The Ethics of Earnings Management: Perceptions after Sarbanes-Oxley

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A survey compares accounting students' and professionals' perceptions of the ethics of earnings management from before and after the accounting scandals that led to passage of the Sarbanes-Oxley Act of 2002 (SOX). The results suggest that professionals and students in the era following the passage of SOX find earnings management more questionable and less ethical than their pre-SOX counterparts. Overall, the high-profile accounting scandals appear to have had a bigger effect than SOX on the perceived ethics of earnings management.

The ethics of financial reporting has long been a concern of the accounting profession. A significant increase in business failures and fraudulent financial reporting in the 1980s led to the creation of the National Commission on Fraudulent Financial Reporting. Also referred to as the Treadway Commission, it defined fraudulent financial reporting as "intentional or reckless conduct, whether act or omission, that results in materially misleading financial statements."[1] Attention to the ethics of accounting practice and financial reporting further intensified following the collapse of the market for technology stocks in 2000 and the flurry of accounting scandals that received public attention in 2001 and 2002, including Adelphia, Enron, Kmart, Homestore.com, Global Crossing, Qwest, Xerox, AOL Time Warner, Bristol-Myers Squibb, Duke Energy, Merck, Nicor, WorldCom, CMS Energy, Dynegy, El Paso, Halliburton, Peregrine Systems, Reliant Energy, Tyco International, and others. The Sarbanes-Oxley Act

of 2002 (SOX) was passed in response to those scandals to hold top executives more closely accountable for their firms' financial reporting.

Fraudulent financial reporting can happen when managers and accountants are involved in the practice of earnings management. Consequently, earnings management behavior has also been an area of concern and subject of study in the accounting profession. In fact, almost all fraudulent financial reporting could be characterized as earnings management, but not all earnings management is considered fraudulent. Kenneth Merchant observes that evidence suggests earnings management is common in practice, while Steven M. Mintz and Roselyn E. Morris explain that there is no consensus as to when earnings management is unethical behavior as opposed to being poor or even desirable managerial behavior.[2] Thus, many managers believe that some types of earnings management behavior are acceptable or even desirable.

Prior research has looked at the theory of planned behavior to understand factors related to earnings management.[3] Research has shown that the theory of planned behavior can help explain unethical and fraudulent financial reporting.[4] It states that behavior can be explained by intentions, which are shaped by three factors: attitude toward the behavior, the subjective norm, and perceived control over the behavior.

In regard to earnings management behavior, the first factor, attitude toward the behavior, may be influenced by knowledge of SOX. The second factor, the subjective norm for earnings management behavior (as perceived by accountants and managers) may be influenced by the general attitude of society concerning the ethics of earnings management as well as by the general attitude toward earnings management within individuals' organizations. Organizational cultural or social norms regarding the ethics of earnings management may vary significantly, with the views of top management playing a significant role in shaping the organizational social norm. The passage of SOX may change individual perceptions of the societal norm regarding the ethics of earnings management. If the organization has not reduced its tolerance for earnings management in response to SOX, accountants or managers (particularly those familiar with SOX) may see a greater difference between the perceived societal norm and the organizational cultural norm for earnings management behavior. In that case, an individual may judge the organization and earnings management behavior within the organization more harshly. Finally, in accounting it is likely that the third factor, perceived control over the behavior, is relevant only for those directly involved in earnings management. For example, internal auditors are not usually in a position to manage earnings and would have little incentive to do so unless they are cooperating in a fraud.

SOX requires that company management guarantee the fairness and accuracy of an organization's financial reporting and attest to the adequacy of its internal control system to provide reasonable assurance of fair and accurate reporting, disclosing any material weaknesses in the control systems. SOX is designed to prevent top management from delegating to (or encouraging) subordinates to commit acts of fraudulent or misleading reporting and then claiming ignorance if those actions are discovered. The Act is also designed to encourage development and documentation of improved internal control systems to prevent or detect misleading and fraudulent financial reporting. Thus, SOX seeks to reduce misleading and fraudulent financial reporting primarily by making it more difficult to engage in such activities, affecting the perceived control factor in the theory of planned behavior. Yet SOX also may have the indirect effect of changing views about the ethics of earnings management activities. A change in individual views would affect the first factor, attitude toward the behavior. Collectively, these changing views could create a shift in the second factor, the perceived normative views on earnings management behavior.

Background

As Mintz and Morris note, there is no "generally accepted" definition of earnings management.[5] Their phrase, "a conscious effort to manipulate earnings for one's advantage," captures the essence of earnings management as defined by Katherine Schipper and by Paul Healy and James Wahlen.[6] The "one" gaining the advantage is often a manager achieving a bonus, getting a more favorable review, gaining a promotion, or avoiding dismissal. But the advantage might also be more

general to the firm if earnings management is used to satisfy bond covenants or maintain stock price. Here the advantage is to the firm and existing shareholders at the expense of creditors and future shareholders.

Thomas McKee defends earnings management, defining it as "reasonable and legal management decision making and reporting intended to achieve stable and predictable financial results."[7] Ronald Dye notes that the current owners of a firm have a demand for earnings management to maximize the value of the firm at the expense of future owners.[8] In smoothing earnings, management is acting as agent in the interests of the current owners. William Parfet characterizes the actions under McKee's definition as "good earnings management" as opposed to "bad earnings management," which includes false entries, violations of generally accepted accounting principles (GAAP), and stretching estimates beyond the point of reasonableness.[9]

Based on field studies and interviews with managers, Merchant created a survey instrument with 14 earnings management scenarios.[10] A version of Merchant's survey instrument containing 13 of the 14 scenarios was published in the *Harvard Business Review* as an "Ethics Test for Everyday Managers," and readers were invited to respond.[11] Summarizing the responses, William Bruns and Merchant found no consensus that any of the scenarios were either completely ethical or completely unethical.[12] They also suggested that five factors appear to influence judgments about the acceptability of earnings management practices:

1. Method—accounting manipulations were less acceptable than operating manipulations.
2. Direction—increasing earnings was less acceptable than reducing earnings.
3. Materiality—actions involving large amounts were less acceptable than those involving small amounts.
4. Time period—affecting annual reports was less acceptable than affecting quarterly reports.
5. Operating method—offering extended credit terms (to boost revenue) was less acceptable than selling excess assets or using overtime to increase shipments.[13]

Accounting manipulations relate to accounting choices such as the timing of recognition of revenues and expenses, classification of items, and changes in estimates that affect current reported income for a given period. An accounting manipulation is earnings management if the primary motivation behind the choice is to achieve a desired effect on reported income in a particular period rather than to accurately value assets and liabilities or accurately reflect the results of operations. Operating manipulations are decisions affecting the timing or selection of actual business events, such as deferring or accelerating production, shipping to customers, maintenance, or research and development. Operating manipulations are earnings management if the primary motivation behind the choice is to achieve a desired result on reported income in a particular period rather than to satisfy customers, achieve long-term strategic goals, or improve long-term performance.

Merchant and Joanne Rockness used the same instrument to survey a more controlled sample of managers and controllers from two large corporations and the membership of a chapter of the Institute of Internal Auditors (IIA). They tested six factors for their influence on judgments of acceptability of earnings management practices:

1. Method—accounting methods were judged significantly less acceptable than operating methods.
2. Adherence to GAAP—no significant difference.
3. Direction of earnings effect—no significant difference.
4. Materiality—actions involving large amounts were judged significantly less acceptable than those involving small amounts.
5. Time period—affecting annual reports was judged significantly less acceptable than affecting quarterly reports.
6. Purpose—earnings management to meet a budget target was judged significantly less acceptable than earnings management to enable continuation of product development projects.[14]

Merchant and Rockness also found significant differences across the groups, with managers and controllers at one company judging earnings management practices in aggregate to be less acceptable than did the respondents from the other company and the IIA chapter. The company with the harsher judgments had recently experienced a major fraud incident. Merchant and

Rockness suggested the experience itself or a different "tone at the top" were possible explanations for the difference.

Marilyn Fischer and Kenneth Rosenzweig administered Merchant's survey instrument to undergraduate and MBA students and members of an Institute of Management Accountants (IMA®) chapter.[15] Using factor analysis, they identified two factors related to accounting manipulations and two factors related to operating manipulations. Across all groups, accounting manipulations were judged more harshly than operating manipulations. Practitioners judged accounting manipulations significantly more harshly than the students did. MBA students were significantly less harsh than undergraduate accounting students on accounting manipulations not involving inventory, and the reverse was true for accounting manipulations involving inventory. The accounting students judged operating expense manipulations most harshly, followed by the MBA students and accounting practitioners. They found no significant differences across groups of respondents in judgments of operating revenue manipulations.

In studies published in 2002 and 2004, Rafik Elias sent Merchant's survey to 5,000 members of the American Institute of Certified Public Accountants (AICPA), receiving 763 responses from members in public practice, industry, faculty, and students.[16] In the 2002 study, Elias found that accounting manipulations were uniformly judged less acceptable than operating manipulations. When comparing responses across groups, students judged operating manipulations more harshly and accounting manipulations less harshly than did faculty and practitioners.[17] Elias also found significant effects between earnings management judgments and the respondent's personal moral philosophy (2002), the respondent's beliefs about the association between social responsibility and firm performance (2002), and the perceived ethical values of the respondent's company (2004).

Steven Kaplan modified three of the hypothetical scenarios from Merchant's survey instrument for use in an experiment with MBA students.[18] The roles that students played (as a shareholder or as another manager learning of earnings management activity of an unknown fellow manager) affected their judgments about the ethics, fairness, and consequences of the action. Students assuming the role of another manager in the organization generally judged the accounting manipulations more harshly. Students in the shareholder role judged the operating manipulation more harshly in terms of financial suffering, seriousness of consequences, and overall fairness, but they showed no difference in terms of overall ethicality of the manipulations.

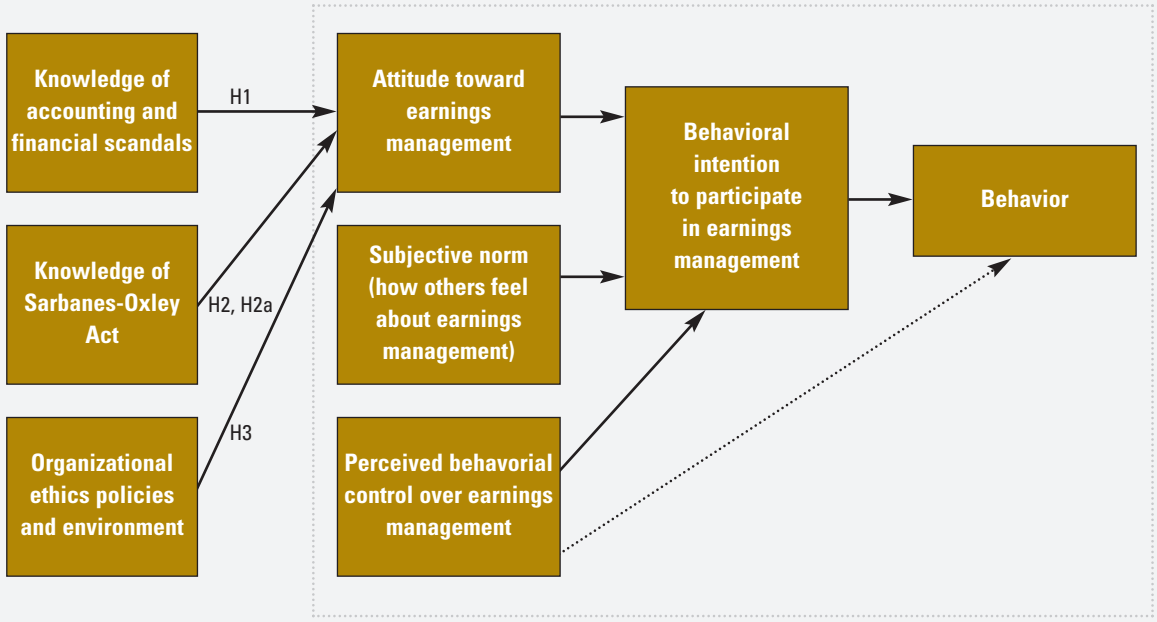
Tina Carpenter and Jane Reimers proposed that the theory of planned behavior be used to understand factors related to earnings management.[19] Through survey analysis and an experiment, they found that the theory of planned behavior can help explain unethical and fraudulent financial reporting. Individual attitude had the most influence on predicting behavioral intent. They concluded that the theory of planned behavior was a good predictive model of behavioral intention related to earnings management.

Model and Hypotheses

Our model proposes antecedents to the attitude construct from the Carpenter and Reimers model (see Figure 1). Our study focuses on the ethical perception of earnings management, not actual involvement in earnings management behavior. Our focus is on the first intention factor—attitude toward earnings management. Our proposed antecedents for these intention factors are knowledge of accounting and financial scandals, knowledge of the Sarbanes-Oxley Act, and organizational ethical policies and environment. We will now describe the hypotheses devised for the study. (The numbers of the hypotheses pertaining to each antecedent are included in Figure 1.)

When Merchant and Rockness raised the possibility that a fraud experienced by one of their subject companies led to harsher earnings management judgments from respondents in that company, it was before the high-profile corporate scandals became headline news and before SOX was enacted. If that effect is possible within one company, the accounting and financial reporting scandals that were widely publicized after 2000 should add to the awareness of the damage that can be done by earnings management and thus cause a change in attitude related to earnings management.

Figure 1: Theory of Planned Behavior Applied to Earnings Management



Source: Tina D. Carpenter and Jane L. Reimers, "Unethical and fraudulent financial reporting: Applying the theory of planned behavior," *Journal of Business Ethics*, Vol. 60, No. 2, 2005.

This leads to Hypothesis 1 (H1):

> **H1:** Earnings management practices will be judged more harshly (be perceived as less ethical) following the accounting and financial reporting scandals of the early 2000s than they were prior to 2000.

Significant differences in ethical judgments between student and professional populations were found by Fischer and Rosenzweig as well as Elias (2002).[20] This suggests that both learning and work experience play a role in shaping ethical judgments and attitudes related to earnings management. This is further reinforced by Elias's (2004) finding that respondents who worked for companies they perceived as having high ethical standards tended to judge earnings management practices more harshly.[21] SOX also created an increased awareness of and emphasis on the importance of internal control. The SOX requirements that lead to increased demands for accountability and increased responsibility for a high level of internal controls should make those familiar with SOX judge earnings management practices more harshly than those unfamiliar with the Act. This leads to Hypothesis 2 (H2):

> **H2:** Earnings management practices will be judged more harshly (be perceived as less ethical) by individuals familiar with the provisions of SOX than by those unfamiliar with SOX.

Earnings management can be accomplished by manipulating financial reporting or business operations. SOX is primarily concerned with financial reporting. Operating manipulations of earnings management can occur within an information system without violating internal controls because the system is faithfully reporting what actually occurred.[22] Daniel Cohen, Aiyesha Dey, and Thomas Lys found that managers of firms appear to have replaced accrual-based (financial report-

ing) earnings management practices with real (operating) earnings management practices since the passage of SOX.[23] Thus, knowledge of SOX may affect the attitude toward earnings management related to accounting manipulations more than operating manipulations. This leads to Hypothesis 2a (H2a):

> **H2a**: Knowledge of SOX will affect an individual's judgments of accounting manipulations more than it will affect judgments of operating manipulations. Compared to individuals unfamiliar with SOX, those more familiar with SOX provisions will judge earnings management based on accounting manipulations more harshly (perceive it as less ethical) than earnings management based on operating manipulations.

Merchant and Rockness found that managers and controllers at one company judged earnings management practices in aggregate to be less acceptable than did the respondents from another company. They suggested that a different "tone at the top" may possibly explain the difference.[24] External auditors have long considered an assessment of the "tone at the top" essential in evaluating the overall risk of fraudulent activity. Carpenter and Reimers maintained that attitudes for managers can be shaped by a firm's culture and direction of top executives and the board of directors.[25] This leads to Hypothesis 3 (H3):

> **H3**: Compared to individuals in organizations that have fewer ethical policies and lower ethical standards, those individuals in organizations with more ethical policies and higher ethical standards will judge earnings management more harshly.

Methodology

We used the 14-item version of Merchant's earnings management survey instrument in our study rather than the 13-item version that the other cited studies used. (See Appendix for the survey questions.) Subjects were asked to judge the actions described in each scenario as (1) an ethical practice, (2) a questionable practice, (3) a minor infraction, (4) a serious infraction, or (5) totally unethical. The dates were changed from 1986-1987 to 2007-2008, and all dollar amounts were multiplied by 1.5 to adjust for inflation. The text was otherwise unchanged from the original survey instrument.

The survey was administered to undergraduate accounting majors during December 2007 and January 2008 at a state university in the eastern United States. Most of the students responding to the survey were allowed time to complete the survey online during an accounting information systems class. Students in online graduate programs (MBA and MSM) at a private university in the western United States also completed the survey online in February-March 2008. In May-June 2008, 1,100 members of the Global Audit Information Network of the IIA were asked to complete the survey online, and two requests were sent by e-mail to 43,840 members of IMA (9,948 members actually opened the e-mail) with a link to complete the survey online.

After responding to the earnings management scenarios, the respondents were asked how familiar they were with SOX. The undergraduate accounting students were also asked how many courses they had taken that covered SOX. The IMA and IIA members were asked to respond to the five questions in Shelby Hunt, Van Wood, and Lawrence Chonko's measure of corporate ethical values.[26] Finally, all respondents were asked for information regarding their backgrounds, including age, gender, nationality, work experience, ethics courses taken, and (except for the undergraduate students) professional certifications.

A total of 110 undergraduate accounting students completed the survey, all of whom responded to all 14 of the earnings management scenarios. Of the 165 graduate students who logged onto the survey website, 33 did not respond to any ethical scenarios, yielding a final sample of 132 graduate students. Fifteen of the 132 graduate students in the final sample did not respond to one or more of the 14 scenarios. As for IIA members, 118 logged on to the survey, and 116 responded to the ethical scenarios, a response rate of 10.5%. Three of the 116 failed to respond to one scenario. Of the IMA members, 1,647 clicked on the link to the survey website, 860 logged on to the survey, 82 did not respond to any survey questions, and another 90 did not respond to

Table 1: Familiarity with the Sarbanes-Oxley Act of 2002

Familiarity with the Sarbanes-Oxley Act of 2002	Not at all familiar	Familiar with basic provisions	Very familiar with provisions & requirements
IMA and IIA practitioners	99	449	206
Graduate students	45	68	12
Undergraduate accounting students	9	85	16

How many of your courses covered the Sarbanes-Oxley Act of 2002?	0	1	2	3	4 or more
Undergraduate accounting students	7	19	24	31	29

any ethical scenarios, leaving a final sample of 688 IMA members, a response rate of 6.9% of those who actually opened the e-mail. Sixty-five of those 688 omitted a response to one or more of the ethical scenarios, which means 623 members responded to all 14 scenarios.

To test Hypothesis 1, we compared the results from our survey respondents to pre-SOX responses by similar populations. We make separate comparisons for professionals, graduate students, and undergraduate students because prior studies found significant differences in ethical judgments among those different groups.[27]

The responses from IMA and IIA members are combined into a single sample of professionals and managers. These responses are compared to the pre-SOX responses of professionals and managers used in Merchant and Rockness, plus an additional 39 responses collected from an executive education class and 33 responses from a control staff of a corporation collected by Merchant.[28] One corporation in the Merchant and Rockness study and the corporate control staff respondents were administered the 13-scenario version of Merchant's survey, omitting the manipulation with no effect on earnings. Nine members of the Merchant and Rockness sample and two members of Merchant's added sample failed to respond to one or more scenarios.

The student responses are compared to responses collected from a similar population of 170 undergraduate accounting students and 210 graduate students at a state university in the western United States between 1992 and 1993. Thirteen of the undergraduate accounting students and eight of the graduate students did not respond to one or more of the 14 scenarios.

All respondents were asked to rate their familiarity with SOX by selecting one of three categories: not at all familiar, familiar with the basic provisions, or very familiar with the provisions and requirements. The responses are summarized in Table 1. A substantial majority (60%) of professionals and managers reported being familiar with the basic provisions of SOX. The responses varied among the students, however. Only 8% of undergraduate students reported being very familiar with the SOX provisions and requirements, while the largest group of graduate students (64%) reported being familiar with the basic provisions of SOX. Because of the lack of dispersion in the familiarity with SOX among students, we also used the number of courses covering SOX as a measure of familiarity for the undergraduate students. Undergraduate student responses regarding the number of courses taken are also reported in Table 1.

To test Hypothesis 2, we created seven composite variables:

1. An average score for all manipulations,
2. An average score for all manipulations except the scenario with no effect on earnings (question 7),
3. An average score for all accounting manipulations,
4. An average score for all accounting manipulations except the scenario with no effect on earnings,

5. An average score for accounting manipulations inconsistent with GAAP (excluding the item with no effect on earnings, the average of questions 3, 5a, 8a, and 8b),
6. An average score for accounting manipulations consistent with GAAP (the average of questions 5b, 6a, and 6b), and
7. An average score for all operating manipulations.

All of these composite variables were previously used by Merchant and Rockness except for those including the accounting manipulation scenario not affecting earnings, which did not appear in their study. We ran one-way ANOVAs (analysis of variance) with the composite variables as the dependent variables and familiarity with SOX as the independent variable. The tests were run separately on the professional and manager, graduate student, and undergraduate student samples.

Hypothesis 2a proposes that greater knowledge of SOX will lead to stronger reactions (harsher judgments) of accounting manipulations compared to operating manipulations. To test Hypothesis 2a, we compared the one-way ANOVA results in the Hypothesis 2 tests for the eight accounting manipulation scenarios with the results from the six operating manipulation scenarios.

We also used the composite variables to compare our results to those reported by Merchant and Rockness and, where possible, Fischer and Rosenzweig and Elias (2002). We also replicated the factor analyses performed by Fischer and Rosenzweig using our data, and we used the resulting factor scores to replicate their comparisons.

Following Elias (2004), we used the five-item instrument developed by Hunt, et al., as a measure of the corporate ethical values for the responding professionals and managers.[29] A typographical error on one of the survey items comprising the corporate ethical value measure made it difficult to properly respond to the item. The error appeared to the early respondents to the IMA survey. All IMA respondents who logged onto the survey prior to the correction of the typographical error were consequently dropped from analyses using the corporate ethical value measure.[30] Regressions were run using the ethical scenarios and the composite variables for accounting and operating manipulations created for Hypothesis 2a as dependent variables and the corporate ethical value measure as the independent variable.

Results

The mean responses to the Merchant earnings management scenarios by the professionals and managers pre- and post-SOX are presented in Table 2. The post-SOX respondents were expected to be harsher in their judgments of earnings management behavior. The post-SOX mean response was nominally higher for 13 of the 14 scenarios and significantly higher in 11 cases—10 at a 99.9% confidence level. The post-SOX professionals and managers were significantly harsher in their judgments on the ethics of four out of six scenarios that involved changing operations to manage earnings and seven out of eight scenarios involving accounting manipulations.

The mean responses to the Merchant earnings management scenarios by the graduate students pre- and post-SOX are presented in Table 3. The post-SOX respondents were expected to be harsher in their judgments of earnings management behavior. The mean response of post-SOX graduate students was nominally higher for all 14 scenarios. The mean responses for post-SOX students were significantly higher in 11 cases—10 at a 99.9% confidence level. The post-SOX students were significantly harsher in their judgments about the ethics of five out of six scenarios that involved changing operations to manage earnings and six out of eight scenarios involving accounting manipulations.

The mean responses to the Merchant earnings management scenarios by the undergraduate accounting students pre- and post-SOX are presented in Table 4. The post-SOX respondents were expected to be harsher in their judgments of earnings management behavior. The mean response of post-SOX undergraduate students was nominally higher for 13 of the 14 scenarios and significantly higher in 10 cases. The post-SOX students were significantly harsher in their judgments about the ethics of all six scenarios that involved changing operations to manage earnings.

These results provide significant support for Hypothesis 1. On balance, post-SOX respondents are harsher in their judgments of the ethics of earnings management activities than pre-SOX respondents.

Table 5 summarizes the results of the one-way ANOVAS on the sample of professionals and managers using the composite variables. The mean responses are

Table 2: Professionals' and Managers' Responses

Merchant Survey Item (A=Accounting manipulation, O=Operating manipulation)	Post-SOX Mean (St.Dev)	Pre-SOX Mean (St.Dev)	t-statistic
1. Accelerate painting of buildings because profits are ahead of annual budget target. O (N=801, 380)	1.30 (.701)	1.28 (.610)	.371
2a. Defer discretionary expenditures to meet quarterly budget targets. O (N=794, 379)	**2.21** (1.280)	**1.77** (1.011)	**6.281*****
2b. Defer discretionary expenditures to meet annual budget targets. O (N=794, 379)	**2.52** (1.454)	**2.06** (1.258)	**5.493*****
3. Delay recording an invoice for supplies. A (N=790, 379)	**3.83** (.930)	**3.35** (.811)	**9.039*****
4a. Offer liberal payment terms, pulling sales into fourth quarter to meet annual budget target. O (N=782, 378)	**2.22** (1.167)	**1.98** (1.089)	**3.545*****
4b. Work overtime to ship everything possible before the end of the year to meet annual budget target. O (N=787, 379)	1.33 (.739)	1.35 (.720)	–.445
4c. Sell excess assets to reach annual budget targets. O (N=788, 378)	**1.48** (.850)	**1.29** (.728)	**3.922*****
5a. Pre-pay and record as a current expense next year's trade show expenses because profits are ahead of target. A (N=782, 380)	**3.70** (1.119)	**3.30** (1.047)	**5.886*****
5b. Write off inventory (justifiable taking a conservative view) because profits are ahead of target. A (N=782, 378)	**3.87** (1.187)	**3.49** (1.211)	**5.097*****
6a. Reverse write-off of inventory from previous year to assure product development efforts aren't delayed. A (N=771, 378)	**3.82** (1.233)	**3.60** (1.166)	**2.882*****
6b. Reverse write-off of inventory from previous year to make budget profit targets. A (N=771, 378)	**3.95** (1.172)	**3.68** (1.113)	**3.761*****
7. Bury most of scrap expense in other expense accounts to avoid scrutiny of excessive scrap costs. A (N=774, 246)	4.22 (.901)	4.14 (.781)	1.328
8a. Ask a consulting firm to delay invoicing for work already done until next year (small amount). A (N=776, 380)	**4.00** (.984)	**3.61** (.983)	**6.262*****
8b. Ask a consulting firm to delay invoicing for work already done until next year (large amount). A (N=776, 380)	4.48 (.784)	4.25 (.802)	**4.665*****

* = p<.05, ** = P<.01, *** = p<.001—one-tailed tests

Table 3: Graduate Student Responses

Merchant Survey Item (A=Accounting manipulation, O=Operating manipulation)	Post-SOX Mean (St.Dev)	Pre-SOX Mean (St.Dev)	t-statistic
1. Accelerate painting of buildings because profits are ahead of annual budget target. O (N=131, 210)	**1.52** (.854)	**1.10** (.322)	**5.324*****
2a. Defer discretionary expenditures to meet quarterly budget targets. O (N=132, 209)	**3.07** (1.463)	**2.26** (.996)	**5.560*****
2b. Defer discretionary expenditures to meet annual budget targets. O (N=132, 209)	**3.37** (1.427)	**2.67** (1.122)	**4.756*****
3. Delay recording an invoice for supplies. A (N=131, 210)	**3.99** (1.041)	**3.17** (.884)	**7.539*****
4a. Offer liberal payment terms, pulling sales into fourth quarter to meet annual budget target. O (N=129, 210)	**1.93** (1.167)	**1.54** (.842)	**3.322*****
4b. Work overtime to ship everything possible before the end of the year to meet annual budget target. O (N=129, 210)	1.32 (.637)	1.31 (.631)	.050
4c. Sell excess assets to reach annual budget targets. O (N=129, 210)	**1.64** (1.007)	**1.26** (.657)	**3.801*****
5a. Pre-pay and record as a current expense next year's trade show expenses because profits are ahead of target. A (N=123, 210)	**2.89** (1.509)	**2.63** (1.192)	**1.672***
5b. Write off inventory (justifiable taking a conservative view) because profits are ahead of target. A (N=130, 209)	3.38 (1.355)	3.19 (1.074)	1.413
6a. Reverse write-off of inventory from previous year to assure product development efforts aren't delayed. A (N=125, 206)	**3.66** (1.332)	**3.01** (1.206)	**4.489*****
6b. Reverse write-off of inventory from previous year to make budget profit targets. A (N=127, 206)	**3.69** (1.245)	**3.21** (1.139)	**3.501*****
7. Bury most of scrap expense in other expense accounts to avoid scrutiny of excessive scrap costs. A (N=129, 208)	**4.47** (.875)	**3.86** (.900)	**6.104*****
8a. Ask a consulting firm to delay invoicing for work already done until next year (small amount). A (N=129, 207)	**3.33** (1.370)	**2.93** (1.041)	**2.795*****
8b. Ask a consulting firm to delay invoicing for work already done until next year (large amount). A (N=129, 207)	3.65 (1.356)	3.52 (1.101)	.947

* = p<.05, ** = P<.01, *** = p<.001—one-tailed tests

Table 4: Undergraduate Student Responses

Merchant Survey Item (A=Accounting manipulation, O=Operating manipulation)	Post-SOX Mean (St.Dev)	Pre-SOX Mean (St.Dev)	t-statistic
1. Accelerate painting of buildings because profits are ahead of annual budget target. O (N=110, 170)	**1.63** (.833)	**1.36** (.649)	**2.863****
2a. Defer discretionary expenditures to meet quarterly budget targets. O (N=110, 170)	**3.36** (1.232)	**2.95** (1.045)	**2.929*****
2b. Defer discretionary expenditures to meet annual budget targets. O (N=110, 170)	**3.62** (1.196)	**3.31** (1.099)	**2.243***
3. Delay recording an invoice for supplies. A (N=110, 168)	3.46 (1.089)	3.39 (.947)	.604
4a. Offer liberal payment terms, pulling sales into fourth quarter to meet annual budget target. O (N=110, 169)	**2.02** (1.014)	**1.78** (.979)	**1.950***
4b. Work overtime to ship everything possible before the end of the year to meet annual budget target. O (N=110, 170)	**1.68** (.856)	**1.51** (.816)	**1.671***
4c. Sell excess assets to reach annual budget targets. O (N=110, 168)	**2.03** (1.062)	**1.49** (.812)	**4.529*****
5a. Pre-pay and record as a current expense next year's trade show expenses because profits are ahead of target. A (N=110, 170)	**2.95** (1.176)	**2.58** (1.220)	**2.529****
5b. Write off inventory (justifiable taking a conservative view) because profits are ahead of target. A (N=110, 165)	**3.37** (1.203)	**3.12** (1.150)	**1.787***
6a. Reverse write-off of inventory from previous year to assure product development efforts aren't delayed. A (N=110, 164)	2.97 (1.200)	2.80 (1.134)	1.173
6b. Reverse write-off of inventory from previous year to make budget profit targets. A (N=110, 164)	3.12 (1.194)	3.20 (1.131)	–.583
7. Bury most of scrap expense in other expense accounts to avoid scrutiny of excessive scrap costs. A (N=110, 166)	3.86 (1.208)	3.83 (1.019)	.231
8a. Ask a consulting firm to delay invoicing for work already done until next year (small amount). A (N=110, 168)	**3.33** (1.142)	**3.05** (1.088)	**2.055***
8b. Ask a consulting firm to delay invoicing for work already done until next year (large amount). A (N=110, 168)	**3.85** (1.143)	**3.61** (1.067)	**1.770***

* = p<.05, ** = P<.01, *** = p<.001—one-tailed tests

Table 5: One-way ANOVA Significance for Professionals and Managers

		Familiarity with SOX		
Composite variables	One-way ANOVA F values	Not at all familiar	Familiar with basic provisions	Very familiar with provisions and requirements
All manipulations	3.613	3.04	3.02	3.14*
All manipulations except earnings-neutral scenario (Q7)	2.809	2.94	2.94	3.04*
Accounting manipulations	23.734***	3.86	3.91	4.29***
Accounting manipulations except earnings-neutral scenario	22.879***	3.80	3.89	4.26***
Manipulations inconsistent with (i.e., violating) GAAP	18.041***	3.92	3.93	4.27***
Manipulations consistent with (i.e., satisfying) GAAP	17.254***	3.61	3.81	4.24***
Operating manipulations	8.248***	1.96	1.88	1.67***

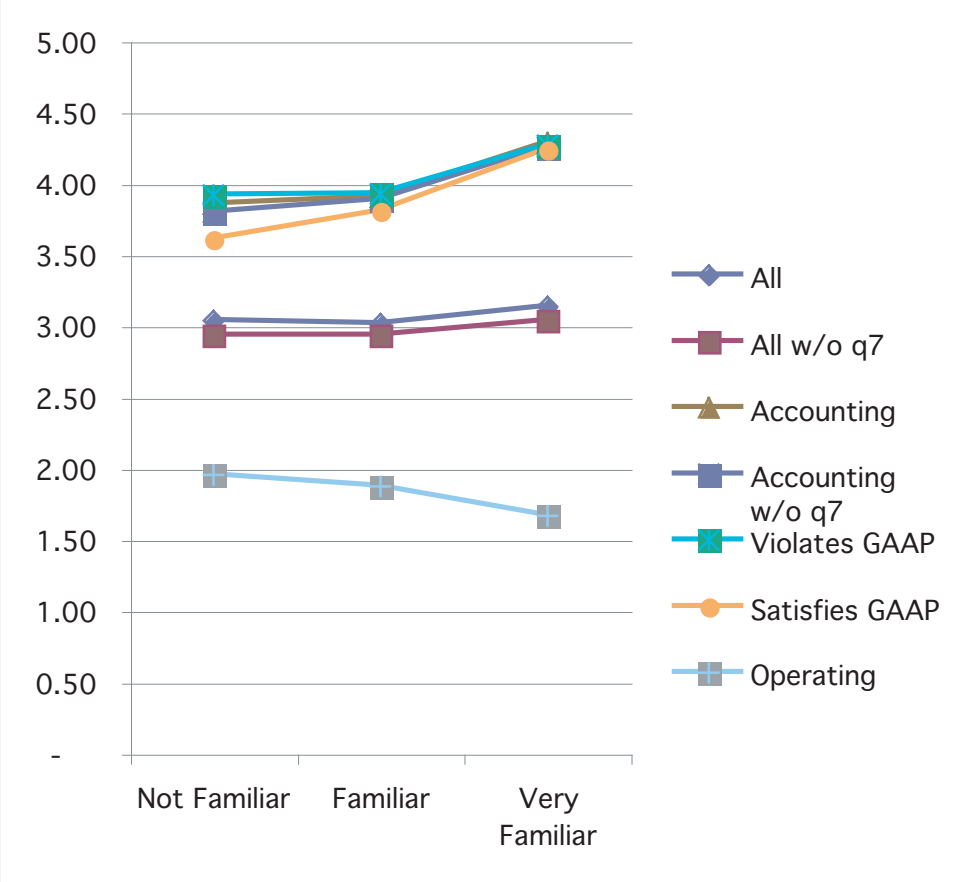
* = p<.05, *** = p<.001, Means significantly different from means of "Not at all familiar" and "Familiar" groups, one-tailed tests

displayed graphically in Figure 2. As shown by Table 5, professionals and managers who reported being very familiar with the provisions and requirements of SOX were on average significantly harsher in their judgments of earnings management practices than those who were familiar or not at all familiar, providing some support for Hypothesis 2. All one-way ANOVAs on the individual accounting manipulation scenarios were significant and displayed the same pattern of means. The difference between the means of the "not familiar" and "familiar with the basic provisions" responses was significant only for Question 6a, reversing the prior write-off of inventory.

Hypothesis 2a proposes that knowledge of SOX will affect judgments of accounting manipulations more than operating manipulations. The results in Table 5 show that professionals and managers who reported being very familiar with the provisions and requirements of SOX were significantly harsher in their judgments of accounting manipulations than those only familiar with the basic provisions or not at all familiar with SOX. Surprisingly, the professionals and managers very familiar with SOX were also significantly less harsh in their judgments of operating manipulations. One-way ANOVAs on the individual operating manipulation scenarios showed the composite variable result was driven by the responses to Questions 2a, 2b, and 4c, which follow the same pattern as the composite variable. On Question 1, respondents familiar with the basic provisions of SOX had a nominally lower mean response than those very familiar with SOX, while those not familiar with SOX had the highest mean value, significantly different from the familiar group and marginally significantly different (p<.05, one-tailed test) from the very familiar group. There were no significant differences in the responses to Questions 4a and 4b.

The pattern of results in Table 5 and Figure 2 lends some support to Hypotheses 2 and 2a for the sample of professionals and managers. Knowledge of SOX appears to have a greater impact on the judgments of the ethics of accounting manipulations than on judgments of operating manipulations, with professionals and managers very familiar with SOX displaying on average significantly harsher judgments than others. Thus Hypotheses 2 and 2a are supported with respect to those reporting they are very familiar with the provisions of SOX in comparison to everyone else. As expected, differences in the judgments about the ethics of operating manipulations associated with knowledge of SOX were not as great as for accounting manipulations, but,

Figure 2: Composite Variable Mean Responses by Professionals and Managers



surprisingly, those very familiar with SOX would judge operating manipulations less harshly.

One-way ANOVAs were run for both graduate and undergraduate students on the responses to the composite variables and the 14 ethics scenarios, using familiarity with SOX as the dependent variable. The level of familiarity with SOX did not explain a significant amount of variation in any case. Because so few graduate students reported being very familiar with SOX, means tests were run comparing students not at all familiar with SOX to those with at least some familiarity. Again, no significant results were found. One-way ANOVAs using the number of courses as a proxy for familiarity with SOX for undergraduate students also showed no significant variation in judgments on the ethics of earnings management explained by familiarity with SOX. The results do not show any support for Hypotheses 2 and 2a in the student sample.

In sum, we find partial support for Hypotheses 2 and 2a for accounting manipulations for professionals and managers very familiar with SOX compared to those familiar with the basic provisions or not at all familiar with SOX. The effect of being very familiar with SOX was strongest on the accounting manipulations, supporting Hypothesis 2a, but the judgments for operating manipulations for professionals and managers very

Table 6: The Impact of Corporate Ethical Values on Earnings Management Judgments

Merchant Survey Item	Regression Parameter	t-statistic
Operating manipulations		
1. Accelerate painting of buildings because profits are ahead of annual budget target.	(0.083)	–2.075*
2a. Defer discretionary expenditures to meet quarterly budget targets.	(0.207)	–2.848**
2b. Defer discretionary expenditures to meet annual budget targets.	(0.225)	–2.743**
4a. Offer liberal payment terms, pulling sales into fourth quarter to meet annual budget target.	(0.103)	–1.572
4b. Work overtime to ship everything possible before the end of the year to meet annual budget target.	(0.056)	–1.339
4c. Sell excess assets to reach annual budget targets.	(0.196)	–4.074***
Operating manipulations	(0.137)	–3.499**
Accounting manipulations		
3. Delay recording an invoice for supplies.	0.051	0.941
5a. Pre-pay and record as a current expense next year's trade show expenses because profits are ahead of target.	(0.023)	–0.367
5b. Write off inventory (justifiable taking a conservative view) because profits are ahead of target.	0.121	1.786
6a. Reverse write-off of inventory from previous year to assure product development efforts aren't delayed.	0.121	1.696
6b. Reverse write-off of inventory from previous year to make budget profit targets.	0.103	1.587
8a. Ask a consulting firm to delay invoicing for work already done until next year (small amount).	0.056	0.877
8b. Ask a consulting firm to delay invoicing for work already done until next year (large amount).	0.037	0.815
Accounting manipulations	0.042	0.971
7. Bury most of scrap expense in other expense accounts to avoid scrutiny of excessive scrap costs.	0.041	0.817
Accounting manipulations (with additional scenario)	0.043	1.046

familiar with SOX compared to those somewhat familiar or not at all familiar with SOX were in the opposite direction from that predicted by Hypothesis 2.

The results of regression analyses with the ethical scenarios and composite variables as the dependent variables and corporate ethical values as the independent variable are summarized in Table 6. There are no significant results for any of the accounting manipulations or composite variables. The corporate ethical value variable is significant for the operating manipulation composite variable and for four of the six ethical scenarios involving operating manipulations, but the coefficients are negative. This means that professionals and managers reporting a less ethical corporate environment judge operating manipulations more harshly, and those reporting a more ethical corporate environment judge

Table 7: Average Ratings by Composite Variable

Composite variables	Professionals and Managers Post-SOX Mean (St.Dev)	Professionals and Managers Pre-SOX Mean (St.Dev)	Graduate Students Post-SOX Mean (St.Dev)	Graduate Students Pre-SOX Mean (St.Dev)	Undergraduate Students Post-SOX Mean (St.Dev)	Undergraduate Students Pre-SOX Mean (St.Dev)
Accounting manipulations (N=755, 375, 119, 203, 110, 160)	3.96*** (.742)	3.61 (.660)	3.55*** (.889)	3.11 (.744)	3.29* (.711)	3.10 (.734)
Accounting manipulations (with additional scenario) (N=753, 243, 119, 203, 110, 159)	4.00*** (.711)	3.59 (.608)	3.67*** (.836)	3.20 (.712)	3.36* (.700)	3.19 (.713)
Operating manipulations (N=769, 377, 126, 209, 110, 157)	1.83*** (.677)	1.62 (.608)	2.16*** (.639)	1.69 (.454)	2.39*** (.588)	2.07 (.538)
Manipulations inconsistent with GAAP (N=770, 379, 122, 207, 110, 166)	4.01*** (.726)	3.63 (.677)	3.50*** (.964)	3.06 (.776)	3.40* (.775)	3.17 (.787)
Manipulations consistent with GAAP (N=763, 376, 123, 205, 110, 160)	3.89*** (1.054)	3.59 (.998)	3.59*** (1.143)	3.14 (1.005)	3.15 (.979)	3.03 (.953)
Manipulations increasing revenue (N=744, 374, 121, 203, 110, 161)	2.98*** (.556)	2.69 (.497)	2.97*** (.663)	2.50 (.497)	2.94** (.578)	2.72 (.567)
Manipulations decreasing revenue (N=777, 378, 123, 209, 110, 165)	2.95*** (.695)	2.69 (.661)	2.61** (.854)	2.31 (.622)	2.65** (.709)	2.36 (.704)

Significantly different from the pre-SOX sample mean * = p<.05, ** = p<.01, *** = p<.001—one-tailed tests

operating manipulations less harshly. These results are contrary to Hypothesis 3 and contrary to the results reported by Elias (2004).

Comparisons to Prior Studies

Merchant and Rockness created composite variables by computing the average mean score for scenarios with accounting manipulations, operating manipulations, manipulations inconsistent with GAAP, manipulations consistent with GAAP, manipulations increasing income, and manipulations decreasing income.[31] The average ratings by our samples for Merchant and Rockness's composite variables are presented in Table 7. We included a second composite variable for accounting manipulation because the added scenario in the survey instrument used in our study was an accounting manipulation.

In general, post-SOX judgments were harsher than pre-SOX judgments for all groups. All of the mean values are significantly higher in the post-SOX samples than in the pre-SOX samples except for the accounting manipulations consistent with GAAP in the undergraduate student group. Compared to the managers and professionals, only operating manipulations were judged more harshly by the students (especially the undergraduate accounting students). The mean scores for manipulations increasing revenue were the same across all post-SOX groups. The biggest relative changes between groups from pre-SOX and post-SOX are in the graduate students' judgments of operating manipulations, which were closer to those of the professionals and managers pre-SOX. Additionally, their judgments of manipulations increasing revenue, which were lower than those of the undergraduates and professionals and managers pre-SOX, were equal to those of the undergraduates and professionals and managers in the post-SOX sample.

Merchant and Rockness used their composite vari-

Table 8: Paired Sample Mean Comparisons

	Professionals and Managers		Graduate Students		Undergraduate Students	
	Post-SOX t-statistic	Pre-SOX t-statistic	Post-SOX t-statistic	Pre-SOX t-statistic	Post-SOX t-statistic	Pre-SOX t-statistic
Method: Accounting vs. Operating (M&R Composite variables)	**60.974*****	**47.636*****	**16.845*****	**24.086*****	**13.150*****	**16.885*****
Method: Accounting (with additional scenario) vs. Operating (M&R Composite variables)	**63.469*****	**41.649*****	**19.130*****	**26.564*****	**13.963*****	**18.626*****
Adherence to GAAP: Inconsistent with GAAP vs. Consistent with GAAP (M&R Composite variables)	**3.374****	.782	–1.298	–1.028	**2.533****	**1.667***
Direction: Increase vs. Decrease in Earnings (M&R Composite variables)	.956	.088	**6.393*****	**5.022*****	**4.841*****	**6.697*****
Direction: Increase vs. Decrease in Earnings (Item 2b vs. Item 1—identical dollar amounts)	**24.377*****	**12.287*****	**13.264*****	**19.442*****	**13.985*****	**21.736*****
Materiality: Large vs. Small dollar amounts (Item 8b vs. Item 8a)	**20.213*****	**18.617*****	**5.575*****	**13.308*****	**5.633*****	**10.517*****
Time period: Annual vs. Quarterly (Item 2b vs. Item 2a)	**13.983*****	**10.197*****	**4.700*****	**8.388*****	**2.862*****	**6.753*****
Purpose: Meet profit target vs. Continue product development (Item 6b vs. Item 6a)	**5.673*****	**3.04****	.399	**4.792*****	1.338	**5.778*****

* = p<.05, ** = p<.01, *** = p<.001—one-tailed tests.

ables along with paired comparisons of specific individual scenarios to explore whether judgments regarding the ethics of earnings management depended on specific attributes of the practice. The results of the paired comparison test for our samples are presented in Table 8.

1. Method—Accounting methods were judged significantly less acceptable than operating methods for all groups pre- and post-SOX, consistent with Merchant and Rockness.
2. Consistency with GAAP—Contrary to Merchant and Rockness's pre-SOX findings, the post-SOX sample of professionals and managers judged manipulations inconsistent with GAAP significantly more harshly than manipulations consistent with GAAP. The undergraduate students also judged manipulations inconsistent with GAAP significantly more harshly than those consistent with GAAP. The effect was more pronounced for the post-SOX students than for the pre-SOX students. Graduate students showed no significant difference in their judgments of the ethics of manipulations based on consistency with GAAP. In fact, the mean scores were nominally higher (harsher judgments) for the manipulations consistent with GAAP.
3. Direction of earnings effect—Consistent with Merchant and Rockness, the post-SOX professionals and managers had no significant direction of earnings effect. When compared to other groups, students pre- and post-SOX judged manipulations that increased earnings significantly more harshly

than manipulations that decreased earnings. This is because the student groups judged manipulations that decreased earnings less harshly than did the professionals and managers. There were significant differences in all samples when the earnings effect was measured as a difference between the judgments on Items 2b and 1.

4. Materiality—The request that a consulting firm delay invoicing until after the end of the year was judged significantly more harshly by all groups when it involved a large amount than when it involved a small amount, consistent with Merchant and Rockness.
5. Time period—Deferring expenses to affect annual results was judged by all groups significantly more harshly than deferring expenses to affect quarterly results, consistent with Merchant and Rockness.
6. Purpose—Consistent with Merchant and Rockness, the managers and professionals and pre-SOX students judged earnings management to meet a budget target (presumably to receive favorable evaluations and perhaps a bonus) as significantly less acceptable than earnings management to enable continuation of product development projects in the long term (presumably more for the benefit of the organization than for personal gain). The motivation behind reversing an inventory write-off did not matter to the post-SOX graduate and undergraduate students.

Fischer and Rosenzweig performed a principle components analysis of the responses to the 13 items in their version of Merchant's survey.[32] Four factors emerged, which they interpreted based on the variables that loaded highest in each factor after a Varimax rotation. In their study, variable 1 (painting ahead of schedule) loaded nominally higher on the factor containing high loadings for manipulations accelerating revenue (.389), but Fischer and Rosenzweig found it conceptually more appealing to include with the operating expense factor, where it had a slightly lower (.380) loading. We replicated their factor analysis on our combined pre- and post-SOX respondents. The rotated factor matrix is presented in Table 9. For our sample, variable 1 loaded strongly with the manipulations accelerating revenue (.508) and much lower on the operating expense factor. Other than variable 1, all of the variables loaded unambiguously onto the same factors as in Fischer and Rosenzweig.[33]

Fischer and Rosenzweig also used their factor scores to test for differences in responses between accounting practitioners and graduate and undergraduate accounting students. The results for pre- and post-SOX respondents to our study are presented in Table 10 along with the results reported by Fischer and Rosenzweig for comparison. The basic pattern displayed by our pre-SOX respondents followed the pattern reported by Fischer and Rosenzweig. Practitioners judged accounting and (accounting-based) inventory manipulations more harshly (more unethical) than did students, and students judged operating expense manipulations more harshly than did practitioners. Fischer and Rosenzeig found significant differences in the mean responses of all groups for the accounting, inventory manipulations, and operating expense manipulations. Our graduate and undergraduate student responses were not significantly different on the accounting and inventory manipulations. Fischer and Rosenzweig found no significant difference in the responses on the operating revenue manipulation factor. The mean scores show that pre-SOX graduate students were significantly less harsh in their judgments of operating revenue manipulations than practitioners or undergraduate accounting students.

The general conclusion that, on a relative basis, practitioners judge accounting and accounting-based inventory manipulations more harshly than students and that students judge operating manipulations more harshly than practitioners held for our post-SOX respondents. The graduate student responses showed the biggest change from the pre-SOX pattern. The mean score for graduate students on inventory manipulations was not significantly lower than the mean for the practitioner sample. On operating expense manipulations, pre-SOX graduate students had a mean score significantly lower than undergraduate accounting majors, and post-SOX graduate students were nominally higher and not significantly different from the undergraduate accounting students. On the operating revenue manipulations, graduate students in the pre-SOX sample had the lowest mean score. In the post-SOX sample, the graduate students' mean score on the operating revenue factor

Table 9: Rotated Factor Matrix

		Factor Names (Fischer & Rosenzweig, 1995)			
	Merchant Survey Item	**ACCMANIP**	**INVMANIP**	**OPEREXP**	**OPERREV**
1.	Accelerate painting of buildings because profits are ahead of annual budget target.	.128	–.079	*.287	***.508**
2a.	Defer discretionary expenditures to meet quarterly budget targets.	–.015	.005	**.942**	.182
2b.	Defer discretionary expenditures to meet annual budget targets.	–.004	.013	**.943**	.130
3.	Delay recording an invoice for supplies.	**.594**	.132	.275	.005
4a.	Offer liberal payment terms, pulling sales into fourth quarter to meet annual budget target.	.140	.180	–.010	**.654**
4b.	Work overtime to ship everything possible before the end of the year to meet annual budget target.	–.063	.010	.012	**.765**
4c.	Sell excess assets to reach annual budget targets.	–.035	.036	.155	**.681**
5a.	Pre-pay and record as a current expense next year's trade show expenses because profits are ahead of target.	**.622**	.319	–.036	.087
5b.	Write off inventory (justifiably taking a conservative view) because profits are ahead of target.	.255	**.727**	–.001	.090
6a.	Reverse write-off of inventory from previous year to assure product development efforts aren't delayed.	.212	**.896**	–.019	.032
6b.	Reverse write-off of inventory from previous year to make budget profit targets.	.209	**.895**	.043	.033
8a.	Ask a consulting firm to delay invoicing for work already done until next year (small amount).	**.878**	.161	–.067	.046
8b.	Ask a consulting firm to delay invoicing for work already done until next year (large amount).	**.834**	.193	–.099	.018

*Included in OPEREXP (.380) by F&R, although nominally highest loading was under OPERREV (.389)

was nominally higher and not significantly different from that of practitioners.

Elias (2002) surveyed AICPA members and grouped his responses by students (undergraduate and graduate), faculty, public practitioners, and practitioners in industry. Elias collected his responses prior to Enron and the other high-profile cases that led to the passage of SOX. Table 11 displays a comparison of overall mean scores by group for accounting manipulations and operating manipulations from our study to those reported for students and industry practitioners by Elias (2002). The pre-SOX undergraduate accounting students in our study had nominally higher mean scores for operating manipulations and nominally lower mean scores for accounting manipulations. The pre-SOX graduate scores were nominally lower than the student scores in the Elias (2002) sample. The pre-SOX managers in our sample (from Merchant's data) were nominally higher

Table 10: Mean Scores of Factor Variables by Responding Group

	Post-SOX	Pre-SOX	Fischer & Rosenzweig
Mean value: ACCMANIP			
Practitioners	**0.3872**	**–0.0186**	**0.3374**
Graduate students	–0.2574	–0.6641	**–0.5347**
Undergraduate accounting students	–0.2612	–0.5394	**–0.1101**
Mean value: INVMANIP			
Practitioners	0.2071	**0.0000**	**0.2470**
Graduate students	0.0756	–0.2442	**–0.0539**
Undergraduate accounting students	**–0.4091**	–0.4222	**–0.4894**
Mean value: OPEREXP			
Practitioners	**–0.1134**	**–0.4493**	**–0.4391**
Graduate students	0.7129	**0.0285**	**0.0308**
Undergraduate accounting students	0.7060	**0.5265**	**0.6149**
Mean value: OPERREV			
Practitioners	0.0163	–0.0523	N/R
Graduate students	0.0255	**–0.3102**	N/R
Undergraduate accounting students	**0.5658**	0.0273	N/R

Inverse of scores reported by Fischer and Rosenzweig to be consistent with the scale used in this study. Fischer & Rosenzweig scored responses from 4 "ethical" to 0 "totally unethical." Merchant and Rockness and our study scored responses from 1 "ethical" to 5 "totally unethical." High factor means indicate respondents judged the practices to be less ethical. Means printed in bold are significantly different from other groups at p<.01. Fischer and Rosenzweig reported significant differences at p<.05.

on operating manipulations than the AICPA practitioners in industry in the Elias (2002) sample. Data was not available to determine whether or not the differences were statistically significant.

Discussion and Implications

Professionals, managers, and graduate and undergraduate accounting students surveyed after the highly publicized financial reporting scandals and the implementation of the Sarbanes-Oxley Act had significantly harsher judgments of earnings management practices than did managers and students surveyed prior to the scandals. It appears that the high-profile frauds that led Congress to pass SOX also led professionals and students to view earnings management practices as more unethical.

Professionals and managers in IMA and IIA who reported being very familiar with the provisions of SOX were significantly harsher in their judgments of the ethics of earnings management by accounting manipulations compared to those who reported being familiar only with the basic provisions of SOX or not familiar with SOX. Familiarity with SOX—and for the undergraduate students, the number of courses taken covering SOX—had no effect on student judgments. The Sarbanes-Oxley Act is designed to reduce financial misrepresentation primarily through promoting improved internal control and increasing the negative conse-

Table 11: Comparison of Mean Responses by Group with Elias (2002)

Sample	Means	
	Accounting Manipulations	Operating Manipulations
Students (Elias, 2002)	3.48	1.90
Undergraduate accounting, pre-SOX	3.10	2.07
Graduate, pre-SOX	3.11	1.69
Undergraduate accounting, post-SOX	3.30	2.40
Graduate, post-SOX	3.55	2.15
Industry (Elias, 2002)	3.64	1.49
Managers, pre-SOX	3.61	1.62
IMA and IIA practitioners, post-SOX	3.96	1.83

quences of getting caught. It appears that detailed knowledge of SOX is required before the Act may have the added indirect benefit of altering individual ethical judgments and raising the normative standard for ethical conduct regarding earnings management through accounting manipulations.

The patterns of responses in our study were largely consistent with those reported by Merchant and Rockness. One notable difference was the significance of violating GAAP. While Merchant and Rockness reported no significant difference based on conformity or lack of conformity with GAAP, our post-SOX sample of professionals and managers perceived accounting manipulations that violated GAAP to be significantly less ethical than accounting manipulations that did not violate GAAP. This may be evidence of SOX having an indirect effect on normative standards regarding the ethics of earnings management. Yet the result also may be a discipline effect. Our sample was drawn from accounting professional organizations, while roughly two-thirds of the Merchant and Rockness sample came from general management of two large firms.

Contrary to expectations, professionals and managers in IMA and IIA who reported being very familiar with the provisions of SOX were somewhat less harsh in their judgments of the ethics of earnings management by accounting manipulations compared to those who reported not being familiar or being familiar only with the basic provisions of SOX. This may reflect a tendency toward a rules-based rather than principles-based evaluation of conduct being used by those very familiar with SOX. Further research is necessary to determine if accountants very familiar with SOX have a tendency toward employing rules-based ethical judgments and, if so, whether SOX is somehow encouraging rules-based evaluations or if the association with familiarity with SOX is spurious.

Also surprising and contrary to the results reported by Elias (2004), the level of corporate ethical values did not affect the perceived ethics of accounting manipulations, and operating manipulations were generally perceived to be less questionable and more ethical by professionals and managers reporting higher levels of corporate ethical values. Again, this may be evidence of a rules-based evaluation process. Another possible explanation for our result is that professionals and managers in firms with high ethical values are more likely to assume ethical motives for operating decisions. The brevity of the scenarios leaves room for varying interpretation, increasing the overall variability in the responses.

After responding to the survey online, Ron Kirscht, president of Donnelly Custom Manufacturing Company, took advantage of the invitation to contact the

researchers via e-mail and commented on the problem, using Item 4b as an example:

> "In the case where the GM had everyone working overtime in December to get every possible order that could be shipped sent out before year-end—it didn't say if the GM was running and shipping orders that were due after the month of December, and so I had to assume the GM wasn't pulling orders that were due to go out after year-end and shipping them before year-end. In my view it is highly ethical to have folks work overtime to meet the delivery commitments that have been made to the customers. Too much overtime for too long can create a human relations issue, but not a breach of ethics."

Kirscht assumed an ethical motivation for the operational decision—meeting customer demand while also hitting annual earnings targets. Others reading the same information may have assumed the GM was working overtime to ship sales actually due to customers the following year, and respondents working in a corporate climate with low ethical value may be more likely to assume the unethical behavior. Further research using more fully developed scenarios will increase our understanding of the ethical perceptions of operating manipulations. They may also help explain or reconcile the difference between our results and those reported by Elias (2004).

While all earnings management practices were perceived to be less ethical by the post-SOX respondents compared to the pre-SOX respondents, accounting manipulations were perceived as significantly less ethical than operational manipulations both pre- and post-SOX. On a relative basis, professionals and managers judged accounting manipulations more harshly than students did, and students judged operational manipulations more harshly than professionals and managers did, a result consistent with Fischer and Rosenzweig. It may be that the students are somewhat more focused on the outcome (earnings manipulation) than on the means used to achieve the outcome.

This study used the Merchant survey instrument to assess attitudes toward earnings management. The brief, highly plausible scenarios encouraged greater participation, and we were able to directly compare our results to prior studies using the instrument. A disadvantage of the Merchant instrument is that the small number of items means that some attributes, such as materiality and period, are being tested within the context of a single earnings management setting. There is a possibility that some of the results are specific to the context of the scenarios in the survey instrument. Further research using different scenarios to address the same dimensions (e.g., operational vs. accounting, conformity vs. nonconformity with GAAP) would significantly improve our understanding of the perceived ethics of earnings management.

As noted earlier, accounting manipulations are still judged more harshly than operating manipulations, and the difference is larger among professionals and managers than among students. This is important because results reported by Cohen, et al., suggest that post-SOX managers have substituted real (operating) earnings management practices for accounting earnings management practices.[34] Accounting manipulations may be judged more harshly than operating manipulations because accounting manipulations are viewed as distorting the truth. With operating manipulations, the accounting statements faithfully report what actually occurred. This view focuses on the earnings number as an end in itself.

It is important to remember that earnings is a construct designed to measure an underlying reality. Actions to manipulate the reported number introduce bias, making the reported earnings number a less reliable measure of the underlying reality. Operating manipulations actually can be more harmful than accounting manipulations to the future performance of the organization. Accounting manipulations distort reporting but do not affect the operations. Operating manipulations introduce bias in the reported numbers and may also disrupt operations to the detriment of long-term performance. For example, postponing discretionary expenses to meet earnings targets can disrupt marketing and product development efforts, hurting long-term performance. Channel stuffing and "make the numbers" sales pushes at the end of a period can

disrupt production flow, create costly spikes and troughs in activity, and harm relations with customers and partners in the supply chain. If SOX has created a shift toward earnings management through operating manipulations, a more critical view of such activities is warranted, and further research exploring operational manipulations of earnings would be especially welcome.

The management of ethical risk is becoming a required core competency for business and government. Ethical risk management is a critical part of the risk management process. The recent global financial crisis most likely will increase the importance of governance and ethical decision making. Additional legislation may be forthcoming that will also have an impact on perception of earnings management. We expect this area to lead to further research. ■

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ENDNOTES

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29 Hunt, et al., and Elias (2004) had subjects respond on a seven-point scale with two anchors (1=strongly disagree, 7=strongly agree), reverse scoring the first two of the five items so that unethical conditions received low scores and ethical conditions received high scores. We used a five-point scale (strongly disagree, disagree, neutral, agree, strongly agree). We coded the items from -2 to +2, also reverse scoring the first two items so that -2 represented the most unethical condition, +2 was the most ethical condition, and 0 was neutral. The construct was reliable, with Cronbach's alpha of 0.825.
30 Two hundred seventy of the respondents (238 of whom responded to the corporate ethical value questions) in the final IMA sample began the survey before the corporate ethical value typo was corrected. These responses were dropped from the analyses involving corporate ethical values. The remaining 418 respondents in the IMA sample (367 of whom responded to the corporate ethical value questions) began the survey after the typo was corrected and were included along with the IIA respondents in the corporate ethical value analyses.
31 Merchant and Rockness, 1994, p. 79.
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33 Following Fischer and Rosenzweig, we performed the factor analysis on the combined set of respondents. Performing the factor analysis on the student responses alone yielded a somewhat different factor pattern. For the students, item 1 (accelerating painting of the building) loaded unambiguously with the items manipulating operating revenue and item 5a (prepaying for a trade show and recording it as a current expense) loaded with the inventory manipulations. Thus the students seem to be making somewhat different associations (perhaps focusing more on the ends than the means) than are the professionals and managers.
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Appendix.
Questionnaire on the Ethics of Short-Term Earnings Management

General managers engage in many practices intended to improve short-term operating results. Some of these practices are clearly ethical. Others are judged by some or most people to be unethical, and the judgments as to the degree and severity of the infraction can vary widely.

This questionnaire includes short descriptions of several earnings management practices. Please indicate your judgment as to the acceptability of these practices using the following scale:

1—Ethical practice.
2—Questionable practice. I would not say anything to the manager, but it makes me uncomfortable.
3—Minor infraction. The manager should be warned not to engage in that practice again.
4—Serious infraction. The manager should be severely reprimanded.
5—Totally unethical. The manager should be fired.

(Assume that the division is part of a $1.5 billion (sales) corporation, which has a January-December fiscal year. The division has annual sales of approximately $150 million, with annual before-tax operating profit of approximately $18 million.) For each question (or part of a question), circle the number that best describes your judgment regarding the practice. Answer each question separately. (Assume the incidents are independent.) All individual responses are confidential.

1. The division's buildings were scheduled to be painted in 2008. Since the division's profit was way ahead of budget in 2007, however, the general manager (GM) decided to have the work done in 2007. Amount $225,000.

2a. (2) The GM ordered all division employees to defer all discretionary expenditures (e.g., travel, advertising, hiring, maintenance) into the next accounting period so that his division could make its budgeted profit targets. Expected amount of the deferral: $225,000. The expense was postponed from February and March until April in order to make the first quarter target.

2b. (3) The GM ordered all division employees to defer all discretionary expenditures (e.g., travel, advertising, hiring, maintenance) into the next accounting period so that his division could make its budgeted profit targets. Expected amount of the deferral: $225,000. The expense was postponed from November and December until January in order to make the annual target.

3. (4) On December 15, a clerk in the division placed an order for $4,500 worth of office supplies, and the supplies were delivered on December 29. This order was a mistake because the division GM had ordered that no discretionary expenses be incurred for the remainder of the fiscal year, and the supplies were not urgently needed. The company's accounting policy manual states that office supplies are to be recorded as an expense when delivered. The division GM learned what had happened, however, and, to correct the mistake, he ordered the accounting department not to record the invoice until February.

4a. (5) In September, the GM realized that the division would need strong performance in the last quarter of the year in order to reach its budget targets. The GM decided to implement a sales program offering liberal payment terms to pull some sales that would normally occur next year into the current year; customers accepting delivery in the 4th quarter would not have to pay the invoice for 120 days.

4b. (6) In September, the GM realized that the division would need strong performance in the last quarter of the year in order to reach its budget targets. The GM ordered manufacturing to work overtime in December so that everything possible could be shipped by the end of the year.

4c. (7) In September, the GM realized that the division would need strong performance in the last quarter of the year in order to reach its budget targets. The GM sold some excess assets and realized a profit of $40,000.

5a. (8) At the beginning of December 2007, the GM realized that the division would exceed its budgeted profit targets for the year. The GM ordered the division's controller to prepay some expenses (e.g., hotel rooms, exhibit expense) for a major trade show to be held in March 2008 and to book them as a 2007 expense. Amount $90,000.

5b. (9) At the beginning of December 2007, the GM realized that the division would exceed its budgeted profit targets for the year. The GM ordered the division's controller to develop the rationale for increasing the reserve for inventory obsolescence. By taking a pessimistic view of future market prospects, the controller was able to identify $1,050,000 worth of finished goods that conservative accounting would say should be fully reserved (i.e., written off), even though the GM was fairly confident the inventory would still be sold at a later date at close to full price.

6a. (10) The next year, the division described in Question 5b (9) sold 70% of the written-off inventory, and a customer had indicated some interest in buying the rest of the inventory the following year. The GM ordered the division controller to prepare the rationale for reducing the reserve for obsolescence by $315,000 (i.e., writing up the previously written-off goods to full cost). The GM's motivation for recapturing the profit was to be able to continue working on some important product development projects that might have had to be delayed due to budget constraints.

6b. (11) The next year, the division described in Question 5b (9) sold 70% of the written-off inventory, and a customer had indicated some interest in buying the rest of the inventory the following year. The GM ordered the division controller to prepare the rationale for reducing the reserve for obsolescence by $315,000 (i.e., writing up the previously written-off goods to full cost). The GM's motivation for recapturing the profit was to make budgeted profit targets.

7. (12) In July 2007 the GM noticed that scrap costs in the plant were running way ahead of plan. So that senior management would not become alarmed, the GM ordered the division controller to "bury" most of the scrap costs in other expense accounts where they would not be noticed. Over the remainder of the year, the controller buried approximately $90,000 of scrap costs. Effect on net income: zero.

8a. (13) In November 2007, the division was straining to meet budget. The GM called the engagement partner of a consulting firm that was doing some work for the division and asked that the firm not send an invoice for work done until next year. The partner agreed. The estimated cost of work done but not invoiced was $45,000.

8b. (14) In November 2007, the division was straining to meet budget. The GM called the engagement partner of a consulting firm that was doing some work for the division and asked that the firm not send an invoice for work done until next year. The partner agreed. The estimated cost of work done but not invoiced was $750,000.

Note: Questions are numbered as they appeared in Merchant's original survey instrument and as referenced in our article. Item numbers are listed in parentheses. Merchant and Rockness omitted item 7, and items 8a and 8b became items 7a and 7b.

Fischer and Rosenzweig and Elias (2002, 2004) numbered the items consecutively, omitting item 7. Items 8a and 8b became items 12 and 13.