2011

Ethics in Accounting: Sustainability as a Predictor of Financial Statement Usefulness

Kyle L. Shipley
Claremont McKenna College

CLAREMONT McKENNA COLLEGE

ETHICS IN ACCOUNTING: SUSTAINABILITY AS A PREDICTOR OF FINANCIAL STATEMENT USEFULNESS

SUBMITTED TO

PROFESSOR MATTHEW MAGILKE

AND

DEAN GREGORY HESS

BY

KYLE SHIPLEY

FOR

SENIOR THESIS

FALL 2011

NOVEMBER 28, 2011

Contents

Abstract

This paper examines the impact of ethics on financial statement usefulness in 120 publicly traded companies. Because ethics are difficult, if not impossible, to quantify, Corporate Social Responsibility ratings are used as a proxy. The potential implications of this study are vast, though the main idea is that investors would be able to make better financial decisions should the hypothesis come to fruition. Contrarily, investors will also be able to avoid potentially bad investments if they can ascertain certain companies that lack ethical values. In this paper, I will discuss several facets of corporate ethics such as creative accounting in addition to delving deeper into what it means for firms to be sustainable. Using data from the Roberts Environmental Center at Claremont McKenna College in conjunction with financial data from Wharton Research Data Services and panel data techniques, I find that only within the food and beverages industry is there a correlation between ethics and financial statement usefulness. This finding lends distinct support for the hypothesis and also begs the question of how corporate ethics vary between industries.

Introduction

A significant part of being ethical in the field of accounting is providing investors with useful financial information. An assumption can be made that sustainable companies are inherently more ethical than companies who neglect to contribute to the conservation of our planet. If these ethics then translate throughout the many facets of firms, their financial statements should, theoretically, be more useful than those of their less ethical counterparts. Indeed, companies who are not concerned with acting ethically will be more willing to post inflated or deceptive numbers in their financial statements if it means financial gains can be made or they can otherwise satisfy any self-interest motivated desires.

Good ethics are arguably the biggest asset of the accounting profession, as their work means nothing if it cannot be trusted. However, accounting standards are not always black and white and managers are left with some discretion as to how they want to deal with any number of scenarios. Because the goal of every firm is to maximize profits, there always exists a possibility that a manager will be motivated to skew numbers such that potential investors are more likely to invest money. While this may lead to the betterment of company executives, this deception can also cause investors to make misinformed and ill-fated decisions with their money. Thus, it is imperative to examine the ethics of companies to ensure the potential for sound investments and an even playing field for risk-averse people who prefer safe ways to invest their hard-earned dollars.

Survey of Literature

Usefulness of Earnings

As stated in the Financial Accounting Statements Board's Conceptual Framework, the main purpose of financial reporting is to furnish the investor and lender with information that gives users basis for choosing among alternative uses of scarce resources.[1] However, despite the intent of financial statements being clear, there are countless ways by which readers of these statements might construe information to be useful. Earnings are often considered to be the marquis element of information presented in financial statements. Indeed, when financial analysts express their beliefs for future outcomes, they refer largely to earnings rather than other financial statement elements such as equity, assets or sales.[2] Furthermore, the compensation of managers, and therefore many of their business decisions, is based on earnings objectives. The actual evaluation of earnings usefulness is a process that has been done many times by many people. However, even with the vast amount of time spent investigating the topic, there is still not a single, straightforward answer regarding the optimization of earnings usefulness. Such is the nature of financial information; numbers that may be useful to some financial statement users may be irrelevant for the needs of other users.

When studies of earning usefulness first began, the underlying concept was simple: if many individuals seemed to be using the same bit of information to make financial statements, this bit of information could be construed as useful. In a landmark

---

[1] Schroeder, R., Clark, M., & Cathey, J. (2011). "Financial Accounting Theory and Analysis: Text and Cases." John Wiley & Sons Inc., Hoboken, NJ.

[2] Lev, B. (1989). "On the Usefulness of Earnings and Earnings Research: Lessons and Directions from Two Decades of Empirical Research." *Journal of Accounting Research*, 27, 155.

study on the concept of earnings usefulness, Ball and Brown stated that, "an observed revision of stock prices associated with the release of the income report would thus provide evidence that the information reflected in income numbers is useful."[3]

In 1995, James A. Ohlson set out to prove the naysayers of the prevalence accounting information wrong by designing a mathematic model displaying their predictive financial validity. The model achieved its goal by relating a firm's market value with several elements of accounting data and their expected realizations.[4] This model built off the general consensus that sound earnings numbers are largely responsible for useful financial statements. However, it also took into account other common accounting information such as Book Value of Equity and Annual Returns. Due to the success of this model, there is now a rapidly expanding body of research that examines similar issues using cross-sectional regressions where earnings and book values serve as the primary independent variables.

Defining Sustainability and Corporate Social Responsibility

In order to conceive any relationship between a firm's ethics and the usefulness of their financial statements, a working definition of what is ethical in the corporate world must first be established. Corporate Social Responsibility (CSR) is one form of ethics in the business world and is defined as operating a business on a reliable, sustainable and desirable basis that respects ethical values, people, communities and the environment.[5]

---

[3] Ball, R. & Brown, P. (1968). "An Empirical Evaluation of Accounting Income Numbers." *Journal of Accounting Research*, 159, 78.
[4] Liu, J. & Ohlson, J.A. (1999). "The Feltham-Ohlson (1995) Model: Empirical Implications." <http://ssrn.com/abstract=180452>.
[5] Finch, N. "The Motivations for Adopting Sustainability Disclosure (2005)." *MGSM Working Paper No. 2005-17.*

Hallmark characteristics of Corporate Social Responsibility include environmental impact, corporate governance, social impact and workplace practices.[6]

Unfortunately, while it is certainly beneficial to society for corporations to act in a sustainable fashion, it is not always in the firm's best interest to do so. Thus, those firms who do elect to practice sustainability risk taking financial hits as a result. An argument can be made that a business entity's sole purpose is to maximize profits for its shareholders. Implied in this argument is that any resources spent doing anything outside of profit maximization contradicts the role of an economic entity. Some even go as far as to say that managers who implement Corporate Social Responsibility policies do so only to further their own social, political or career agendas despite doing a disservice to their stakeholders.[7] Therein lies a major dilemma for managers, as they must juggle the demands of their stakeholders while avoiding public scrutiny regarding sustainability in an ever increasingly environmentally conscious society.

Sustainability Disclosures in Accounting

The purpose of accounting is to disclose valuable information about companies in such a way that any concerned party can glean some form of value. However, traditional accounting often neglects to present vital information if it does not directly involve finances. Because corporations have both economic and social impacts[8], the disclosure of both economic and social information should be included in their company reports. By this logic, firms who do elect to include an array of social impact disclosures are

---

[6] RepuTex (2003), "RepuTex Social Responsibility Ratings." Reputation Measurement Pty Ltd, Melbourne.
[7] McWilliams, A. & Siegel, D. (2001). "Corporate Social Responsibility: A Theory of the Firm Perspective." *Academy of Management Review*. 26 (1) p 118.
[8] Estes, R. (1976). "Corporate Social Accounting." Wiley, New York.

providing more useful information than their counterparts who choose to disclose strictly financial information.

In 1997, The Coalition for Environmentally Responsible Economics launched the Global Reporting Initiative (GRI) to provide a framework for companies to provide more comprehensive reports to their stakeholders. The GRI was based upon the triple bottom line reporting approach (TBL), which is meant to focus corporations "not just on the economic value they add, but also on the environmental and social value they add – and destroy."[9] The notion of better sustainability reporting has garnered support from businesses, non-government organizations, accounting bodies, investor organizations and trade unions alike, with a goal of setting a universal standard as to how social reporting should be conducted in accounting.[10]

The question then becomes whether or not the inclusion of sustainability disclosures is any indicator of a firm's interest in producing comprehensive and useful financial statements. A large amount of previous research exists on related topics, though most use different financial dependent variables so it is difficult to compare the results in order to reach a more definite conclusion. Indeed, some researchers have reported positive correlations between corporate social responsibility and financial performance while others report negative correlations, along with everything in between.[11]

---

[9] Elkington, J. (1997). "Cannibals With Forks: The Triple Bottom Line of 21st Century Business." Capstone Publishing.
[10] Fowler, G. (2002). "Sustainability Reporting – A Global Framework." *Company Director*, November, Sydney.
[11] McWilliams, A. & Siegel, D. (2000). "Research Notes and Communications: Corporate Social Responsibility and Financial Performance: Correlation or Misspecification?" *Strategic Management Journal*, 21, pp.603-609.

Ethics and Creative Accounting

It is generally understood that the purpose of any financial entity is to turn a profit. Within this understanding is a logical truth that management behavior will often revolve around self-interest. It is this notion of self-interest that provides the background for the idea of earnings management. Earnings management, otherwise known as creative accounting, is the practice of altering financial information in such a way that abides by the standard rules of accounting yet does not adhere to the intended spirit of the laws. In a hypothetical world governed completely by self-interest, managers would exercise creative accounting practices to the fullest of their abilities. In reality, however, such is not the case, leading one to believe that there exists an ethical dimension of accounting that prevents many managers from venturing too far astray from standard accounting practices.[12] This begs the question of exactly how prevalent ethics are in the field of accounting and how often managers opt to exercise actions based on honesty rather than self-interest.

Ethical problems in the field of accounting exist in many forms. Subsequently, to stymie the majority of unethical actions, multiple solutions must be formulated. It is imperative to note that because ethics are such a subjective issue, there are varying degrees as to what is considered immoral. Borrowing concepts from philosophy, Ruland distinguishes between the teleological view, which states that an action should be judged on the basis of the moral worth of the outcome, and the deontological view whereby

[12] Amat, O & Gowthorpe, C. (2004). "Creative Accounting: Nature, Incidence and Ethical Issues." *UPF Working Paper No. 749*.

moral rules apply to actual actions.[13] One reaction to the differentiation between immoral actions and immoral outcomes is to take a teleological approach in the private sector, therefore allowing managers discretion regarding loose accounting policies, and a deontological approach in the public sector in the interest of avoiding investor deception.[14] Because the actions of private sector firms do not have the same implications of those of public firms, the latter logic makes sense. However, this is reliant upon the managers in the private sector behaving as ethically as possible while partaking in creative accounting, even in situations where ethics are not explicitly defined.

As was previously mentioned, ethics vary among individuals and are subjective to a bevy of factors. Indeed, everybody holds different standards of ethics and, subsequently, everybody makes different judgments as to what is a violation of ethical procedure. Evidently, it seems as though attitudes toward ethics change depending on one's role in the industry. In a study in 1995, Fischer and Rosenzweig found MBA students to be more critical than accountants of manipulated transactions, whereas accountants were more critical of abuse of accounting rules than MBA students.[15] These results are confirmed by another study conducted by Merchant and Rockness, who presented accountants with scenarios of creative accounting and found that they were

---

[13] Ruland, R.G. (1984). "Duty, Obligation and Responsibility in Accounting Policy Making. *Journal of Accounting and Public Policy*. Fall, pp. 223-237.
[14] Revsine, L. (1991). "The Selective Financial Misrepresentation Hypothesis." *Accounting Horizons*, December, pp. 16-27.
[15] Fischer, M. & Rosenzweig, K. (1995). "Attitudes of Students and Accounting Practitioners Concerning the Ethical Acceptability of Creative Accounting." *Journal of Business Ethics*, 14, pp. 433-444.

more critical of abuse of accounting rules than of manipulation of transactions.[16] Further, they found that self-interest fueled by instances of creative accounting brought about greater degrees of disapproval than did instances where the motivation was to promote the company. As is evident, a debate rages on regarding what type of ethical violations are most egregious. Nonetheless, the actual unethical acts committed by many accountants are well known.

According to a study conducted in 1995, which surveyed 1500 accountants, the three ethical problems cited most frequently were conflict of interest, client proposals to manipulate accounts and client proposals for tax evasion.[17] One example of a relatively common practice in accounting that can be construed as unethical is earnings smoothing. This occurs as a result of a company's preference to report a steady trend in growth rather than a volatile one. To ensure constant growth, firms can make unnecessarily high provisions for liabilities and against asset values in good years so that these provisions can later be reduced. As a result, when firms have years with weaker earnings numbers, they are nonetheless able to cast an illusion of steady profits.[18] Advocates of earnings smoothing claim that, in the long run, smoothed earnings provide better numbers on which investors can base their decisions. They also claim that it prevents investors' expectations from reaching unattainable levels following a single good year that the company likely will not be able to satisfy in subsequent periods. Opponents of earnings

---

[16] Merchant, K.A. & Rockness, J. (1994). "The Ethics of Managing Earnings: An Empirical Investigation." *Journal of Accounting and Public Policy*, 13, pp. 79-94.
[17] Leung, F. & Cooper, B. (1995). "Ethical Dilemmas in Accountancy Practice." *Australian Accountant*, May, pp. 28-33.
[18] Amat, O & Gowthorpe, C. (2004). "Creative Accounting: Nature, Incidence and Ethical Issues." *UPF Working Paper No. 749*.

smoothing stake the claim that if a business is indeed volatile, then investors should be privy to this volatility as it could potentially hide long-term changes in profit trends.

When ethical problems do arise, the decision of whether or not to act ethically is exclusively under human control, as opposed to situations where company policy can dictate decisions. In the words of a former senior partner of Price Waterhouse, this is because:

> When fraudulent reporting occurs, it frequently is perpetrated at levels of management above those for which internal control systems are designed to be effective. It often involves using the financial statements to create an illusion that the entity is healthier and more prosperous than it actually is. This illusion sometimes is accomplished by masking economic realities through intentional misapplication of accounting principles.[19]

As is indicated by the latter statement, creative accounting is something that people choose to do and not something that is inherently part of the profession. Thus, very often the decision to partake in unethical accounting practices comes down to whether or not the person involved can live with himself or herself knowing that they acted immorally.

Curbing the Use of Creative Accounting

Many efforts have been made to reduce the amount of subjectivity in the accounting profession. With this objective in mind, there are several possible ways by which success can be achieved. One such way to curb the prevalence of creative

---

[19] Conner, I.E. (1986). "Enhancing Public Confidence in the Accounting Profession." *Journal of Accountancy*, July, p. 78.

accounting is to reduce the number of acceptable accounting methods for a given process. If it is absolutely necessary to have multiple methods, then there should be guidelines as to exactly what circumstances must be present to use each method. Another possible method by which to reduce creative accounting is to limit the amount of judgment accountants have. For example, firms used to be able to classify many items as extraordinary when they simply did not want to include them in the operating profit. Fortunately, the International Accounting Standards Board has essentially abolished this practice in the interest of financial statement usefulness, as the extraordinary items section acted as an opportunity to hide certain information from less knowledgeable investors.

Hypothesis

As is explained by the Ohlson Model, both book value of equity and earnings per share are significant predictors of annual returns. It follows that because the variables are significant, the information can be used by investors when making decisions. More specifically, the information is useful to investors. Thus, because the financial information used in the Ohlson Model is useful to investors, it should logically follow that the firms who provide the most useful numbers are the most ethical. In terms of this study, this means that the Corporate Social Responsibility ratings should fit into the regression formula with significance. Of course this can only be true if the sustainability ratings can truly act as a proxy for overall ethics.

Along with the basic hypothesis that ethics will act as a predictor for financial statement usefulness for all firms, this study also examines smaller subdivisions of the

regression. Specifically, it tests the hypothesis that companies within some industries may be inherently more ethical than those within other industries. Indeed, it seems entirely possible that a food or drink manufacturing company would be more concerned with honoring sustainability concerns than a big oil company that destroys the environment as part of its everyday business functions.

Furthermore, this study looks at whether or not the size of a firm influences its propensity to produce useful financial statements. An argument can be made that even if small firms are extremely sustainable and, thus, receive excellent Corporate Sustainability Scores, they are still prone to producing less useful financial statements resulting from the fact that there is simply less regulation and internal control than in a large firm. However, none of the firms included in the data would ever be classified as a small business and all have high enough market values that the differences in internal control should be marginal at most, at least if it assumed that none of the firms are involved in any malpractice.

In summation, the first hypothesis under investigation is that the Ohlson Model is, indeed, correct. The second hypothesis is that ethics will be a significant predictor of financial statement usefulness. Within this hypothesis, different subdivisions will be created based on industry and company size to see if there are any discrepancies in the data based on the form and function of individual firms.

Data

The data on Corporate Social Responsibility used in this study comes from the Robert Environmental School at Claremont McKenna College. These ratings are put

together annually by J. Emil Morhardt, Elgeritte Adidjaja and a team of students. The ratings rank individual firms on a scale from zero to one hundred and different reports are published in reports divided by industry. Ratings for an individual industry are not necessarily published every year, however, so it is possible that inconsistencies in what years are included could influence the data. Fortunately, because the present analysis being performed looks at changes within individual firms rather than across industries, the statistical results are unaffected by the lack of certain years.

Because the Roberts Environmental Center has been putting together the Corporate Social Responsibility ratings for less than a decade, the sample of data is relatively limited. Furthermore, many of their points of interest reside outside the scope of the present research. For example, one of the reports published involves Colleges and Universities and this data is obviously irrelevant in this study, as the goals of such institutions fall outside the general framework of a profit seeking company. Additionally, institutions such as these do not make their financial statements widely available to the public so no statistical analysis can be performed.

A potential weakness in the data is that the algorithm used to calculate the corporate social responsibility ratings has seen some changes throughout the years. Unfortunately, as is the nature of most archival research, nothing can be done to correct the ratings of past years to normalize the data. However, because the same people oversee the work every year, a good level of consistency can be assumed as they have no incentive to implement significant changes to their process.

The book value of equity was compiled by subtracting total liabilities from total assets for every year. The data for total liabilities and total assets was downloaded from

COMPUSTAT from the Wharton Research Data Services website.[20] The data for annual returns was attained from CRSP, which is another section on the Wharton Research Data Services website.

The main limitation of the financial data is that some of the numbers were not available for select companies. However, the only real effect this has is to shrink the sample size a marginal amount, as the firms who did not have the necessary financial information were simply omitted. Outside of the non-existent information, the data is very strong as it is taken from a trusted database, which extracts its data straight from the firms. Because the Wharton School is a third party, there is very little risk that they would tamper with the numbers as they have no incentive to make any firms look better than others. Thus, the financial data should be very reliable to use in the present statistical analysis.

Summary Statistics

CSR Rating is the corporate social responsibility rating produced by the Roberts Environmental Center at Claremont McKenna College and considers the overall sustainability of firms from both environmental and corporate perspectives. EPS is defined as annual earnings per share and can be calculated dividing the difference between net income and dividends on preferred stock by average outstanding shares. As was previously mentioned, BV of Equity is defined as the annual book value of equity calculated by subtracting total liabilities from total assets for each given year. Annual Returns are defined as the change in total value of an investment in a common stock over

[20] Wharton Research Data Services. 2011. Wharton School at the University of Pennsylvania. 10 Oct. 2011 <https://wrds-web.wharton.upenn.edu/wrds/>

the course of a year or, in other words, the change in the price of the firm's stock over the course of the year. Data was compiled from monthly information on CRSP and summed together to create annual figures. EPS*CSR and BV*CSR are calculated by interacting the previously mentioned variables. Finally, the MCAP variable is defined as the sum of all issue-level market values, including trading and non-trading issues.[21]

Table 1

Variable	Obs	Mean	Std. Dev.	Min	Max
CSR Rating	255	28.02	14.14	1.77	62.69
EPS	255	2.42	3.92	-31.58	15.02
BV of Equity	255	10911.48	17999.99	-16116.00	117523.00
Annual Return	255	0.04	0.37	-1.15	1.16
EPS*CSR	255	67.50	126.96	-1154.72	407.78
BV*CSR	255	365357.70	701205.10	-661884.10	5396656.00
MCAP	255	29001.82	48746.63	93.01	397234.1

Econometric Method

To test the validity of the Ohlson Model itself, I first regressed the annual returns on earnings per share and book value of equity. The basic specification is:

$$Price_{it} = \alpha + \beta_1 EPS_{it} + \beta_2 BV_{it}$$

[21] Wharton Research Data Services. 2011. Wharton School at the University of Pennsylvania. 10 Oct. 2011 <https://wrds-web.wharton.upenn.edu/wrds/>

Next, to utilize the Ohlson Model to investigate the effects of ethics, I regress the annual returns on earnings per share, book value of equity, corporate social responsibility ratings and a spattering of other explanatory variables. This follows the basic form of the Ohlson Model, with slight modifications to adjust for corporate social sustainability. The basic specification is:

$$\Delta Return_{it} = \alpha + \Delta\beta_1 EPS_{i(t-1)} + \Delta\beta_2 BV_{i(t-1)} + \Delta\beta_3 CSR_{i(t-1)} + \Delta\beta_4 EPS*CSR_{i(t-1)} + \Delta\beta_5 BV*CSR_{i(t-1)} + \varepsilon_{it}$$

Where *i* indexes the company and *t* indexes the year. In addition to the basic Ohlson Model and sustainability variables, interaction terms are used to determine if there exists any interconnectivity between the variables used.

This study uses a random effects panel regression due to the fact that the panel contains data from multiple companies over multiple years. A Hausman Test determines that a random effects panel regression is applicable because the chi-squared value is greater than 0.05.

Results

Part I: Basic Ohlson Model

Using a random effects panel regression for all industries, the data confirms, with significance, that earnings per share is a predictor of annual returns. However, the data does not provide evidence in support of Ohlson's conclusion that book value of equity is also a significant predictor of annual returns. Though the Ohlson Model does not completely hold in the present study, the basic results are indicative of the results

presented in Part III of this section. Complete regression results for the basic Ohlson Model are reported in Table II.

The interpretation of these results should be that all results from this data must be taken with a grain of salt. The reliability of the Ohlson Model is difficult to question, as there have been many studies that confirm its validity, such as that of Dunn et al.[22] Thus, it is possible that the data set may not be entirely reliable, especially considering its small sample size relative to other replications of the Ohlson Model. Once again, however, it should be noted that the limited sample size is necessitated by the short period of time for which the corporate social responsibility ratings have been assembled.

Table II

VARIABLES	(1) return
EPS	0.0134**
	(0.00601)
BV of Equity	2.68e-07
	(1.31e-06)
Constant	0.000583
	(0.0300)
Observations	255
R-squared	0.020

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

[22] Dunn, K., Kohlbeck, M. & Magilke, M. (2009). "Future Profitability, Operating Cash Flows, and Market Valuations Associated with Offshoring Arrangements of Technology Jobs." *Journal of Information Systems*, 23, 2, pp. 25-47.

Part II: All Industries

Using a random effects panel regression for all industries, I find that ethics do not have a significant impact on financial statement usefulness. This is evidenced by the fact that the corporate social sustainability ratings did not display any significance as predictive variables for annual returns. Complete regression results for all industries are reported in Table 3. Furthermore, the results indicate that when all industries are taken into account, even the most basic assumptions made under the Ohlson Model do not hold true. Indeed, neither Earnings per Share nor Book Value of Equity display any significant predictive value for Annual Returns. Additionally, both interaction variables lacked significance in the regression. Interestingly, the results of this study when all industries are considered are inconsistent with the work of Ohlson as well as the central hypothesis of this thesis, which predicted a correlation between ethics and financial statement usefulness.

Although none of the values of the coefficients are statistically significant, it is still important to analyze the signs in front of them. The coefficients for both sustainability and the interaction of book value and sustainability are negative. While it must be remembered that there is a total lack of significance, these negative signs are striking nonetheless. As a whole, this means that as corporate social responsibility ratings rise, annual returns fall. Similarly, it means that as the interaction variable between corporate social responsibility ratings and book values rise, returns are falling. This particular result is interesting to note, as it contradicts the positive sign found in front of the regular book value of equity coefficient. Per contra, both the earnings per share as well as the interaction variable between earnings per share and corporate social

responsibility are preceded with positive signs. Once again, the numbers are not significant, but these results do share with the Ohlson Model the notion that as earnings per share rises, so do annual returns.

Table 3

VARIABLES	(1) Return
EPS	0.00420
	(0.0179)
BV of Equity	1.47e-06
	(4.48e-06)
CSR Rating	-0.000877
	(0.00241)
BV*CSR	-3.39e-08
	(1.21e-07)
EPS*CSR	0.000314
	(0.000579)
Constant	0.0255
	(0.0747)
Observations	135
R-squared	0.022

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Part III: Food Industry

Due to the utter lack of significant results, more random effects panel regressions were run while controlling for different factors in the sample to determine whether or not there exists a confounding variable thwarting the results. First, the size of the firm was controlled for, as there could easily be a discrepancy between the moral codes of small

and large firms as was posited by Revsine.[23] Using market capitalization as a proxy for firm size, no significant results arose. Next, the data was divided up by industry and separate regressions were run for each of them, as well as for combinations of similar industries such as mining and petroleum. After analyzing the results, the only industry that displayed any statistical significance was the Food and Beverages Industry.

Using a random effects panel regression, I found that both earnings per share and corporate social sustainability significantly impact annual returns. These findings indicate that within the food industry, the Ohlson Model's conclusion that earnings per share are significant predictors of annual returns holds true. Furthermore, these results also coincide with the primary hypothesis of this study in that the corporate social responsibility ratings are significant predictors of annual returns. Thus, this lends support to the idea that ethics do correlate with financial statement usefulness in the Food and Beverages Industry. Complete regression results for the food industry are reported in Table 4.

As with before, it is important to note the signs in front of the coefficients to fully understand their meaning. The signs in front of the earnings per share and corporate social responsibility rating coefficients are both positive, as is the sign in front of the insignificant interaction variable between corporate social responsibility and book value of equity. On the contrary, the signs in front of the coefficients for book value of equity and the interaction variable between earnings per share and corporate social responsibility are negative. An interesting analysis can be drawn from these signs, as

---

[23] Revsine, L. (1991). "The Selective Financial Misrepresentation Hypothesis."*Accounting Horizons*, December, pp. 16-27.

higher earnings per share as well as higher corporate social responsibility ratings correspond with higher returns. However, because the sign in front of the interaction coefficient is negative, it follows that higher sustainability scores are associated with a lower reaction for a given level of earnings per share. In other words, if two firms exhibit the same earnings per share in a given year, the firm with the higher corporate social responsibility rating will display a smaller market reaction to its earnings per share than the firm with the lower corporate social responsibility rating.

Table 4

VARIABLES	(1) Return
EPS	0.210**
	(0.104)
BV of Equity	-4.08e-06
	(2.47e-05)
CSR Rating	0.0141**
	(0.00617)
EPS*CSR	-0.00558**
	(0.00247)
BV*CSR	3.22e-07
	(6.70e-07)
Constant	-0.472*
	(0.247)
Observations	34
R-squared	0.271

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Conclusion

Contrary to the hypothesis, it is clear that corporate social responsibility ratings are not significant predictors of annual returns when all industries are considered. However, the results do indicate a correlation between corporate social

responsibility ratings and annual returns in the food industry, individually. While the results are strong, this conclusion must be considered with caution due to the small quantity of sustainability data available for individual industries. Had there been a wider array of available data, the results would be more reliable due to the laws of sample size in statistics. Additionally, it would have made it possible to run regressions on a wider variety of firms, as some industries had minimal amounts of published data. Furthermore, because the data failed to confirm all aspects of the Ohlson Model, further caution should be taken when considering the results.

As a whole, the data indicates that just because companies devote energy and resources to be sustainable or, in other words, ethical, it does not necessarily mean their financial statements are any more useful to investors. This conclusion contradicts seemingly rational logic, but it is not all that unusual considering that self-interest often causes perceptions of what is ethical in the eyes of management to differ from that of investors. Thus, the hypothesis that ethics would be a significant predictor of financial statement usefulness does not entirely work out, but it is likely that the reason is the general ambiguity of business ethics rather than the framework of the investigation.

Works Cited

Amat, O & Gowthorpe, C. (2004). "Creative Accounting: Nature, Incidence and Ethical Issues." *UPF Working Paper No. 749*.

Anderson, J. "Corporate Social Accounting." Westport, CT: Greenwood Press, Inc., 1989. Print.

Ball, R. & Brown, P. (1968). "An Empirical Evaluation of Accounting Income Numbers." *Journal of Accounting Research*, 159, 78.

Cohen, J., Pant, L. & Sharp, D. (1992). "Cultural and socioeconomic constraints on international codes of ethics: Lessons from accounting." *Journal of Business Ethics*, 11 (9), pp. 687-700.

Conner, I.E. (1986). "Enhancing Public Confidence in the Accounting Profession." *Journal of Accountancy*, July, p. 78.

Dunn, K., Kohlbeck, M. & Magilke, M. (2009). "Future Profitability, Operating Cash Flows, and Market Valuations Associated with Offshoring Arrangements of Technology Jobs." *Journal of Information Systems*, 23 (2), pp. 25-47.

Elkington, J. (1997). "Cannibals With Forks: The Triple Bottom Line of 21st Century Business." Capstone Publishing.

Estes, R. (1976). "Corporate Social Accounting." Wiley, New York.

Finch, N. "The Motivations for Adopting Sustainability Disclosure." MGSM Working Paper No. 2005-17, 2005.

Fischer, M. & Rosenzweig, K. (1995). "Attitudes of Students and Accounting Practitioners Concerning the Ethical Acceptability of Creative Accounting." *Journal of Business Ethics*, 14, pp. 433-444.

Fowler, G. (2002). "Sustainability Reporting – A Global Framework." *Company Director*, November, Sydney.

Gray, R., Bebbington, J. (2000). "Environmental accounting, managerialism and sustainability: Is the planet safe in the hands of business and accounting?" Emerald Group Publishing Limited.

Keller, G. "Statistics For Management and Economics." 8th ed. Mason, OH: Cengage Learning, 2008. Print.

Kieso, Donald E., Jerry J. Weygandt, and Terry D. Warfield. *Intermediate Accounting*. 13th ed. Hoboken, NJ: John Wiley & Sons, 2010. Print.

Leung, F. & Cooper, B. (1995). "Ethical Dilemmas in Accountancy Practice." *Australian Accountant*, May, pp. 28-33.

Lev, B. (1989). "On the Usefulness of Earnings and Earnings Research: Lessons and Directions from Two Decades of Empirical Research." *Journal of Accounting Research*, 27, 155.

Libby, R., Libby, P. and Short, G. *Financial Accounting*. 6th ed. New York, NY: McGraw-Hill Irwin, 2009. Print.

Liu, J. & Ohlson, J.A. (1999). "The Feltham-Ohlson (1995) Model: Empirical Implications." <http://ssrn.com/abstract=180452>.

McWilliams, A. & Siegel, D. (2001). "Corporate Social Responsibility: A Theory of the Firm Perspective." *Academy of Management Review*. 26 (1) p 118.

McWilliams, A. & Siegel, D. (2000). "Research Notes and Communications: Corporate Social Responsibility and Financial Performance: Correlation or Misspecification?" *Strategic Management Journal*, 21, pp.603-609.

Merchant, K.A. & Rockness, J. (1994). "The Ethics of Managing Earnings: An Empirical Investigation." *Journal of Accounting and Public Policy*, 13, pp. 79-94.

Morhardt, E., Adidjaja, E., et al. (2011). "2011 Sustainability Reporting of the World's Largest Food and Beverages Companies."

Ponemon, L. (2002). "Can ethics be taught in accounting?" *Journal of Accounting Education*, 11 (2), pp. 185-209.

RepuTex (2003). "RepuTex Social Responsibility Ratings." Reputation Measurement Pty Ltd, Melbourne.

Revsine, L. (1991). "The Selective Financial Misrepresentation Hypothesis." *Accounting Horizons*, December, pp. 16-27.

Roberts Environmental Center, Available at: <http://www.roberts.cmc.edu/>, n.d. (accessed October 3, 2011).

Ruland, R.G. (1984). "Duty, Obligation and Responsibility in Accounting Policy Making." *Journal of Accounting and Public Policy*. Fall, pp. 223-237.

Schroeder, R., Clark, M., & Cathey, J. (2011). "Financial Accounting Theory and Analysis: Text and Cases." John Wiley & Sons Inc., Hoboken, NJ.

Schweiker, W. (1993). "Accounting for ourselves: Accounting practice and the discourse of ethics." *Accounting, Organizations and Society*, 18 (2-3), pp. 231-252.

Wharton Research Data Services. 2011. Wharton School at the University of Pennsylvania. 10 Oct. 2011 <https://wrds-web.wharton.upenn.edu/wrds/>

Appendix

Table 5

Company	Frequency	Company	Frequency
Abbot Laboratories	2	Delta Airlines	2
Adams Resource and Energy, Inc.	2	Devon Energy	3
Air Products and Chemicals Inc.	2	DirecTV	3
Alcoa	2	Dominion Resources	2
Allegheny Technologies	2	Dow Chemical	2
Allergan	2	DTE Energy	2
Alpha Natural Resources	2	DuPont	2
Ameren	2	Dynegy	2
American Airlines	2	Eastman Chemical	2
American Electric Power	2	Edison International	2
Amgen	2	Eli Lily	2
Anadarko Petroleum	2	EnCana	2
Apache	2	Entergy	2
Apple	2	EOG Resources	2
Arch Coal	2	Exelon	3
Archer Daniels Midland	3	Exxon Mobile	2
Ashland, Inc.	2	Ferrellgas Partners	2
AT&T	2	FirstEnergy	2
Atmos Energy Corp	2	Ford	3
Avery Dennison	3	General Mills	2
Biogen Idec Inc.	2	Halliburton	2
Bristol-Myers Squibb	2	Hess	3
Bunge	3	Hormel Foods Corp	3
Celanese	2	Hospira	2
Centerpoint Energy	2	Integrys Energy Group	2
Chesapeake Energy	2	Intel	2
Chevron	2	International Paper	2
Coca-Cola	3	Johnson Controls	3
Commerical Metals	2	Kellogg	2
ConAgra Foods	3	Kraft Foods	2
Consol Energy	2	Louisiana-Pacific	2
Consolidated Edison	2	Lubrizol	2
CSX	2	Magna International	2
Cummins	2	Marathon Oil	2
Dean Foods	2	Merck	2
Dell	2	Molex	2

Company	Frequency	Company	Frequency
Molson Coors Brewing Co.	2	Qualcomm	2
Monsanto	2	Questar	2
Nalco	2	Rockwell Automation	2
NCR Corp	2	Royal Bank of Canada	2
New Jersey Resources	2	Sara Lee	3
Newfield Exploration	2	Scana	2
Newmont Mining	2	Scnitzer Steel Industries	2
NextEra Energy, Inc.	2	Sempra Energy	3
NiSource	2	Southern Company	2
Northeast Utilities	2	Standard Pacific Homes	2
Northrop Grumman	2	Steel Dynamics	2
NRG Energy	2	Sunoco	3
Nucor	2	Time Warner	2
Occidental Petroleum	3	Tyson Foods	3
Peabody Energy	2	Union Pacific	2
PepsiCo	3	United States Steel	2
Pfizer	2	Universal Forest Products	2
PG&E	3	Verizon Communication	2
Pitney Bowes Inc.	2	Watson Pharmaceuticals	2
Plum Creek Timber	2	Wells Fargo	2
Potlatch	2	Weyerhauser	2
PPL	2	Worthington Industries	2
Progress Energy	2	Xcel Energy	2