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CFO Career Concerns and Strategic Decisions: An Empirical Analysis of M&As

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ABSTRACT Chief financial officers (CFOs) have become increasingly involved in strategic decisions. The literature has emphasized the potential benefits of this development, delineating CFOs as impartial advisors who ensure economically conscious decisions. Our study, however, suggests that the career concerns of CFOs create signaling incentives that detrimentally influence the outcomes of strategic decisions. Based on the merger and acquisition (M&A) decisions of S&P 500 firms between 2005 and 2018, our results show that CFOs with higher signaling incentives (i.e., at earlier and later career stages) are associated with lower M&A returns, higher M&A premiums, greater M&A activity, and riskier M&A features (e.g., large, diversified, or cross-border deals). This association is stronger when chief executive officers are more likely to delegate decision authority to CFOs, whereas it is weaker when CFOs have a higher reputation, strong long-term incentives, and when there is strong external monitoring. Our results further indicate that the labor market highly values the M&A experience of CFOs and only lightly punishes CFOs involved in value-destroying M&As.

Keywords: Chief financial officer; career concerns; implicit career incentives; M&As; career horizon

JEL codes: G30; G34; M51

1. Introduction

Nowadays, chief financial officers (CFOs) are typically second in the corporate hierarchy and are strongly involved in strategic decisions (Caglio et al., 2018; Hoitash et al., 2016; Uhde et al., 2017). The general contention is that CFOs' influence can benefit the outcomes of strategic decisions because CFOs act as impartial advisors, preventing potential misjudgments by chief executive officers (CEOs) (Ferris & Sainani, 2021; Karaevli & Özcan, 2022; Shi & Chen, 2019). However, this prevailing perspective assumes that CFOs fulfill their role in the best interests of shareholders. It neglects that CFOs, like other managers, can also follow their personal interests. Therefore, it is crucial to also understand whether and when the personal interests of CFOs may harm the outcomes of strategic decisions.

In this study, we focus on the career concerns of CFOs and whether they create implicit incentives that impede their role as impartial advisors in strategic decisions. In contrast to Ferris and

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Sainani (2021), who focus on CFOs' ability to influence strategic decisions, we aim to understand when variations in CFOs' incentives can render their influence on strategic decisions detrimental to shareholder interests. Our focus on career concerns is motivated by labor market demands, which have evolved in parallel with the expansion of the CFO role. Specifically, the demand for CFOs with experience in strategic decisions, such as M&As, has grown substantially (Caglio et al., 2018; Chasan, 2012; Datta & Iskandar-Datta, 2014). CFOs with such experience are further increasingly in demand as CEOs (Li et al., 2017; Serfling, 2014; Yim, 2013; Zhang et al., 2016) and directors (Field & Mkrtchyan, 2017; Greene & Smith, 2021; Harford & Schonlau, 2013). This demand can create incentives for CFOs to gain extensive experience in major strategic decisions, thereby positively influencing their prospects in the labor market. At the same time, the role of CFOs in strategic decisions is to challenge the economic implications of such decisions with 'healthy skepticism' (Karaevli & Özcan, 2022) and, if necessary, to oppose potentially subpar or overly risky decisions (Uhde et al., 2017). However, if CFOs aim to advance their career prospects by gaining experience in strategic decisions, they could have an implicit incentive to be less skeptical, which would interfere with their role as impartial advisors.

Theoretically, this view is embedded in the managerial signaling perspective (Prendergast & Stole, 1996), which suggests that career concerns create incentives for managers to make bold and more visible decisions that provide a signal to the labor market (Li et al., 2017; Yim, 2013; Zhang et al., 2016). This perspective contrasts with the market learning perspective, suggesting that managers fear the labor market's punishment for subpar decisions and engage in more conservative decision making when they are concerned about their career prospects (Chevalier & Ellison, 1999; Crain, 2017; Hirshleifer & Thakor, 1992). Given CFOs' duties as financial record keepers, their behavior is traditionally viewed from the market learning perspective.¹ However, we argue that the signaling perspective becomes particularly relevant for CFOs in strategic decisions. Becoming visible in strategic decisions comes with high upside potential for CFOs (e.g., CEO promotions or board seats), while they are less strongly held accountable for poor strategic decision outcomes. Instead, the labor market is more likely to attribute poor strategic decision outcomes to CEOs (Greene & Smith, 2021), which limits the downside risk of CFOs in this context. Therefore, CFOs who are concerned about their labor market prospects may weigh the upside potential of signaling experience in bold and visible strategic actions as higher than its downside risk.

In our main hypothesis, we propose that CFOs' incentives to engage in signaling are detrimental to the outcomes of strategic decisions. Signaling incentives could make CFOs less skeptical and even motivate them to advocate for overly risky (and potentially harmful) strategic decisions. We suggest that these incentives are especially relevant for CFOs at earlier career stages who are concerned with improving their career prospects (e.g., Gibbons & Murphy, 1992). While signaling incentives should diminish throughout a career, we expect that CFOs at later career stages become concerned again with gaining board seats to extend their career beyond managerial tenure (e.g., Harford & Schonlau, 2013) or ultimately become CEOs. Therefore, we predict a curvilinear relationship between CFO career horizon and the outcomes of strategic decisions.

We acknowledge that CFOs are not the ultimate decision makers in strategic decisions. To better identify whether indeed CFOs' signaling incentives affect the outcomes of strategic decisions, we consider differences in CEOs' propensity to delegate decision authority to CFOs. In

¹Specifically, empirical studies have shown that inaccuracies in a firm's reporting result in severe career penalties for CFOs (Bedard et al., 2014; Li et al., 2010; Wang, 2010). We also empirically test whether signaling incentives in CFO's reporting activities are indeed rather limited and find that CFOs in early or late career stages do not overly engage in earnings management (see Appendix S18 in the Online Appendix). This supports that signaling incentives might only be relevant if CFOs perceive the upside potential of signaling as higher than the downside risk of being held accountable for poor decision outcomes.

some firms, work overload or the lack of financial expertise of CEOs may motivate them to delegate more authority to CFOs (Graham et al., 2015). We assume that, under such conditions, CFOs' influence on strategic decisions should naturally become more visible (see Ferris & Sainani, 2021). Thus, we predict that the influence of CFOs' signaling incentives on strategic outcomes is more pronounced when CEOs delegate more decision authority to CFOs.

To test our predictions, we focus on M&As as major strategic decisions. M&As provide an ideal setting because they are observable strategic decisions with measurable outcomes (Bens et al., 2012). Recent studies have further highlighted the crucial role that CFOs can play in these decisions (Ferris & Sainani, 2021; Iskandar-Datta & Shekhar, 2020). We empirically test our predictions using a sample of 3,151 M&As of non-financial S&P 500 firms between 2005 and 2018. Our results indicate an inverted U-shaped relationship between CFO career horizon and M&A returns, suggesting that firms with CFOs at earlier and later career stages are associated with lower M&A returns. Moreover, the inverted U-shaped relationship between CFO career horizon and M&A returns is particularly pronounced when CEOs are more likely to delegate decision authority to CFOs. Several robustness tests regarding alternative specifications of our dependent variable, independent variable, sample, and endogeneity concerns substantiate these results.

We address potential concerns that CEOs' signaling incentives could confound our results. First, we follow Kim et al.'s (2011) approach by modeling a 'horse race' between the influence of CFOs' and CEOs' signaling incentives. Our results neither support a negative direct influence of CEOs' signaling incentives on M&A returns nor do controlling for them diminish the influence of CFOs' signaling incentives. This result is in line with prior literature, indicating that although CEOs' signaling incentives may lead to higher M&A activity, they do not detrimentally influence M&A returns (Li et al., 2017; Yim, 2013) and could be explained by CEOs being held more accountable for poor M&As (Greene & Smith, 2021). Second, we test the influence of CFOs' signaling incentives among different career stages of CEOs and find that CFOs' influence holds for CEOs in early and middle career stages. It only disappears for experienced CEOs at late career stages, who are likely to delegate less decision authority to other managers (Graham et al., 2015).

Next, we examine additional cross-sectional variations. First, we focus on CFO characteristics that could decrease their signaling incentives. We find that the association between CFO career horizon and M&A returns diminishes for CFOs with a high reputation in terms of high total pay relative to industry peers, recent M&A experience, and an external board seat. Moreover, the association between CFO career horizon and M&A returns is less pronounced under higher long-term compensation. Second, we focus on the intensity of external monitoring. Weak external monitoring particularly calls for CFOs' internal monitoring role (Acharya et al., 2011). Therefore, the potentially detrimental influence of CFOs' signaling incentives should more strongly affect M&A returns when external monitoring is weak. In line, we find that the relationship between CFO career horizon and M&A returns is more pronounced under weak external monitoring.²

We also test the channels through which CFOs may negatively affect M&A returns. In their role as impartial advisors, CFOs are required to prevent overpayments and the initiation of overly risky M&As (Karaevli & Özcan, 2022). However, if CFOs possess high signaling incentives, we find that firms initiate more and larger deals, deals with riskier features and overpay for targets.

²In additional tests, we also find that the association between CFO career horizon and M&A returns is stronger when another accounting executive is present; thus, the CFO's role is focused on strategic tasks (Rhodes & Russomanno, 2021). We do not find significant differences for the presence of other dedicated strategy or operations executives (see Appendix S14 in the Online Appendix). This is consistent with the view that CFOs are more likely to collaborate with other managers in strategic decision-making than being overlooked (Agrawal et al., 2016; Buchheit et al., 2019).

Finally, we examine the labor market outcomes for CFOs who have gained recent experience in M&As. We find that this experience is positively related to CFO promotion, new board seats, awards, higher tenure and higher compensation, while its relation to CFO dismissal is insignificant. We further differentiate between experience in M&As with positive returns and that with negative returns and between experience in M&As with highly positive, mediocre (i.e., slightly positive or negative) and highly negative returns. We find that positive labor market outcomes are more pronounced for experience in M&As with positive or mediocre returns, but experience in M&As with negative or even highly negative returns does not significantly impair such positive outcomes. Moreover, we observe that only M&As with highly negative returns increases the risk of CFO dismissal. Collectively, these results support the idea that signaling M&A experience entails high upside potential for CFOs, while the downside risk of career penalties is limited.

In summary, our study indicates that implicit incentives for CFOs to signal experience with strategic decisions can harm these decisions. This contributes to the literature in the following ways. First, we add to the discussion of the implications of CFOs' expanded decision-making responsibilities (e.g., Hoitash et al., 2016; Kroos et al., 2018; Uhde et al., 2017). While existing studies have emphasized the detrimental effects on CFOs' fiduciary duties (Buchheit et al., 2019; Caglio et al., 2018), we investigate the influence of CFOs on strategic decisions. Practitioners (Agarwal et al., 2018) and academics (e.g., Karaevli & Özcan, 2022; Shi & Chen, 2019) mostly note the potential benefits of CFO involvement in strategic decisions. Our study complements this literature by highlighting a potential conflict of interest arising from CFO career concerns and how this can harm strategic decisions. Specifically, we contextualize the seminal findings of Ferris and Sainani (2021), who suggest that a strong CFO influence on the M&A process, on average, benefits shareholders. Our results show that greater CFO involvement can also be detrimental when CFOs' signaling incentives motivate them to deviate from their designated impartial role. Therefore, similar to Ferris and Sainani (2021), we conclude that CFOs are a key factor for M&A success. However, in addition to their ability to influence the M&A process, we suggest that their motivation (e.g., signaling incentives) should also be considered.

Second, our study contributes to the literature on governing the CFO role (Uhde et al., 2017). Prior literature points to several characteristics relevant to the alignment of interests between CFOs and shareholders (e.g., Aier et al., 2005; Beck & Mauldin, 2014; Caglio et al., 2018). While these studies focus on the outcomes of CFOs' fiduciary responsibilities, we add evidence on the relevance of governing CFOs in fields that exceed their traditional fiduciary duties. In this context, we point to specific CFO characteristics (e.g., reputation and explicit incentives) and the intensity of external monitoring (e.g., through industry competition or dedicated institutional investors) that determine the appearance and potential harm of CFOs' signaling incentives in strategic decisions. To diminish signaling incentives, directors and investors should carefully evaluate CFOs' contributions to prior strategic decisions and highly appreciate when CFOs stand up to CEOs.

Third, our study contributes to the literature on the labor markets of top managers. Related studies have so far suggested that the managerial signaling perspective may be restricted to labor markets for generalists, whereas the market learning perspective prevails in specialized labor markets (Chevalier & Ellison, 1999; Crain, 2017). We extend this literature by emphasizing the relevance of signaling incentives in the more specialized CFO labor market. Therefore, we respond to Fee and Hadlock's (2004) call to study the labor market evaluations of non-CEO managers. Specifically, we suggest that developments in non-CEO labor markets create signaling incentives that can be particularly detrimental to the outcomes of strategic decisions. Functional top managers have gained increasing influence in the strategic decision-making process (Menz, 2012) and their labor market outcomes often benefit from experience with major strategic decisions (see Greene & Smith, 2021). However, poor strategic decision outcomes are still primarily

attributed to CEOs (Greene & Smith, 2021). This situation implicitly incentivizes functional top managers to advocate major and even risky strategic decisions. This may question the effectiveness of internal monitoring by non-CEO managers (Acharya et al., 2011) and calls for more attention to the career incentives of non-CEO managers in the context of strategic decisions.

2. Literature and Hypothesis Development

2.1. The CFOs' Role in Strategic Decision-making

While CFOs' responsibilities were originally confined to accounting and finance activities (Fogel et al., 2018; Zorn, 2004), academics and practitioners increasingly emphasize that CFOs also play a key role in strategic decisions (e.g., Agrawal et al., 2018; Bernard et al., 2021). CFOs provide insights into the economic consequences of strategic decisions and are expected to oppose subpar decisions (Karaevli & Özcan, 2022; Uhde et al., 2017). For example, CFOs 'voice different opinions based on realistic data (...) to urge the CEO and the board to carefully evaluate the synergistic value and post-merger implementation costs in order to make more objective decisions' in M&As (Karaevli & Özcan, 2022, p. 80). Moreover, CFOs partly engage in 'a facilitation role as opposed to a preventative one' (Clifford et al., 2010, p. 6), proposing strategic alternatives to CEOs.

The implications of this expansion of the CFO role are highly debated in the literature (Bernard et al., 2021; Caglio et al., 2018; Uhde et al., 2017). Two major questions stand out: (1) In which strategic decisions do CFOs play an influential role, and (2) when does the influence of CFOs unfold positively or negatively in the outcomes of these strategic decisions? Recent studies have indicated that CFOs exert a significant influence on strategic decisions, such as research and development, capital expenditure (Hoitash et al., 2016), capital structure (Florackis & Sainani, 2018) and especially M&As (e.g., Ferris & Sainani, 2021; Iskandar-Datta & Shekhar, 2020). Ferris and Sainani (2021) find that several M&A outcomes, such as completion time, target selection, payment and performance are affected by CFOs' level of influence. They conclude that firms with more influential CFOs benefit from higher value creation during M&As (Ferris & Sainani, 2021). This aligns with the assumption that CFOs use their influence in the best interests of shareholders (Karaevli & Özcan, 2022; Keck & Tang, 2016; Uhde et al., 2017) and that financial experts tend to act objectively (Aier et al., 2005; Badolato et al., 2014). However, the portrait of CFOs as impartial advisors ensuring effective strategic decisions neglects their pursuit of personal interests, which can motivate them to diverge from their dedicated role.

2.2. Career Concerns and Implicit Career Incentives

The expansion of the CFO role is accompanied by evolving labor market demands, which renders career concerns particularly relevant to CFOs' interests in strategic decisions. For example, accounting experience was typically considered a main attribute for CFOs' career development (Hoitash et al., 2016), but the labor market is increasingly shifting its focus to the strategic experience of CFOs (Bernard et al., 2021; Chasan, 2012; Datta & Iskandar-Datta, 2014). Anecdotal evidence also suggests that CFOs' careers benefit from the willingness to take greater risks in strategic decisions (Bax et al., 2017). Therefore, CFOs' actions in strategic decisions can have a substantial influence on their future careers.

The accounting and economics literature highlights that managers' concerns about their careers can create powerful incentives to make certain decisions. Although such incentives may align managerial actions with firm interests (e.g., Fama, 1980), recent studies have shown that career concerns create incentives for dysfunctional managerial actions (Baginski et al.,

2018; Crain, 2017; Yim, 2013). In this context, the literature typically highlights two opposing perspectives on how managers' career concerns affect their decision-making.

The first perspective – the market learning hypothesis – argues that career concerns create incentives to shy away from bold decision making and to prefer more conservative decisions (Chevalier & Ellison, 1999; Crain, 2017; Hirshleifer & Thakor, 1992). This risk aversion is explained by concerns that the labor market learns from managers' actions and punishes them in the case of poor decision outcomes. The anticipation of such labor market punishments creates incentives to avoid risky strategies and to make conservative decisions (Chevalier & Ellison, 1999; Crain, 2017; Lu & Wang, 2018). Conversely, the second perspective – the managerial signaling hypothesis – posits that career concerns create incentives for managers to become visible and take bolder actions (Prendergast & Stole, 1996). According to this perspective, managers anticipate that bolder decisions can signal their abilities and increase their reputation and visibility in the labor market (Li et al., 2017; Serfling, 2014; Zhang et al., 2016). However, to engage in signaling, managers should perceive the upside potential of bolder decisions as greater than the downside risk of being punished for poor decision outcomes (Li et al., 2017). Therefore, the relevance of the two perspectives is likely to depend on the perception of the specific executive in question.

2.3. CFO Career Concerns and the Outcomes of Strategic Decisions

Given these two perspectives, the question of how career concerns affect the behavior of CFOs in strategic decisions arises. We expect that the signaling perspective is particularly relevant when it comes to incentives of CFOs in strategic decisions.

To begin with, having more experience with strategic decisions has large upside potential for CFOs. The labor market searches for CFOs with strategic experience that are able to actively contribute to strategic decision making (Clifford et al., 2010; Russell Reynolds Associates, 2012; SpencerStuart, 2017). This experience is vital when CFOs aim for CEO positions (Caglio et al., 2018; SpencerStuart, 2013) or external board seats (SpencerStuart, 2017). Hence, CFOs possess incentives to become visible in the market by advocating for major strategic decisions. Moreover, CFOs can distinguish themselves from others by signaling their ability to implement these decisions. They typically play a leading role in implementing strategic reorganizations (e.g., adapting steering systems; Firk et al., 2019) or post-acquisition integration (Iskandar-Datta & Shekhar, 2020). Such an implementation experience is likely appreciated by the labor market but depends on making major strategic decisions in the first place.

In addition, the downside risk of CFOs involved in poor strategic decisions seems relatively low. Although poor strategic decisions may be punished, the labor market is unlikely to view the CFO as the ultimate decision-maker in major strategic decisions. Instead, the labor market is likely to attribute the outcome of strategic decisions to CEOs (Greene & Smith, 2021) and may hold CFOs less accountable.³ Hence, when aiming to advance their careers, CFOs are more likely to benefit from being visible in strategic decisions than be punished for the potentially poor performance of such decisions.

³This is also supported by anecdotal examples. For instance, when Bayer acquired Monsanto, the deal was negatively perceived by the capital market, and Bayer's CEO was harshly criticized. However, Bayer's CFO was featured as 'CFO of the month' in the business press and praised for his negotiation tactics (e.g., Fröndhoff & Landgraf, 2016). Similarly, the Sprint-Nextel deal, which is often featured as one of the worst M&A deals in modern history, led to the demise of Sprint's CEO Garry Forsee. However, Paul Saleh, CFO of the acquirer Sprint, kept his role in the merged firm and received several 'Best CFO' awards around the time of the deal. After Forsee was made to leave the company, Saleh became interim CEO. One year later, Saleh also had to leave the firm, but he soon stepped into another CFO role.

Career concerns are typically more pronounced at stages in which managers aim to improve their career prospects (Prendergast & Stole, 1996; Serfling, 2014; Zhang et al., 2016). Whereas the literature often assumes a linear (decreasing) relationship between career stage and career concerns, our expectation is more nuanced. We believe that CFOs at earlier career stages are particularly concerned with accelerating their managerial careers (Li et al., 2017; Naranjo-Gil et al., 2009) and are thus likely to have greater signaling incentives. Signaling incentives should then diminish as their careers progress and signaling may only provide incremental benefits. However, CFOs at later career stages may again become concerned with extending their professional career beyond their managerial tenure and gaining external board seats (Brickley et al., 1999; Harford & Schonlau, 2013). CFOs at later career stages may also aspire to enter a CEO position. Therefore, we expect that CFOs' signaling incentives will increase again towards the end of their careers.

We believe that CFOs' signaling incentives are detrimental to the outcomes of strategic decisions. CFOs with higher signaling incentives may choose not to go against potentially subpar or overly risky decisions proposed by the CEO. Instead, they may focus on the upside potential of signaling strategic experience, which could lead to advocating for, rather than opposing, risky strategic decisions. This behavior contrasts with the view that objective assessments of CFOs benefit strategic decisions (Karaevli & Özcan, 2022; Uhde et al., 2017). Therefore, we expect CFOs' signaling incentives to impair the outcomes of strategic decisions. To investigate this prediction, we focus on M&As as major strategic decisions with measurable outcomes. Given our assumption that CFOs' signaling incentives are higher at the early and late career stages, we predict an inverted U-shaped relationship between CFO career horizon and M&A returns:

Hypothesis 1: There is an inverted U-shaped relationship between CFO career horizon and M&A returns.

As CFOs are not the ultimate decision-makers in M&As, the level to which CFOs can influence M&A decisions depends on the extent to which CEOs delegate decision authority to CFOs (Ferris & Sainani, 2021; Graham et al., 2015). Thus, if CFOs' signaling incentives influence M&A returns, this influence should vary with CEOs' propensity to delegate decision authority to CFOs. Specifically, CEOs are more likely to delegate authority in M&As to other managers when they are overloaded with decisions and face a complex information environment (Graham et al., 2015). Moreover, CEOs may particularly delegate more authority to CFOs when they lack experience in the finance or accounting domains (Graham et al., 2015). Thus, we predict that in situations in which CEOs are likely to delegate more decision authority to CFOs in M&As, CFOs' signaling incentives have a stronger influence on M&A returns.

Hypothesis 2: The inverted U-shaped relationship between CFO career horizon and M&A returns is more pronounced when CEOs' propensity to delegate decision authority to CFOs is high.

3. Data and Variables

3.1. Sample

We start with an initial sample of 7,654 firm-year observations, corresponding to 644 nonfinancial firms listed once in the S&P 500 Index between 2005 and 2018. To identify CFOs for these firm-years, we manually complement missing data from BoardEx and Execucomp and carefully hand-check whether the CFOs serve as the 'main' CFOs in the respective years. We then match the initial sample with M&A data provided by the Securities Data Corporation (SDC). We consider only M&As that satisfy common criteria in M&A research (e.g., Masulis et al.,

Table	1.	Sample	construction	and deal	characteristics
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Taler A. Sample construction					
Sample selection	Observations				
Firm-years of non-financial firms once listed in the S&P 500 Index during 2005–2018 - Firm-years with missing 'main' CFO after manual search CFO-firm-years of non-financial firms once listed in the S&P 500 Index during 2005–2018 Number of completed M&A deals of potential firm-years	7,654 691 6,963 11,895				
 M&A deals with deal data restrictions M&A deals not meeting restriction criteria M&A deals with control data restrictions Final M&A sample 	7,298 941 505 3,151				
Panel B: Deal characteristics over time					

Panel A: Sample construction

Panel B: Deal characteristics over time							
Year	Number of M&As	Mean Acquirer Market Value (USD million)	Mean Deal Value (USD million)	Mean CAR33 (in %)			
2005	349	24,498	938	0.46			
2006	341	48,986	1,100	-0.08			
2007	291	35,947	717	0.45			
2008	227	21,726	733	-1.54			
2009	223	25,967	1,290	0.02			
2010	291	32,962	878	0.24			
2011	278	24,671	1,171	-0.33			
2012	228	29,264	893	0.88			
2013	167	38,953	850	0.75			
2014	170	46,968	2,293	0.33			
2015	181	42,897	2,294	-0.35			
2016	151	66,164	2,451	-0.23			
2017	142	68,998	1,573	-0.35			
2018	112	46,485	2,010	0.05			
Total / Average	3,151	37,061	1,243	0.04			

This table presents an overview of the sample selection process and the deal characteristics over time. Panel A describes the sample selection process. We start with an initial sample of 7,654 unique firm-year observations encompassing nonfinancial (SIC Classification other than 6000-6999) firms that were listed once in the S&P 500 Index in the period 2005–2018. We then screened BoardEx and Execucomp for the phrases 'chief financial,' 'chief finance,' and 'CFO' in the respective title fields of the two databases to identify the CFO. In Execucomp, we further used the 'CFOANN' indicator to identify CFOs (Mobbs, 2018). If we cannot identify the CFO using this method, we go through the firm's conference calls and annual reports to fill in any missing CFO years. Next, we ensure that the identified CFOs actually served as CFO throughout the majority of the respective firm-years (following the 'main' CFO logic of the 'CFOANN' indicator in Execucomp). If necessary, we replaced the previously identified CFO with the actual 'main' CFO. In line with the existing literature, we further eliminated all interim and acting CFOs (Datta & Iskandar-Datta, 2014). The resulting sample covers 6,963 CFO firm years. We match these CFO firm-years with M&A deal data provided by the Securities Data Corporation (SDC). From this dataset, we choose M&As that fulfill the following criteria: (1) the M&A deal is completed, (2) the acquirer controls less than 50% of the target's stock prior to the M&A deal and owns 100% of the target's shares after the deal execution, (3) the deal value disclosed by the SDC is equal to or greater than US\$ 1 million, and (4) all the required deal data and variables are available (Masulis et al., 2007). The fulfillment of these criteria yields a sample of 3,151 M&A deals. Panel B presents the deal characteristics over time.

2007), yielding a final sample of 3,151 M&As. Panel A of Table 1 summarizes the selection process.

Panel B of Table 1 presents the distribution of the deals and their characteristics over time. We observe a decrease in M&A activity during the financial crisis. Following this crisis, the number of deals increases, but then decreases again in the most recent years of our observation period. This can be explained by firms preferring to allocate their resources to selected large deals rather than to initiate a large number of smaller deals (Alexandridis et al., 2017).

3.2. Variables

3.2.1. Dependent variable: CAR33 (%)

We use cumulative abnormal returns (*CARs*) around the announcement date to measure M&A returns (Alexandridis et al., 2017; Masulis et al., 2007). We use the market model approach with parameters over a 200-day period from 211 to 11 days before the announcement and returns of the S&P 500 Index (Masulis et al., 2007). We accumulate daily abnormal returns over the seven-day event window (*CAR33*) (e.g., Cai & Sevilir, 2012). *CAR33* is measured in percent.

3.2.2. Independent variable: CFO horizon

We use CFO age as a proxy for career horizon (see also Jenter & Lewellen, 2015; Yim, 2013). We subtract the CFO's age from 65 years to obtain our measure of *CFO horizon*. Thus, the younger the CFO, the longer the career horizon.

3.2.3. Moderator variable: CEO's propensity to delegate

To capture the likelihood of CEOs delegating decision authority to CFOs in M&As, we create a comprehensive index of four indicators. First, we consider total assets as an indicator of firm size. With increasing firm size, CEOs are more likely to be overloaded and, thus, are more likely to delegate authority to other managers (Graham et al., 2015). Second, we consider the number of segments in distinctive industries as an indicator of firm complexity. CEOs are more likely to be overloaded when firm complexity is higher, making delegation more likely (Graham et al., 2015). Third, we proxy for expected growth opportunities by the percentage change in sales over the previous two years. Because CEOs are more likely to delegate if there are fewer growth opportunities (Graham et al., 2015), we use the inverse of previous sales growth as another indicator. Fourth, we consider CEOs' financial expertise, as indicated by their prior education or work experience in accounting or finance-related domains. CEOs are more likely to delegate decisions if they lack the information required to make them. Thus, we argue that CEOs who lack financial expertise rely on other senior managers' financial knowledge and are more likely to delegate authority to CFOs (Graham et al., 2015). We min–max normalize each indicator and integrate them into an index variable (*CEO's propensity to delegate*).

3.2.4. Control variables: CFO, CEO, acquirer and M&A deal characteristics

We control for several potentially confounding effects grouped into four categories: (1) CFO, (2) CEO, (3) acquirer, and (4) M&A deal characteristics. Appendix 1 describes the variable definitions and data sources.

CFO characteristics. We control for *CFO M&A experience*, *CFO role experience*, accounting expertise (*CFO CPA*), and education-related strategic expertise (*CFO MBA*) to alleviate the concern that CFO horizon gathers expertise-related effects. Second, we control for CFO power within the firm, which can differ according to their career stage and influence CFOs' impact on strategic decisions (Ferris & Sainani, 2021; Florackis & Sainani, 2018). We control for CFO board membership (*CFO board member*) as a proxy for structural power and CFOs' time in the role relative to CEOs (*Time in role CEO vs. CFO*) to capture CFOs' authority to exert influence on CEOs in strategic decision-making. Third, we account for CFOs' explicit incentives by controlling for *CFO equity-based compensation*, as a relatively high proportion of equity incentives could mitigate potential agency problems in strategic decision making.

CEO characteristics. Consistent with our CFO variables, we incorporate *CEO horizon*, its squared form (*CEO horizon sq.*). In controlling for CEO career horizon, we intend to alleviate the concern that CEOs' implicit career incentives bias the presumed effect of CFOs' implicit career

incentives on M&A returns. We also capture whether CEOs have financial expertise (*CEO financial expertise*) to control for the likelihood that CEOs will interfere with CFOs' duties during M&A and *CEO equity-based compensation*.

Acquirer characteristics. We include the following common controls (Alexandridis et al., 2017; Cai & Sevilir, 2012; Masulis et al., 2007) for the acquirer firm and governance characteristics: Firm size, Leverage, Number of segments, Free cash flow, Tobin's Q, Firm M&A experience, Board size, Board independence, Analyst coverage, Institutional ownership, and Ownership concentration.

M&A deal characteristics. In line with previous M&A studies (e.g., Masulis et al., 2007), we include several M&A characteristics, namely *Private target * all-cash*, *Private target * stock*, *Public target * all cash*, *Public target * stock*, *Relative deal size*, and *Cross-border deal*.

3.2.5. Control variables: selection controls

Given our M&A sample and the focus on CFOs' career stages, it is important to consider self-selection concerns. Firms endogenously decide to conduct M&As and thus self-select into our sample. They also select early- or late-career stage CFOs, and the motives behind this choice could affect M&A returns. Therefore, we decided to control for self-selection in two ways.

M&A sample selection correction. First, we perform a two-stage Heckman (1979) procedure to correct for the M&A sample. We estimate a probit model of the likelihood that a firm will initiate at least one M&A in the following year (see Appendix S2 in the Online Appendix). We include M&A industry activity (measured as the average number of M&As for each two-digit SIC industry in the current and previous three years) as an exclusion criterion as it influences the initiation of M&As (e.g., Harford, 2005) but it should be independent of M&A returns. Finally, we calculate the inverse Mills ratio and use it as an additional control variable (*M&A selection mills*).

CFO selection correction. Second, we follow Shaver (1998) by including a correction factor for the likelihood that firms engage in a particular strategy (e.g., selecting early- or late-career CFOs). We calculate a probit model to estimate the likelihood that firms will select an early- or late-career CFO in the first stage.⁴ We include CFO industry turnover (measured as the number of CFO turnovers in each FF12 industry) as the exclusion criterion.⁵ The results indicate that our exclusion criterion is strongly associated with the selection of an early- or late-career CFO (see Appendix S2 in the Online Appendix). Based on this result, we calculate the inverse Mills ratio and use it as an additional control variable (*CFO selection mills*).

3.3. Summary Statistics of Regression Variables

Table 2 provides the means and standard deviations (SD) as well as the 25th, 50th and 75th percentiles of the variables used in our main regression model.⁶ *CFO horizon* has an average of 14.09, indicating an average CFO age of approximately 51, which is approximately five years younger than the average CEO. Moreover, abnormal returns for deals are, on average, close to zero (0.04%) but show substantial variation, with an SD of 5.54%.

⁴Early-/late-career CFO is a dummy variable equaling one if the CFO is in the lowest or highest career stage quartile according to our sample, zero otherwise. This definition is consistent with our PSM analysis.

⁵We expect that a high level of CFO turnovers among industry peers could make it more difficult for a focal firm to attract a mid-career CFO due to a high demand for such CFOs in other firms (assuming that firms prefer CFOs with some experience, but not in the final career stage). Consequently, CFO turnovers in peer firms could increase the likelihood that focal firms will select a CFO at earlier or later career stages. At the same time, we do not expect that CFO industry turnovers have a direct effect on the M&A returns of focal firms.

⁶Appendix S1 in the Online Appendix further shows the correlation coefficients among these variables.

	Mean	SD	p25	p50	p75
CAR33 (%) ^a	0.04	5.54	-2.64	0.23	2.92
CFO horizon	14.09	5.72	10.00	14.00	18.00
CFO horizon sq.	231.21	163.80	100.00	196.00	324.00
CEO's propensity to delegate ^b	0.50	0.50	0.00	0.00	1.00
CFO CPA ^b	0.40	0.49	0.00	0.00	1.00
CFO MBA ^b	0.58	0.49	0.00	1.00	1.00
CFO board member ^b	0.07	0.26	0.00	0.00	0.00
CFO role experience ^b	0.29	0.46	0.00	0.00	1.00
CFO equity compensation ^a	0.49	0.66	0.00	0.37	0.73
CFO M&A experience ^a	10.64	11.65	3.00	7.00	14.00
CEO horizon	9.30	6.21	5.00	9.00	13.00
CEO horizon sq.	125.02	124.81	25.00	81.00	169.00
Time in role CEO vs. CFO ^a	1.67	6.12	-2.00	0.90	4.50
CEO financial expertise ^b	0.33	0.47	0.00	0.00	1.00
CEO equity compensation ^a	0.57	0.80	0.00	0.43	0.80
Board size	9.40	2.24	8.00	9.00	11.00
Board independence	0.24	0.19	0.13	0.22	0.33
Institutional ownership	0.76	0.17	0.67	0.80	0.89
Ownership concentration	0.29	0.13	0.20	0.29	0.38
Analyst coverage	2.95	0.50	2.71	3.00	3.26
Firm size ^c	16.17	1.39	15.16	16.06	17.01
Leverage ^a	0.22	0.16	0.10	0.19	0.31
Free cash flow ^a	0.07	0.06	0.04	0.08	0.11
Number of segments	3.19	1.76	2.00	3.00	4.00
Tobin's Q ^a	2.23	1.19	1.41	1.90	2.63
Firm M&A experience ^d	1.13	0.86	0.53	0.99	1.53
Relative deal size	0.12	0.33	0.01	0.03	0.09
Diversifying deal ^b	0.49	0.50	0.00	0.00	1.00
Private $*$ all cash ^b	0.16	0.36	0.00	0.00	0.00
Private * stock ^b	0.02	0.15	0.00	0.00	0.00
Public * all cash ^b	0.16	0.37	0.00	0.00	0.00
Public * stock ^b	0.05	0.21	0.00	0.00	0.00
Cross border deal ^b	0.31	0.46	0.00	0.00	1.00

 Table 2.
 Descriptive statistics

This table presents the means, standard deviations (SD) and the 25th, 50th and 75th quartiles of the variables used in our baseline regression model.^aWinsorized at 0.01 and 0.99 levels.^bDummy variable.^cLog-transformed.^dIndustry-adjusted.

4. Results

4.1. Main Regression Results

To investigate the influence of CFO career horizon on M&A returns, we run the following ordinary least squares (OLS) regression:

$$CAR33_{i,t} = \alpha + \beta_1 \times CFO \ horizon_{i,t} + \beta_2 \times CFO \ horizon \ sq_{i,t} + \gamma_1 \times controls_{i,t} + M \&A \ selection \ mills_{i,t} + CFO \ selection \ mills_{i,t} + industry_{i,t} + time_t + \varepsilon_{i,t}$$
(1)

CAR33 represents the dependent variable, and *CFO horizon* and *CFO horizon sq.* represent the independent variables. The item *controls* reflects the controls for the CFO, CEO, acquirer, and M&A characteristics. *M&A selection mills* and *CFO selection mills* represent the two correction factors. The item *industry* reflects Fama-French 12 industry fixed effects to control for within-industry variations, and the item *time* represents year fixed effects to control for time trends in the likelihood of M&As. Item ϵ denotes the standard errors clustered at the firm level. We cluster standard errors at the firm level to control for heteroscedasticity and autocorrelation, as



Figure 1. Predictive margins of CFO horizon on CAR33. This figure presents the predictive margins from our baseline OLS regression of CFO horizon on CAR33 (Table 3, Model 1). The turning point of CFO horizon equals the value of 15.5 years (see Appendix S21 of the Online Appendix). 1SD of CFO horizon equals the value of 5.7 years (see Table 2).

we expect residuals in M&A returns to be correlated among observations of the same firm (Ferris & Sainani, 2021; Petersen, 2009).

Model 1 in Table 3 displays the results for the first hypothesis. In line with our hypothesis, we find a negative and significant coefficient of CFO horizon sq. (p < 0.05), which indicates that CFOs at early- and late-career stages are more negatively associated with M&A returns than CFOs at mid-career stages. The turning point is at 15.5 years, which is well within the lower $(-8)^7$ and upper bound (31) of the data range of *CFO horizon*. We further test the presence of an inverted U-shaped relationship between CFO horizon and CAR33 against a potential monotone shape (Lind & Mehlum, 2010). Our results allow us to reject the null hypothesis of a monotone shape (p < 0.05). We also check whether the slope is significantly steep at both ends of the data range (Lind & Mehlum, 2010). Our results indicate that the slope is significant, both at early- (p < 0.05) and late-career stages (p < 0.01) (see Appendix S21 of the Online Appendix).⁸ Finally, we present a plot of the results of Model 1 in Figure 1 to simplify the economic interpretation. The figure shows that M&A returns peak for mid-career CFOs at 15.5 years of CFO horizon, with an average CAR33 of 0.29%. When CFO horizon moves away from this point towards earlier or later career stages by one SD (approximately 5.7 years), we find a relatively slight decrease in CAR33 of 23 basis points. This illustrates a high-performance plateau in the mid-career stage. However, moving further away from the middle of CFOs' careers by another

⁷The negative values of *CFO horizon* are due to CFOs whose ages exceed their expected managerial tenures, which we set to 65 years in line with the literature (e.g., Jenter & Lewellen, 2015).

⁸We conduct three additional tests to confirm that there is indeed an inverted U-shape relationship. First, we add a cubic term to our empirical model to rule out the presence of an S-curve (Haans et al., 2016). The coefficient of the cubic term is insignificant, suggesting no S-shape relationship between *CFO horizon* and *CAR33*. Second, we split the data based on our turning point and find that values of *CFO horizon* above this point indicate a negative relationship with *CAR33*, while values below the turning point indicate a positive relationship (Haans et al., 2016) (Appendix S19 in the Online Appendix). Third, we use a non-parametric smoothing procedure to find a curve of best fit for the relationship between *CFO horizon* and *CAR33*, without assuming the data must fit some distribution (i.e., LOWESS in STATA). All these results (see Appendix S22 of the Online Appendix) substantiate the presence of an inverted U-shaped relationship.

Model	1	2	3	4	5	6
DV	CAR33	CAR33	CAR33	CAR33	CAR33	CAR33
		All M&As			Matched samp	le
a 1		High	Low		High	Low
Sample	Total	delegation	delegation	Total	delegation	delegation
CFO horizon	0.223**	0.457***	0.044	0.224**	0.463***	0.045
	(0.013)	(0.001)	(0.701)	(0.016)	(0.004)	(0.706)
CFO horizon sq.	-0.007^{**}	-0.015^{***}	-0.001	-0.006^{*}	-0.015^{***}	0.000
*	(0.024)	(0.002)	(0.741)	(0.054)	(0.008)	(0.945)
CFO CPA	-0.074	-0.228	-0.104	-0.231	-0.426	- 0.203
	(0.756)	(0.492)	(0.740)	(0.372)	(0.248)	(0.561)
CFO MBA	-0.046	-0.536^{*}	0.310	-0.146	-0.518	0.047
	(0.843)	(0.098)	(0.341)	(0.567)	(0.146)	(0.897)
CFO board member	0.173	0.513	- 0.544	0.540	0.373	0.504
	(0.664)	(0.282)	(0.422)	(0.262)	(0.479)	(0.416)
CEO role experience	0.342	0.508	0.089	0.290	0.290	0 349
er o tole experience	(0.211)	(0.212)	(0.822)	(0.290)	(0.514)	(0.433)
CEO equity compensation	-0.095	-0.105	-0.083	-0.165	-0.380	-0.179
CFO equity compensation	-0.093	-0.103	-0.083	-0.103	-0.380	(0.112)
CEO M& A experience	(0.302)	(0.754)	0.007	0.001	0.025	(0.412)
CFO M&A experience	(0.365)	(0.017)	(0.723)	(0.028)	(0.225)	-0.021
CEO horizon	0.022**	(0.917)	(0.723)	(0.938)	(0.283)	(0.204)
CEO IIOIIZOII	-0.083	-0.112	-0.040	-0.030	-0.070	-0.024
CEO having an	(0.046)	(0.039)	(0.530)	(0.267)	(0.180)	(0.739)
CEO norizon sq.	0.003	0.003	0.002	0.001	0.000	0.001
T' ' 1 CEO CEO	(0.150)	(0.280)	(0.461)	(0./18)	(0.970)	(0.754)
Time in role CEO vs. CFO	- 0.006	- 0.025	0.021	- 0.014	- 0.041	0.015
	(0.756)	(0.401)	(0.4/5)	(0.518)	(0.204)	(0.656)
CEO financial expertise	- 0.044	0.076	- 0.209	0.266	0.117	0.194
	(0.868)	(0.895)	(0.573)	(0.348)	(0.844)	(0.639)
CEO equity compensation	0.067	- 0.060	0.051	0.307	0.122	0.493
	(0.691)	(0.837)	(0.820)	(0.163)	(0.715)	(0.143)
Board size	-0.019	0.024	-0.078	0.017	0.110	-0.070
	(0.727)	(0.773)	(0.297)	(0.770)	(0.176)	(0.404)
Board independence	-0.193	0.077	-0.517	-0.398	-0.317	-0.443
	(0.726)	(0.935)	(0.445)	(0.514)	(0.738)	(0.572)
Institutional ownership	0.147	0.345	0.236	-0.172	0.542	-0.382
	(0.847)	(0.779)	(0.830)	(0.838)	(0.681)	(0.743)
Ownership concentration	-2.162^{**}	-1.594	-1.872	-2.924^{***}	-2.279	-2.472
	(0.036)	(0.300)	(0.201)	(0.008)	(0.185)	(0.121)
Analyst coverage	-0.654^{**}	-0.452	-0.551	-0.635^{**}	-0.519	-0.626
	(0.037)	(0.238)	(0.200)	(0.033)	(0.203)	(0.192)
Firm size	-0.194	-0.123	-0.206	-0.076	-0.006	-0.068
	(0.152)	(0.557)	(0.286)	(0.631)	(0.979)	(0.760)
Leverage	0.959	0.535	1.114	0.436	1.170	-0.270
0	(0.235)	(0.681)	(0.320)	(0.632)	(0.433)	(0.829)
Free cash flow	-2.061	- 6.250	0.451	- 3.533	- 11.231	-0.472
	(0.433)	(0.283)	(0.873)	(0.198)	(0.101)	(0.871)
Number of segments	-0.038	0.037	-0.05	-0.078	-0.080	-0.044
6	(0.601)	(0.695)	(0.705)	(0.320)	(0.465)	(0.777)
Tobin's O	0.035	0.388	-0.155	0.119	0.784**	-0.133
	(0.790)	(0.229)	(0.329)	(0.382)	(0.024)	(0.438)
Firm M&A experience	0.040	0.064	0.089	-0.018	-0.313	0.153
i initi Meeri experience	(0.785)	(0.781)	(0.649)	(0.915)	(0.242)	(0.481)
Relative deal size	0 392	0.969	0.230	0.967	1 954*	0.725
relative dear Size	$(0.5)^2$	(0.221)	(0.770)	(0.138)	(0.050)	(0.123)
Diversifying deal	-0.082	(0.221)	0.081	_ 0.225	-0.382	0.004
Diversitying deal	-0.082	-0.217 (0.552)	(0.701)	(0.223)	(0.350)	(0.004
Drivete + cash deal	0.212	0.552)	0.164	0.025	0.662	(0.990)
riivate * casil deal	-0.512	-0.034	-0.104	-0.025	- 0.003	0.448
	(0.320)	(0.094)	(0.730)	(0.933)	(0.117)	(0.348)

 Table 3.
 OLS regression of CFO horizon on CAR33

(Continued).

Model DV	1 CAR33	CAR33	3 CAR33	4 CAR33	5 CAR33	6 CAR33
Sample		All M&As	5		Matched sam	ple
	Total	High delegation	Low delegatior	n Total	High delegation	Low delegation
Private * stock deal	- 0.262	0.734	-0.834	- 0.090	-0.278	0.177
Public * cash deal	(0.756) -0.213 (0.465)	(0.633) -0.127 (0.731)	(0.415) -0.324 (0.463)	(0.915) -0.487 (0.122)	(0.881) - 0.144 (0.741)	(0.842) - 0.701
Public * stock deal	-3.381^{***}	(0.751) (-3.017^{***})	(0.403) -4.070^{***}	(0.122) - 3.855***	(0.741) -3.932^{***} (0.000)	(0.141) - 4.266*** (0.001)
Cross border deal	-0.056 (0.784)	(0.002) 0.037 (0.896)	-0.052 (0.877)	-0.129 (0.592)	(0.000) 0.054 (0.873)	-0.126 (0.735)
M&A selection mills	-0.023	-0.251	0.167	-0.124	-0.341^{*}	0.102
CFO selection mills	(0.830) 0.304 (0.278)	0.761** (0.039)	(0.383) -0.098 (0.818)	0.036 (0.914)	(0.081) 0.560 (0.166)	(0.017) -0.369 (0.480)
Turning point	15.5	14.8	15.9	17.3	15.3	74.4
U-test (<i>p</i> value) Coefficient higher/lower?	0.024 M	0.002 odel 2 > Mo	0.392 del 3?	0.071 M	0.008 odel 5 > Moi	1.000 del 6?
CFO horizon sq. + CFO horizon	on Yes (C	hi2 = 5.40; p	p = 0.010	Yes (Cl	hi2 = 4.35; p	= 0.019)
Industry and year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
\mathbf{R}^2	0.041	0.064	0.051	0.045	0.079	0.057
Obs.	3151	1574	1577	2442	1173	1269

 Table 3.
 Continued

This table presents the results from OLS regression of *CFO horizon* on *CAR33*. In Models 1–3, the sample covers completed and full-acquiring M&As (deal value of at least US\$ 1 million) of non-financial S&*P* 500 firms in the years 2005-2018. In Models 4–6, the sample covers propensity score-matched observations. We use a logit regression with no replacement and specify a caliper of 0.25% to match late- and early-career CFOs as the treatment group with mid-career CFOs as the control group. The treatment group includes observations with the CFO horizon in the lowest and highest quartiles of the total sample. The control group includes observations with the CFO horizon in the second and third quartiles of the sample. We end up with 1221 unique matched pairs (i.e., 2442 observations in the matched sample). For further information on the matching approach, see Section 4 of the manuscript and Appendices S3 and S4 of the Online Appendix. See Appendix 1 for the variable definitions.***,**, and* denote statistical significance at the 1%, 5%, and 10% level (two-tailed), respectively. The *p*-values are provided in parentheses. Standard errors are clustered at the firm level.

SD (11.4 years away from the turning point) results in a much stronger decrease of 69 basis points (a decrease of 94 basis points from the turning point in total), which equals an average *CAR33* of -0.64%. Thus, these results support Hypothesis 1.

To test our second hypothesis, we split the sample into subsamples of CEOs with high and low propensities to delegate authority to CFOs. Model 2 in Table 3 shows the results for the high delegation sample. We find a negative and significant coefficient of *CFO horizon sq.* (p < 0.01). Lind and Mehlum's (2010) inverted U-test further supports this finding (p < 0.01). Conversely, the results for the low delegation subsample (Model 3 in Table 3) do not show a significant coefficient for any of the *CFO horizon* variables. Similar to Arnold and Artz (2015), we further test the difference between the sum of the two (linear and squared) *CFO horizon* variables in the high and low delegation samples. Table 3 indicates that the association between *CFO horizon* and *CAR33* is significantly stronger (p < 0.01) in the high delegation sample. In sum, these results support our second hypothesis, suggesting that the negative influence of CFOs' signaling incentives on M&A returns is particularly pronounced if CEOs more likely delegate decision authority to CFOs.

4.2. Propensity Score-matched Sample Results

To alleviate the concern that our results are biased by differences in observable characteristics between firms with early- or late-career CFOs versus those with mid-career CFOs, we conduct a propensity score matching (PSM) analysis. To operationalize the PSM, we first split the sample into quartiles based on CFOs' career horizons. We define the treatment group as observations with the CFO horizon in the first (late-career) or fourth (early career) quartile. The control group captures those observations with CFO horizon in the two middle quartiles. Second, we generate propensity scores by running a logit regression of this treatment indicator on the controls used in our baseline empirical model. Third, we use these propensity scores to match the M&As of early-or late-career CFOs with those of mid-career CFOs. We perform a one-to-one match without replacement by setting the caliper to 0.25% (Shipman et al., 2017). The resulting matched sample consists of 2,442 M&A s.⁹

Finally, we re-run the regression models on the matched sample. We find a negative and significant coefficient of *CFO horizon sq.* (p < 0.10) on *CAR33* (see Model 4 of Table 3). Moreover, Models 5 and 6 show that the negative association between *CFO horizon sq.* and *CAR33* is more pronounced for CEOs with a high propensity to delegate than for those with a low propensity to delegate. Therefore, the PSM analysis supports our first and second hypotheses.

5. Robustness Tests

5.1. Alternative Sample and Variable Specifications

We perform a battery of robustness checks using alternative specifications. First, we rerun our main regression on alternative samples. We focus only on deals with volumes of at least US\$10 million, US\$ 50 million, and US\$ 100 million. We run a test in which we exclude the period of the financial crisis, and we separate our sample into years with relatively high and low deal activity. These tests consistently support our main results. Second, we test several alternative specifications of the dependent variable and focus on shorter three-day and five-day event windows. Our results remain robust. Third, we test the squared term of the log-transformed version of *CFO horizon* and that of CFO age. Both tests validate the findings. We also construct two indicator variables for early- and late-career stage CFOs and find that both show a negative and significant association with M&A returns. This analysis further confirms that the negative associations between CFOs at both edges of the career spectrum and M&A returns are comparable in size. Finally, we test alternative specifications of the CEO's propensity to delegate measure, focusing on each index component separately and on alternative ways of aggregation. Our results remain robust. Appendices S5 to S10 of the Online Appendix present the results.

5.2. CFO or CEO Career Incentive Effects?

We run two additional tests to address the concern that the observed relationship is an artifact of CEOs' influence and to disentangle the signaling incentive effects of CFOs and CEOs.

⁹We assess the post-matching covariate balance using both univariate and multivariate tests (Appendix S3 and S4 in the Online Appendix). The univariate analysis shows that our matching covariates are insignificantly different between the early/late-career CFO versus mid-career CFO matched sample. We also calculate the normalized differences in the post-matching covariates to evaluate the economic significance of these differences. All normalized differences are well below the critical threshold of 0.25 (Imbens & Wooldridge, 2009), which suggests that the economic differences in the covariates are negligible. Finally, the multivariate analysis validates these results, as we find that none of our controls is statistically significant in the post-match logit regressions.

5.2.1. Horse race between CFO and CEO signaling incentives

First, we follow Kim et al.'s (2011) approach by testing the influence of CFO and CEO horizons separately and then including both terms and comparing the resulting changes in the coefficients to draw conclusions on whether any of these effects dominate (i.e., 'horse race'). Panel A of Table 4 presents the results. Model 1, which tests the relationship between *CFO horizon sq.* and *CAR33* without considering CEO horizon, supports the presence of an inverse U-shaped relationship. Model 2, which focuses only on CEO horizon, shows an insignificant positive relationship between *CEO horizon sq.* and *CAR33*, which does not support a U-shaped nature of this relationship.¹⁰ This result is in line with previous literature suggesting that, although CEOs at earlier career stages tend to undertake greater and bolder investment decisions, they do not hurt the quality of these decisions on average (Li et al., 2017; Yim, 2013). This supports our theorizing that the signaling incentives of CEOs are different from those of CFOs due to a higher probability of being held accountable for poor M&A outcomes. In Model 3, we observe that the coefficients of both *CFO (CEO) horizon* and *CFO (CEO) horizon sq.* do not change significantly when including them jointly. These results indicate that the influence of CFO signaling incentives on M&A returns is not an artifact of CEOs' signaling incentives.

5.2.2. CFO horizon and M&A returns by different stages of CEO horizon

Second, we explore the relationship between CFO career horizon and M&A returns over different stages of the CEO career horizon. This helps us to further understand whether the influence of CFO horizon may be restricted to career stages in which CEOs have strong signaling incentives. To test this expectation, we re-run our main analysis in the sub samples of high, medium, and low CEO horizons. Panel B of Table 4 presents the results. We find statistically significant and negative associations between *CFO horizon sq.* and *CAR33* for CEOs at early and middle career stages. These results indicate that the negative influence of CFO's signaling incentives on M&A returns is also prevalent under limited signaling incentives of CEOs (i.e., at the middle career stage). Moreover, the negative relationship between *CFO horizon sq.* and *CAR33* diminishes for CEOs at late career stages. An explanation may be that older (and thus more experienced) CEOs are less likely to involve other managers, such as CFOs, in their decision-making (Graham et al., 2015).

5.3. Further Endogeneity Tests

5.3.1. Additional CEO and CFO controls

First, we run a test that consecutively includes additional CEO and CFO controls. We include *CEO overconfidence, CFO overconfidence, CEO total compensation, CFO total compensation, CEO gender, CFO gender,* and the educational background of the CEO (*CEO CPA* and *CEO MBA*) as additional controls. Appendix S12 in the Online Appendix summarizes the results. The results are quantitatively and qualitatively similar to the main findings.

5.3.2. Within-CFO analysis

Second, we perform within-CFO analysis. As only some CFOs in our sample have conducted multiple M&As at different career stages, we run a within-CFO analysis restricted to CFOs involved in M&As at the early, middle and late stages of their careers. This approach enables us

¹⁰We also examine whether there is a linear relationship between CEO horizon and M&A returns. However, we only find an insignificant negative relationship, similar to previous literature (Li et al., 2017; Yim, 2013). Appendix S11 in the Online Appendix provides the result.

Panel A: Horse race between CFO and CEO horizon						
Model DV Sample	1 CAR33 All M&As	2 CAR33 All M&As	3 CAR33 All M&As			
CFO horizon	0.205**		0.223**			
CFO horizon sq.	-0.007^{**}		-0.007^{**} (0.024)			
CEO horizon	(01001)	-0.068^{*} (0.091)	-0.083^{**} (0.046)			
CEO horizon sq.		0.003 (0.220)	0.003 (0.150)			
CFO horizon			()			
Turning point	15.0		15.5			
U-test (p value) CEO horizon	0.026		0.024			
Turning point		13.4	14.0			
U-test (p value)		0.211	0.184			
Controls	Yes	Yes	Yes			
Industry and year fixed effects	Yes	Yes	Yes			
R^2	0.040	0.038	0.041			
Obs.	3151	3151	3151			

 Table 4.
 CFO versus CEO career incentives

Panel B: CFO horizon over different stages of CEO horizon						
Model	1	2	3			
DV	CAR33	CAR33	CAR33			
Sample	CEO horizon low	CEO horizon medium	CFO horizon high			
CFO horizon	0.105	0.336***	0.403*			
CFO horizon sq.	(0.428) - 0.002	$(0.006) - 0.012^{***}$	$(0.074) - 0.013^{*}$			
	(0.726)	(0.006)	(0.089)			
Turning point	30.1	13.5	15.5			
U-test (<i>p</i> value)	1.000	0.004	0.024			
Industry and year fixed effects R^2 Obs.	Yes	Yes	Yes			
	0.101	0.076	0.079			
	846	1523	782			

This table presents the results of the OLS regression of *CFO horizon* on *CAR33* in relation to *CEO horizon*. Panel A shows the results of the horse racing test. Panel B provides results regarding the relationship between CFO horizon and CAR33 over different stages of the CEO horizon. CEO horizon low (high) includes observations where the CEO horizon is in the lowest (highest) quartile. CEO horizon medium captures these observations with the CEO horizon in the second and third quartiles.^{***,**}, and^{*} denote statistical significance at the 1%, 5%, and 10% level (two-tailed), respectively. The *p*-values are provided in parentheses. Standard errors are clustered at the firm level.

to include CFO fixed effects, controlling for any time invariant characteristics at the CFO level, such as personality and ability.¹¹ Although this procedure substantially reduces our sample, we still find 203 M&As conducted by 20 different CFOs. Based on this sample, we run a CFO fixed effects model that includes a more limited set of control variables and the *CFO horizon* and *CFO horizon* sq. variables. Panel A of Table 5 reports the results. In line with our previous results, we find a significant inverted U-shaped relationship between CFO horizon and M&A returns.

¹¹In an alternative specification of this test, we also considered firm fixed-effects and find robust results (unreported).

Pane	el A: Within-Cl	FO analysis		
Model DV Sample			CFOs late ol	1 CAR33 with early- and -career stage oservations
				2 (2(**
CFO horizon				3.626** (0.020)
CFO horizon sq.				- 0.134**
Turning point U-test (p value) Selected controls CFO fixed effects Year fixed effects R ² Obs.				(0.036) 13.6 0.077 Yes Yes Yes 0.234 203
Panel B: CFO turr	nover (differen	ce-in-differe	ence analysis)	
	Mean CAR33 (%)	Exp.	Mean difference [Treatment - Control]	<i>P</i> value (one-tailed)
From CFOs with less to more signaling incentives Pre-turnover CAR33 Control firms (CFOs with less signaling	0.123			
incentives) Treatment firms (CFOs with less signaling incentives)	0.281		0.151	(0.780)
Control firms (CFOs with less signaling incentives)	0.278			
Treatment firms (CFOs with more signaling incentives)	- 0.865	(-)	- 1.143***	(0.005)
Diff-in-Diff (Post- minus Pre-turnover) Total observations From CFOs with more to less signaling incentives		(+)	1.295 ** 282	(0.030)
Pre-turnover CAR33 Control firms (CFOs with more	-0.342			
Treatment firms (CFOs with more signaling incentives)	- 0.586		- 0.244	(0.548)
Control firms (CFOs with more signaling incentives)	-0.009			
Treatment firms (CFOs with less signaling incentives)	0.524	(+)	0.533*	(0.083)
Diff-in-Diff (Post- minus Pre-turnover)		(-)	- 0 .777*	(0.089)
Total observations			362	

Table	5.	Additional	endogeneity	tests

This table presents the results of additional endogeneity tests. Panel A shows the results of the within-CFO analysis. The sample covers CFOs who appear as both early- and late-career CFOs in our sample. The selected control variables were Firm size, Tobin's Q, Leverage, Free cash flow, Deal size, Diversifying deal, and Share deal. Panel B presents a difference-in-differences analysis around CFO turnovers, comparing the changes in M&A returns following turnovers from CFOs with less (more) to more (less) signaling incentives. Control firms are matched using a propensity score matching technique based on exact industry-year matching, nearest neighbor (no replacement), and a caliper of 0.1 (unreported).***,**, and* denote statistical significance at the 1%, 5%, and 10% level (two-tailed, unless otherwise indicated). The *p*-values are provided in parentheses. Standard errors are clustered at the firm level.

5.3.3. CFO turnovers (difference-in-difference analysis)

Third, we focus on CFO turnovers to better tease out the influence of CFOs' signaling effects. We focus on the turnovers from CFOs in early and late career stages (i.e., more signaling incentives) to CFOs at medium career stages (i.e., fewer signaling incentives), and vice versa, and investigate the corresponding changes in M&A returns. We restrict our sample to CFO turnovers plausible for exogenous reasons.¹² CFO effects following exogenous CFO turnovers are less likely to be the result of an endogenous choice of firms and CEOs (Dittmar & Duchin, 2016; Fee et al., 2013), allowing us to better isolate the effect of CFOs on M&A returns. We expect a decrease (increase) in M&A returns when a CFO with less (more) signaling incentives is replaced by a CFO with more (less) signaling incentives. We use a propensity score matching approach and compare turnover firms (treatment group) with non-turnover firms (control group).¹³ Panel B of Table 5 reports the results. The results show a decrease in M&A returns when firms experience a turnover from CFOs with less to more signaling incentives. In the post-turnover period, we find significant differences in M&A returns between treated and non-treated firms, and insignificant differences in the pre-turnover period. For CFO turnovers from more to less signaling incentives, we find an increase in M&A returns and higher returns for treated firms compared to non-treated firms in the post-turnover period. These differences are significant, according to one-tailed tests of significance. In sum, these results support our previous findings by indicating that CFOs with more (less) signaling incentives are related to lower (higher) M&A returns.¹⁴

6. Additional Tests

6.1. Cross Sectional Variations

To better understand the mechanism behind the inverted U-shaped relationship between CFO career horizon and M&A returns, we examine cross sectional variations. First, we focus on CFO characteristics that may alter CFOs' signaling incentives. Second, we focus on differences in external monitoring that may determine the need for CFOs' oversight in the M&A process.

6.1.1. CFO characteristics influencing signaling incentives

The characteristics of CFOs differ even at comparable career stages and may alter signaling incentives. First, we expect that the degree of recent M&A experience determines the need for additional signals. CFOs with a high level of recent M&A experience may benefit only incrementally from the signal of an additional M&A. For this reason, they may perceive the upside potential as relatively low, while there is still some downside risk. Second, we have similar expectations if CFOs have a higher reputation in terms of an external board seat or relatively higher compensation than their peers. Finally, we assume that the level of long-term compensation may decrease the incentives to engage in signaling behavior. Based on these considerations, we test how cross sectional differences affect our results. Specifically, we split our sample into

¹²To define exogenous CFO turnovers, we draw on prior literature (Fee et al., 2013; Ferris & Sainani, 2021; Florackis & Sainani, 2018) and focus on turnovers that have occurred for reasons, such as 'pursuing other career opportunities,' 'resignation to join a new firm,' 'being appointed as CEO at another firm,' 'retirement on own desire,' or 'health reasons'. ¹³To match the control firms, we use a propensity score matching procedure (Ferris & Sainani, 2021; Florackis & Sainani, 2018). The matching is based on exact industry-year matching, nearest neighbor (no replacement), a logit function of firm size, Tobin's Q, leverage, free cash flow, and ownership concentration to estimate the propensity score, and a caliper of 0.1 (unreported).

¹⁴In an additional test, we run an across-CFO analysis, focusing on the M&A returns of newly appointed CFOs. We again find a significant inverted U-shaped relationship between CFO horizon and M&A returns, supporting our previous results (see Table S13 of the Online Appendix).

subsamples of CFOs with high and low recent M&A experience (*CFO M&A experience*), high and low relative compensation (*CFO to peer compensation*), high and low long-term compensation (*CFO LTI*) and based on whether CFOs have a board seat at another firm (*CFO external board seat*). We then run our main regression model in both subsamples. Panel A in Table 6 shows the results. We find that the association between *CFO horizon* and *CAR33* is not significant for CFOs with a relatively high level of recent M&A experience, total compensation, a board seat, and a relatively high long-term compensation. In these situations, the upside potential of becoming visible through an M&A for CFOs at early or late career stages may not exceed the downside risk.

6.1.2. The role of external monitoring

We also investigate the differences in the external monitoring of the firm. The potential detrimental influence of CFOs' signaling incentives on M&A returns should be higher when CEOs and other managers behave more opportunistically, because such behaviors make it more likely that they will propose subpar strategic decisions. The literature suggests that weak external monitoring increases the tendency of CEOs and other managers to pursue opportunistic motives (e.g., Ali & Zhang, 2015). Under such conditions, CFOs' skepticism and, thus, their internal monitoring might be particularly decisive for the quality of M&As (Uhde et al., 2017). Therefore, we split our sample into subsamples of external monitoring indicators. First, we consider the level of industry competition (i.e., product market competition) as a powerful disciplining mechanism (Shleifer & Vishny, 1997). Second, we include the level of dedicated institutional investors as these actors are likely to monitor strategic decisions more closely (Oehmichen et al., 2021). Third, we view board independence as another disciplining mechanism for managerial decisionmaking (Ali & Zhang, 2015). Fourth, we consider firm leverage, as higher leverage indicates a higher dependency on banks, which should also curb opportunistic managerial decisions (Firk et al., 2021). We then split our sample into subsamples with high (larger than the sample median) and low (lower than or equal to the sample median) levels of each monitoring indicator. Panel B of Table 6 reports the results. We find that the inverse U-shaped association between CFO horizon and CAR33 is more strongly pronounced when external monitoring is weak.

6.2. Channels Through Which CFOs Exert Influence on M&A Outcomes

We perform three tests to grasp how CFOs affect M&A returns. First, the price paid by the acquirer for the target is among the most critical determinants of M&A performance (Darrough et al., 2018). CFOs typically conduct the due diligence in M&As (e.g., Zoni & Pippo, 2017) and negotiate deal prices (Huang & Kisgen, 2013; Karaevli & Özcan, 2022). Therefore, we argue that if CFOs at early and late career stages aim to become visible through M&A decisions, they may complete the deal with less skepticism concerning the price paid. Based on this reasoning, we expect a U-shaped relationship between *CFO horizon* and M&A premiums. Panel A in Table 7 presents the results. Consistent with our prediction, Models 1 and 2 show a significant U-shaped relationship between *CFO horizon* and the premium measures.

Second, given the CFO's role as an advisor to the CEO in corporate decisions (e.g., Caglio et al., 2018; Hoitash et al., 2016; Uhde et al., 2017), we investigate their influence on M&A initiation. Signaling incentives could make CFOs at early and late career stages less skeptical and encourage them to advocate for the initiation of more M&As. Thus, we expect a U-shaped relationship between *CFO horizon* and firms' *M&A deals*. Panel B in Table 7 presents the results. Model 1 supports our expectation. We then compare this relationship for small (Model 2) and very large (Model 3) deals (with volumes exceeding 5% of the acquirer's market capitalization).

		Pane	el A: CFO characteristics	influencing signaling i	incentives			
Model	1	2	3	4	5	6	7	8
DV	CAR33	CAR33	CAR33	CAR33	CAR33	CAR33	CAR33	CAR33
Sample	CFO to peer	compensation	CFO	LTI	CFO extern	al board seat	CFO M&A	experience
	Low	High	Low	High	No	Yes	Low	High
CFO horizon	0.326***	0.028	0.435***	0.000	0.272**	0.038	0.279**	0.099
	(0.005)	(0.842)	(0.002)	(1.000)	(0.015)	(0.815)	(0.036)	(0.345)
CFO horizon sq.	-0.011^{***}	0.001	-0.015^{***}	0.002	-0.009^{**}	-0.002	-0.010^{**}	-0.002
	(0.006)	(0.905)	(0.002)	(0.689)	(0.026)	(0.749)	(0.034)	(0.598)
Turning point	14.2	-24.8	14.5	0.0	15.9	9.5	14.6	23.8
U-test (p value)	0.005	1.000	0.001	0.438	0.026	0.401	0.021	0.444
Coefficient higher/lower?	Model 1 >	Model 2?	Model 3 >	Model 4?	Model 5 =	Model 6?	Model 7 >	Model 8?
CFO horizon sq. + CFO horizon	Yes (Chi2 $= 2$.73; p = 0.049	Yes (Chi2 $= 5$.	13; p = 0.012)	Yes (Chi2 $= 1$.69; p = 0.097)	Yes (Chi2 $= 2.1$	1; p = 0.073)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry and year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R ²	0.067	0.058	0.077	0.057	0.037	0.127	0.060	0.066
Obs.	1576	1575	1576	1575	2265	886	1727	1424
			Panel B: Intensity	of external monitoring				
Model	1	2	3	4	5	6	7	8
DV	CAR33	CAR33	CAR33	CAR33	CAR33	CAR33	CAR33	CAR33
Sample	Industry c	ompetition	Dedicated investors		Board independence		Leverage	
	Low	High	Low	High	Low	High	Low	High
CFO horizon	0.341**	0.133	0.332**	0.054	0.251**	0.102	0.443***	0.068
	(0.016)	(0.233)	(0.013)	(0.630)	(0.022)	(0.513)	(0.002)	(0.525)
CFO horizon sq.	-0.010^{**}	- 0.005	- 0.011**	-0.001	-0.007^{*}	- 0.004	-0.017^{***}	- 0.001
	(0.037)	(0.286)	(0.023)	(0.819)	(0.097)	(0.408)	(0.001)	(0.803)
Turning point	17.1	14.2	14.8	31.0	19.1	11.4	13.2	36.8
U-test (p value)	0.043	0.179	0.023	1.000	0.157	0.246	0.001	1.000
Coefficient higher/lower?	Model 1 >	Model 2?	Model 3 >	Model 4?	Model 5	Model 6?	Model 7 >	Model 8?
CEO having and CEO having					N. (Clica o	25 0.277)	V (Ch:2 4.6	0 0.015)
CFO norizon sq. + CFO norizon	Yes (Chi2 $= 1$.71; p = 0.095)	Yes (Chi2 $= 2$.	27; p = 0.066)	No $(Chi2 = 0$.35; p = 0.277	$100 \text{ (Cm}_2 = 4.0$	(9; p = 0.015)
Controls	Yes (Chi2 = 1 Yes	.71; $p = 0.095$) Yes	Yes (Chi2 = 2. Yes	27; p = 0.066) Yes	No $(Chi2 = 0)$ Yes	(.35; p = 0.277) Yes	Yes Yes	p = 0.015 Yes
Controls Industry and year fixed effects	Yes (Chi2 = 1 Yes Yes	.71; p = 0.095) Yes Yes	Yes (Chi2 = 2. Yes Yes	27; p = 0.066) Yes Yes	No (Chi2 = 0 Yes Yes	$\begin{array}{l} \text{.35; } p = 0.277) \\ \text{Yes} \\ \text{Yes} \end{array}$	$\begin{array}{l} \text{Yes} \\ \text{Yes} \\ \text{Yes} \end{array}$	$\begin{array}{l} \text{Yes} \\ \text{Yes} \\ \text{Yes} \end{array}$
Controls Industry and year fixed effects R^2	Yes (Chi2 = 1 Yes Yes 0.067	.71; p = 0.095) Yes Yes 0.061	Yes (Chi2 = 2. Yes Yes 0.064	27; p = 0.066) Yes Yes 0.062	No (Chi $2 = 0$ Yes Yes 0.050	(35; p = 0.277) Yes Yes 0.068	$\begin{array}{c} \text{res}(\text{Cm2} = 4.0)\\ \text{Yes}\\ \text{Yes}\\ 0.080 \end{array}$	p = 0.015 Yes Yes 0.056

 Table 6.
 Cross sectional analyses

This table presents the results of OLS regressions for the cross sectional analyses of the relationship between *CFO horizon* and *CAR33*. Panel A shows the results regarding the variations in cross sectional CFO incentives. Panel B presents the results for cross sectional variations in external monitoring. See Appendix 1 for the variable definitions.***,**, and* denote statistical significance at the 1%, 5%, and 10% level (two-tailed), respectively. The *p*-values are provided in parentheses. Standard errors are clustered at the firm level.

	Panel A: M&A	premiums			
Model		1	2		
DV Second	Premi	iums 30	Premiums 30 imputed		
Sample	All	viaAs	All M&AS		
CFO horizon	-0.	.035**	-0.012^{**}		
CFO horizon sa	(0.	028) 01**	(0.031) 0.001**		
er o nonzon sq.	(0.	026)	(0.025)		
Turning point	1	4.0	13.4		
U-test (p value)	0.	016	0.014		
Controls		Yes	Yes		
Industry and year fixed effects \mathbf{p}^2		182	Yes 0.126		
Obs.	0. 7	185	3151		
	Panel B: M&A	activity			
Model	1	2	3		
		Small M&A deals	Large M&A deals		
DV	M&A deals	(< = 5pct)	(> 5pct)		
Sample	S&P500 Panel	S&P500 Panel	S&P500 Panel		
CEO horizon	-0.020	0.005	- 0.036**		
	(0.232)	(0.814)	(0.023)		
CFO horizon sq.	0.001*	0.000	0.002***		
	(0.094)	(0.978)	(0.003)		
Turning point	10.2	- 117.7	11.0		
U-test (<i>p</i> value)	0.083	1.000	0.005		
Coefficient higher/lower?		Model 2 -	a < 100 of 5?		
Controls	Vec	$\operatorname{Yes}(\operatorname{Cm2} = 3)$	(5.50; p = 0.055)		
Industry and year fixed effects	Yes	Yes	Yes		
Pseudo R^2	0.038	0.055	0.031		
Obs.	6072	6072	6072		
	Panel C: M&	A types			
Model	1	2	3		
DV	Share deals	Diversifying deals	Cross border deals		
Sample	S&P500 Panel	S&P500 Panel	S&P500 Panel		
CFO horizon	-0.074^{*}	-0.035^{*}	-0.035^{*}		
	(0.064)	(0.056)	(0.098)		
CFO horizon sq.	0.003**	0.001**	0.001*		
Turning point	(0.050)	(0.028)	(0.080)		
Turning point U-test (n value)	13.7	12.0	15.0		
Controls	Yes	Ves	Ves		
Industry and year fixed effects	Yes	Yes	Yes		
Pseudo R^2	0.068	0.104	0.096		
Obs.	6072	6072	6072		

Table 7. Channels through which CFOs exert influence on M&A outcomes

This table presents the analyses of the channels through which CFOs might influence M&A outcomes. Panel A shows the results of using OLS regressions to test the relationship between the CFO horizon and M&A premiums. Panel B presents the results of using negative binomial regressions to test the relationship between CFO horizon and M&A activity. Panel C reports the results of using negative binomial regressions to test the relationship between CFO horizon and M&A activity. Panel C reports the results of using negative binomial regressions to test the relationship between CFO horizon and M&A types. See Appendix 1 for the variable definitions.***,**, and* denote statistical significance at the 1%, 5%, and 10% level (two-tailed), respectively. The *p*-values are provided in parentheses. Standard errors are clustered at the firm level.

The results show that the U-shaped relationship between *CFO horizon* and firms' M&A activity is significantly more pronounced for large deals, further supporting our signaling argument.

Third, we investigate strategic deal features that may be relevant to synergy realization, as CFOs are likely to give CEOs advice on these features (Ferris & Sainani, 2021). If CFOs with high signaling incentives are less skeptical, they will tolerate more risks in realizing synergy. Prior literature has shown that both diversifying and cross border deals are more challenging in terms of synergy realization (Campbell et al., 2016; Ferris & Sainani, 2021; Martin, 1996). Moreover, if the synergistic value is uncertain, it may require financing deals with more shares (Ferris & Sainani, 2021; Martin, 1996). Thus, we expect a U-shaped relationship between *CFO horizon* and these deal types. Panel C of Table 7 presents the results. We find a significant U-shaped relationship between *CFO horizon* and riskier deal features.

6.3. Labor Market Outcomes of CFO M&A Experience

Finally, we elaborate on the premise that M&As have significant upside potential for CFOs aiming to promote their careers and that the downside risk of such deals is rather limited for them. We examine the role of recent M&A experience (*CFO M&A experience*) in several labor market outcomes.¹⁵ We investigate whether CFO career outcomes benefit from M&A experience in terms of being promoted to a CEO position or another CFO position (*Promotion*), receiving external board seats (*Board seats*), achieving a higher tenure in the firm (*High tenure*), and higher total compensation (*Total comp.*), base salary (*Base salary*), number of awards (*Awards*), and whether CFO career outcomes suffer in terms of being dismissed (*Dismissal*). We measure the labor market outcomes for the next year and focus on CFOs' M&A experience in the current and past three years. The results are presented in Table 8.¹⁶

Panel A shows the results for the labor market outcomes of *CFO M&A experience*. There are significant positive relationships between *CFO M&A experience* and positive labor market outcomes (e.g., promotion, board seats, and higher compensation), while there is no indication of negative labor market outcomes (e.g., dismissal). In Panel B, we split CFO M&A experience into CFO M&A experiences with positive and negative deals. We find several positive labor market outcomes associated with *CFO positive M&A experience*, no negative labor market outcomes associated with *CFO negative M&A experience*, but a positive association with CFO base salary.¹⁷ In Panel C, we differentiate between M&A experiences with highly positive deals (*CAR33* higher than 2.5%), mediocre deals (i.e., slightly positive or negative), and highly negative deals (*CAR33* lower than 2.5%). We again find multiple positive labor market outcomes associated with *CFO mediocre M&A experience*. *CFO highly negative M&A experience* is positively related to dismissal, but other than this, we find no evidence of more downsides. Collectively, these results suggest a significant upside potential from being visible in M&As, and that this upside potential likely exceeds the downside risk of being punished for poor M&A decisions.

¹⁵We also run a test that estimates the influence of withdrawn M&A deals on labor market outcomes. We would not expect that withdrawing M&A deals and acting more conservative provides positive labor market outcomes. In line with this, we do find that with drawn M&A deal relate significantly to the labor market outcome variables. This test is displayed in Appendix S16 of the Online Appendix.

¹⁶We control for all variables of our main analysis except deal characteristics. We also control for restatements, as previous studies document the relevance of inaccuracies in financial reporting for CFO career outcomes (Bedard et al., 2014; Li et al., 2010; Wang, 2010) and for the level of earnings management in current and past three years as CFOs could manage earnings to smooth the performance after negative-performing M&As.

¹⁷A potential reason may be the increased firm size and control span after completed M&As.

Panel A: M&A experience							
Model	1	2	3	4	5	6	7
DV	Promotion S&P500	Board seats S&P500	Total comp. S&P500	Base salary S&P500	Awards S&P500	High tenure S&P500	Dismissal S&P500
Sample	Panel	Panel	Panel	Panel	Panel	Panel	Panel
CFO M&A experience Controls	0.002* (0.074) Yes	0.016*** (0.000) Yes	0.012** (0.026) Yes	0.010*** (0.001) Yes	0.030*** (0.005) Yes	0.013*** (0.000) Yes	0.002 (0.177) Yes
Firm and year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R ² Obs.	0.118 6072	0.449 6072	0.510 6072	0.447 6072	0.568 6072	0.393 6072	0.108 6072
Panel B: Positive and negative M&A experience							
Model	1	2	3	4	5	6	7
DV Sample	Promotion S&P500 Panel	Board seats S&P500 Panel	Total comp. S&P500 Panel	Base salary S&P500 Panel	Awards S&P500 Panel	High tenure S&P500 Panel	Dismissal S&P500 Panel
CFO pos. M&A experience	0.003* (0.096)	0.024*** (0.000)	0.015* (0.081)	0.005 (0.371)	0.031** (0.028)	0.020*** (0.001)	0.004 (0.117)
CFO neg. M&A experience	0.001 (0.617)	0.008 (0.273)	0.008 (0.406)	0.015*** (0.009)	0.020 (0.197)	0.007 (0.265)	0.000 (0.858)
Controls Firm and year fixed effects	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes
R ² Obs.	0.118 6072	0.449 6072	0.510 6072	0.447 6072	0.567 6072	0.394 6072	0.108 6072
	Panel C	Highly posit	tive and nega	tive M&A ex	perience		
Model	1	2	3	4	5	6	7
DV Sample	Promotion S&P500 Panel	Board seats S&P500 Panel	Total comp. S&P500 Panel	Base salary S&P500 Panel	Awards S&P500 Panel	High tenure S&P500 Panel	Dismissal S&P500 Panel
CFO highly pos. M&A experience	0.001 (0.835)	0.028** (0.027)	0.019 (0.200)	0.006 (0.528)	0.040* (0.074)	0.013 (0.230)	0.006 (0.182)
CFO med. M&A experience	0.005** (0.040)	0.011 (0.251)	0.004 (0.711)	0.017** (0.020)	0.004 (0.787)	0.017** (0.028)	-0.001 (0.561)
CFO highly neg. M&A experience	- 0.001 (0.793)	0.019* (0.095)	-0.021 (0.165)	0.004 (0.609)	0.009 (0.721)	0.001 (0.938)	0.006* (0.070)
Controls Firm and year fixed effects	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes
R ² Obs.	0.119 6072	0.449 6072	0.510 6072	0.447 6072	0.566 6072	0.392 6072	0.109 6072

Table 8. Labor market outcomes of CFO's recent M&A experience

This table presents the results of firm fixed effects regressions for the relationship between CFO M&A experience and labor market outcomes. In Panel A, we test the effect of CFO M&A experience on labor market outcomes. In Panel B, we test the effects of CFO positive and negative M&A experience on labor market outcomes. In Panel C, we test the effects of CFO highly positive, mediocre, and highly negative M&A experiences on labor market outcomes. See Appendix 1 for the variable definitions.***,**, and* denote statistical significance at the 1%, 5%, and 10% level (two-tailed), respectively. The *p*-values are provided in parentheses. Standard errors are clustered at the firm level.

7. Discussion and Conclusion

Prior literature has delineated CFOs as impartial advisors who benefit the outcomes of strategic decisions (Ferris & Sainani, 2021; Karaevli & Özcan, 2022). Our study points to potential adverse effects. We theorize that the labor market's demand for CFOs with experience in strategic decisions creates incentives to become visible in such decisions (i.e., signaling incentives). Thus, CFOs concerned about their careers may neglect the skepticism to ensure economically conscious decisions. To better understand whether and when such detrimental effects of CFOs' signaling incentives occur, we investigated the influence of CFO career horizon on M&A returns.

We found a curvilinear relationship between CFO career horizon and M&A returns, indicating that CFOs at early and late career stages are associated with lower M&A returns. This curvilinear relationship is more pronounced when CEOs are more likely to delegate decision authority to CFOs. A PSM analysis and various sensitivity tests supported these results. In additional tests, we found that CFOs at early and late career stages tend to lack the required skepticism, as they are associated with higher M&A premiums, greater M&A activity, especially for very large deals, and riskier deal features. In cross sectional analyses, we found that CFOs at early and late career stages are not associated with weaker M&A returns if their current reputation is high or if they have strong long-term incentives. Moreover, firms with weaker external monitoring that could particularly benefit from skeptical CFOs challenging strategic decisions are subject to even weaker M&A returns when they have CFOs at early and late career stages. Finally, our evidence suggests that M&A experience helps CFOs achieve superior labor market outcomes (e.g., being promoted). We find only slight differences when differentiating between M&A experiences with positive and negative returns. Career penalties (i.e., CFO dismissals) are limited to highly valuedestroying M&As. These tests support our argument about a high upside potential and a limited downside risk for CFOs in the context of M&A decisions.

Taken together, our results suggest that the labor market demand for CFOs with strategic experience creates signaling incentives that are detrimental to the outcomes of strategic decisions. However, these results should be interpreted in light of the following limitations. First, we focus on M&As as exemplary and observable strategic decisions. Hence, we cannot ensure that our findings are transferable to other strategic decisions, particularly those that are less visible. Second, our sample covers large and listed firms, in which CFOs are more likely to be involved in strategic decisions (Graham et al., 2015). Our results may not hold for smaller firms, in which CFOs have more limited responsibilities. Third, we cannot completely rule out the possibility of endogeneity. While we run a series of tests to mitigate potential concerns, we could not exploit clear exogenous variation that may have allowed us to establish causality, similar to previous CFO research.

Despite these limitations, our study has valuable implications for practice and research. Our findings suggest that, in the selection process, directors should look beyond the strategic experience of CFOs and carefully consider their influence on past strategic decisions. In this sense, a positive development would be for the labor market to value CFOs, who stand up to CEOs in strategic decisions (Uhde et al., 2017). Boards could also counteract CFOs' signaling incentives by carefully designing explicit incentives (i.e., by establishing a stronger focus on long-term incentives). Finally, our study is the first to show that the signaling perspective can help explain implicit career incentives for a specialized managerial role. In recent years, several functional TMT members have become increasingly involved in strategic decisions. This development calls for further research on the implications of signaling incentives of functional managers other than CFOs.

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Appendix

Appendix 1: Data sources and variable definitions

Variable	Description [data source]
Main analysis CAR33	Seven-day cumulative abnormal return (in percentage) calculated using the market model with acquirer's national composite index and a 200-day estimation window. [SDC & Refinitiv]

(Continued).

Variable	Description [data source]
CFO horizon CFO horizon sq.	Difference between 65 and the age of the CFO. [Boardex] Squared term of CFO horizon. [Boardex]
CEO's propensity to delegate	The sum of the following four min-max normalized indicators: (1) firm size as natural logarithm of total assets, (2) number of firm's distinct (two-digit SIC industries) segments, (3) inverse sales growth as the percentage change in sales over the two previous years, and (4) a dummy variable equaling one if the CEO does not possess financial expertise, otherwise zero. Our final variable is an indicator variable that equals one if the continuous variable is larger than the sample median, otherwise zero. [Refinitiv & Boardex]
CFO CPA	Dummy variable equaling one if the CFO has a CPA, zero otherwise. [Boardex]
CFO MBA	Dummy variable equaling one if the CFO has a MBA, zero otherwise. [Boardex]
CFO board member	Dummy variable equaling one if the CFO is executive director, zero otherwise. [Execucomp]
CFO role experience	Dummy variable equaling one if the CFO was 'main' CFO in another company before his current CFO position, zero otherwise. [Boardex]
CFO equity-based	Total value of restricted stock granted plus the total value of stock options
compensation	scaled by the CFO's total compensation. [Execucomp]
CFO M&A	Number of M&As in which the CFO was involved as CFO in the last three
experience	years. [SDC & Boardex]
CEO horizon	Difference between 65 and the age of the CEO. [Boardex]
Time in role CEO vs	Difference in the time in role in firm between the CEO and the CEO in years
CFO	[Boardex]
CEO financial	Dummy variable equaling one if the CEO possesses finance expertise as
expertise	indicated by an educational degree in a finance-related domain (e.g., CPA) or prior work experience in a finance-related position (e.g., CFO) or in the finance industry, zero otherwise. [Boardex]
CEO equity-based	Total value of restricted stock granted plus the total value of stock options by
compensation	the CEO's total compensation. [Execucomp]
Board size	Natural logarithm of the number of supervisory directors serving on the board. [Boardex]
Board independence	The percentage of outside directors serving less than three years on the board. [Boardex]
Institutional ownership	The sum of fractional holdings by institutional investors. [Refinitiv]
Ownership	Sum of holdings held by owners with more than three percentage of total shares.
Analyst coverage Firm size	Natural logarithm of the number of analysts following the company. [IBES] Natural logarithm of total assets. [Refinitiv]
Leverage	Debt position calculated as long-term debt divided by total assets. [Refinitiv]
Free cash flow	Sum of operating income before depreciation, interest expenses, income taxes and capital expenditures, scaled by total assets. [Refinitiv]
Number of segments	The firm's number of (two-digit SIC industries) segments. [Refinitiv]
Tobin's Q	Sum of market capitalization and total assets minus total shareholders' equity, scaled by total assets. [Refinitiv]
Firm M&A	A firm's number of M&As in the last three years scaled by M&A activity of
experience	industry peers. [SDC]
Relative deal size	The deal's transaction value divided by total assets. [SDC]
Diversitying dear	two-digit SIC codes, zero otherwise. [SDC]
Public	Dummy variable equaling one if the target was public, zero otherwise. [SDC]
Private	Dummy variable equaling one if the target was private, zero otherwise. [SDC]
All Cash	Dummy variable equaling one for purely cash-financed deals, zero otherwise. [SDC]
Stock	Dummy variable equaling one for partially or fully stock-financed deals, zero otherwise. [SDC]
Cross-border deal	Dummy variable equaling one if it is a cross-border deal, zero otherwise. [SDC]

Variable	Description [data source]
Additional tests (M&A so	ample)
CFO to peer	Dummy variable equaling one if the difference between the CFO's total
compensation	compensation and the average total compensation of the CFO's industry neers is higher than the sample median zero otherwise. [Execucomp]
CEO I TI	Dummy variable equaling one if the CFO's uneversised options and restricted
	stock holdings scaled by total companyation are higher than the sample
	stock holdings scaled by total compensation are night than the sample
CEO automal board	Dummy variable aqualing and if the CEO passages at least and automal board
CFO external board	Dummy variable equaling one if the CFO possesses at least one external board
seat	seat on a listed company; zero otherwise. [Boardex]
Industry competition	Measured as the inverse of the Herfindahl-Hirschman Index of sales in two-digit
~	SIC industries. [Refinitiv]
Dedicated investors	Measured as the sum of dedicated institutional investors' shareholdings
	with more than one percentage holdings subtracted by the sum of transient
	institutional investors' shareholdings with more than one percentage holdings.
	[Refinitiv]
Additional tests (S&P500	0 panel)
Premiums 30	Four-weeks acquisition premiums for publicly listed targets calculated as the
	deal transaction value scaled by the target's market capitalization four-weeks
	prior to the announcement date (Chow et al. 2016; Humphery-Jenner &
	Powell 2011) The variable is truncated, so that it takes values between zero.
	and true (Officer 2002) [CDC & Definitial
Dramiuma 20	The coloulation of the imputed version of marriage 20 follows a two stars
Premiums 50	The calculation of the imputed version of premiums 50 follows a two-step
imputed	procedure. First, we calculate the four-weeks premium for each publicly
	listed target firm, as defined above. Second, we proxy for each target firm
	that is not listed (i.e., does not have a market capitalization) the premium 30
	as the average premium for the target's industry peers in a given acquisition
	year (Humphery-Jenner & Powell, 2011; Officer, 2003). [SDC & Refinitiv]
M&A deals	The firm's number of M&A deals. [SDC]
Small M&A deals	The firm's number of M&A deals with a deal value smaller than five percent of
	market capitalization. [SDC]
Large M&A deals	The firm's number of M&A deals with a deal value larger than five percent of
	market capitalization [SDC]
Share deals	The firm's number of M&A deals that are at least half financed with shares
Share deals	[SDC]
Diversifying deals	The firm's number of M&A deals involving a target from a different two-digit
Diversitying dears	SIC industry [SDC]
Cross border deals	The form's number of M&A deals involving a target backguartered in a foreign
Cross border deals	The firm s number of wick deals involving a target headquartered in a foreign
D (country. [SDC]
Promotion	Dummy variable equaling one if the resigning CFO became either CFO of
	another significant public firm or CEO within the current or another firm,
	zero otherwise. [Boardex]
Board seats	The CFO's number of external board seats on listed companies. [Boardex]
Total comp.	The natural logarithm of the CFO's total compensation. [Execucomp]
Base salary	The natural logarithm of the CFO's base salary. [Execucomp]
Awards	The CFO's number of awards received. [Boardex]
High tenure	Dummy variable equaling one if the CFO time in role in firm is at least seven
	years, which equals the forth quartile of CFO's time in role in firm. [Boardex]
Dismissal	Dummy variable equaling one if the resigning CFO is dismissed, zero otherwise.
	We categorize changes as dismissal if the press release contains terms such
	as 'Changing needs or other skillset required,' 'Disagree with board,'
	'Discipline for poor performance,' 'Fired.' 'Accounting manipulations'
	'Firm reorganization' and 'Reassignment within firm' We also carefully
	cross_check the press releases that contain terms such as 'No reason given'
	(Durance other interests ' and 'Definerent', Encirclence and ile
	ruisue other interests, and kettrement. For instance, we also categorize
	certain retirement' turnovers as forced, if the CFO was younger than 57
	years and did not actually retire (e.g., by taking another job), similar to
	previous research (Bedard et al., 2014; Parrino, 1997). [Hand-collected]

Variable	Description [data source]
CFO pos. M&A experience	Number of M&As with positive returns (CAR33), in which the CFO was involved as 'main' CFO in the current and past three years, [SDC & Boardex]
CFO neg. M&A	Number of M&As with negative returns (CAR33), in which the CFO was involved as 'main' CFO in the current and past three years [SDC & Boardey]
CFO highly pos. M&A experience	Number of M&As with highly positive returns (CAR33 > 2.5%, see Campbell et al., 2016), in which the CFO was involved as 'main' CFO in the current and past three years. [SDC & Boardex]
CFO med. M&A experience	Number of M&As with mediocre returns (CAR33 < 2.5% and CAR33 > -2.5%), in which the CFO was involved as 'main' CFO in the current and past three years [SDC & Boardex]
CFO highly neg. M&A experience	Number of M&As with highly negative returns (CAR33 $< -2.5\%$, see Campbell et al., 2016), in which the CFO was involved as 'main' CFO in the current and past three years. [SDC & Boardex]
Restatements	Dummy variable equaling one if the firm reports a restatement of its financial reports, zero otherwise (e.g., Bedard et al., 2014), [Audit Analytics]
Earnings management	Absolute discretionary accruals, which is calculated following Kim et al. (2017) as the residual of regressing total accruals on the difference between the change in sales and the change in accounts receivable, property, plant, and equipment, and net income (all variables scaled by total assets). We calculate the average of this variable over the current and the last three years to control for earnings management as means of smoothing poor performing M&A decisions. [Compustat]