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The Financial Expertise of CFOs and Accounting Restatements

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SYNOPSIS: We investigate whether the characteristics of chief financial officers (CFOs) are associated with accounting errors (using accounting restatements as a proxy). We investigate several metrics of financial literacy similar to those suggested for members of audit committees by the NYSE-NASD Blue Ribbon Committee. These metrics include years of work as a CFO, experience at another company, advanced degrees (like M.B.A.s), and professional certification (like a CPA). We use a logit model to test whether the likelihood of an earnings restatement is related to the above metrics of financial literacy (measured at the date of the original accounting error). Restating and non-restating companies during the period 1997–2002 were matched on year, industry, and company size. Overall, our results are consistent with restatements being negatively associated with the CFO's financial expertise. Specifically, we find that companies whose CFOs have more work experience as CFOs, M.B.A.s, and/or CPAs are significantly less likely to restate their earnings.

INTRODUCTION

The purpose of this study is to investigate whether accounting restatements are associated with the financial expertise of chief financial officers (CFOs). Accounting restatements have recently become increasingly common. For example, a study about restatements by Financial Executives International (FEI), an association of senior corporate financial officials, determined that the number of restatements grew from 59 in 1997 to 91 in 1998, 150 in 1999, and 156 in 2000 (Moriarty and Livingston 2001). The General Accounting Office (GAO) used somewhat different search criteria and found a marked increase in the number of accounting restatements (GAO 2002). In the GAO study, the number of restatements increased from 102 in 1997 to 229 in 2001. In contrast, the average number of restatements over the ten-year period prior to 1998 was only 46 (Weil 2001).

Numerous commentators attempt to explain the rampant increase in restatements. The FEI restatement study links the rise of restatements to former SEC Chairman Arthur Levitt's

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crusade to put an end to so-called “managed earnings.” In contrast, Baruch Lev, an accounting and finance professor at New York University, places the blame upon the increasing complexity of corporate accounting, noting that “growing competition, globalization, deregulation and financial engineering all have made the nature of what companies do more complicated” (Liesman 2002, C1).

In addition to the increased complexity of accounting regulations and the SEC crackdown on earnings management, recent changes in the background of CFOs may also contribute to the increase in restatements. For example, a 2001 study by Spencer Stuart, a headhunting firm, found that only 20 percent of CFOs at *Fortune* 500 companies were Certified Public Accountants (CPAs), 35 percent had M.B.A.s, and 5 percent had procured both qualifications (*Economist* 2002). The relatively small percentage of CFOs possessing a CPA reported in the Spencer Stuart survey represents a marked break from the past. As a 1999 article published in the *Treasury Management Association Journal* noted, “[T]wenty years ago, the percentage of CFOs with CPAs would have been much higher” (McCarty 1999, 59).

Anecdotal evidence from the business press in the late 1990s also suggests a decreased emphasis on the CFO’s knowledge of basic accounting. The financial director of Abbey National Bank, Mark Pain, goes so far as to state that “the day of the finance director as bean counter is well and truly over ... it is less likely that an accountancy qualification will be as significant (in the future)” (McCarty 1999, 59). Further, in an article that discusses the views of leading Canadian CFOs, *CMA Management* notes that corporate officers see accounting functions as a relatively minor part of their duties (Edur 1999).

However, the accounting background of CFOs may play an important role in determining the quality of financial reporting since CFOs are generally responsible for supervising all of a company’s financial functions. Specifically, CFOs oversee the implementation of accounting principles and procedures and the preparation of financial reports. CFOs also are responsible for establishing and maintaining internal controls and reporting any deficiencies to the audit committee and the external auditors. Consequently, CFOs must work closely with internal auditors in order to identify any potential internal control weaknesses. CFOs can potentially influence the quality of financial reporting by monitoring the expertise of accounting personnel, by their attitude toward internal controls, and through their role as conduits of information to directors, other managers, and auditors.

Instead of choosing CFOs based on their accounting backgrounds, companies appear to have embraced a new, revised role for the chief financial officer. Doug Carmichael, formerly an accounting professor at Baruch College and currently the chief auditor for the Public Company Accounting Oversight Board (PCAOB), observed that the modern CFO “is prized more for (his) ability to raise money than as an accounting officer” (Jones 2000, NW2). CFOs have also become key players in strategic planning, mergers and acquisitions, implementing information technology initiatives, and managing associations with venture capitalists and the investing public. *Fortune* states that during the 1990s, companies “started looking for financial officers who could do more than cut costs ... so CFOs tossed aside their green eyeshades and turned to more creative pursuits” (Kahn 2002, 199). Such creative pursuits often involve spearheading ever-more-complex business deals to drive the company’s financial performance in the eyes of investors with a decreased emphasis on external reporting and internal controls. As a consequence, CFOs are no longer viewed as “the ethical compasses of a firm’s behavior” (Howell 2002, 25). As CFOs move away from

their historical role of acting as the enforcers of companies' financial reporting requirements, perhaps their accounting skills get lost in the transition—with a corresponding increase in the likelihood of accounting errors.¹

We investigate whether accounting restatements are associated with proxies for the financial expertise of CFOs. The National Association of Securities Dealers (NASD) and the New York Stock Exchange (NYSE) jointly released guidelines for audit committees that stated “because of the audit committee’s responsibility for overseeing the corporate accounting and financial controls and reporting this committee clearly has a recognizable need for members with accounting and/or related financial expertise—where ‘expertise’ signifies past employment experience in finance or accounting, requisite professional certification in accounting, or any other comparable experience or background which results in the individual’s financial sophistication, including being or having been a CEO or other senior officer with financial oversight responsibilities” (Blue Ribbon Committee 1999, 25).² Since CFOs are also expected to oversee corporate accounting and controls, we develop proxies that are consistent with both the Blue Ribbon Committee’s definition of financial expertise and guidance concerning the acquisition of financial expertise mandated in the Sarbanes-Oxley Act of 2002.³ Specific characteristics that we study include the years of experience that the CFO has in the role of chief financial officer, whether the CFO has prior experience at another company, whether the CFO has a master’s degree in business administration (M.B.A.), and whether the CFO is a certified public accountant (CPA). We find that companies that have CFOs with a CPA, an M.B.A., or more experience as CFOs are less likely to restate earnings. An important point to note is that while we test for an association between a lack of CFO financial expertise and restatements, we are unable to distinguish whether CFOs who lack expertise cause restatements or whether restating companies are simply more likely to choose CFOs who lack expertise.

This paper is organized as follows. In the following section, we present a review of prior research. In the third section, we present our empirical models. In the fourth section, the sample selection process is discussed. The fifth section discusses our results, and the sixth section concludes.

PRIOR RESEARCH

Several studies have investigated the cause of earnings restatements.⁴ For example, Kinney and McDaniel (1989) analyze companies that restate quarterly earnings. They find that, relative to other companies in their industry, restating companies are smaller, less

¹ Although it is important to note that CFOs may influence the quality of financial reporting, the accounting background of CFOs is only one of many factors that ultimately impact financial reporting quality.

² In 1998, Arthur Levitt, the SEC Chairman, expressed concerns about the lack of financial expertise among members of audit committees in his famous speech “The Numbers Game” (Levitt 1998). In response, the NYSE and the NASD formed the Blue Ribbon Committee on Improving the Effectiveness of Corporate Audit Committees (BRC). The BRC recommendation that effective audit committees must be composed of at least one member who possesses accounting or related financial management expertise (BRC 1999) was approved by the SEC and adopted by the three major stock exchanges.

³ Under Section 407 of the Sarbanes-Oxley Act of 2002, an audit committee member may acquire financial expertise through experience as “a principal financial officer, principal accounting officer, controller, public accountant or auditor,” by supervising such functions, by “monitoring the auditing or evaluation of financial statements,” or through other relevant experience (Scarpati 2003, 32).

⁴ In contrast to the growing amount of research on restatements, prior CFO research has been fairly limited. In a study of the replacement and succession of chief financial officers, Mian (2001, 144) notes, “while the theory and practice of corporate finance has attracted considerable attention from the academic finance profession, we know little about the individuals who hold these positions.” Mian’s (2001) main finding is that companies that changed CFOs experienced a decline in their financial performance, especially before the departure of CFOs for reasons other than retirement.

profitable, have more debt, grow more slowly, and receive more uncertainty-qualified audit opinions. Similarly, DeFond and Jiambalvo (1991) find that earnings overstatements are negatively correlated with earnings growth. They also find that overstatements are more likely when companies have fewer income-increasing GAAP alternatives available. More recently, Richardson et al. (2002) find that companies that make restatements have high market expectations for future earnings growth, higher levels of outstanding debt, a string of consecutive positive earnings growth, and consecutive positive quarterly earnings surprises.

The causes of earnings overstatements also have an impact on how the users of financial statements react to restatement announcements. Palmrose et al. (2004) examine the market reaction to restatement announcements and find an overall significant negative abnormal return (about 9 percent) over a two-day event window. In addition, they find that negative average abnormal returns are related to indications of management fraud, more material dollar effects, and restatements that are attributed to auditors. Palmrose et al. (2004) also find a significant association between the dispersion of earnings forecasts by analysts and restatement announcements.

Other studies report results that corroborate those in Palmrose et al. (2004). For example, Wu (2002) examines a three-day price response around the restatement announcements and finds that restatements are regarded as bad news by the stock market and that the market reaction is stronger when the restated amount is larger. Anderson and Yohn (2002) also find that investors and dealers react negatively (lower market returns and increased bid-ask spreads) to restatements.

Kinney et al. (2004) investigate the role of auditors and audit committees on earnings restatements. They find a significant negative association between tax-service fees and restatements, suggesting that the quality of financial reporting may improve when auditors do more tax work. However, they find a significant positive association between audit, audit-related, and nonaudit service fees and restatements.⁵ The positive association between audit fees and restatements is driven by smaller companies, which suggests that auditors may charge a risk-premium for smaller, riskier companies. Finally, the positive association between nonaudit services and restatements is consistent with some types of higher nonaudit fees compromising the independence of auditors.

Abbott et al. (2004) study the effect of audit committee characteristics on the probability of financial restatements by companies. A significant finding of their study is the negative association between restatements and an audit committee that includes at least one member with financial expertise, consistent with the recommendations of the Blue Ribbon Committee (BRC). Similarly, Agrawal and Chadha (2005) find that the probability of restatement is negatively related to the incidence of independent directors with a background in accounting or finance on the board or audit committee and to the presence of the CFO on the audit committee.

EMPIRICAL MODEL

We investigate financial accounting restatements filed with the Securities and Exchange Commission between January 1997 and June 2002. Restating companies are matched with non-restating companies based on year, company size, and industry (similar to Dechow et al. 1996). We use a logit model where the dependent variable takes on a value of 1 for restating companies, and 0 otherwise. We model accounting restatements as a function of the CFO's years of experience as a CFO, possession of prior experience with a different

⁵ The association between audit-related fees and restatements is no longer significant after controlling for mergers.

company, possession of an M.B.A. degree, and possession of a CPA certification. In addition, we include control variables in the model that prior research identifies as important determinants of restatements. The inclusion of these additional variables should improve the power of our tests. Our model may be summarized as follows:

$$REST_{i,t} = \phi_0 + \delta_1 CFOEXP_{i,t-n} + \delta_2 ELSE_{i,t-n} + \delta_3 MBA_{i,t-n} + \delta_4 CPA_{i,t-n} \\ + \delta_5 FreeC_{i,t-n} + \delta_6 FinRaised_{i,t-n} + \delta_7 EPSGrowth_{i,t-n} + \delta_8 LEV_{i,t-n} + v_{i,t}$$

where, for a given company i :

t = for each restating company and its matching non-restating company, the year in which the restating company publicly announced a restatement (per the GAO study);

n = for each restating company and its matching non-restating company, the number of years between the fiscal year of the original accounting error by the restating company and the year of its restatement;

$REST$ = dummy variable with a value of 1 if the company restated its earnings, 0 otherwise;

$CFOEXP$ = years of work experience as a CFO;

$ELSE$ = dummy variable equal to 1 if the CFO has prior experience at another company, 0 otherwise;

MBA = dummy variable equal to 1 if the CFO has a M.B.A. degree, 0 otherwise;

CPA = dummy variable equal to 1 if the CFO has a CPA accreditation, 0 otherwise;

$FreeC$ = demand for external financing, measured as the sum of cash from operations less average capital expenditures divided by lagged total assets;

$FinRaised$ = external financing (debt and equity) raised by the company, deflated by total assets;

$EPSGrowth$ = dummy variable equal to 1 if the company had at least four quarters of continuous earnings per share growth prior to the GAAP violation, 0 otherwise; and

LEV = total debt deflated by total assets.

All of the independent variables in the model are measured at the time the error occurred that later resulted in a restatement. For example, if the original error was made in 1995 and restated in 1998, $CFOEXP$, $ELSE$, MBA , CPA , $FreeC$, $FinRaised$, $EPSGrowth$, and LEV are measured as of 1995 (i.e., $t = 1998$ and $n = 3$).

Hypothesized Effects

CFO Experience

We measure $CFOEXP$ as the total number of years of experience that the CFO has in his/her current position. We expect that individuals who have more experience as CFOs will have a greater understanding of accounting treatments unique to his or her company and/or industry. Accordingly, we expect that $CFOEXP$ will be negatively related to the incidence of financial restatements.

ELSE

$ELSE$ is a dummy variable indicating that the CFO has worked for a previous employer at some time in his or her career. We conjecture that CFOs who possess experience at

another company will be able to bring that experience to bear when determining whether the company is employing appropriate accounting treatments. Thus, *ELSE* is expected to be negatively associated with the occurrence of accounting restatements.

MBA

MBA is a dummy variable that indicates that the CFO has a master's degree in business administration. According to the Institute of Management Accountants, an M.B.A. degree allows an accountant to "build a better understanding of (his or her) company," and thus allows him or her to "play a much broader, more strategic role in the management and operation of (his or her) businesses" (Messmer 1998, 10). While a better understanding of the company does not necessarily translate into better financial reporting, it should provide an opportunity for better financial reporting. In accordance with this notion, we expect the *MBA* variable to be negatively associated with the likelihood of making a financial restatement.

CPA

The *CPA* variable is a dummy variable denoting whether the CFO possesses accreditation by the American Institute of Certified Public Accountants (AICPA). Such certification involves passing a four-part written examination administered by the AICPA and covering subject matter including accounting and reporting, auditing, and professional responsibilities. In addition, CPAs must meet state-mandated educational, testing, and experience qualifications. Finally, CPAs must continue their professional education to keep their license current, and they must also adhere to prescribed ethical standards of conduct. We conjecture that an individual who meets the criteria for CPA licensing possesses a greater understanding of accounting concepts than an individual who has not been licensed. Accordingly, *CPA* is expected to negatively correlate with incidences of accounting restatements.

Controls

Several studies identify incentives to manage earnings using a sample of companies that had to restate their financial statements. Dechow et al. (1996) suggest four incentives for managers to manipulate earnings: the demand for external financing, executive compensation plans, insider trading, and the avoidance of debt covenants. Of these incentives, Dechow et al. (1996) find that only the demand for external financing is an important determinant of earnings management and, accordingly, we adopt the variable as a control variable in the present study. In addition, Richardson et al. (2002) and DeFond and Jiambalvo (1991) identify the incentive for companies to maintain earnings growth as a determinant of earnings management. Moreover, Richardson et al. (2002) report that the incentive to manage earnings in order to meet analysts' forecasts is an important determinant of earnings management. Because earnings management is likely to increase the probability of restating earnings, we control for the following incentives in order to improve the power of our tests.

External Financing

We adopt two measures of external financing from Dechow et al. (1996). The first measure is a company's free cash flow, *FreeC*.

$$FreeC_{i,t-n} = \frac{\text{Cash from operations}_{i,t-n} - \text{Average capital expenditures}_{i,t-n-3 \text{ to } t-n-1}}{\text{Total Assets}_{i,t-n-1}}$$

Free cash flow measures a company's ability to cover its capital expenditures through assets that the company already holds. Therefore, this variable represents the company's demand for external financing during the earliest fiscal year of the original accounting error. The second measure is the actual amount of financing that was raised, *FinRaised*. This measure represents the amount of financing raised through stock or debt offerings during the earliest fiscal year of the original accounting error scaled by total assets.

Earnings per Share Growth

Since most executive compensation plans are a function of earnings, managers have an incentive to meet earnings targets. Therefore, companies with a decline in earnings growth are more likely to have incentives to manage earnings (DeFond and Jiambalvo 1991). We adopt two measures of earnings per share growth suggested by Richardson et al. (2002). The first measure is a dummy variable that has a value of 1 when the company has four consecutive quarters of growth at the earliest fiscal year of the original accounting error, and 0 otherwise. The second measure is a count of the number of consecutive quarters of earnings per share growth up to the earliest fiscal year of the original accounting error (going back eight quarters). The two measures were highly correlated (over 90 percent) and therefore, appear to capture the same construct. We report results for the first measure only, which we denote *EPSGrowth*. The results of all of our tests are similar using the second measure as well.

Leverage

Companies that are close to the violation of debt covenants have incentives to manage earnings. However, Dechow et al. (1996) and DeFond and Jiambalvo (1991) do not find that leverage (debt/assets) is significantly related to earnings management. In contrast, Richardson et al. (2002) report evidence that leverage is related to earnings management. Given the finding in Richardson et al. (2002), we include leverage (*LEV*) at the earliest fiscal year of the original accounting error as a control variable. Begley and Freedman (2004) find that leverage is being used less frequently as a constraint in lending agreements, suggesting that leverage may not be as large an incentive for earnings management in recent samples.

SAMPLE SELECTION

The GAO's restatement database was used as the starting point for our data search. As shown in Table 1, the GAO database listed 919 restatements between January 1, 1997 and June 30, 2002. Of the 919 restatements on the GAO database, we exclude 169 due to lack of Compustat data. We then use Lexis-Nexis to find restatement announcements for the remaining 750 in order to determine the time period of the original misstatement (the GAO database only codes the year in which the restatement is announced). For observations with multiple years of misstatements, we code the earliest year that the company misstated its financial statements. We are unable to find restatement announcements for 67 of the observations so we drop them from the sample, leaving 683 observations.

We then use Compustat to generate a control sample, matching each of the 683 observations remaining in the restatement sample with a company that did not make financial restatements but which had similar size (total assets), industry (using four-digit SIC Codes) and year (using the year of the accounting misstatement for the treatment companies); this is the same matching process used in Dechow et al. (1996). Finally, for each observation in both the treatment and control samples, data regarding characteristics of that company's

TABLE 1
Sample Selection

Selection Criteria	Number of Observations
Observations in the GAO Restatement database between the period January 01, 1997 to June 30, 2002	919
Less: Compustat data not found	169
Less: News announcement of restatement on Lexis-Nexis not found	67
Less: Companies lacking CFO data in the <i>Dun & Bradstreet Reference Book of Corporate Management</i>	455
Subtotal for restatement sample	228
Add: Control sample matched on size, industry and year using the Compustat database	228
Total observations	456

chief financial officer are collected from the *D&B Reference Book of Corporate Managements* (1997–2002). These characteristics are years of experience as a CFO (*CFOEXP*), possession of prior experience at other companies (*ELSE*), possession of an M.B.A. degree (*MBA*), and possession of a CPA certification (*CPA*).⁶

The *D&B Reference Book of Corporate Managements* is not comprehensive (data is collected for only a subset of all publicly available companies). In addition, the entries for some companies do not contain all of the background information on CFOs that we require for this study (*CFOEXP*, *MBA*, *CPA*, *ELSE*). Therefore, 455 companies are excluded from the treatment group, along with the corresponding control companies, due to insufficient data.⁷ In cases where the requisite CFO background data are missing for the control group, we chose the next best matching company from Compustat that had CFO data. Our dependence on the availability of data in the *D&B Reference Book* is a limitation of our study. Since the *D&B Reference Book* appears to follow relatively larger companies, our sample may also tend to be biased toward larger companies and, therefore, our results need to be interpreted accordingly. Our final sample consists of 456 company observations (228 treatment companies and 228 control companies).⁸

RESULTS

Table 2, Panel A contains descriptive statistics of the financial characteristics of the 456 sample companies. Restating companies are, on average, 15 percent smaller than the companies in the control sample (\$4.778 billion versus \$5.580 billion in total assets).

⁶ We also collected several other variables at the same time that do not appear in our primary analysis. We use total years of work experience (*TOTALEXP*) and years of work experience in the present company (*COMPEXP*) as alternatives to *CFOEXP* in sensitivity analyses. As expected, both measures are highly correlated with *CFOEXP*, and both measures are significant when included in the logit model in place of *CFOEXP*. In addition, the name of any audit firm that the CFO previously worked for is collected and is compared to the name of the company's current audit firm to investigate, as a separate analysis, whether restatements occur more often when the CFO previously worked for the company's current audit firm. Previous research (Lennox 2005) suggests such a link. However, when the variable is included in the logit model with our other variables, its coefficient is not significant.

⁷ Although the *D&B Reference Book of Corporate Managements* is not comprehensive, we could not find another source that systematically collects detailed data on the background of CFOs over the sample period of 1997–2002.

⁸ All restatements involved a change in previously reported accounting numbers.

TABLE 2
Descriptive Statistics

Panel A: Financial Statistics for Companies Examined

Variable	Restatement Sample (n = 228)		Control Sample (n = 228)		Mean Diff. ^a
	Mean	Std. Dev.	Mean	Std. Dev.	
Total Assets	4,778.182	9,220.017	5,580.153	17,647.890	-801.971
Net Income	219.558	705.180	274.316	949.642	-54.572
Market Value	6,105.687	19,616.432	8,093.281	29,409.583	-1987.594
Market/Book	2.938	2.636	3.126	2.920	-0.188
Price/Earnings	28.941	37.715	26.729	27.477	2.212
FreeC	0.015	0.103	0.020	0.077	-0.005
Analyst	0.665	0.473	0.667	0.472	-0.002
FinRaised	0.189	0.472	0.164	0.405	0.025
EPSGrowth	0.579	0.495	0.618	0.487	-0.039
LEV	0.304	0.241	0.268	0.224	0.036*

Panel B: Statistics on CFOs for Companies Examined

Variable	Restatement Sample (n = 228)		Control Sample (n = 228)		Mean Diff. ^a
	Mean	Std. Dev.	Mean	Std. Dev.	
CFOEXP	6.553	4.479	7.930	5.124	-1.377**
ELSE	0.925	0.263	0.961	0.195	-0.036†
MBA	0.162	0.370	0.250	0.434	-0.088††
CPA	0.373	0.485	0.575	0.495	-0.202††

^a ** Signifies statistically significant (p-value is less than 0.05) and * signifies marginally significant (p-value is less than 0.10) using a t-test. †† signifies statistically significant (p-value is less than 0.05) and † signifies marginally significant (p-value is less than 0.10) using a χ^2 test. The χ^2 test is used for statistical tests of differences in the two samples where the underlying variable is a dummy variable, while the t-test is used otherwise.

Total Assets = total dollar value of the company's assets in millions (Compustat data item 6);

Net Income = total dollar value of the company's bottom-line net income in millions (Compustat data item 172);

Market Value = total market value in millions of dollars calculated as the year-end closing share price multiplied by the year-end number of shares outstanding (Compustat data item 24 multiplied by Compustat data item 25);

Market/Book = the ratio of the company's market value divided by the company's book value of net assets (market value from above/Compustat data item 216);

Price/Earnings = measured as the company's year-end closing price divided by earnings per common share—excluding extraordinary items (Compustat data item 24/Compustat data item 58);

FreeC = net cash flows from operating activities (Compustat data item 308) less average capital expenditures (Compustat data item 128) deflated by total assets (Compustat data item 6);

Analyst = dummy variable equal to 1 if the company was followed by analysts, 0 otherwise;

FinRaised = sum of new debt and equity issued by the company (Compustat data item 108 plus data item 111) deflated by total assets (Compustat data item 6);

EPSGrowth = dummy variable equal to 1 if the company had at least four quarters of continuous earnings per share growth prior to the GAAP violation, 0 otherwise;

LEV = total debt (Compustat data item 34 plus data item 9) deflated by total assets (Compustat data item 6);

CFOEXP = years of work experience as a CFO;

ELSE = dummy variable equal to 1 if the CFO has prior experience at another company, 0 otherwise;

MBA = dummy variable equal to 1 if the CFO has a MBA degree, 0 otherwise; and

CPA = dummy variable equal to 1 if the CFO has a CPA accreditation, 0 otherwise.

Note that Price/Earnings ratios and Market/Book ratios are only calculated for companies with positive earnings and book values, respectively.

The difference is not statistically significant, suggesting that the matching procedure is successful. In addition, restating companies have lower net income, lower market values, and lower market-to-book ratios, suggesting that restating companies are less healthy.⁹ In contrast, the price-to-earnings ratio is higher for the restating companies. Finally, both the restatement and control groups have a similar level of analyst coverage. None of the differences in net income, market values, market-to-book ratios, price-to-earnings ratios, or analyst coverage between the restating and control groups is statistically significant.

The lack of significant differences is in contrast to the descriptive statistics in Richardson et al. (2002), who used many of the same variables. Richardson et al. (2002) found that the earnings-to-price ratio, the book-to-market ratio, and net income were all significantly lower for restating companies. In addition, the magnitude of each of these ratios (after taking the inverse of the earnings-to-price ratio and the book-to-market ratio in the Richardson et al. [2002] sample to make them consistent with the ratios used in this sample) is much higher in the current sample than in the Richardson et al. (2002) sample, consistent with the companies being in better financial shape. We believe that the current sample and the Richardson et al. (2002) sample differ because (1) of the necessity to collect CFO data from the *D&B Reference Book*, which appears to be biased toward larger healthier companies, and (2) Richardson et al. (2002) used all companies on the Compustat database without restatements as a control group. Finally, leverage is marginally significantly different across restatement and control companies similar to findings in Myers et al. (2004), who also find a marginally significant difference in leverage.

Descriptive statistics for the characteristics of CFOs are summarized in Table 2, Panel B. The CFOs of the control sample have an average of 1.377 years more experience as CFOs than do those of the restatement sample. In addition, 3.6 percent more of the CFOs in the control sample have experience at another company at some point in their careers in comparison to the CFOs in the restatement sample. There are 8.8 percent more M.B.A.s among CFOs of the control sample compared to the CFOs in the restatement sample. The largest disparity observed between the two samples is in the *CPA* variable. The control sample contains 20.2 percent more CPAs than the restating sample. All of these differences are statistically significant with the exception of the experience elsewhere variable, which was only marginally statistically significant. Pearson correlations between the above variables and restatements (not tabulated) are also negative and significant except for experience elsewhere, which is negative, but again only marginally significant.¹⁰ Overall, the differences in the characteristics of CFOs between the restatement and control samples support the view that the CFOs of restatement companies have less financial expertise.

Table 3 summarizes the logit analysis of whether restatements are associated with CFO characteristics. The *MBA* (p-value 0.01) and *CPA* (p-value 0.01) variables are significantly negatively associated with restatements. Therefore, it appears that both types of professional training are more likely for CFOs in the control group than in the restatement group. In addition, the amount of experience that the CFO has as a CFO (*CFOEXP* p-value 0.05) is also negatively and significantly associated with restatements. However, the coefficient on whether the CFO has outside experience, *ELSE*, is not statistically significant (p-value 0.15). Thus, companies whose CFOs possess a CPA, M.B.A., and/or have more experience as

⁹ However, the percentage of profitable companies (untabulated) is similar for restating and control samples (80.7 percent and 82.0 percent, respectively).

¹⁰ The correlation between the *MBA* and *CPA* variables is negative, which indicates that CFOs typically do not procure both accreditations (only 8 percent of CFOs have both M.B.A. and CPA while 68 percent have either CPAs, M.B.A.s, or both).

TABLE 3
Ability of CFO Characteristics to Explain the Likelihood of Making an Accounting Restatement

$$REST_{i,t} = \phi_0 + \delta_1 CFOEXP_{i,t-n} + \delta_2 ELSE_{i,t-n} + \delta_3 MBA_{i,t-n} + \delta_4 CPA_{i,t-n} + \delta_5 FreeC_{i,t-n} + \delta_6 FinRaised_{i,t-n} + \delta_7 EPSGrowth_{i,t-n} + \delta_8 LEV_{i,t-n} + v_{i,t}$$

	Coefficient	Standard Error	z-statistic
Intercept	0.757	0.563	1.34
<i>CFOEXP</i>	-0.036	0.022	-1.66**
<i>ELSE</i>	-0.451	0.445	-1.01
<i>MBA</i>	-0.631	0.247	-2.55***
<i>CPA</i>	-0.765	0.209	-3.66***
<i>FreeC</i>	0.014	1.155	0.01
<i>FinRaised</i>	0.183	0.223	0.82
<i>EPSGrowth</i>	0.051	0.076	0.68
<i>LEV</i>	0.626	0.459	1.36*

*, **, *** Significant at $p = 0.10$, $p = 0.05$, and $p = 0.01$ level, respectively, in a one-sided hypothesis test
 $n = 456$;
 LR $\chi^2(8) = 33.69$;
 Prob. $> \chi^2 = 0.0001$; and
 Pseudo $R^2 = 0.0533$.
 See Table 2 for variable definitions.

CFOs are less likely to restate their earnings. We caution that while the tests reported in Table 3 indicate an association between a lack of CFO financial expertise and restatements, the results cannot be used to distinguish whether CFOs who lack expertise cause restatements or whether restating companies are simply more likely to choose CFOs who lack expertise.

Tests of the control variables reported in Table 3 produce coefficients that are not significantly different from zero with the exception of leverage, *LEV*. We find that highly leveraged companies in our sample are marginally significantly more likely to restate (p -value in a one-sided test = 0.09). The lack of significance of the control variables is inconsistent with prior research (e.g., Richardson et al. 2002), which we attribute either to the use of the *D&B Reference Book* for our data on CFO characteristics or to our matching procedure. From our sample statistics, the companies in the *D&B Reference Book* appear larger and healthier than companies in other restatement studies. In addition, Richardson et al. (2002) use all companies on the Compustat database that did not have a restatement as a control group, while our control group is formed by matching each restating company with one similar non-restating company.

CONCLUSION

This paper provides empirical evidence on the association between CFO characteristics and the occurrence of accounting restatements based on a sample of 228 restatement companies and 228 matching companies from the years 1997 through 2002. Overall, the evidence is consistent with companies that have CFOs with a CPA certification, an M.B.A., or more experience as CFOs being less likely to restate earnings.

The study suffers from limitations due to data availability. First, the study relies on data from the *D&B Reference Book of Corporate Managements* for information on the

background of CFOs. The *D&B Reference Book* does not follow all companies and may be biased toward larger companies. Second, the *D&B Reference Book* only provides information on corporate officers. Therefore, we are unable to determine whether other individuals below the level of corporate officer who possess financial expertise can substitute for a CFO who lacks expertise.

This study is motivated by the idea that changes in the financial expertise of CFOs may be associated with recent increases in the frequency of accounting restatements. Anecdotal evidence suggests that the role of CFOs as a monitor of the integrity of financial reporting has been de-emphasized, with a corresponding impact on the quality of financial reporting. However, the pendulum may be starting to swing back to the point where the CFO is viewed as a steward of the company's assets instead of the head of a profit center. For instance, a December 2002 article in *CFO Magazine* notes that accounting skills are back in vogue for CFOs and that CPA accreditation is high on the wish lists of clients of executive recruiters looking for replacement CFOs (Nyberg 2002). Some of this increased interest in accounting skills is likely attributable to new reporting rules instituted by the Sarbanes-Oxley Act that require CFOs and CEOs to personally sign off on their companies' financial statements. According to John C. Wilson (an executive recruiter), "Now CPAs are preferred in some organizations. If you have just an M.B.A., you may be perceived as [deficient] in areas like [Financial Accounting Standards Board] rules and reporting and regulatory requirements" (O'Sullivan 2004, 1). Taken together with the negative association between CFO expertise and restatements in our sample, improvements in the level of CFO expertise may help to reduce or reverse the upward trend in accounting restatements.

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