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Honors Thesis

Auditing's Ripple Effect: Divergence After Enron

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Abstract

Title: Auditing's Ripple Effects: Divergence After Enron

The Enron scandal received considerable attention over the past 10 years (2001-2011), and the fallout from Enron, WorldCom, and Adelphia was severe. Both auditors and accountants lost the trust of the government and the public. This caused the government to intervene by enacting the Sarbanes-Oxley Act and creating the Public Company Accounting Oversight Board to oversee the audits of public companies. This study will examine how the differences in perspectives amongst gender, as well as public and GCAS auditors, factors into personal opinions by administering a research survey and studying literature surrounding the Enron scandal.

Auditing's Ripple Effects: Divergence After Enron

The Enron scandal, as well as similar financial scandals, is an event that has changed the landscape of auditing. The trust of the public was lost and harsh sanctions were imposed. Explored in many novels, documentaries, as well as the entertainment industry, the Enron scandal took center stage as individuals searched for answers. Our society today was much impacted by the actions of Arthur Andersen and Enron. In fact, as time has progressed and rules become ever more all encompassing, many auditors wonder if the profession will ever once again control its own destiny. The government's intervention came through enacting the Sarbanes-Oxley Act and creating the Public Company Accounting Oversight Board. These actions were designed to oversee the audits of public companies and would change the face of auditing as we know it. How have auditors responded to the public outcry? What are their thoughts on the Enron scandal, and how can we learn to use this for future application. This study will examine these differences and seek to answer the questions associated with them.

The Enron scandal was made possible by the collusion of both the Enron management team, as well as Arthur Andersen auditors assigned to the account. Mark-to-market accounting,

offshore entities, cooked books, and non-audit services all lead to the ultimate bankruptcy of Enron. The first of these, mark-to-market accounting, “meant that once a long-term contract was signed, the present value of the stream of future inflows under the contract was recognized as revenues and the present value of the expected costs of fulfilling the contracts were expensed.¹” In essence, Enron would note profits on their books before they’d actually realized them. The offshore entities were used by Enron to avoid taxes and hide debt or losses that had been accrued. Both mark-to-market accounting and offshore entities enabled Enron to ‘cook the books,’ to in essence make their company look better than what they actually are in order to keep investors and stockholders happy. Arthur Andersen, which should have been watching to ensure this did not happen, failed to recognize the signs. In addition to audit services, Arthur Andersen also provided non-audit services,² which severely put in to question their independence. It has been interesting to note however, that public outcry was addressed more forcibly to the Arthur Andersen auditors than to Enron management. This was due to an “expectation gap” that the public holds. An “expectations gap” is the difference between what users of financial statements, the general public perceives an audit to be and what the audit profession perceives an audit to be as they are conducting the audit.³ The public seemed to accept and perhaps even expect that corporation’s top management might try to be crafty. However, they had high expectations that auditors assigned to the case would be able unravel the manipulations that might be done. When Arthur Andersen failed to uncover this and when it was revealed during the trial, “that Andersen shredded hundreds of pounds of Enron documents even though it knew that the Securities and

¹ Paul Healy & Krishna Palepu, *The Fall of Enron*, *The Journal of Economic Perspectives*, 17(2), 2003, p. 11.

² John Coates, *The Goals and Promise of the Sarbanes-Oxley Act*. *The Journal of Economic Perspectives*, 21(1), 2007, p. 105.

³ Marianne Ojo, *Eliminating the Audit Expectations Gap: Myth or Reality?* *Journal of Forensic Accounting* Volume VIII, December 2007.

Exchange Commission had begun looking into Enron,⁴” the public saw these actions and believed that Andersen had attempted to hide the scandal. As a result, the public lashed out at Arthur Anderson, causing the entire auditing profession to take a major hit.

The full impact of the Enron scandal, and the fallout that would result from similar scandals such as WorldCom and Adelphia, was unprecedented. As Brewster put it, “the accounting profession had the respect of the public one day and the derision of the public the next...All CPAs...were caught in a profession changing too fast for them to keep up.”⁵ Before these scandals, the accounting profession enjoyed the ability to self-regulate able to set any standard they wanted. The global firms had a lot of latitude in the standards by which they wished to operate. This was due to a number of factors; one being that there had been no limits on the concentration of the accounting industry. In essence, these global firms had a lock on the market and were able to purchase or merge with any firm that even appeared to compete with them. As headlines continued to fill with prominent companies involved in financial scandals and bankruptcies, Congress knew that it had to take action. It did so on July 25,2002 when it passed the Sarbanes-Oxley Act⁶. The Sarbanes-Oxley Act was designed to fix the auditing of public companies, and created the Public Company Accounting Oversight Board (PCAOB), to oversee and regulate auditing. The PCAOB oversees auditors and their actions through enlisting auditors to enforce existing rules against theft or fraud by corporate officers with the Securities and Exchange Commission overseeing public companies.⁷

⁴ Robert Bryce, *Pipe Dreams: Greed, Ego, and the Death of Enron*, (New York, NY: PublicAffairs, 2003), pp. 357-358.

⁵ Mike Brewster, *Unaccountable: How the Accounting Profession Forfeited a Public Trust*. (Hoboken, NJ: John Wiley & Sons, 2003), pp. 282-283.

⁶ John Coates, *The Goals and Promise of the Sarbanes-Oxley Act*. *The Journal of Economic Perspectives*, 21(1), 2007, p. 91.

⁷ *Ibid.*

As my study's aim is to look at the perceptions of auditors, in order to really take a look at the purposes surrounding the Enron scandal I prepared a survey. The original intent for my survey was to distribute it to the auditors within the Michigan Certified Public Accountant (CPA) Association, however, that plan ultimately did not prove successful, requiring me to look at an alternative source. With that in mind, I decided to distribute the survey to auditors from the General Conference Auditing Service (GCAS) and CPAnet.com. GCAS took the role of a private, not-for-profit firm, whereas CPAnet.com took the role of public auditors. The respondents from CPAnet had a wider background than the respondents from GCAS, being as they were from many different backgrounds and specialties. The work done by the General Conference Auditors was much narrower in scope as they are auditors working for the church, as opposed to auditors from a conglomerate of not-for-profit organizations. While GCAS auditors may come from different backgrounds, it would be inaccurate to call them a sample of auditors within the private, not-for-profit field of auditing. A larger sample would need to be done whereby respondents are pulled from many different private, not-for-profit jobs, such as governmental, other church denominations, or charities. If my survey had been able to draw those respondents, it would have more accurately portrayed the private sector of accounting. On the public sectors side however, we had more variety from our respondents, with participants from both the bigger and smaller firms. The restriction to the public sectors reach however was that they were members of CPAnet, so while that did garner participants, it should be noted that not all auditors within the public field of auditing are members of CPAnet.

My survey consisted of 15 questions to which respondents could answer yes, no, or answer based on a likert scale that ranged between 1-5, with 1 being strongly disagree and 5 being strongly agree. All information was then correlated and compared primarily on basis of average. A T-test was used to determine which of the results were statistically significant at the

.05 level of significance with comparisons made on a basis of gender or public accountants and auditors versus General Conference auditors. A comparison by effect size was also run. Whilst correlating the results it was important to keep in mind that those auditors within GCAS were a very focused subgroup of the larger group of private, not for profit auditors.

There were several limitations that constrained the scope of my survey. Firstly, my study had a very small sample size of 34 respondents. It was this fact that made it necessary to operate more on mean as opposed to T-tests. While T-tests were done, with a total of 30 being run from the data gathered, we also had to account for type-1 errors, or false-positives. In order to counteract false-positives, a Holm-Bonferroni was run to mitigate the impact. It is important to note that while the Holm-Bonferroni will reduce the number of false-positives, it will not be able to account for false-negatives that also could have been a factor due to my small sample size.

The equation for Holm-Bonferroni is demonstrated by the equation below.

$$S1 \leq \frac{\alpha}{(n - 1)}$$

This method involves arranging the p-value for all tests run in order of significance. Those with the highest p-values, those that were least likely to occur were listed first and so on down the list. The level of significance with which this test was conducted was then divided by the number of tests ran, decreasing by one each time so that while n=30 on the first application of the Holm-Bonferroni method, for the second application n=29. In this way, we were able to narrow down the results by eliminating type-1 errors that may have proved positive due to the number of T-tests that were ran. The table below demonstrates my application of the Holm-Bonferroni method, with yellow showing p-values from GCAS and public auditors, while blue applied to male and female auditors. The numbers next to the p-value correspond to the question asked (Appendix 1).

3	0.22370859
3	0.12101785
13	0.08351282
11	0.07629911
9	0.05563416
2	0.03369585
14	0.02574417
13	0.01713591
2	0.00790947
6	0.00687762

As you can see, only two results were found to be significant after having the Holm-Bonferroni correction applied, something we will look into more during the results analysis below.

Another limitation of my survey was the fact that the participants were self-select. In other words, participants chose to participate in the survey as opposed to it being a simple, random survey. Therefore the results I received could have been skewed or otherwise impacted by the participants who elected to complete the survey. The final limitation of my survey was the fact that the questions were limited to those we were able to decide upon, that being 15. Further researchers may wish to do a survey that is broader in its scope in order to better cover the Enron scandal and the perceptions of the auditors impacted by the scandal.

Now that we have taken a brief look at the limitations of my survey, we will examine the results. As I conducted my survey, there were two ways I categorized the responses, by gender and field. As stated previously, I had a total of 34 respondents. These 34 respondents were broken down into 20 male participants, 13 female participants, 15 GCAS auditors, and 19 public auditors from the CPAnet website. While there were other demographics I would have liked to analyze, due to a limited sample size, they were not included in my final research. The first way we will analyze is by gender. Amongst male and female participants, there did seem to be a difference in how they responded; however due to the size of my sample that could also be a false positive. The table below shows the mean of responses by gender.

Responses by Gender															
	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
Male	3.16	3.11	0.74	3.74	3.89	4.26	3.42	0.32	3.68	3.63	3.84	4.05	2.89	3.21	3.00
Female	2.80	4.00	0.47	4.13	4.20	4.47	3.53	0.4	3.67	3.73	4.13	4.07	3.53	3.07	3.40

Part of my original hypothesis was that men would react differently than women to the questions, for some this seems to apply, but again, due to my small sample size I am unable to definitively conclude that men respond differently than women. Though T-Tests are not typically applied to such a small sample size, I applied it to this study in order to examine what the results may yield. Due to the large amount of tests that I had to run, it was also necessary to run a Holm-Bonferroni correction in order to correct for type-1 errors. The table below shows our p-values before and after the Holm-Bonferroni correction was run.

T-Test Results: Male & Female Auditors															
	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
Pre-Holm Bonferroni	0.34	0.01	0.12	0.31	0.26	0.45	0.76	0.63	0.95	0.74	0.42	0.96	0.08	0.69	0.27
Post-Holm Bonferroni	0.34	0.01	0.12	0.31	0.26	0.45	0.76	0.63	0.95	0.74	0.42	0.96	0.08	0.69	0.27

As you can see, due to the small sample size only one of our questions, question two (Appendix 1) has been seen as significant. Females tended to on average, agree more with question 2 than men.

The next way we will examine our results is by comparing GCAS auditors to public auditors that responded from CPANet. Amongst GCAS auditors and public auditors there seemed to be a larger difference than amongst male and female auditors that was surprising though not unexpected due to the fact that sanctions were imposed upon public companies and auditors as opposed to not-for-profit companies and auditors. As the table below shows, GCAS auditors tended to respond differently than public company auditors.

Responses by Field															
	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
GCAS	2.87	3.87	0.73	3.93	4.07	4.73	3.47	0.47	4.00	3.73	4.33	4.20	3.67	2.73	3.33
Public	3.11	3.21	0.53	3.89	4.00	4.05	3.47	0.26	3.42	3.58	3.68	3.95	2.79	3.47	3.05

Though T-tests are not typically applied to a small sample size, they were ran in order to determine which of the questions might be good to research in the future. It was also necessary to apply the Holm-Bonferroni method to account for type-1 errors. The table below shows the T-Tests results before and after the Holm-Bonferroni correction was run.

T-Test Results: GCAS & Public Auditors															
	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
Pre-Holm Bonferroni	0.54	0.05	0.22	0.92	0.81	0.01	0.98	0.24	0.06	0.62	0.08	0.33	0.02	0.03	0.42
Post-Holm Bonferroni	0.54	0.05	0.22	0.92	0.81	0.01	0.98	0.24	0.06	0.62	0.08	0.33	0.02	0.03	0.42

As you can see, the results before applying the correction was more drastic than in the previous example which suggests that there is a more pronounced difference amongst GCAS and public auditors. However once again, due to my rather small sample size not much can be said other than to say that this could benefit from a larger research study and sample size.

In order to examine results in another way, I utilized cohens-d method for effect size. The formula, as shown below, involves subtracting the means and dividing by the standard deviation.

$$d = \frac{\bar{x}_1 - \bar{x}_2}{s},$$

Effect size can help to convey the estimated magnitude of a relationship and also complements inferential statistic methods such as p-values. Effect size also helps in power analysis and allows researchers to summarize findings within their research. For the purposes of my research I divided my questions up into three categories: auditor perception, public perception, and the

reaction to reform. In effect size, anything above a .5 is moderately strong, with anything above .8 being strong, positive or negative values are also irrelevant and dependent upon the way a question was worded. The first table we will look at is auditor perception.

	Effect Size: Auditor Perception					
	Q3	Q4	Q5	Q7	Q8	Q14
Public / GCAS	0.42	0.03	0.08	-0.01	0.42	0.77
Male / Female	0.56	0.35	0.39	-0.11	-0.2	0.15

While none of the results are strong, a few of them are moderately strong and point towards a need for further research into auditor perception of what occurred at that time. The next table we will look at is public perception.

	Effect Size: Public Perception					
	Q1	Q2	Q6	Q11	Q12	Q15
Public / GCAS	-0.22	0.71	0.88	0.63	0.34	0.27
Male / Female	0.34	0.89	0.27	0.29	-0.02	0.38

The results in this table tended overall to be stronger. These questions asked auditors to answer how they felt the public's perception of them was. This would definitely be an area I would suggest for further research due to the stronger effect size results, especially in differences between public auditors and GCAS auditors. The final table we will look at to compare effect size is their reaction to reform.

	Effect Size: Reform		
	Q9	Q10	Q13
Public / GCAS	0.66	0.17	0.79
Male / Female	0.02	0.11	0.58

As the results show, reform reaction tends to be stronger amongst public auditors and GCAS auditors as opposed to male and females, though there was a moderately strong difference between male and female auditors. All of our effect sizes obtained, coupled with our previously obtained p-values does seem to show a correlation between effect sizes and p-values. Which supports a need for further study.

Overall, though my study has flaws, there were interesting results that merited further study, such as differences between male and females opinion of the auditing profession, as well as the differences between auditors that work for public companies and those that work for a not-for-profit entity. My study only looked at GCAS auditors, however future studies could expand and look at other not-for-profit auditors. My interest in this study began due to an article I read by Carnegie and Napier that looked at traditional accountants and business professions and how to portray the profession after Enron. Using that article as a springboard, I wanted to look specifically at how Enron and other financial scandals impacted how auditors perceived their profession, as well as how they believed the public perceived their profession. Which is how my study began. Though I wished the scope had been larger, what I learned as well as going through the academic research process was helpful. Possessing a larger sample size would have enabled more to be said, however it is my hope that this research will be a springboard for future research on this topic. In all the comparisons run, perhaps the most pivotal conclusion I can offer is that perceptions vary and the studies of how perceptions vary may help future generations better understand their field and the impact reform has had upon it.

Appendix 1 – Survey Questions

Before Enron, 10 Years Ago

Q1: Please indicate your agreement with the following statement. "Auditors were serving the public interest first."

Q2: Please indicate your agreement with the following statement. "The actions of auditors impacted the publics' perceptions of accountants"

Q3: Before the Enron scandal was known, were you proud to be an accountant?

Q4: Please indicate your agreement with the following statement. "The auditors at Arthur Andersen were opportunistic"

Immediately After Enron, 9 Years Ago

Q5: Please indicate your agreement with the following statement "The Collapse of Enron could have been avoided"

Q6: Please indicate your agreement with the following statement "Arthur Andersen betrayed the publics' trust, and their responsibilities as auditors"

Q7: Please indicate your agreement with the following statement, "Arthur Andersen could have prevented the Enron failure from occurring"

Q8: In the immediate aftermath of the Enron scandal, were you proud to be an accountant?

Q9: Please indicate your agreement with the following statement, "Reforms were needed to restore the stereotypes of the public towards both auditors and accountants as a whole"

Today

Q10: Please indicate your agreement with the following "Changes that have been made thus far have positively impacted the auditing profession"

Q11: Please indicate your agreement with the following "The Auditors Involved in the Enron scandal had a conflict of interest"

Q12: Please indicate your agreement with the following "The public trusts auditors to do their jobs honestly"

Q13: Please indicate your agreement with the following "Sarbanes-Oxley was necessary to help restore the publics' trust"

Q14: Please indicate your agreement with the following "The auditing profession should be self regulated again"

Q15: Please indicate your agreement with the following "Today's auditors serve the public interest first"

Bibliography

- Belski, T. H. (2003). A Post-Enron Examination of Student Perceptions to Potential Accounting Reforms.
<http://www.newaccountantusa.com/newsFeat/wealthManagement/minationofstudentperceptionstopotentialaccountingreforms.pdf>.
- Brewster, M. (2003). *Unaccountable: How the Accounting Profession Forfeited a Public Trust*. Hoboken, NJ: John Wiley & Sons.
- Bryce, R. (2003). *Pipe Dreams: Greed, Ego, and the Death of Enron*. New York, NY: PublicAffairs.
- Buckstein, J. (2008). Recovery of the Accounting Profession Post-Enron. *Professional Development for Certified General Accountants and the Business Community*.
<http://www.cga-pdnet.org/en-CA/PDResources/Pages/RecoveryAccountingProfessionPost-Enron.aspx>.
- Carnegie, G. D., & Napier, C. J. (2010). Traditional accountants and business professionals: Portraying the accounting profession after Enron. *Accounting, Organizations and Society*, 35, 360-376.
- Coates, J. C. IV. (2007). The Goals and Promise of the Sarbanes-Oxley Act. *The Journal of Economic Perspectives*, 21(1), 91-116.
- Healy, P. M., & Palepu, K. G. (2003). The Fall of Enron. *The Journal of Economic Perspectives*, 17(2), 3-26.
- Holm, S. (1979). A Simple Sequentially Rejective Multiple Test Procedure. *Scandinavian Journal of Statistics*, 6, 65-70.
- Hunt, S.C., Intrieri, R.C., Falgiani, A.A., & Papini, M. T. (2009). The Effect of Gender and Knowledge on Students' Impressions of Accountants in The Post-Enron Era. *Journal of Business & Economics Research*, 7(5),
<http://journals.cluteonline.com/index.php/JBER/article/view/2285>.
- Jeacle, I. (2008). Beyond the Boring Grey: The Construction of the Colourful Accountant. *Critical Perspectives on Accounting*, 19(8), 1296-1320.
- Rosnow, R. L., Rosenthal, R., & Rubin, D. B. (2000) Contrasts and Correlations in Effect-Size Estimation. *Psychological Science*, 6, 446-453.
- Smith, M., & Briggs, S. (1999). From Beancounter to Action hero, Changing the Image of the Accountant, *Management Accounting*, 28-30.