Analysis of the perceptions of accounting students and practitioners regarding the ethnicity of earnings management post Sarbanes-Oxley

Deborah M. Pendarvis
University of Tampa

David E. Morris, Sr.
North Georgia College & State University

ABSTRACT

This paper reports the results of a study which was an extension of previous studies by Grasso, Tilley and White (2009) and Fischer and Rosenzweig (1995) which examined the ethical perceptions of accounting students and accounting practitioners regarding earnings management. Earnings management can be used by management and accountants to influence the reported earnings of a company. This study surveyed 49 accounting professionals and 120 accounting students. The survey was one used by Burns and Merchant (1990) which presented participants with 13 various scenarios in which a subordinate engaged in earnings management. The subjects were asked to indicate the degree of ethical acceptability of each situation. It was believed by the authors that the passage of Sarbanes-Oxley (SOX) would result in stronger agreement among and between the two groups and less tolerance of questionable ethical behaviors. The primary results included significant disagreement between the professionals and students in 5 of the 13 scenarios. The professionals rated the scenarios as being more ethical as their number of years of work experience increased. Both groups rated as more unethical manipulations which affected year-end earnings versus quarterly earnings. The professionals rated situations involving accounting methods as significantly more unethical while the students rated the cases involving operational decisions as significantly more unethical. The results suggest there is still a need for better understanding of ethical behaviors as they relate to earnings management.

Keywords: Accounting ethics, earning management, Sarbanes-Oxley

INTRODUCTION

The topic of professional ethics within the accounting profession has taken on more importance than ever given recent accounting scandals. The ethnicity of earnings management has been the subject of much discussion and research. Earnings management can be viewed as a natural result of the fact that accounting standards allow for flexibility and subjectivity. On the other hand, earnings management can be used to produce fraudulent financial data intended to mislead investors and other users of such financial information. It has been said that earnings management is "bad" when it is used by managers to hide operating performance and can be "good" when it is "reasonable and proper practices that are part of a well-managed business and delivering value to shareholders" (Parfet 2000).

The purpose of this paper is to report the results of a study which compared the perceptions of accounting students and accounting professionals when considering the ethnicity of earnings management. The study also compared the effects of years of work experience and number of accounting classes taken on such judgments as well as other factors such as gender, whether the earnings management would increase or decrease earning, operating expense manipulations versus accounting manipulations, etc. This study was an extension of previous research published by Grasso, Tilley and White (2009) and Fischer and Rosenzweig (1995).

REVIEW OF THE LITERATURE

A study by Burns and Merchant (1990) in the area of ethics and earnings used a survey describing 13 management earnings situations that were presented to 649 managers. The results indicated strong disagreement among managers as to what constituted ethical behavior in situations involving the management of short-term earnings by changing or manipulating data.

In a second study, using the previous mentioned survey, Merchant and Rockness (1994) found that among other things, managers and internal auditors were significantly more liberal than general managers in their judgments across all of the cases involving questionable earning management activities. They found that all groups had a greater tolerance for manipulations involving operating expenses as opposed to accounting manipulations. However, their judgments were not affected by whether or not the manipulations were consistent with GAAP or the direction of the change in earnings.

Another study by Fischer and Rosenzweig (1995), using the same survey developed by Burns and Merchant, examined the ethical perceptions of accounting practitioners, undergraduate students and MBA students. The results indicated that accounting practitioners viewed as significantly more unethical earnings manipulation via accounting methods than did undergraduate students and MBA students. There was also significant disagreement among the subjects regarding operating expense manipulation. The undergraduate students viewed these manipulations as being more unethical than both the MBA students and the accounting practitioners.

Ethically related judgments were also asked of MBA students (Kaplan, 2001) in which the subjects were, prior to reading the three scenarios, assigned to one of three roles: A manager from the same company who did not know the manager in the

scenario, a manager from the same company who did know the manager in the scenario and, lastly, a shareholder. The four scenarios involved earnings management. With regards to accounting based earnings management, the subjects considered the scenarios as being more unethical when they assumed the role of being unfamiliar with the manager as opposed to either being familiar with the manager or being a shareholder. The authors concluded that one's role in the organization did have an influence in the ethically related judgments made by an individual.

A recent study published by Grasso, Tilley and White (2009) surveyed accounting students and professionals using a modified version of the survey used by Burns and Merchant. They compared results for groups surveyed prior to the passage of SOX and after the passage of SOX. The results indicated that both students and professionals in the post-SOX groups were harsher in their judgments of the ethics of earnings management manipulations than the pre-SOX respondents. The results also found that professionals stating that they were familiar with SOX were harsher of accounting manipulations and less harsh in their judgments of operating manipulations than those stating they were less familiar (or not familiar at all) with SOX. The familiarity with SOX had no significant affect on the responses of the students. Finally, those working in organizations with more ethical policies and higher standards indicated the same degree of harshness with regards to accounting manipulations and less harshness with regards to operating manipulations.

RESEARCH DESIGN AND RESEARCH QUESTIONS

A survey developed by Burns and Merchant (1990) was administered to 120 accounting students and 49 accounting professionals. The survey consisted of 13 scenarios in which a subordinate had engaged in earnings management. Subjects were asked to rate these situations on a 5-point scale from "ethical" to "totally unethical".

The following questions were addressed in this research study:

Research Question 1:
Are there significant differences between accounting professionals and accounting students concerning their ethics judgments of the 13 business scenarios?

Research Question 2:
Are there significant differences between males and females concerning their ethics judgments of the 13 business scenarios?

Research Question 3:
Are there significant relationships among the number of years worked in business/accounting, the number of accounting classes taken, and the ratings of the 13 scenarios?

Research Question 4:
Is there a significant difference between the participants' attitudes towards earnings management decisions that would increase earnings versus decisions that would decrease earnings?

Research Question 5
Is there a significant difference between the participants' attitudes towards manipulation that affected the quarter-end (scenario 2) versus year-end (scenario 3)?

Research Question 6:

Is there a significant difference between the participants' attitudes towards scenarios that are consistent with GAAP and scenarios that are not consistent with GAAP?

Research Question 7:

Is there a significant difference between accounting professionals and accounting students concerning their ethics ratings of the following methods of earnings management: accounting decisions, operational decisions, decisions that increase earnings, decisions that decrease earnings, decisions that have a small effect and decisions that have a large effect?

RESULTS

Research Question 1:

Are there significant differences between accounting professionals and accounting students concerning their ethical judgments of the 13 business scenarios?

A Mann-Whitney test was conducted to determine if the professionals and students significantly differed with regards to their ethical ratings for each of the 13 scenarios. The Mann-Whitney test is the non-parametric equivalent of the independent samples t-test. It was the appropriate test for these data because the dependent variable (ethics ratings) was ordinal scaled. The Mann-Whitney statistics are listed in Table 1. The tests revealed several significant differences. The professionals' and students' ethics perceptions significantly differed on scenarios 1, 2, 3, 12 and 13. The students scored significantly higher than the professionals on their ratings of scenarios 1, 2 and 3. Higher scores represent a higher degree of unethical behavior. Therefore, the students perceived the first 3 scenarios as being more unethical than the professionals. However, the professionals scored significantly higher than the students on their ratings of scenarios 12 and 13. This indicates that the professionals rated these 2 scenarios as more unethical than the students. The professionals and students did not significantly differ regarding their ratings of the remaining scenarios. See Table 1.

Research Question 2:

Are there significant differences between males and females concerning their ethical judgments of the 13 business scenarios?

A Mann-Whitney test was conducted to determine if the males and females significantly differed with regards to their ethical ratings for each of the 13 scenarios The Mann-Whitney statistics are listed in Table 2. The results indicate that the males and females significantly differed on their perceptions of scenarios 5 and 7. In both cases the females scored significantly higher than the males. This suggests that the females rated these 2 scenarios more unethical than the males. See Table 2.

Research Question 3:

Are there significant relationships among the number of years worked in business/accounting, the number of accounting classes taken, and the ratings of the 13 scenarios?

Several Spearman correlations were calculated to determine if there were significant relationships among the number of years worked in business/accounting, the number of accounting classes taken, and the ratings of the 13 scenarios. The data for the number of accounting classes taken was collected for the student participants only. The correlation matrix is presented in Table 3. Several significant relationships were

revealed. The number of accounting classes taken (among the students) was positively related to the participants' ratings of scenarios 2, 3, 5, and 11. This suggests that the students rated these scenarios as more unethical with increasing numbers of accounting classes taken. The strongest relationship pertaining to the accounting classes variable was between the number of classes taken and the ratings of scenario 2, $r = .32$, $p < .01$. The number of years worked in business/accounting was negatively related to the ethics ratings of scenarios 1, 2, 3, 6 and 7. This suggests that the participants rated these scenarios as more ethical as the number of years working within the profession increased. However, the number of years the participants worked in business/accounting was positively related to the participant's ethics ratings of scenarios 8, 12 and 13. This indicates that the participants rated these scenarios as more unethical as the number of years within the profession increased. See Table 3.

Research Question 4:

Is there a significant difference between the participants' attitudes towards earnings management decisions that would increase earnings versus decisions that would decrease earnings?

Scenarios resulting in increased earnings were 2, 3,4,5,6,7,10,11,12,13 while 1, 8, 9 resulted in decreased earnings. This research question was addressed separately for the professional and students. First, a paired-samples t-test was conducted to determine if the professionals perceived decisions that would increase earnings as significantly more unethical than decisions that would decrease earnings. The means and standard deviations for each variable are listed in Table 4. The t-test (Table 5) failed to reveal a significant difference in the professionals' ethics ratings of decisions that would increase earnings compared to those decisions that would decrease earnings, $t\ (45) = 1.10$, $p > .05$. A second paired-samples t-test was conducted with the student data. The students' data (Tables 6 and 7) suggests that the students perceived decisions that increase earnings (M = 2.91, SD = 0.60) as significantly more unethical than decisions that decrease earnings (M = 2.72, SD = 0.76), $t\ (120) = 3.09$, $p < .01$. See Tables 4 through 7.

Research Question 5:

Is there a significant difference between the participants' attitudes towards manipulation that affected the quarter-end (scenario 2) versus year-end (scenario 3)?

This research question was addressed separately for the professional and students. A Wilcoxon test was conducted to address this research question because both variables are not continuous. The descriptive statistics for the professionals' responses to the scenarios are listed in Table 8. The Wilcoxon test revealed that the professionals rated scenario 3 as significantly more unethical than scenario 2, $z = -3.02$, $p < .01$. The same test was also conducted on the student data. The descriptive statistics are listed in Table 9. The student data students also rated scenario 3 as significantly more unethical than scenario 2, $z = -5.02$, $p < .01$. See Tables 8 and 9.

Research Question 6:

Is there a significant difference between the participants' attitudes towards scenarios that are consistent with GAAP and scenarios that are not consistent with GAAP?

As in the earlier study by Merchant and Rockness (1994), scenarios 9, 10, and 11 were considered consistent with GAAP while scenarios 4,8,12 and 13 were considered inconsistent with GAAP. This research question was addressed separately for the professional and students. First, a paired-samples t-test was conducted to determine if the

professionals perceived decisions that are not consistent with GAAP as more unethical than scenarios that are not consistent with GAAP. The means and standard deviations for each variable are listed in Table 10. The t-test (Table 11) failed to reveal a significant difference in the professionals' ethics ratings of scenarios that are consistent with GAAP and scenarios that are not consistent with GAAP, t (46) = -1.80, $p > .05$. A second paired-samples t-test was conducted with the student data. The students' data (Tables 12 and 13) suggests that the students perceived decisions that are consistent with GAAP (M = 3.68, SD = 1.02) as significantly more unethical than scenarios that are inconsistent with GAAP (M = 3.42, SD = 0.95), t (120) = 2.72, $p < .01$. The authors believe that scenarios 9, 10 and 11 are, in fact, violations of GAAP. This may explain why professionals failed to recognize any significant differences in the ethical aspects of the situations. See Tables 10 through 13.

Research Question 7:

Is there a significant difference between accounting professionals and accounting students on their ethics ratings of the following methods of earnings management: accounting decisions, operational decisions, decisions that increase earnings, decisions that decrease earnings, decisions that have a small effect and decisions that have a large effect?

Several independent samples t-tests were conducted to determine if the accounting professionals and the accounting students significantly differed on the dependent variables. The means and standard deviations for each dependent variable by group are listed in Table 14. The t-tests are listed in Table 15. Levene's test was not significant for all 6 tests, indicating that the groups had equal variances on the dependent variables.

The t-tests revealed many significant differences. First, the accounting professionals (M = 3.97, SD = 0.72) rated accounting methods as significantly more unethical than the accounting students (M = 3.53, SD = 0.83), t (166) = 3.20, $p < .01$. Interestingly, the students (M = 2.12, SD = 0.60) rated operational decisions as significantly more unethical than the accounting professionals (M = 1.82, SD = 0.66), t (165) = -2.87, $p < .01$. The professionals (M = 4.16, SD = 0.85) rated accounting decisions that have a small effect as significantly more unethical than the accounting students (M = 3.51, SD = 0.97), t (166) = 4.02, $p < .01$. The accounting professionals (M = 3.90, SD = 0.83) rated accounting decisions that have a large effect as significantly more unethical than the accounting students (M = 3.54, SD = 0.89), t (166) = 2.37, $p < .05$. The accounting professionals and the accounting students did not significantly differ on their ethics ratings of accounting decisions that increase earnings and accounting decisions that decrease earnings. See Tables 14 and 15.

CONCLUSIONS

The purpose of this study was to examine and compare the ethical views of accounting professionals and accounting students. The questionnaire used was one previously used by Burns and Merchant (1990) and Rosenzweig and Fischer (1994). As previous studies had indicated, there were significant differences of opinion between accounting students and accounting professionals regarding the ethnicity of earnings management. The most disappointing results may be the fact that operating manipulation

was still considered less unethical than accounting manipulation by the accountants. Both types of manipulations can lead to misleading financial information. Also of concern is the fact that accounting professionals rated the scenarios more ethical as the number of years of work experience increased. It appears that the passage of Sarbanes-Oxley may have raised more awareness of the potential problems of earnings management but there is still room for improvement. The results suggest there is still a need for a better understanding of ethics as it relates to earnings management. Universities may need to incorporate such information into their ethics classes and employers might be wise to provide workshops and continuing education classes to employees.

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Table 1

Mann-Whitney Tests on Scenarios by Group

Dependent Variable	Mann-Whitney U	Sig.
Scenario 1	2402.50	.016
Scenario 2	2103.50	.004
Scenario 3	2169.00	.009
Scenario 4	2456.00	.092
Scenario 5	2630.00	.567
Scenario 6	2615.50	.335
Scenario 7	2398.00	.069
Scenario 8	2383.00	.094
Scenario 9	2670.50	.528
Scenario 10	2663.50	.508
Scenario 11	2512.50	.218
Scenario 12	1660.50	.000
Scenario 13	1655.00	.000

Table 2

Mann-Whitney Tests on Scenarios by Gender

Dependent Variable	Mann-Whitney U	Sig.
Scenario 1	3019.50	.052
Scenario 2	3319.00	.531
Scenario 3	3276.50	.448
Scenario 4	3150.50	.218
Scenario 5	2840.50	.035
Scenario 6	3172.00	.198
Scenario 7	2837.50	.013
Scenario 8	3162.50	.256
Scenario 9	3282.00	.454
Scenario 10	3021.00	.105
Scenario 11	3212.00	.318
Scenario 12	3347.00	.595
Scenario 13	2958.50	.067

Table 3 Bivariate Spearman Correlations for Research Question 3

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Years Worked (1)	---	0.11	-.16*	-.28**	-.24**	0.13	0.05	-.20*	-.17*	.18*	0.13	0.03	0.1	.31**	.26**
Accounting Classes (2)		---	0.01	.32**	.31**	0.15	.26**	0.02	0.12	-0.03	-0.1	0.03	.20*	0.15	0.15
Scenario 1 (3)			---	.19*	.22**	-0.06	0.15	0.1	.21**	-0.01	-0.11	0.03	-0.04	0	-0.07
Scenario 2 (4)				---	.82**	0	0.13	0.08	0.11	0.05	-0.02	0.04	0.04	-0.03	0
Scenario 3 (5)					---	-0.03	0.12	0.09	0.14	0.11	-0.03	0.01	0.03	-0.05	0.03
Scenario 4 (6)						---	.16*	-0.11	-0.08	.24**	.22**	.29**	.32**	.30**	.42**
Scenario 5 (7)							---	.21**	.25**	.33**	-0.01	0.11	0.01	.34**	.33**
Scenario 6 (8)								---	.40**	-0.02	-0.02	0.06	-0.01	-0.07	-0.05
Scenario 7 (9)									---	0.11	-0.04	0.05	0.04	-0.02	0.01
Scenario 8 (10)										---	.26**	.37**	.21**	.29**	.34**
Scenario 9 (11)											---	.42**	.40**	0.15	.26**
Scenario 10 (12)												---	.78**	.15*	.27**
Scenario 11 (13)													---	0.13	.24**
Scenario 12 (14)														---	.77**
Scenario 13 (15)															---

Table 4

Means and Standard Deviations of Professionals' Ethics Ratings for Research Question 4

Variable	M	SD	SE	N
Decisions That Increase Earnings	2.93	0.59	0.09	46
Decisions That Decrease Earnings	2.80	0.73	0.11	46

Table 5

Paired-Samples t-test for Professionals

Paired Differences							
Mean	SD	SE	95% CI of the Difference		*t*	df	Sig.
			Lower	Upper			
0.12	0.76	0.11	-0.10	0.35	1.10	45	.279

Table 6

Means and Standard Deviations of Students' Ethics Ratings for Research Question 4

Variable	M	SD	SE	N
Decisions That Increase Earnings	2.91	0.60	0.05	121
Decisions That Decrease Earnings	2.72	0.76	0.07	121

Table 7

Paired-Samples t-test for Students

Paired Differences							
Mean	SD	SE	95% CI of the Difference		*t*	df	Sig.
			Lower	Upper			
0.19	0.67	0.06	0.07	0.31	3.09	120	.002

Table 8

Means and Standard Deviations of Professionals' Ethics Ratings for Research Question 5

Variable	N	M	SD	Min.	Max.
Scenario 2	48	2.17	1.36	1.00	5.00
Scenario 3	48	2.52	1.57	1.00	5.00

Table 9

Means and Standard Deviations of Students' Ethics Ratings for Research Question 5

Variable	N	M	SD	Min.	Max.
Scenario 2	121	2.69	1.20	1.00	5.00
Scenario 3	121	3.13	1.33	1.00	5.00

Table 10

Means and Standard Deviations of Professionals' Ethics Ratings for Research Question 7

Variable	M	SD	SE	N
Consistent with GAAP	3.82	1.03	0.15	47
Inconsistent with GAAP	4.09	0.74	0.11	47

Table 11

Paired-Samples t-test for Professionals

Paired Differences							
Mean	SD	SE	95% CI of the Difference		*t*	df	Sig.
			Lower	Upper			
-0.26	1.00	0.15	-0.56	0.03	-1.80	46	.079

Table 12

Means and Standard Deviations of Students' Ethics Ratings for Research Question 7

Variable	M	SD	SE	N
Consistent with GAAP	3.68	1.02	0.09	121
Inconsistent with GAAP	3.42	0.95	0.09	121

Table 13

Paired-Samples t-test for Students

Paired Differences							
Mean	SD	SE	95% CI of the Difference		*t*	df	Sig.
			Lower	Upper			
0.26	1.05	0.10	0.07	0.45	2.72	120	.007

Table 14

Means and Standard Deviations for Research Question 8

Dependent Variable	Group	N	M	SD
Accounting Methods	Professional	47	3.97	0.72
	Student	121	3.53	0.83
Operational Decisions	Professional	46	1.82	0.66
	Student	121	2.12	0.60
Decisions That Increase Earnings	Professional	46	3.03	0.58
	Student	121	2.93	0.60
Decisions That Decrease Earnings	Professional	47	2.79	0.72
	Student	121	2.72	0.76
Decisions That Have a Small Effect	Professional	47	4.16	0.85
	Student	121	3.51	0.97
Decisions That Have a Large Effect	Professional	47	3.90	0.83
	Student	121	3.54	0.89

Table 15

Independent Samples t-tests for Research Question 8

						95% CI of the Difference	
Dependent Variable	*t*	df	Sig.	Mean Difference	SE	Lower	Upper
Accounting Methods	3.20	166	.002	0.44	0.14	0.17	0.71
Operational Decisions	-2.87	165	.005	-0.31	0.11	-0.52	-0.10
Decisions That Increase Earnings	1.02	165	.307	0.11	0.10	-0.10	0.31
Decisions That Decrease Earnings	0.54	166	.590	0.07	0.13	-0.19	0.33
Decisions That Have a Small Effect	4.02	166	.000	0.65	0.16	0.33	0.97
Decisions That Have a Large Effect	2.37	166	.019	0.36	0.15	0.06	0.65