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CFO Outside Directorship and Financial Misstatements

Abstract

I study an important accounting consequence— financial misstatements—of CFO outside board membership. I find that firms with CFOs holding outside directorships have a lower likelihood of misstatements. These results likely reflect the benefits accruing to CFOs' home firms in terms of improved financial reporting quality. These findings are based on several methods that control for unobserved factors that may affect both incidence of CFO outside directorships and a firm's financial misstatements. I also provide some preliminary insights into CFO and home-firm characteristics that determine CFO outside board directorships. My findings are consistent with the inter-organizational embeddedness perspective, suggesting that inter-firm networks provide sources for counseling and learning opportunities, which executives can use to improve their home firms' performance.

Keywords: CFO; outside directorship; financial misstatements; diffusion of knowledge.

JEL Classification: M41.

INTRODUCTION

Executives' outside board service has become an important topic in corporate governance. The benefits from outside board memberships include increases in executive and firm reputation and better access to learning opportunities (Fama and Jensen 1983). Although the outside directorships of chief executive officers (CEOs) have been studied extensively, limited research exists on the effect of outside directorships on the executive's home (or *source*) firm, especially in the context of knowledge diffusion (e.g., Finkelstein and Hambrick 1996; Friedman and Singh 1989; Geletkanycz and Boyd 2011; Malmendier and Tate 2007; Rosenstein and Wyatt 1990). Moreover, the importance of the external board memberships of non-CEO executives, especially of chief financial officers (CFOs), has received even less attention and warrants further inquiry. While research explains that investors generally find no value in non-CEO directorships (e.g., Fich 2005), the supporting analysis homogeneously categorizes all non-CEO executives. Given CFOs' important and expanding role in capital markets (Ernst & Young 2012a) and their influence on the accounting-related practices and thus value of their firms (Francis, Schipper, and Vincent 2003; Palmrose, Richardson, and Scholz 2004), distinguishing their directorships and those of other non-CEO executives is warranted.[1] In this paper, I examine the effect of CFO outside directorship on financial misstatements.

A financial misstatement can harm a firm in several ways, including a decline in market value and increases in litigation and the cost of capital. Executives also face severe penalties, such as reduced compensation, loss of employment, and poorer job prospects. Thus it is likely that, ceteris paribus, both firms and CFOs aim to avoid financial misstatements.

[1] Consider a quote by Bruce Besanko, CFO of OfficeMax: "As CFO, I'm in a unique position within the organization, at the absolute center of the universe. The only other executive besides me that has the same presence at the center is the CEO" (Ernst & Young 2012a).

The Sarbanes-Oxley Act of 2002 (SOX), in conjunction with changes in the listing requirements of the NYSE and NASDAQ, requires the presence of a financial expert on the board's audit committee, creating an additional demand for executives with such a background in the director labor market. CFOs are the primary candidates for these posts.[2] For instance, Ernst & Young has studied (2012b: 19) the "unprecedented demand for CFOs' experience on corporate boards" in fulfilling the increasing needs of directors with financial expertise. Although this trend has increased in recent years, few currently serving CFOs sit on outside boards.

About 60% of large companies restrict their CFOs to serve on outside boards (Spencer Stuart 2014). One reason is the time commitment. The literature observes that executives can spend a significant amount of time in fulfilling their outside board responsibilities (Lipton and Lorsch 1992; Perry and Peyer 2005). These concerns are exacerbated when one considers that a CFO who serves on an outside board is likely to be a member of the audit committee, which is one of the most demanding and time-consuming committees (Engel, Hayes, and Wang 2010). Even so, these directorships can bring benefits for home firms, too. Ernst & Young (2012b) also indicates that 75% of interviewed CFOs recognize learning opportunities as a key benefit of outside directorships. If the outside directorships of CFOs assist home firms in reducing the likelihood of costly financial misstatements, then the decision to prevent CFOs from joining outside boards may be imprudent.

CFOs are likely to increase their knowledge in at least two major ways. First, serving on an outside board gives CFOs insight into board dynamics and makes them better communicators with their home firms' directors (Ernst & Young 2012b). Improved communication makes these

[2] Chava and Purnanandam (2010) and Jiang, Petroni, and Wang (2010) suggest that CFOs are more influential and responsible than CEOs for decision-making where accounting knowledge is required. Similar views have been expressed by commentators and policymakers with respect to CFOs' role in accounting-related decisions (Katz 2006; McCann 2012; Securities Exchange Commission 2006: 117).

CFOs more influential at their home firms, as they can articulate their messages and policies more clearly to the board. Second, most CFOs on outside boards are likely to serve on the audit committee, which can provide valuable experience and learning opportunities related to their role at the home firm. CFOs can compare the accounting policies and practices of various firms and determine whether and why they differ. Based on this information, they can improve practices at the home firm. These views are consistent with the inter-organizational embeddedness literature, which suggests that outside directorships of CEOs bring value to home firms (e.g., Geletkanycz and Boyd 2011).

Alternatively, CFOs of firms with better accounting practices may also be more likely to be invited to join other firms' boards because of their reputations. While it is possible that more qualified CFOs may be more likely to attain outside board memberships, I hypothesize that these CFOs will hone their skills and gain further knowledge from their outside directorships. To address the endogeneity concern, I conduct a number of alternative specifications, including estimating the instrumental variable (IV) approach model, where I estimate both the CFO outside directorship selection model and the probability of restatement simultaneously. This procedure helps isolate the effect of CFO directorships on restatements while accounting for the possibility of the CFO serving on an outside board. Furthermore, I use a managerial-fixed effect model and a propensity-score matching (PSM) procedure. Although my results are robust to several methods, I cannot rule out endogeneity concerns, and therefore my results should be interpreted with caution.

I use a panel of U.S. firms to test my hypothesis. I find results consistent with inter-organizational embeddedness theory: firms with CFOs holding outside directorships have a lower likelihood of restatements. After controlling for other managerial factors and using IV, PSM, and managerial-fixed effect models, the results support the view that directorships are valuable

resources for learning and networking and thus can help reduce financial misstatements at the home firm. In terms of economic magnitude, depending on the specification, CFO outside directorships are associated with about 2% to 3% reduction in financial misstatements, given an unconditional probability of about 14%. Furthermore, the CFO selection model shows that firm size, CFO age, and the demand and opportunities in the director labor market positively affect the likelihood of a CFO obtaining an outside board seat.

This research makes several contributions. First, it deepens understanding of learning in inter-firm networks, which can affect the accounting practices of CFO home firms. This matters because ineffective financial reporting, resulting from a CFO's lack of knowledge, can result in costs to the firm (e.g., litigation). If CFO expertise improves the quality of reporting, then it is important to understand the sources of this expertise and how it develops. Outside directorships are one potential source of enhanced accounting expertise for CFOs. Thus the results here suggest that firms should encourage, not restrict, their CFOs from joining outside boards. The results also have implications for board recruitment. A Spencer Stuart report (2014) finds firms experiencing difficulties in recruiting financial expert directors. Several firms have reduced their board sizes and extended directors' retirement ages in response to this shortage. Allowing CFOs to sit on at least one outside board may partially address the increasing demand for financial expert directors.

This paper's second contribution is its explicit study of CFOs. Even though CEOs are the ultimate decision-makers in firms, CFOs exercise specialized judgment in an area where many CEOs lack expertise, and the finer aspects of corporate financial decision-making can affect the overall value of the firm. Therefore the results here provide insight into the alignment of CFO expertise and the quality of firm financial reporting.

Finally, I extend the literature on director selection (e.g., Lester, Hillman, Zardkoohi, and Cannella 2008), as I provide preliminary evidence on the determinants of CFOs' outside board directorships. However, in contrast to existing literature, my focus is on the selection of a financial-expert director, who is recruited in response to the specific need for accounting knowledge and will likely join an audit committee. The results provide insight into this selection process.

THEORY AND HYPOTHESES DEVELOPMENT

CFOs and Financial Misstatements

Financial misstatements arise when reported financial reports are later discovered not to accord with Generally Accepted Accounting Principles (GAAP) (Hirschey, Palmrose, and Scholz 2005). A misstatement is a significant event that results in a number of a negative consequences for both the misstating firm and affiliated executives. Research provides empirical evidence that restatements result in significant negative stock price reactions (Palmrose et al. 2004) and increase the probability of litigation (Palmrose and Scholz 2004). The literature also discusses the negative effects of a restatement on the firm's ability to raise capital. For example, Hribar and Jenkins (2004) find that a firm's cost of capital increases between 7% and 19%, following a restatement. Graham, Li and Qiu (2008) examine the consequence of financial misstatements on bank loan contracting and find that restatements result in significantly higher spreads, more covenant restrictions, shorter maturities, and higher upfront and annual fees. They suggest that banks use tighter loan contract terms, following restatements, to compensate for higher risk and information asymmetry. Given these negative consequences, it is not surprising that firms strive to repair reputational damage in the wake of restatements. Indeed, firms spend time and resources targeting stakeholders, such as capital providers and customers, and take actions to mitigate reputational damage (Chakravarthy, deHaan, and Rajgopal 2014).

CFOs, to whom restatements are attributed, can also face significant professional challenges. Financial misstatements indicate inadequate skills and lack of credibility on the part of the executive under scrutiny (Palmrose et al., 2004). Accordingly, Cheng and Farber (2008) discuss reduced compensation for top executives, following restatements. Desai, Hogan and Wilkins (2006) suggest that, following a restatement, not only does the probability of a senior executive leaving the firm double, but these executives also face a stiff labor market following their departure (Collins, Masli, Reitenga, and Sanchez 2009).

CFOs and Outside Directorships

Scholars have used inter-organizational embeddedness and agency perspectives to explain the causes and consequences of board directorships. The separation of ownership and control inhibits principals' observation of agents' (e.g., managers) actions (Holmstrom 1979; Jensen and Meckling 1976). As a result, owners have difficulty assessing the extent to which managerial actions are value maximizing or rent extracting. One particular issue of concern to owners, in this context, is the executives' outside directorships (Conyon and Read 2006; Rosenstein and Wyatt 1994).

The inter-organizational embeddedness perspective emphasizes the diffusion of practices and learning benefits. Tom Kolder, president of Crist Kolder Associates, a recruiting firm that cultivates candidates for board seats, notes that board service "allows CFOs to engage with another group of senior business leaders and bring back to their organizations best practices" (Krantz 2008, online). Granovetter (1985) posits that firms are part of the social network in which a firm behavior is partially determined by inter-firm relations. Firms draw upon one another in search of tangible and intangible resources (Pfeffer and Salancik 1978). Firm employees can also draw knowledge

and resources from each other. Indeed, Argote and Ingram (2000) suggest that individuals can learn from each other's experiences and exchange know-how (Gulati 1999).

A report published by Ernst & Young (2012b) suggests that benefits to CFOs from outside board positions include "a better understanding of boardroom dynamics, the cross-pollination of ideas and best practices, and exposure to a different corporate culture" (p. 19).[3] The board of directors is potentially served by executives with a diversity of knowledge and experiences and alternative points of view. While serving on outside boards, CFOs interact with other directors, thus enriching their own knowledge and experience, beyond what they can learn at the home firm. McDonald, Khanna, and Westphal (2008) suggest that fellow directors on board can be sources of advice and counseling both during normal and critical times, which may help improve firm performance. Geletkanycz and Boyd (2011) find that CEOs' outside directorships relate positively to the long-term performance of their source firms. Overall, the inter-organizational embeddedness perspective suggests that CFOs can gain problem-solving expertise from being on an outside board and that these skills can be used to better discharge their fiduciary responsibilities and resolve issues at the source firm.

Research has established an association between CFO financial knowledge and financial misstatements (e.g., Aier, Comprix, Gunlock and Lee 2005). Most CFOs are likely to serve on the audit committee of the board, which plays an important role in maintaining the integrity of financial reporting (Klein 2002; Bedard, Chtourou, and Courteau 2004).[4] Thus, by serving on

[3] The popular press has highlighted the importance of CFOs' outside directorship and its impact on a CFO's ability to discharge fiduciary responsibilities. For example, David McCann (2012, online edition) of CFO.com states: "If you're OK with the time investment and the risks, board service can make you a better CFO, bring new insights into your company, and enhance your career prospect." This claim further motivates this study and highlights its timeliness and pertinence.

[4] One lead director highlights the importance of an audit committee chair by suggesting that "it is the single most important role on the board." (Tapestry Network, EY 2013)

external audit committees, CFOs gain greater accounting-related expertise from other directors and observe the accounting practices of other firms, which can serve as a basis for comparison. More knowledgeable and resourceful CFOs are more likely to correctly apply complex accounting standards and less likely to make material reporting errors. Thus benefits gained from outside directorships should reduce the likelihood of financial misstatements. If relevant accounting knowledge transfers, I expect firms with CFOs with outside directorships to make fewer financial misstatements.

An alternative perspective is that CFOs join outside directorships to gain personal benefits, such as prestige, higher compensation, and more power at the source firm—as opposed to seeking knowledge (Jensen and Meckling 1976). This perspective is consistent with agency theory. This argument is based on the divergent interests of managers and shareholders and suggests that managers are motivated to maximize their utility at the expense of shareholders. The literature provides empirical evidence consistent with agency theory (e.g., Fich and White 2003; Rosenstein and Wyatt 1994).

Another concern with outside directorships is that they are time consuming and result in high opportunity costs for individuals. For example, Perry and Peyer (2005) argue that executives face costs of accepting external directorships. These costs include expending effort in carrying out the monitoring function of a director, which can distract executives from their responsibilities at the source firm. Lipton and Lorsch (1992) suggest that individual directors spend at least 100 hours per year fulfilling their directorship duties. Both agency theory and the time-commitment argument would predict a negative or an insignificant relationship between outside directorships of executives and the performance of their primary employer.

Based on the discussion above, I hypothesize the following in the null.

H1: After controlling for firm- and managerial-level characteristics, the outside board directorship of a CFO is not associated with home firm financial misstatements.

DATA AND SAMPLE SELECTION

Measure of Financial Misstatements

One of the most important duties of a CFO is to oversee financial reporting (Ge, Matsumoto, and Zhang 2011), including instances of restatements (Aier et al. 2005). Furthermore, SOX 302 requires the CFO (as well as the CEO) to certify in writing the veracity of annual and quarterly financial reports. I focus on financial reporting restatements because these represent material misstatements and are likely to result in costly litigation (e.g., Palmrose et al. 2004) and executive turnover (Desai et al. 2006). Thus most firms as well as their CFOs are likely to try to avoid restatements, irrespective of their earnings management intentions. In my analysis, the restatement (*Restate*) is a dummy variable and is coded as 1 if the firm's financial statement for the period is restated (Armstrong, Larcker, Ormazabal and Taylor 2013). I use only restatements that are accounting-related, because my research question deals with CFO accounting-related knowledge.[5]

Sample Selection

I acquire data from several different sources. First, my sample consists of firms that appear in the Capital IQ database from 2003 to 2014 for which I find relevant financial data. This data provides information on company directors, such as committee membership, audit committee chair, etc. I use the Compustat North American annual files to collect individual firm accounting and financial data and the Center for Research in Security Prices (CRSP) to collect return data for individual firms. Additionally, I use data downloaded from Professor Sarah McVay's website for

[5] Main results are qualitatively similar when non-accounting restatements are included.

the managerial ability variable. Restatement data is collected from Audit Analytics. I exclude regulated utilities (SIC codes 4949 to 4999) and financial firms (SIC codes 6000 to 6999). I begin with a dataset of 45,299 firm-year observations on 8,173 firms for the years 2003 to 2014. Excluding utilities and financial firms results in a loss of 10,438 observations. Including managerial ability data further reduces the sample size to 31,859 firm-year observations. Furthermore, 3,435 observations are lost due to calculation of local density of firms, resulting in a sample of 28,424 firm-year observations. Finally, I lose 6,371 observations due to missing values, reducing my sample to 22,053 firm-year observations on 3,741 firms, which serves as the basis for my analysis.

[Insert Table 1 about here]

RESEARCH DESIGN

To test my hypothesis, I estimate the following equation. For brevity, all year and firm subscripts are suppressed.

$$\begin{aligned} Restate = {} & \beta_0 + \beta_1\, CFO\ Director + \beta_2\, MA + \beta_3\, Size + \beta_4\, \sigma(Sales) + \beta_5\, \sigma(OCF) + \beta_6\, Oper\ Cycle + \beta_7\, Loss\ \% + \beta_8\, Big\ Auditor + \beta_9\, \Delta Sales + \beta_{10}\, Abn\ Return + \beta_{11}\, CFO\ Age + \beta_{12}\, CEO\ Director + \beta_{13}\, CFO\ Inside + \beta_{14}\, CFO\ Tenure + \beta_{15}\, CPA + Industry\ and\ year\ dummies + \varepsilon, \end{aligned} \quad (1)$$

where *Restate* is an indicator variable that equals 1 if a firm restates its earnings for the period. The variable of interest, *CFO Director*, is an indicator variable that equals 1 if a CFO holds an outside board membership and zero otherwise. Standard errors in Equation 1 are adjusted for heteroscedasticity and clustered by firm. If the estimated coefficient on *CFO Director* is significantly different from zero, the null hypothesis of no association between CFO outside directorships and the likelihood of earnings restatements will be rejected.

I develop my regression model following Demerjian, Lewis, Lev, and McVay (2012a). The set of control variables include all variables identified by Demerjian et al. (2012a). These variables include firm-specific managerial ability, size, sales volatility, cash flow volatility, percentage of losses, and operating cycle. Research shows these variables affect restatements (Dechow and Dichev 2002). Specifically, I include managerial ability to control for unobserved managerial quality that can influence both CFO outside board membership and restatements. That is, overall firm-specific managerial ability is likely to affect not only restatements but also whether a firm recruits another firm's CFO as a director. This occurs for several reasons. When making judgments about quality, outsiders are likely to evaluate an individual based on performance. Yet, in the absence of any individual-specific performance indicator, recruiting firms are likely to use information cues from CFOs' home firms to determine CFOs potential contribution to the hiring board. Additionally, recruiting firms are concerned about the reputation and prestige of the home firm, as the hiring firm aims to benefit from its affiliation with the CFO's home firm (Shenkar and Yuchtman-Yaar 1997).

In addition, I include an indicator variable for the use of a Big 4 auditing firm (*Big Auditor*). The expectation on the coefficient of *Big Auditor* is unclear, as research shows that it is associated both positively (e.g., DeFond, Lim, and Zang 2016) and negatively (e.g., Lobo and Zhao 2013) with the probability of a restatement. To control for growth and firm performance that may affect both CFO outside directorships and restatements, I include change in sales growth and abnormal return.

In addition to variables used by Demerjian et al. (2012a), I include a dummy for whether the CEO of the source firm sits on one or more outside boards (*CEO Director*) and whether the CFO sits on the board of the home firm (*CFO Inside*) (Bedard, Hoitash, and Hoitash 2014).

Furthermore, I include CFO age (*CFO Age*) to control for CFOs' potential knowledge, as older CFOs are likely to be more experienced, which may reduce the likelihood of financial misstatement. At the same time, older CFOs are likely in the latter stages of their careers and may be less observant and cautious in monitoring, due to lower career concerns, which may reduce the quality of financial statements and increase restatement probability. Thus the effect of CFO age on restatement is ambiguous. I also include an indicator variable that equals 1 if the CFO is a certified public accountant (*CPA*). This variable controls for the accounting expertise of the CFO, as this expertise can affect reporting quality and therefore financial misstatements. CFOs who are CPAs may also be more likely to receive invitations to serve on outside boards as financial experts. Finally, I include the log of CFO tenure at the home firm to control for CFO's home firm-specific knowledge. I expect it to be negatively associated with restatements. All of the variables in the above equations are defined in Appendix A.

Endogeneity

I use several measures to address potential endogeneity inherent in my study.

Instrumental Variable Approach

Without controlling for the CFO's endogenous selection to the outside board memberships, inferences made from these estimations can be misleading. The endogeneity concern is that unobserved factors can be associated with both CFOs' selection to the outside board and restatements. To address this, I estimate a recursive bivariate probit model, which assumes that latent linear models with jointly normal errors determine both treatment and the binary outcome variable (Evans and Schwab 1995). A restatement equation (outcome) that accounts for CFO outside board membership can be represented as the following.

$$\text{Restate}_i^* = \mathbf{x}_i'\boldsymbol{\beta} + \gamma\text{CFO Director}_i^* + \varepsilon_i, \quad (2)$$

$$\text{Restate}_i = 1 \text{ if Restate}_i^* > 0 \text{ and 0 otherwise,}$$

where CFO Director$_i$ is an indicator variable that equals 1 if the CFO is on the outside board and $\mathbf{x_i}$ is a vector of exogenous determinants of restatements. CFO outside board selection can be modeled as the following.

$$\text{CFO Director}_i^* = \mathbf{w_i'\alpha} + \mu_i, \quad (3)$$

$$\text{CFO Director}_i = 1 \text{ if CFO Director}_i^* > 0 \text{ and 0 otherwise.}$$

Thus, if ε_i and μ_i are correlated, then ignoring this correlation will result in biased estimates. To account for endogenous CFO outside directorships, I estimate two equations simultaneously using a maximum likelihood estimation (MLE), while controlling for the correlation between the errors terms (ε_i and μ_i) from Equations 2 and 3 (Greene 2003). The key to this approach is to have an instrumental variable in the selection Equation (3) for identification that is not directly correlated with the dependent variable in the outcome Equation (2). I use the local density of firms (*Density of Firms*) as my instrument. The local demand and opportunities in the director labor market affect the directors' requirement. Specifically, I use a log of the number of public firms within a 50-mile radius of the source firm. Alam, Chen, Ciccotello, and Ryan (2014) and Knyazeva, Knyazeva, and Masulis (2013) conclude that the local density of firms influences supply and demand in the director labor market. Fahlenbrach, Low, and Stulz (2010) find that the distance between the source firm and the appointing firm is an important determinant of outside board membership. Additionally, Huang, Jiang, Lie, and Yang (2014) suggest that geographic proximity increases the chances of an executive serving on an outside board, because proximity reduces personal costs (e.g., travel time) to directors and increases social interaction among directors.[6] Indeed, the number of firms located nearby increases the likelihood of a CFO being

[6] In a study of mergers and acquisitions, Huang et al. (2014) use geographical proximity to instrument the possibility of an investment banker on a firm's board of directors.

invited to sit on an outside board. Thus the local density of firms is expected to be positively associated with CFOs' outside directorships.

Propensity-Score Matching (PSM)

I also employ propensity-score matching. Armstrong et al. (2010) suggest that PSM is more robust to the misspecification of the functional form underlying the relationship between an independent and dependent variable. This approach minimizes variations in the control variables, thus finding a sample of control (i.e., non-CFO director) firms that are most similar to CFO director firms. I perform matching with replacement and restrict my matches within a caliper of 0.01. The dependent variable equals 1 if the CFO sits on an outside board and zero otherwise. The results from the determinant model are presented in the following section.

RESULTS

Univariate Results

Descriptive Statistics

Table 2 provides summary statistics for the full sample. Eight percent of firms in my sample have CFOs who hold outside board memberships. Additionally, I provide summary statistics by splitting the sample into firms with CFOs holding outside directorships and those without CFOs holding outside directorships. I use a chi-squared test to determine whether the difference is significant for discrete variables and a t-test to determine whether this difference is significant for continuous variables. The *CFO Director* firms are bigger, better managed, and have less sales volatility. Additionally, firms with CFOs holding outside directorships are significantly less likely to issue restatements, and the difference is statistically significant. CFOs who hold outside board memberships are older than those with no outside board memberships. Furthermore, CFOs with outside directorships have longer tenures at their home firms and are less likely to be CPAs.

[Insert Table 2 about here]

Figure 1 shows the yearly trend in the percentage of CFOs who hold board positions at other firms. The chart shows a steep rise in CFOs with outside board directorships from 2004 to 2007. This increase is consistent with an increased demand for financial expert directors after SOX. Furthermore, this trend is consistent with increased interest in recruiting individuals with financial backgrounds for board positions prior to the subprime mortgage crisis (Krantz 2008). The trend line remained largely stable between 2008 and 2012, with a marginal increase after 2012.

[Insert Figure 1 about here]

Correlations

Table 3 provides Pearson correlations among variables of interest. The correlations with respect to CFO directorship are largely consistent with knowledge acquisition and networking theory. CFO outside directorship is significantly and negatively correlated with restatements (coefficient = -0.023). Consistent with prior studies, *Restate* is positively correlated with firm size (coefficient = 0.024), sales volatility (coefficient = 0.013), and percentage of losses (0.022) and negatively associated with abnormal return (coefficient = -0.016). Furthermore, *Restate* is negatively associated with the CFO tenure at the home firm (coefficient = -0.056), suggesting a reduced probability of financial misstatement as CFOs gain more firm-specific knowledge. Consistent with the work of Demerjian et al. (2012a), I find *Restate* to be negatively associated with managerial ability (coefficient = -0.024). Furthermore, managerial ability is positively correlated with *CFO Director*, suggesting that CFOs of firms with more managerial talent are more

likely to sit on the boards of other companies (coefficient = 0.021). *CFO Director* is significantly and positively associated with home firm size (coefficient = 0.210), reflecting the visibility of larger firms, which influences the probability that their CFOs are hired for outside board positions. In addition, *CFO Director* is negatively associated with sales volatility, operating cash-flow volatility, and percentage of losses. CFOs who sit on their home firm boards and who have longer tenures are more likely to hold outside directorships. The correlation results, however, are subject to confounding effects. To control for these effects, I use a multivariate regression approach in my primary analysis.

[Insert Table 3 about here]

Regression Results

Model 1 of Table 4 presents the results of my primary specification, which includes industry and year dummies. The results from this estimation suggest that CFO outside directorships are negatively associated with earnings restatements (β = -0.107; $p < 0.10$). In terms of economic significance, given the unconditional probability of restatement is about 14%, the marginal effect of *CFO Director* is economically significant at -2.1%. The results presented in Column 1, however, do not account for endogenous CFO outside directorship.

To further support my hypothesis and rule out a possible alternate explanation, I use an IV approach, with a bivariate probit model, which accounts for the endogenous nature of a CFO's appointment to an outside board. Columns 2 and 3 report results from the selection and outcome models, respectively. In Column 2, the dependent variable is the dummy for *CFO Director* and includes an instrument, *Density of Firms*, along with other exogenous variables. The result shows that the coefficient on *Density of Firms* is positive and significant ($p < 0.05$) and therefore a valid instrument. This result suggests that, when the home firm is located in an area of higher firm

density, its CFO is more likely to sit on an outside board. The *Density of Firms* also appears to satisfy exclusion restriction, as its correlation (not tabulated) with home firm restatements *(Restate*) is insignificant (r = -0.01; p > 0.10). Additionally, the results in Column 2 reveal that managerial ability of the home firm is also positively associated with *CFO Director*.

Column 3 of Table 4 presents results of the outcome equation of restatement from the two-equation recursive bivariate probit model. The coefficient on *CFO Directorship* is negative and significant (β = -0.897; p < 0.01). The results from this two-equation regression model also provide the statistics related to the Wald test of exogeneity ($\rho \neq 0$). The coefficient estimate for ρ is significant and positive (p < 0.01), which rejects the exogeneity between the selection and outcome. This result indicates that firms whose CFOs join outside boards tend to be associated with higher levels of restatement. This shows that the coefficient in the primary model is positively biased (although the primary model still indicates a negative association between *CFO Director* and *Restate*). This probably explains a more significant association between *CFO Director* and *Restate* in Column 3 than in Column 1. The marginal effect of CFO outside directorship on restatement in this specification is -1.4% (which amounts to about a 10% overall reduction in restatements).

With respect to my control variables, I find that managerial ability (*MA*) is significantly, negatively associated with the probability of restatement in Column 1, consistent with the findings of Demerjian et al. (2012b). This suggests that better managed firms are less likely to misstate their financial statements. In addition, abnormal return is negatively associated with restatement in both models, consistent with the expectation. In general, the coefficients on *CFO Director* and on control variables in Table 4 remain similar across different models. Overall, the results from Table 4 suggest that CFO outside directorship results in a lower probability of a financial restatement.

[Insert Table 4 about here]

Propensity-Score Matching (PSM) Results

Discussion of Determinant Model Results

In Table 5, I report results from propensity-score matching. In Panel A, I present results of the propensity-score determinant model, where the dependent variable equals 1 if a CFO holds outside directorship and zero otherwise. Consistent with the literature, firm size is significantly and positively associated with CFO outside board membership. Additionally, I find the coefficient on firm-specific managerial ability to be positive and significant, suggesting that CFOs of better-managed firms are more likely to be on outside boards. An interesting result of the determinant model is a positive and significant coefficient on loss percentage. One explanation for this association could be that CFOs seek outside directorships to mitigate reputational damage resulting from a history of losses. Such a history may become a reputational concern for CFOs as their careers progress, and they may respond by actively engaging in identity construction (Maguire and Phillips 2008; Rodrigues and Child 2008). Thus CFOs of loss firms will actively seek outside directorships. Considering that the demand for financial expert directors, especially that of active CFOs, outstrips supply (Ernst & Young 2012b), these CFOs can obtain board positions.

Regarding variables related to CFO characteristics, I find CFO age to be positively associated with the incidence of outside board membership in all specifications ($p < 0.01$), suggesting that older CFOs are more visible and experienced and therefore more likely to sit on outside boards. Additionally, I find that CFOs are more likely to sit on outside boards when they are members of the home firm's board. Furthermore, after controlling for other explanatory variables, home firm tenure of the CFO is negatively associated with the likelihood of outside directorships.

Overall, the results from the PSM determinant model suggest that CFOs from larger firms are more likely to be recruited as outside board directors, due to their higher visibility. Additionally, larger firms also offer more resources to their inside executives and therefore likely provide better training than their smaller counterparts (Kalleberg and Van Buren 1996). CFOs' personal attributes—such as age and home-firm directorship and possibly personal motivation—also likely explain why CFOs of public companies secure positions on other companies' boards.

Discussion of Outcome Results

In Table 5, Panel B, I provide a covariate balance test. First, I provide the mean and standard deviation of firms whose CFOs serve on outside boards and the corresponding matched sample. Additionally, I report statistics related to differences in the treatment and control samples. Armstrong, Jagolinzer and Larcker (2010) suggest that an absence of an adequate degree of covariate balance may result in an identification problem. Thus it is desirable to achieve between the treatment and control groups to make proper inferences. To assess the covariate balance, I report normalized differences between the two groups, t-statistics, and a p-value. The results show that a match has been achieved, as none of the covariates are significantly different (p-values are greater than 0.10). Additionally, the normalized differences between the two sets of samples is less than 0.25, a cutoff point Imbens and Wooldridge (2009) suggest. This also indicates that a balance in the covariates between the two groups is achieved. (See Jayaram and Milbourn 2015 and Hoitash, Hoitash, and Kurt 2016 for an application in the accounting literature.)

At the bottom of Table 5, Panel B, I report the difference in restatements for the treatment and control samples. Using the univariate tests, the results show that the probability of CFO director firm restating is 21% (0.11- 0.14/0.14) less than the corresponding matched firm. Thus my matched-sample analysis confirms a negative association between *CFO Director* and

restatements (p = 0.01). To account for any remaining differences in the covariates between treatment and matched sample, I estimate a probit regression after including other controls. The results, presented in Panel C, further confirm a negative coefficient on *CFO Director* (p < 0.05). In terms of economic magnitude, this suggests a significant reduction of about -3.2% in restatements, given the overall probability of about 14%. Thus the results from Table 5 are consistent with those reported in Table 4.

[Insert Table 5 about here]

Additional Robustness Tests

CFO Style Model

As an additional robustness test, I consider a CFO-fixed effect model. The literature suggests that individual managers exhibit unique styles and that these styles influence firm behavior and financial performance (Bertrand and Schoar 2003). Furthermore, Bamber, Jiang and Wang (2010) suggest that managers impose their idiosyncratic style on their firms' voluntary disclosure choices. This stream of literature relies on Hambrick and Mason's (1984) upper echelons theory, which proposes that individual managers matter. In the context of this study, individual CFOs may have their own style of financial reporting (e.g., some CFOs may be more aggressive than others in reporting revenues), which may influence the incidence of restatements.

To rule out the possibility that the reported results could be a function of CFO idiosyncratic style, I follow the managerial-fixed effect approach of Bertrand and Schoar (2003) and reanalyze the association between restatement and CFO's directorships. (See Bamber et al. 2010 for application to accounting research.) Thus the coefficient on *CFO Director* in this specification measures the effect of CFO outside board membership, incremental to the effect of a CFO's unique style, on restatements. Another advantage of this model is that it controls for other CFO-specific

characteristics, such as certifications and education that remain constant for a given individual. The results (not tabulated) from the CFO-fixed effect model show a negative and significant coefficient on *CFO Director* (β = -0.401; p < 0.01). Additionally, CFO tenure at the home firms is negative and significant, suggesting that home firm-specific knowledge is an important factor that determines financial misstatements.[7]

Reverse Causality

To address additional concerns that prior performance—specifically, in the context of this paper, the incidence of restatements—affects the possibility of attaining outside board memberships, I conduct an additional test. In an unreported regression, I estimate a model where the dependent variable is a dummy for CFO directorship, the independent variable is lagged announcement of a restatement, and the control variables are the ones that are included in CFO directorship determinant model, shown in Panel A of Table 5. I find coefficient on lagged restatement to be positive but insignificant (p = 0.85), suggesting no systematic relationship between home firm restatements and CFOs' probability of acquiring outside board directorships.

CONCLUSION

This paper examines the importance of CFO outside board memberships on financial misstatements of a CFO's home firm. Several studies provide evidence on the outside directorships

[7] For an additional robustness analysis and to further provide insights into the stand-alone effect of CFO directorship, I create three additional groups: firm-years with CFOs are only on outside boards but not on inside boards (Group 1), firm-years with CFOs are only on inside boards but not on outside boards (Group 2), and firm-years with CFOs are both on inside and outside boards. Of the full sample, 6.5% of CFOs are in Group 1 (i.e., only on outside boards), about 12% in Group 2 (only on home firm boards), and about 1.5% in Group 3 (both on home and outside boards). In an unreported regression, using the fixed effect model, I exclude *CFO Director* and *CFO Inside* variables and include dummies for the three groups. The results show a significant and negative coefficient on Group 1 (β= - 0.441, p<0.01), while the coefficient on Group 2 is positive but insignificant (p=0.177). Additionally, the results show a negative and insignificant coefficient on Group 3 (p=0.355). This analysis reveals two important findings: (1) a significant number of CFOs who hold outside directorships are not directors at the home firm, and (2) the reported results of a negative association between *CFO Director* and *Restate* are largely driven by firm-years in which CFOs are directors only at outside firms, and not at home firms.

of CEOs (Finkelstein and Hambrick 1996; Friedman and Singh 1989; Malmendier and Tate 2007; Rosenstein and Wyatt 1994), but the literature is largely mute with respect to CFOs' outside directorships. My results show that CFO outside directorship is negatively associated with financial misstatements. My results are consistent with inter-organizational embeddedness theory, which suggests that outside directorships of executives provide opportunities to learn and network and, in turn, bring value to the home firm by helping avoid costly financial restatements. The present study seeks to understand the benefits accruing to the source firm from CFOs' outside directorships. Overall, the results suggest that outside directorships connect CFOs to other executives and directors, who can be sources of counsel and insight.

Although I conduct several tests to account for endogeneity, these results should be interpreted with caution. Furthermore, in the current study, I treat all outside directorships as the same, although securing board positions in certain types of firms may prove more beneficial to home firms. Future research might examine the impact of such differences on the knowledge of CFOs and the resulting benefits to the source firm. Another opportunity for future research is an analysis from the perspective of appointee firms. In other words, what are the resource needs for firms that seek to appoint a financial expert director? For example, it would be helpful to understand whether certain types of firms benefit more from the presence of a financial expert. My study takes a step toward explaining the benefits of CFOs' outside directorship, and I hope that it might prompt future research to consider related issues.

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Appendix A: Variable Definitions

Variable	*Definition*
Restate	An indicator variable that is equal to 1 for the period of restatement.
CFO Director	An indicator variable that equals 1 if CFO holds an outside board membership
MA	The decile rank (by industry and year) of managerial efficiency from Demerjian et al. (2012b). The estimation of managerial ability is a two-step process. The model begins with estimating total firm efficiency using data envelopment analysis (DEA). In the second stage, managerial ability is separated from total firm efficiency by regressing total firm efficiency on various firm characteristics (i.e., size, market share, cash availability, life cycle, operational complexity, and foreign operations). See Demerjian, Lev and McVay. (2012b) for detail.
Size	The natural log of the firm's assets (AT) reported at the end of year t.
σ(Sales)	The standard deviation of [sales (SALE)/average assets (AT)] over at least three of the last 5 years (t-4, t)].
σ(OCF)	The standard deviation of [cash flow from operation (OANCF)/average assets (AT)] over at least three of the last years (t-4,t).
Oper Cycle	The natural log of the length of the firm's operating cycle, defined as sales turnover plus days in inventory [(Sale/360/average RECT) + (COGS/360)/average INVT)] and is averaged over at least three of the last five years (t-4,
Loss %	The percentage of years reporting losses in net income (IBC) over at least three of the last five years (t-4, t).
Big Auditor	An indicator variable that is equal to 1 if auditor for the year represents one of the big 4 auditing firm
Δ Sales Growth	Current year's sales growth ($\Delta SALE_t/SALE_{t-1}$) less prior year sales growth ($\Delta SALE_{t-1}/SALE_{t-2}$)
Abn Return	One-year market-adjusted buy-and-hold return for year t where market-returns are value weighted.
CFO Age	Log of the age of the firm's CFO.
CEO Director	An indicator variable that equals 1 if CEO holds an outside board membership
CFO Inside	An indicator variable that equals 1 if CFO sits on the board of the home firm
CFO Tenure	Log of CFO's home firm tenure
CPA	An indicator variable that equals 1 if CFO is a CPA
Density of Firms	Log of number of firms within 50 miles radius of the home firm

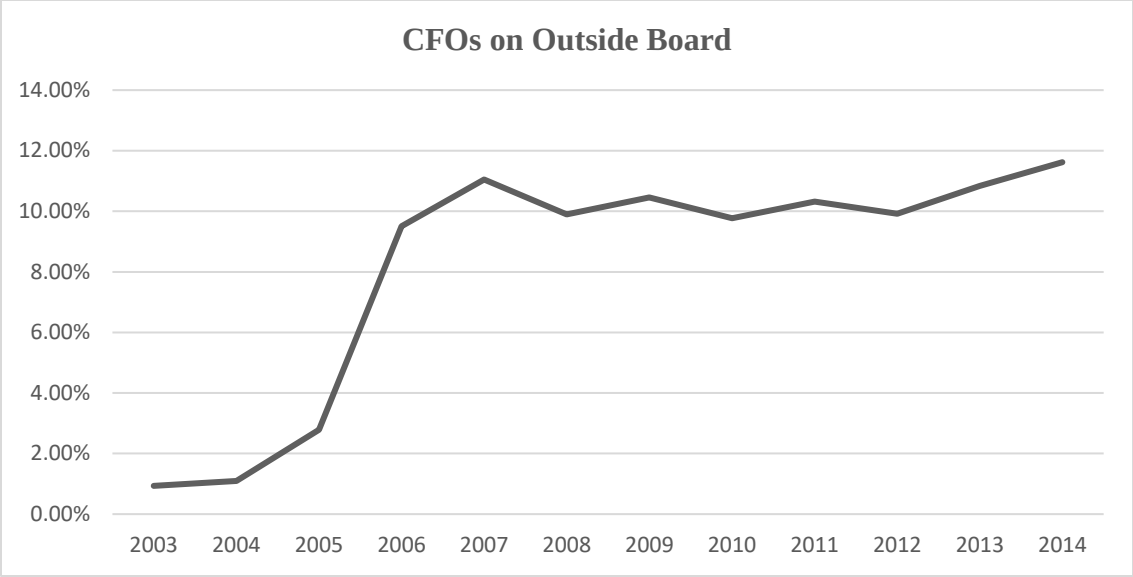

Figure 1: Yearly trend in percentage of CFOs with outside board directorships

Table 1
Sample Selection

Firm-years after merging Capital IQ, Compustat, CRSP, and Audit Analytics data	45299
Less: firm-years in utilities and financial industry	(10438)
Less: firm-years lost due to merging managerial ability data (Demerjian at el. 2012a)	(3002)
Less: firm-years lost due to calculating local density of firms	(3435)
Less observations lost due to missing values	(6371)
Firm-years available for analysis	22053

Table 2: Summary Statistics

	Full (N=22,053)			CFO Director (N=1,774)			Non-CFO Director (N=20,279)				
Variables	Mean	Median	SD	Mean	Median	SD	Mean	Median	SD	Diff	p-value
CFO Director	0.08	0.00	0.27								
Restate	0.14	0.00	0.35	0.11	0.00	0.31	0.14	0.00	0.35	-0.03	0.00
MA	0.56	0.60	0.28	0.57	0.60	0.30	0.55	0.60	0.27	0.02	0.00
Size	6.19	6.14	1.95	7.58	7.68	1.93	6.07	6.03	1.90	1.50	0.00
σ(Sales)	0.18	0.13	0.18	0.14	0.10	0.14	0.19	0.13	0.18	-0.05	0.00
σ(OCF)	0.07	0.05	0.07	0.06	0.04	0.07	0.07	0.05	0.07	-0.01	0.00
Oper Cycle	0.18	0.12	0.20	0.17	0.10	0.21	0.18	0.12	0.20	-0.01	0.13
Loss %	0.31	0.20	0.35	0.26	0.00	0.34	0.32	0.20	0.35	-0.06	0.00
Big Auditor	0.76	1.00	0.43	0.90	1.00	0.30	0.75	1.00	0.43	0.15	0.00
Δ Sales Growth	-0.01	-0.01	0.39	-0.02	-0.01	0.38	0.01	0.01	0.40	-0.03	0.61
CFO Age	3.90	3.91	0.15	3.96	3.97	0.12	3.89	3.89	0.15	0.07	0.00
Abn Return	0.08	-0.02	0.58	0.07	-0.02	0.50	0.09	0.03	0.59	-0.02	0.19
CEO Director	0.22	0.00	0.41	0.48	0.00	0.50	0.19	0.00	0.39	0.29	0.00
CFO Inside	0.14	0.00	0.35	0.18	0.00	0.39	0.13	0.00	0.34	0.05	0.00
CFO Tenure	1.65	1.79	0.85	1.71	1.79	0.83	1.64	1.79	0.85	0.07	0.00
CPA	0.36	0.00	0.48	0.29	0.00	0.45	0.37	0.00	0.48	-0.08	0.00
Density of Firms	8.14	8.13	0.29	8.20	8.16	0.30	8.14	8.13	0.29	0.06	0.00

*, **, *** denotes a difference in the mean under a t-test (Chi-Square test) with a two-tailed p-value of less than 0.10, 0.05, and 0.01, respectively for continuous (indicator) variables.

This table provides summary statistics for full sample in panel A. Panel B provides summary statistics separately for firms whose CFOs holds outside directorships and firms whose CFOs do not hold any outside directorships. The column Diff represent differences between variables for those two groups. All continuous variables are winsorized at the extreme 1%.

Table 3: Correlations

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Restate	1														
2	CFO Director	**-0.023**	1													
3	MA	**-0.024**	**0.021**	1												
4	Size	**0.024**	**0.210**	**-0.026**	1											
5	σ(Sales)	**0.013**	**-0.078**	**0.064**	**-0.290**	1										
6	σ(OCF)	-0.004	**-0.056**	**0.047**	**-0.439**	**0.385**	1									
7	Oper Cycle	0.007	-0.010	**-0.058**	**-0.235**	**0.200**	**0.450**	1								
8	Loss %	**0.022**	**-0.045**	**-0.118**	**-0.415**	**0.171**	**0.415**	**0.391**	1							
9	Big Auditor	**0.050**	**0.096**	**-0.028**	**0.502**	**-0.156**	**-0.183**	**-0.080**	**-0.160**	1						
10	Δ Sales	0.001	-0.004	**0.047**	0.007	**-0.022**	**-0.037**	**-0.037**	-0.012	0.011	1					
11	CFO Age	-0.010	**0.123**	**0.019**	**0.085**	**-0.075**	**-0.062**	**-0.070**	**-0.096**	-0.010	0.010	1				
12	Abn Return	**-0.016**	-0.009	**0.030**	**-0.019**	**0.025**	**0.026**	**0.021**	**0.028**	**0.036**	**0.099**	**-0.033**	1			
13	CEO Director	**-0.023**	**0.189**	-0.005	**0.340**	**-0.113**	**-0.127**	**-0.050**	**-0.106**	**0.169**	-0.012	**0.076**	**-0.021**	1		
14	CFO Inside	0.000	**0.040**	**-0.016**	-0.003	0.007	**-0.022**	**-0.018**	**-0.040**	**-0.056**	0.010	**0.094**	0.001	**-0.038**	1	
15	CFO Tenure	**-0.056**	**0.022**	**0.022**	**0.105**	**-0.102**	**-0.154**	**-0.141**	**-0.227**	0.006	**0.015**	**0.233**	-0.007	**0.039**	**0.124**	1
16	CPA	-0.003	**-0.044**	**-0.031**	-0.138	**0.045**	**0.060**	**0.057**	**0.064**	**-0.107**	**-0.017**	**-0.133**	-0.002	**-0.054**	**-0.017**	-0.007

This table provides Pearson correlations between selected variables. Variables that are statistically significant at the 5% level are presented in bold.

Table 4: CFO Outside Directorship and Financial Misstatement

	Pred.	(1) Primary	(2) IV	(3)
Dependent Variable		Restate	CFO Director	Restate
CFO Director	-	-0.107*		-0.897***
		(-1.78)		(-4.79)
MA	-	-0.107**	0.113*	-0.079
		(-2.06)	(1.65)	(-1.52)
Size	+	0.039***	0.211***	0.065***
		(3.21)	(11.90)	(4.78)
σ(Sales)	+	0.075	-0.111	0.059
		(0.80)	(-0.68)	(0.64)
σ(OCF)	+	0.095	0.147	0.122
		(0.36)	(0.33)	(0.47)
Oper Cycle	+	0.055	0.071	0.071
		(0.58)	(0.59)	(0.76)
Loss %	+	0.113**	0.293***	0.142**
		(2.00)	(3.49)	(2.55)
Big Auditor	?	0.114**	0.105	0.114***
		(2.57)	(1.33)	(2.62)
Δ Sales	?	-0.007	0.015	-0.005
		(-0.29)	(0.48)	(-0.23)
Abn Return	?	-0.078***	0.036	-0.072***
		(-4.03)	(1.42)	(-3.79)
CFO Age	?	0.219*	1.788***	0.397***
		(1.86)	(9.14)	(3.10)
CEO Director	?	-0.007	0.292***	0.057
		(-0.16)	(5.96)	(1.23)
CFO Inside	-	-0.031	0.286***	0.010
		(-0.67)	(3.80)	(0.20)
CFO Tenure	-	-0.092***	-0.057**	-0.095***
		(-5.00)	(-2.03)	(-5.22)
CPA	-	0.057	-0.050	0.047
		(1.62)	(-0.90)	(1.37)
Density of Firms	+		0.163**	
			(1.97)	
Constant	?	-2.884***	-11.550***	-3.656***
		(-5.68)	(-10.46)	(-6.72)
N		22053	22053	22053
Fixed Effects		Ind & Year	Ind & Year	Ind & Year
Pseudo R^2/Wald Chi^2		0.038	3094.98***	

***, **, and * denotes significance at the 1%, 5%, and 10% levels, respectively. All tests are two-tailed.

This table reports results where dependent variable is an indicator variable that is equal to 1 for the period of restatement, and variable of interest is *CFO Directorship,* a dummy variable that equals one if the CFO of a firm holds an outside directorship and zero otherwise. Model 1 report results from primary models. Model 2 and 3 report results of selection and outcome models respectively from simultaneous equation model using an instrument variable approach. The selection model includes all firm-specific characteristics and an exogenous variable; the log of number of firms in 50 miles radius. For all specifications, z-statistics estimated with standard errors robust to heteroscedasticity (White 1980) and clustered by firms and are presented in parentheses.

Table 5: Propensity Score Matching Analyses

Panel A: Probit Regression of CFO Outside Directorship (i.e., PSM Model)

MA	0.161***
	(3.45)
Size	0.186***
	(19.90)
σ(Sales)	-0.397***
	(-4.08)
σ(OCF)	0.683***
	(2.66)
Oper Cycle	0.250***
	(3.30)
Loss %	0.262***
	(5.41)
Big Auditor	0.061
	(1.43)
Δ Sales	-0.024
	(-0.70)
Abn Return	-0.005
	(-0.20)
CFO Age	1.783***
	(16.54)
CEO Director	0.437***
	(14.89)
CFO Inside	0.201***
	(5.55)
CFO Tenure	-0.054***
	(-3.25)
CPA	0.013
	(0.44)
Constant	-9.967***
	(-22.97)
N	22053
Pseudo R^2	0.133

Panel B: Covariate Balance Test

	CFO Director=1		CFO Director=0			Mean Diff	
Variable use to estimate PSM							
	Mean	SD	Mean	SD	Norm Diff	ttest	p-value
MA	0.57	0.30	0.58	0.30	-0.03	-0.75	0.451
Size	7.58	1.93	7.58	1.96	0.00	0.01	0.993
σ(Sales)	0.14	0.14	0.14	0.14	-0.04	-1.32	0.188
σ(OCF)	0.06	0.07	0.06	0.07	-0.01	-0.40	0.688
Oper Cycle	0.17	0.21	0.17	0.20	0.01	0.23	0.818
Loss %	0.26	0.34	0.26	0.33	-0.02	-0.46	0.643
Big Auditor	0.90	0.30	0.90	0.30	-0.00	-0.11	0.911
Δ Sales	-0.02	0.38	-0.02	0.36	-0.00	-0.10	0.923
Abn Return	3.96	0.12	3.96	0.12	-0.02	-0.26	0.791
CFO Age	0.07	0.50	0.07	0.54	-0.01	-0.59	0.558
CEO Director	0.48	0.50	0.48	0.50	0.01	0.20	0.840

CFO Inside	0.19	0.39	0.18	0.38	0.02	0.57	0.572
CFO Tenure	1.72	0.83	1.74	0.87	-0.03	-0.93	0.350
CPA	0.29	0.45	0.28	0.45	0.03	0.78	0.435
Misreporting Var					Diff		
Restate	0.11	0.31	0.14	0.35	-0.03	-2.62***	0.00

Panel C: Probit Regression for PSM Sample

CFO Director	-	-0.162**
		(-2.24)
MA	-	-0.153
		(-1.33)
Size	+	0.002
		(0.09)
σ(Sales)	+	0.547**
		(2.06)
σ(OCF)	+	-1.298**
		(-1.97)
Oper Cycle	+	0.064
		(0.31)
Loss %	+	0.152
		(1.30)
Big Auditor	?	0.131
		(0.95)
Δ Sales	?	0.118*
		(1.78)
Abn Return	?	-0.075
		(-1.15)
CFO Age	?	0.093
		(0.27)
CEO Director	?	-0.021
		(-0.28)
CFO Inside	-	0.001
		(0.01)
CFO Tenure	-	-0.121***
		(-2.66)
CPA	-	0.073
		(0.90)
Constant	?	-1.344
		(-0.97)
N		3548
Pseudo R^2		0.018

***, **, * indicate two-tailed statistical significance at the 1%, 5% and 10% levels, respectively.

Panel A of the table reports coefficients and related z-statistics in parenthesis from probit regressions in which dependent variable is *CFO Director*. Panel B of the table reports means and standard deviations of propensity score matching model variables for the treatment (CFO Director) and match (non-CFO Director) observations. NormDiff (normalized difference) is the difference in means of the two groups divided by the average standard deviations. A NormDiff of 0.25 or less suggests an acceptable balance (Imbens and Wooldridge 2009). Panel C reports results from a probit regression using the match sample where dependent variable is *Restate*. Standard errors are robust to heteroscedasticity (White 1980) and clustered by firms.