The Path to Reporting Economic Reality - Why all CEOs Should Have Accounting Degrees

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This study was to determine whether there is a connection between the accounting educational background of a CEO and the firms' tendency toward aggressive accounting/earnings management. This study represents one of the first attempts to test such a connection. We hypothesized that firms with CEO's having an educational background in accounting would be less aggressive in their earnings management than those CEO's with other educational backgrounds. We further hypothesized that firms with male CEO's would be more aggressive in their earnings management than those having female CEO's. We found female CEO's were more likely to engage in aggressive accounting.

INTRODUCTION

The purpose of this study was to determine whether there is a connection between the educational background of a CEO (in accounting) and the firms' tendency toward aggressive accounting/earnings management practices. The training for an accountant differs from other business degrees. 'Conservatism' is a unique foundational principle of accounting education which we posit results in accountants being more conservative than executives from other acumens: this tendency toward conservatism results in the adoption of less aggressive accounting practices.

Due to the difficulty historically in collecting data surrounding the educational background (functional degree earned) of executives within corporations, this study represents one of the first of its kind to attempt to test such a connection. The Bad Debt Ratio (BDR) was used as a proxy for an indication of aggressive accounting practices in the 8,951 firm-years tested: Where the Bad Debt Ratio equals the allowance for bad debts divided by accounts receivable. We measure a firms accounting aggressiveness by taking the absolute value of the difference between the firms' BDR and the industry median's BDR. The larger the difference in BDR, the more aggressive the firms' accounting practices.

We hypothesized that firms with CEO's having an educational background in accounting would be less aggressive in their management of earnings than those CEO's coming from other educational backgrounds. We further hypothesized that firms with male CEO's would be more aggressive in their management of earnings than those having female CEO's. While the result of our testing did support our first hypothesis, we found that female CEO's were more likely to engage in aggressive accounting practices than their male counterparts. This later finding was surprising to us. While the number of Female CEO's in our sample is relatively small (273 female vs 8,678 male) at approximately 3%, it is still the opposite of what we had expected.

Related Literature

Since our study is looking at the educational background of the CEO and a firms' tendency to use aggressive accounting practices, we concentrate our review of related literature to that concerning the background of the CEO, the composition of the board of directors, earnings management and its ethics.

CEO Background

Studies surrounding CEO background have focused primarily on things like the level of education completed and/or the quality of the college from which their degree or degrees was/were earned. These studies have compared their stated definitions of CEO background with things like CEO compensation and firm performance (Gottesman and Morey, 2006; Jalbert, Furuma and Jalbert, 2011; Jalbert, Rao and Jalbert, 2002). Other studies in this area have identified connections between CEO educational background and certain character traits (tendency toward innovation, strategic change and tolerance for ambiguity) (Huang, Ryan and Wiggins, 1997; Waller, Huber and Glick, 1995). These studies did not try and tie their definition of CEO background to accounting practices nor the CEO's moral character.

Board of Director Composition

There is also a body of literature surrounding the composition of the Board of Directors (BOD), and/or the management team, and how composition can impact the types of decisions that are made, and how they are made. BOD composition in these studies has looked toward internal versus external members, age, gender, educational attainment and functional background: comparing these attributes to different types of decisions (Hitt and Tyler, 1991; Sutcliffe and Humber, 1998; Tuggle, Schnattay and Johnson, 2010; Wierseam and Bantel, 1992). Again, these studies did not focus directly on earnings management.

However, a number of studies have looked directly at the composition of the board of directors and, the likelihood that a firm will commit fraud, have abnormal accruals and/or manage earnings (Beasley, 1996;Carcello, Hollingsworth, et al, 2006). The findings of these studies generally support the idea that the more independent the board (having outside members on the board of directors), decreases the likelihood of fraud, and minimizes the extent of abnormal accruals and earnings management. Other studies have delved deeper into board composition, looking at not only independence but whether or not the board of directors have audit committee members with financial expertise (Bédard, Chtourou and Courteau, 2004; McDaniel, Martin and Maines,2002). These later studies have found that having a board member with financial expertise on the audit committee will further reduce the risk of abnormal accruals and earnings management (with independent members with financial expertise being preferable).

Earnings Management

While much has been written on Earnings Management (EM), there is not a globally accepted definition for what it is, how exactly to measure it, nor an apparent consensus regarding what is or is not acceptable earnings management in actual practice. The end goal of these practices is to reach some desired result in regard to net earnings through the management of revenue or expenses. Clearly there are many decisions which a company needs to make which are not only in the best interest of the company, but are also legal, in accordance with GAAP and ethical. However, the end result of EM may not depict the economic reality of company performance, but merely what management would like the readers of the financial statements to believe the earnings to be: this is where the controversy surrounding EM lies. The literature in the field generally places earnings management into three categories: Operational decisions, Accounting Elections/changes in accounting method, and Accruals management (Healy and Wahlen, 1999; Huang, Louwers, etal., 2007; Rosner, 2003).

Operational decisions are decisions which directly impact the level of earnings or expenses like decreasing production levels to avoid carrying too much inventory when demand decreases, or heavily discounting products at quarter- or year-end to encourage sales. There are many decisions which management makes regularly surrounding operations which then result in a direct impact to earnings. Some of these decisions while providing short term benefit, can have negative long term consequences; thus, begging the question as to the motive and wisdom behind the decision being made.

Accounting method elections can have direct impact to earnings as well. For example, the choice of depreciation methods can have a material effect to reported net earnings. Changing an election, like from one method of depreciation to another, can result in either an increase or decrease in earnings, depending on the method elected. The motives behind these types of decisions are also in question, as is whether or not the election being made is in accordance with Generally Accepted Accounting Principles.

When people think of accounting as being an art form, or grey in nature, they are generally referring to areas in accounting where estimation is necessary and large amounts of judgment is required to determine the proper balance in a given account. The last category of EM, accruals management, falls squarely into that category. Examples of accruals which might be adjusted/managed upward or downward are those relating to receivables, deferred compensation, deferred liabilities and pensions to name a few. These accruals have a discretionary component to them which provide opportunity for their manipulation.

Accruals management is generally agreed to be used much more frequently than the other two to paint a financial picture which differs from economic reality (Jackson and Liu, 2010; Levitt, 1998; McNichols and Wilson, 1998). Accruals like these are typically used to build up a reserve in good times, to allow for their draw down in bad times; thus, allowing for earnings to be smoothed over longer periods of time(more commonly known as rainy day or cookie jar reserves). This type of reserve (accruals) management allows firms to meet or just beat analysts' estimates quarter after quarter. Firms have also been known to significantly decrease reserves in down times to keep earnings from falling below acceptable levels, or even to prevent a net loss from being reported. A 2010 study by Jackson and Liu found that firms manage the allowance for bad debts through bad debts expense to meet analysts' earnings forecasts by increasing or decreasing write-offs to attain desired results. We use that same account in our study, the allowance for bad debts, as a proxy for what we term aggressive accounting practices.

Ethics and Earnings Management

As a reminder, EM practices are those which are done to attain a specific earnings number, with no concern to the long term implications of the action, and results in financial reporting which intentionally distort economic reality. Former SEC Chairman, Arthur Levitt said, in describing concerns over earnings management, "I fear that we are witnessing an erosion in the quality of earnings, and therefore, the quality of financial reporting. Managing may be giving way to manipulation; integrity may be losing out to illusion (Levitt, 1998). In regard to literature speaking to the Ethics of EM, there is no consensus, on what is or is not ethical, given the wide array of practices which fall into its use (Bruns and Merchant, 1990; Fischer and Rosenzweig, 1995). However, there is general agreement that practices involving accruals management to attain a desired result which do not depict economic reality are unethical and more likely than not a breach of GAAP (Belski, Beams and Brozovsky, 2008;Levitt, 1998, Loomis, 1999; Marker and Pearson, 2000).

Overall, there is a great body of literature surrounding earnings management. Studies on EM have looked at identifying its' existence, the motives behind it, its proclivity, its connection to conservative accounting practices, and whether it is legal, in accordance with GAAP or ethical. This list is not exhaustive, but meant merely to show that a great body of literature exists on this topic. However, there is not an easy way to identify it, nor measure it (Marquardt and Wiedman, 2004; McNichols, 2000; Thomas and Zhang, 2000; Penman and Zhang, 2002).

A primary goal in identification of EM, is to determine the portion of earnings which are the result of decisions which were made to distort the true economic picture of the entity. With many of the practices used to manage earnings being required and perfectly acceptable in practice, the struggle is to determine what is abnormal from what is ordinary. The difficulty in the identification of EM is further complicated by the fact that there are both discretionary and nondiscretionary components to all decisions of this type (while it is the discretionary components which need to be measured). These difficulties have been responded to with various methodologies for identification of EM (Marquardt and Wiedman, 2004; McNichols, 2000; Thomas and Zhang, 2000; Penman and Zhang, 2002).

Our Study

While there may be complications in the measurement of EM, there is general agreement as to its existence. In fact, the use of EM to manage earnings is considered by many to be standard operating procedure (meaning most firms practice EM in some form to some extent). Per Bruns and Merchant, 1990, "many managers are convinced that if a practice is not explicitly prohibited or is only a slight deviation from rules, it is an ethical practice regardless of who might be affected either by the practice or the information that flows from it". For purposes of our study, we are less concerned with identifying whether or not a firm actually manages earnings, but identifying those firms whose accounting practices appear to be the most aggressive (falling outside industry norms/averages). It is our belief that the more aggressive the practice, the more likely it is that the results reported do not reflect economic reality.

We have elected to use the absolute value of the difference in the firms Bad Debt Ratio (Allowance for Bad Debts divided by Accounts Receivable) as compared to the Industry's average Bad Debt Ratio. We use the absolute value of the difference from the industry average since, as previously stated, accruals like the allowance for bad debts can be managed up or down to reach a desired decrease or increase in reported earnings. Therefore, the larger the variance (the further a firm drifts from the industry median), the more aggressive their accounting practices. We compare the BDR results with whether or not the firms' CEO has an accounting educational background or not, and whether the CEO is male or female.

In this paper, we examine the relation between a CEO's accounting background and his or her behavior (aggressive accruals surrounding the allowance for bad debt).We obtained CEO educational backgrounds from the 'BoardEx' database (See the Appendix in Fracassi and Tate (2010) for a detailed description of the BoardEx database). For our study, we classify those CEOs with the following certifications and/or degrees as CEO's with accounting backgrounds: Certified Public Accountant, Chartered Accountant, Certified Management Accountant, Chartered Management Accountant, Fellow Chartered Accountant, Certified Accountant, Certified General Accountant, Chartered Certified Accountant, Certified Practicing Accountant, Certified Professional Accountant, Master of Accountancy (MAcc), BS in Accounting, etc, as CEOs with Accounting backgrounds. The company's related financial information was obtained from the Compustat database and stock return data from the Center for Research in Security Prices (CRSP). Companies listed in BoardEx are not identified by the trading ticker symbol, CUSIP or GVKey. To match a company in BoardEx with a company in Compustat, we first used Spedis functions within SAS to identify closely matched Compustat firms based on each company's name. Then out of the potential matches found, we manually went through the list to match the firms.

Results

Please recall that we hypothesized that firms with CEO's having an educational background in accounting would be less aggressive in their management of earnings than those CEO's coming from other educational backgrounds. We further hypothesized that firms with male CEO's would be more aggressive in their accounting practices than those having female CEO's. While our findings confirmed our first hypothesis, it did not confirm our second hypothesis.

Table 1 displays the average absolute difference in firms' bad debt ratio from the industry median, accompanied by the "n" equaling the number of firm-years being tested. Again, the larger the difference, the more aggressive the accounting practice. As you can see, female CEO's with accounting backgrounds (n=12) tend to have the highest distance from the median, followed by female CEO's without accounting backgrounds (n=261), male CEO's without accounting backgrounds (n=8,247) and finally, male CEO's with accounting backgrounds (n=431).

TABLE 1
GENDER VERSUS BACKGROUNDS

	Gender	
Background	**Female**	**Male**
Without Accounting	4.0537(n=261)	2.9448 (n=8247)
With Accounting	4.774 (n=12)	2.1369 (n=431)

While the information in Table 1 is telling, it does not look at whether the differences in results are statistically significant. To look at the significance of the results we must compare the data in several different ways. Table 2 displays the absolute difference in the bad debt ratio from industry median, comparing CEO's without accounting backgrounds to those with them. The difference between the two averages of .7705 is statistically significant with a p of .0018. These results support our first hypothesis that CEO's with Accounting backgrounds are less likely to engage in aggressive accounting practices like earnings management. Another way of framing this finding is to say that the financial statements presented by firms whose CEO's have accounting backgrounds provide a more accurate picture of the actual results of operations than those presented by firms with CEO's without accounting backgrounds.

TABLE 2
DIFFERENCES IN ABSOLUTE BAD DEBT RESERVE RATIO
(WITHOUT ACCOUNTING VS. WITH ACCOUNTING)

Background		**Without-Accounting**	**With Accounting**	**Difference (Without-Accounting)**
	Mean	2.9789	2.2084	0.7705 (p=0.0018)
	N	8508	443	

Table 3 displays the variance in the bad debt ratio comparing male versus female respondents. The average difference between these two is 1.1806, which is statistically significant with a p of .0002. This result does not support our second hypothesis that male CEOs are more likely to engage in aggressive accounting practices like earnings management than females. It shows just the opposite, that female CEOs are more likely than male CEOs to engage in such practices. This finding is quite surprising and potentially disturbing. However, the finding while significant may be limited to some degree due to the low n of 273 for female CEOs.

TABLE 3
DIFFERENCES IN ABSOLUTE BAD DEBT RESERVE RATIO (FEMALE VS. MALE)

Gender		**Female**	**Male**	**Difference (Female-Male)**
	Mean	4.0854	2.9047	1.1806 (p=0.0002)
	N	273	8678	

Finally, Table 4 displays the difference in the absolute bad debt ratio for all six of the possible ways of comparing the data for gender and background results. As you can see all but two of the differences were found to be statistically insignificant: Females without accounting backgrounds versus females with accounting backgrounds; and, males without accounting backgrounds versus females with accounting backgrounds.

TABLE 4
DIFFERENCES IN ABSOLUTE BAD DEBT RESERVE RATIO

Portfolio Comparisons		**Abnormal Returns**		
		Mean Difference	**p-value**	**Significance**
Male Non-Acc Vs Male Acc	**0**	0.8079	0.0001	Yes (P<.10)
Female Non-Acc Vs Female Acc	+	-0.7205	0.7005	No
Male Non-Acc Vs Female Non-Acc	+	-1.1088	0.0037	Yes (P<.10)
Male Acc Vs Female Acc	+	-2.6372	0.0233	Yes (P<.10)
Male Non-Acc Vs Female Acc	+	-1.8293	0.2143	No
Male Acc Vs Female Non-Acc	**0**	-1.9167	0.0001	Yes (P<.10)

As stated previously, the purpose of this study was to determine whether there is a connection between the educational background of a CEO (in accounting) and the firms' tendency toward aggressive accounting/earnings management practices. Due to the historical difficulty in collecting data surrounding the educational background (functional degree earned) of executives within corporations, this study represents one of the first of its kind to attempt to test such a connection. Our findings clearly indicate that such a connection does in fact exist. CEO educational background and to a lesser degree gender are both indicators as to the use of aggressive accounting practices like earnings management.

These findings are important and should be useful to other researchers, practitioners and investors, alike. Perhaps having an accounting educational background should be a prerequisite for all CEO positions. Future research might consider looking for differences between industries. Also, as previously stated, the number of female CEO firm-years is low. This is directly related to the fact that the vast majority of CEOs are still male. As time goes by, this number will increase, so relooking at these results as the number of female CEOs continues to grow could provide different insights.

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