CFO Succession and Corporate Financial Practices

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Abstract

We examine the determinants and financial performance consequences of Chief Financial Officer (CFO) successions. We argue that if internal monitoring mechanisms are effective, there should be a greater probability of forced CFO departures in firms with poor financial reporting and capital management performance, and resulting improvements in financial practices following forced turnovers. We test these hypotheses over the period 2002 to 2008. We find that (1) the incidences of accounting restatements and debt covenant violations are significantly associated with the probability of forced CFO turnovers; (2) firms are more likely to hire successor CFOs from outside the firm following accounting restatements, especially those due to irregularities; (3) the hiring of outside CFOs is associated with improved financial reporting quality. Further, these findings are concentrated in firms with majority independent boards, suggesting that outside directors play a greater role in monitoring CFOs than inside board members.

Key words: CFO succession, CFO turnover, Board of director monitoring

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1. Introduction

In this study, we examine the determinants and financial performance consequences of Chief Financial Officer (CFO) successions. As a result of increased external pressure from the capital market and regulators, the role of CFOs has expanded dramatically over the past decade from basic fiscal management and financial reporting to more comprehensive financial reporting and compliance responsibilities balanced with strategic business support. These changes have introduced new mechanisms designed to increase monitoring of CFOs by boards of directors. Board members are more accountable for financial reporting quality and corporate finance decisions and outcomes. They demand more frequent and comprehensive updates from CFOs to ensure that CFOs are fulfilling their fiduciary duties. While historically the CEO is the decision-maker in hiring a CFO, boards are no longer content to simply endorse a CEO's selection of a new CFO, but instead play a more active role in the hiring process by communicating with the CEO and interviewing promising candidates.[1]

We argue that if mechanisms for internal monitoring of CFOs are effective, there should be a greater probability of forced CFO departures in firms with poor financial practices and resulting improvements in financial practices following forced turnovers. Prior studies document that CFO turnovers are disciplinary in nature – triggered by a decline in operating performance and significant weaknesses in internal controls (Mian, 2001; Li et al., 2010). These findings are consistent with internal monitoring mechanisms being effective in holding poorly performing CFOs accountable.

[1] For details, see the article titled "Heavy Vetting – Boards of directors now want to talk to would-be CFOs – and vice versa" from the CFO Magazine July 1, 2006.

While removing a poorly performing CFO is important, the firm must also be able to identify and hire a competent successor CFO to enhance shareholder value. In this study, we examine the causes and financial performance consequences of CFO successions with a focus on providing direct insight on the subsequent hiring decisions and the corporate financial outcomes of these decisions. Specifically, we address three main research questions. First, to what extent do CFOs appear to be held accountable for their performance in financial reporting and corporate finance functions? Second, what types of successor CFOs do firms employ when they replace a poorly performing CFO? Third, to what extent are the desired successor CFO characteristics associated with improvements in subsequent corporate financial outcomes in these firms with poor financial practices?

To answer these questions, we collect data on CFO turnovers and successions from 2002 to 2008. The use of a sample period following the passage of the Sarbanes-Oxley Act (SOX) and other regulatory interventions provides a powerful empirical setting to capture the enhanced monitoring environment and greater board accountability towards CFOs. As noted in Engel, Hayes, and Wang (2010), the regulatory interventions, including SOX and stock exchange requirements and overall investors pressure to improve corporate governance, likely created an increased demand for board monitoring of the financial reporting process. We note, however, that more board involvement in the financial reporting and corporate financing activities does not necessarily translate into effective monitoring, thus the effectiveness of CFO succession processes remains an empirical question.

Our sample consists of 555 CFO succession events from 2002 to 2008 in which CFO departures are involuntary. We use a sample of 6,506 firm-years during this period with no CFO turnover firms as the primary control sample. We also include 148 CFO succession events in

which outgoing CFOs are promoted or reassigned within their firms as an alternative comparison group to control for the general determinants and consequences of CFO changes.

We first investigate the extent to which CFOs are held accountable for their performance. Historically, CFOs serve two functions in a firm, a controller role responsible for the financial reporting process and a treasurer role responsible for identifying and managing the company's financing needs. Using two alternative control groups as a benchmark, we find that the incidences of accounting restatements and debt covenant violations increase the probability of forced CFO turnovers, suggesting that performance measures capturing outcomes associated with the specific responsibilities of the CFOs are important determinants of CFO turnover decisions. We recognize that accounting restatements could be the result of an irregularity (intentional misstatement by management) or the result of an accounting error (technical issues in the application of GAAP), and that the managerial consequences of accounting restatements might vary depending on the type of restatements (Hennes et al. 2008). Thus, we replicate our analyses by separating irregularities from errors and find that both types of restatements are associated with CFO turnovers, but the turnover likelihood is higher and more significant when there is an irregularity as opposed to an error.

We further partition the sample into two subsamples based on the independence of the board to provide evidence on the role of board monitoring in the CFO turnover/succession process. We find that the significant relations between forced CFO turnover and performance measures capturing CFO job responsibilities are concentrated in firms with majority independent boards. This evidence is consistent with the idea of greater board involvement in financial reporting and capital management activities when board members have greater incentives to monitor CFOs.

Next, we study successor CFO characteristics and how these characteristics vary with the quality of firms' financial practices before succession. We focus on three characteristics of successor CFOs - their origin (i.e., internal promotion or outside hire), financial expertise, and treasurer role experience. We document that firms are more likely to hire CFOs from outside the firm when accounting restatements occur. Management literature suggests that the selection of a new CEO from outside an organization is a strong signal that the board of directors is interested in triggering substantial changes (Vancil, 1987). We interpret our empirical evidence as suggesting that the increased scrutiny of the financial reporting of public companies prompted boards of directors to hire outside CFOs to change the "tone" of the organization's financial reporting, which is considered to be the most important factor contributing to the integrity of the financial reporting process (Ge and McVay, 2005). We also investigate whether the type of restatement affects successor CFO characteristics, in particular the origin of the successor CFOs. Given that irregularities represent the more egregious type of restatements, boards have greater incentives to bring a successor CFO from outside the company to signal the urgency to restore financial reporting credibility when irregularities occur. Consistent with this expectation, our evidence suggests that the hiring of an outsider CFO is more significantly associated with accounting irregularities relative to accounting errors.

We further partition the sample based on board independence to analyze the impact of cross-sectional variation in the level of board monitoring. If boards simply rubber-stamp a CEO's selection of a new CFO, then there should be little cross-sectional variation in successor CFO characteristics across firms with different board structures. The empirical results, however, indicate that the significant associations between successor CFO characteristics and the quality of firms' financial practices documented earlier are more pronounced in firms with majority

independent boards, supporting the idea of active board involvement in the CFO hiring decisions.

Finally, we examine the association between successor CFO characteristics and subsequent corporate financial practices after forced turnovers. We document that the improvement in financial reporting quality, measured as reduced incidences of accounting restatements, is more pronounced with the appointment of an outsider CFO, suggesting that the hiring of an outsider CFO is effective in changing the "tone" at the top regarding financial reporting. We also find that the improvement in capital management quality is more pronounced with the appointment of a CFO with treasury role experience.

Our study makes the following contributions. First, we present new evidence about the causes and consequences of CFO successions during the 2002 to 2008 period. While there is extensive research on CEO successions (Denis and Denis, 1995; Huson et al., 2001; Huson et al., 2004), we know little about whether CFO successions following forced turnovers are associated with improved corporate financial practices. At the same time, substantial changes in both the role of CFOs and board monitoring of CFOs occurred over the past decade. Our analyses provide direct evidence on the monitoring quality of firms' financial functions in the current regulatory and business climate.

Second, we extend the literature on CFO turnovers by focusing on the unique responsibilities of CFOs who are in charge of external financial reporting and corporate financing matters. The board of directors' evaluation of CFOs' performance should focus on CFOs' ability to successfully manage firms' financial reporting and make financing decisions, not just on the overall operating performance of the firm. The empirical evidence in our paper lends strong support for the intuitive idea that performance metrics associated with the specific

responsibilities of non-CEO executives are also important determinants of their continued employment, in contrast to the general focus on overall performance in explaining non-CEO executive turnovers (Finkelstein et al., 2009). Our paper is most related to studies that examine the associations between governance decisions regarding CFOs and the CFOs' role in internal control aspect of the financial reporting process (Hennes et al., 2008; Hoitash et al., 2009; Li et al., 2010). These studies, however, cover a single cross-section and speak only to the managerial consequences of internal control failure. In contrast, our study of CFO turnover and succession decisions and our unique focus on financial reporting and corporate finance performance metrics allow us to shed light on the financial consequences of CFO successions and the role of board monitoring in this important process.

The remainder of the paper is organized as follows. In Section 2, we develop hypotheses on the determinants and consequences of CFO turnover and succession decisions. We describe the data and sample in Section 3, and present empirical results and insights in Section 4. Section 5 concludes the paper.

2. Hypothesis Development

2.1 The changing role of CFOs and the evolution of internal monitoring mechanisms of CFOs

In recent decades, the CFO's role has evolved from a traditional financial planning and reporting function to include broader and more complex job responsibilities such as comprehensive financial reporting and analysis, corporate financing, and strategic and risk management.[2] The passage of SOX again changed the landscape of the CFO's role. While CFOs are increasingly playing an active role in firms' strategic decisions, such as mergers and

[2] See "The evolving role of Today's CFOs", available at http://businessfinancemag.com/hr/evolving-role-todays-cfo.

acquisitions and other investment decisions, SOX focuses on CFOs' traditional financial reporting function. For example, SOX requires that all public companies establish and maintain an internal control system for financial reporting, and requires that management evaluate and certify the effectiveness of these systems and the external financial statements they produce (Sections 302 and 404). These changes have expanded the commitments of CFOs in that they are now the executive officers that direct all financial aspects of the business with special emphasis on financial reporting and compliance.

Likewise, characteristics of internal monitoring mechanisms at public firms, in particular the intensified scrutiny from the board of directors and audit committees, have changed since the passage of SOX. SOX emphasizes the role of audit committees, requiring that all members of the audit committee be independent (Section 301), and that the company's annual report disclose whether a member of the audit committee is a financial expert (Section 407). Furthermore, recent corporate governance scandals have also increased scrutiny from investors and the public, and increased shareholder activism has created new demands for more transparent information and more vocal challenges of management and boards at annual meetings. The combination of these forces has led to an increase in the demand for boards of directors to more diligently monitor top management including CFOs. Popular press and business survey articles provide anecdotal evidence supporting the notion that the nature of CFOs' relationship with their boards has changed since the passage of SOX. For example, a survey article by Russell Reynolds Associates (2006) reports that the meetings between CFOs and audit committees have become more formal with an increased focus on accounting issues, and that the duration and intensity of these meetings have increased in recent years. The same article also reports that the scope of the audit committees has grown to tackle specific responsibilities such as financial structure and

macro-governance issues. The above evidence is in accordance with the notion that board monitoring of CFOs has become more intense since the passage of SOX.

Our primary objective is to gain an understanding of the effectiveness of the internal monitoring mechanisms of CFOs. Unfortunately, most of the routine actions of board members are unobservable. As such, we examine the observable actions of board members in crisis situations – the CFO turnover and succession decisions. While it is common knowledge that the board of directors is the ultimate decision maker in selecting the next CEO (Mace 1986 and Vancil 1987), the hiring of the successor CFO is usually conducted by the CEO. Regulatory interventions around the passage of SOX, however, have increased the perceived risk of directors who are accountable for their companies operating in accordance with sound financial practices. As such, greater involvement of boards in the CFO hiring process has increasingly become the norm in recent years, and board members exercise greater due diligence in the CFO hiring process. Board members are involved not only in the interviewing and screening stages, but also in communicating with the CEO about what constitutes the right person before actual candidates are identified (DeMars, 2006).

2.2 The determinants of CFO turnovers

A large literature beginning with Couglan and Schmidt (1985) and Warner et al. (1988), analyzes top management turnover, and the general conclusion from this literature is that CEO turnover increases with poor company performance. Focusing on CFO turnovers, Mian (2001) documents that CFO turnovers are also preceded by poor operating performance. Collectively these studies suggest that management turnover is disciplinary in nature. Existing research presents mixed results on whether financial reporting failures lead to management turnovers.

Early studies do not document a positive relation between financial reporting problems and management turnover (Beneish, 1999; Agrawal et al., 1999). However, more recent empirical evidence suggests a significant association between management turnovers and financial reporting failures captured by accounting restatements and internal control weaknesses (Desai et al., 2006; Hennes et al., 2008; and Li et al., 2010).

Following prior literature, we expect that effective internal monitoring of CFOs will lead to a higher likelihood of forced turnover for those with poor performance. Our analyses broaden the scope of CFO performance to include not only overall corporate operating performance, but also the results of the distinct functions of CFOs as stewards of financial reporting and corporate financial policies. We argue that the pool of measures to evaluate overall CFO performance should capture the quality of firms' financial reporting practices and the effectiveness of capital management decisions – factors for which the CFOs are more directly responsible and thus, for which they should be held accountable. We use the incidence of accounting restatements as a proxy for financial reporting quality, and the incidence of debt covenant violations as a proxy for capital management quality.[3] We predict that the likelihood of involuntary CFO turnovers is positively related to recent incidences of accounting restatements and debt covenant violations along with operating performance measures.

Accounting restatements could be the result of an irregularity (intentional misstatement by management) or the result of an accounting error (technical issues in the application of GAAP). Hennes et al. (2008) report that the likelihood of management turnover is higher in the period surrounding the announcement of an irregularity compared to that surrounding the

[3] We use the incidence of debt covenant violations, an outcome variable, to capture capital management quality. While it is not clear that CFOs are actually responsible for debt covenant violations, Roberts and Sufi (2009) report that CFOs are required to submit periodic covenant compliance reports that discuss the computation of and adherence to each financial covenant, suggesting that CFOs are actively involved in debt contracting with banks.

announcement of error type restatements. While boards have incentives to fire a CFO after an irregularity, they are also likely to hold the CFO accountable for errors because CFOs should possess the expertise to prevent the errors. Therefore, we expect that both types of restatements are associated with the likelihood of CFO turnover.

We further probe whether the association between forced turnovers and CFO performance measures varies with the intensity of internal monitoring mechanisms. Weisbach (1988) documents a stronger CEO turnover-performance association for companies with outsider-dominated boards relative to those with insider-dominated boards, suggesting that independent directors play an important monitoring role in removing poorly performing CEOs. Similarly, Huson et al. (2004) document that firm performance improvement after CEO succession is positively related to the presence of an outsider-dominated or independent board. Independent directors have incentives to develop reputations as expert decision makers in the labor market and thus are more likely to be responsible for evaluating the senior management team and replacing them if they perform poorly (Fama and Jensen 1983). If independent directors have greater incentives to monitor and evaluate the CFO, we would expect a more pronounced relation between forced turnovers and CFO-specific performance measures in companies with more independent boards.

2.3 The determinants of successor CFO characteristics

We are interested in the following CFO characteristics: the professional qualification or knowledge (i.e., comprehensive financial expertise and treasurer role experience) and the origin (i.e., internal vs. external to the company) of CFOs. Specifically we develop hypothesis on desirable successor CFO characteristics with the potential to improve financial practices in

companies where CFOs are forced out due to poor performance. On one hand, we expect that the board of directors would hire a successor CFO with more financial expertise to fix poor financial practices. We also expect that a successor CFO with treasurer role experience is more capable of negotiating with the lenders to fix problems when the company has financing difficulty. On the other hand, it is not clear that a CFO's financial expertise and working experience are the first order factor in developing effective financial practices for these troubled companies, particularly in the area of financial reporting. The effectiveness of internal control environment over financial reporting usually reflects the "tone" at the top. Ge and McVay (2005) cite a note from the Treadway Commission, "the tone set by top management – the corporate environment or culture within which financial reporting occurs – is the most important factor contributing to the integrity of the financial reporting process." Therefore, if there is a need to fundamentally change the corporate culture or environment of financial reporting, we expect that the board of directors would hire a successor CFO from outside the company to change the "tone" at the top.

As in the analyses of CEO turnover determinants discussed in Section 2.2, we probe the impact of accounting restatements and board monitoring on successor CFO characteristics. Given that irregularities represent the more egregious type of restatements, boards are more likely to have greater incentives to hire a successor CFO from outside the company to signal the urgency to restore financial reporting credibility. Therefore, we expect that an outsider CFO is more likely to be appointed in companies with irregularity restatements relative to those with error restatements. In investigating the impact of board monitoring on the process of selecting the successor CFOs, we acknowledge that in addition to the significant role that the CEO plays in the CFO hiring process, board members have taken on increased responsibilities in identifying

the right person for the top finance job in the company (DeMars, 2006). Using the independence of boards to measure the extent of board monitoring in the CFO succession process, we expect that firms with majority independent boards are more likely to hire a successor CFO with the desirable characteristics in companies with poor financial practices.

2.4 The association between successor CFO characteristics and subsequent financial performance outcomes

Our final set of analyses explores the subsequent performance implications of CFO successions. We are interested in exploring whether subsequent financial practices are influenced by the characteristics of successor CFOs.

There is an emergent literature on the CFOs' role in firms' financial reporting and voluntary disclosure decisions. The "upper echelons" theory (Hambrick and Mason, 1984) predicts that organization outcomes, including strategic choices and performance levels, are partially predicted by managerial background characteristics. Applying this theory to financial managers, Bamber et al. (2010) find that individual CFO-specific effects play an important role in voluntary financial disclosures. Likewise, Ge et al. (2011) document that individual CFO styles matter across a wide range of financial reporting decisions.[4]

The analyses in these studies generally employ fixed effects to make inferences about CFO-specific characteristics.[5] We believe that our sample which focuses on CFO successions provides a unique setting to evaluate the effects of CFO characteristics on subsequent financial

[4] On the other hand, prior research provides mixed evidence on CFOs' roles in earnings management. While Jiang, Petroni, and Wang (2010) suggest that CFO equity incentives are more important than CEO equity incentives in explaining earnings management, the evidence in Feng et al (2011) indicates that CFOs are involved in earnings manipulations because of pressure from CEOs.

[5] In a recent paper, Fee, Hadlock, and Pierce (2011) raise concerns on the managerial style hypothesis which is usually tested using manager-specific fixed effects research methodology.

practices.[6] If the internal monitoring mechanisms of the CFO are effective and a successor CFO with characteristics deemed desirable in these poorly performing companies is hired, we predict a positive relation between the presence of these CFO characteristics and the subsequent improvement in financial practices following forced turnovers. More specifically, we expect that the hiring of a successor CFO from outside the company is related to the improvement in financial reporting, and that the hiring of a successor CFO with treasurer experience is related to reduced incidences of future debt covenant violations.

3. Data and sample

We use several sources for data in our study. We employ the Compustat ExecuComp database to construct the CFO turnover/succession sample covering the years from 2002 to 2008. We collect CFOs' succession and employment history from annual reports, proxy statements, and web searches. Financial accounting and stock returns data are drawn from Compustat and CRSP, respectively. The accounting restatement data, including the irregularity/error classification, and debt covenant violation data are described in Hennes et al. (2008 and 2012) and Nini et al. (2012), and are generously provided by the authors.[7] We exclude utility firms (two-digit SIC code 49) and financial institutions (one-digit SIC code 6) from the sample because CFOs in these regulated industries function differently from CFOs in unregulated industries.

[6] Matsunaga, Wang, and Yeung (2013) investigate the relation between CEOs' former CFO experience and firms' accounting policies including financial reporting, disclosure, and tax policies. Interestingly, they employ the empirical setting of CEO successions. However, they do not consider CFO characteristics or successions in their research design. In our empirical analysis, we include a variable of CEO succession to control for this potential effect.

[7] The data on restatements including irregularity/error classification are provided by Andy Leone. The data on debt covenant violations are available from http://faculty.chicagobooth.edu/amir.sufi/data.htm, compiled by Nini, Smith and Sufi. They collected debt covenant violation data from 10-Ks and 10-Qs. We record a violation as any violation that occurred during the fiscal year.

For the sample period before 2006, we identify an executive as a CFO if the "annual title" variable in the ExecuComp database indicates that the executive has financial responsibility such as chief financial officer or vice president of finance. For the sample period after 2006, we use the available "CFOANN" variable to identify CFOs.

We construct a measure of CFO turnover/succession starting from the list of CFOs identified from the ExecuComp database. CFO turnovers are identified for each year in which the personal identification of CFOs has changed from one year to the next. With an initial list of CFO turnovers/successions, we use *Nexus* and *Factiva* to search for articles or press releases that allow us to determine the reason for each CFO turnover. Given our focus on involuntary CFO turnovers, we classify turnovers according to whether the articles suggest that the CFO was forced to leave (see Engel et al. 2003 and Wang 2010, for example).

Table 1 Panel A reports the reasons of the 555 forced turnover events in the final sample. We categorize turnovers classified as "pursue other interests" (104 events), "pursue other possibilities" (114 events), "family or personal reasons" (25 events), "scandal" (13 events), and "no reason" (67 events) as forced. Prior studies (Warner et al., 1988; DeFond and Park, 1999) suggest that involuntary turnovers are often presented as retirements in press releases. Therefore, we classify retirement turnovers when the CFO is younger than 62 as forced turnovers (167 events). There are a number of CFO turnovers for which we are not able to find press releases. These are classified as "no news". Similar to early retirement, such turnovers of CFOs younger than 62 are considered forced turnovers in the absence of press releases (65 events).

For each CFO turnover event, we collect measures of successor CFO characteristics. Following prior literature on CEO succession, we define a successor CFO as an outsider if the CFO has been with the firm for no more than one year at the time of their appointment (Parrino,

1997; Huson et al., 2004). A successor CFO is classified as possessing comprehensive financial expertise when she has prior experience as a CFO. We also determine whether a successor CFO has prior experience as a treasurer. These characteristics are not mutually exclusive, i.e., a successor could possess one or more of these characteristics.

To examine whether forced CFO turnovers are related to poor financial practices, we use firm years with no CFO turnovers as the primary control group. There are 6,506 firm-year observations with no changes in CFOs, and we refer to this as the *no turnover* sample. We also construct an alternative benchmark sample by identifying cases when the outgoing CFO is promoted or re-assigned within the same company. The resulting 148 such turnover events are referred to as the *promoted* sample.[8]

4. Empirical Results

4.1 Descriptive statistics

Table 1 panel B reports summary statistics for the forced sample and the two control samples, i.e., the no turnover sample and the promoted sample. Compared with the no turnover sample, the forced sample contains more frequent accounting restatements and covenant violations in the year prior to the turnover (17.3% versus 10.7% and 10.3% versus 7.1%, respectively, with both differences significant at the 1% level). Further, the existence of both types of accounting restatements is significantly higher in the forced sample than in the no turnover sample (10.5% versus 7.5% for accounting error restatements, and 6.8% versus 3.2%

[8] We do not consider two types of CFO succession events in our empirical analyses: CFO successions when the outgoing CFO became a CFO or executive officer of another company, and CFO retirements when the outgoing CFO departed at age 62 or older. We suspect that these CFO succession events include a mixture of retirements, promotion, and forced turnovers. For example, some departing CFOs leave the company to become a CFO of a smaller or lower profile company due to poor performance or because their skills are no longer sufficient to address an increasingly complex environment. Inclusion of these ambiguous settings in either sample would add noise to the analyses.

for irregularity, both differences significant at the 1% level). The average return on assets is also lower in the forced sample (0.017 versus 0.038, the difference is significant at the 1% level). The comparison between the forced and the promoted samples yields similar inferences. The results from the descriptive statistics suggest that poor financial practices are positively associated with forced CFO turnovers.

Several successor CFO characteristics also differ between the forced group and the promoted group. More successor CFOs are hired from outside the company for the forced sample than for the promoted sample (53.7% versus 41.9%, the difference is significant at the 1% level). Firms in the forced sample are also more likely to hire successor CFOs with comprehensive financial expertise than the promoted sample (66.3% versus 57.4%, the difference is significant at the 1% level). We do not, however, observe significant differences in successor CFOs' prior experience as a Treasurer (22.9% versus 25.7%).

4.2 Determinants of forced CFO turnovers

The summary statistics in Table 1 provide preliminary insights on the determinants of forced CFO turnover events. Next, we use the following probit regression model to estimate the likelihood of the CFOs being forced out:

$$Prob(Forced = 1) = \alpha + \beta_1 Restatement + \beta_2 Covenant\ Violation + \beta_3 Roa + \beta_4 Return + \beta_5 Size + \beta_6 Leverage + \beta_7 Tenure + \beta_8 Age + \beta_9 CEOsuc + \varepsilon \quad (1)$$

The indicator variable *Forced* equals one if the CFO is forced to leave the company, and zero if there is no CFO turnover or the outgoing CFO is promoted or reassigned within the company. We include four proxies capturing different aspects of CFO responsibilities, *Restatement, Covenant Violation, Roa,* and *Return*. *Restatement* and *Covenant Violation* are indicator variables, equal to one if a firm experienced an accounting restatement or a debt covenant

violation, respectively, in either of the two years prior to the CFO turnover event, and zero otherwise. *Roa* and *Return* are measured as the industry-adjusted return on assets and stock returns, respectively. Industry classification is based on two-digit SIC codes. Control variables include firm size (*Size*), measured as the natural log of total assets; leverage (*Leverage*), measured as the ratio of total debt to total assets; the age and the number of years in office of the outgoing CFO (*Age* and *Tenure*). We also include an indicator variable to capture whether a CEO was replaced prior to CFO turnover (*CEOsuc*) to control for the potential influence of CEO successions on the CFO employment decisions (Matsunaga et al., 2013).

We present the regression results in Panel A of Table 2. The regression in column (1) employs the no turnover sample as a control group to predict forced turnovers. Consistent with the univariate results in Table 1, firms with recent accounting restatements are more likely to remove the CFOs (0.255, t=3.98). The coefficient on *Covenant Violation* is positive and marginally significant (0.104, t=1.29). CFOs in firms with poor operating performance, as measured by *Roa*, are also more likely to depart (-0.736, t=-3.73), confirming the findings of Mian (2001) that poor company performance proceeds CFO turnovers. However, the coefficient on *Return* is not statistically significant, in contrast to the strong and robust turnover return sensitivity documented in CEO turnover studies (see, for example, Warner et al 1988). These results suggest that performance measures capturing outcomes associated with the specific responsibilities of CFOs are important determinants of CFO turnover decisions.

We report the regression results of using the promoted sample as an alternative control group in column (2). The results in column (2) are similar to those in column (1). We focus on the coefficients on the performance measures for CFO job responsibilities. We find positive and

significant coefficients on *Restatement* and *Covenant Violation* (0.499; t=2.71; 0.474; t=1.88), and a negative and significant coefficient on *Roa* (-1.059; t=-1.97).

To shed light on the impact of different restatement types, we estimate equation (1) above by including the two types of restatements (i.e., accounting errors and irregularities) separately. The results are presented in columns (3) and (4) of Panel A. We find positive and significant coefficients on both types of accounting restatements with both of the control samples, suggesting that CFOs are held accountable for their financial reporting role, regardless of the source. We find, however, that the coefficient on *Irregularity* is higher in magnitude and more statistically significant than that on *Error* (0.401, t=3.87 vs. 0.184, t=2.38, the difference is significant at the level of 5%). This result suggests that while CFOs are held accountable for both types of restatements, they are more likely to be terminated after reporting an accounting irregularity than after an accounting error and highlights the importance of controlling for restatement type (Hennes et al., 2008). We interpret the evidence from Panel A collectively as suggesting that CFOs are held accountable for their performance in financial reporting and corporate financing functions.[9]

To examine the impact of board monitoring on CFO turnover decisions, we gather data on individual director independence from the Investor Responsibility Research Center (IRRC) database.[10] We partition the sample based on whether a majority of the sample firm's board members are independent. We find that the majority of sample firms have independent boards (4,741 versus 996). The results using the board independence partition are presented in columns (1) and (2) of Table 2 Panel B, with column (1) for the majority independent board subsample

[9] Due to the smaller sample size of the promoted sample, we use the no turnover sample as the control group in the subsequent cross-sectional analyses.

[10] We supplement the data from the IRRC database by collecting information directly from company proxy statements where necessary.

and column (2) for the less independent board subsample. We find that the results in column (1) are similar to those in Table 2 Panel A using the full sample, with a positive and significant coefficient on *Restatement* (0.261, *t*=3.59), a positive and marginally significant coefficient on *Covenant Violation* (0.150; *t*=1.63), and a negative and significant coefficient on *Roa* (-1.102; *t*=-4.71). In contrast, we do not find similar evidence in column (2) when we conduct the regression in the subsample of firms with less independent boards. None of the coefficients of interest are statistically significant. These results collectively suggest that the role of board monitoring in CFO turnovers is more pronounced in companies with majority independent boards.[11] Our findings from the CFO turnover sample are consistent with those of Weisbach (1998) who shows a stronger turnover-performance association for CEO turnover when the boards are dominated by outsiders.

We also conduct the regression analyses by controlling for restatement types, and present the results in Columns (3) and (4). In the subsample of firms with majority independent boards (Column (3)), we observe positive and significant coefficients on *Error and Irregularity* (0.166, *t*=1.89 and 0.449, *t*=3.88, respectively), and a negative and significant coefficient on *Roa* (-1.108, *t*=-4.74). We also find a positive coefficient on *Covenant Violation*, but with only marginal significance (at the 10% level). In contrast, none of the coefficients on CFO performance measures in Column (4) are statistically significant when the firms do not have majority independent boards.

[11] One concern on the results from the two different subsamples partitioned by board independence is that the sample size of the majority independent board subsample is larger than that of the less independent board subsample, therefore the results from the less independent subsample lacks power. To investigate this possibility, we repeat the regression on the majority independent board subsample using a randomized sample of 1,000 observations, and find similar results to those reported in the table, suggesting that subsample size differences are unlikely to explain the findings.

Overall, the results suggest that firms with majority-independent boards are more committed to ensuring solid financial practices by more actively removing poorly performing CFOs.

4.3 Determinants of successor CFO characteristics

Next, we examine characteristics of successor CFOs - specifically their origin (i.e., internal or external hire), and their professional qualifications (i.e., whether the incoming CFO has prior experience as a CFO or a treasurer). Given that the focus is on successor CFOs, we employ the forced turnover sample to investigate how the successor CFO characteristics are associated with the different aspects of poor financial practices in these firms. We use the following regression model to estimate the likelihood of successor CFOs possessing these characteristics.

$$Prob(Characteristic=1) = \alpha + \beta_1 Restatement + \beta_2 Covenant\ Violation + \beta_3 Roa + \beta_4 Return + \beta_5 Size + \beta_6 Leverage + \beta_7 CEOsuc + \varepsilon \quad (2)$$

The dependent variable *Characteristic* represents one of the three characteristics of successor CFOs, *Outside*, *Financial Expertise*, and *Treasurer*. The variable *Outside* equals one if a successor CFO is chosen from outside the company, and zero otherwise. The variables *Financial Expertise/Treasurer* are equal to one if a successor CFO has prior experience as a CFO/treasurer, and zero otherwise. Recall that we are interested in investigating whether successor CFOs possess desirable characteristics to improve financial practices in these companies where CFOs are forced out due to poor performance, so we include the CFO performance metrics: *Restatement*, *Covenant Violation*, *Roa*, and *Return*. Additionally, we include similar control variables used in model (1). These variables are as defined earlier, and also summarized in the Appendix.

Table 3 Panel A presents the probit regression results predicting the likelihood of hiring a successor CFO with one of the characteristics of interest: *Outside* in column (1), *Financial Expertise* in column (2), and *Treasurer* in column (3). Column (1) shows that firms are more likely to hire successor CFOs from outside the firm when there are incidences of accounting restatements (0.389, t=2.61), and when the firm's operating performance is poor (-0.861, t=-1.91). On the other hand, we do not find that the variables capturing firms' poor financial practices are significantly associated with the probability of successor CFOs possessing prior CFO experience (columns (2) and (3)). We also do not find a positive relation between debt covenant violations and the successor CFOs' prior Treasurer experience. These results suggest that successor CFOs from outside the firm appear to be desirable candidates to fix the financial reporting problems rather than CFOs with a particular prior experience.

With regard to the control variables, we find that a large firm is less likely to hire from the outside (-0.147; t=-4.10), possibly because they have more departments and a larger pool of eligible talent inside the firm. Larger firms are also less likely to hire CFOs with prior CFO experience (-0.077, t=-2.15). We do not find that successor CFO characteristics are associated with a recent CEO succession event.

The regression results including separate variables for each restatement type are presented in columns (4) through (6) of Panel A, with *Outside* in column (4), *Financial Expertise* in column (5) and *Treasurer* in column (6). We find that the coefficients on both *Error* and *Irregularity* restatement types are positive and significant when predicting successor CFO hiring from outside the company, with the coefficient on *Irregularity* being higher in magnitude and more significant (0.628, t=-2.69) than that on *Error* (0.249, t=1.38). We also document a significant coefficient on *Irregularity* (0.396, t=1.62) in predicting the hiring of a CFO with

financial expertise in column (5). Results on all other variables are consistent with the results in columns (1) through (3). The results of the analyses probing restatement type suggest that the hiring of a successor CFO from outside the firm appears to signal the urgency to restore financial reporting credibility when irregularities occur.

Note that the CFO characteristics are not mutually exclusive and a successor CFO could have one or more of these characteristics. Therefore, the error terms in the three models with each characteristic as the dependent variable could be correlated. To address this possibility, we estimate a multivariate probit model, and we find qualitatively similar results in both coefficient magnitude and statistical significance as those in Table 3 panel A. The results are not tabulated for brevity.

Similar to the analyses on CFO turnover decisions, we further investigate the effects of board independence on the characteristics of successor CFOs. Panel B of Table 3 presents the results based on the board independence partition. Columns (1) through (3) of panel B tabulate the choice of successor characteristics when the firms have majority independent boards. We find very similar results as those in Panel A using the full sample: firms are more likely to hire from outside the firm if there is an incidence of accounting restatements (0.397, t=2.48) and poor operating performance (-0.905, t=-1.93).

Columns (4) through (6) summarize the estimation results of model (2) for the subsample of observations with less independent boards. We do not find evidence that successor CFO characteristics are related to the quality of financial practices or operating performance prior to the turnover. Interestingly, and in contrast to the results with the majority-independent boards, the subsample of less dependent boards is more likely to hire outside CFO successors and CFOs with financial expertise when stock return performance is lower. We find this result surprising

because the stock return performance of the firm was not found to be a significant determinant or CFO turnover decisions in the analyses in Table 2 and, as discussed earlier, is more typically associated with turnover decisions for CEOs. The results in Panel B are consistent with the idea that firms with majority independent boards are more likely to hire successor CFOs from outside the company to tackle the financial reporting issues.

We also examine whether the characteristics of successor CFOs are associated with specific accounting restatement types for subsamples partitioned by board independence, and we report the results in panel C. Columns (1) through (3) show the choice of successor characteristics when firms have majority independent boards. We find that firm are more likely to hire from outside the firm following accounting irregularities (0.764, t=3.03), but not error restatements (0.176, t=0.90) (Column (1)). Successor CFOs also tend to have prior CFO experience following accounting irregularities (0.410, t=1.60) (Column (2)). Panel C columns (4) through (6) summarize the regression results for the subsample of firms with less independent boards. As in Panel B, we do not find significant association between successor CFO characteristics and firms' financial practice quality before the forced turnover in the subsample of less independent boards.

Taken together, the results in panels B and C suggest that firms with directors that have more incentives to monitor – i.e., those with majority independent boards, tend to choose successor CFOs with characteristics that better equip them to address poor financial practices. In particular, successor CFOs from outside the firm can help change the 'tone' of the financial function and address problematic financial reporting practices that resulted in irregularities. Overall, these results support the idea of greater board involvement in selecting successor CFOs when board members have greater incentives to monitor CFOs.

4.4 Financial performance implications of CFO successions

Our findings thus far show that forced turnovers are more likely to be driven by lower CFO performance and that firms tend to hire CFOs possessing desirable characteristics with the potential to tackle what led to such turnovers. We also find that these results are concentrated in firms with majority independent boards. We now probe further and examine whether these characteristics hypothesized to have the potential to improve the quality of financial practices following the forced turnover events are associated with actual subsequent improvements in financial practices. Specifically, we estimate the following regression model:

$$\text{Prob}(Outcome=1) = \alpha+\beta_1 Outside+\beta_2 Financial\ expertise+\beta_3 Treasurer+\beta_4 Roa+\beta_5 Return+ \beta_6 Size+\beta_7 Leverage+\beta_8 CEOsuc+\beta_9 lag(dependent\ variable)+\varepsilon \quad (3)$$

where *Outcome* captures either the existence of a restatement or debt covenant violation in the two year period following the forced CFO turnover. To control for the potential stickiness of the dependent variables, we include lagged dependent *Outcome* variables in the model.

We report the estimation results of model (3) for the each of the subsequent financial outcome variables (*Restatement, Error, Irregularity* and *Covenant Violation*) following forced CFO turnovers in Table 4. We find in Column (1) that successor CFOs hired from outside the firm are associated with reduced probability of accounting restatements in the two years after the turnover events (-0.177, t=-1.33), but not those successor CFOs with prior CFO or treasurer experience (0.157, t=1.10; 0.086, t=0.56). When we separate subsequent irregularity restatements from error restatements, the results show that successor CFOs hired from outside the firm are significantly associated with reduced probability of subsequent irregularity restatement (column (2): -0.298, t=-1.75), but not subsequent error restatement (column (3): -0.031, t=-0.20). These results are consistent with the idea that the hiring of an outsider CFO is

effective in changing the "tone" at the top regarding financial reporting, particularly as it relates to accounting irregularities.

Finally, column (4) presents results on subsequent debt covenant violations. While we do not find significant results on *Outside* (-0.160, t=0.86) and *Financial Expertise* (0.204, t=1.00), we find a negative and significant coefficient on *Treasurer* (-0.598, t=-2.22). This result suggests that the subsequent improvement in capital management quality is positively related to the appointment of a CFO with prior treasurer experience.

4.5 Analyses from the 1997 to 2001 time period

The underlying premise of our paper is that the regulatory interventions in 2002 resulted in an enhanced monitoring environment and greater board accountability toward CFOs. For purposes of comparison, we conduct analyses on the CFO turnover triggers and the determinants and consequences of CFO succession decisions during the 1997 to 2001 period – prior to the enactment of SOX and other regulatory initiatives. We follow data collection procedures similar to those described in Section 3 to identify 443 forced CFO turnover events, 4,398 no turnover events, and 104 CFO turnover events when the CFO is promoted or reassigned to a high rank.

The results are presented in Table 5. Panel A shows the results on the determinants of forced CFO turnover. While we find that CFOs are more likely to be forced out when there is an incidence of debt covenant violation, we do not find any significant relation between CFO forced turnovers and the incidence of accounting restatements or poor operating performance. This contrasts with significant positive associations between CFO forced turnover and both financial reporting and operating performance in Table 2 covering the post-2001 period. Panel B reports the results on the determinants of successor CFO characteristics following forced turnovers, and

panel C presents the results on the relation between these CFO characteristics and firms' subsequent financial practices. In contrast to the analogous results from the post-2001 period in Table 3 (Panel A) and Tables 4 (Panel A), we find little evidence that successor CFO characteristic are associated with measures of CFO performance (Panel B) with the sole exception of a significant positive relation between the hiring of a successor CFO with financial expertise in firms with accounting restatements. Further, we document no significant relation between subsequent improvements in financial reporting quality and the characteristics of successor CFOs (Panel C). In comparing these analyses from the pre-SOX period to the primary analyses in Tables 3 through 5, we find that the evidence in the pre-SOX period lacks the strength of that documented in the post-SOX period.

5. Conclusion

In this paper, we examine both the determinants of CFO turnover and successor CFO characteristics and the financial performance consequences of CFO successions. We hypothesize that if internal monitoring mechanisms are effective, there should be a greater probability of forced CFO departures in firms with poor financial reporting and capital management performance. Further, we expect a greater association between CFO performance metrics and the probability of hiring a successor CFO with characteristic expected to address the financial problems and resulting improvements in financial practices following the hiring of CFOs with these characteristics in firms with poor financial practices.

We test the hypotheses during the 2002 to 2008 period, a period following the passage of the Sarbanes-Oxley Act. We conjecture that the regulatory interventions in 2002 resulted in an enhanced monitoring environment and greater board accountability toward CFOs. The use of the

post-SOX sample period thus provides a more powerful empirical setting to identify the effects of board monitoring of CFOs. We find that the incidences of accounting restatements and debt covenant violations are significantly associated with the probability of forced CFO turnovers. We also show that firms are more likely to hire successor CFOs from outside the firm following these forced turnovers and that the hiring of such CFOs are associated with improved financial reporting quality. These findings are concentrated in firms with majority independent boards, suggesting that outside directors play a greater role in monitoring CFOs than inside board members. Overall, we interpret the empirical evidence as consistent with the notion that board of directors' monitoring plays an important role in the CFO succession process in the current regulatory and business climate.

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Appendix: Variable definitions

Variable Name	Variable Definition
Firm characteristics	
Restatement	Equals one if the firm experiences an accounting restatement (either accounting error or irregularity) in either of the two years prior to the CFO turnover event, and zero otherwise.
Error	Equals one if the firm experiences an accounting restatement due to accounting error in either of the two years prior to the CFO turnover event, and zero otherwise.
Irregularity	Equals one if the firm experiences an accounting restatement due to an accounting irregularity in either of the two years prior to the CFO turnover event, and zero otherwise.
Covenant Violation	Equals one if the firm experiences a debt covenant violation in either of the two years prior to the CFO turnover event, and zero otherwise.
Roa	Industry-adjusted return on assets for the year prior to CFO turnover, where industry is based on two-digit SIC code.
Return	Industry-adjusted stock return for the year prior to CFO turnover, where industry is based on two-digit SIC code.
Size	Natural logarithm of the total assets at the beginning of the year.
Leverage	The ratio of total debt and total assets
CEOsuc	Equals one if there is a new CEO in the most recent two years as of the year of CFO succession, and zero otherwise.
CFO Succession characteristics	
Forced	Equals one if the outgoing CFO is classified as being "fired", "demoted", "pursue other interests or possibilities", leaving for "family or personal reasons", "accounting irregularity or scandal", and "no reason", and retiring before the age of 62, and zero otherwise.
Tenure	The number of years the outgoing CFO has held the position.
Age	The age of the outgoing CFO in the year of turnover.
Successor CFO characteristics	
Outside	Equals one if the successor CFO is from outside the company, and zero otherwise.
Financial Expertise	Equals one if the successor CFO has prior experience as a CFO and zero otherwise.
Treasurer	Equals one if the successor CFO has prior experience as a treasurer and zero otherwise.

Table 1. Summary statistics
This table reports descriptive statistics of the sample for the years 2002 to 2008. Variables are defined in the Appendix.

Panel A. Reasons for forced CFO turnover
This table summarizes the reasons for forced CFO turnovers from 2002 and 2008.

Reason for forced turnover	*Frequency*
Retirement before 62	167
Pursuing other possibilities	114
Pursuing other interests	104
No news	65
No reason provided	67
Family or personal reasons	25
Scandal	13
Total	555

Panel B. Sample description

This table reports descriptive statistics of sample firms for the years 2002 to 2008, including number of observations, mean, median and the standard deviation. Information is provided for the sample of forced CFO turnovers and the two control samples – the no CFO turnover sample and the CFO promoted sample. Information on the incoming and outgoing CFOs background data are collected from annual reports, proxy statements, and web searches. Bold numbers are significant differences between the forced out sample and the two control samples based on t-test for mean comparison and Wilcoxon test for median comparison, at the level of 5%. Variables are defined in the Appendix.

	CFO Forced out (N=555)			No CFO turnover (N=6506)			CFO promoted (N=148)		
	Mean	Median	Std	Mean	Median	Std	Mean	Median	Std
Firm characteristics									
Restatement	0.173	0.000	0.379	**0.107**	**0.000**	0.309	**0.068**	**0.000**	0.252
Error	0.105	0.000	0.306	**0.075**	**0.000**	0.263	**0.047**	**0.000**	0.213
Irregularity	0.068	0.000	0.253	**0.032**	**0.000**	0.177	**0.020**	**0.000**	0.141
Covenant Violation	0.103	0.000	0.304	**0.071**	**0.000**	0.257	**0.034**	**0.000**	0.181
Roa	0.017	0.044	0.144	**0.038**	**0.051**	0.105	**0.052**	**0.058**	0.101
Return	0.152	0.074	0.574	0.200	**0.118**	0.568	0.213	**0.156**	0.505
Size	7.330	7.235	1.700	**7.190**	**7.013**	1.553	7.596	7.545	1.652
Leverage	0.209	0.206	0.173	0.196	0.186	0.165	0.215	0.192	0.168
Tenure	11.595	8.000	8.972	**10.150**	**8.000**	8.285	12.115	10.000	8.131
Age	51.501	52.000	6.240	**49.371**	**49.000**	6.439	**49.196**	**49.000**	5.960
CEOsuc	0.261	0.000	0.440	**0.179**	**0.000**	0.384	0.291	0.000	0.456
Successor CFO characteristics									
Outside	0.537	1.000	0.499				**0.419**	**0.000**	0.495
Financial Expertise	0.663	1.000	0.473				**0.574**	**1.000**	0.496
Treasurer	0.229	0.000	0.420				0.257	0.000	0.438

Table 2. Board independence and the likelihood of forced CFO turnover

This table examines the determinants of forced CFO turnover (i.e. the likelihood that the CFOs are removed from office involuntarily).

$Prob(Forced=1)=\alpha+\beta_1 Restatement+\beta_2 Covenant\ Violation+\beta_3 Roa+\beta_4 Return+\ \beta_5 Size+\beta_6 Leverage+\beta_7 Tenure +\beta_8 Age+\beta_9 CEOsuc++\varepsilon$

$Prob(Forced=1)=\alpha+\beta_1 Error+\beta_2 Irregularity+\beta_3 Covenant\ Violation+\beta_4 Roa+\beta_5 Return+\ \beta_6 Size+\beta_7 Leverage +\beta_8 Tenure+\beta_9 Age+\beta_{10}\ CEOsuc+\varepsilon$

Panel A. The likelihood of forced CFO turnover

Using the forced sample and a control sample, either the no turnover sample of the promoted CFO sample for the years 2002 to 2008, this table reports the estimation results predicting the likelihood that the CFOs are removed from office involuntarily. Standard errors are robust standard errors clustered by two-digit industry. The coefficients and their *t*-stats are presented in the table. *, **, *** denote significance at the 10%, 5%, and 1% levels with one-tailed tests for test variables (in bold) and two-tailed tests for control variables. Variables are defined in the Appendix.

Dependent Variable:	Control Sample		Control Sample	
Prob(*Forced*=1)	No turnover	Promoted	No turnover	Promoted
	(1)	(2)	(3)	(4)
Variable	Estimate (t-stats)	Estimate (t-stats)	Estimate (t-stats)	Estimate (t-stats)
Restatement	0.255***	0.499***		
	(3.98)	(2.71)		
Error			0.184***	0.426**
			(2.38)	(1.93)
Irregularity			0.401***	0.636**
			(3.87)	(2.06)
Covenant Violation	0.104*	0.474**	0.092	0.466**
	(1.29)	(1.88)	(1.13)	(1.84)
Roa	-0.736***	-1.059**	-0.738***	-1.069**
	(-3.73)	(-1.97)	(-3.74)	(-1.99)
Return	-0.026	-0.087	-0.023	-0.085
	(-0.63)	(-0.82)	(-0.55)	(-0.79)
Size	0.008	-0.058	0.006	-0.059
	(0.49)	(-1.55)	(0.37)	(-1.58)
Leverage	0.088	0.013	0.092	0.008
	(0.62)	(0.04)	(0.64)	(0.02)
Tenure	0.006**	-0.006	0.007**	-0.005
	(2.33)	(-0.79)	(2.46)	(-0.74)
Age	0.024***	0.041***	0.024***	0.040***
	(6.42)	(4.25)	(6.42)	(4.25)
CEOsuc	0.207***	-0.198	0.205***	-0.200
	(3.85)	(-1.57)	(3.82)	(-1.59)
Constant	-2.803***	-0.729	-2.794***	-0.719
	(-13.84)	(-1.48)	(-13.80)	(-1.46)
Pseudo_R2	0.030	0.064	0.031	0.065
N	7061	703	7061	703

Panel B. The likelihood of forced CFO turnover for firms partitioned by board independence

Using the forced sample and the no turnover sample for the years 2002 to 2008, this table reports the estimation results predicting the likelihood that the CFOs are removed from office involuntarily. Standard errors are robust standard errors clustered by two-digit industry. *, **, *** denote significance at the 10%, 5%, and 1% levels with one-tailed tests for test variables (in bold) and two-tailed tests for control variables. Variables are defined in the Appendix.

Dependent Variable: Prob(*Forced*=1)	*Majority Independent Board* Yes	*Majority Independent Board* No	*Majority Independent Board* Yes	*Majority Independent Board* No
	(1)	(2)	(3)	(4)
Variable	Estimate (t-stats)	Estimate (t-stats)	Estimate (t-stats)	Estimate (t-stats)
Restatement	0.261***	0.199		
	(3.59)	(1.09)		
Error			0.166**	0.151
			(1.89)	(0.73)
Irregularity			0.449***	0.363
			(3.88)	(1.01)
Covenant Violation	0.150*	-0.115	0.132*	-0.127
	(1.63)	(-0.45)	(1.43)	(-0.50)
Roa	-1.102***	-0.228	-1.108***	-0.232
	(-4.71)	(-0.32)	(-4.74)	(-0.33)
Return	0.035	0.098	0.040	0.101
	(0.67)	(0.89)	(0.75)	(0.92)
Size	-0.038**	-0.023	-0.041**	-0.024
	(-2.05)	(-0.48)	(-2.20)	(-0.51)
Leverage	0.075	0.507	0.080	0.507
	(0.44)	(1.39)	(0.47)	(1.38)
Tenure	0.005	0.009	0.005*	0.009
	(1.59)	(1.19)	(1.76)	(1.20)
Age	0.027***	0.006	0.027***	0.006
	(6.21)	(0.72)	(6.23)	(0.70)
CEOsuc	0.242***	-0.225	0.240***	-0.222
	(4.04)	(-1.39)	(4.00)	(-1.37)
Constant	-2.507***	-1.699***	-2.497***	-1.682***
	(-10.46)	(-3.15)	(-10.42)	(-3.11)
Pseudo_R2	0.039	0.016	0.040	0.016
N	4741	996	4741	996

Table 3. Successor CFO characteristics

This table examines the determinants of the characteristics for the incoming CFOs - their professional qualification and the origin of CFOs (internal vs. external to the company) after a CFO is removed from office involuntarily.

$Prob(Characteristic=1)=\alpha+\beta_1 Restatement+\beta_2 Covenant\ Violation+\beta_3 Roa+\beta_4 Return+\ \beta_5 Size+\beta_6 Leverage+\beta_7 CEOsuc+\ \varepsilon$

$Prob(Characteristic=1)=\alpha+\beta_1 Error+\beta_2 Irregularity+\ \beta_3 Covenant\ Violation+\beta_4 Roa+\beta_5 Return+\ \beta_6 Size+\beta_7 Leverage+\beta_8 CEOsuc+\ \varepsilon$

Panel A. Predicting successor CFOs characteristics

This table examines the determinants of successor CFO characteristics for the years 2002 to 2008. Standard errors are robust standard errors clustered by two-digit industry. *, **, *** denote significance at the 10%, 5%, and 1% levels with one-tailed tests for test variables (in bold) and two-tailed tests for control variables. Variables are defined in the Appendix.

Dependent Variable:	Outside	Financial Expertise	Treasurer	Outside	Financial Expertise	Treasurer
Prob(*Characteristic*=1)	(1)	(2)	(3)	(4)	(5)	(6)
Variables	Estimate (t-stats)	Estimate (t-stats)	Estimate (t-stats)	Estimate (t-stats)	Estimate (t-stats)	Estimate (t-stats)
Restatement	0.389***	0.071	0.154			
	(2.61)	(0.47)	(0.98)			
Error				0.249*	-0.110	0.074
				(1.38)	(-0.61)	(0.38)
Irregularity				0.628***	0.396*	0.280
				(2.69)	(1.62)	(1.19)
Covenant Violation	0.009	0.030	-0.001	-0.018	-0.004	-0.019
	(0.05)	(0.16)	(-0.01)	(-0.10)	(-0.02)	(-0.09)
Roa	-0.861*	-0.172	0.526	-0.874*	-0.225	0.508
	(-1.91)	(-0.41)	(1.12)	(-1.95)	(-0.54)	(1.08)
Return	-0.078	0.073	0.129	-0.067	0.092	0.136
	(-0.78)	(0.70)	(1.24)	(-0.67)	(0.87)	(1.31)
Size	-0.147***	-0.077**	-0.027	-0.151***	-0.081**	-0.029
	(-4.10)	(-2.15)	(-0.70)	(-4.19)	(-2.24)	(-0.74)
Leverage	0.365	-0.143	0.540	0.374	-0.133	0.539
	(1.09)	(-0.42)	(1.50)	(1.11)	(-0.39)	(1.50)
CEOsuc	-0.112	0.207	-0.090	-0.123	0.191	-0.098
	(-0.89)	(1.58)	(-0.65)	(-0.97)	(1.46)	(-0.70)
Constant	1.088***	0.946***	-0.695**	1.120***	0.974***	-0.681**
	(4.20)	(3.59)	(-2.46)	(4.29)	(3.69)	(-2.40)
Pseudo_R2	0.046	0.090	0.011	0.049	0.019	0.012
N	555	555	555	555	555	555

Panel B. Successor CFO characteristics for firms partitioned by board independence

This table examines the determinants of successor CFO characteristics for firms after partitioning by the independence of the board. Standard errors are robust standard errors clustered by two-digit industry. *, **, *** denote significance at the 10%, 5%, and 1% levels with one-tailed tests (in bold) for test variables and two-tailed tests for control variables. Variables are defined in the Appendix.

	Majority Independent Board			*Less Independent Board*		
Dependent Variable:	Outside	Financial Expertise	Treasurer	Outside	Financial Expertise	Treasurer
Prob(*Characteristics*=1)	(1)	(2)	(3)	(4)	(5)	(6)
Variables	Estimate (t-stats)	Estimate (t-stats)	Estimate (t-stats)	Estimate (t-stats)	Estimate (t-stats)	Estimate (t-stats)
Restatement	0.397***	0.095	0.168	0.302	-0.032	-0.269
	(2.48)	(0.58)	(1.00)	(0.68)	(-0.07)	(-0.49)
Covenant Violation	0.070	0.038	0.064	-0.399	-0.174	-0.261
	(0.35)	(0.19)	(0.30)	(-0.64)	(-0.27)	(0.189)
Roa	-0.905**	-0.026	0.445	1.467	-2.160	2.447
	(-1.93)	(-0.06)	(0.93)	(0.68)	(-0.93)	(0.93)
Return	-0.040	-0.028	0.120	-0.549**	1.082***	0.358
	(-0.38)	(-0.25)	(1.09)	(-1.79)	(2.61)	(1.07)
Size	-0.167***	-0.087**	-0.006	0.083	-0.084	-0.368**
	(-4.39)	(-2.30)	(-0.13)	(0.71)	(-0.66)	(-2.38)
Leverage	0.338	-0.314	0.591	0.350	0.867	1.381
	(0.91)	(-0.84)	(1.51)	(0.39)	(0.87)	(1.23)
CEOsuc	-0.148	0.202	-0.091	0.270	0.168	-0.700
	(-1.10)	(1.46)	(-0.62)	(0.64)	(0.38)	(-1.13)
Constant	1.246***	1.065***	-0.852***	-0.573	0.729	1.395
	(4.45)	(3.75)	(-2.82)	(-0.72)	(0.85)	(1.43)
Pseudo_R2	0.061	0.018	0.012	0.047	0.085	0.106
N	467	467	467	88	88	88

Panel C. Successor CFO characteristics for firms partitioned by board independence with details of type of restatement

This table examines the determinants of successor CFO characteristics for firms after partitioning by the independence of the board and separately includes a measure of the type of accounting restatement - error vs. irregularity. Standard errors are robust standard errors clustered by two-digit industry. *, **, *** denote significance at the 10%, 5%, and 1% levels with one-tailed tests for test variables (in bold) and two-tailed tests for control variables. Variables are defined in the Appendix.

	Majority Independent Board			*Less Independent Board*		
Dependent Variable:	Outside	Financial Expertise	Treasurer	Outside	Financial Expertise	Treasurer
Prob(*Characteristic*=1)	(1)	(2)	(3)	(4)	(5)	(6)
Variables	Estimate (t-stats)	Estimate (t-stats)	Estimate (t-stats)	Estimate (t-stats)	Estimate (t-stats)	Estimate (t-stats)
Error	0.176	-0.091	0.066	0.688	-0.230	-0.141
	(0.90)	(-0.47)	(0.32)	(1.25)	(-0.43)	(-0.24)
Irregularity	0.764***	0.410*	0.316*	-0.639	0.428	0.148
	(3.03)	(1.60)	(1.30)	(-0.77)	(0.53)	(0.294)
Covenant Violation	0.040	0.011	0.046	-0.204	-0.284	-0.094
	(0.20)	(0.05)	(0.22)	(-0.31)	(-0.43)	(0.232)
Roa	-0.924**	-0.083	0.420	1.596	-2.243	2.469
	(-1.99)	(-0.19)	(0.87)	(0.73)	(-0.96)	(0.95)
Return	-0.025	-0.010	0.129	-0.605*	1.117***	0.338
	(-0.23)	(-0.09)	(1.16)	(-1.95)	(2.66)	(1.01)
Size	-0.174***	-0.090**	-0.007	0.103	-0.095	-0.357**
	(-4.52)	(-2.36)	(-0.17)	(0.88)	(-0.74)	(-2.29)
Leverage	0.341	-0.308	0.587	0.227	0.943	1.311
	(0.92)	(-0.82)	(1.49)	(0.25)	(0.94)	(1.17)
CEOsuc	-0.172	0.183	-0.102	0.206	0.203	-0.719
	(-1.27)	(1.31)	(-0.69)	(0.48)	(0.45)	(-1.16)
Constant	1.299***	1.088***	-0.837***	-0.681	0.791	1.337
	(4.60)	(3.83)	(-2.76)	(-0.85)	(0.92)	(1.36)
Pseudo_R2	0.067	0.022	0.013	0.063	0.089	0.102
N	467	467	467	88	88	88

Table 4. Outcome of CFO successions

This table reports the estimation results of the following regression model:
Prob(*Outcome*=1)=$\alpha+\beta_1$*Outside*$+\beta_2$*Financial expertise*$+\beta_3$*Treasurer*$+\beta_4$*Roa*$+\beta_5$*Return*$+\beta_6$*Size*
$+\beta_7$*Leverage* $+\beta_8$*CEOsuc* $+\beta_9$ *lag(dep. var.)* $+\varepsilon$,
where *Outcome* is measured over the two years after the forced CFO succession in 2002 to 2008. Standard errors are robust standard errors clustered by two-digit industry. *, **, *** denotes significance at the 10%, 5%, and 1% levels with one-tailed tests for test variables (in bold) and two-tailed tests for control variables. Variables are defined in the Appendix.

Dependent Variable	Restatement	Irregularity	Error	Covenant Violation
Prob(*Outcome*=1)	(1)	(2)	(3)	(4)
	Estimate	Estimate	Estimate	Estimate
Variable	(t-stat)	(t-stat)	(t-stat)	(t-stat)
Outside	-0.177*	-0.298**	-0.031	-0.160
	(-1.33)	(-1.75)	(-0.20)	(-0.86)
Financial expertise	0.157	0.138	0.100	0.204
	(1.10)	(0.76)	(0.59)	(1.00)
Treasurer	0.086	0.096	0.013	-0.598**
	(0.56)	(0.50)	(0.07)	(-2.22)
Roa	0.139	0.095	0.102	0.239
	(1.02)	(0.56)	(0.63)	(1.27)
Return	-0.164	-0.161	-0.069	0.481
	(-0.32)	(-0.23)	(-0.12)	(0.68)
Size	0.107	-0.025	0.168	-0.035
	(0.86)	(-0.15)	(1.18)	(-0.21)
Leverage	-0.062	0.019	-0.124**	-0.197***
	(-1.42)	(0.34)	(-2.30)	(-2.83)
CEOsuc	-0.312	-0.310	-0.229	1.317**
	(-0.77)	(-0.59)	(-0.48)	(2.42)
lag(dep. var.)	0.321*	0.845***	0.500**	1.289***
	(1.89)	(2.85)	(2.40)	(5.96)
Constant	-0.615*	-1.601***	-0.585	-0.665
	(-1.79)	(-3.68)	(-1.42)	(-1.33)
Pseudo_R2	0.025	0.043	0.048	0.227
N	555	555	555	555

Table 5. Analyses in the 1997 to 2001 period

Panel A. The likelihood of forced CFO turnover

Using the forced sample and a control sample, either the no turnover sample or the promoted CFO sample for the years 1997 to 2001, this table reports the estimation results of variations of the following regression:

$Prob(Forced=1)=\alpha+\beta_1 Restatement+\beta_2 Covenant\ Violation+\beta_3 Roa+\beta_4 Return+\ \beta_5 Size+\beta_6 Leverage+\beta_7 Tenure +\beta_8 Age+\beta_9 CEOsuc++\varepsilon$

Standard errors are robust standard errors clustered by two-digit industry. The coefficients and their *t*-stats are presented in the table. *, **, *** denotes significance at the 10%, 5%, and 1% levels with one-tailed tests for test variables (in bold) and two-tailed tests for control variables. Variables are defined in the Appendix.

Dependent Variable:	Control sample	
Prob(*Forced*=1)	No turnover	Promoted
	(1)	(2)
Variable	Estimate (t-stats)	Estimate (t-stats)
Restatement	-0.035	-0.011
	(-0.25)	(-0.03)
Covenant Violation	0.284***	0.209
	(3.05)	(0.93)
Roa	-0.040	-0.072
	(-0.15)	(-0.12)
Return	0.017	-0.047
	(0.48)	(-0.60)
Size	-0.034*	-0.066
	(-1.80)	(-1.49)
Leverage	0.059	0.260
	(0.36)	(0.65)
Tenure	0.001	-0.007
	(0.16)	(-0.87)
Age	0.029***	0.032***
	(7.22)	(3.47)
CEOsuc	0.336***	-0.007
	(5.44)	(-0.05)
Constant	-2.636***	-0.227
	(-12.45)	(-0.47)
Pseudo_R2	0.033	0.028
N	4841	547

Panel B. Characteristics of Successor CFOs

This table examines the determinants of the characteristics for the incoming CFOs after a CFO is removed from office involuntarily, for the years 1997 to 2001.

$$Prob(CFO\ Characteristics=1)=\alpha+\beta_1 Restatement+\beta_2 Covenant\ Violation+\beta_3 Roa+\beta_4 Return+\beta_5 Size+\beta_5 Leverage+\beta_6 CEOsuc+\varepsilon$$

Standard errors are robust standard errors clustered by two-digit industry. The coefficients and their *t*-stats are presented in the table. *, **, *** denotes significance at the 10%, 5%, and 1% levels with one-tailed tests for test variables (in bold) and two-tailed tests for control variables. Variables are defined in the Appendix.

Dependent Variable	Outside	Financial Expertise	Treasurer
Prob(*Characteristic*=1)	(1)	(2)	(3)
Variable	Estimate (t-stats)	Estimate (t-stats)	Estimate (t-stats)
Restatement	0.416	0.660**	-0.453
	(1.20)	(1.72)	(-1.08)
Covenant Violation	0.130	0.220	0.043
	(0.64)	(1.06)	(0.20)
Roa	-0.433	-0.080	0.190
	(-0.67)	(-0.13)	(0.27)
Return	0.059	-0.081	-0.067
	(0.71)	(-1.01)	(-0.70)
Size	-0.198***	-0.024	0.043
	(-4.67)	(-0.59)	(0.95)
Leverage	-0.478	-0.806**	0.311
	(-1.23)	(-2.08)	(0.74)
CEOsuc	0.208	0.308**	0.109
	(1.48)	(2.15)	(0.73)
Constant	1.552***	0.523*	-1.111***
	(5.53)	(1.92)	(-3.71)
Pseudo_R2	0.057	0.023	0.011
N	443	443	443

Panel C. Outcome of CFO succession

This table reports the estimation results of the following regressions:

Prob(*Outcome*=1)=$\alpha+\beta_1$*Outside*$+\beta_2$*Financial expertise*$+\beta_3$*Treasurer*$+\beta_4$*Roa*$+\beta_5$*Return*$+\beta_6$*Size*
$+\beta_7$*Leverage* $+\beta_8$*CEOsuc*$+\beta_9$ *lag(dep. var.)* + ε,

where outcome is measured in the following two years after the forced CFO succession for the years 1997 to 2001. Standard errors are robust standard errors clustered by two-digit industry. *, **, *** denotes significance at the 10%, 5%, and 1% levels with one-tailed tests for test variables and two-tailed tests for control variables. Variables are defined in the Appendix.

Dependent Variable	Restatement	Covenant Violation
Prob(*Outcome*=1)	(1)	(2)
	Estimate	Estimate
Variable	(t-stat)	(t-stat)
Outside	-0.053	-0.145
	(-0.28)	(-0.89)
Financial expertise	0.149	0.186
	(0.80)	(1.12)
Treasurer	-0.140	-0.150
	(-0.64)	(-0.78)
Roa	0.182	0.027
	(0.97)	(0.16)
Return	-1.124**	0.458
	(-1.72)	(0.71)
Size	0.085	-0.127
	(0.72)	(-1.12)
Leverage	0.141**	-0.069
	(2.34)	(-1.18)
CEOsuc	-0.554	1.050**
	(-0.99)	(2.22)
lag(dep. var.)	0.968***	0.952***
	(2.73)	(4.35)
Constant	-2.395***	-1.044**
	(-5.11)	(-2.46)
Pseudo_R2	0.075	0.080
N	443	443