, p = 0.032; -3. S.D: ΔCAR = -4.903, p = 0.017). Hypothesis 2 predicts that CFO dismissal will be more beneficial than CEO dismissal for restoring investor confidence following material weaknesses when CFO within-role power is higher than CEO within-role power. The coefficients indicate that dismissing the CEO (rather than CFO) decreases *three-day CAR* by -3.1% when CEO within-role power is -2 S.D lower than CFO power and -4.9% when CEO within-role power is -3 S.D lower. This translates into a

loss of approximately $3.1 billion and $4.9 billion dollars, respectively, for a firm with a $100 billion market capitalization. Interestingly, when CEO within-role power is -1 S.D lower than CFO power, there is no significant difference in investor reactions to CEO versus CFO dismissal. This suggests that the CFO must be noticeably more powerful than the CEO to become investors' preferred dismissal candidate. CEOs, on the other hand, are the preferred dismissal candidate for investors whenever they possess more within-role power than CFOs.

Again, these results are replicated when using *three-day BHAR* as the dependent variable. Graphically, the effects are shown in Figure 4.1. The graphs show that when CFO within-role power is higher than CEO within-role power, the effect of CEO dismissal (relative to CFO dismissal) on CAR/BHAR is below the horizontal zero line. Taken together, these results provide support for our theorizing.

4.6 Robustness Checks

While our event study design avoids endogeneity concerns, we conducted additional checks to ensure our findings were robust. First, we performed a propensity score matching (PSM) procedure to address possible selection bias given that power-motivated CFOs and CEOs may choose to work for firms that exhibit distinct characteristics. PSM addresses selection bias by creating a matched sample of firms with high-powered CEOs relative to CFOs [1], versus high-powered CFOs relative to CEOs [0] as a treatment. We estimated the probability of being treated (i.e., of the firm having a high-powered CEO relative to CFO) using the same controls used in the main analyses. We employed one-to-one nearest-neighbor matching without replacement and imposed a caliper distance of 0.001 to match observations. We then re-performed the analyses using the matched sample of 426 firms. The results, presented in Tables 4.4 and 4.5, confirm our main findings.

Table 4.4 OLS analyses predicting investor reaction using matched sample

	DV: Three-day CAR		DV: Three-day BHAR	
Variable	**Model 1**	**Model 2**	**Model 3**	**Model 4**
CEO tenure	1.129*	1.115*	1.176*	1.130
	(0.658)	(0.650)	(0.702)	(0.695)
CFO tenure	-0.838	-0.877	-1.037	-1.028
	(0.622)	(0.626)	(0.664)	(0.669)
Board size	0.915***	0.871**	0.915**	0.867**
	(0.347)	(0.340)	(0.371)	(0.364)
Independent directors	-2.518	-2.164	-2.279	-1.798
	(2.870)	(2.865)	(3.065)	(3.063)
Entrenchment	1.556***	1.673***	1.741***	1.869***
	(0.587)	(0.580)	(0.627)	(0.620)
Analysts following	-0.049	-0.087	-0.080	-0.117
	(0.090)	(0.089)	(0.096)	(0.095)
Number of employees	0.339	-0.130	0.394	-0.146
	(0.898)	(0.901)	(0.959)	(0.964)
Total assets	-1.483	-1.245	-1.547	-1.288
	(0.987)	(0.969)	(1.053)	(1.036)
Sales revenue	0.000	0.000**	0.000	0.000**
	(0.000)	(0.000)	(0.000)	(0.000)
Return on assets	0.190	-0.729	-0.098	-1.080
	(5.251)	(5.153)	(5.606)	(5.510)
Firm leverage	0.009	0.009	0.010	0.010
	(0.031)	(0.030)	(0.033)	(0.032)
CEO versus CFO dismissal		0.666		0.892
		(0.962)		(1.029)
CEO versus CFO within-role power		-0.396**		-0.437**
		(0.172)		(0.184)
CEO versus CFO dismissal × CEO versus CFO within-role power		0.832***		0.831***
		(0.239)		(0.256)
Intercept	6.769	5.100	6.249	4.531
	(12.440)	(12.252)	(13.282)	(13.100)
Year fixed effects	Included	Included	Included	Included
Industry fixed effects	Included	Included	Included	Included
Observations	426	426	426	426
R-squared	0.554	0.577	0.544	0.566

Notes. Standard errors reported in parentheses.

*$p < 0.10$; **$p < 0.05$; ***$p < 0.01$.

Table 4.5 Marginal effects analyses using matched sample

	DV: Three-day CAR[a]			
CEO versus CFO within-role power	***ΔCAR***	***SE***	***t(p)***	*[95% CI]*
-3 S.D.	-8.315***	2.979	-2.79 (0.006)	[-14.180, -2.450]
-2 S.D.	-4.994**	2.093	-2.39 (0.018)	[-9.114, -0.874]
-1 S.D.	-1.673	1.308	-1.28 (0.202)	[-4.247, 0.901]
Mean	1.648*	0.931	1.77 (0.078)	[-0.184, 3.480]
+1 S.D.	4.969***	1.340	3.65 (0.000)	[2.292, 7.645]
+2 S.D.	8.289***	2.158	3.84 (0.000)	[4.041, 12.538]
+3 S.D.	11.610***	3.048	3.81 (0.000)	[5.609, 17.611]
	DV: Three-day BHAR[b]			
CEO versus CFO within-role power	***ΔBHAR***	***SE***	***t(p)***	***[95% CI]***
-3 S.D.	-8.078**	3.185	-2.54 (0.012)	[-14.349, -1.807]
-2 S.D.	-4.761**	2.238	-2.13 (0.034)	[-9.166, -0.356]
-1 S.D.	-1.444	1.398	-1.03 (0.303)	[-4.196, 1.309]
Mean	1.873*	0.995	1.88 (0.061)	[-0.086, 3.832]
+1 S.D.	5.191***	1.454	3.57 (0.000)	[2.328, 8.053]
+2 S.D.	8.508***	2.308	3.69 (0.000)	[3.965, 13.050]
+3 S.D.	11.825***	3.259	3.63 (0.001)	[5.408, 18.241]

Notes. [a]Estimates based on Model 2, Table 4. [b]Estimates based on Model 4, Table 4. *SE* = standard error; *t* = t-statistic; *p* = exact p-value; *95% CI* = 95% confidence interval.
*$p < 0.10$; **$p < 0.05$; ***$p < 0.01$.

We also considered a *four-day CAR* (-1, +2) and *four-day BHAR* event window as alternative dependent variables and re-performed the main analyses, again using the matched sample to rule out selection bias. We found that the conclusions were again unaffected. The results are provided in supplementary Appendix A and B.

4.7 Discussion

Previous research on investor reactions to executive dismissal following financial misconduct suggests that congruence between the misconduct and functional expectations of the dismissed executive is important for restoring investor confidence. While this work has advanced our understanding of how firms can mitigate the negative consequences of such violations, it does not explain why some functionally congruent executive dismissals do not restore investor confidence. Integrating insights from the functional and structural perspective of role theory, we argue and provide empirical evidence that the difference in CEO versus CFO within-role power is a critical role signal influencing investor reactions to

CEO versus CFO dismissal following financial misconduct. We find that when CEO within-role power is higher than CFO within-role power, investors react more positively to CEO dismissal. Conversely, when CFO within-role power is higher than CEO within-role power, investors react more positively to CFO dismissal. These findings have implications for the literature on executive dismissal, upper echelons theory, and role theory.

First, and foremost, we contribute to upper echelons theory and efforts to understand executive dismissal as a corrective action for restoring investor confidence following financial misconduct (Hersel et al., 2019, 2023), by specifying how within-role differences in executives' power shape investors' attributions of blame. While congruence is a critical factor for investors when evaluating executive dismissal (Connelly et al., 2011), the roles of the CEO and CFO are functionally interdependent and overlapping—particularly in the context of financial misconduct—which make CEO-CFO functional role signals ambiguous to investors. In such instances, our results suggest that within-role differences in CEO versus CFO power determine investors' attributions of blame, as it signals the degree to which the CEO (CFO) can exert their will and act autonomously.

Thus, by integrating the functional and structural perspective of role theory to the CEO-CFO interface, we extend the literature on the consequences of executive dismissal following misconduct by highlighting executive power differences as an important but overlooked role signal shaping investor reactions. This new perspective explains the observed variation in investor reactions to functionally congruent CEO-CFO dismissals that is unaccounted for in existing literature. In addition, by uncovering the importance of the within-role power differences between executives in shaping investor reactions to dismissal, our study helps theoretically reconcile inconsistencies in prior research on investor reactions to dismissals more generally—with studies reporting both positive and negative effects for CEO and CFO dismissals (c.f. Denis & Denis, 1995; Khanna & Poulsen, 1995; Mian, 2001; Worrell et al., 1993). Our results suggest that investors may consider low-power dismissals

as ceremonial and high-power dismissals as remediative, which can explain why specific types of dismissal (CEO vs. CFO) lead to both negative and positive investor reactions, respectively.

Relatedly, our study contributes to and extends the CEO effect literature central to upper echelons theory. While studies examining the CEO effect have emphasized and empirically demonstrated the significant impact that CEOs have on firm outcomes (e.g., Crossland & Hambrick, 2007; Quigley & Hambrick, 2015, Quigley et al., 2017), our study suggests that under certain conditions other executives—such as the CFO—can impact the firm to a greater extent. Specifically, we demonstrate a novel CFO dismissal effect for restoring investor confidence following signalled financial misconduct that emerges when the within-role power of the CFO is noticeably higher than the withinrole power of the CEO. In contrast, whenever the CEO is more powerful than the CFO, investors react more positively to CEO dismissal. This finding goes beyond existing work that assumes the primacy of the CEO effect on firm outcomes, instead our study suggests that other executives can and do matter— particularly the CFO—when they have sufficient within-role power to exert their will. Indeed, when the CEO and CFO exhibit no difference in their within-role power, our results suggest that investors do not distinguish between CEO versus CFO dismissal. Future research may build on our findings to consider the changing profile of the CEO effect and the emerging influence of the CFO, as well as other executives, on other firm outcomes outside of dismissal.

Notwithstanding the contributions to the executive dismissal literature and upper echelons theory, our study also contributes to role theory by providing a more nuanced understanding of how role expectations are formed within the TMT in terms of function and structure (i.e., power) (Georgakakis et al., 2022). Distinct from prior work that focuses on the function-based signals within specific executive roles that shape executives' and audiences' role expectations (e.g., Um et al., 2022; Xu et al., 2022), we shift our attention to

the within-role differences in executive power as an overlooked signal of role expectations. Specifically, by integrating the functional and structural perspectives of role theory, we examine how within-role differences in power between the CEO and CFO become a central signal to investors when making sense of dismissal following financial misconduct given the overlap in functional role signals. Our results suggest that between the CEO and CFO, it is the within-role differences in power that is the deciding factor determining investor reactions. Thus, we extend the literature on executive roles (e.g., Menz, 2012) beyond the narrow focus on functional conceptualizations. Our study, therefore, represents a starting point for understanding the nuances of role assumption within the TMT based on the interplay of functional expectations and within-role differences in power.

Our study is not without limitations. First, because we focus on material weaknesses as a pervasive signal of financial misconduct, doing so may limit the generalizability of our results to other signals of financial misconduct such as restatements. While we expect our results to hold for restatements, given they are correlated with material weaknesses (PCAOB, 2004), future research may examine other signals of financial misconduct and actual financial fraud. Second, and related, our paper is limited in its focus on U.S. firms, which also indicate potential limits to generalizability. Future research may seek to replicate our findings in samples of firms from other countries and cultural contexts. For example, differences in country-level power distance (high vs. low), which captures the degree to which individuals are accepting of authority and power, may be an important boundary condition to our findings (Quigley & Hambrick, 2015). Moreover, propensity score matching cannot completely eliminate potential omitted variable bias, as some unobservable factors that might affect both the treatment and outcome require further consideration. Finally, we limited our focus to the CEO-CFO interface only, which may also represent an important contextual factor. While we expect our results to hold given the legislative centrality and functional congruence of the CEO and CFO in the context of financial

misconduct, future work may extend our work to include other executives.

In this study, we showed that, distinct from functional role characteristics, within-role differences in executives' power are an important signal for investors when evaluating dismissal following financial misconduct. Given the increasing functional specialization of TMTs and the evolving power of individual executives, advancing scholarship on the CEO-TMT interface using role theory seems critical. Our paper is an early step in this direction on which we hope other scholars will build.

4.8 References

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Conclusion

The studies in this thesis focus on the turnover and dismissal of the CEO and CFO, particularly the latter. In my first paper, I establish an open-access database for CFO turnover and dismissal in S&P 1500 firms from 2000 to 2022 (link), opening new research avenues in the field of strategy and corporate governance studies. I use my database to examine the strategic partnership between CFOs and CEOs and the antecedents of different types of CFO turnover and dismissal. I also examine the interdependence between CEO and CFO exits for new job opportunities. This provides an empirical foundation for the study of non-CEO executives, in line with the core tenet of upper echelons theory. My first paper also addresses the call for exploration of the non-CEO executive labor market, which has been largely underdeveloped in existing literature but is growing in importance in the management field.

Most importantly, my novel and comprehensive CFO turnover and dismissal has the potential to advance various streams of management research, especially for the role of boards of directors in executive turnover decision. For example, future studies could explore how board characteristics, such as independence, diversity, and size, influence decisions to dismiss or retain CEOs and CFOs for specific reasons, or whether the CEO or CFO is more likely to voluntarily leave the company. Board involvement in CEO and CFO dismissal, is an essential aspect of corporate governance. Thus, future researchers can investigate the potential relationship between boards and top executive transitions. Furthermore, the database can facilitate research into joint CEO-CFO turnover scenarios, which provides new insights into governance structures and top leadership shakeup.

My second paper explores the antecedents of CFO dismissal, rather than commonly examined performance drivers. Specifically, I examine the stigmatization among executives, particularly the impact of different types of CEO dismissal on CFO dismissal, by integrating CFO and CEO turnover and dismissal databases. Based on stigma theory, I identify a

positive association between CEO dismissal (especially when due to integrity issues) and CFO dismissal, suggesting that CFOs may face career penalties as dismissal due to their association with culpable CEOs. In addition, my second study examines how professional and personal ties between CEOs and CFOs may intensify this contagion effect. This offers new insights for corporate governance and executive team transition policies. My third paper examines the consequences of CEO and CFO dismissal from the perspective of role theory. Through an event study analysis of CEO vs. CFO dismissals in U.S. firms, my research highlights how the power differential within the roles of CEO and CFO serves as a significant signal to investors when financial misconduct is being signalled, which influences the attribution of blame. The study reveals that investors respond more positively to CEO dismissal when the CEO's within-role power is higher than that of the CFO, and vice versa. This provides a new angle on understanding executive dismissals as a corrective action for restoring investor confidence.

In summary, my research offers a novel theoretical and empirical foundation for understanding the dynamics of the non-CEO executive labor market, particularly for CFO turnover and dismissal, highlighting the intricate interplay between antecedents of CFO dismissals, corporate governance, and investor reactions. The biggest contribution of my research to the management field is the comprehensive CFO turnover and dismissal database, which is open access and updated annually for at least five years following the submission of my thesis. Through a multi-faceted analysis of CEO and CFO dismissal phenomena, my studies not only expand the boundaries of strategy management and upper echelons research from the CEO to the CFO domain, but also offer a valuable resource and practical guidance for academics, practitioners, and policymakers seeking to understand and shape the future of executive leadership and corporate strategies.

Appendixes

Chapter 2 Appendix A: Fifty-nine prior CFO turnover and dismissal studies

Authors	Year	Article Title	Journal	Turnover Type Stated	Turnover Identified By
Arthaud-Day, ML; Certo, ST; Dalton, CM; Dalton, DR	2006	A changing of the guard: Executive and director turnover following corporate financial restatements	Academy of Management Journal	General turnover	Company press release, proxy filings
Banker, RD; Feng, C	2019	The Impact of Information Security Breach Incidents on CIO Turnover	Journal of Information Systems	General turnover	ExecuComp
Bao, DC; Su, LX; Zhang, Y	2022	The real effects of disclosure regulation: Evidence from mandatory CFO compensation disclosure	Journal of Accounting and Public Policy	General turnover	ExecuComp and 10-K filings
Bedard, JC; Hoitash, R; Hoitash, U	2014	Chief Financial Officers as Inside Directors	Contemporary Accounting Research	Turnover (general, which they label as change); retirement	Audit Analytics
Beneish, MD; Marshall, CD; Yang, J	2017	Explaining CEO retention in misreporting firms	Journal of Financial Economics	General turnover	AAER, GAO, and Audit Analytics
Bernard, D; Ge, WL; Matsumoto, D; Toynbee, S	2021	Implied Tradeoffs of Chief Financial Officer Accounting Expertise: Evidence from Firm-Manager Matching	Management Science	Turnover (general, which they label as change); retirement	BoardEx
Billings, A; Gao, XH; Jia, YH	2014	CEO and CFO Equity Incentives and the Pricing of Audit Services	Auditing: A Journal of Practice & Theory	General turnover	ExecuComp
Bird, RC; Borochin, PA; Knopf, JD	2015	The role of the chief legal officer in corporate governance	Journal of Corporate Finance	General turnover	ExecuComp
Brinkhuis, E; Scholtens, B	2018	Investor response to appointment of female CEOs and CFOs	Leadership Quarterly	General turnover	Press releases and database
Brochet, F; Faurel, L; McVay, S	2011	Manager-Specific Effects on Earnings Guidance: An Analysis of Top Executive Turnovers	Journal of Accounting Research	General turnover	ExecuComp and First Call databases; PR Newswire and Wall Street Journal articles from Factiva
Brochet, F; Miller, GS; Srinivasan, S	2014	Do Analysts Follow Managers Who Switch	Accounting Review	Turnover; promotion	ExecuComp & BoardEx & Factiva & SEC

Authors	Year	Article Title	Journal	Turnover Type Stated	Turnover Identified By
		Companies? An Analysis of Relationships in the Capital Markets			
Chang, JC; Sun, HL; Tang, AP	2021	Effect of SEC enforcement actions on forced turnover of executives: Evidence associated with SOX provisions	International Review of Economics & Finance	Forced resign; resign	Litigation documents, firms' disclosures in 8-K, 10-K, and proxy statements, and news releases
Chee, S; Matsunaga, S; Wang, S	2022	Effective board monitoring over earnings reports and forecasts: Evidence from CFO outside director appointments	Journal of Accounting and Public Policy	General turnover	BoardEx
Chen, X; Cheng, Q; Lo, AK	2013	Accounting Restatements and External Financing Choices	Contemporary Accounting Research	General turnover	Not explicitly
Chen, X; Li, N; Lin, AP	2022	CFO Gaps: Determinants and Impact on the Corporate Information Environment	Accounting Review	Dismissal, retire, promote, personal decision, etc	Audit Analytics and 8-k
Cheng, CSA; Huang, HH; Li, YH	2015	Hedge Fund Intervention and Accounting Conservatism	Contemporary Accounting Research	General turnover	Not explicitly
Collins, D; Fleischman, G; Kaden, S; Sanchez, JM	2018	How Powerful CFOs Camouflage and Exploit Equity-Based Incentive Compensation	Journal of Business Ethics	General turnover	Execucomp, corporate Library database, manual examine
Collins, D; Masli, A; Reitenga, AL; Sanchez, JM	2009	Earnings Restatements, the Sarbanes-Oxley Act, and the Disciplining of Chief Financial Officers	Journal of Accounting, Auditing & Finance	Involuntary; promotion; retirement	SEC proxy statements (form DEF-l4A), 10-Ks, or 8-Ks
Collins, D; Reitenga, AL; Sanchez, JM	2008	The impact of accounting restatements on CFO turnover and bonus compensation: Does securities litigation matter?	Advances in Accounting	General turnover	SEC proxy statements
Curtis, QD; Donelson, DC; Hopkins, JJ	2019	Revealing Corporate Financial Misreporting	Contemporary Accounting Research	General turnover	ExecuComp
Dao, M; Huang, HW; Chen, KY; Huang, TC	2014	Can Management Turnover Restore the Financial Statement Credibility of Restating Firms? Further Evidence	Journal of Business Finance & Accounting	General turnover	Audit Analytics and 8-k
Das, S; Gong, JJ; Li, SY	2022	The Effects of Accounting Expertise of Board Committees on the Short-	Journal of Accounting, Auditing & Finance	General turnover	ExecuComp and hand collect for 1997–2005 data

Authors	Year	Article Title	Journal	Turnover Type Stated	Turnover Identified By
		and Long-Term Consequences of Financial Restatements			
Efendi, J; Files, R; Ouyang, B; Swanson, EP	2013	Executive Turnover Following Option Backdating Allegations	Accounting Review	Dismissal, resignation (forced turnover, non-forced turnover)	SEC filling (10-K, 8-K), also consider retirement age/ announcement period 6 months.
Engel, E; Gao, F; Wang, X	2019	The Importance of Role-Specific Performance and Sociopolitical Factors for Chief Financial Officer Employment Outcomes	Accounting Horizons	Forced turnover; retirement; promotion	Execucomp, Nexus and Factiva
Feldmann, DA; Read, WJ; Abdolmohammadi, MI	2009	Financial Restatements, Audit Fees, and the Moderating Effect of CFO Turnover	Auditing: A Journal of Practice & Theory	General turnover	SEC proxy statements and 10-K filings
Feng, M; Ge, WL; Luo, SQ; Shevlin, T	2011	Why do CFOs become involved in material accounting manipulations?	Journal of Accounting & Economics	General turnover	Speculation: just mention the turnover event is coded as 1 if "during the three-year time period prior to the first accounting manipulation year" but other CFO data was collecting through SEC filings.
Feng, M; Li, C; Raghunandan, K; Sun, LL	2022	Restating Internal Control Reports Following Financial Statement Restatements: Determinants and Consequences	Contemporary Accounting Research	General turnover	Audit Analytics
Ferris, SP; Sainani, S	2021	Do CFOs matter? Evidence from the M&A process	Journal of Corporate Finance	Forced and General turnover (i) to pursue other career opportunities, (ii) early retirement, (iii) resigned to join a new firm, (iv) appointed as a CEO at another firm.	Bloomberg news searches
Firk, S; Schmidt, T; Wolff, M	2019	CFO emphasis on value-based management: Performance implications and the challenge of CFO succession	Management Accounting Researcjh	CFO succession	BoardEx and hand-collected
Florackis, C; Sainani, S	2018	How do chief financial officers influence corporate cash policies?	Journal of Corporate Finance	Forced turnover and General turnover, such as (i) to pursue other career opportunities, (ii) early retirement, i.e., before the age of 60, (iii) resigned to	Bloomberg news searches

Authors	Year	Article Title	Journal	Turnover Type Stated	Turnover Identified By
				join a new firm, or (iv) appointed as a CEO at another firm	
Francis, B; Hasan, I; Park, JC; Wu, Q	2015	Gender Differences in Financial Reporting Decision Making: Evidence from Accounting Conservatism	Contemporary Accounting Research	General turnover	ExecuComp
Francis, BB; Hasan, I; Hovakimian, G; Sharma, Z	2023	Gender pay gap in American CFOs: Theory and evidence	Journal of Corporate Finance	General turnover	ExecuComp
Francis, BB; Hasan, I; Wu, Q; Yan, M	2014	Are Female CFOs Less Tax Aggressive? Evidence from Tax Aggressiveness	Journal of the American Taxation Association	General turnover	ExecuComp
Gallemore, J; Maydew, EL; Thornock, JR	2014	The Reputational Costs of Tax Avoidance	Contemporary Accounting Research	General turnover	ExecuComp
Gietzmann, M; Marra, A; Pettinicchio, A	2016	Comment Letter Frequency and CFO Turnover: A Dynamic Survival Analysis	Journal of Accounting, Auditing & Finance	General turnover	Audit Analytics
Haislip, JZ; Masli, A; Richardson, VJ; Sanchez, JM	2016	Repairing Organizational Legitimacy Following Information Technology (IT) Material Weaknesses: Executive Turnover, IT Expertise, and IT System Upgrades	Journal of Information Systems	General turnover	SEC proxy filings
Haislip, JZ; Masli, A; Richardson, VJ; Watson, MW	2015	External reputational penalties for CEOs and CFOs following information technology material weaknesses	International Journal of Accounting Information Systems	General turnover	Proxy statements and 10-K filings
Haislip, JZ; Myers, LA; Scholz, S; Seidel, TA	2017	The Consequences of Audit-Related Earnings Revisions	Contemporary Accounting Research	General turnover	SEC proxy statements
He, J	2022	Executive Network Centrality and Corporate Reporting	Management Science	General turnover	BoardEx
Hennes, KM; Leone, AJ; Miller, BP	2008	The Importance of Distinguishing Errors from Irregularities in Restatement Research: The Case of Restatements and CEO/CFO	Accounting Review	General turnover	Filings and press release
Hermanson, DR; Ye, ZX	2009	Why Do Some Accelerated Filers with SOX Section 404 Material Weaknesses	Auditing: A Journal of Practice & Theory	General turnover	Audit Analytics, 10-Ks, 10-Qs, 8-Ks, and proxy statements

Authors	Year	Article Title	Journal	Turnover Type Stated	Turnover Identified By
		Provide Early Warning under Section 302?			
Hersel, MC; Gangloff, KA; Shropshire, C	2023	Mixed messages: crisis communication-dismissal (in)coherence and shareholder trust following misconduct	Academy of Management Journal	Dismissal and other turnover (this article has two studies and mention CFO dismissal)	Lexis Nexis (misstatement's public disclosure)
Janney, JJ; Gove, S	2019	Do Executive Departures to Signal the End of a Scandal Create or Reduce Uncertainty? An Examination of Market Reaction in Stock Option Backdating Scandal Events	Business & Society	Terminated; retire; resign; general turnover	SEC form 8-k, Factiva, Google News, and LexisNexis
Karajian, S; Ullah, S	2022	Consequences of fraud and overcoming negative market reaction	Global Finance Journal	General turnover	SEC EDGAR filings, specifically in the 10-K, 10-K/A, and DEF14A filing.
Leone, AJ; Liu, M	2010	Accounting Irregularities and Executive Turnover in Founder-Managed Firms	Accounting Review	General turnover	Restatement (10k, 8k SEC filings)
Li, C; Sun, LL; Ettredge, M	2010	Financial executive qualifications, financial executive turnover, and adverse SOX 404 opinions	Journal of Accounting & Economics	General turnover	Lexis-Nexis searches of Form 8-Ks and proxy statements
Li, P; Song, C; Wang, JJ; Zheng, HR	2022	CFOs' audit experience and corporate disclosure quality: evidence from China	Accounting & Finance	General turnover	Not explicitly mentioned
Li, WY; Phang, SY; Ho, SY	2019	CEO/CFO turnover and subsequent remediation of information technology material weaknesses	Accounting & Finance	General turnover	Audit Analytics and 8-k
Li, YW; Zeng, YQ	2019	The impact of top executive gender on asset prices: Evidence from stock price crash risk	Journal of Corporate Finance	General turnover	Factiva
Loyeung, A; Matolcsy, Z	2015	CFO's accounting talent, compensation and turnover	Accounting & Finance	Turnover; normal retirement	Morningstar DatAnalysis Premium data se
Masli, A; Richardson, VJ; Watson, MW; Zmud, RW	2016	SENIOR EXECUTIVES' IT MANAGEMENT RESPONSIBILITIES: SERIOUS IT-RELATED DEFICIENCIES AND CEO/CFO TURNOVER	MIS Quarterly	General turnover	SEC proxy statements

Authors	Year	Article Title	Journal	Turnover Type Stated	Turnover Identified By
Menon, K; Williams, DD	2008	Management turnover following auditor resignations	Contemporary Accounting Research	Retirement; turnover (general, which they label as change); identified in public filings of changes; Compact disclosure database; Press releases	Following several prior studies (e.g., Denis and Denis 1995; Engel et al. 2003; Weisbach 1988) we include all CEO and CFO changes and attempt to identify potential retirements by relying on the executive's age. We treat the departure of executives aged 64 years or more as likely retirements. (p. 577); CEO and CFO changes are identified from public filings, the Compact Disclosure database, and press releases. (p. 577)
Mian, S	2001	On the choice and replacement of chief financial officers	Journal of Financial Economics	Dismissal, retire, promotion, reassign, etc.	Dow Jones News Retrieval
Olson, AJ; Ordyna, P	2023	Boards? Reactions to Problems in Accounting for Income Taxes	Journal of the American Taxation Association	General turnover	Public announcement
Peng, L; Teoh, SH; Wang, YK; Yan, JW	2022	Face Value: Trait Impressions, Performance Characteristics, and Market Outcomes for Financial Analysts	Journal of Accounting Research	General turnover	ExecuComp (they just identify new CEO/CFO)
Shi, W; Zhang, Y; Hoskisson, RE	2019	Examination of CEO-CFO social interaction through language style matching: outcomes for the CFO and the organization	Academy of Management Journal	General turnover	Capital IQ's People Intelligence, Morningstar's Historical Governance, and BoardEx databases
Singer, Z; Zhang, J	2022	Do companies try to conceal financial misstatements through auditor shopping?	Journal of Business Finance & Accounting	General turnover	Audit analytics
Tan, WH; Wang, Q; Guo, XY; Chen, JT	2022	Political connections and managerial premiums in the labor market: Evidence from China	Economic Modelling	Forced and General turnover (1) change of job, (2) retirement, (3) contract expiration, (4) change in control right, (5) resignation, (6) dismissal, (7) health, (8) personal reasons, (9) corporate governance reform, (10) end of acting terms, (11) legal disputes,	Companies' announcements and websites

Authors	Year	Article Title	Journal	Turnover Type Stated	Turnover Identified By
				and (12) no reason provided	
Wang, X	2010	Increased Disclosure Requirements and Corporate Governance Decisions: Evidence from Chief Financial Officers in the Pre- and Post-Sarbanes-Oxley Periods	Journal of Accounting Research	Dismissal, retire, personal decision, etc.	Factiva

Chapter 2 Appendix B: CFO turnover coding rubric

This document outlines the coding scheme and guidelines that were used to classify CFO turnover events. The coding scheme was used to train graduate research students to analyze the collected media sources of CFO turnovers and was used systematically by the coding team to ensure consistency. The scheme was followed step-by-step.

Step 1.	**Does the media source explicitly mention the passing (death) or ill-health of the CFO as reason for the turnover?**	
	[YES] Code 1 Involuntary CFO death or illness	[NO] Go to Step 2
Step 2.	**Is the media source negative in its sentiment when discussing the CFO turnover (i.e., firm emphasizes difficulties and expresses no thanks or gratitude to the CFO and or vice-versa)?**	
	[YES] Go to Step 3.	[NO] Go to Step 6
Step 3.	**Does the media source explicitly mention poor performance, strategic issues (indicated by terms such as "cut-backs", "shake-up" etc.) or job-related failings of the CFO?**	
	[YES] Code 2 Involuntary CFO dismissal (performance)	[NO] Go to Step 4
Step 4.	**Does the media source explicitly mention behavioral and personal issues relating to policy breaches and misconducts (e.g., violations in HR policy, regulations, and law)**	
	[YES] Code 3 Involuntary CFO dismissal (behavior issues)	[NO] Go to Step 5
Step 5.	**Was the CFO turnover effective immediate or within less than 1-month of the announcement?**	
	[YES] Code 4 Involuntary CFO dismissal (no reason disclosed)	[NO] Go to Step 13
Step 6.	**Is the media source positive in its sentiment when discussing the CFO turnover (i.e., firm expresses thanks or gratitude to the CFO and or vice-versa)?**	
	[YES] Go to Step 7.	[NO] Go to Step 11

Step 7.	**Does the media source explicitly mention retirement?**	
	[YES] Code 5 Voluntary CFO retirement	[NO] Go to Step 8
Step 8.	**Does the media source provide explicit statements from the CFO that provide a personal justification for leaving the firm (e.g., spending more time with family, philanthropy etc.)**	
	[YES] Code 6 Voluntary (personal reasons)	[NO] Go to Step 9
Step 9.	**Did the CFO take a new executive role within another firm within 3-months of leaving the company?**	
	[YES] Code 7 Voluntary (new opportunity)	[NO] Go to Step 10
Step 10.	**Did the media source contain statements from the CFO expressing thanks and gratitude for time at the firm or from the firm announcing a succession plan and or transition period?**	
	[YES] Code 8 Voluntary (no reason)	[NO] Go to Step 13
Step 11.	**Did the CFO internally transition into another executive role within the firm (such as CEO)?**	
	[YES] Code 9 Internal role transition	[NO] Go to Step 12
Step 12.	**Other category: Did the CFO hold multiple positions in the firm, turnover due to a merger or acquisition or was the company delisted, bankrupt, cease to exist, change identifiers?**	
	[YES] Code 10 Other	[NO] Go to Step 13
Step 13.	**Missing information. Despite efforts to ascertain reason for CFO turnover, no information could be sourced at this stage to assign code to turnover event. Code as 11 (Missing)**	

*Note. All current CFOs are coded as 12 (Current CFO).

Chapter 2 Appendix C: Database user manual

This user manual provides an overview of our open access CFO turnover and dismissal database in S&P 1500 firms (link). Before utilizing the database, we recommend reviewing this document to make navigating and using the data more efficient. The database we have developed captures the various reasons why CFOs leave their jobs based on the qualitative coding of media disclosures that document the turnover event. We identify twelve mutually exclusive categories of turnover, including dismissal, internal reassignment, and retirement, among others. A summary of the coding is provided in Table 2.2.

The granular distinctions between different types of turnover can be used by researchers for various purposes (as indicated in the paper that corresponds to this database). This initial version of our database has been robustly developed and subject to rigorous verification processes to ensure its efficacy. Nonetheless, the database is a "living" project and will be subject to extensions and improvements over time by the author team as the community engages with it and uses it for research purposes. We strongly encourage users to provide their feedback and specific areas for improvement to the first author (email: ziheng.zhang@adelaide.edu.au.). As improvements and extensions are made, a log of prior versions will be retained to ensure transparency.

In the following, we outline the variables that comprise our database.

Variable Definitions

1. **Company id:** A unique identifier for each company. Within the BoardEx database, *Company id* typically refers to a unique identifier assigned to each company.
2. **PERMCO:** A permanent unique identifier assigned to companies in CRSP (Center for Research in Security Prices) database.
3. **GVKEY:** *GVKEY* is a unique identifier used by the Compustat database, which is managed by S&P Global Market Intelligence.
4. **CFO name:** *CFO name* is full name of the chief financial officer.
5. **Company name:** The formal name of the associated company.

6. **Leave reason:** The primary reasons underlying the CFO's departure are voluntary resignation, involuntary dismissal, or internal reassignment, among others.
7. **Source:** The primary source from which the CFO's turnover and dismissal information was ascertained, such as news reports, company announcements, etc.
8. **Role name:** The specific role or designation held by the CFO within the company.
9. **Date start role:** The date on which the CFO officially commenced their tenure as the CFO.
10. **Date end role:** The date marking the official cessation of the CFO's tenure in their role.
11. **Seniority:** A categorization denoting the CFO's level of experience or rank within the corporate hierarchy.
12. **Director id:** A unique identifier for board members in BoardEx, like executive id in ExecuComp database.
13. **Note:** Additional annotations and explanations related to the source record that provide context and clarify specific aspects for CFO departure.
14. **Insider or outsider:** An indicator specifying whether the CFO's succession was a result of internal promotion ("Insider") or external recruitment ("Outsider").
15. **Code:** A designated code representing the nature of the CFO's transition, correlated with the "Leave reason" column.

Data coding

The coding of CFO turnovers was conducted by the first author and three graduate research students. Prior to coding, three graduate students were trained to code the media disclosures using the protocol developed. Each disclosure was independently coded by two coders. These were randomly sampled. Intercoder agreement was 88 percent—indicating the efficacy of the coding protocol and process. The 12 percent of disagreements were collectively resolved through discussions among the four coders, including the first author.

A random sample of 200 turnover events was also sent to an independent graduate research student after all turnover events were coded. This was to ensure the reliability and accuracy of the coding effort. The intercoder agreement was 91 percent, indicating a substantial level of agreement comparable to prior work (e.g., Gentry et al., 2021).

Use guidelines

In the database, we have provided the various types of company unique identifier, such as company ID (BoardEx), GVKEY (Execucomp), and PERMCO (CRSP), so that the database can be easily merged with existing databases. We also provide STATA code to merge our database with Gentry et al., (2021) open access CEO database.

Use of the database is free and open according to the Open Data Commons Attribution License. We request that authors who use the data (a) cite the article that published the set; and (b) if extensions or modifications to the database are made to provide these so a detailed log can be kept facilitating future improvements.

Chapter 2 Appendix D: Merging CFO and CEO turnover databases (STATA code)

Due to the similarity in the coding of our CFO turnover and dismissal database and Gentry and colleagues' (2021) CEO turnover and dismissal database, researchers can merge these sources to pursue exciting new lines of inquiry. As we indicated in our paper, a particularly fruitful area of future research would be to examine the interdependencies between the various types of CFO and CEO turnover. This involves capture preceding CEO to subsequent CFO turnover and preceding CFO to subsequent CEO turnover.

We begin by providing basic STATA code to conditionally merge the two databases. The coding we provide is to capture preceding CEO turnover events to subsequent CFO turnover events. Researchers can easily adapt the code below to also capture preceding CFO turnover events to subsequent CEO turnover events. Also note, in our coding, we renamed Gentry's CEO database as "2023 CEO" and our CFO database as "2023 CFO". If you save these databases using a different file name, please ensure you edit these in below code for execution.

The time interval between CEO and CFO departure can be determined based on any specific research objective. Given that not every CEO turnover is accompanied by a subsequent CFO turnover, it is crucial to note that for every CEO turnover event, there is always an associated observation for the CFO, even if the CFO remains in their position (i.e., current CFOs).

STATA Code (Preceding CEO turnover to subsequent CFO turnover)

```
use "2023 CEO.dta", clear
gen check_id = _n
joinby gvkey using "2023 CFO.dta" //,
unmatched(none) replace cfoend = "31dec2099" if
cfoend == ".c"
gen cfostart_num = date(cfostart,"DMY")
gen cfoend_num = date(cfoend,"DMY")
```

```
gen turnover =.
replace turnover = 1 if inrange (cfoend_num - left_ceo_office, 0, 365) // In this case, we retain CEO turnover event which is ahead of CFO turnover in one calendar year.

replace turnover = 0 if turnover ==.

bysort check_id: egen check_num = sum(turnover)

drop if check_num! =0 & turnover==0
drop if check_num== 0 &
cfoend_num<left_ceo_office
drop if check_num==0 &
left_ceo_office<cfostart_num replace cfoend = ".c" if
cfoend == "31dec2099"
drop check_id cfostart_num cfoend_num left_ceo_office check_num
```

Further, we provide the code for entirely merging our CFO database with Gentry's CEO database, which includes all current CEOs and CFOs for every year of observation within a given firm. Please ensure that you change the variable names in both Gentry's and our datasets before performing the merge. Additionally, please note that the data for current CEOs is derived from *Execucomp* using the executive unique identifier *co_per_rol*. If you have any questions, please contact the author.

STATA Code (Merging CFO and CEO database entirely)

```
use "2023 CEO.dta", clear //** CFO start and CFO end are the date **
gen cfostart2 = date(cfostart,"DMY")
gen cfoend2 = date(cfoend,"DMY")
format %td cfostart2 cfoend2
rename (cfostart cfoend cfostart2 cfoend2) (cfostart2 cfoend2 cfostart cfoend)
replace cfoend = 99988 if cfoend ==.
replace cfostart = 900 if cfostart==.
keep gvkey CFOname cfostart cfoend
expand 24
bysort gvkey CFOname (cfostart): gen year_id = 1999 + _n
keep if inrange (year_id, year(cfostart), year(cfoend))
gen CFO_turnover = year_id == year(cfoend)
bysort gvkey year_id (cfoend): gen k = _n
bysort gvkey year_id (cfoend): egen r = max (CFO_turnover)
drop if r==1 & CFO_turnover==0
drop if gvkey ==.
drop k r
save "222"
use "2023 CEO.dta", clear
```

```
keep gvkey co_per_rol ceostart ceoend //** CEO start and CEO end are the date **
replace ceoend = 99999 if ceoend ==.
replace ceostart = 900 if ceostart==.
format %td ceoend
expand 24
bysort gvkey co_per_rol: gen year_id = 1999 + _n
keep if inrange(year_id, year(ceostart), year(ceoend))
gen CEO_turnover = year_id == year(ceoend)
bysort gvkey year_id (ceoend): gen k = _n
bysort gvkey year_id (ceoend): egen r = max (CEO_turnover)
drop if (r==1 & CEO_turnover==0) | gvkey==.
drop k r
save "333"

use "222", clear
duplicates drop gvkey year_id, force
keep gvkey year_i
merge m:m gvkey year_id using "333"
drop if _merge==2
drop _merge
save "333", replace

use "222", clear
joinby gvkey year_id using "333", unmatched(none)
sort gvkey year_id CFOname co_per_rol
replace CEO_turnover = 1 if CFO_turnover==1 & ceoend-cfoend>=30 & ceoend-
cfoend<=365
recode cfostart cfoend ceostart ceoend (99999 99988 900 =.)
drop if year_id>=2023

preserve
keep if CEO_turnover==1 & CFO_turnover==1
replace year_id = year_id+1
drop if year_id>=2023
save "444", replace
restore

merge m:m gvkey year_id using "444"
drop if _merge==2
drop if _merge==3 & CFO_turnover==0 & CEO_turnover==1
drop _merge
save "full merge"
```

Chapter 4 Appendix A: OLS analyses predicting four-day CAR/BHAR using matched sample

	DV: Four-day CAR		DV: Four-day BHAR	
Variable	**Model 1**	**Model 2**	**Model 3**	**Model 4**
CEO tenure	0.801	0.759	0.893	0.821
	(0.702)	(0.701)	(0.730)	(0.729)
CFO tenure	-0.655	-0.618	-0.811	-0.731
	(0.664)	(0.675)	(0.690)	(0.701)
Board size	1.231***	1.203***	1.181***	1.151***
	(0.371)	(0.367)	(0.385)	(0.381)
Independent directors	-3.852	-3.164	-3.696	-2.875
	(3.065)	(3.090)	(3.186)	(3.210)
Entrenchment	0.939	1.086*	1.120*	1.282**
	(0.627)	(0.625)	(0.652)	(0.649)
Analysts following	-0.139	-0.168*	-0.161	-0.189*
	(0.096)	(0.096)	(0.100)	(0.100)
Number of employees	-0.345	-0.806	-0.244	-0.774
	(0.959)	(0.972)	(0.997)	(1.010)
Total assets	-0.621	-0.397	-0.692	-0.445
	(1.053)	(1.045)	(1.095)	(1.085)
Sales revenue	-0.000	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Return on assets	5.594	4.996	4.970	4.317
	(5.607)	(5.558)	(5.829)	(5.773)
Firm leverage	0.025	0.024	0.025	0.024
	(0.033)	(0.033)	(0.034)	(0.034)
CEO versus CFO dismissal		0.162		0.332
		(1.038)		(1.078)
CEO versus CFO within-role power		-0.427**		-0.473**
		(0.186)		(0.193)
CEO versus CFO dismissal × CEO versus CFO within-role power		0.709***		0.721***
		(0.258)		(0.268)
Intercept	3.116	0.860	2.848	0.472
	(13.283)	(13.214)	(13.809)	(13.727)
Year fixed effects	Included	Included	Included	Included
Industry fixed effects	Included	Included	Included	Included
Observations	426	426	426	426
R-squared	0.566	0.580	0.559	0.574

Notes. Standard errors reported in parentheses.
*$p < 0.10$; **$p < 0.05$; ***$p < 0.01$.

Chapter 4 Appendix B: Marginal effects analyses (four-day CAR/BHAR)

	DV: Four-day CAR[a]			
CEO versus CFO within-role power	***ΔCAR***	***SE***	***t(p)***	***[95% CI]***
-3 S.D.	-7.485**	3.257	-2.33 (0.027)	[-13.810, -0.846]
-2 S.D.	-4.657**	2.288	-2.06 (0.040)	[-9.101, -0.214]
-1 S.D.	-1.830	1.429	-1.30 (0.196)	[-4.606, 0.947]
Mean	0.998	1.017	0.99 (0.321)	[-0.978, 2.974]
+1 S.D.	3.826**	1.486	2.61 (0.010)	[0.939, 6.713]
+2 S.D.	6.653***	2.359	2.86 (0.005)	[2.071, 11.236]
+3 S.D.	9.481***	3.333	2.88 (0.004)	[3.008, 15.953]
	DV: Four-day BHAR[b]			
CEO versus CFO within-role power	***ΔBHAR***	***SE***	***t(p)***	***[95% CI]***
-3 S.D.	-7.448**	3.338	-2.23 (0.026)	[-14.019, -0.877]
-2 S.D.	-4.571*	2.345	-1.95 (0.052)	[-9.187, 0.045]
-1 S.D.	-1.694	1.465	-1.16 (0.249)	[-4.578, 1.190]
Mean	1.183	1.043	1.13 (0.257)	[-0.869, 3.236]
+1 S.D.	4.061***	1.523	2.67 (0.008)	[1.061, 7.060]
+2 S.D.	6.938***	2.418	2.87 (0.004)	[2.178, 11.698]
+3 S.D.	9.815***	3.415	2.87 (0.004)	[3.091, 16.539]

Notes. [a]Estimates based on Model 2, Appendix A. [b]Estimates based on Model 4, Appendix A. *SE* = standard error; *t* = t-statistic; *p* = exact p-value; *95% CI* = 95% confidence interval.
*$p < 0.10$; **$p < 0.05$; ***$p < 0.01$.