

Do CFOs Matter? Evidence from the M&A Process

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by

Stephen P. Ferris

(Corresponding Author)

Miller College of Business

Ball State University

Phone (USA): 765–285–2820

Email: spferris@bsu.edu

and

Sushil Sainani

Management School

University of Liverpool

Phone (UK): (+44) 151-794-9942

Email: s.sainani@liv.ac.uk

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Abstract

This study examines the effect of Chief Financial Officers (CFOs) on mergers and acquisitions using a newly constructed CFO Influence Index. Because the perceived influence of CFOs is high in U.K. firms, we use that market for our analysis. We find that influential CFOs as measured by experience, stature, and pay are associated with more deal completions and the pursuit of smaller, domestic targets. High influence CFOs require less time to complete a deal and are able to identify higher quality targets for which they pay less. We also discover that firms with high influence CFOs enjoy greater long-term operating and financial performance post-merger. We conclude that influential CFOs are effective in creating shareholder value during M&A.

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1. Introduction

The Chief Executive Officer (CEO) is traditionally considered as the key individual within the senior management team for the development of corporate mergers and acquisitions (M&A) strategy. In most modern firms, however, the Chief Financial Officer (CFO) plays an equally important role and is considered essential to the success of any M&A. CFOs are involved in every stage of the M&A process, from the initial due-diligence to the final integration of the target. Mukherjee et al. (2004), for instance, describes how CFOs are responsible for identifying financially attractive targets while Graham and Harvey (2001) and Almeida et al. (2014) explain how CFOs are required to design effective financing strategies for the acquisition. Importantly, the attention of CFOs is not restricted to financial management and planning, but also is focused on the identification and realization of post-merger synergies (Hommel et al., 2012).¹

Given these findings, this study examines the role and effect that CFOs exercise in an M&A. More specifically, we investigate whether CFOs influence the following important aspects of an M&A transaction: (i) likelihood of completing an acquisition, (ii) deal terms and process, and (iii) subsequent operating and financial performance.

Each CFO brings a different set of experiences, skills, and perspectives to the position. The nature of that portfolio of individual professional competencies determines the extent to which a CFO successfully engages in M&A activity. Thus, we must first assess the skills that a CFO possesses before we can determine the effect of CFOs on M&A.

To address this issue, we construct an index (hereafter, the CFO Influence Index) which captures the ability of the CFO to influence a firm's acquisition behaviour and performance. Consistent with an extensive corporate finance and management literatures (e.g., Becker, 1975; Fama, 1980; Fama and Jensen, 1983; Finkelstein, 1992; Castanias and Helfat, 2001; Adams and Ferreira, 2007; Masulis and Mobbs, 2011; Aktas et al., 2013; Huang et al., 2014; Bedard

¹ For instance, a recent article in *Harvard Business Review* entitled "[The CEO and CFO Pairing that Makes Mergers More Successful](#)" states that "CEOs shape strategies and often make final M&A decisions. They also consult their CFOs, who help identify acquisition targets, conduct due diligence, arrange financing, and engage in post-deal execution. CFOs are the Robin to the CEO's Batman, the Watson to Sherlock" (Published: August 12, 2019).

et al., 2014; El-Khatib et al., 2015; Field and Mkrtyan, 2017; Aktas et al., 2019) and using an approach comparable to Ellul and Yerramilli (2013), Koo and Lee (2018) and Florakis and Sainani (2018), we construct a seven-component index of CFO Influence. These components capture a CFO's experience and stature while reflecting the well-established finding that leadership is inherently multidimensional (Yukl, 1989; Seters and Field, 1990; Northouse, 2019).

Using CFO influence index, we formally examine the effect that CFOs have on M&A activity and performance in the United Kingdom (U.K.), where CFOs are observed to have a notable influence on strategic board decisions. CFOs in U.K. firms are highly influential members of the senior management team. Indeed, they are the only executives after the CEO who sit on the board of directors in the vast majority of U.K. firms. For our sample, nearly 85% of the CFOs hold a board seat. This is in sharp contrast to the U.S. experience, where only about 11% of CFOs hold board positions (Mobbs, 2018). The influence of CFOs in the U.K. is also reflected in their higher relative compensation. The average CFO compensation in our sample is about 69% of that of the CEO. The corresponding value in the U.S. is about 41% (Jiang et al., 2010). Another factor that facilitates influence by U.K. CFOs is their widespread presence on the boards of other firms. In particular, approximately 27% of our sample CFOs hold outside board seats as compared to about 8% in the U.S. (Khan, 2019).

Our analysis starts by establishing whether firms with influential CFOs (i.e., high values of the CFO influence index) are more likely to conduct acquisitions than their counterparts with less influential CFOs. We find a significant positive association between influential CFO firms and the likelihood of acquisitions. More specifically, we observe that firms with influential CFOs are more likely to complete an acquisition than those with less influential CFOs. Our results are robust to the inclusion of various CEO and governance characteristics which the literature suggests are associated with corporate acquisition decision-making.

We then investigate the effect of CFOs on deal terms and process. We find that an influential CFO is associated with deals that are more commonly cash financed, domestically focused, and smaller in relative size. Influential CFOs tend to shorten the length of the M&A process as they are more experienced and skilled in the review of the target's profitability and its potential for synergies. Further, they are associated with superior targets as measured by earnings

quality. These same CFOs offer lower premiums for their targets, perhaps due to their greater negotiation skills and previous experiences.

We next examine the post-acquisition operating cash flow performance across high CFO influence and low CFO influence firms. Using ex-post profitability (i.e. ROA) as a measure of synergy gains, we find that the operating performance in high CFO influence firms improves significantly from pre- to post-acquisition years. In contrast, we do not observe any significant change in operating performance for these firms with low CFO influence. This indicates that high CFO influence firms, on average, outperform low CFO influence firms in terms of long-term performance. The finding is robust to the use of different proxies for operating performance. Moreover, we analyse the market reaction to merger announcements as a second measure of synergy gains. We find that the market values the presence of an influential CFO in those cases where the merger is seen as complex due to size and/or international considerations.

We also explore the effect of CFO Influence in the context of the CEO. That is, how is CFO Influence affected by various characteristics or attributes of the CEO. We first examine this issue relative to the power of the CEO. We find that CFOs Influence remains significant across both weak and strong CEOs. Our results suggest, however, that CFOs are more influential when CEOs have less power. We further find that CFO Influence matters for M&A activity across all levels of the CEO's willingness to delegate. Our evidence does suggest, however, that CFOs might be more influential when their CEOs are likely to delegate.

It might be that CFO Influence is affected by the kind of CEO with whom a CFO is paired. We test for this possibility by examining three dimensions of CEO-CFO similarity: age, tenure, and gender. We observe that the magnitude of the CFO Influence coefficient is larger when the CFO is paired with a CEO who differs across any of these dimensions. This suggests that CFO influence is higher when they work for CEOs who differ from themselves.

Finally, we introduce a set of robustness tests to our analysis to assess the stability of our findings. We find that our results remain robust to an alternative measure of CFO influence, to a propensity score matched sample, and the exogenous shock of CFO departures. We conclude that the effect of CFOs on M&A activity is both profound and permanent.

Our study contributes to a narrow stream in the corporate finance literature that examines the effect of CFO traits on corporate policies (see, e.g., Bertrand and Schoar, 2003; Chava and

Purnanandam, 2010; Habib and Hossain, 2013; Bedard et al., 2014; Custódio and Metzger, 2014; Dittmar and Duchin, 2016; Florakis and Sainani, 2018). The present study is first to examine the role of CFOs in M&A. Most of the existing literature focuses on CEOs and their effect on M&A decisions.² The role of the CFO has historically been ignored. Despite the importance of the CFO for designing corporate strategies, we know very little about how they influence an M&A. Our study fills this void by constructing a new index that captures the ability of a CFO to affect a firm's acquisition behaviour and performance. We conclude from our empirical analysis that the CFO's ability is a key factor in determining M&A success.

We organize the remainder of our study into seven sections. Section 2 describes our M&A sample selection process and how we construct our CFO influence index. Section 3 provides summary statistics while the effect of CFO influence on merger deal characteristics is contained in Section 4. Section 5 discusses CFO influence and subsequent merger financial and operating performance. In Section 6 we undertake a series of cross-sectional analyses, focusing on the effect of CFO Influence while controlling for CEO power and similarity factors. We provide a set of robustness checks in Section 7. We conclude with a summary of our findings and a discussion of their importance in Section 8.

2. Date, Sample, and CFO Influence Index Construction

2.1 Data and Sample

We draw our data from a variety of sources. The CFO variables used for creating the influence index are collected from BoardEx. We use the BoardEx summary file to track the CFOs of all U.K. listed companies. We identify CFOs based on the data item "individual role", and by pinpointing the following titles: CFO, Chief Financial Officer, Finance Director (FD), Group Finance Director (GFD) and Executive Director (Finance). Board characteristics are also obtained from BoardEx while ownership information is gathered from Thomson Reuters (Ownership and Profiles). Firm characteristics and accounting information are drawn from Refinitiv DataStream. Our sample covers the period of 2000-2015 and contains 10,501 *firm-year* observations for 2,208 unique firms listed on the London Stock Exchange.

² For instance, Malmendier and Tate (2008) and Ferris et al. (2013) focus on CEO overconfidence; Jaffe et al. (2013) examine CEO skills; Custódio and Metzger (2014) study CEOs' industry expertise; El-Khatib et al. (2015) study CEO network; Aktas et al. (2016) look at CEOs' narcissistic behaviour and Bernile et al. (2017) analyse CEOs' early-life disaster experience.

The Mergers and Acquisitions (M&A) data are obtained from Refinitiv Securities Data Company (SDC) Platinum M&A database. We collect information on a wide set of deal, bidder, and target characteristics. We restrict our analysis to deals that fulfil the following requirements: (i) the acquirer owns less than 50% of the target prior to the announcement and obtains at least 51% ownership of the target firm, (ii) the acquirer is a public firm, whereas the target can be either a public or a privately-owned firm, (iii) both acquirer and target in the deal are non-financial firms. Similar to prior studies (e.g., Masulis et al., 2007; Huang et al., 2014), we require deal size to be greater than £1 million (i.e., only significant deals). These criteria yield a total number of 3,122 (*firm-deal-year* observations) completed M&A deals over the period of 2000-2015. All continuous variables are winsorized at their 1st and 99th percentiles to reduce the influence of outliers.

2.2 CFO Influence Index

Using an index construction approach similar to Ellul and Yerramilli (2013), Florakis and Sainani (2018), and Koo and Lee (2018), we construct our CFO influence index based on a number of characteristics that capture an individual's ability to influence M&A decisions. Our use of an index is motivated by the fact that CFO influence and the ability of the CFO to direct the firm's M&A activity is an exercise of executive leadership. The literature on leadership is essentially unanimous on its inherent multidimensional nature (e.g., Yukl, 1989; Seters and Field, 1990; Northouse, 2018). That is, effective leadership is characterized by a variety of attributes that an individual must possess to affect change and to lead the organization towards mission success. It is not just one characteristic that marks an effective leader, but multiple attributes that produces leadership success.

It is also important to note that different aspects or skills of leadership become more critical depending on the firm's circumstances. For instance, for a firm that has a young CEO and/or an inexperienced board, the CFO's previous M&A experience and technical knowledge might be most important. Alternatively, for a firm with a more mature leadership team, the CFO's communication, negotiation and coordination skills might be most essential. In yet other circumstances, it might be the CFO's own stature and professional network that drives deal success.

We select seven different variables as the components for this index based on the corporate finance and management literatures. The first is *CFO Board Membership*, a dummy

variable that identifies whether the CFO sits on the board of directors or not. Board members are considered to have more influence on corporate decisions due to their firm-specific knowledge and understanding regarding the firm's strategic opportunities (Fama and Jensen, 1983). CFOs who sit on the board are also able to establish stronger connections with board members due to their frequent meetings and interactions, thus increasing their influence with the board (Adams and Ferreira, 2007; Bedard et al., 2014). We conjecture that a CFO holding a board directorship is more likely to participate in the critical decisions associated with an M&A.

The second variable is *CFO Outside Directorship*, a dummy variable that identifies whether the CFO is a non-executive director in other firms or not. Fama and Jensen (1983) contend that an outside board membership is an indication of an individual's influence and stature even within their own firm. Likewise, Masulis and Mobbs (2011) show that inside directors with outside directorships reflect the quality of a board's membership. These directors are perceived to have strong management skills, superior reputation and credibility, and access to valuable private information. Further a CFO's external ties can be a source of information useful in bidding and negotiation (El-Khatib et al., 2015). Thus, we expect that a CFO holding external board appointments has a greater influence over a firm's merger decisions.

The next set of variables captures a CFO's relative importance within the senior management team. These variables are: (1) *CFO Top 3*, a dummy variable that identifies whether the CFO is among the three highest paid executives within the organization, (2) *CFO Relative Pay*, defined as the ratio of the CFO's total compensation, excluding equity-based compensation, to the CEO's total compensation. We expect CFOs who are among the top paid executives in their firm and are paid more relative to their CEOs, are able to exert greater influence over corporate decision-making.³

Our final set of index components captures a CFO's human capital in terms of experience, judgement, firm-specific knowledge, expertise, and general skills (Becker, 1975; Fama, 1980; Castanias and Helfat, 2001). In particular, we focus on the following variables: CFO seniority, CFO M&A experience, and CFO financial expertise. *CFO Seniority* is measured as age and reflects the individual's total set of professional experiences. *CFO M&A Experience* is

³ Ellul and Yerramilli (2013) and Koo and Lee (2018) use similar measures to capture the relative influence of the chief risk officer and the chief marketing officer, respectively, in a firm's senior management team.

calculated as the total number of prior M&As in which the individual has participated. Drawing on prior findings of the acquisition experience of senior executives and directors (Aktas et al., 2013; Field and Mkrtchyan, 2017; Aktas et al., 2019), we expect CFOs with merger experience to have more influence on deal making. *CFO Financial Expertise* is a dummy variable that identifies whether the CFO holds a chartered qualification (i.e., Chartered Accountant, Chartered Financial Analyst, or Chartered Management Accountant). Given prior evidence that financial experts help boards in identifying suitable targets (Huang et al., 2014), we expect CFOs with financial expertise to have more influence on acquisition decisions.

The CFO Influence index is a composite index of the seven variables mentioned above. To begin our construction of this index, we first convert all continuous variables into dummy variables relative to corresponding industry medians. We then sum these seven indicator variables to obtain a firm-level measure of CFO influence. By construction, the index ranges from 0 (least influence) to 7 (highest influence). For robustness purposes, we also use a principal component analysis to combine these variables. The major advantage of this approach is that it allows a differential weighting for each of the seven index variables.

2.3 The U.K. Merger Market and the Importance of CFOs

The U.K. market for corporate control is significant from an economic perspective⁴. Firms in the U.K. invested more than \$2.7 trillion in M&A transactions during the boom period (1998–2005), which represents about 21% of their total GDP. This level of M&A activity is significantly higher as compared to their U.S. (10.7% of the GDP), French (9.9% of the GDP), German (7.5% of the GDP), and Japanese (2.5% of the GDP) counterparts over the same period (Jackson and Miyajima, 2007). Further evidence suggest that the U.K. is the largest M&A market in Europe; indeed, nearly half of the domestic M&A transactions over the period, 1985–2004, occurred in the U.K. (Martynova and Renneboog, 2011).

The U.K. also plays an increasingly important role in worldwide cross-border M&A. The value of cross-border acquisitions carried out by U.K. firms not only account for the largest proportion of total U.K. M&A volume, but also for total worldwide cross-border acquisitions

⁴ For instance, a recent article by *Ernst and Young* entitled “[Global M&A Appetite at 10– year High Fuelled by Portfolio Reshaping](#)” states that “In 2018, the UK accounted for 10% of M&A globally worth a combined US\$400 billion – its second– best year since the financial crisis – with domestic mergers boosted by strong inbound and outbound flows”.

(Conn et al., 2005).⁵ According to a 2000 United Nations Conference on Trade and Development report, U.K. firms were the largest acquirer, accounting for about 30% of all cross-border acquisitions worldwide, compared to 16% for U.S. firms.⁶

The U.K. market is also a very useful market in which to examine the role of a CFO. CFOs in U.K. firms are highly-influential members of the senior management team. They are the only executives after the CEO who sit on the board of directors in the vast majority of U.K. firms. As reported in Table 1, nearly 85% of the CFOs in our sample hold a board seat. This particularly high percentage contrasts with the U.S. experience, where only about 11% of CFOs hold board positions (Mobbs, 2018). The CFO presence on boards in the U.K. is consistent with the U.K. Corporate Governance Code that encourages an appropriate balance of executive and non-executive directors on the board. For example, Principle B.1 of the Financial Reporting Council (2016) report states “The board should include an appropriate combination of executive and non-executive directors (and, in particular, independent non-executive directors) such that no individual or small group of individuals can dominate the board’s decision taking.”

The influence of CFOs in the U.K. is also reflected in their higher CEO-relative compensation. The average CFO compensation in our sample is about 69% of that of the CEO. The corresponding value in the U.S. is about 41% (Jiang et al., 2010). Another factor that facilitates influence by U.K. CFOs is their widespread presence on the boards of other firms. In particular, approximately 27% of our sample CFOs hold outside board seats as compared to about 8% in the U.S. (Khan, 2019).

3. Summary Statistics and Univariate Comparisons

Figure 1 presents a comparative time series of merger activity based on CFO influence levels. High influence CFO firms are those firms whose CFO influence value is greater than the median CFO influence index across all firms in a given sample year. Correspondingly, low influence CFO firms are those whose CFO influence index is less than the median CFO

⁵ According to a report by *J.P. Morgan* entitled “[2017 M&A Global Outlook](#)”, the cross-border M&A makes up the largest proportion of total U.K. M&A volume, accounting for about 69%, on average, for the 10 years from 2007 to 2016. For the case of our sample period from 2000–2015, we find that around 40% of the acquisitions carried out by UK bidders were cross-border acquisitions.

⁶ See, [World Investment Report 2000: Cross–border Mergers and Acquisitions and Development](#) (United Nations Conference on Trade and Development, 2000).

influence value across all firms in a given sample year. We observe that high influence CFOs are consistently associated with higher levels of acquisition activity than their less influential peers. This result is invariant with respect to the business cycle. High influence CFOs complete more deals than low influence CFOs even in the periods surrounding the tech crash of 2000 and the Great Recession of 2007–2009. This figure suggests how a CFO’s influence level does affect deal completion activity.

Table 1 presents initial summary statistics for our aggregate sample. In Panel A of Table 1, we provide a distribution across industry of the mean CFO influence. We observe that the telecommunications industry has, on average, the most influential CFOs while the oil and gas industry has the least, followed by basic materials. Panel B provide key descriptive statistics for the variables included in our main analysis. We find that 85% of CFOs in our sample hold a board position while 27% of them also hold a board position in another firm. The mean compensation of the CFO relative to that of the CEO is 69%. In 75% of firms, CFOs are among the three highest-paid executives. The average CFO is 47.2 years old. In 73.5% of our firm-years, CFOs can be classified as financial experts. The proportion of firms in our sample that engages in M&A activities is 26%. As for the firm-level characteristics, the average value of total assets is £1.30 billion, while the average market-to-book, leverage and sales growth are 1.92, 18% and 25% respectively. We also find that, on average, firms in the U.K. hold 16% of their total assets in cash and other marketable securities. The board-level data show that the average board size in our sample is 7 directors and 41% of directors on board are independent.

Table 2 presents a mean and median comparison of various firm, board, and CEO characteristics by CFO influence levels. Specifically, we compare firms with low influence CFOs against those having high influence CFOs. As shown in Table 2, high CFO influence firms tend to engage in more M&A activities than low CFO influence firms do. We also observe that high CFO influence firms are significantly larger, have less sales growth, use more leverage, hold less cash, and have lower PE multiples.⁷ They tend to have more independent boards which also are larger, on average. Their CEOs are slightly older, have a longer tenure, but surprisingly hold less equity.

⁷ The finding that high-influence CFOs hold less cash is consistent with the existing literature. Florakis and Sainani (2018) contend that strong CFOs have less need to hold cash as a precautionary motive because of their greater ability to access external capital markets. Similarly, Fogel et al. (2018) find that CFOs with greater social capital are more skilled negotiators and able to secure more favorable loan terms from creditors.

4. CFO Influence and M&A Outcomes

4.1 Likelihood of a Merger

In this section, we investigate whether an influential CFO affects a firm's likelihood of completing an acquisition. The dependent variable is a dummy that assumes the value of one if a firm completes at least one acquisition in a given year, and zero otherwise. The main independent variable of interest is CFO influence, which is our seven-component index of CFO merger-relevance characteristics. We control for a set of firm-level characteristics identified in the prior literature as factors affecting merger outcomes (see e.g., Harford, 1999; Malmendier and Tate, 2008; Huang et al., 2014). We also include industry and year fixed effects to control for within-industry variations and time trends in the likelihood of a merger. All firm-level controls are measured at the beginning of the year with definitions provided in the Appendix.

Model 1 of Table 3 presents the results from a logit regression with standard errors clustered at the firm level to control for heteroscedasticity and auto-correlation. We find that the coefficient for the CFO Influence index is positive and statistically significant at the 1% level. This result suggests that firms with more influential CFOs have a higher likelihood of completing an acquisition. The economic magnitude of this finding is also significant. For instance, the marginal effect (2.92%) show that a one standard deviation increase in CFO influence (1.95) is associated with a 5.68% increase in the likelihood that the acquirer firm completes an acquisition. The coefficients on the various firm variables are consistent with that reported in prior studies.⁸

In Model 2, we introduce a number of board and CEO variables such as board size, board independence, CEO gender, CEO age, CEO tenure and CEO ownership as additional controls.⁹ We continue to observe that CFO influence positively affects the likelihood of an acquisition. These results suggest that influential CFOs feel they possess the skills and knowledge to aggressively pursue acquisitions. This result holds even after controlling for various board and CEO characteristics. Our findings confirm the importance of CFO skill and experience to ultimate deal completion.

⁸ In robustness tests reported in Table OA.1 of the online appendix, we find CFO Influence remains significantly positive when we measure M&A activity as: (1) the total number of completed deals, (2) total number of announced deals.

⁹ Additionally, in Table OA.2 of the online appendix, we also control for the effect of CEO-CFO pairing based on a variety of demographic characteristics and our results remain robust.

4.2 Deal Characteristics

We now examine the extent to which a CFO influences several important features of an acquisition deal. Specifically, we study payment method, cross-border status, and relative size. All models include a number of firms, deal, governance and CEO control variables as suggested in the existing literature. We present our findings in Table 4.

In Model 1, we test whether CFOs affect the form of payment used in a merger. Specifically, the dependent variable is a dummy variable that assumes a value of one if the acquisition is financed with stock and zero otherwise. We observe that the CFO influence variable is significantly negative. This indicates that more influential CFOs tend to use stock less often when electing to finance their acquisition. This might occur because influential CFOs are more confident in their ability to realize the deal's projected synergies and hence have less need to pay for risk sharing with the target shareholders through equity financing (see Martin, 1996; Huang et al., 2016).

Model 2 examines whether influential CFOs more actively pursue international acquisitions. Our dependent variable is a dummy variable that assumes a value of one if the target is cross-border and zero otherwise. We find that the coefficient for CFO influence is significantly negative. This suggests that the experience and skills gained by seasoned CFOs encourage them to avoid the many cultural, accounting, and regulatory issues that complicate international mergers and impede the realization of projected synergies (Reuer, 2005).

We examine the relation between relative deal size and CFO influence in Model 3. The dependent variable in Model 3 is relative deal size. This is a dummy variable that equals 1 if the ratio of deal value to acquirer market value 4 weeks prior to announcement is above the annual industry median and zero otherwise. We find that the coefficient for CFO influence is significantly negative, indicating that more influential CFOs pursue smaller targets. This might occur for multiple reasons. It might be easier to integrate the target with the acquirer and realize the projected synergies when the acquisition is smaller. Regulatory approval might be quicker if the target is smaller and there is less impact on market competitiveness (see Shrivastava, 1986; Alexandridis et al., 2013). Finally, from an agency perspective, a CFO's relative influence might be less threatened when the new blended management team is constructed using executives from a smaller target.

We conclude from our analysis in Table 4 that an influential CFO affects the acquisition activity of a firm. They are associated with deals that are more commonly cash financed, directed towards less risky domestic targets, and smaller in relative size. Overall, it appears that more influential CFOs pursue acquisitions that have a higher likelihood of generating synergies upon integration with the acquirer.

4.3 Deal Completion Time and Target Quality

In this section, we examine whether an influential CFO affects two important aspects of a M&A deal: deal completion time and the accounting quality of the target. In Models 1 (Tobit) and 2 (OLS) of Table 5, we analyse the relation between CFO influence and the length of the M&A process. The dependent variable is the natural logarithm of the total number of days that elapse between the deal announcement and completion (Marquardt and Zur, 2015).¹⁰ In both models, we find that the coefficient for CFO influence is significantly negative. This suggests that influential CFOs use their experience and skills to accelerate the speed of the M&A process and more quickly move the deal to completion. To put this into perspective, we find that high influence CFOs, on average, reduce deal completion time by 7 days, when compared to their low influence counterparts. Because of their experience, we conclude that influential CFOs can scrutinize more efficiently potential targets and assess their potential synergies.

In Models 3 and 4 of Table 5, we investigate whether influential CFOs focus on targets that are of higher accounting quality.¹¹ More specifically, we examine whether CFOs focus on earnings quality of a target. This is important since it has implications for the creation of merger synergies. In Model 3, we use the modified Jones model (Dechow et al., 1995) to measure accounting quality with discretionary accruals. More specifically, the dependent variable is a dummy variable that equals one if the target firm's absolute discretionary accruals are below the yearly-median values of absolute discretionary accruals and zero otherwise. We observe that the coefficient for the CFO Influence variable is significantly positive. This indicates that the presence of a more influential CFO is associated with target firms whose earnings quality is higher. We obtain confirming evidence of this relation in Model 4 where we use the modified

¹⁰ We estimate a Tobit regression in Model 1 to account for several observations in which the deal completion period are zero days (left censored) i.e., the deal was announced and completed on the same day.

¹¹ This approach limits the sample size because only publicly listed targets report data on discretionary accruals which we use to assess target quality.

Jones model with operating performance (Kothari, et al., 2005). Again, the presence of a more influential CFO is associated with targets having a higher accounting quality.

We conclude from this analysis that a more influential CFO has a direct influence on the length of the M&A process. Such CFOs tend to shorten this process as they more efficiently investigate target profitability and its potential for synergies. Further, they are associated with superior targets as measured by earnings quality. Influential CFOs provide value to the acquisition process by being more effective during the screening process, thus allowing the deal to close sooner. Further, they appear better able to identify high quality targets to acquire.

4.4 Deal Premium

We now examine whether the presence of an experienced CFO affects the premium paid to a target. We estimate two different measures for the acquisition premium. In Model 1 of Table 6, we use the raw premium which is calculated as the ratio of the offer price to the target's share price four weeks prior to the acquisition announcement. We also control for a number of firm, deal, and governance variables as suggested by the literature. We find that the coefficient for the CFO Influence index is significantly negative. That is, the presence of an influential CFO results in lower offer prices. We obtain similar results when we use the industry median-adjusted deal premium as our dependent variable (see Model 2 of Table 6). Influential CFOs are associated with lower offer premiums for their targets.

We conclude from our analysis that influential CFOs focus on small domestic companies with high earnings quality. They move through the due diligence process quickly to determine if a target's projected synergies are profitable. When they identify such candidates, these CFOs employ their previous acquisition experience and financial skills to offer prices that are very favourable to the acquirer. Their ability to make lower offer prices can influence the subsequent long-term success of the acquisition, which we examine in the following section.

5. CFO Influence and Merger Performance

In this section we investigate the effect that CFO influence has on the financial and operating performance of the firm following a merger. We begin with an examination of the announcement period effect of these mergers based on CFO influence. We then progress to a long-run analysis of the subsequent financial and operating performance of the merged firm.

5.1 Announcement Period Effect

In Table 7, we present the results from our announcement period analysis. Because the skills of an experienced CFO are more likely to be valued when the deal is complex, we undertake our empirical analysis using an interactive variable between the CFO influence index and a measure of deal complexity. We use two estimates for deal complexity which capture complications due to size and cross-border factors. Complex Deal (1) is a dummy variable that equals 1 when both the acquirer size and relative deal size exceed the corresponding annual median and 0 otherwise. Complex Deal (2) is a dummy variable that equals 1 when both the acquirer size and relative deal size values exceed the annual corresponding median and the target is a foreign firm and 0 otherwise.

We calculate the cumulative abnormal returns (CARs) using the market model estimated over the two-hundred-day period ending 11 days prior to the acquisition announcement date. We use the value-weighted return as the market return (Masulis et al., 2007).

In Models (1) through (3), the CAR is calculated over event days (-1) through (+2). We observe that the role of the CFO only becomes significant when we include deal complexity. More specifically, the market reacts more positively to the announcement of an acquisition of a target that is large and/or foreign when the acquirer has an influential CFO. The market appears to believe that only an influential CFO can extract the projected synergies when the target is large and/or cross-border. Our results are robust to both measures of deal complexity. In Models (4) through (6), we estimate our CARs over the day (-2) through (+1) event window to allow for greater possible information leakage. We obtain similar results regarding the value of an influential CFO during a complex acquisition.

Based on this analysis, we conclude that the market most favourably views the presence of an influential CFO when the deal is complex. When the target is larger or if it is large and is foreign, then the challenges to deal completion and synergy generation are greater. Hence, the market's desire for an influential CFO to manage the process is stronger.

5.2 Long-term Buy and Hold Returns

If influential CFOs are associated with more efficient pre-purchase scrutiny and better identification of target quality, then it is reasonable to ask if their acquisition decisions generate superior long-run performance. In Table 8, we examine one, two, and three-year excess buy and hold returns following an acquisition. The BHAR for each sample firm is calculated as

follows: $BHAR_{(i,a,b)} = \prod_{t=a}^b (R_{it} + 1) - \prod_{t=a}^b (R_{mt} + 1)$, where $BHAR_{(i,a,b)}$ is the excess return for sample firm i over time period, day a to day b , R_{it} is the return on the common stock of sample firm i on day t , and $R_{m,t}$ is the stock market return on day t .

We find that CFO influence is positively and significantly related to all three estimates of excess buy and hold returns. Indeed, we find that the magnitude of the coefficient increases as the length of the holding period expands. These results are consistent with the findings presented in Table 5 regarding target quality and in a broader sense, with the event study results regarding deal complexity in Table 7. Experienced CFOs appear able to generate value for their shareholders through their acquisition choices.

5.3 Operating Performance

As a corresponding analysis to Table 8, we examine whether the acquisition decision of influential CFOs is associated with superior operating performance. We define operating performance as the sum of operating income, depreciation, interest expenses and taxes divided by the market value of assets at the beginning of the year. We then adjust the raw operating performance by the corresponding median value of the other firms in the industry for that year. In each pre-acquisition year, returns for the combined firm are the weighted averages of the target and acquirer returns, with the weights being the relative dollar value of the assets of the two firms. Post-acquisition returns use data for the merged firms.

We examine the operating performance of firms based upon CFO influence across four different windows. In Panel A of Table 9, we compare industry-adjusted performance for the year (-3) through year $(+1)$ window. We observe that for firms with high influence CFOs, the post-acquisition performance is significantly higher than that observed during the pre-period. The performance for the low-influence CFOs, however, is not significantly different. We obtain a comparable pattern across all four event windows, including Panel D where we extend the window from year (-4) to year $(+4)$. Our results show that the operating performance of acquisitions made by high influence CFOs outperform their pre-merger selves. This pattern is not observed for the acquisitions made by low-influence CFOs.

The results from this analysis are consistent with our previous findings. Firms with high influence CFOs are able to identify higher quality targets, offer lower acquisition prices, and thus generate synergies. These synergies are then reflected in superior post-merger operating performance. The potential for these synergies, especially in complex deals, is recognized by

the market at the time of the acquisition announcement. Further, we note that influential CFOs are also associated with increased buy and hold returns for up to three years following an acquisition. Overall, we conclude that influential CFOs are associated with the acquisition of targets that are able to generate value for the acquirer's shareholders.

6. Cross-Sectional Analysis of CEO Influence

We now consider the effect of CFO Influence in the context of the CEO. That is, how is CFO Influence affected by various characteristics or attributes of the CEO. We examine the effect of CEO characteristics separately as well as in paired differences with the CFO.¹²

6.1 CEO Effects

In Panel A of Table 10, we perform subsample analysis to examine how CEO characteristics and skills affect the ability of an influential CFO to pursue M&A. Specifically, we first test whether powerful (or influential) CEOs might eclipse any effect of CFO Influence on M&A activity (see Adams et al., 2005). Accordingly, we split our sample into sub-samples of firms with high or low levels of CEO power. We use the following two measures of CEO power: *CEO Pay Slice*, defined as the ratio of the CEO's total annual compensation to the aggregate of total top five executives' compensation (see Bebchuk et al., 2011); and *CEO Influence*, which is the sum of six dichotomous variables that includes CEO outside directorship, CEO financial expertise, CEO seniority, CEO tenure, CEO Ownership and CEO M&A experience. We assign firms to the high (low) CEO power group if their value lies above (below) the yearly median value of each measure of CEO power.

We find that regardless of the CEO's power, the effect of CFO Influence remains significantly positive for explaining corporate M&A activity. Nevertheless, based on the magnitude of the regression coefficient, it appears that CFOs influence is more pronounced in the presence of a weaker CEO. This result holds for both the CEO pay slice and CEO influence index measures of CEO power.

We then test whether the CEO's willingness to delegate might affect the ability of a high influence CFO to pursue M&A. We use *Firm size* and the *CEO's Knowledge* as measured by the possession of an MBA degree to proxy for the willingness to delegate (see Graham et al, 2015). We split the sample into sub-samples of firms with a "high" and "low" degree of CEO

¹² We thank two anonymous reviewers for suggesting this analysis.

delegation. We classify firms into the high (low) degree of delegation group if they have above (below) median yearly sales or they are led by CEOs without (with) an MBA degree.

We find that the coefficient for CFO Influence is again significantly positive, regardless of the CEO's willingness to delegate. But the magnitude of the CFO Influence coefficient is significantly higher when delegation is measured by sales revenue and nominally higher when measured by CEO knowledge. Our results are consistent the claim that CFOs can exercise greater influence when their CEOs are more willing to delegate.

We conclude from Panel A that CFO Influence has an effect on a firm's propensity to engage in M&A activity. This effect holds for firms where the CEO has both high or low levels of power, but appears stronger in the case of weaker CEOs. CFO Influence also matters for M&A activity across all levels of the CEO's willingness to delegate. We do find, however, evidence that CFOs might be more influential when their CEOs are likely to delegate.

6.2 CFO versus CFO-CEO Effects

It might be that CFO Influence is affected by the kind of CEO with whom a CFO is paired. We test for this possibility by examining three dimensions of CFO-CEO similarity: *CFO-CEO Age Gap*, *CFO-CEO Joint Tenure*, and *CFO-CEO Same Gender* (see Goergen et al., 2015). CEOs and CFOs are classified as similar in age if the *age* difference is less than 5 years. We code their *joint tenure* as similar if the number of years the CFO and the CEO have been working together is longer than or equal to 3 years. We also calculate a similarity index if the CEO and CFO share commonality on two of these three variables.

We present our findings in Panel B of Table 10. We note that the coefficient for CFO Influence is significantly positive for both the similar and different categories across all three CEO-CFO demographic measures. Comparable results hold for the similarity index as well. We further observe that the magnitude of the CFO Influence coefficient is larger when the CFO is paired with a CEO who differs in any of the three dimensions or in the similarity index. This suggests that a CFO's influence is greater when they work for CEOs who are different. This might be due to their ability to provide offsetting skills, experience, or perspective.

7. Robustness and Further Analysis

In this section we describe a number of robustness tests we undertake to confirm our conclusions regarding the effect that CFO influence has upon both the M&A decision and the subsequent performance of the combined entity.

7.1 *Alternative Measure of CFO Influence*

To construct an alternative to our additive index measure of CFO influence, we undertake a Principal Components Analysis (PCA) using those same seven variables. Unlike the additive index where each component is equally weighted, the PCA approach allows each of the seven variables to provide its own individualized weight to the ultimate index value. Panel A of Table 11 presents the results from the PCA, which yields one component with an eigenvalue greater than one.¹³ The component loadings for the first component are also reported in this panel. All seven of the variables have positive component loadings, with CFO board membership and CFO Top 3 having the highest loadings. Panel B present the correlation matrix of CFO variables used to construct the CFO influence index. The results show a positive and statistically significant correlation among all of the variables.

Panel C of Table 11 contains the results of a logistic regression of the relation between a firm's propensity to engage in an M&A deal and our PCA estimate of CFO influence. Model 1 contains a number of firm level controls in addition to the PCA constructed CFO influence measure. We observe that the coefficient for CFO influence is positive and statistically significant. In Model 2, we introduce a number of board and CEO control variables. Again, we find that the coefficient for CFO influence is significantly positive. We conclude from this analysis that CFO influence continues to increase the likelihood that a firm will complete an M&A even when using a more sophisticated weighing of CFO attributes.^{14,15}

7.2 *Propensity Score Matching*

¹³ An eigenvalue greater than one indicates that the extracted component can explain more variance, i.e., it has more explanatory power than any one of the original variables by itself. As reported in Panel A of Table 11, the first (second) component captures 57.60% (13.91%) of the total variance in our data and has an eigenvalue of 4.03 (0.97).

¹⁴ In Section OA.3 of the online appendix, we replace our benchmark CFO influence measure with our PCA measure and re-estimate each of our other M&A outcomes and again the inferences remain the same (See Table OA.3 of the online appendix).

¹⁵ In Section OA.4 of the online appendix, we provide additional evidence based on a set of alternative CFO indexes. The main results, as presented in Panels B-H of Table OA.4, continue to remain robust to the use of each of the modified CFO influence indexes.

A potential concern with our causal interpretation of the relation between CFO influence and the likelihood of M&A activity is that of endogeneity (see e.g., Bertrand and Schoar, 2003; Custódio and Metzger, 2013). In the context of our study, this issue might arise when boards/firms select CFOs with particular characteristics that best fit their firm's M&A needs. This endogenous CFO-firm matching makes it difficult to establish causality.

To address this concern, we undertake a propensity score matched sample process (Rosenbaum and Rubin, 1983). This method allows us match each treatment observation (i.e., a firm with high CFO influence) with a control observation (i.e., a firm with low CFO influence) that has similar *observable* characteristics.¹⁶

We begin by constructing subsamples of high CFO influence (treatment) and low CFO influence (control) firms based on firm-year observations. The high and low influence groups are constructed relative to the median value of CFO influence in year t . We then implement our testing procedure in two stages. In the first stage, we estimate a logistic regression to calculate the probability (i.e., propensity score) that a firm has an influential CFO as a function of firm size, market-to-book, leverage, cash holdings, cash flow, sales growth, networking capital, price-to-earnings, board size, board independence, CEO gender, CEO age, CEO tenure, CEO ownership, and industry and year fixed effects.

In the second stage, we use the calculated propensity scores to match each high CFO influence firm with that of a similar firm with a low CFO influence. In doing so, we use the nearest-neighbour matching technique without replacement (as suggested by Leuven and Sianesi, 2003).¹⁷ We find close matches for 1,498 high CFO influence firm-year observations. Our final panel includes 2,996 observations.

Panel A of Table 12 presents the results from a covariate balance test, which assesses whether the average values of covariates (firm level variables) are similar across the high CFO influence and low CFO influence firms. The normalized difference in a given variable between the two groups is calculated as the difference in means divided by the square root of the average

¹⁶ As a caveat, we acknowledge that propensity score matching process, when used on its own, cannot solve the endogeneity problem because it does not rely on a clear source of exogenous variation for identification. For example, it does not address endogeneity when selection occurs on *unobservable* factors (see Roberts and Whited, 2013 and Angrist and Pischke, 2015 for detailed discussion).

¹⁷ To ensure an accurate matching, we require that the maximum difference between the propensity scores of the two groups does not exceed 0.01 in absolute terms. As noted in Shipman et al. (2017), imposing a caliper is generally a best practice to decrease the likelihood of "poor" matches and to improve covariate balance (see p. 218).

of the group variances. A normalized difference of 0.25 or less indicates an acceptable balance (Imbens and Wooldridge, 2009). We observe that all of the differences are well below this threshold. Thus, we conclude that the two groups are statistically indistinguishable along these variables.

In Panel B, we re-estimate the deal completion regressions from Table 3 on this propensity matched sample. The dependent variable equals one if the firm completes at least one acquisition in year t and zero otherwise. For both models, we observe that the coefficient for CFO influence is significantly positive. Even when we explicitly match on firm characteristics known to affect restructuring decisions, we continue to find that higher levels of CFO influence are associated with a greater likelihood of an M&A deal.

7.3 CFO Turnovers

An alternative approach to isolate the effect of CFOs on M&A activity is to focus on the sample of firms that experience a CFO turnover from a more influential (less influential) to a less influential (more influential) CFO. We then observe the corresponding changes in the proportion of firms that completes at least one acquisition within a given year. To begin this analysis, we first identify firms that experience a turnover from a less-influential (more-influential) to a more-influential (less-influential) CFO. We exclude from our sample turnovers that are likely to have occurred for endogenous reasons (e.g., forced turnovers).¹⁸

After excluding potentially endogenous turnovers, we identify a sample of likely exogenous turnovers, which have occurred for the following reasons: (i) to pursue other career opportunities, (ii) early retirement, (iii) resigned to join a new firm, (iv) appointed as a CEO at another firm (Fee et al., 2013; Dittmar and Duchin, 2016). To capture the effect of influential CFOs on M&A activity we calculate the total number of successfully completed M&A deals in year t . We expect an increase in the level of corporate M&A activity when a less influential CFO is replaced by a more influential CFO. Conversely, we expect a decrease in the level of M&A activity when a more influential CFO is replaced by a less influential CFO. To eliminate

¹⁸ To identify forced turnovers, we conduct Bloomberg news searches over a three-year period around CFO turnovers, examining all news releases that reveal the reason for each CFO turnover. We assign a CFO turnover to a forced category if the article suggests that the CFO was “fired” by the board or has “resigned” after the firm reported annual loss. Since corporate press releases regarding CFO changes are often less informative, we create an alternative category called “suspected forced” CFO turnovers. We assign turnover events in this category if (i) a firm’s industry-adjusted accounting performance as measured by its return on assets (ROA) falls into the lowest tercile in the pre-turnover year, or (ii) a firm faces severe financial constraints as measured by its industry-adjusted total debt falls into the top tercile in the pre-turnover year, or (iii) if the turnover occurs during a crisis period.

possible confounding effects on M&A activity, we employ a propensity score matching technique and compare turnover firms (treatment group) with no-turnover firms (control group) that are similar in terms of firm size, market-to-book, leverage, cash holdings, cash flow, sales growth, networking capital and price-to-earnings.

Panel A of Table 13 presents the results when firms experience a turnover from a weak to an influential CFO. In the pre-turnover period, we find no significant difference in the proportion of firms engaging in an M&A activity between treatment and control firms when they are managed by less influential CFOs. By contrast, in the post-turnover period, we observe an increase in the M&A activity in firms that experiences turnover from less influential to more influential CFOs as compared to control firms without CFO turnovers. The difference between the two groups is statistically significant at the 1% level. Most importantly, we find that the average increase in the level of M&A activity from pre-to post-CFO turnovers is equal to 11.4 percentage points, which is excess to that observed during the similar period among otherwise similar firms with no CFO turnovers. This result is significant at the 5% level. The results suggest that the CFO turnover from a less influential to a more influential CFO is associated with a significant rise in M&A activity.

In Panel B of Table 12, we repeat the analysis by looking at firms experiencing a turnover from a more influential CFO to a less influential CFO. Consistent with our expectations, the results indicate an 11.0 percentage point decrease in M&A activity from pre- to post-CFO turnover, which is also excess to that observed during the same period among otherwise similar firms with no CFO turnovers. We conclude from this analysis that concerns regarding endogeneity in our results are unfounded and that CFO influence does have a measurable effect on the likelihood of an M&A deal.

7.4 Deal Success Rate

Our main findings suggest that firms with influential CFOs are more likely to engage in M&A. In this section, we examine whether influential CFO firms are also more successful in completing the deal. The dependent variable is a dummy variable that equals one if the deal was successful (completed) and zero if withdrawn. The results from this section are reported in Table OA.5 of the online appendix. Specifically, we find the coefficient on CFO influence to be positive and statistically significant (at the 1% level), suggesting that firms with more influential CFOs (higher values on CFO influence) are also more successful in bringing the M&A deal negotiations to a successful end.

7.5 CFO Hiring

In this section, we test the robustness of our findings by introducing circumstances surrounding the hiring of the CFO. All results discussed in this section are available in Table OA.6 of the online appendix of this manuscript. In our first analysis we examine the preferences and influence of the CEO in the CFO hiring decision. We first split our sample firms into two groups based on the CFO's hiring relative to the CEO's tenure (Panel A of Table OA.6). In Model (1) we only consider those CFOs who are hired after the current CEO took office. In Model (2) we only include those CFOs who are hired before the current CEO took office. Our dependent variable of interest is a binary indicator that equals one if a firm completes at least one acquisition in year t and zero otherwise. We find that regardless of whether the CFO is hired before the CEO was appointed or afterwards, the CFO Influence variable is significantly positive. We conclude that the preferences and influence that the CEO might bring to the CFO hiring process, do not affect the ability of CFO Influence to determine M&A activity.

We next examine whether internal or externally hired CFOs are more influential in M&A deal-making. Again, we split our sample into sub-samples based on whether the CFO was hired internally or not (Panel B of Table OA.6). In Model (1), we estimate the role of CFO Influence on M&A activity for external hires. In Model (2) we undertake the identical analysis for internal hires. We find that the coefficient for CFO Influence is significantly positive for both internal and external hires. We conclude that regardless of the CFO's origin, a CFO's influence will affect the firm's M&A activity.

7.6 Serial Acquirers

If a firm's strategy consists of an acquisition program, it is reasonable to expect that a more experienced or influential CFO is of greater importance. It could be that the influential CFO is actually a serial acquirer effect. To test this possibility, we repeat our analysis after controlling for a firm's practice of serial acquisition. Following Fuller et al. (2002), we define *Serial Acquirer* as a binary indicator variable that equals one if the acquirer has made five or more acquisitions during the past three years and zero otherwise.

We present our empirical results across the range of M&A characteristics and outcomes in Table OA.7 of the online appendix to this study. We find that regardless of how we measure the acquisition history of the acquirer, the coefficient for the CFO Influence variable remains significantly positive. We conclude from our findings that CFO influence is distinct from any

serial acquisition effect on a firm's propensity to engage in a M&A deal, deal characteristics, deal completion time, target accounting quality, deal premium, cumulative abnormal returns, or long-term buy-and-hold returns.

7.7 Financial Advisors

An important responsibility of the CFO is to select an advisor for a M&A deal. Thus, it is possible that more influential CFOs select superior advisors and it is the advisor that facilitates the lower premium and faster deal completion. We test this conjecture in Table OA.8 of the online appendix of this study.

We begin our analysis by first defining a superior advisor as a top 10 investment banker as measured by the number of deals advised (Bao and Edmans, 2011; Golubov et al., 2012)¹⁹. Such advisors are coded as a one for the Financial Advisor indicator variable and zero otherwise. We then examine three different deal and target characteristics: time to completion, target accounting quality, and deal premium. We continue to find that even after controlling for financial advisor quality, that CFO Influence is associated with less time to deal completion, targets with higher accounting quality, and lower deal premiums. We conclude from these results that CFO Influence continues to have an important effect on the M&A transaction even in the presence of high-quality advisors.

8. Conclusion and Discussion

In this study, we investigate the effect that CFOs have upon M&A activity and performance. Central to this analysis is the creation of an innovative index that captures the ability of a CFO to influence the M&A decision-making process. Our index is based on a set of CFO-specific attributes such as board membership, outside board experience, the level of financial expertise, compensation, seniority, and relative pay status. Based on this index, we separate our sample firms into a group with a more influential CFO and another without. From this analysis, we obtain a number of important findings.

We first discover that firms with more influential CFOs are more likely to complete acquisitions than their counterparts with less influential CFOs. We then investigate the effect of CFOs on deal terms and process. We find that an influential CFO is associated with deals

¹⁹ The top ten investment banks are Goldman Sachs, Merrill Lynch (now Bank of America Merrill Lynch), Morgan Stanley, JP Morgan, Credit Suisse, Citi/Salomon Smith Barney, UBS, Hoare Govett (RBS Hoare Govett, now Jefferies), Rothschild & Co. and Invesco Ltd.

that are more commonly cash financed, focused on domestic targets, and smaller in relative size. Influential CFOs tend to shorten the length of the M&A process due to their greater efficiency in screening a target for profitability and potential synergies. Further, these CFOs are associated with targets exhibiting superior earnings quality. These same CFOs offer lower premia for their targets, perhaps due to their greater negotiation and deal-making experiences.

We next examine the post-acquisition operating cash flow performance across high CFO influence and low CFO influence firms. We find that the operating performance of high CFO influence firms improves significantly over pre- to post-acquisition years. In contrast, we fail to observe significant changes in operating performance for firms with low influence CFOs. Further, we analyse the market reaction to merger announcements as a second measure of synergy gains. We find that the market values the presence of an influential CFO in those cases where the merger is seen as complex due to size and/or international factors. A set of robustness tests confirms the stability of our findings, and we continue to conclude that the effect of CFOs on M&A activity is both profound and permanent.

The contributions of our study and its findings reside in several different areas. First, this study extends the corporate governance literature in a new direction. Most studies of governance focus on the CEO and boards of directors. Ours is one of only a few that examine the importance and effect of a critical, but subordinate executive. We believe that this approach has relevance for the analysis of other corporate executives such as the Vice President for Investor Relations, Chief Strategy Officer, or Vice President for Innovation and what contributes to effective corporate governance. Our findings can also provide insight into the executive labor market.

Finally, our results provide new perspectives on the market for acquisitions and the process that surrounds business combination activities. We provide new insights into the determination of offer premia, the nature of the M&A process, and the market's reaction to deal complexity. Indeed, we expand the study of M&A beyond traditional CEO and board considerations, and introduce a new kind of decision-maker and influencer into our analysis.

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Appendix

Data Definitions

Variable Name	Definition
<u>CFO Characteristics</u>	
CFO Board Membership	Dummy variable coded 1 if the CFO sits on the board of directors and 0 otherwise.
CFO Outside Directorship	Dummy variable coded 1 if the CFO sits on at least one outside board and 0 otherwise
CFO Top 3	Dummy variable coded 1 if the CFO is among the three highest paid executives and 0 otherwise.
CFO Financial Expertise	Dummy variable coded 1 if the CFO has a chartered qualification in accounting of financial analysis (Chartered Accountant (CA), Associate Chartered Accountant (ACA), Fellow Chartered Accountant (FCA), Chartered Financial Analyst (CFA), Chartered Management Accountant (CMA) and Chartered Secretary) and 0 otherwise.
CFO Seniority	The age of the CFO in years.
CFO Relative Pay	Ratio of the CFO's total compensation, excluding equity-based awards, to the CEO's total compensation.
CFO M&A Experience	Total number of prior M&A in which the CFO has participated.
CFO Tenure	Number of years that the CFO has served in current role as CFO _e .
CFO Time in Company	Number of years that the CFO has been employed by the <u>firm</u> .
CFO Ownership	Ratio of the value of common shares and options held by the CFO at the end of fiscal year <i>t</i> to the market value of common shares outstanding.
CFO Hiring	Dummy variable coded 1 if the CFO position was the first position the individual held at the company and 0 otherwise.
CFO Co-option	Dummy variable coded 1 if the CFO was appointed into the current position <i>after</i> the current CEO took office and 0 otherwise.
CFO Influence	Sum of seven dichotomous variables that includes CFO board membership, CFO outside directorship, CFO top 3, CFO financial expertise, CFO seniority, CFO relative pay and CFO M&A experience. For this purpose, we create dichotomous measures of the continuous variables among seven proxies of CFO influence based on industry-year medians (i.e., 1 if the variable is above the industry-year median and 0 otherwise).
CFO Influence (1 st Component)	First principal component from a principal component analysis (PCA) based on the following variables: CFO board membership, CFO outside directorship, CFO top 3, CFO financial expertise, CFO seniority, CFO relative pay and CFO M&A experience.
Modified CFO Influence (1)	First principal component from a principal component analysis (PCA) based on the following variables: CFO board membership, CFO outside directorship, CFO top 3, CFO financial expertise, CFO seniority, CFO relative pay, CFO M&A experience and CFO tenure.
Modified CFO Influence (2)	First principal component from a principal component analysis (PCA) based on the following variables: CFO board membership, CFO outside directorship, CFO top 3, CFO financial expertise, CFO seniority, CFO relative pay, CFO M&A experience, CFO tenure and CFO ownership.

Modified CFO Influence (3)	First principal component from a principal component analysis (PCA) based on the following variables: CFO board membership, CFO outside directorship, CFO top 3, CFO financial expertise, CFO seniority, CFO relative pay, CFO M&A experience, CFO time in company and CFO ownership.
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<u>Dependent Variables</u>	
M&A Activity	Dummy variable coded 1 if a firm completes at least one acquisition in year t and 0 otherwise.
Deal Completion Time	Natural logarithm of total number of days between the announcement and deal completion (as in Marquardt and Zur, 2015). We add one to the total number of days so that the log transformation is always non-negative.
Target Accounting Quality	Dummy variable coded 1 if the target firm's absolute discretionary accruals are below yearly-median values of absolute discretionary accruals and 0 otherwise. Absolute value of discretionary accruals are computed using modified Jones model (Dechow et al., 1995) and an augmented version of the modified Jones model (as in Kothari et al., 2005).
Deal Premium (Raw)	Premium is calculated based on the offer price to the target's share price 4 weeks prior to the acquisition announcement.
CAR (-1,+2) and CAR(-1,+2)	Four-day cumulative abnormal return centered on the acquisition announcement date is calculated using the market model estimated over the two hundred day period ending 11 days before the acquisition announcement dates (Masulis et al., 2007).
Acquirer BHAR	Acquirer buy-and-hold average abnormal returns over holding periods that extend from one to three years following M&A announcements. BHAR is calculated as follows, $BHAR_{(i,a,b)} = \prod_{t=a}^b (R_{it} + 1) - \prod_{t=a}^b (R_{mt} + 1)$, where $BHAR_{(i,a,b)}$ is excess return for event firm i over time period from day a to day b , R_{it} is the return on the common stock of event firm i on day t , and R_{mt} is the return on the stock of the market on day t .
<u>Firm Characteristics</u>	
Firm Size	Natural log of book value of total assets.
Market-to-Book	Ratio of the book value of assets minus the book value of equity plus the market value of equity to the book value of assets.
Leverage	Ratio of long-term debt plus short-term debt to total assets.
Cash Holdings	Ratio of cash and marketable securities to the book value of total assets.
Cash Flow	Earnings after interest, common dividends and taxes but before depreciation divided by total assets.
Sales Growth	Ratio of current net sales minus prior year net sales to prior year net sales.
Net Working Capital	Net working capital minus cash divided by total assets.
Price-to-earning	Ratio of stock price to earnings per share.
<u>Board/CEO Characteristics</u>	
Board Size	Number of members sitting on the board of directors.
Board Independence	Ratio of number of non-executive directors to the total number of directors.
CEO Gender	Dummy variable coded 1 if the CEO is female and 0 otherwise.
CEO Age	The age of the CEO in years
CEO Tenure	Number of years the CEO has been with the firm.

CEO Ownership	Ratio of the value of common shares and options held by the CEO at the end of fiscal year t to the market value of common shares outstanding.
CEO Payslice	Ratio of the CEO's total annual compensation to the aggregate of total top five executives' compensation. Following Feng et al. (2011) , if BoardEx discloses less than five executives, we assume the undisclosed executives receive the same pay as the lowest paid executive among those disclosed.
CEO Relative Board	Dummy variable coded 1 if the CEO sits on two or more board committees and 0 otherwise.
Sales Revenue (Size)	Natural log of sales revenue (as in Graham et al., 2015)
CEO Outside Directorship	Dummy variable coded 1 if the CEO sits on at least one outside board and 0 otherwise
CEO Knowledge	Dummy variable coded 1 if the CEO has a master's of business administration (MBA) degree and 0 otherwise (as in Graham et al., 2015)
CEO Financial Expertise	Dummy variable coded 1 if the CFO has a chartered qualification in accounting of financial analysis (Chartered Accountant (CA), Associate Chartered Accountant (ACA), Fellow Chartered Accountant (FCA), Chartered Financial Analyst (CFA), Chartered Management Accountant (CMA) and Chartered Secretary) and 0 otherwise.
CEO Influence	Sum of six dichotomous variables that includes CEO outside directorship, CEO financial expertise, CEO seniority (age), CEO tenure, CEO Ownership and CEO M&A experience. For this purpose, we create dichotomous measures of the continuous variables among six proxies of CEO influence based on industry-year medians (i.e., 1 if the variable is above the industry-year median and 0 otherwise).
CFO-CEO Age Gap	Dummy variable coded 1 if the age gap between the CEO and the CFO is less than 5 years and 0 otherwise.
CFO-CEO Joint Tenure	Dummy variable coded 1 if the number of years the CFO and the CEO have been working together is longer than or equal to 3 years and 0 otherwise.
CFO-CEO Same Gender	Dummy variable coded 1 if the CFO and the CEO have the same gender and 0 otherwise.
CFO-CEO Similarity Index	Dummy variable coded 1 if the sum of three dichotomous variables that includes i.e., CFO-CEO age gap, CFO-CEO joint tenure and CFO-CEO same gender is greater than or equal to two, and 0 otherwise
<u>Deal Characteristics</u>	
Tender Offer	Dummy variable coded 1 if tender offers if tender offer is launched for the target and 0 otherwise.
Same Sector	Dummy variable coded 1 if the acquirer and the target belong to same two-digit SIC codes and 0 otherwise.
Private Target	Dummy variable coded 1 if takeover target is private and 0 otherwise.
Public Target	Dummy variable coded 1 if takeover target is public and 0 otherwise.
Subsidiary Target	Dummy variable coded 1 if takeover target is subsidiary and 0 otherwise.
Deal Size (in £ million)	Total (value of transaction) amount paid for all common stock, common stock equivalents, preferred stock, debt, options, assets, warrants, and stake purchases made within six months of the announcement date of the transaction.

Relative Deal Size	Dummy variable coded 1 if the ratio of deal size to acquirer market value 4 weeks prior to announcement is above yearly-industry median and 0 otherwise.
Cross Border	Dummy variable coded 1 if the M&A is a cross-border deal and 0 otherwise.
Stock Payment	Dummy variable coded 1 if merger is financed entirely by stock and 0 otherwise.
Complex Deals (1)	Dummy variable coded 1 if both the acquirer size and relative deal size are above yearly median and 0 otherwise.
Complex Deals (2)	Dummy variable coded 1 when both the acquirer size and relative deal size values are above yearly median values of the distributions, and the M&A is a cross-border deal and 0 otherwise.
Serial Acquirer	Dummy variable coded 1 if the acquirer has made <u>five</u> or more acquisitions during the past <u>three</u> years and 0 otherwise, as in Fuller et al. 2002).
Financial Advisor	Dummy variable coded 1 for the top ten financial advisors/investment banks in our UK sample (as measured by number of deals advised) and 0 otherwise, following Bao and Edmans (2011) and Golubov et al., (2012). The top ten financial advisors/investment banks are Goldman Sachs, Merrill Lynch (now Bank of America Merrill Lynch), Morgan Stanley, JP Morgan, Credit Suisse, Citi/Salomon Smith Barney, UBS, Hoare Govett/RBS Hoare Govett (now Jefferies), Rothschild & Co. and Invesco Ltd.

Figure 1: Deal Propensity in Firms with High and Low CFO Influence

The figure depicts the deal propensity of firms with high CFO influence and low CFO influence in each sample year. For each CFO subgroup, the figure shows the ratio of numbers firms who completed at least one deal to the total number of firms in that subgroup in a given sample year (in percentage terms). High CFO influence (blue bar) firms are those firms whose CFO influence value is greater than the median CFO influence value across all firms in year t . Low influence CFO firms (red bar) are those firms whose CFO influence value is lower than (or equal) to the median CFO influence value across all firms in year t . The CFO influence measure is the sum of seven dichotomous variables as discussed in Section 2.2.

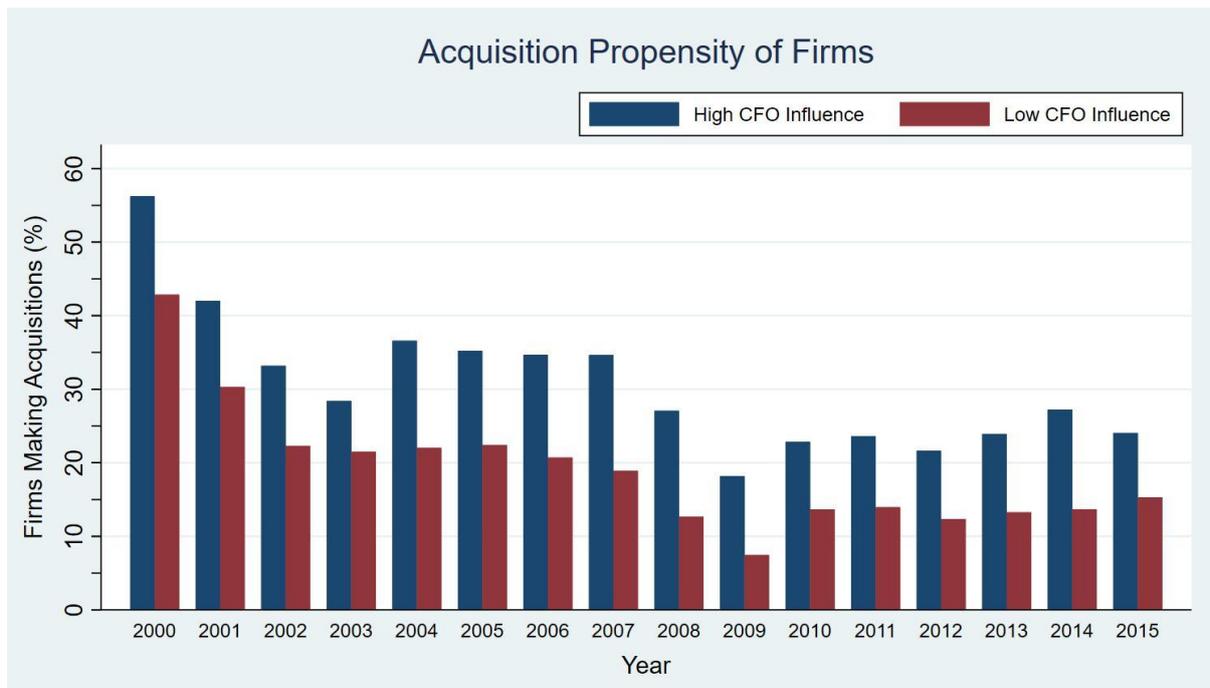


Table 1: Industry Distribution and Aggregate Sample Statistics

This table presents the descriptive statistics for the aggregate sample. Panel A presents the industry distribution of our sample. Panel B presents the summary statistics for the key variables used in our main analysis. We also report the mean values of our CFO influence measure within each industry group in Panel A. Analytical definitions of all variables are provided in the Appendix.

<i>Panel A: Distribution of Sample by Industry</i>						
Industry	Frequency (N)	Percentage (%)	CFO Influence (Mean)			
Oil and Gas	642	6.11	2.95			
Basic Material	681	6.49	3.04			
Industrial	3366	32.05	3.93			
Consumer Goods	1088	10.36	3.83			
Health Care	825	7.86	3.59			
Consumer Services	2242	21.35	3.86			
Telecommunications	155	1.48	4.01			
Technology	1502	14.30	3.73			
Total	10501	100.00	3.74			
<i>Panel B: Aggregate Sample Summary Statistics</i>						
	N	Mean	Median	S.D.	P25	P75
CFO Board Membership	10501	0.85	1.00	0.36	1.00	1.00
CFO Outside Directorship	10501	0.27	0.00	0.44	0.00	1.00
CFO Top 3	10501	0.75	1.00	0.43	1.00	1.00
CFO Financial Expertise	10501	0.73	1.00	0.45	0.00	1.00
CFO Seniority (in years)	10501	47.21	47.00	6.75	42.00	52.00
CFO Relative Pay	10501	0.69	0.63	0.46	0.51	0.76
CFO M&A Experience	10501	0.66	0.00	1.37	0.00	1.00
CFO Influence	10501	3.74	4.00	1.95	3.00	5.00
M&A Activity	10501	0.26	0.00	0.44	0.00	1.00
Firm Size	10501	11.76	11.63	2.24	10.21	13.25
Total Assets (in £ billions)	10501	1.30	0.11	4.19	0.02	0.56
MV (in £ billions)	10501	1.51	0.10	3.61	0.02	0.52
Market-to-Book	10501	1.92	1.41	1.86	1.06	2.08
Leverage	10501	0.18	0.14	0.19	0.02	0.28
Cash Holdings	10501	0.16	0.09	0.18	0.04	0.20
Cash Flow	10501	-0.01	0.06	0.29	0.00	0.10
Sales Growth	10501	0.25	0.07	1.13	-0.03	0.22
Networking Capital	10501	-0.02	-0.01	0.23	-0.11	0.09
Price-to-earnings	10501	17.35	11.10	41.23	1.60	17.40
Board Size	10501	7.11	7.00	2.42	5.00	8.00
Board Independence	10501	0.41	0.43	0.21	0.29	0.57
CEO Gender	10501	0.03	0.00	0.16	0.00	0.00
CEO Age (in years)	10501	51.02	51.00	7.20	46.00	56.00
CEO Tenure (in years)	10501	5.34	3.80	5.09	1.80	7.10
CEO Ownership	10501	0.05	0.01	0.10	0.00	0.04

Table 2: Comparative Sample Statistics

This table presents the mean and median of main variables used in our analysis separately for two groups with low and high CFO influence. For our benchmark analysis, we measure CFO influence as the sum of seven dichotomous variables that attempt to capture the ability of the CFO to influence M&A outcome, as discussed in Section 2.2. High CFO influence firms are those firms whose CFO influence value is greater than the median CFO influence value across all firms in year t . Low influence CFO firms are those firms whose CFO influence value is lower than (or equal) to the median CFO influence value across all firms in year t . The t-statistic is for a difference in means and the z-test (Wilcoxon) is for difference in medians between low and high CFO influence firms. Analytical definitions of all variables are provided in the Appendix. ***, ** and * denote statistical significance at the 1%, 5% and 10% levels, respectively.

	CFO Influence			CFO Influence		
	Low (Mean)	High (Mean)	Difference t- test	Low (Median)	High (Median)	Difference z-test
M&A Activity	0.22	0.32	- 11.88***	0.00	0.00	- 11.81***
Firm Size	11.52	12.10	- 13.12***	11.41	11.95	- 12.85***
Total Assets (in £ billions)	1.11	1.58	- 5.64***	0.09	0.15	- 12.85***
MV (in £ billions)	0.96	1.43	- 6.58***	0.08	0.14	- 11.39***
Market to Book	2.01	1.81	5.45***	1.42	1.40	1.30
Leverage	0.17	0.19	- 3.25***	0.13	0.16	- 6.05***
Cash Holdings	0.17	0.13	10.43***	0.10	0.08	9.51***
Cash Flow	- 0.02	0.01	- 5.42***	0.06	0.06	- 3.69***
Sales Growth	0.28	0.21	3.30***	0.07	0.08	- 2.29**
Networking Capital	- 0.02	- 0.01	- 1.06	- 0.01	- 0.01	- 0.29
Price-to-earnings	17.98	16.47	1.85*	10.50	11.70	- 5.49***
Board Size	6.93	7.37	- 9.15***	7.00	7.00	- 8.57***
Board Independence	0.39	0.43	- 8.91***	0.43	0.46	- 8.71***
CEO Gender	0.03	0.03	- 0.47	0.00	0.00	- 0.47
CEO Age (in years)	50.62	51.58	- 6.75***	50.00	52.00	- 7.05***
CEO Tenure (in years)	5.25	5.45	- 1.97**	3.80	3.90	- 2.29**
CEO Ownership	0.05	0.04	5.36***	0.01	0.01	5.73***

Table 3: Deal Propensity and CFO Influence

This table presents the results from logistic regressions on the relationship between firms propensity to engage in an M&A deal and CFO influence. The dependent variable is a dummy that equals one if a firm completes at least one acquisition in year t and zero otherwise. The CFO influence measure is the sum of seven dichotomous variables that attempt to capture the ability of the CFO to influence M&A outcome, as discussed in Section 2.2. Our baseline specification (Model 1) includes a set of firm-level controls. In Model 2, we repeat our baseline specification with additional controls for board and CEO characteristics. Analytical definitions for all variables are provided in the Appendix. ***, ** and * denote statistical significance at the 1%, 5% and 10% levels, respectively.

	Model 1	Model 2
CFO Influence	0.170*** (0.014)	0.173*** (0.014)
Firm Size	0.265*** (0.013)	0.266*** (0.020)
Market-to-Book	0.032** (0.015)	0.030* (0.015)
Leverage	-0.733*** (0.160)	-0.757*** (0.160)
Cash Holdings	-1.239*** (0.196)	-1.269*** (0.197)
Cash Flow	0.806*** (0.189)	0.848*** (0.194)
Sales Growth	0.180*** (0.022)	0.172*** (0.021)
Networking Capital	-0.743*** (0.131)	-0.712*** (0.131)
Price-to-earning	0.000 (0.001)	0.000 (0.001)
Board Size	-	0.019 (0.014)
Board Independence	-	-0.202 (0.145)
CEO Gender	-	-0.054 (0.151)
CEO Age	-	-0.011*** (0.004)
CEO Tenure	-	-0.015*** (0.005)
CEO Ownership	-	0.173 (0.272)
Intercept	-4.333*** (0.248)	-3.765*** (0.314)
Observations	10,501	10,501
Pseudo R^2	0.113	0.115
Year/Industry Fixed Effects	Yes	Yes

Table 4: Deal Characteristics and CFO Influence

This table presents the results from logistic regressions on the relation between CFO influence and various deal characteristics. The dependent variable in Model 1 is a dummy variable that equals one if the deal is financed using only stock and zero otherwise. In Model 2, the dependent variable is a dummy variable that equals 1 if takeover target is cross-border and zero otherwise; and in Model 3 is relative deal size, a dummy variable that equals 1 if the ratio of deal value to acquirer market value 4 weeks prior to announcement is above yearly-industry median and zero otherwise. The CFO influence measure is the sum of seven binary variables as discussed in Section 2.2. ***, ** and * denote statistical significance at the 1%, 5% and 10% levels, respectively.

	Stock Payment	Cross-border Deal	Relative Deal Size
	Model 1	Model 2	Model 3
CFO Influence	- 0.094** (0.045)	- 0.091*** (0.026)	- 0.066** (0.028)
Firm Size	- 0.469*** (0.088)	0.194*** (0.042)	- 0.619*** (0.046)
Market to Book	- 0.004 (0.057)	0.113*** (0.037)	- 0.465*** (0.091)
Leverage	- 0.665 (0.633)	- 0.182 (0.292)	1.301*** (0.346)
Cash Flow	- 1.238*** (0.324)	- 0.254 (0.304)	- 0.486** (0.222)
Board Size	0.118** (0.056)	0.087*** (0.025)	0.038 (0.032)
Board Independence	- 0.870* (0.492)	1.011*** (0.278)	0.094 (0.286)
CEO Age	- 0.009 (0.011)	0.023*** (0.006)	0.003 (0.007)
CEO Tenure	- 0.059** (0.024)	0.006 (0.009)	0.005 (0.010)
CEO Gender	- 0.505 (0.676)	- 0.569** (0.273)	0.027 (0.266)
CEO Ownership	1.350 (0.909)	- 1.888** (0.738)	- 0.899* (0.513)
Tender Offer	0.101 (0.333)	- 0.912*** (0.298)	0.157 (0.339)
Same Sector	- 0.229 (0.204)	0.413*** (0.097)	0.134 (0.109)
Private Target	- 0.262 (0.244)	- 0.194** (0.094)	- 0.299*** (0.111)
Public Target	2.220*** (0.337)	- 0.497* (0.258)	1.887*** (0.275)
Deal Size	0.001*** (0.000)	0.000* (0.000)	- -
Relative Deal Size	0.308 (0.222)	0.015 (0.108)	- -
Cross Border	0.179 (0.209)	- -	0.044 (0.103)
Stock Payment	- -	0.075 (0.232)	0.526* (0.269)
Intercept	4.154*** (1.083)	- 4.398*** (0.611)	3.769*** (0.777)
Observations	3,122	3,122	3,122
Pseudo R^2	0.304	0.162	0.227
Year/Industry Fixed Effects	Yes	Yes	Yes

Table 5: Deal Completion Time, Target Quality, and CFO Influence

This table shows whether the CFO influence affects deal completion time and target quality. A Tobit regression is estimated in Model 1, OLS in Model 2, and a logit regression in Models 3 and 4. The dependent variable in Models 1 and 2 is the natural logarithm of total number of days between deal announcement and deal completion (Marquardt and Zur, 2015). The dependent variable in Models 3 and 4 is a dummy variable that equals one if the target firm's absolute discretionary accruals are below the yearly-median values of absolute discretionary accruals and zero otherwise. In Model 3, we compute discretionary accruals using the modified Jones model (Dechow et al., 1995) and in Model 4, an augmented version of modified Jones model as noted by Kothari et al. (2005). Standard errors are reported in parentheses. ***, ** and * denote statistical significance at the 1%, 5% and 10% levels, respectively.

	<u>Deal Completion Time</u>		<u>Target Accounting Quality</u>	
	Model 1	Model 2	Model 3	Model 4
CFO Influence	-0.101** (0.045)	-0.038** (0.019)	0.234** (0.117)	0.232** (0.118)
Firm Size	0.324*** (0.072)	0.151*** (0.030)	0.108 (0.174)	0.343* (0.192)
Market-to-Book	0.145** (0.061)	0.060** (0.026)	-0.255* (0.138)	-0.340** (0.161)
Leverage	-0.232 (0.525)	-0.080 (0.214)	-0.150 (1.259)	-0.873 (1.252)
Cash Flow	-0.871** (0.418)	-0.401** (0.183)	1.609 (1.388)	2.570 (1.866)
Board Size	-0.035 (0.043)	-0.015 (0.018)	0.014 (0.086)	-0.008 (0.088)
Board Independence	0.163 (0.468)	-0.012 (0.192)	1.306 (1.377)	1.328 (1.318)
CEO Age	0.027** (0.011)	0.011** (0.005)	-0.005 (0.031)	-0.052 (0.035)
CEO Tenure	-0.084*** (0.017)	-0.028*** (0.007)	-0.008 (0.038)	0.018 (0.047)
CEO Gender	0.186 (0.444)	0.066 (0.187)	-1.126 (0.877)	-0.876 (0.849)
CEO Ownership	1.221 (0.882)	0.364 (0.368)	-3.131 (2.410)	1.442 (2.552)
Tender Offer	0.805* (0.416)	0.393* (0.201)	-1.011*** (0.357)	-0.533 (0.358)
Same Sector	0.073 (0.174)	0.003 (0.070)	0.353 (0.433)	0.108 (0.450)
Private Target	-2.078*** (0.170)	-0.896*** (0.070)	-	-
Public Target	1.720*** (0.372)	1.344*** (0.177)	-	-
Deal Size	0.001*** (0.000)	0.001*** (0.000)	0.000 (0.000)	0.000 (0.000)
Relative Deal Size	2.390*** (0.191)	0.974*** (0.079)	0.105 (0.410)	0.040 (0.449)
Cross Border	1.256*** (0.161)	0.496*** (0.065)	-	-
Stock Payment	1.247*** (0.340)	0.639*** (0.156)	-0.580 (0.464)	0.077 (0.456)
Intercept	-3.811*** (1.022)	-0.062 (0.426)	-2.582 (2.318)	-3.075 (2.420)
Observations	3,122	3,122	280	280
Pseudo R ² (R ²)	0.149	(0.162)	0.232	0.240
Year/Industry Fixed Effects	Yes	Yes	Yes	Yes

Table 6: The Deal Premium and CFO Influence

This table presents the results from the regression on the relationship between CFO influence and deal premium. The dependent variable in Model 1 is the ratio of offer price to the target's share price 4 weeks prior to the acquisition announcement (Raw). In Model 2, we use industry-median adjusted deal premium. The CFO influence measure is the sum of seven dichotomous variables as discussed in Section 2.2. Analytical definitions for all variables are provided in the Appendix. ***, ** and * denote statistical significance at the 1%, 5% and 10% levels, respectively.

	Model 1	Model 2
	<i>Raw Premium</i>	<i>Industry-adjusted Premium</i>
CFO Influence	- 0.003*** (0.001)	- 0.003*** (0.001)
Firm Size	0.038*** (0.003)	0.035*** (0.003)
Market-to-Book	0.019*** (0.002)	0.019*** (0.002)
Leverage	- 0.060*** (0.013)	- 0.059*** (0.014)
Cash Flow	- 0.002 (0.008)	0.003 (0.008)
Board Size	0.001 (0.001)	0.001 (0.001)
Board Independence	0.016 (0.013)	0.017 (0.013)
CEO Age	- 0.001* (0.000)	- 0.000 (0.000)
CEO Tenure	- 0.000 (0.000)	- 0.000 (0.000)
CEO Gender	0.013 (0.013)	0.011 (0.013)
CEO Ownership	0.141*** (0.024)	0.126*** (0.025)
Tender Offer	0.003 (0.007)	0.003 (0.007)
Same Sector	- 0.002 (0.002)	- 0.001 (0.003)
Private Target	0.006** (0.002)	0.006** (0.002)
Public Target	0.003 (0.005)	0.004 (0.006)
Deal Size	0.000* (0.000)	0.000** (0.000)
Relative Deal Size	- 0.000 (0.003)	- 0.001 (0.003)
Cross Border	- 0.002 (0.002)	- 0.003 (0.002)
Stock Payment	- 0.000 (0.006)	- 0.004 (0.007)
Intercept	- 0.408*** (0.037)	- 0.429*** (0.039)
Observations	2,639	2,639
R-squared	0.828	0.785
Year/Firm Fixed Effects	Yes	Yes

Table 7: Acquirer Announcement CARs and CFO Influence

The table presents market response to the announcement of M&A deals. The dependent variable is the cumulative abnormal returns (CARs) on the acquirer's stock during the event window. CARs are calculated using the market model estimated over the two-hundred day period ending 11 days before the acquisition announcement dates with the value weighted return as the market return (Masulis et al., 2007). In Models 1–3, the event window starts one day before and ends two days after the announcement of the deal. In Models 4–6, the event window starts two days before and ends one day after the announcement of the deal. Complex Deals (1) is a dummy variable that equals one when both the acquirer size and relative deal size are above yearly median and zero otherwise. Complex Deals (2) is a dummy variable that equals 1 when both the acquirer size and relative deal size values are above yearly median values of the distributions, and target is not a domestic firm (cross border takeover) and 0 otherwise. The CFO influence measure is the sum of seven dichotomous variables as discussed in Section 2.2. Analytical definitions for all variables are provided in the Appendix. Standard errors are reported in parentheses. ***, ** and * denote statistical significance at the 1%, 5% and 10% levels, respectively.

	CAR (–1,+2)			CAR (–2, +1)		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
CFO Influence	0.000 (0.001)	– 0.001 (0.001)	– 0.001 (0.001)	0.000 (0.001)	– 0.001 (0.001)	– 0.001 (0.001)
Complex Deals (1)	–	– 0.021** (0.010)	–	–	– 0.022* (0.010)	–
CFO Influence x Complex Deals (1)	–	0.005** (0.002)	–	–	0.005** (0.002)	–
Complex Deals (2)	–	–	– 0.025*** (0.013)	–	–	– 0.026** (0.012)
CFO Influence x Complex Deals (2)	–	–	0.006** (0.003)	–	–	0.006** (0.003)
Intercept	0.060*** (0.016)	0.061*** (0.016)	0.061*** (0.016)	0.042*** (0.016)	0.044*** (0.016)	0.044*** (0.016)
Firm Controls	Yes	Yes	Yes	Yes	Yes	Yes
Deal Controls	Yes	Yes	Yes	Yes	Yes	Yes
Board and CEO Controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2835	2835	2835	2835	2835	2835
R ²	0.046	0.047	0.049	0.037	0.039	0.040
Year/Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes

Table 8: Acquirer BHARs and CFO Influence

The table presents the long-term buy-and-hold (BHARs) average abnormal returns over holding periods that extend from one to three years following M&A announcements. The BHAR for each event firm is calculated as follows, $BHAR_{(i,a,b)} = \Pi_{t=a}^b(R_{it} + 1) - \Pi_{t=a}^b(R_{mt} + 1)$, where $BHAR_{(i,a,b)}$ is excess return for event firm i over time period from day a to day b , R_{it} is the return on the common stock of event firm i on day t , and R_{mt} is the return on the stock of the market on day t . The dependent variable in Model 1 is acquirer BHARs over 1-year period, Model 2 over 2-years period and in Model 3 over 3-years period. The CFO influence measure is the sum of seven dichotomous variables as discussed in Section 2.2. Analytical definitions for all variables are provided in the Appendix. ***, ** and * denote statistical significance at the 1%, 5% and 10% levels, respectively.

	Model 1 BHAR (1-Year)	Model 2 BHAR (2-Year)	Model 3 BHAR (3-Year)
CFO Influence	0.014** (0.006)	0.017** (0.008)	0.029*** (0.010)
Firm Size	-0.165*** (0.021)	-0.353*** (0.025)	-0.375*** (0.034)
Market-to-Book	-0.081*** (0.009)	-0.128*** (0.011)	-0.176*** (0.015)
Leverage	-0.103 (0.095)	0.076 (0.114)	0.298* (0.154)
Cash Flow	0.147*** (0.048)	0.252*** (0.055)	0.346*** (0.078)
Tender Offer	0.006 (0.042)	0.067 (0.052)	0.064 (0.068)
Same Sector	0.013 (0.015)	0.029 (0.019)	0.018 (0.025)
Private Target	0.003 (0.014)	0.004 (0.018)	-0.040* (0.023)
Public Target	-0.008 (0.036)	-0.012 (0.045)	-0.052 (0.058)
Deal Size	0.000** (0.000)	0.000** (0.000)	0.000 (0.000)
Relative Deal Size	0.055*** (0.017)	0.019 (0.022)	0.001 (0.027)
Cross Border	0.001 (0.015)	-0.008 (0.019)	-0.017 (0.024)
Stock Payment	-0.019 (0.038)	-0.012 (0.046)	-0.045 (0.062)
Board Size	-0.001 (0.007)	0.007 (0.009)	-0.021* (0.011)
Board Independence	-0.100 (0.090)	-0.145 (0.113)	-0.214 (0.146)
CEO Age	0.040 (0.075)	0.020 (0.077)	-0.309** (0.121)
CEO Tenure	0.012*** (0.004)	0.018*** (0.005)	0.023*** (0.006)
CEO Ownership	0.566*** (0.152)	0.051 (0.182)	-0.642*** (0.246)
Intercept	0.404 (3.344)	3.591 (3.449)	19.048*** (5.422)
Observations	2,583	2,583	2,583
R-squared	0.494	0.553	0.588
Year/Industry Fixed Effects	Yes	Yes	Yes
CEO Fixed Effects	Yes	Yes	Yes

Table 9: Changes in Abnormal Operating Performance

The table reports the median changes in abnormal operating performance around acquisitions (completed in year 0) for acquirer firms with high and low CFO influence. Changes are reported for four different event windows ranging from 3 years prior to the acquisition completion (i.e. Pre-Acquisition) to one year (Panel A), two years (Panel B) and three years (Panel C) after the acquisition completion (i.e. Post-Acquisition), respectively. In Panel D, we further extend the event window from 4 years prior to 4 years after the acquisition completion. Following Healy et al. (1992), we calculated operating performance as the sum of operating income, depreciation, interest expenses and taxes divided by the market value of assets at the beginning of the year. The change in the market values of target and acquiring firms at the takeover announcement are excluded from the market value in the Post-Acquisition years. Industry adjusted operating performance are computed for each firm and year as the difference between the value of operating performance and median values for other firms in the same industry in the given year. In each Pre-Acquisition year, returns for the combined firm are weighted averages of target and the acquirer returns, with the weights being the relative assets of the two firms. Post-Acquisition returns use data for the merged firms. Pre-Acquisition industry returns are weighted averages of the target and acquirer industry average returns, with the weights being the relative assets of the acquirer and target firms each year. In the Post-Acquisition period, the weights used to compute the industry returns are the relative assets of the acquirer and target firms in one year before the acquisition. High CFO influence firms are those firms whose CFO influence value is greater than the median CFO influence value across all firms in year t . Low influence CFO firms are those firms whose CFO influence value is lower than (or equal) to the median CFO influence value across all firms in year t . The CFO influence is the sum of seven dichotomous variables as discussed in Section 2.2. ** and * indicate statistical significance by Wilcoxon rank sum z-test for the equality of medians at the 5% and 10% levels, respectively.

	Firms with High CFO Influence	Firms with Low CFO Influence
Panel A: Event Window (-3, +1)		
Pre-Acquisition (%)	0.017	-0.040
Post-Acquisition (%)	1.113	0.822
<i>Difference (Post-Pre)</i>	1.095*	0.863
<i>Wilcoxon z-test</i>	1.812	1.575
<i>(p-values)</i>	(0.070)	(0.115)
Panel B: Event Window (-3, +2)		
Pre-Acquisition (%)	0.017	-0.040
Post-Acquisition (%)	1.127	0.505
<i>Difference (Post-Pre)</i>	1.110**	0.545
<i>Wilcoxon z-test</i>	2.195	1.580
<i>(p-values)</i>	(0.028)	(0.114)
Panel C: Event Window (-3,+3)		
Pre-Acquisition (%)	0.017	-0.040
Post-Acquisition (%)	0.619	0.363
<i>Difference (Post-Pre)</i>	0.602**	0.403
<i>Wilcoxon z-test</i>	2.234	1.277
<i>(p-values)</i>	(0.025)	(0.201)
Panel D: Event Window (-4,+4)		
Pre-Acquisition (%)	0.015	-0.017
Post-Acquisition (%)	0.512	0.206
<i>Difference (Post-Pre)</i>	0.497**	0.224
<i>Wilcoxon z-test</i>	2.486	1.312
<i>(p-values)</i>	(0.012)	(0.189)

Table 10: CEO and CFO-CEO Effects

The table shows whether the relationship between CFO influence and firms' propensity to engage in an M&A deal varies across firms with influential CEOs, degree of delegation decisions and firms whose CEOs and CFOs share similar characteristics. In Panel A, we split firms into high and low CEO influence groups (based on CEO Pay Slice, CEO Influence), and high and low degree of CEO delegation groups (based on Size as measured by sales revenue and CEO Knowledge). In Panel B, we split firms into similar and different pairing of CFO and CEO based on the following demographic characteristics: age gap, joint tenure and same gender. The dependent variable is a dummy that equals one if a firm completes at least one acquisition in year t and zero otherwise. The CFO influence measure is the sum of seven dichotomous variables that attempt to capture the ability of the CFO to influence M&A outcome, as discussed in Section 2.2. For ease of exposition, we do not report the results on control variables. ***, ** and * denote statistical significance at the 1%, 5% and 10% levels, respectively.

Panel A: CEO Effects

	Level of CEO Power				Degree of CEO Delegation			
	CEO Pay Slice		CEO Influence		Size (Sales Revenue)		CEO Knowledge	
	High Level	Low Level	High Level	Low Level	High Degree	Low Degree	High Degree	Low Degree
	Above Median	Below Median	Above Median	Below Median	Above Median	Below Median	No MBA Degree	MBA Degree
CFO Influence	0.155*** (0.020)	0.181*** (0.021)	0.062*** (0.023)	0.160*** (0.020)	0.240*** (0.020)	0.065*** (0.021)	0.171*** (0.015)	0.166*** (0.037)
Observations	5,508	4,993	4,004	6,497	5,214	5,287	9,054	1,447
Pseudo R^2	0.100	0.122	0.106	0.116	0.084	0.120	0.116	0.127
Year/Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm and Board Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Panel B: CFO-CEO Effects

	CFO-CEO Age Gap		CFO-CEO Joint Tenure		CFO-CEO Gender		CFO-CEO Similarity Index	
	Similar CFO-CEO	Different CFO-CEO	Similar CFO-CEO	Different CFO-CEO	Similar CFO-CEO	Different CFO-CEO	Similar CFO-CEO	Different CFO-CEO
	CFO Influence	0.061** (0.030)	0.216*** (0.017)	0.104*** (0.036)	0.181*** (0.016)	0.076*** (0.020)	0.256*** (0.029)	0.072*** (0.027)
Observations	4,108	6,393	3,423	7,078	8,216	2,285	5,500	5,001
Pseudo R^2	0.083	0.141	0.353	0.112	0.093	0.182	0.090	0.151
Year/Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm and Board Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 11: Alternative Measure of CFO Influence

This table presents results from an alternative measure of CFO influence constructed using principal component analysis. Panel A presents the results from a principal component analysis (PCA) based on the following CFO influence components. CFO board membership, CFO outside directorship, CFO top 3, CFO financial expertise, CFO seniority, CFO relative pay and CFO M&A experience. CFO influence is the 1st principal component obtained from the PCA. The component loadings of the 1st component is presented, while eigenvalue and the proportion of variance explained by 1st and 2nd component is presented. Panel B reports the correlation coefficients among the CFO attributes. Panel C presents regression results on the relationship between firms' propensity to engage in an M&A deal and CFO influence (1st Component). The dependent variable equals one if a firm completes at least one acquisition in year t and zero otherwise. For ease of exposition, we do not report the results on control variables. Analytical definitions for all variables are provided in the Appendix. Standard errors are reported in parentheses. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

Panel A: Principal Component Analysis (PCA)

<u>1st Principal Component</u>	<u>Individual Components</u>	<u>Loading</u>
CFO Influence	CFO Board Membership	0.47
	CFO Outside Directorship	0.21
	CFO Top 3	0.47
	CFO Financial Expertise	0.40
	CFO Seniority	0.43
	CFO Relative Pay	0.34
	CFO M&A Experience	0.16
	<u>CFO Influence (1st Comp)</u>	<u>2nd Component</u>
Eigenvalue	4.03	0.97
Proportion Explained	57.60%	13.91%

Panel B: Correlation Among CFO Influence Components

	1.	2.	3.	4.	5.	6.	7.
1. CFO Board Membership	1.00						
2. CFO Outside directorship	0.31***	1.00					
3. CFO Top 3	0.83***	0.26***	1.00				
4. CFO Financial Expertise	0.74***	0.22***	0.60***	1.00			
5. CFO Seniority	0.95***	0.35***	0.80***	0.71***	1.00		
6. CFO Relative Pay	0.58***	0.21***	0.54***	0.45***	0.57***	1.00	
7. CFO M&A Experience	0.23***	0.16***	0.15***	0.19***	0.23***	0.10***	1.00

Panel C: Deal Propensity and CFO Influence

	<u>Model 1</u>	<u>Model 2</u>
CFO Influence (1 st Component)	0.208*** (0.018)	0.213*** (0.018)
Observations	10,501	10,501
R ²	0.113	0.115
Firm Controls	Yes	Yes
Board and CEO Controls	No	Yes
Year/Industry Fixed Effects	Yes	Yes

Table 12: Propensity Score Matched Sample

This table presents the results from the propensity score matching analysis for treatment (high CFO influence) and control (low CFO influence) firm-year observations. The treatment (high CFO influence) group includes those firms whose CFO influence is in above median CFO influence across all firms in year t . The control (low CFO influence) group includes those firms whose CFO influence is in below median CFO influence across all firms in year t . Panel A presents the results from a covariate balance test, which assesses whether the average values of covariates (firm-level determinants) are similar across treatment (high CFO influence) and control (low CFO influence) firms. The t -statistic and the normalized difference is for the difference in means between firms with high CFO influence and low CFO influence. The normalized difference is calculated as the difference in means for treatment and match groups divided by the square root of the average of the group variances. A normalized difference of 0.25 or less indicates an acceptable balance (Imbens and Wooldridge, 2009). In Panel B, we re-estimate the regressions from Table 3 on the propensity matched sample. The CFO influence measure is the sum of seven dichotomous variables, as discussed in Section 2.2. The dependent variable equals one if firm completes at least one acquisition in year t and zero otherwise. The propensity score is estimated as a logit function of firm size, market-to-book, leverage, cash holdings, cash ow, sales growth, networking capital, price-to-earning, board size, board independence, CEO gender, CEO age, CEO tenure and CEO ownership. Analytical definitions for all variables are provided in the Appendix. We match each firm with a high CFO influence firm to a low CFO influence using nearest neighbour without replacement subject to caliper (i.e. maximum difference in propensity score) of 0.01 using psmatch2, a STATA function written by Leuven and Sianesi (2003). We did exact matching on industry and year. psmatch2 allows imposing common support condition by dropping treatment observations whose p -score is higher than the maximum or less than the minimum p -score of the controls. To test the differences in means between the two samples (i.e. high CFO influence firms and low CFO influence firms). *** denote statistical significance at the 1% level.

Panel A: Covariate Balance Test

	Firms with Low CFO Influence	Firms with High CFO Influence	<i>Difference</i> <i>t-stat</i>	<i>Normalized</i> <i>Difference</i>
Firm Size	12.002	11.997	0.062	0.002
Market-to-Book	1.745	1.678	1.310	0.034
Leverage	0.186	0.190	-0.664	-0.017
Cash Holdings	0.118	0.115	0.723	0.019
Cash Flow	0.029	0.032	-0.441	-0.011
Sales Growth	0.137	0.145	-0.449	-0.012
Networking Capital	-0.011	-0.004	-0.985	-0.025
Price-to-Earning	16.123	16.693	-0.462	-0.012
Board Size	7.276	7.145	1.531	0.040
Board Independence	0.419	0.417	0.286	0.007
CEO Gender	0.020	0.021	-0.257	-0.007
CEO Age	51.516	51.280	0.982	0.025
CEO Tenure	5.413	5.378	0.193	0.005
CEO Ownership	0.040	0.044	-1.049	-0.027

Panel B: Deal Propensity and CFO Influence (Propensity Matched Sample)

	Model 1	Model 2
CFO Influence	0.274*** (0.035)	0.276*** (0.035)
Observations	2996	2996
R^2	0.103	0.102
Firm Controls	Yes	Yes
Board and CEO Controls	No	Yes
Year/Industry Fixed Effects	Yes	Yes

Table 13: CFO Turnovers and M&A Activity (Difference-in-Difference Analysis)

Panel A presents mean differences in proportion of firms completing at least one acquisition in a given year (hereafter, M&A activity) between treatment firms (i.e., experiencing a turnover from a less influential to a more influential CFO) and control firms (i.e., those that are always run by less influential CFOs). Panel B presents mean differences in M&A activity between treatment firms (i.e., experiencing a turnover from a more influential to a less influential CFO) and control firms (i.e., those that are always run by more influential CFOs). Firms with more-influential CFOs are those firms whose CFO influence value is greater than the median CFO influence across all firms in year t . Less-influential CFO firms are those whose CFO influence value is lower than the median CFO influence across all firms in year t . The CFO influence measure is the sum of seven dichotomous variables, as discussed in Section 2.2. We identify control firms by employing a propensity score matching procedure. The propensity score (unreported) is estimated as a logit function of market size, market-to-book, leverage, cash holdings, cash flow, sales growth, networking capital and price-to-earning. Analytical definitions for all variables are provided in the Appendix. We match each treatment group to a control group using nearest neighbour without replacement subject to the calliper (i.e. maximum difference in propensity score) of 0.05 using psmatch2, a STATA function written by Leuven and Sianesi (2003). We did exact matching on industry and year. psmatch2 allows imposing common support condition by dropping treatment observations whose p-score is higher than the maximum or less than the minimum p-score of the controls. ***, ** and * denote statistical significance at the 1%, 5% and 10% levels, respectively.

Panel A: Less-influential to More-influential CFOs

	Mean M&A Activity	Mean Difference (Robust S.E) [Treatment – Control]
<i>Pre-turnover M&A activity</i>		
Control Firms (less-influential CFOs)	0.233	
Treatment Firms (less-influential CFOs)	0.227	– 0.006 (0.045)
<i>Post-turnover M&A activity</i>		
Control Firms (less-influential CFOs)	0.193	
Treatment Firms (more-influential CFOs)	0.302	0.109*** (0.036)
Diff-in-Diff (Post- minus Pre-turnover)		0.114** (0.058)
Total Observations		922

Panel B: More-influential to Less-influential CFOs

	Mean M&A Activity	Mean Difference (Robust S.E) [Treatment – Control]
<i>Pre-turnover M&A activity</i>		
Control Firms (more-influential CFOs)	0.271	
Treatment Firms (more-influential CFOs)	0.294	0.023 (0.043)
<i>Post-turnover M&A activity</i>		
Control Firms (more-influential CFOs)	0.278	
Treatment Firms (less-influential CFOs)	0.190	– 0.088** (0.042)
Diff-in-Diff (Post- minus Pre-turnover)		– 0.110* (0.060)
Total Observations		852

**Online Appendix for:
Do CFOs Matter?
Evidence from the M&A Process**

Abstract

In this Online Appendix, we offer supplementary results for our paper “Do CFOs Matter? Evidence from the M&A Process”. More specifically, we check the robustness of our findings by using alternative proxies for deal propensity; controlling for CEO-CFO effects, serial acquirer effect and financial advisors; alternative measure of CFO influence and three modified versions of CFO influence index. Additionally, we also examine the effect of CFO influence on deal success rate.

OA.1 Deal Frequency and CFO Influence

Our main findings show that firms with influential CFOs are more likely to complete an acquisition. In this section, we further examine whether CFO influence is associated with the level of deal frequency. The results are presented in Table OA.1. In Models 1 and 2, the dependent variable is the total number of completed deals. In Models 3-4, we employ the total number of deals announced. We control for same set of firm-, board and CEO-level characteristics as in Table 3 of the paper. The results in Table OA.1 show that firms with influential CFOs more frequently engage in M&A activity.

OA.2 Control for CFO-CEO Effects

In Model 1 of Table OA.2, we check the robustness of our main findings (Table 3 of the paper) after controlling for the effect CEO-CFO similarities on deal propensity. Specifically, in Model 1 of Table OA.2, we use the following three measures to capture CFO-CEO similarities: *CEO-CFO age*, a dummy variable that equals one if the age gap between the CEO and the CFO is less than five years and zero otherwise; *CFO-CEO Joint Tenure*, a dummy variable that equals one if the number of years the CFO and the CEO have been working together is longer than or equal to 3 years and 0 otherwise. and *CFO-CEO Same Gender*, which identifies whether the CFO and the CEO have the same gender or not (see Goergen et al., 2015). In Model 2, we also employ a CFO-CEO similarity index, which is a dummy variable that equals one if the sum of the dichotomous variables CFO-CEO age gap, CFO-CEO joint tenure and CFO-CEO gender is greater than or equal to two. The results, as presented in Table OA.2, continue to show a positive and statistically significant association between CFO influence and the likelihood of completing an acquisition.

OA.3 Robustness: Alternative CFO Influence Measure

In this section, we assess the robustness of our analysis (Tables 4-9 of the paper) after replacing our benchmark CFO resistance with an alternative measure of CFO resistance that we construct using principal component analysis (PCA), as analytically discussed in Section 7.1 of the paper.

As shown in Table OA.3, the association between influential CFOs and various deal characteristics (Panel A), deal completion time and target quality (Panel B), deal premium (Panel C), announcement returns (Panel D), long-term buy-and-hold returns (Panel E) and

operating performance (Panel F) continues to remain robust to a PCA estimate of CFO influence.

OA.4 Modified CFO Influence Index

In this section, we assess the robustness of our results after replacing our PCA estimate of CFO influence with three modified CFO influence indexes. In the first modified CFO influence (1), we extend our CFO influence index by including CFO tenure, which is defined as the number of years that the CFO has been with the firm, respectively. Zajac and Westphal (1996) argue that an executive's (the CFO, in our case) influence on firm decisions also increases with his/her experience and knowledge about the firm's resources, operations and risks. In the second modified CFO influence index (2), we extend further by including CFO ownership, which is a ratio of the value of common shares and options held by the CFO at the end of fiscal year t to the market value of common shares outstanding.

In the third modified CFO index (3), we replace CFO tenure with CFO time in company, defined as the total number of years that the CFO has been in the firm. Detailed definitions of all variables used for the construction of our modified CFO influence indexes are provided in the Appendix of the paper. Our results of the principal component analysis, as presented in Panel A of Table OA.4 strongly suggest that none of these alternative CFO-specific variables add significantly to the information contained in the benchmark version of the index. To the contrary, the proportions explained by the modified CFO indexes are actually lower. Nevertheless, our results, as presented in Panels B-H of Table OA.4, remain robust to the use of each of the modified CFO influence indexes.

OA.5 Deal Success Rate

Our main findings suggest that firms with influential CFOs are more likely to engage in M&A. In this section, we examine whether influential CFO firms are also more successful in completing the deal. The dependent variable is a dummy variable that equals one if the deal was successful (completed) and zero if withdrawn.

Table OA.5 presents results from logit regressions. We find the coefficient on CFO influence to be positive and statistically significant (at the 1% level), suggesting that firms with more influential CFOs (higher values on CFO influence) are also more successful in bringing the M&A deal negotiations to a successful end.

OA.6 CFO Hiring

We split our sample into sub-samples of firms based on CFO Hiring, a dummy variable that identifies whether the CFO position was the first position the individual held at the company or not, and *CFO Co-option*, a dummy variable that identifies whether a CFO was appointed into the current position after the current CEO took office or before. For CFO Hiring, we split firms where CFOs were hired in the current position from outside (Model 1 of Panel A, Table OA.6) *versus* inside the company (Model 2 of Panel A). For CFO Co-option, firms in which the current CFO was hired after (Model 1 of Panel B) *versus* before (Model 2 of Panel B) the current CEO's appointment

Table OA.6 presents the results. As can be seen, we find that the coefficient on the CFO influence is positive and statistically significant for the sub-groups of firms in which CFOs were being hired from *outside* the company and those who were hired *after* the current CEO. Similarly, this positive relation is also observed in subgroup of firms in which CFOs were promoted from inside the company and were present in the firm *before* the current CEO was appointed. Overall, these results suggest that the effect of CFO influence on deal propensity is not driven by the CFO's hiring decisions.

OA.7 Serial Acquirer Effect

In this section, we re-estimate our main results after controlling for serial acquirer effects. We use *Serial Acquirer* as a dummy variable that identifies whether an acquirer has made five or more acquisitions during the past three years or not, as in Fuller et al. (2002). Table OA.7 presents the results. We conclude from our findings that CFO influence is distinct from any serial acquisition effect on a firm's propensity to engage in an M&A deal, deal characteristics, deal completion time, target accounting quality, deal premium, cumulative abnormal returns, or long-term buy-and-hold returns.

OA.8 Financial Advisors

An important responsibility of the CFO is to select an advisor for a M&A deal. Thus, it is possible that more influential CFOs select superior advisors and it is the advisor that facilitates the lower premium and faster deal completion. We test this conjecture in Table OA.8 of the online appendix of this study.

We begin our analysis by first defining a superior advisor as a top 10 investment banker as measured by the number of deals advised (Bao and Edmans, 2011; Golubov et al., 2012)¹. Such advisors are coded as a one for the Financial Advisor indicator variable and zero otherwise.

¹ The top ten investment banks are Goldman Sachs, Merrill Lynch (now Bank of America Merrill Lynch), Morgan Stanley, JP Morgan, Credit Suisse, Citi/Salomon Smith Barney, UBS, Hoare Govett (RBS Hoare Govett, now Jefferies), Rothschild & Co. and Invesco Ltd.

We then examine three different deal and target characteristics: time to completion, target accounting quality, and deal premium. We continue to find that even after controlling for financial advisor quality, that CFO Influence is associated with less time to deal completion, targets with higher accounting quality, and lower deal premiums. We conclude from these results that CFO Influence continues to have an important effect on the M&A transaction even in the presence of high-quality advisors.

OA.9 Does CEO Influence and CEO-CFO Similarity Affect Deal Characteristics

In this section, we examine whether CEO influence and CEO-CFO pairing affect the results on CFO influence and other deal characteristics including stock payment, cross-border and relative deal size. The findings, as presented in Table OA.9, confirm the distinctiveness of CFO influence on these deal characteristics regardless of the influence level of the CEO or similar (different) pairing of CFO-CEO.

Table OA.1 Deal Frequency and CFO Influence

This table presents the regression results on the relationship between Deal frequency and CFO influence. The dependent variable in Models 1-2 is the total number of completed deals, while in Models 3-4 is the total number of deals announced. The CFO influence measure is the sum of seven dichotomous variables that attempt to capture the ability of the CFO to influence M&A outcome, as discussed in Section 2.2. Our baseline specification (Models 1 and 3) includes a set of firm-level controls. In Models 2 and 4, we repeat our baseline specification with additional controls for board and CEO characteristics. Analytical definitions for all variables are provided in the Appendix of the paper. ***, ** and * denote statistical significance at the 1%, 5% and 10% levels, respectively.

	Number of Completed Deals		Number of Deals Announced	
	Model 1	Model 2	Model 3	Model 4
CFO Influence	0.046*** (0.005)	0.046*** (0.005)	0.055*** (0.005)	0.056*** (0.005)
Firm Size	0.116*** (0.006)	0.115*** (0.008)	0.149*** (0.007)	0.141*** (0.009)
Market-to-Book	0.015*** (0.004)	0.015*** (0.004)	0.018*** (0.005)	0.018*** (0.005)
Leverage	-0.134** (0.054)	-0.140*** (0.054)	-0.198*** (0.061)	-0.206*** (0.061)
Cash Holdings	-0.269*** (0.047)	-0.284*** (0.048)	-0.309*** (0.052)	-0.340*** (0.053)
Cash Flow	0.014 (0.024)	0.018 (0.024)	-0.002 (0.027)	0.002 (0.027)
Sales Growth	0.065*** (0.011)	0.062*** (0.011)	0.076*** (0.013)	0.072*** (0.012)
Networking Capital	-0.238*** (0.038)	-0.229*** (0.038)	-0.327*** (0.043)	-0.315*** (0.043)
Price-to-earning	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)
Board Size	-	0.010* (0.006)	-	0.024*** (0.007)
Board Independence	-	-0.092** (0.046)	-	-0.121** (0.052)
CEO Gender	-	0.042 (0.064)	-	0.055 (0.076)
CEO Age	-	-0.001 (0.001)	-	-0.002 (0.002)
CEO Tenure	-	-0.004* (0.002)	-	-0.004* (0.003)
CEO Ownership	-	0.127 (0.089)	-	0.263*** (0.100)
Intercept	-0.774*** (0.117)	-0.721*** (0.142)	-1.009*** (0.135)	-0.955*** (0.163)
Observations	10,501	10,501	10,501	10,501
R ²	0.110	0.111	0.123	0.126
Year Fixed Effects	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes

Table OA.2 Controlling for CFO-CEO Effects

This table presents the results from logistic regressions on the relationship between firms' propensity to engage in an M&A deal and CFO influence after controlling for CEO-CFO pair effect. The dependent variable is a dummy that equals one if a firm completes at least one acquisition in year t and zero otherwise. The CFO influence measure is the sum of seven dichotomous variables that attempt to capture the ability of the CFO to influence M&A outcome, as discussed in Section 2.2. CFO-CEO Age Gap is a dummy variable that identifies if the age gap between the CEO and the CFO is less than 5 years or not. CFO-CEO Joint Tenure is a dummy variable that identifies whether CFO and the CEO have been working together is longer than or equal to 3 years and 0 otherwise. CFO-CEO Same Gender is a dummy variable that identifies whether the CFO and the CEO have the same gender or not. CFO-CEO Similarity Index is simply a sum of three dichotomous variables including CFO-CEO age, CFO-CEO tenure and CFO-CEO gender. For ease of exposition, we do not report the results on control variables. ***, ** and * denote statistical significance at the 1%, 5% and 10% levels, respectively.

	Model 1	Model 2
CFO Influence	0.145*** (0.017)	0.175*** (0.015)
CFO-CEO Age Gap	-0.143*** (0.051)	-
CFO-CEO Joint Tenure	-0.200 (0.171)	-
CFO-CEO Same Gender	0.357*** (0.080)	-
CFO-CEO Similarity Index	-	-0.092* (0.051)
Observations	10,501	10,501
Pseudo R^2	0.115	0.113
Year Fixed Effects	Yes	Yes
Industry Fixed Effects	Yes	Yes
Firm and Board Controls	Yes	Yes

Table OA.3 Robustness Tests: Alternative CFO Influence Measure

This table presents additional results from an alternative measure of CFO influence constructed using principal component analysis as discussed in Section 7.1 of the paper. Panel A presents the regression results on the relation between alternative CFO influence and various deal characteristics. Panel B shows the effect of CFO influence on deal completion time and target quality. A Tobit regression is estimated in Model 1 of Panel B, OLS in Model 2, and a logit regression in Models 3 and 4. Panel C presents the regression results on the relationship between alternative CFO influence and deal premium. Panel D shows the effect of CFO influence on acquirers' cumulative abnormal returns (CARs). Panel E shows the effect of CFO influence on CFO influence and long-term buy-and-hold (BHARs) average abnormal returns. Panel F reports the median changes in abnormal operating performance around acquisitions (completed in year 0) for acquirer firms with high and low CFO influence. For ease of exposition, we do not report the results on control variables. Analytical definitions for all variables are provided in the Appendix of the paper. ***, ** and * denote statistical significance at the 1%, 5% and 10% levels, respectively.

Panel A: Deal Characteristics

	Stock Payment	Cross-border Deal	Relative Deal Size
	Model 1	Model 2	Model 3
CFO Influence (1 st Component)	-0.120** (0.053)	-0.100*** (0.035)	-0.080** (0.040)
Observations	3,122	3,122	3,122
Pseudo R^2	0.311	0.124	0.218
Year/Industry Fixed Effects	Yes	Yes	Yes
Firm Controls	Yes	Yes	Yes
Board/CEO/Deal Controls	Yes	Yes	Yes

Panel B: Deal Completion Time and Target Quality

	Deal Completion Time		Target Accounting Quality	
	Model 1	Model 2	Model 3	Model 4
CFO Influence (1 st Component)	-0.113** (0.057)	-0.043* (0.024)	0.286* (0.152)	0.315** (0.150)
Observations	3,122	3,122	280	280
Pseudo R^2 (R^2)	0.124	(0.384)	0.228	0.235
Year/Industry Fixed Effects	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes
Firm Controls	Yes	Yes	Yes	Yes
Board/CEO/Deal Controls	Yes	Yes	Yes	Yes

Panel C: Deal Premium

	Raw Premium	Industry-adjusted Premium
	Model 1	Model 2
CFO Influence (1 st Component)	-0.003** (0.001)	-0.003** (0.001)
Observations	2,648	2,648
R^2	0.824	0.794
Year/Firm Fixed Effects	Yes	Yes
Firm Controls	Yes	Yes
Board/CEO/Deal Controls	Yes	Yes

Panel D: Acquirer Announcement CARs

	CAR (-1,+2)		CAR (-2,+1)	
	Model 1	Model 2	Model 3	Model 4
CFO Influence (1 st Component)	-0.002 (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)
Complex Deals (1)	-0.008* (0.005)	- -	-0.010** (0.005)	- -
CFO Influence x Complex Deals (1)	0.008*** (0.003)	- -	0.009*** (0.003)	- -
Complex Deals (2)	- -	-0.009 (0.006)	- -	-0.010* (0.006)
CFO Influence x Complex Deals (2)	- -	0.010*** (0.003)	- -	0.010*** (0.003)
Observations	2,835	2,835	2835	2835
R ²	0.049	0.500	0.042	0.041
Year/Industry Fixed Effects	Yes	Yes	Yes	Yes
Firm Controls	Yes	Yes	Yes	Yes
Board/CEO/Deal Controls	Yes	Yes	Yes	Yes

Panel E: Acquirer BHARs

	BHAR (1-Year)	BHAR (2-Year)	BHAR (3-Year)
	Model 1	Model 2	Model 3
CFO Influence (1 st Component)	0.017** (0.008)	0.024* (0.014)	0.044*** (0.014)
Observations	2,583	2,583	2,583
R ²	0.643	0.709	0.736
Year/Industry/CEO Fixed Effects	Yes	Yes	Yes
Firm Controls	Yes	Yes	Yes
Board/CEO/Deal Controls	Yes	Yes	Yes

Panel F: Changes in Abnormal Operating Performance

	Firms with High CFO Influence	Firms with Low CFO Influence
	Panel F(a): Event Window (- 3, +3)	
Pre-Acquisition (%)	-0.005	0.040
Post-Acquisition (%)	0.492	0.300
<i>Difference (Post-Pre)</i>	0.497**	0.260
<i>Wilcoxon z-test</i>	2.063	1.431
<i>(p-values)</i>	(0.039)	(0.152)
Panel F(b): Event Window (- 4, +4)		
Pre-Acquisition (%)	-0.004	0.006
Post-Acquisition (%)	0.439	0.125
<i>Difference (Post-Pre)</i>	0.443**	0.119
<i>Wilcoxon z-test</i>	2.412	1.389
<i>(p-values)</i>	(0.015)	(0.165)

Table OA.4 Modified CFO Influence Index

Panel A presents key results from the principal component analysis conducted to construct our modified CFO influence indexes. Eigenvalues and proportion of variance explained by each Modified CFO Influence Index (1), (2) and (3) are presented. Panel B presents regression results on the relationship between firms' propensity to engage in an M&A deal and three modified CFO influence indexes. Panel C shows the effect of modified CFO influence indexes on various deal characteristics. Panel D shows the effect of modified CFO influence on deal completion time and target's accounting quality. Panel E presents the association between modified CFO influence and deal premium. Panels F, G and H shows the effect of modified CFO influence on cumulative abnormal returns, long-term buy-and-hold returns and operating performance, respectively. For ease of exposition, we do not report the results on control variables. Detailed definitions of modified CFO indexes are provided in the Appendix of the paper. Standard errors are reported in parentheses. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

Panel A: Principal Component Analysis			
	<i>Modified CFO Influence 1</i>	<i>Modified CFO Influence 2</i>	<i>Modified CFO Influence 3</i>
Eigenvalue	4.32	4.41	4.39
Proportion Explained	54.08%	49.02%	48.87%
Panel B: Deal Propensity			
	<i>Modified CFO Influence (1)</i>	<i>Modified CFO Influence (2)</i>	<i>Modified CFO Influence (3)</i>
	Model 1	Model 2	Model 3
Modified CFO Influence	0.190*** (0.017)	0.187*** (0.016)	0.191*** (0.017)
Observations	10,501	10,501	10,501
R ²	0.113	0.113	0.114
Firm Controls	Yes	Yes	Yes
Board and CEO Controls	Yes	Yes	Yes
Year/Industry Fixed Effects	Yes	Yes	Yes
Panel C: Deal Characteristics			
	<i>Modified CFO Influence (1)</i>	<i>Modified CFO Influence (2)</i>	<i>Modified CFO Influence (3)</i>
	Model 1	Model 2	Model 3
<i>(i) Stock Payment</i>			
Modified CFO Influence	-0.142*** (0.053)	-0.137*** (0.052)	-0.139*** (0.052)
Observations	3,122	3,122	3,122
Pseudo R ²	0.308	0.307	0.308
<i>(ii) Cross-Border Deal</i>			
Modified CFO Influence	-0.093*** (0.033)	-0.090*** (0.033)	-0.096*** (0.033)
Observations	3,122	3,122	3,122
Pseudo R ²	0.126	0.126	0.127
<i>(ii) Relative Deal Size</i>			
Modified CFO Influence	-0.075* (0.039)	-0.070* (0.038)	-0.076** (0.038)
Observations	3,122	3,122	3,122
Pseudo R ²	0.228	0.228	0.228
Firm Controls	Yes	Yes	Yes
Board and CEO Controls	Yes	Yes	Yes
Year/Industry Fixed Effects	Yes	Yes	Yes

Panel D: Deal Completion Time and Target Accounting Quality			
	<i>Modified CFO Influence (1)</i>	<i>Modified CFO Influence (2)</i>	<i>Modified CFO Influence (3)</i>
	Model 1	Model 2	Model 3
<i>(i) Time to Deal Completion (Tobit Regression)</i>			
Modified CFO Influence	-0.120** (0.053)	-0.109** (0.053)	-0.110** (0.053)
Observations	3,122	3,122	3,122
<i>Pseudo R</i> ²	0.122	0.123	0.122
<i>(ii) Target Accounting Quality (Absolute Discretionary Accruals)</i>			
Modified CFO Influence	0.261* (0.145)	0.252* (0.142)	0.276* (0.143)
Observations	280	280	280
<i>Pseudo R</i> ²	0.235	0.235	0.236
Firm Controls	Yes	Yes	Yes
Board and CEO Controls	Yes	Yes	Yes
Year/Industry Fixed Effects	Yes	Yes	Yes
Panel E: Deal Premium			
	<i>Modified CFO Influence (1)</i>	<i>Modified CFO Influence (2)</i>	<i>Modified CFO Influence (3)</i>
	Model 1	Model 2	Model 3
<i>(i) Raw Premium</i>			
Modified CFO Influence	-0.003** (0.001)	-0.002** (0.001)	-0.003** (0.001)
Observations	2,639	2,639	2,639
<i>Pseudo R</i> ²	0.826	0.826	0.827
<i>(ii) Industry-Adjusted Premium</i>			
Modified CFO Influence	-0.003** (0.001)	-0.002** (0.001)	-0.003** (0.001)
Observations	2,639	2,639	2,639
<i>Pseudo R</i> ²	0.794	0.794	0.794
Firm Controls	Yes	Yes	Yes
Board and CEO Controls	Yes	Yes	Yes
Year/Industry Fixed Effects	Yes	Yes	Yes

Panel F: CARs

	CAR (-1,+2)		CAR (-2,+1)	
	Model 1	Model 2	Model 3	Model 4
<i>(i) Modified CFO Influence (1)</i>				
Modified CFO Influence (1)	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)
Complex Deals (1)	-0.007 (0.005)	- -	-0.009* (0.005)	- -
Modified CFO Influence (1) x Complex Deals (1)	0.007*** (0.003)	- -	0.008*** (0.002)	- -
Complex Deals (2)	- -	-0.006 (0.006)	- -	-0.007 (0.006)
Modified CFO Influence (1) x Complex Deals (2)	- -	0.008** (0.003)	- -	0.008*** (0.003)
Observations	2,835	2,835	2835	2835
R^2	0.051	0.050	0.043	0.042
<i>(ii) Modified CFO Influence (2)</i>				
Modified CFO Influence (2)	-0.002* (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)
Complex Deals (1)	-0.007 (0.005)	- -	-0.009* (0.005)	- -
Modified CFO Influence (2) x Complex Deals (1)	0.007*** (0.003)	- -	0.008*** (0.002)	- -
Complex Deals (2)	- -	-0.006 (0.006)	- -	-0.007 (0.006)
Modified CFO Influence (2) x Complex Deals (2)	- -	0.008** (0.003)	- -	0.008*** (0.003)
Observations	2,835	2,835	2835	2835
R^2	0.051	0.050	0.043	0.042
<i>(iii) Modified CFO Influence (3)</i>				
Modified CFO Influence (3)	-0.002* (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)
Complex Deals (1)	-0.007 (0.005)	- -	-0.009* (0.005)	- -
Modified CFO Influence (3) x Complex Deals (1)	0.007*** (0.003)	- -	0.008*** (0.002)	- -
Complex Deals (2)	- -	-0.006 (0.006)	- -	-0.007 (0.006)
Modified CFO Influence (3) x Complex Deals (2)	- -	0.008** (0.003)	- -	0.008*** (0.003)
Observations	2,835	2,835	2835	2835
R^2	0.051	0.050	0.043	0.042
Year/Industry Fixed Effects	Yes	Yes	Yes	Yes
Firm Controls	Yes	Yes	Yes	Yes
Board/CEO/Deal Controls	Yes	Yes	Yes	Yes

Panel G: Acquirer BHARs

	BHAR (1-Year)	BHAR (2-Year)	BHAR (3-Year)
	Model 1	Model 2	Model 3
<i>(i) Modified CFO Influence (1)</i>			
Modified CFO Influence (1)	0.015* (0.008)	0.013 (0.010)	0.037*** (0.013)
Observations	2,583	2,583	2,583
R ²	0.645	0.706	0.734
<i>(ii) Modified CFO Influence (2)</i>			
Modified CFO Influence (2)	0.017** (0.008)	0.015 (0.010)	0.037*** (0.013)
Observations	2,583	2,583	2,583
R ²	0.646	0.706	0.734
<i>(iii) Modified CFO Influence (3)</i>			
Modified CFO Influence (2)	0.018** (0.008)	0.015 (0.010)	0.038*** (0.013)
Observations	2,583	2,583	2,583
R ²	0.646	0.706	0.734
Year/Industry/CEO Fixed Effects	Yes	Yes	Yes
Firm Controls	Yes	Yes	Yes
Board/CEO/Deal Controls	Yes	Yes	Yes

Panel H: Changes in Abnormal Operating Performance

	Firms with High CFO Influence	Firms with Low CFO Influence
Event Window (- 3, +3)		
Pre-Acquisition (%)	0.016	0.005
Post-Acquisition (%)	0.469	0.310
<i>Difference (Post-Pre)</i>	0.453*	0.305
<i>Wilcoxon z-test</i>	1.899	1.587
<i>(p-values)</i>	(0.057)	(0.112)
Event Window (- 4, +4)		
Pre-Acquisition (%)	0.160	0.004
Post-Acquisition (%)	0.442	0.080
<i>Difference (Post-Pre)</i>	0.282**	0.076
<i>Wilcoxon z-test</i>	2.362	1.455
<i>(p-values)</i>	(0.018)	(0.145)

Table OA.5 Deal Success Rate and CFO Influence

This table presents the results from logistic regressions on the relationship between the success rate of an M&A deal and CFO influence. The dependent variable is a dummy variable that equals one if the deal was successful/completed and zero otherwise. The CFO influence measure is the sum of seven binary variables as discussed in Section 2.2. Analytical definitions for all variables are provided in the Appendix. ***, ** and * denote statistical significance at the 1%, 5% and 10% levels, respectively.

	Model 1
CFO Influence	0.082*** (0.031)
Firm Size	0.141*** (0.052)
Market to Book	- 0.041 (0.036)
Leverage	- 0.320 (0.356)
Cash Flow	0.170 (0.222)
Board Size	- 0.006 (0.034)
Board Independence	0.157 (0.311)
CEO Age	- 0.006 (0.006)
CEO Tenure	0.014 (0.013)
CEO Gender	0.232 (0.358)
CEO Ownership	- 0.868* (0.524)
Tender Offer	1.805*** (0.351)
Same Sector	0.057 (0.126)
Private Target	0.568*** (0.123)
Public Target	- 1.155*** (0.218)
Deal Size	- 0.000 (0.000)
Relative Deal Size	0.247* (0.138)
Cross Border	- 0.203* (0.116)
Stock Payment	- 0.287 (0.214)
Intercept	- 0.054 (0.662)
Observations	3,560
Pseudo R^2	0.067
Year Fixed Effects	Yes
Industry Fixed Effects	Yes

Table OA.6 CFO Hiring

This table shows whether the relationship between CFO influence and firms' propensity to engage in an M&A deal is affected CFOs' hiring decisions. In Panel A, we split the sample into firms based on *CFO hiring*: CFO were hired in the current position from outside (Model 1) *versus* inside the company (Model 2). In Panel B, we split the sample into firms based on *CFO Co-option*: CFOs who were hired into the current position *after* (Model 1) *versus before* (Model 2) the current CEO took office. The dependent variable is a dummy that equals one if a firm completes at least one acquisition in year t and zero otherwise. The CFO influence measure is the sum of seven dichotomous variables that attempt to capture the ability of the CFO to influence M&A outcome, as discussed in Section 2.2. We includes sets of firm-, board-, and CEO-level controls. For ease of exposition, we do not report the results on control variables. ***, ** and * denote statistical significance at the 1%, 5% and 10% levels, respectively.

Panel A: CFO Co-option		
	<i>CFO After CEO</i>	<i>CFO Before CEO</i>
	Model 1	Model 2
CFO Influence	0.186*** (0.016)	0.125*** (0.032)
Observations	6,939	3,570
Pseudo R ²	0.119	0.106
Year Fixed Effects	Yes	Yes
Industry Fixed Effects	Yes	Yes
Firm-level Controls	Yes	Yes
Board and CEO-level Controls	Yes	Yes
Panel B: CFO Hiring		
	<i>External Hire</i>	<i>Internal Hire</i>
	Model 1	Model 2
CFO Influence	0.194*** (0.017)	0.080*** (0.028)
Observations	6,303	4,206
Pseudo R ²	0.130	0.104
Year Fixed Effects	Yes	Yes
Industry Fixed Effects	Yes	Yes
Firm-level Controls	Yes	Yes
Board and CEO-level Controls	Yes	Yes

Table OA.7 Serial Acquirer Effect

This table shows the effect of CFO influence on various deal outcomes after controlling for serial acquisition history. Panel A shows the effect of CFO influence on deal propensity, Panel B on deal characteristics, Panel C on deal completion time and target accounting quality, Panel D on deal premium, Panel E on cumulative abnormal returns (CARs) and Panel F on long-term buy-and-hold (BHARs) returns. The CFO influence measure is the sum of seven dichotomous variables that attempt to capture the ability of the CFO to influence M&A outcome, as discussed in Section 2.2. Serial Acquirer is a dummy variable that equals one if the acquirer has made five or more acquisitions during the past three years and zero otherwise, as in Fuller et al. (2002). For ease of exposition, we do not report the results on control variables. Analytical definitions for all variables are provided in the Appendix. *** denote statistical significance at the 1% level.

Panel A: Serial Acquirer and Deal Propensity		
	Model 1	Model 2
CFO Influence	0.135*** (0.014)	0.139*** (0.014)
Serial Acquirer	2.611*** (0.110)	2.620*** (0.111)
Observations	10,501	10,501
Pseudo R^2	0.176	0.179
Year/Industry Fixed Effects	Yes	Yes
Firm Controls	Yes	Yes
Board/CEO Controls	No	Yes

Panel B: Serial Acquirer and Deal Characteristics			
	Stock Payment Model 1	Cross-border Deal Model 2	Rel. Deal Size Model 3
CFO Influence	-0.097** (0.045)	-0.093*** (0.027)	-0.063** (0.031)
Serial Acquirer	-0.070 (0.295)	-0.178* (0.100)	-0.551** (0.120)
Observations	3,122	3,122	3,122
Pseudo R^2	0.312	0.125	0.229
Year/Industry Fixed Effects	Yes	Yes	Yes
Firm Controls	Yes	Yes	Yes
Board/CEO/Deal Controls	Yes	Yes	Yes

Panel C: Serial Acquirer and Deal Completion Time/Target Accounting Quality				
	Deal Completion Time		Target Accounting Quality	
	Model 1	Model 2	Model 3	Model 4
CFO Influence	-0.082* (0.045)	-0.029 (0.019)	0.219* (0.123)	0.226* (0.120)
Serial Acquirer	-0.447** (0.183)	-0.170** (0.073)	0.499 (0.405)	0.720* (0.396)
Observations	3,122	3,122	280	280
Pseudo R^2 (R^2)	0.124	(0.386)	0.239	0.233
Year/Industry Fixed Effects	Yes	Yes	Yes	Yes
Firm Controls	Yes	Yes	Yes	Yes
Board/CEO/Deal Controls	Yes	Yes	Yes	Yes

Panel D: Serial Acquirer and Deal Premium

	Raw Premium	Industry-Adjusted Premium
	Model 1	Model 2
CFO Influence	- 0.003** (0.001)	- 0.002** (0.001)
Serial Acquirer	0.001** (0.000)	0.001 (0.000)
Observations	2,639	2,639
R-squared	0.841	0.813
Year/Firm Fixed Effects	Yes	Yes
Firm Controls	Yes	Yes
Board/CEO/Deal Controls	Yes	Yes

Panel E: Acquirer Announcement CARs

	CAR (-1,+2)		CAR (-2,+1)	
	Model 1	Model 2	Model 3	Model 4
CFO Influence	- 0.001 (0.001)	- 0.001 (0.001)	- 0.001 (0.001)	- 0.000 (0.001)
Complex Deals (1)	- 0.020* (0.010)	- -	- 0.022** (0.010)	- -
CFO Influence x Complex Deals (1)	0.004** (0.002)	- -	0.005** (0.002)	- -
Complex Deals (2)	- -	- 0.022* (0.012)	- -	- 0.024** (0.012)
CFO Influence x Complex Deals (2)	- -	0.005* (0.003)	- -	0.006** (0.003)
Serial Acquirer	- 0.004 (0.003)	- 0.003 (0.003)	- 0.002 (0.003)	- 0.002 (0.003)
Observations	2,835	2,835	2835	2835
R ²	0.049	0.049	0.040	0.039
Year/Industry Fixed Effects	Yes	Yes	Yes	Yes
Firm Controls	Yes	Yes	Yes	Yes
Board/CEO/Deal Controls	Yes	Yes	Yes	Yes

Panel F: Acquirer BHARs

	BHAR (1-Year)	BHAR (2-Year)	BHAR (3-Year)
	Model 1	Model 2	Model 3
CFO Influence	0.015** (0.006)	0.017* (0.009)	0.032*** (0.010)
Serial Acquirer	- 0.032* (0.019)	- 0.072*** (0.024)	- 0.081*** (0.030)
Observations	2,583	2,583	2,583
R ²	0.642	0.709	0.738
Year/Industry/CEO Fixed Effects	Yes	Yes	Yes
Firm Controls	Yes	Yes	Yes
Board/CEO/Deal Controls	Yes	Yes	Yes

Table OA.8: Financial Advisors

Panel A shows whether the CFO influence affects deal process after controlling for the quality of financial advisor and an interaction between CFO influence and financial advisor. Financial Advisor is a dummy variable that equals one for the top ten investment banks in our sample (as measured by number of deals advised) and zero otherwise, following Bao and Edmans (2011) and Golubov et al., (2012). The main variable of interest is the interaction between CFO influence and financial advisor. A Tobit regression is estimated in Model 1, OLS in Model 2, and a logit regression in Models 3 and 4 of Panel A. The dependent variable in Models 1 and 2 is the natural logarithm of total number of days between deal announcement and deal completion (Marquardt and Zur, 2015). The dependent variable in Models 3 and 4 is a dummy variable that equals one if the target firm's absolute discretionary accruals are below the yearly-median values of absolute discretionary accruals and zero otherwise. In Model 3, we compute discretionary accruals using the modified Jones model (Dechow et al., 1995) and in Model 4, an augmented version of modified Jones model as noted by Kothari et al. (2005). ***, ** and * denote statistical significance at the 1%, 5% and 10% levels, respectively.

Panel A: Deal Completion Time and Target Accounting Quality				
	Deal Completion Time		Target Accounting Quality	
	Model 1	Model 2	Model 3	Model 4
CFO Influence	-0.103** (0.047)	-0.035* (0.020)	0.206* (0.178)	0.177* (0.154)
Financial Advisor	0.398 (0.827)	0.549 (0.468)	0.948 (1.215)	-0.811 (1.115)
CFO Influence x Financial Advisor	0.131 (0.172)	0.030 (0.098)	-0.339 (0.234)	-0.043 (0.207)
Observations	3,122	3,122	280	280
Pseudo R^2 (R^2)	0.126	(0.394)	0.262	0.244
Year Fixed Effects	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes
Firm Controls	Yes	Yes	Yes	Yes
Board and CEO Controls	Yes	Yes	Yes	Yes
Deal Controls	Yes	Yes	Yes	Yes
Panel B: Financial Advisor and Deal Premium				
	Raw Premium	Industry-Adjusted Premium		
	Model 1	Model 2		
CFO Influence	-0.003*** (0.001)	-0.002** (0.001)		
Financial Advisor	0.005 (0.012)	0.018 (0.013)		
CFO Influence x Financial Advisor	-0.004 (0.002)	-0.006 (0.002)		
Observations	2,639	2,639		
R-squared	0.828	0.796		
Year Fixed Effects	Yes	Yes		
Firm Fixed Effects	Yes	Yes		
Firm Controls	Yes	Yes		
Board and CEO Controls	Yes	Yes		
Deal Controls	Yes	Yes		

Table OA.9: Does CEO Influence and CEO-CFO Similarity Affect Other Results: Deal Characteristics

The table shows whether the relationship between CFO influence and various deal characteristics varies across firms with influential CEOs, and firms whose CEOs and CFOs share similar characteristics. In Panel A, we split firms into high and low CEO influence groups based on CEO Influence. In Panel B, we split firms into similar and different pairing of CFO and CEO based on CEO-CFO similarity index. CEO-CFO Similarity Index is a dummy variable coded 1 if the sum of three dichotomous variables that includes i.e., CFO-CEO age gap, CFO-CEO joint tenure and CFO-CEO same gender is greater than or equal to two and 0 otherwise. The CEO influence is a sum of six dichotomous variables that includes CEO outside directorship, CEO financial expertise, CEO seniority, CEO tenure, CEO ownership and CEO prior M&A experience. For this purpose, we create dichotomous measures of the continuous variables among six proxies of CEO influence based on industry-year medians (i.e., 1 if the variable is above the industry-year median and 0 otherwise). The CFO influence measure is the sum of seven dichotomous variables that attempt to capture the ability of the CFO to influence M&A outcome, as discussed in Section 2.2. For ease of exposition, we do not report the results on control variables. Analytical definitions for all variables are provided in the Appendix. ***, ** and * denote statistical significance at the 1%, 5% and 10% levels, respective

Panel A: Deal Characteristics and CEO Influence						
	Stock Payment		Cross-border Deal		Relative Deal Size	
	High CEO Influence	Low CEO Influence	High CEO Influence	Low CEO Influence	High CEO Influence	Low CEO Influence
CFO Influence	0.053 (0.079)	-0.090 (0.070)	-0.097*** (0.036)	-0.082** (0.037)	-0.098** (0.043)	-0.130*** (0.045)
Observations	1,899	1,223	1,899	1,223	1,899	1,226
Pseudo R^2	0.296	0.290	0.119	0.124	0.216	0.244
Year/Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Firm and Board Controls	Yes	Yes	Yes	Yes	Yes	Yes
Panel B: Deal Characteristics and CEO-CFO Similarity Index						
	Similar CFO-CEO	Different CFO-CEO	Similar CFO-CEO	Different CFO-CEO	Similar CFO-CEO	Different CFO-CEO
CFO Influence	-0.048 (0.150)	-0.122** (0.050)	-0.067* (0.040)	-0.102*** (0.034)	-0.111** (0.048)	-0.127*** (0.041)
Observations	1,739	1,383	1,739	1,383	1,739	1,383
Pseudo R^2	0.258	0.334	0.112	0.137	0.205	0.258
Year/Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Firm and Board Controls	Yes	Yes	Yes	Yes	Yes	Yes