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## Uncontrolled Earnings Management-Financial Enhancement or Downfall?

Kevin A. Costello

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**UNCONTROLLED EARNINGS MANAGEMENT-**  
**Financial Enhancement or Downfall?**

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## **TABLE OF CONTENTS**

	<b>Page</b>
<b>1.0 INTRODUCTION.....</b>	<b>12</b>
1.1 Historical Depictions.....	13
1.2 Earnings Management.....	15
1.3 Pro-forma.....	17
1.4 Arthur Andersen.....	19
1.5 Sarbanes-Oxley Act of 2002.....	21
1.6 Enterprise risk Management.....	23
1.7 Loan Loss Reserve.....	27
<b>2.0 RESEARCH METHODOLOGY .....</b>	<b>31</b>
2.1 Graphical Analysis .....	31
2.2 Regression Analysis .....	52
2.3 Findings & Conclusions .....	61

## **APPENDICES**

APPENDIX A: Data Table

APPENDIX B: SAS Regression Output

Audit/Non-Audit Correlation Output

## **REFERENCES**

## **ABSTRACT**

Since the turn of the century it has become undeniably apparent that many corporations, regardless of their size, have resorted to falsifying financial records in an attempt to mask the true financial health of the company. The reasons for such actions vary from attempts to shore up investor confidence to ensuring perks for corporate executives. These scandalous acts are not a characteristic of a certain type of business. They have occurred across a wide array of businesses including, but not limited to, power and energy, insurance, and telecommunications.

The most common form of record falsification comes in the form of abusive earnings management. The recent Enron debacle brought this fraudulent activity to the forefront. Enron's auditor, Arthur Andersen, was found guilty of obstruction of justice in light of document shredding during the federal investigation. It was determined that Andersen elected to disregard evidence of falsification in order to maintain their lucrative auditing/non-auditing fee agreement with Enron. This spurred the birth of the Sarbanes Oxley Act of 2002.

This thesis was developed based on the theory that there is a correlation between earnings management practices and non-auditing fees incurred by the respective companies. When audit firms receive large amounts in non-audit fees from their clients, they are likely to be less independent and more likely to allow firms to manage their earnings. I elected to perform my

study based on a sample group of forty companies in the insurance industry. The study was based on four main variables namely; earnings per share from operations, income before extraordinary items, auditing fees, and non-auditing fees. The variables compare the years 2000 and 2001 to see how effective management was at meeting their predetermined benchmark earnings. If the company exceeded the prior year's benchmark by a small percentage, this may be indicative of abusive earnings management. A regression analysis was performed and the results of this, backed up by corresponding graphs, indicate that there is a correlation between management's attempts to achieve their benchmark earnings and non-auditing fees.

## **Preface**

During my sophomore year at Syracuse University, I was offered the opportunity to join the prestigious ranks of the Honor's Thesis Program. Successful completion of such a program can provide many benefits to the student. For instance, I plan on attending graduate school in the near future in pursuit of my Masters and Ph.D. My long-term goal includes becoming a professor at an established university. By joining the program and writing a thesis, I am able to gain valuable insight as to what graduate students encounter, as well as hone my research and project management skills, which would be needed in the role of a professor engaged in research projects. Entering the Honor's Thesis Program would also require me to function both individually and as part of a team. More specifically, the bulk of the work is performed by the student, but he/she is required to meet routinely with advisors and seek out assistance from graduate students familiar with the subject matter. When the project is brought to fruition, the student must present his/her thesis to a review committee. Not unlike the requirements of working in the business world and having projects and proposals considered by clients and review boards.

Upon entering the Accounting/CPA program at Syracuse University, I also became a member of the Leadership Community on campus. This outstanding program guides students through a development of their leadership skills and helps them better define the roles they take on when

working in a group situation or working individually. We were taught the aspects of time management and prioritization as well as keeping a project goal in perspective.

When considering the culmination of my experiences with the Leadership Community, as well as my academic course work, accepting admission into the Honors Thesis Program could only be viewed as the next logical step in my academic evolution. I felt honored to have such an opportunity extended to me, but also strangely driven to take on a challenge of unknown complexity. A challenge that would expand the envelope of my abilities as well as help prepare me for what lies ahead. Although I had a period to consider the offer, in my heart I knew unequivocally the challenge set before me would be undertaken.

After discussing “hot” topics in accounting with my advisor, we decided to explore auditor independence. As a result of the Enron and HealthSouth scandals, warranted concerns surfaced regarding auditor independence. Many accounting firms had large amounts of non-auditing fees with these auditing companies and the concern for independence was growing. Non-auditing fees refer to fees for consulting and other non audit services. Were auditing firms independent from their clients even though they had millions to profit from? Many firms will try to meet their benchmarks each year and at times, manipulate their earnings so as to look as though they achieved their goals. If auditors are less independent, they are more likely to allow companies to manage their earnings.

For my thesis, I initially chose to base it on examination of one-hundred insurance companies to determine if the earnings per share and income before continuing operations were in any way manipulated. Next, I would compare these variables to the quality of the Board of each company.

Having compiled so much data and research, and completing a senior honors thesis, I have felt such a big accomplishment as an undergraduate. I was eager to do research as an undergraduate, and writing a thesis, has been a very rewarding experience. Being exposed to the research environment has given me more appreciation for the researchers, professors, and other commonly unidentified individuals, who do this for a living.

**Problems encountered:**

When deciding which advisor I would request to assist me in development of my thesis, I chose Susan Albring. Susan was my professor in the first introductory accounting class. Unfortunately, Susan had relocated to Florida in the beginning of my senior year. This was the first unexpected development that I had to weave into my development strategy. I knew I did not want a new advisor for several reasons. I highly respect Susan and we had worked together throughout my junior year and built a nice rapport. Having already started my research and knowing what my thesis would consist of, I did not want to find another advisor who was not familiar with where I was in my thesis or what I wanted to achieve through it.



More unexpected developments occurred during the research portion of the thesis. I would like to take a moment to explain that I decided long ago to remove the term “setback” from my academic/professional vocabulary. In the overall scheme of a project unexpected developments will invariably materialize and usually at the most inappropriate times. The measure of a good project manager is his ability to modify the project development process to accommodate the unexpected development and continue on to the predetermined goal. I feel use of the word “setback” denotes a failure of some magnitude, and a successful project cannot have a failure as a component of its development.

The problems centered around finding certain variables to use in the insurance industry. Initially, I wanted to research the loan loss reserves in insurance industries; however, this variable is used mainly in the banking industry. Insurance companies have a variety of loss reserves which were not feasible to study. As a result, I modified my thesis by choosing two different variables. These variables were still consistent with the main purpose of the thesis, however, it was unfortunate to have to modify.

Another problem I encountered during my research was the number of companies the database had provided for each variable. I had researched one-hundred insurance companies’ proxy statements and gathered eight variables for each company. However, when I had used the database for my control variables, in order to run the regression, not all of the one-hundred companies were listed. As a result, my sample size was reduced.

**For future honor students:**

When formulating your thesis topic, I highly recommend that it be challenging, stimulating, and rewarding in the end.

I strongly recommend the following:

- 1.) Find an advisor that has the time and willingness to assist you in your pursuit. My advisor was amazing and was always willing to help with any problems I encountered.
- 2.) After you complete your junior year seminars, start working on the thesis towards the end of your junior year or in the summer. Starting your research in the summer will help you in many ways. Senior year is a busy year with many events going on, i.e. job searching, graduate school admissions, or planning for the “real world” and starting early is a big help. Let us also not forget those unexpected developments! Time is of the essence when working on a thesis. The premise of “I have a couple of semesters to complete this” is the first sign of an unprepared and inexperienced thesis writer.
- 3.) When you create a timeline, stick to it as much as possible. It’s easy to get caught up with everything going on in your senior year and procrastinating the thesis will not help.
- 4.) Find as much data as you can. Even if the data seems insignificant at the time, you may need it in the end. You can never have too much data. If you question if you need a certain portion of data, by all means..... take it!

- 5.) Keep a log of all the sources you have used. This is a professional work and needs to be developed as such. A bibliography is essential to the reader and others who will reference your work in the future.
- 6.) Talk with your advisor weekly. By having discussions each week, it will help keep a positive flow for the thesis.
- 7.) Save all of your information to multiple media sources such as your hard-drive, floppy disks, emails, etc. A few minutes of effort in “data management” can be the difference between successfully meeting the completion date or losing critical data.
- 8.) Remember above all else, your thesis will be published and available to future students and faculty. It is an extension of yourself. A veritable example of the growth you experienced while at Syracuse University. Make it your best work. You will never regret the effort you put into its creation.

**Acknowledgements:**

My strongest and most sincere gratitude for helping me develop my senior honors thesis goes to Professor Susan Albring. Although Susan has moved to another university, she has still helped me in many ways. Having Susan as one of my first accounting professors and seeing the way she teaches, inspired me even more to become a professor. She has helped explain/resolve any problems or concerns that I had.

I would also like to thank Professor Randy Elder. I knew Randy was knowledgeable in accounting, particularly auditing. I was extremely grateful when he agreed to be my “homestead” thesis advisor and assist me in any way. I also would like to thank accounting Ph.D student Ahmed Meguid for his assistance with accessing accounting data. My final thank you goes to Joseph A. Mastroianni for his assistance in editing and production.

**Uncontrolled Earnings Management--Financial Enhancement or  
Downfall?**

**1.0 INTRODUCTION**

The modern world is comprised of countless communities, each competing to survive in frequently hostile environments. In a biological community, the generalized definition of survival is being able to fend off predators and remain healthy so as to ward off the effects of famine and pestilence. The concept of survival of the fittest is played out continually in the community. In a surrealistic sense, the global business community is not unlike a biological community. Established companies frequently attempt to weaken their competition by investing in elaborate marketing campaigns. If a company is financially strong enough, it may opt to remove its competition by acquiring it. Downturns in the economy, similar to a famine, are detrimental to almost all of the members of the community. If the economic conditions are severe, some of the companies may succumb. This is another example of survival of the fittest. One defining element of survival in the global business community, that is vastly different from that in a biological community, is the idea of ethics.

To excel in today's fast-paced, competitive business climate, company executives are required to make spontaneous, educated decisions to counteract threats and ensure survival and continued growth of the organization. Threats can originate from a myriad of sources such as a new marketing campaign by a competitor, a fluctuation in the stock market, or a corporate merger. For a

company to endure these threats, executives are frequently faced with determining to what extent the company will go, in order to ensure the perceived health of the company as well as its course to meet its short- and long-term goals. Unlike the biological community, members of the global business community cannot do whatever it takes to survive. The business world must adhere to an ethical set of rules and regulations. This provides for fair competition, economic growth and vital trust from investors.

Unfortunately, in the interest of gaining the upper hand, there have recently been several noted instances of professionals resorting to unethical behavior to achieve their company's goals. As a result, the United States economy has been affected; the legal system and investors' confidence have diminished in American businesses.

### **1.1 Historical Depictions**

During 2001, the collapse of the energy company Enron resulted from reporting false earnings while using accounting methods that were not generally accepted accounting procedures. For years, the company was misleading investors into believing Enron had realized higher profits than it actually had. Unfortunately, no one realized the deception soon enough and insiders of Enron sold their stock and reaped millions. This happened because both internal and external controls failed to detect the financial losses disguised as profits for a number of years (Kadlec).

Another power producer, Dynegy Inc., nearly went bankrupt after Enron Corp. collapsed, and will pay \$468 million to settle shareholder claims that it misled investors by disguising loans as energy trades in 2001. Dynegy's agreement with plaintiffs led by the University of California is the ninth-largest settlement of a class-action securities fraud case in the United States, according to data compiled by Bloomberg. Dynegy will pay \$250 million from its own funds and \$68 million in company stock, while insurers will pay \$150 million. "Dynegy engaged in some of the same types of off-balance-sheet transactions that Enron did, and when the whole thing got exposed, its stock plummeted," said William S. Lerach, lead attorney for the shareholders. "They engaged in illegal (unethical) transactions to artificially boost cash flow." Shareholder losses after Enron's bankruptcy three years ago led to increased scrutiny of the energy-trading industry by securities and commodity regulators and credit-rating services. Dynegy's stock plunged 95 percent in 2002, to an all time low of 51 cents, making it the worst performer in the Standard & Poor's 500-stock index (Ackman).

There were other major members of the business community that have resorted to unethical practices. HealthSouth, the nation's largest healthcare service provider, was also guilty of unethical behavior in regard to their accounting records. The company overstated their profits by more than two and a half billion dollars (Weil). Another famous example of unethical accounting procedures is Worldcom. Worldcom, one of the nation's long distance carriers, improperly booked over three billion dollars during 2001 by

converting expenses into capital expenditures. This resulted in apparent profits for the company, when it should have been reported as losses. Their creative earnings management methods made the earnings look better than they actually were. The auditors did check to see if there were any major swings in the items on the company's consolidated balance sheet. There were not any, and from this, the auditors concluded that follow-up procedures were not necessary. Indeed, WorldCom executives had manipulated its numbers so there wouldn't be any unusual variances (Ulick). The downfall of most of these companies was directly attributable to implementation of abusive earnings management practices at the top corporate levels.

## 1.2 **Earnings Management**

To clarify what constitutes earnings management, it is important to have a good comprehension of what the term “earnings” refers to. Earnings are the profits of a company. Stock analysts and investors routinely review a company’s earnings to determine if they are a good prospect to invest in. Companies with poor earnings prospects will typically have lower share prices than those with good prospects.

Earnings management is a strategy used by the management of a company to deliberately manipulate the company's earnings so the figures match a pre-determined target or benchmark. One type of earnings management is referred to as income smoothing. There are other ways to manage earnings; overstating operating performance, “taking a bath”,



employing off-balance sheet financing, etc. By instituting income smoothing, company earnings appear to maintain a more stable line without periodic highs and lows which would infer more of a risk. The smoothing is achieved by adding or removing funds from reserve accounts, commonly referred to as “cookie jar” accounts. Some companies, in desperate attempts to hold their market share, have resorted to abusive earnings management (Grant).

Abusive earnings management is deemed by the Securities & Exchange Commission to be "a material and intentional misrepresentation of results". When income smoothing becomes excessive, the SEC may issue fines. Unfortunately, there is not much individual investors can do. Accounting laws for large corporations are extremely complex, which makes it very difficult for regular investors to pick up on accounting scandals before they happen.

In order for investors to gain a sense of what is going on financially, most companies have elected to implement a policy of transparency and disclosure. In essence, this policy addresses the social and environmental performance of the respective company by providing investors with information on ongoing projects, corporate restructuring, etc. This is done to promote sustainability and accountability. A company that does not provide such information could easily be viewed as secretive and possibly attempting to cover up some insurrection, such as Enron did.

Although the different methods used by managers to manage earnings can be very complex and confusing, the important thing to remember is that the driving force behind managing earnings is to meet a pre-specified target. As Warren Buffett once said, "Managers that always promise to 'make the numbers' will at some point be tempted to make up the numbers" (Investopedia).

### **1.3 Pro-forma**

The Securities and Exchange Commission will investigate companies suspected of trying to deceive investors in the so-called "pro-forma" modification of earnings. Pro-forma is a financial statement that does not reflect write-downs or goodwill. By omitting items that reduce reported earnings, this process can make a company appear profitable even when it is losing money. Basically, items that detract from a company's appearance are removed from the equation.

Pro-forma earnings are designed to give investors a clearer view of a company's operations. The problem is that there isn't much regulation of pro-forma earnings, so sometimes companies abuse the rules to make earnings look better. Because traders and brokers focus so closely on whether or not the company beats or meets expectations, the headlines are everything. And, if a company missed non-pro-forma expectations but released headlines stating it beat the pro-forma expectations, the company's stock price will not suffer as badly, and it might even go up (Investopedia). Companies all too often release profitable earnings that exclude things like "stock-based compensation" and

"acquisition-related expenses." Such companies, however, are expecting people to forget that these expenses are real and need to be included.

Potentially one of the worst abusers of pro-forma we know of is Network Associates. The company went so far as to exclude its dot-com department's operating earnings. The Network Associates' dot-com department wasn't making or spending pretend money, so why did the company exclude these numbers? No doubt the department was losing money and decided to hide this important fact from investors, who need to have insight into the numbers that reflect poor company strategy.

Pro-forma earnings are designed to give investors a clearer view of a company's operations. For some companies pro-forma earnings makes a lot of sense because of the nature of their businesses. For example, some cable and telephone companies almost never make a net operating profit because they are constantly writing down big depreciation costs. In this case pro-forma earnings do not include these non-cash charges, allowing investors to see what the actual cash profit is.

To sum up, pro-forma earnings are informative when official earnings are blurred by large amounts of asset depreciation and goodwill. But, when you see pro forma, it is up to you to the investor to dig deeper to see why the company is treating its earnings as such (Investopedia).

Disclosure of auditors' fees for non-audit services can inform investors about financial reporting quality, including earnings management. If investors believe the provision for non-audit services comprises auditor objectivity and

they require compensation for a perceived decline in the credibility of firms' earnings reports, then they will bid down the share values of firms disclosing unexpectedly high non-audit fees (Simunic 1984; Teoh and Wong 1993).

Frankel et. al. (2002) found in their study that the basic premise of benchmark analysis occurs in firms that just meet or beat the benchmark but not in firms that just miss the benchmark.

With the results of these major corporations "cooking the books," what has Congress done to help preempt this in the future? Where were the auditors and why did they not pick up or confront these improper accounting procedures? Will American businesses ever regain the confidence from investors?

#### **1.4 Arthur Andersen**

The most prominent auditing firm involved in the recent scandals was Arthur Andersen. Arthur Andersen was one of the Big five accounting firms at the time and had Enron as its biggest client. When Andersen realized that the Securities and Exchange Commission was doing an investigation on Enron, members of management quickly had their employees shred important documents relating to Enron. Shredding this evidence was construed as obstructing justice by destroying evidence. These unprecedented actions by Arthur Andersen poisoned the firm and resulted in Federal fines for their actions, a loss of confidence by their clients, and a subsequent demise of the firm. The firm was later fined for their actions.

Andersen's 2002 Obstruction of Justice conviction for tampering with documents related to their client, Enron Corporation, injected powerful momentum into the federal government's effort to crack down on fraud at companies engaged in accounting abuses in the late 1990s. It also sent Andersen into a tailspin from which the company never recovered, eliminating the jobs of more than 28,000 U.S. employees, disbanding an 89-year-old business that reviewed the books of 1,300 public companies, and sharply narrowing the options of clients in the market for accounting firms large enough to perform international audits (Johnson).

But legal experts said the effect of any ruling on future cases may be minimal because the Sarbanes-Oxley Act created a new obstruction of justice count that resolves most of the company's objections to "vague" language in the original law.

The Justice Department previously said that it took a hard line with Andersen because of the accounting firm's record of allegedly shoddy work, including failed audits at Waste Management Inc. and Sunbeam Corp. that cost investors millions of dollars. Andersen was operating under a form of corporate probation at the instigation of the Securities and Exchange Commission at the time of the Enron debacle.

During a six-week trial, prosecutors argued that Andersen's leaders desperately feared a spate of costly shareholder lawsuits as Enron descended into financial collapse. Shortly after receiving notice about problems at Enron, including what she described in notes as a "highly probable" SEC

investigation, Andersen lawyer Nancy Temple sent out an e-mail message reminding employees to follow the company's document retention policy, which called for the destruction of old and extraneous papers. Accountants in Andersen's Houston office touched off a massive campaign to shred documents, destroying more than two tons of paper and deleting thousands of e-mails in a few weeks in October 2001, the government argued (Lindstrom).

Andersen argued that U.S. District Judge Melinda Harmon gave improperly broad instructions to the jury on the obstruction charge and that prosecutors failed to prove that the document tampering took place after the SEC formally opened a probe into Enron's finances.

The conviction was upheld in June 2004 by the U.S. Court of Appeals for the 5th Circuit. Andersen petitioned the Supreme Court for review in September and the petition was granted recently. This dark episode in U.S. economic history would become the catalyst for creation of Federal legislation to help prevent similar future occurrences.

### **1.5 Sarbanes-Oxley Act of 2002**

With all of these scandals going on, Congress passed the Sarbanes-Oxley Act of 2002. Sarbanes-Oxley is an attempt to define the auditor's level of independence with their clients and have companies review their relationships with their auditors.

Section 201. SERVICES OUTSIDE THE SCOPE OF PRACTICE OF AUDITORS states:

“... its shall be unlawful for a registered accounting firm that performs for any issuer any audit required by this title or the rules of the Commission under this title or, beginning 180 days after the date of commencement of the operation of the Public

Company Accounting Oversight Board, established under Section 101 of the Sarbanes-Oxley Act of 2002, the rules of the Board, to provide that the issuer, contemporaneously with the audit, any non auditing service, including:

- “(1) bookkeeping or other services related to the accounting records or financial statements of the audit client;
- “(2) financial information systems design and implementation;
- “(3) appraisal or valuation services, fairness opinions, or contribution-in-kind reports;
- “(4) actuarial services;
- “(5) internal audit outsourcing services;
- “(6) management functions or human resources;
- “(7) broker or dealer, investment advisor, or investment banking services;
- “(8) legal services and expert services unrelated to the audit; and
- “(9) any other service that the Board determines, by regulation, is impermissible.

It introduced stringent new rules with the stated objective: "to protect investors by improving the accuracy and reliability of corporate disclosures made pursuant to the securities laws."

In essence, the new law stipulates that certain “consulting services” can no longer be performed by the same accounting firm that performs the company’s audits. In the case of Enron, Andersen most likely was overlooking “red flags” intentionally created by Enron executives, so they could continue receiving such high revenues from Enron. To be realistic, however, the auditing firm should bring to the client’s attention the discovery that someone within the company manipulated the financial records. In the end, management is responsible for preparing financial statements, not the auditing firm. The CEO’s and CFO’s must personally certify financial statements. This is outlined in Section 1350 of the Sarbanes-Oxley Act, as presented below:

Section 1350. Failure of corporate officers to certify financial reports

- (a) Certification of Periodic Financial Reports.--Each periodic report containing financial statements filed by an issuer with the Securities Exchange Commission pursuant to section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C.

78m(a) or 78o(d)) shall be accompanied by a written statement by the chief executive officer and chief financial officer (or equivalent thereof) of the issuer.

- (b) "(b) Content.--The statement required under subsection (a) shall certify that the periodic report containing the financial statements fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m or 78o(d)) and that information contained in the periodic report fairly presents, in all material respects, the financial condition and results of operations of the issuer.
- (c) "(c) Criminal Penalties.--Whoever--

"(1) certifies any statement as set forth in subsections (a) and (b) of this section knowing that the periodic report accompanying the statement does not comport with all the requirements set forth in this section shall be fined not more than \$ 1,000,000 or imprisoned not more than 10 years, or both; or

"(2) willfully certifies any statement as set forth in subsections (a) and (b) of this section knowing that the periodic report accompanying the statement does not comport with all the requirements set forth in this section shall be fined not more than \$ 5,000,000, or imprisoned not more than 20 years, or both."

The Sarbanes-Oxley Act of 2002 has become the driving force for companies to implement financial controls, with the goal of avoiding the negative publicity surrounding corporate scandals at Enron, WorldCom and a host of others. In order to meet the requirements set forth by Sarbanes-Oxley, companies have had to develop internal risk management programs. Only recently has guidance on the implementation of a consistent enterprise risk management framework been provided through the Commission of Sponsoring Organizations of the Treadway Commission's (COSO) Enterprise Risk Management (ERM) framework.

## **1.6 Enterprise Risk Management**

ERM represents a fundamental shift in the way businesses must approach risk. As the economy becomes more service-driven and globally oriented, businesses cannot afford to let new, unforeseen areas of risk remain



unidentified. Currency fluctuations, human resources in foreign countries, evaporating distribution channels, corporate governance, and unprecedented dependence on technology are just a few of the new risks businesses must assess. Many organizations are choosing to implement an Enterprise Risk Management process to ensure that a uniform approach to risk identification, measurement and treatment is utilized across the organization.

While risk management traditionally has been considered a way to balance the trade-off between risks and rewards, ERM takes a broader view and positions a company to enhance shareholder value as it builds investor confidence. Firms that make good risk decisions are usually rewarded with improved market value. As a strategy for optimizing risk management, ERM achieves this objective by providing systematic, cooperative evaluation and control of risk. It is an organization-wide process and approach to identifying and alleviating problems related to risk. By giving companies an objective basis for allocating resources and reducing expenditures, ERM can improve capital efficiencies.

Because ERM involves analysis and treatment of all business risks -- those that are insurable as well as a wide array of traditionally non-insurable risks -- the process is an inherently collaborative effort that requires teamwork among many disciplines within an organization. From risk management, credit management, treasury and accounting, to operational management, marketing, R&D, and the law department -- among others -- multiple skills and expertise are essential. And while any number of people and teams can

spearhead the ERM process in a business, few companies have internal resources with the combined skill sets to execute all phases of the process, including the design and implementation of post-analysis solutions such as risk financing and risk mitigation. To set up such a program, companies are electing to outsource the process to experienced consulting firms, other than their auditing firm (Kremer).

It is now illegal for any accounting firm to provide non-auditing services to their audit clients. Bookkeeping, financial information systems design and implementation, actuarial services, internal audit outsourcing services, management functions or human resources, legal services and expert services unrelated to the audit, or any other service that the board determines is not permitted under current regulations. With regard to auditor independence, the Chief Executive Officer, Controller, Chief Financial Officer, Chief Accounting Officer, or any other person in an equivalent position cannot have been employed by the audit firm during a one-year period preceding the audit.

For many decades, auditors have been considered independent contractors. They specialized in auditing and that was their main function. This has changed dramatically however in today's world of "value added" services. Prior to Sarbanes-Oxley, auditing companies were able to provide their clients with additional services such as bookkeeping and management services. They were marketed as a "one-stop shop for all your financial needs." Certified public accounting firms were increasingly expanding into

consulting and other "value-added" services beyond auditing, and regulators are concerned that these new relationships could compromise the independence of their audit reports.

For example, Enron was paying Arthur Andersen twenty-five million dollars for audit fees and twenty-seven million dollars for consulting fees. In essence, Arthur Anderson was fulfilling all of Enron's financial needs. The prime position for any auditing firm would be to provide their clients with auditing as well as consulting services. Establishment of such professional arrangements can turn the big clients into "cash cows" for the auditing firms. To maintain their enhanced fees for additional services, audit firms may be tempted to overlook detrimental issues during audits. However, in such instances, where are the checks and balances that should normally exist with separate firms providing auditing and general accounting services? The temptation of incorrectly reporting losses so as to apparently increase earnings has appeared in many companies.

Why would a prestigious company such as Arthur Andersen want to manipulate their clients' financial statements? Greed. Arthur Andersen was considered one of the big five accounting firms and had major competitors to go along with them. Andersen was receiving millions for their auditing services, so having a once-profitable company drastically decrease profits, would result in less revenue for the company.

Arthur Andersen is not the only accounting firm that has found itself in trouble with the federal government. Coopers & Lybrand, LLP, which

merged with Price Waterhouse, LLP in 1998, to form PricewaterhouseCoopers served as financial auditor for Home State Holdings, Inc., and two of its subsidiaries, The Home Mutual Insurance Company and New York Merchant Bakers Insurance Co., from 1989 to 1997. The lawsuit alleges that PricewaterhouseCoopers failed to catch "numerous red flags" about the insurers' financial stability that could have prevented insolvency. They filed for bankruptcy in 1998. Home State and its subsidiaries sold auto and homeowners insurance in New Jersey, New York, and Pennsylvania. The major transgression the lawsuit alleges is that PricewaterhouseCoopers failed to notify the insurance department that Home State failed to maintain enough cash reserves to pay claims (Lavelle).

Insurance companies have cash reserves set aside for multiple reasons. As previously mentioned, one is to pay claims. The other is a cash reserve used as a loan loss reserve. Most companies, including insurance companies, have loan loss reserves.

### **1.7 Loan Loss Reserve**

The loan loss reserve is the liability recorded on the balance sheet for unpaid losses. It is that portion of a fund's earnings or permanent capital designated by the board of directors as a reserve against possible loan losses and, as such, is unavailable for lending purposes. Generally Accepted Accounting Principles (GAAP) governing for-profit and regulated financial institutions require that loan loss expense be deducted as an annual expense on

an accrual basis, and that the loan loss reserve be shown as a contra-asset account reducing loan assets. To date, no accounting convention has been established to govern loan reserve accounting for unregulated nonprofits. The technical treatment is to establish the reserve through periodic charges against earnings. Actual losses, when and if incurred, are charged against the reserve. For balance sheet purposes, a loan loss reserve (should) be shown as a deduction from the loan portfolio to suggest that its true economic value should be reduced by the estimated loss exposure.

“The trouble with whittling away the loan loss reserves is that as banks write more loans, they will have to replenish the reserves. Plus, if credit conditions worsen as economic growth slows and interest rates rise, they will need to set aside even more, eating further into profits” (Stone).

The allowance for loan losses should be maintained at a level that is adequate to absorb the estimated amount of probable losses in the institution's loan portfolio. Therefore, it is a major factor in the evaluation of each institution's ability to absorb credit losses and to maintain the fairness and accuracy of its financial statements. The allowance for loan losses is a valuation account. The account is used as an offset to, or reduction in, the gross value of loans on the institution's balance sheet. The allowance for loan losses account is generally the largest allowance account. According to a study done by Chen, Elder, and Zhou (2003), found “a positive relationship between non-audit services and total and discretionary loan loss provisions, suggesting that auditors that also provide non-audit services to banks all less

income-increasing discretion.” Furthermore, Frankel et. al (2002) examines the relation between non-audit services and measures of audit quality. They find that companies’ ability to meet earnings forecasts is positively related to the extent of non-audit services, although not the ability to exceed prior year earnings benchmarks.

The institution must analyze its entire loan portfolio in order to determine an appropriate level for the allowance. Generally, however, it is not practical or necessary for institutions to analyze and provide allowances for all loans individually. As discussed previously, institutions should analyze all significant credits and perform an analysis of classified loans, either on an individual basis or collectively. The determination of the allowance for the balance of the portfolio, usually representing the majority of loans, is a difficult process and requires management to make a significant number of subjective estimates and assumptions. Institutions may provide for such credits as part of a pool of loans based on historical loss experience, adjusted for changes in trends and conditions, as well as consideration of other pertinent factors.

Management, unfortunately, can manipulate this reserve. Why would management want to “cook” the books? There is a wide variety of reasons:

*Bonuses* - Each year, management develops a predetermined benchmark for earnings/profits. Bonuses, subsequently, are directly related to profits. If management wanted to ensure bonuses for a particular year, they may overlook certain losses so as to show a profit.

*Credit Rating* – The majority of companies, at some point in their existence, need to obtain funding or capital from a financial institution or the capital markets. This may be required for reasons such as company expansion, equipment purchases, or development services. To obtain the capital they need, their credit rating will be the determining factor. To ensure funding needed for capital, a company may modify their financial statements to minimize or eliminate losses and maximize earnings so as to ensure the integrity of their credit rating. Some institutions would review a company's debt-covenant ratio when evaluating a request for capital. Generally, the higher the ratio, the better the company's ability to meet current obligations.

*Investor Confidence* – A company's life blood is investor confidence. If investors feel insecure with the operation of a company, or a company fails to meet quarterly projections, they may elect to sell off their stock, which would be detrimental for a company. Once again, modification of financial statements by management can convey the appearance of a smooth, steady financial establishment.

*Mergers and Acquisitions* – In today's business world, company mergers and acquisitions have increased to the point of being the norm as opposed to the exception. An organization that is either looking to merge or be acquired has to present a good financial picture. This could be the difference between a company succeeding or failing in the market.

## **2.0 RESEARCH METHODOLOGY**

Since management can manipulate earnings and now that there is a concern of auditor independence, is there any correlation between non-auditing services and earnings per share from operations/income before extraordinary items?

### **2.1 Graphical Analysis**

The following sections present graphs that were developed from the research data. The first section will examine the four main research variables (Earnings Per Share (EPS), Income before extraordinary items, Audit Fees, and Nonaudit fees) for the years 2000 and 2001. The data consists of 40 companies and the corresponding values for each of the respective variables. The data is presented in Appendix A.

Each variable is broken down into four graphs so as to facilitate understanding by eliminating “bunching” of data on the graphs. The four graphs present approximately ten companies each from the sample of forty companies. Data for certain variables within each company was not available, as a result, blank areas on the graphs may exist.

The second section examines two regressions to determine if there is a correlation between the quality of the board for each of the forty companies as compared to EPS and Income for the years 2000 and 2001.



The following variables have been retrieved from the Wharton Research Data Services (WRDS). These definitions will give the reader an overview of what each variable entails and its importance.

**Income Before Extraordinary Items**

Annual Data number	18
Quarterly data number	8
Variable data item (Business Information-Segment item Value File)	IB
Units (companies)	Millions of dollars
Annual data availability	1950
Quarterly data availability	First quarter, 1961
Position number for annual data in Daily Fundamental File	14
Position number for quarterly data in Daily Fundamental File	37
Position number in Business Information – Segment Item Value File	36

This item represents the income of a company after all expenses, including special items, income taxes, and minority interest – but before provisions for common and/or preferred dividends. This item does not reflect discontinued operations or extraordinary items presented after taxes.

This item includes (when reported below taxes):

- 1.) After tax adjustments for net income for the “purchase” portion of net income of “part-pooled” companies.
- 2.) Amortization of intangibles
- 3.) Equity in earnings of unconsolidated subsidiaries
- 4.) Gain or loss on the sale of securities when they are a regular part of a company’s operations.
- 5.) Shipping companies’ operating differential subsidies (current and prior years)

This item, for banks, includes net profit or loss on securities sold or redeemed after applicable deductions for tax and minority interest.

### **Earnings per Share from Operations**

Due to company presentations, this item may differ from the historical Earnings per Share (Diluted) – Including Extraordinary Items. (See Earnings per Share (Diluted) – Including Extraordinary Items.)

Effective December 15, 1997, Statement of Financial Accounting Standards (SFAS) #128 requires companies to report Basic and Diluted Earnings per Share, replacing Primary and Fully Diluted Earnings per Share. The change will affect financial statements issued after this date.

The restated earnings per-share figures reflect all stock splits and dividends whose ex-dividend dates occur through the end of the most recent year with a final update code. If the most recent year with a final update code has an Adjustment Factor (Cumulative) by Ex-Date other than *1.000000*, restated earnings per-share for all years should be divided by that adjustment factor.

Diluted earnings per share will be equivalent to basic earnings per share, if the company reports no dilution or immaterial dilution.

This item is not available for banks.

Annual data number	233
Quarterly data item number	177
Units	Dollars
Annual data availability	1988
Quarterly data availability	First quarter, 1988
Position number of annual data on Daily Fundamental File	15
Position number of annual data on Daily Fundamental File	38

This item represents Earnings per Share (Basic) adjusted to remove the effect of all Special Items from the calculation. This earnings per share item excludes the effect of all nonrecurring events.

This item excludes:

- 1.) Cumulative effect of accounting change
- 2.) Discontinued operations
- 3.) Extraordinary items
- 4.) Special items
- 5.) Non-recurring income taxes

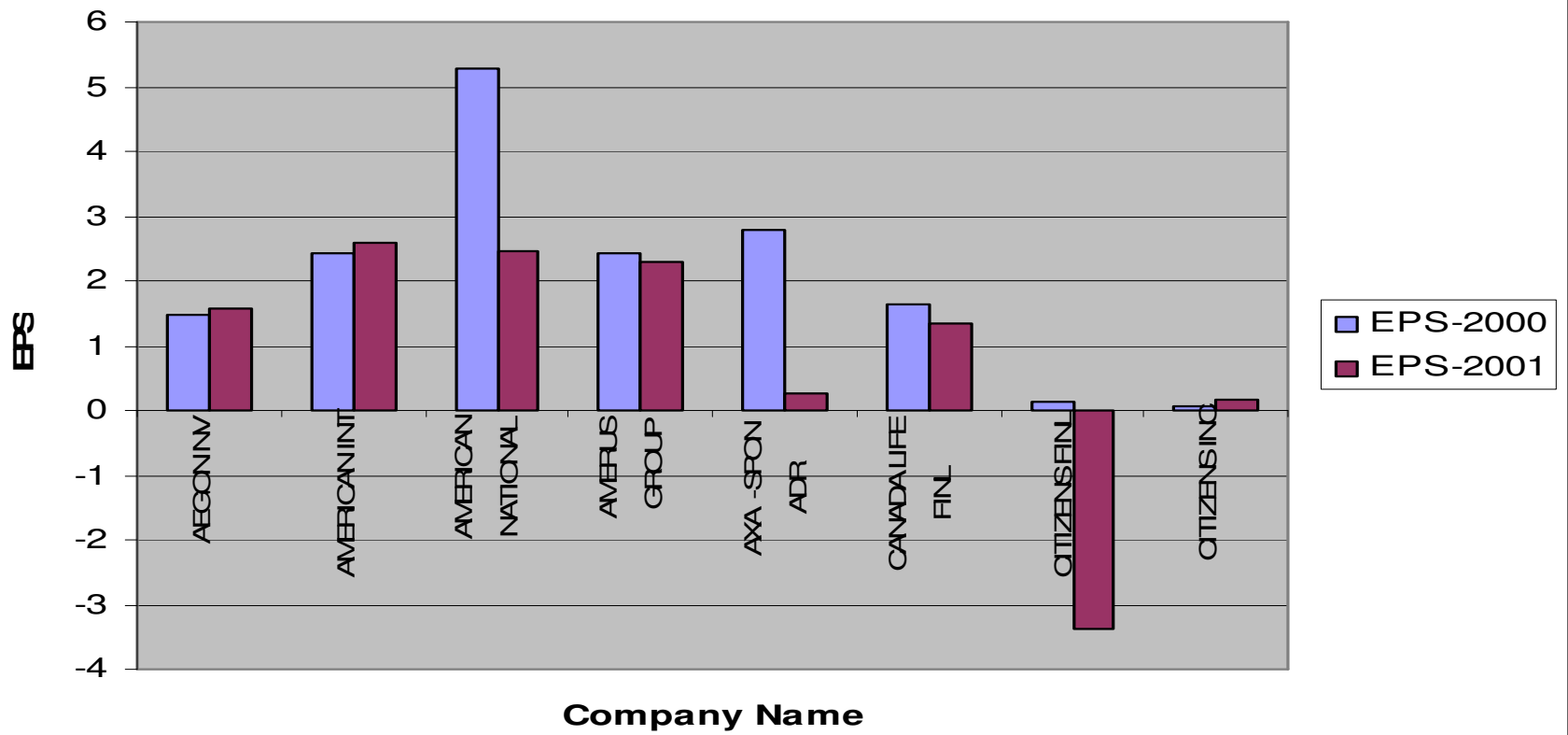
### **Earnings per Share from Operations**

In the four graphs for Earnings per Share from Operations for the years 2000 and 2001, approximately half of the forty companies tested have earnings that are relatively close to the previous year. Some companies, such as Torchmark or National Western, show a big increase in earnings per share. For instance, National Western has an earnings per share of \$8.15 in 2000, but in 2001, earnings increased to \$12.70 per share.

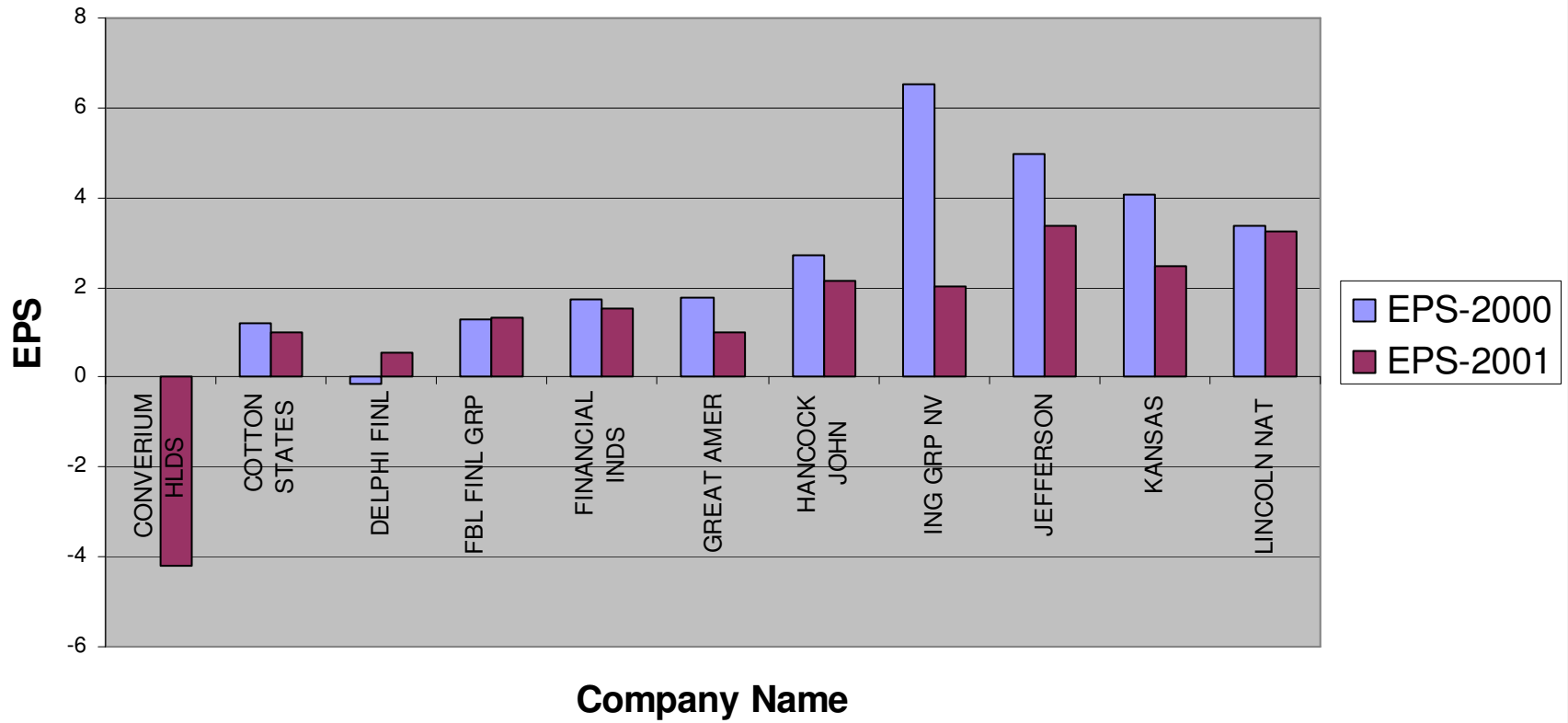
Several of the companies examined have earnings per share that are relatively close to the prior years. For example, Aegon NV had earnings per share of \$1.47 in 2000, but increased slightly to a \$1.57. Also, Metlife increased from \$1.23 to \$1.30 in 2000 and 2001 respectively.

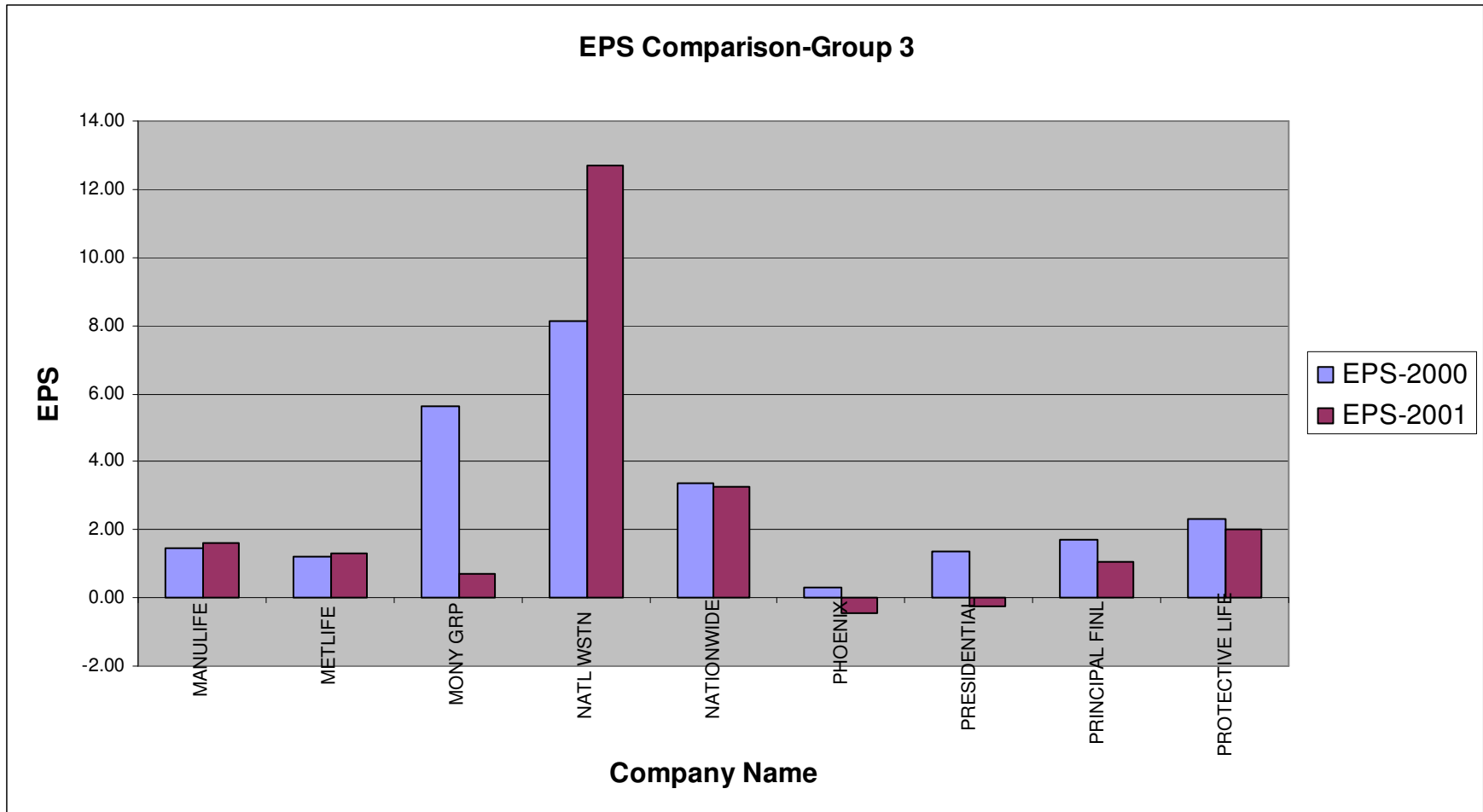
By looking at the graphs and the numbers associated with them, one may conclude that some companies are trying to meet the prior year's benchmark so as to sustain investor confidence. If investors notice that certain ratios are decreasing, such as earnings per share, many of them may withdraw from the company, which essentially can ruin the company.

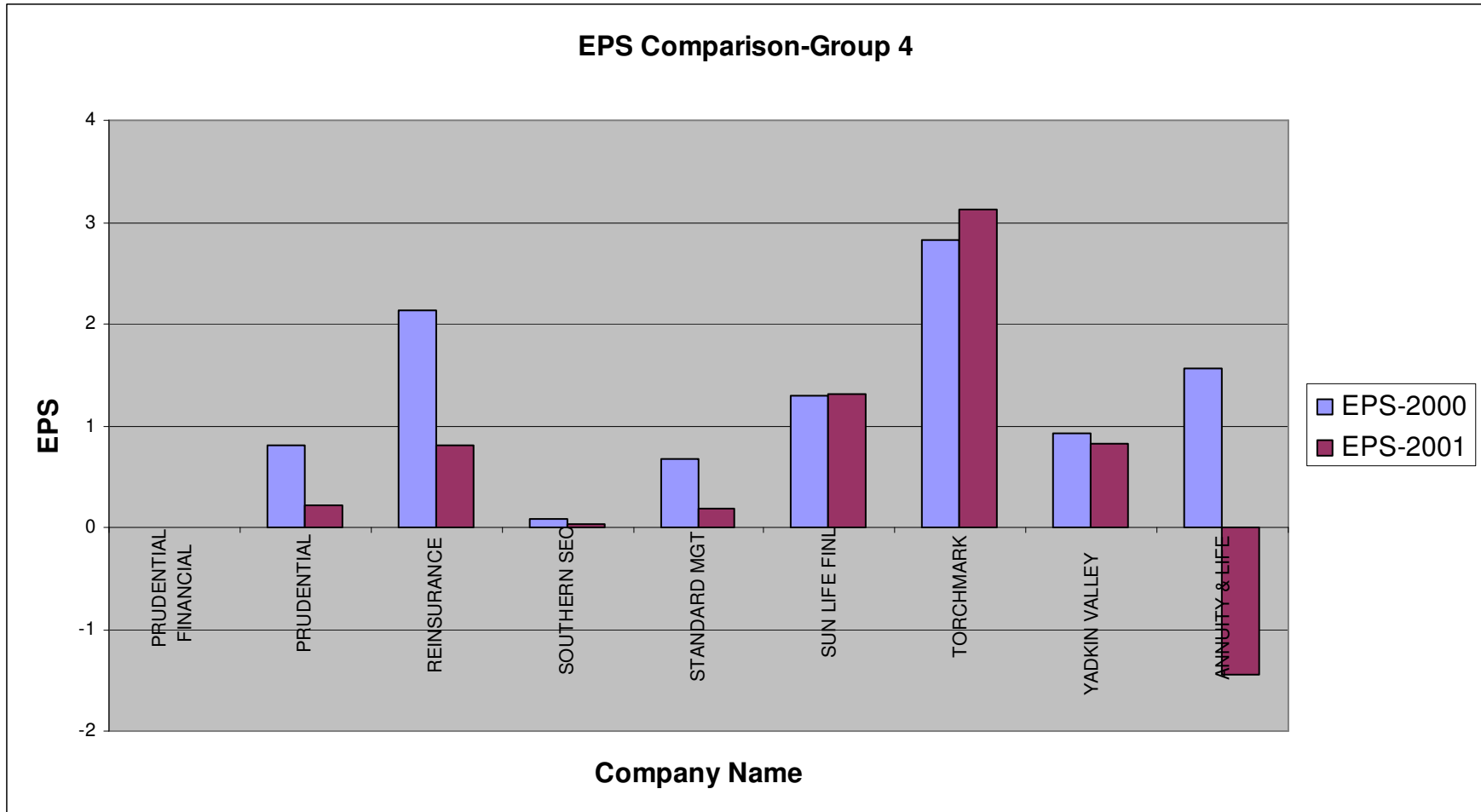
### EPS Comparison-Group 1



### EPS Comparison-Group 2







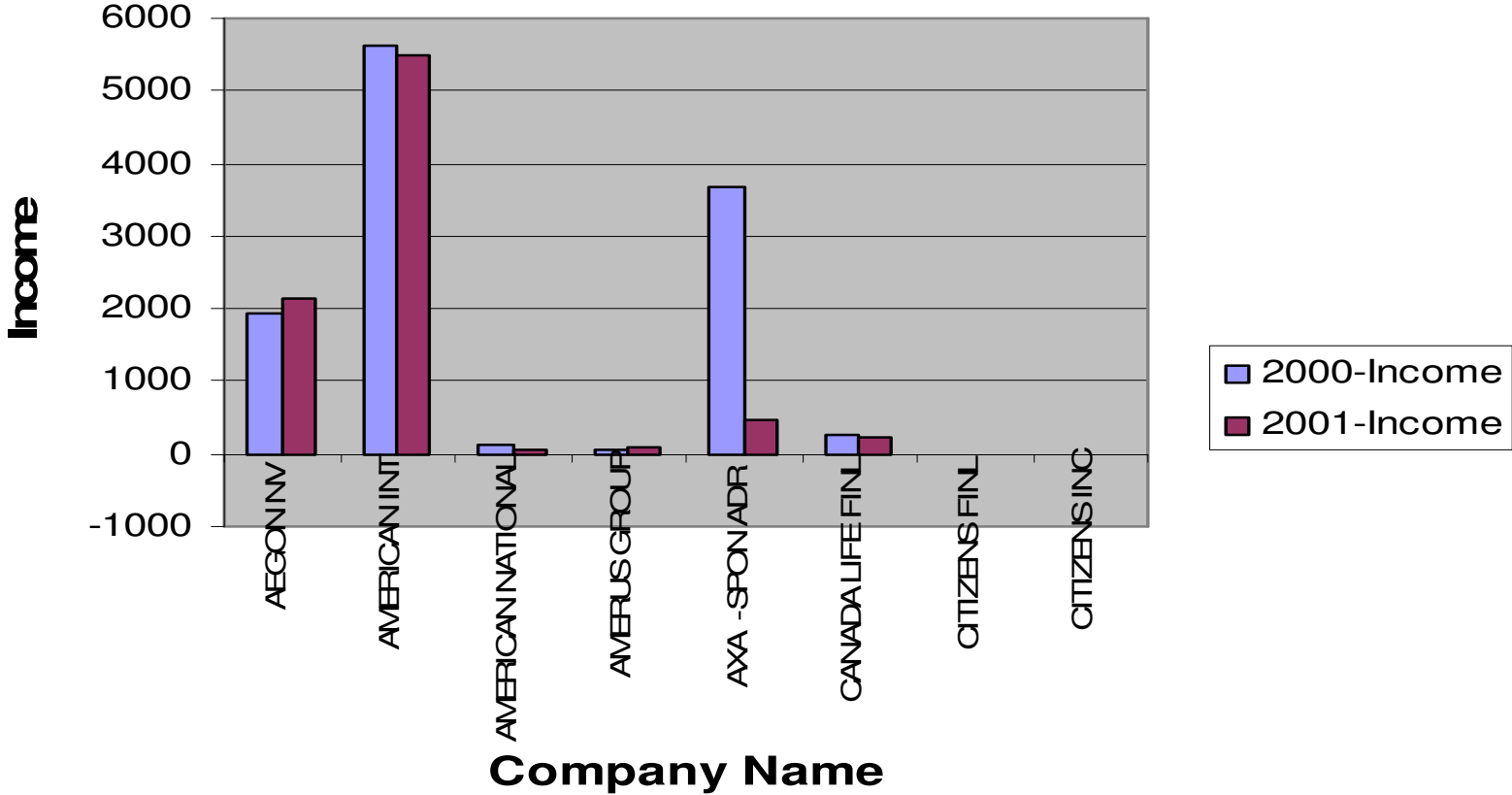
### **Income before Extraordinary Items**

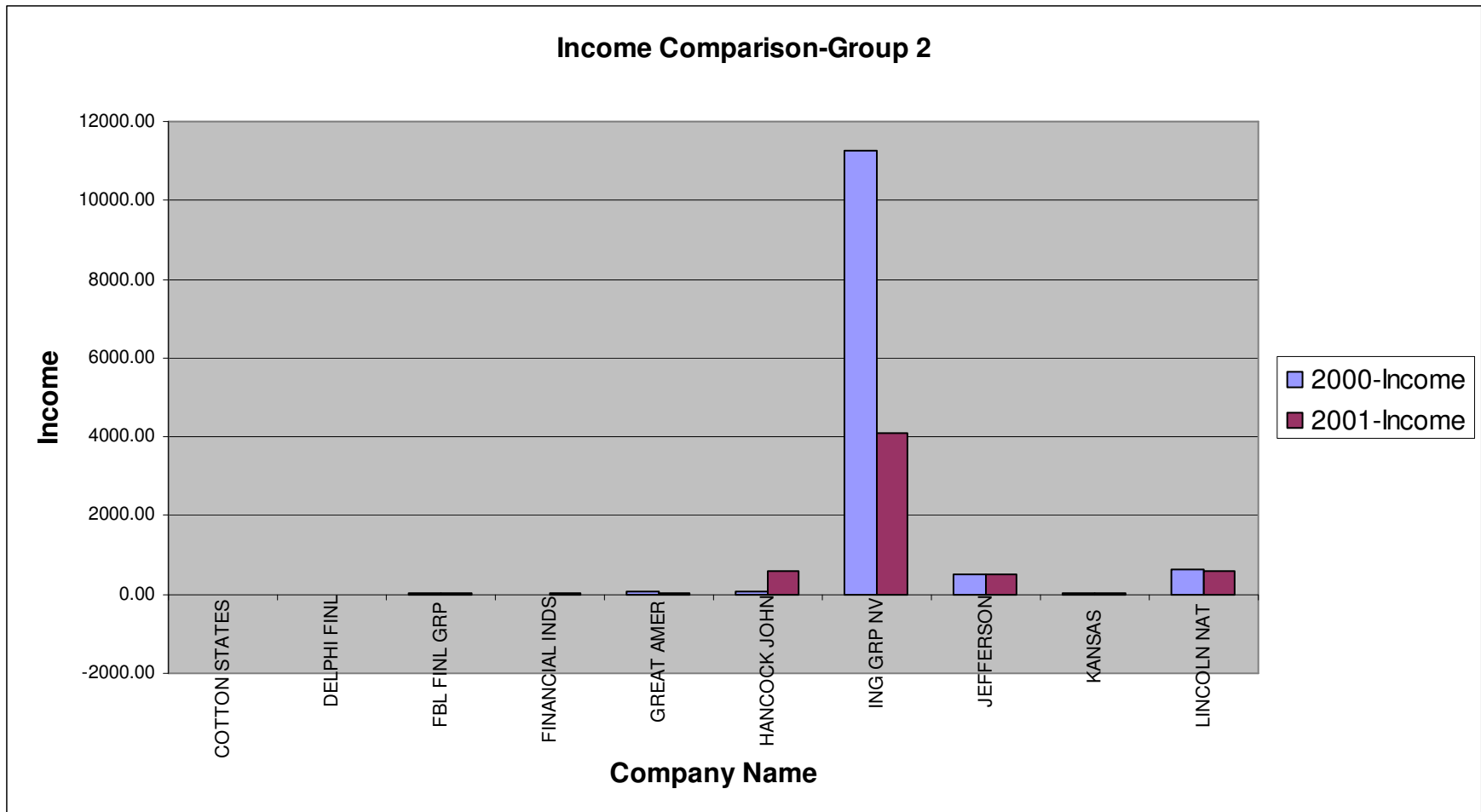
This variable examines the income of a company after all expenses, such as income taxes and minority interest, but before provisions for common/preferred dividends have been accounted for.

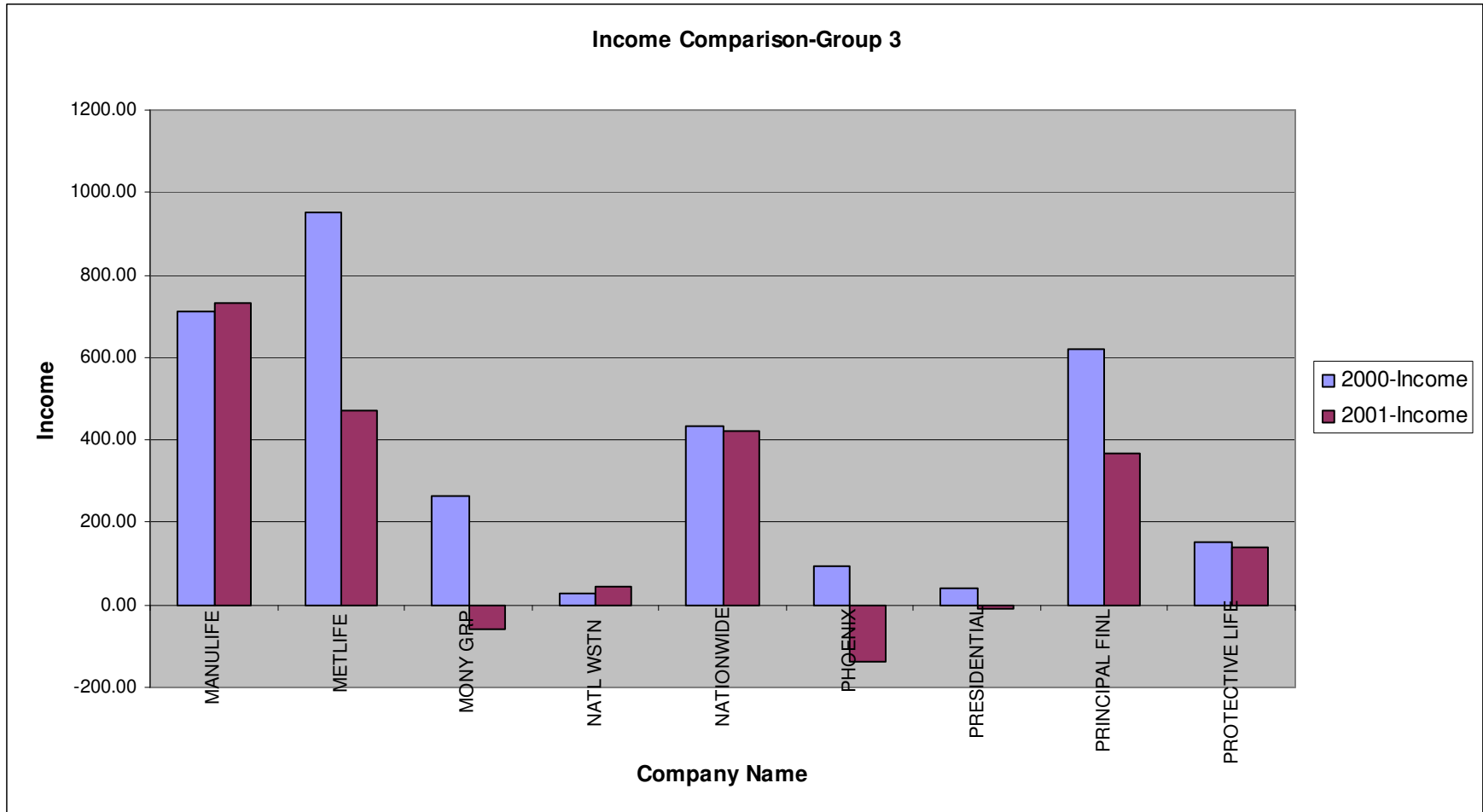
Based on the four graphs, more than half of the companies sampled faced a decrease in income. This may be attributed to the terrorist attacks on September 11, 2001. An interesting result is that of Jefferson Pilots. Jefferson had income of \$512.00 in 2000 and \$512.00 in 2001. Given the economic conditions that the United States was facing, it is interesting that this company “managed” to meet its benchmark.

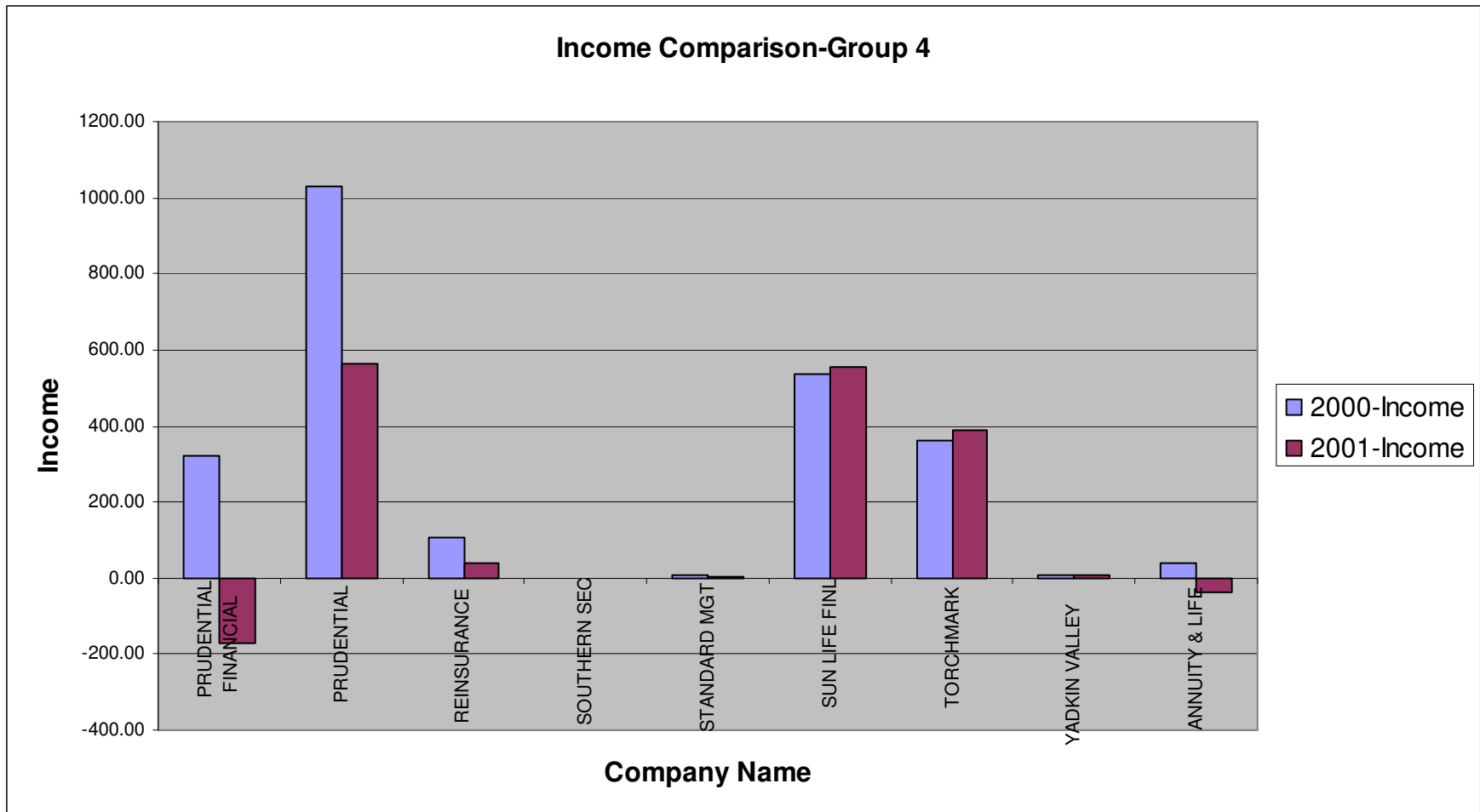


# Income Comparison Group 1





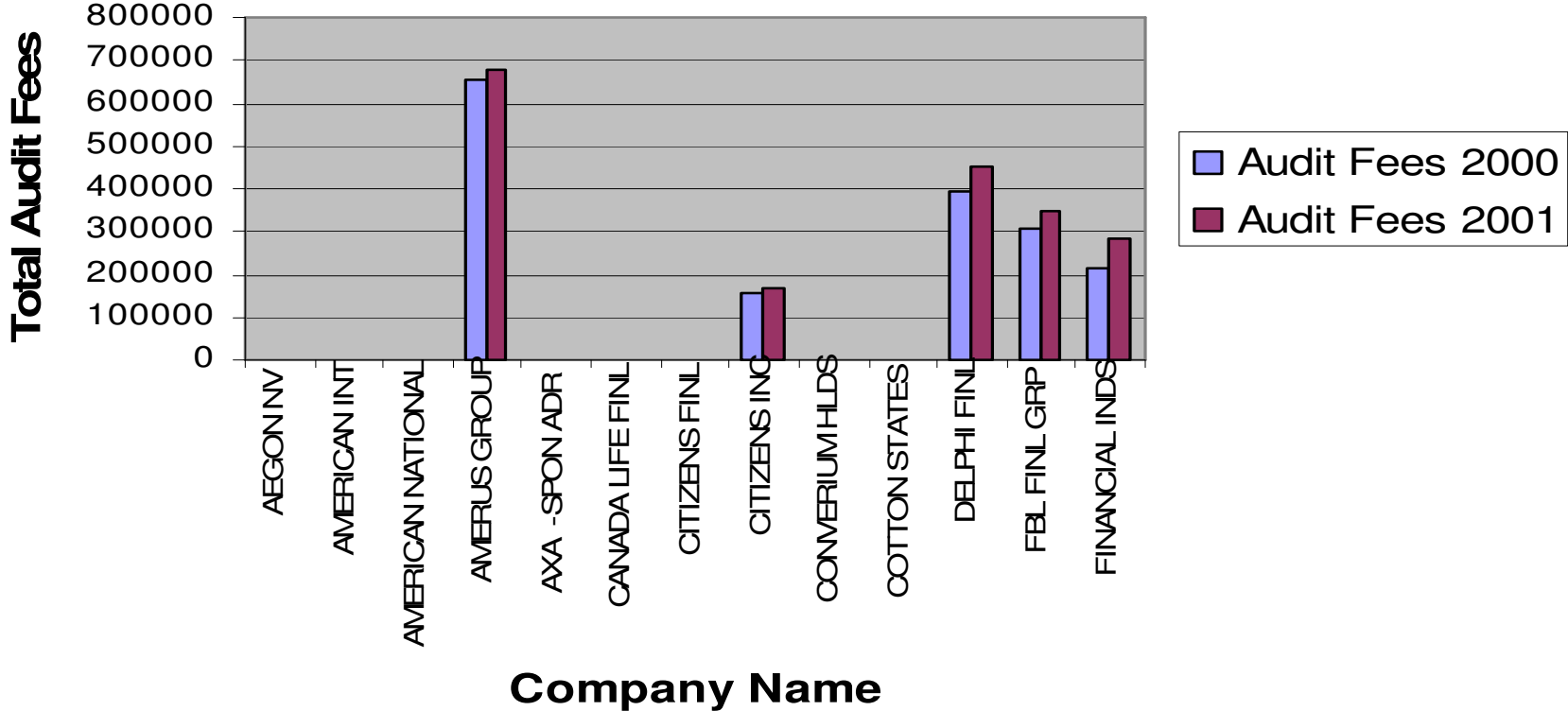


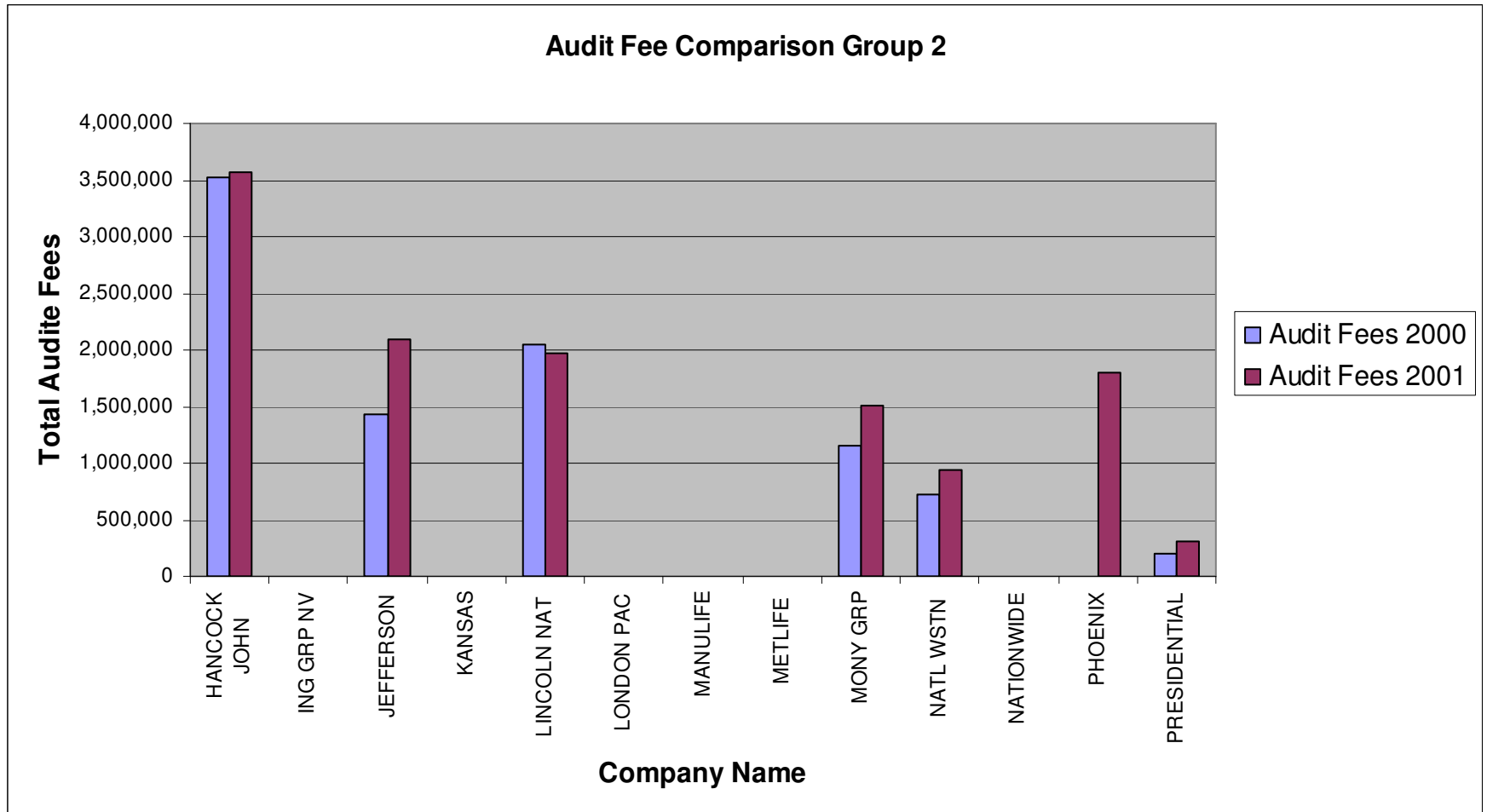


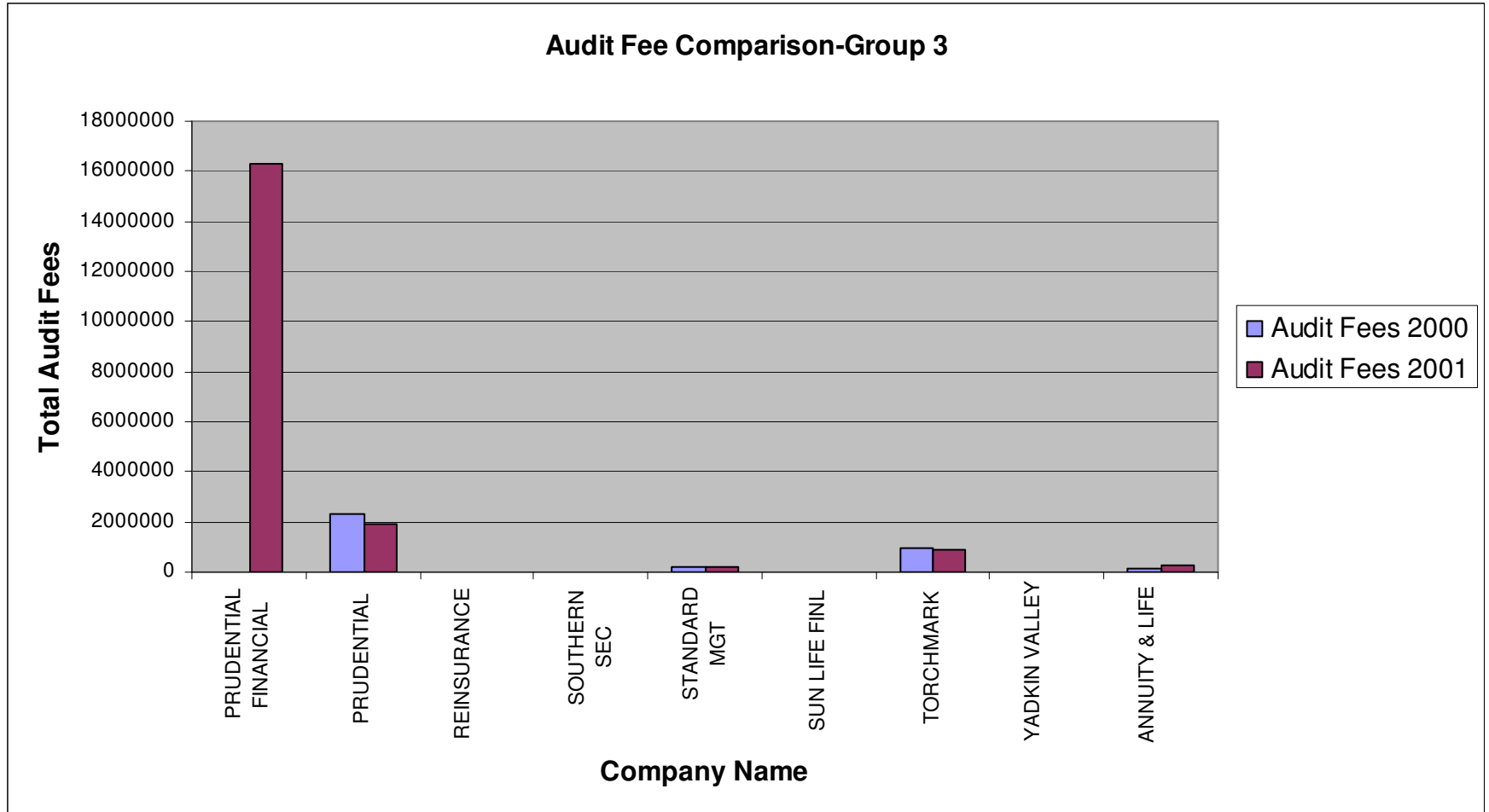
## **Audit Fees**

Audit fees can be large expenses for companies. By looking at the graph alone, one can see that many of these fees run up to millions of dollars. More than half of the companies sampled had an increase in audit fees. One factor that contributed to this may be the Sarbanes-Oxley Act, which has increased the amount of work/time accounting firms must complete. However, this data is from 2000 and 2001 and precedes the Act. One interesting find was Jefferson Pilots. Jefferson, which ironically had the same income before extraordinary items for 2000 and 2001, had an increase of audit fees of approximately \$600,000.

### Audit Fee Comparison Group 1





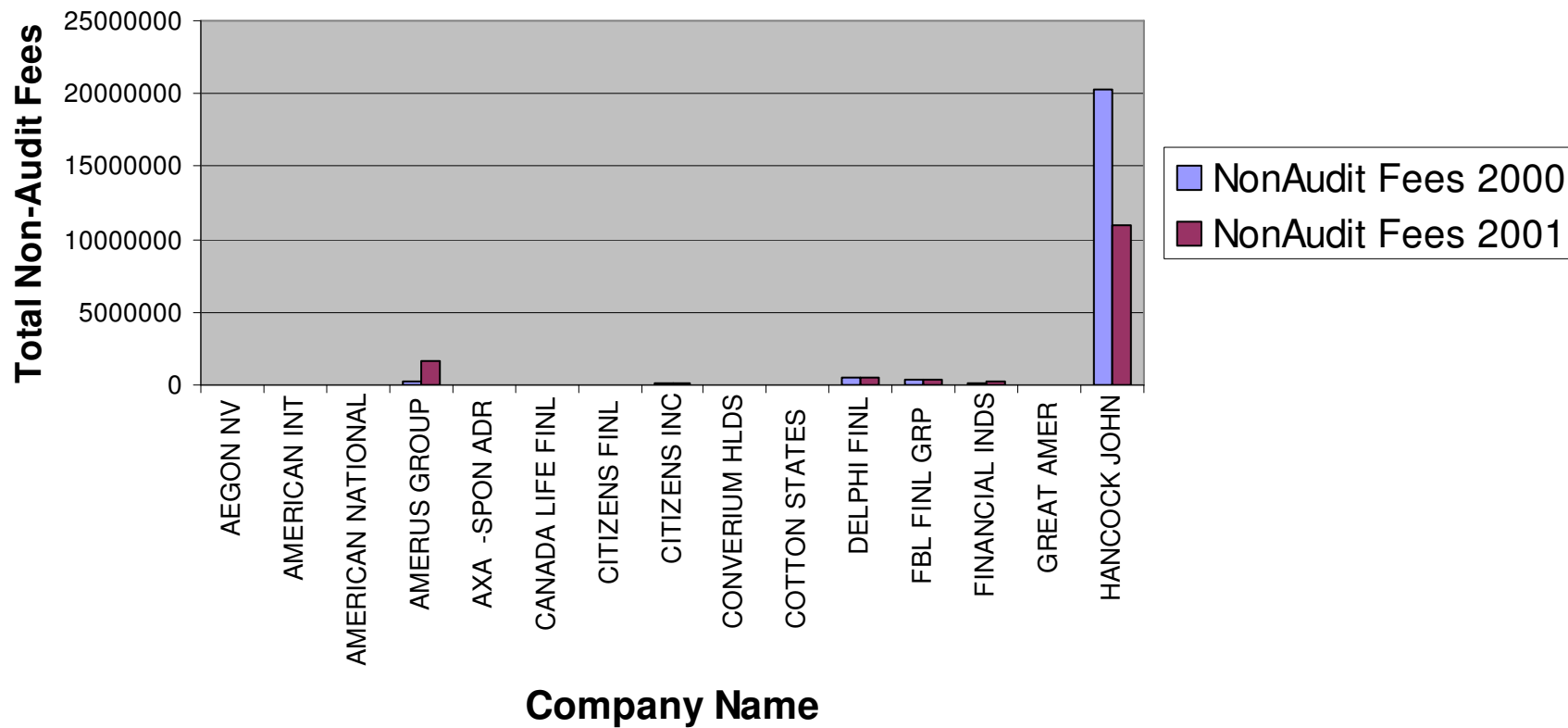


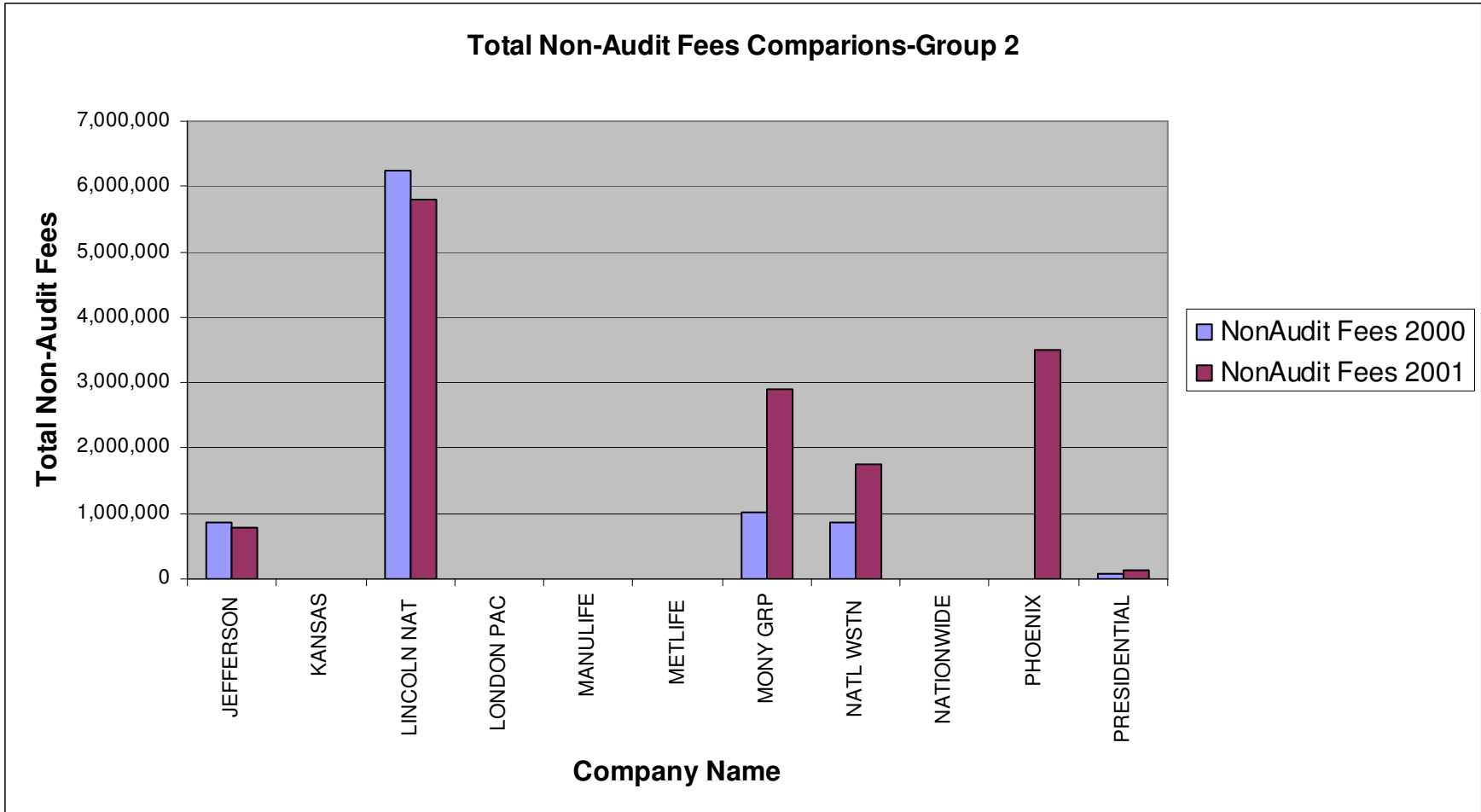


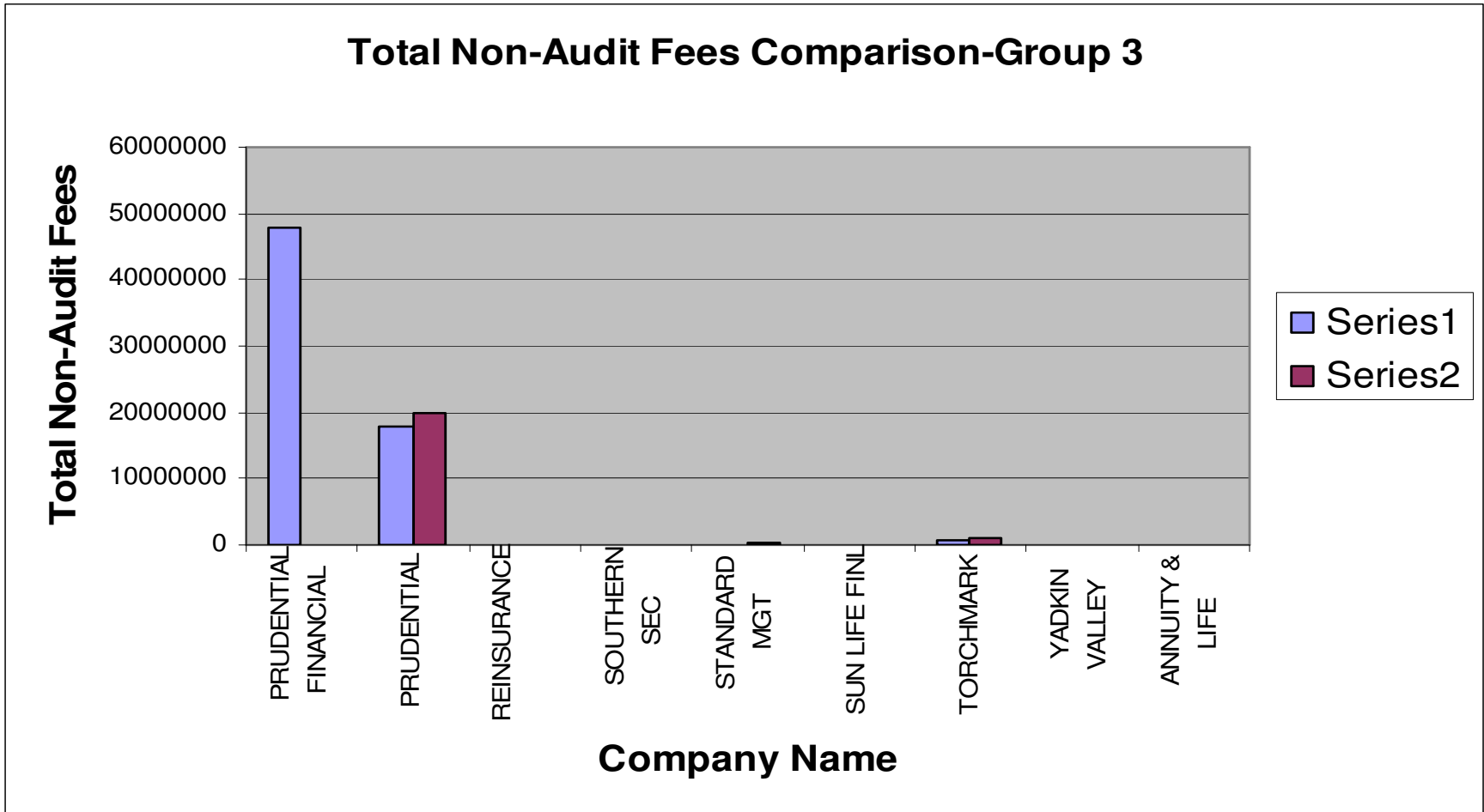
## **Non-Audit Fees**

Non-audit fees can consist of legal, consulting, and other fees that the accounting firms can also provide for their clients. These accounting firms receive millions of dollars from non-audit fees alone. This is where the accountants receive most of their revenue, which raises the concern for auditor independence. For example, in 2000 Prudential Financial Services paid PricewaterhouseCoopers over forty-seven million dollars in non-audit fees! Many of the companies, however, show a decrease in the amount of non-audit fees for 2001. This reflects restrictions on non-audit services adopted by the SEC, many of which were ultimately incorporated in the Sarbanes–Oxley Act.

### Total Non-Audit Fees Comparison-Group 1







## **2.2 Regression Analysis**

The regression analysis for the study was performed using the SAS System. It was run based on a sample of 26 companies in the insurance industry. The output for the regression is presented in Appendix B. The following tables are representative of the data obtained from the regression.

TABLE 1 is a list of the variables utilized and a description of each. It should be noted that the variables AUDGRAY and AUDINSIDE were not included in the table because the values were zero for all of the companies in the sample. More specifically, AUDGRAY represents the number of affiliates on the audit committee and AUDINSIDE represents the number of insiders on the audit committee. One feasible explanation as to why the values for these two variables are zero is the concern over auditor independence. Basically, it is standard practice to not have any insiders or persons affiliated with the company on the audit committee.

The control variable (MKTVAL), was retrieved from the Wharton Research Data Services. The variable was computed by multiplying common shares outstanding by the price-fiscal year end (Data #25 x Data #199).

TABLE 2 presents the values for the dependent and independent variables. From this table it is interesting to note that in the sample group there was more than a 55% increase in EPS from 2000 to 2001. TABLE 3 shows the Pearson Correlation Matrix for the dependent and independent variables. From this table, it can be observed that the number of board members (BDNUM) has a direct correlation to the number of members on the

audit committee (AUDCMT) with a p-value of 0.00. However, the number of insiders on the board (BDIN) has a less prevalent correlation to the AUDCMT with a p-value of 0.31.

TABLE 4 shows the Change in Income Model with comparison to the independent variables. Of the nine independent variables, significant p-values were shown for the number of board meetings (BDMTG), number of board members (BDNUM), insiders on the board (BDIN), outsiders on the board (BDOUT), number of affiliates on the board (BDGRAY) and the market variable (MKTVAL). These indicate a correlation between the variables and the change in income. The adjusted R-squared value of 0.31 indicates that there is a linear pattern within the dependent and independent variables. With the adjusted R-squared being 31%, an improvement in the graph would be possible by using the log value. As a result there would be an increase in the adjusted R-squared and a decrease in the standard error (SE).

TABLES 6 through 8 show the correlation between audit fees to non-audit fees. Based on the tables and the graphs presented, it is evident that the vast majority of the firms in the sample have larger yearly fees associated with non-auditing services as opposed to auditing services.

**TABLE 1***Variable Descriptions***Dependent Variables:**

INC2000	=	Income before extraordinary items in 2000 (variable # 18 from Compustat).
INC2001	=	Income before extraordinary items in 2001 (variable # 18 from Compustat).
EPS2000	=	Earnings per share from operations in 2000 (variable # 233 from Compustat).
EPS2001	=	Earnings per share from operations in 2001 (variable # 233 from Compustat).
CHINC	=	INC2001-INC2000
CHEPS	=	EPS2001-EPS2000

**Independent Variables:**

#BDMTG	=	Number of Board of Directors meetings held by the company each year.
BDNUM	=	Number of Board of Directors members.
BDIN	=	Number of Insiders on Board of Directors. Insiders are current employees of the company.
BDOUT	=	Number of Outsiders on Board of Directors. Outsiders have no ties to the company beyond being a board member.
BDGRAY	=	Number of affiliates on Board of Directors. Consistent with NYSE and NASDAQ listing requirements, affiliated directors are past employees, relatives of the CEO, or have significant transactions, and/or business relationships with the firm as defined by Items 404(a) and (b) of Regulation S-X, or are on interlocking boards as defined by Item 402(j)(3)(ii) of Regulation S-X.
#AUDMTG	=	Number of Audit Committee Meetings.
AUDCMT	=	Number of Audit Committee members.
AUDOUT	=	Number of Outsiders on Board of Directors.

**Control Variables:**

MKTVAL	=	Data # 25 is common shares outstanding multiplied by Data # 199, which is price-fiscal year end. Both numbers were retrieved from Compustat, using WRDS.
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**TABLE 2**  
*Variable Descriptive Statistics*

**Dependent and Independent Variables**

Dependent Variables	<b>N</b>	<b>Mean</b>	<b>Stdev</b>	<b>Min.</b>	<b>Median</b>	<b>Max.</b>
INC2000	38	790.01	2,055.02	-29.30	100.30	11,250.58
INC2001	38	457.37	1,124.46	-367.40	43.65	5,499.00
EPS2000	35	2.28	1.92	-0.16	1.72	8.15
EPS2001	36	1.36	2.54	-4.18	1.31	12.70
CHGINC	38	-332.64	1262.06	-7176.59	-11.81	527.60
CHGEPS	35	-0.76	1.66	-4.94	-0.31	4.55
Independent Variables						
#BDMTG	26	6.19	2.55	1.00	6.00	11.00
BDNUM	26	11.31	4.23	3.00	11.00	21.00
BDIN	26	0.65	1.16	0.00	0.00	4.00
BDOUT	26	10.35	4.56	2.00	11.00	20.00
BDGRAY	26	1.04	1.22	0.00	1.00	4.00
#AUDMTG	24	4.71	1.55	2.20	4.00	8.00
AUDCMT	25	4.48	1.76	3.00	4.00	8.00
AUDOUT	25	4.48	1.74	3.00	4.00	8.00



**TABLE 3**  
*Pearson Correlation Matrix for Dependent and Independent Variables*

	CH IN	CH EPS	#BD MTG	BD NUM	BD IN	BD OUT	BD GRAY	#AUD MTG	AUD CMT	AUD OUT	MKT VAL
CHINC	1.0 0	0.46 <b>(0.01)</b>	-0.51 <b>(0.01)</b>	-0.44 <b>(0.02)</b>	-0.16 (0.42)	-0.41 <b>(0.04)</b>	-0.04 (0.86)	0.00 (0.99)	-0.32 (0.12)	-0.33 (0.17)	-0.23 0.17
CHEPS		1.00	-0.14 (0.53)	0.10 (0.63)	0.30 (0.15)	0.03 (0.88)	0.29 (0.18)	0.22 (0.32)	0.04 (0.85)	0.01 (0.97)	0.00 0.96
#BDMTG			1.00	0.63 (0.00)	0.21 (0.30)	0.56 <b>(0.00)</b>	0.05 (0.81)	0.23 (0.27)	0.64 <b>(0.00)</b>	0.60 <b>(0.00)</b>	-0.10 (0.63)
BDNUM				1.00	-0.02 (0.93)	0.96 <b>(0.00)</b>	0.04 (0.83)	0.01 (0.97)	0.74 <b>(0.00)</b>	0.74 <b>(0.00)</b>	0.41 <b>(0.04)</b>
BDIN					1.00	-0.23 (0.25)	0.69 (0.00)	0.32 (0.13)	-0.21 (0.31)	-0.22 (0.30)	-0.09 (0.65)
BDOUT						1.00	-0.19 (0.35)	-0.03 (0.89)	0.76 <b>(0.00)</b>	0.76 <b>(0.00)</b>	0.42 <b>(0.04)</b>
BDGRAY							1.00	0.08 (0.71)	-0.16 (0.44)	-0.16 (0.43)	0.34 <b>(0.09)</b>
#AUDMTG								1.00	0.12 (0.56)	0.11 (0.61)	-0.09 (0.68)
AUDCMT									1.00	0.99 <b>(0.00)</b>	0.25 (0.24)
AUDOUT										1.00	0.25 (0.23)
MKTVAL											1.00

For variables descriptions refer to Table 1.  
P-values in parentheses. Significant p-values are indicated in bold.

**TABLE 4**  
*Change in Income Model*

$$\text{Model: CHINC} = \alpha + \beta_1\text{BDMTG} + \beta_2\text{BDNUM} + \beta_3\text{BDIN} + \beta_4\text{BDOUT} + \beta_5\text{BDGRAY} + \beta_6\text{ADMTG} + \beta_7\text{ADCMT} + \beta_8\text{ADOUT} + \beta_9\text{MKTVAL} + \varepsilon$$

Variable	
Intercept	0.68 (0.13)
BDMTG	-0.21 (0.01)***
BDNUM	-1.37 (0.01)***
BDIN	0.43 (0.02)***
BDOUT	1.39 (0.01)***
BDGRAY	1.27 (0.02)***
ADMTG	0.03 (0.65)
ADCMT	0.53 (0.14)
ADOUT	-0.40 (0.22)
MKTVAL	-0.00 (0.01)***
N	23
Adjusted R-Squared	0.31
F-Value	2.12*

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\*\*\* (\*\*) (\*) - Significant at the .01 (.05) (.10) level based on a two-tail test.

CHINC=dummy variable=1 if INC2001-INC2000 is positive, 0 otherwise.  
 CHEPS=dummy variable=1 if EPS2001-EPS2000 is positive, 0 otherwise.  
 See Table 1 for Variable Descriptions for remaining variable descriptions.

**TABLE 5**  
*Change in EPS Model*

Model:  $CHEPS = \alpha + \beta_1 BDMTG + \beta_2 BDNUM + \beta_3 BDIN + \beta_4 BDOUT + \beta_5 BDGRAY + \beta_6 ADMTG + \beta_7 ADCMT + \beta_8 ADOUT + \beta_9 MKTVAL + \varepsilon$

<b>Variable</b>	
Intercept	0.00 (0.99)
BDMTG	-0.05 (0.49)
BDNUM	-0.55 (0.25)
BDIN	0.18 (0.25)
BDOUT	0.56 (0.24)
BDGRAY	0.51 (0.26)
ADMTG	0.12 (0.06)*
ADCMT	0.05 (0.88)
ADOUT	-0.10 (0.74)
MKTVAL	-0.00 (0.65)
N	23
Adjusted R-Squared	0.27
F-Value	1.95

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\*\*\* (\*\*\*) (\*) - Significant at the .01 (.05) (.10) level based on a two-tail test.

CHINC=dummy variable=1 if INC2001-INC2000 is positive, 0 otherwise.  
CHEPS=dummy variable=1 if EPS2001-EPS2000 is positive, 0 otherwise.  
See Table 1 for Variable Descriptions for remaining variable descriptions.

**TABLE 6**  
*Variable Descriptions*

**Dependent Variables:**

CHINC	=	INC2001-INC2000
CHEPS	=	EPS2001-EPS2000
AFEEYR1	=	TOTAL AUDIT FEES FOR 2000
AFEEYR2	=	TOTAL AUDIT FEES FOR 2001
NAFEEYR1	=	TOTAL NONAUDIT FEES FOR 2000
NAFEEYR2	=	TOTAL NONAUDIT FEES FOR 2001

**TABLE 7**  
*Correlation of Audit/Non-Audit Fees*

Variables	Minimum	Maximum	N	Mean	Stdev	Sum
CHGINC			18	-58.05	222.56	-1,045
	491.00	527.60				
CHGEPS			17	- 0.50	1.89	-8.43
	4.94	4.55				
AFEEYR1			16	901,145	985241	14,418,325
	17,350	3,521,980				
AFEEYR2			18	1,871,942	3721866	33,694,953
	17,950	16,300,000				
NAFEEYR1			17	5,703,494	12494081	96,959,399
	5,250	47,753,000				
NAFEEYR2			17	2,949,273	5207532	50,137,636
	3,750	20,000,000				

**TABLE 8**  
*Pearson Correlation Coefficients*

	CH INC	CH EPS	AFEE YR1	AFEE YR2	NA FEE YR1	NA FEE YR2
CHGINC	1.00	0.31 (0.23)	0.24 (0.37)	-0.42 (0.08)	0.37 (0.14)	-0.22 (0.41)
CHGEPS		1.00	-0.06 (0.82)	-0.12 (0.64)	0.00 (0.98)	-0.02 (0.92)
AFEEYR1			1.00	0.97 <b>(0.00)</b>	0.90 <b>(0.00)</b>	0.79 <b>(0.00)</b>
AFEEYR2				1.00	0.94 <b>(0.00)</b>	0.66 (0.08)
NAFEEYR1					1.00	-0.37 (0.14)
NAFEEYR2						1.00

P-values in parentheses. Significant p-values are indicated in bold.

### 2.3 **Findings & Conclusions**

The intent of this thesis was to determine if abusive use of earnings management techniques in the insurance industry leads to beneficial outcomes or potentially disastrous consequences for the business in question. To achieve this, raw data such as: number of board meetings, number of board members and number of outsiders on the board, was extracted from the prospectus' of the companies included in the sample. Other data such as EPS, income, audit- and non-audit fees were obtained from the Wharton Research Data Services.

The resulting database was used to develop a series of comparison graphs showing the relationship between EPS, Income, Audit fees and Non-Audit fees for the years 2000 and 2001. The results of these graphs provided evidence, in some circumstances, that companies adjust their annual earnings to meet projected benchmarks. The data was also analyzed by means of the SAS regression program and the Pearson correlation.

In conclusion, the hypothesis that management does manipulate earnings in order to meet their benchmarks and non-audit services having an effect on this practice, is proven true.

**APPENDIX A**  
Statistical Data Table

<b>COMPANY</b>	<b>2000- Income</b>	<b>2001- Income</b>	<b>EPS- 2000</b>	<b>EPS- 2001</b>	<b>Audit Fees 2000</b>	<b>Audit Fees 2001</b>	<b>NonAudit Fees 2000</b>	<b>NonAudit Fees 2001</b>
AEGON NV	1939.56	2133.57	1.47	1.57				
AMERICAN INT	5636.00	5499.00	2.43	2.60				
AMERICAN NATIONAL	140.17	64.93	5.29	2.45				
AMERUS GROUP	51.12	79.32	2.44	2.30	652,300	680,000	240,278	1,674,290
AXA -SPON ADR	3665.08	462.85	2.79	0.27				
CANADA LIFE FINL	256.76	214.74	1.65	1.34				
CITIZENS FINL	0.24	-5.89	0.14	-3.39				
CITIZENS INC	2.05	3.96	0.08	0.16	156,600	169,000	93,400	133,555
CONVERIUM HLDS	-29.30	-367.40		-4.18				
COTTON STATES	7.61	6.45	1.20	1.02				
DELPHI FINL	-3.29	-0.94	-0.16	0.56	394,000	451,000	466,000	535,000
FBL FINL GRP	38.75	40.40	1.27	1.32	310,000	350,000	434,000	417,000
FINANCIAL INDS	8.78	12.01	1.74	1.54	216,640	283,308	77,742	300,679
GREAT AMER	53.90	42.70	1.77	1.01				
HANCOCK JOHN	83.90	611.50	2.71	2.16	3,521,980	3,563,410	20,271,000	10,921,100
ING GRP NV	11250.58	4073.99	6.53	2.01				
JEFFERSON	512.00	512.00	4.97	3.37	1,430,000	2,095,000	873,201	788,152
KANSAS	49.08	29.92	4.08	2.49				
LINCOLN NAT	621.39	605.78	3.38	3.26	2,052,700	1,972,600	6,249,680	5,790,160
LONDON PAC								
MANULIFE	712.25	732.76	1.48	1.59				



<b>COMPANY</b>	<b>2000- Income</b>	<b>2001- Income</b>	<b>EPS- 2000</b>	<b>EPS- 2001</b>	<b>Audit Fees 2000</b>	<b>Audit Fees 2001</b>	<b>NonAudit Fees 2000</b>	<b>NonAudit Fees 2001</b>
METLIFE	953.00	473.00	1.23	1.30				
MONY GRP	262.30	-60.80	5.64	0.70	1,157,000	1,512,000	1,007,360	2,902,490
NATL WSTN	28.54	44.59	8.15	12.70	717,769	931,249	848,899	1,744,870
NATIONWIDE	434.90	419.90	3.38	3.26				
PHOENIX	94.80	-137.30	0.31	-0.46		1,800,000		3,500,000
PRESIDENTIAL	40.86	-7.71	1.36	-0.26	195,440	308,000	91,000	132,630
PRINCIPAL FINL	620.00	369.50	1.72	1.08				
PROTECTIVE LIFE	153.48	141.06	2.33	2.02				
PRUDENTIAL FINANCIAL	321.00	-170.00				16,300,000	47,753,000	
PRUDENTIAL	1028.90	565.72	0.81	0.22	2,300,000	1,900,000	17,800,000	20,000,000
REINSURANCE	105.79	39.90	2.14	0.81				
SOUTHERN SEC	0.16	0.07	0.08	0.04				
STANDARD MGT	5.63	1.78	0.67	0.19	200,000	210,000	40,000	186,000
SUN LIFE FINL	534.85	553.18	1.29	1.31				
TORCHMARK	361.83	390.93	2.83	3.12	947,546	886,436	702,589	1,096,960
YADKIN VALLEY	6.73	6.01	0.92	0.83	17,350	17,950	5,250	3,750
ANNUITY & LIFE	39.99	-36.92	1.57	-1.45	149,000	265,000	6,000	11,000

**APPENDIX B**  
SAS Regression Output  
Audit/Non-Audit Correlation Output

**SAS Regression Output**

The SAS System

22:18 Sunday, April 24, 2005 1

The UNIVARIATE Procedure  
Variable: incyr1

## Moments

N	38	Sum Weights	38
Mean	790.008158	Sum Observations	30020.31
Std Deviation	2055.02115	Variance	4223111.93
Skewness	4.18736311	Kurtosis	19.2033017
Uncorrected SS	179971431	Corrected SS	156255142
Coeff Variation	260.126573	Std Error Mean	333.368452

## Basic Statistical Measures

Location		Variability	
Mean	790.0082	Std Deviation	2055
Median	100.2950	Variance	4223112
Mode	.	Range	11280
		Interquartile Range	506.31000

## Tests for Location: Mu0=0

Test	-Statistic-	-----p Value-----
Student's t	t 2.369775	Pr >  t  0.0231
Sign	M 17	Pr >=  M  <.0001
Signed Rank	S 356.5	Pr >=  S  <.0001

## Quantiles (Definition 5)

Quantile	Estimate
100% Max	11250.580
99%	11250.580
95%	5636.000
90%	1939.560
75% Q3	534.850
50% Median	100.295
25% Q1	28.540
10%	0.240
5%	-3.290
1%	-29.300
0% Min	-29.300

2005 2

The SAS System

22:18 Sunday, April 24,

The UNIVARIATE Procedure  
Variable: incyr1

Extreme Observations

-----Lowest-----		-----Highest-----	
Value	Obs	Value	Obs
-29.30	10	1028.90	31
-3.29	12	1939.56	2
0.16	33	3665.08	6
0.24	8	5636.00	3
2.05	9	11250.58	17

Missing Values

Missing Value	Count	-----Percent of-----	
		All Obs	Missing Obs
.	1	2.56	100.00

2005 3

The SAS System

22:18 Sunday, April 24,

The UNIVARIATE Procedure  
Variable: incyr2

## Moments

N	38	Sum Weights	38
Mean	457.371579	Sum Observations	17380.12
Std Deviation	1124.45601	Variance	1264401.33
Skewness	3.56087266	Kurtosis	13.176
Uncorrected SS	54732022	Corrected SS	46782849.1
Coeff Variation	245.851746	Std Error Mean	182.410853

## Basic Statistical Measures

Location		Variability	
Mean	457.3716	Std Deviation	1124
Median	43.6450	Variance	1264401
Mode	.	Range	5866
		Interquartile Range	471.22000

## Tests for Location: Mu0=0

Test	-Statistic-	-----p value-----		
Student's t	t 2.50737	Pr >  t	0.0167	
Sign	M 11	Pr >=  M	0.0005	
Signed Rank	S 260.5	Pr >=  S	<.0001	

## Quantiles (Definition 5)

Quantile	Estimate
100% Max	5499.000
99%	5499.000
95%	4073.990
90%	732.760
75% Q3	473.000
50% Median	43.645
25% Q1	1.780
10%	-60.800
5%	-170.000
1%	-367.400
0% Min	-367.400

2005 4

The SAS System

22:18 Sunday, April 24,

The UNIVARIATE Procedure  
Variable: incyr2

Extreme Observations

-----Lowest-----		-----Highest-----	
Value	Obs	Value	Obs
-367.40	10	611.50	16
-170.00	30	732.76	21
-137.30	26	2133.57	2
-60.80	23	4073.99	17
-36.92	38	5499.00	3

Missing Values

Missing Value	Count	-----Percent of-----	
		All Obs	Missing Obs
.	1	2.56	100.00

2005 5

The SAS System

22:18 Sunday, April 24,

The UNIVARIATE Procedure  
Variable: epsyr1

Moments

N	35	Sum Weights	35
Mean	2.27685714	Sum Observations	79.69
Std Deviation	1.92091549	Variance	3.6899163
Skewness	1.33486194	Kurtosis	1.69764568
Uncorrected SS	306.8999	Corrected SS	125.457154
Coeff Variation	84.3669745	Std Error Mean	0.32469398

Basic Statistical Measures

Location		Variability	
Mean	2.276857	Std Deviation	1.92092
Median	1.720000	Variance	3.68992
Mode	0.080000	Range	8.31000
		Interquartile Range	1.63000

NOTE: The mode displayed is the smallest of 2 modes with a count of 2.

Tests for Location: Mu0=0

Test	-Statistic-	-----p value-----
Student's t	t 7.012317	Pr >  t  <.0001
Sign	M 16.5	Pr >=  M  <.0001
Signed Rank	S 311	Pr >=  S  <.0001

Quantiles (Definition 5)

Quantile	Estimate
100% Max	8.15
99%	8.15
95%	6.53
90%	5.29
75% Q3	2.83
50% Median	1.72
25% Q1	1.20
10%	0.14
5%	0.08
1%	-0.16
0% Min	-0.16

2005 6

The SAS System

22:18 Sunday, April 24,

The UNIVARIATE Procedure  
Variable: epsyr1

Extreme Observations

----Lowest----		----Highest---	
Value	Obs	Value	Obs
-0.16	12	4.97	18
0.08	33	5.29	4
0.08	9	5.64	23
0.14	8	6.53	17
0.31	26	8.15	24

Missing Values

Missing Value	Count	-----Percent of-----	
		All Obs	Missing Obs
.	4	10.26	100.00



2005 7

The SAS System

22:18 Sunday, April 24,

The UNIVARIATE Procedure  
Variable: epsyr2

Moments

N	36	Sum Weights	36
Mean	1.3572222	Sum Observations	48.86
Std Deviation	2.5387079	Variance	6.44503778
Skewness	2.17196656	Kurtosis	11.5460928
Uncorrected SS	291.8902	Corrected SS	225.576322
Coeff Variation	187.051748	Std Error Mean	0.42311798

Basic Statistical Measures

Location		Variability	
Mean	1.357222	Std Deviation	2.53871
Median	1.305000	Variance	6.44504
Mode	3.260000	Range	16.88000
		Interquartile Range	1.98500

Tests for Location: Mu0=0

Test	-Statistic-	-----p value-----
Student's t	t 3.207668	Pr >  t  0.0029
Sign	M 13	Pr >=  M  <.0001
Signed Rank	S 233	Pr >=  S  <.0001

Quantiles (Definition 5)

Quantile	Estimate
100% Max	12.700
99%	12.700
95%	3.370
90%	3.260
75% Q3	2.230
50% Median	1.305
25% Q1	0.245
10%	-0.460
5%	-3.390
1%	-4.180
0% Min	-4.180

2005 8

The SAS System

22:18 Sunday, April 24,

The UNIVARIATE Procedure  
Variable: epsyr2

## Extreme Observations

----Lowest----		----Highest----	
Value	Obs	Value	Obs
-4.18	10	3.12	36
-3.39	8	3.26	20
-1.45	38	3.26	25
-0.46	26	3.37	18
-0.26	27	12.70	24

## Missing Values

Missing Value	Count	-----Percent of-----	
		All Obs	Missing Obs
.	3	7.69	100.00

2005 9

The SAS System

22:18 Sunday, April 24,

The UNIVARIATE Procedure  
Variable: chginc

Moments

N	38	Sum Weights	38
Mean	-332.63658	Sum Observations	-12640.19
Std Deviation	1262.05706	Variance	1592788.03
Skewness	-4.8611116	Kurtosis	25.0925135
Uncorrected SS	63137746.6	Corrected SS	58933157
Coeff Variation	-379.41019	Std Error Mean	204.73269

Basic Statistical Measures

Location		Variability	
Mean	-332.637	Std Deviation	1262
Median	-11.810	Variance	1592788
Mode	.	Range	7704
		Interquartile Range	139.35000

Tests for Location: Mu0=0

Test	-Statistic-	-----p value-----
Student's t	t -1.62474	Pr >  t  0.1127
Sign	M -6.5	Pr >=  M  0.0470
Signed Rank	S -170.5	Pr >=  S  0.0082

Quantiles (Definition 5)

Quantile	Estimate
100% Max	527.60
99%	527.60
95%	194.01
90%	28.20
75% Q3	2.35
50% Median	-11.81
25% Q1	-137.00
10%	-480.00
5%	-3202.23
1%	-7176.59
0% Min	-7176.59

2005 10

The SAS System

22:18 Sunday, April 24,

The UNIVARIATE Procedure  
Variable: chginc

Extreme Observations

-----Lowest-----		-----Highest-----	
value	Obs	value	Obs
-7176.59	17	20.51	21
-3202.23	6	28.20	5
-491.00	30	29.10	36
-480.00	22	194.01	2
-463.18	31	527.60	16

Missing Values

Missing Value	Count	-----Percent of-----	
		All Obs	Missing Obs
.	1	2.56	100.00

2005 11

The SAS System

22:18 Sunday, April 24,

The UNIVARIATE Procedure  
Variable: chgeps

## Moments

N	35	Sum Weights	35
Mean	-0.7614286	Sum Observations	-26.65
Std Deviation	1.66428424	Variance	2.76984202
Skewness	-0.098827	Kurtosis	3.23830578
Uncorrected SS	114.4667	Corrected SS	94.1746286
Coeff Variation	-218.57391	Std Error Mean	0.28131538

## Basic Statistical Measures

Location		Variability	
Mean	-0.76143	Std Deviation	1.66428
Median	-0.31000	Variance	2.76984
Mode	-0.12000	Range	9.49000
		Interquartile Range	1.64000

Tests for Location:  $\mu_0=0$ 

Test	-Statistic-	-----p value-----
Student's t	t -2.70667	Pr >  t  0.0106
Sign	M -7.5	Pr >=  M  0.0167
Signed Rank	S -204	Pr >=  S  0.0003

## Quantiles (Definition 5)

Quantile	Estimate
100% Max	4.55
99%	4.55
95%	0.72
90%	0.17
75% Q3	0.05
50% Median	-0.31
25% Q1	-1.59
10%	-3.02
5%	-4.52
1%	-4.94
0% Min	-4.94

2005 12

The SAS System

22:18 Sunday, April 24,

The UNIVARIATE Procedure  
Variable: chgeps

Extreme Observations

----Lowest----		----Highest---	
Value	Obs	Value	Obs
-4.94	23	0.11	21
-4.52	17	0.17	3
-3.53	8	0.29	36
-3.02	38	0.72	12
-2.84	4	4.55	24

Missing Values

Missing Value	Count	-----Percent of-----	
		All Obs	Missing Obs
.	4	10.26	100.00

2005 13

The SAS System

22:18 Sunday, April 24,

The UNIVARIATE Procedure  
Variable: bdmgt

Moments

N	26	Sum Weights	26
Mean	6.19230769	Sum Observations	161
Std Deviation	2.54588658	Variance	6.48153846
Skewness	0.41316188	Kurtosis	-0.1201106
Uncorrected SS	1159	Corrected SS	162.038462
Coeff Variation	41.1136963	Std Error Mean	0.49928944

Basic Statistical Measures

Location		Variability	
Mean	6.192308	Std Deviation	2.54589
Median	6.000000	Variance	6.48154
Mode	4.000000	Range	10.00000
		Interquartile Range	4.00000

NOTE: The mode displayed is the smallest of 2 modes with a count of 5.

Tests for Location: Mu0=0

Test	-Statistic-	-----p value-----
Student's t	t 12.40224	Pr >  t  <.0001
Sign	M 13	Pr >=  M  <.0001
Signed Rank	S 175.5	Pr >=  S  <.0001

Quantiles (Definition 5)

Quantile	Estimate
100% Max	11
99%	11
95%	11
90%	11
75% Q3	8
50% Median	6
25% Q1	4
10%	4
5%	3
1%	1
0% Min	1

2005 14

The SAS System

22:18 Sunday, April 24,

The UNIVARIATE Procedure  
Variable: bdmrg

Extreme Observations

----Lowest----		----Highest---	
Value	Obs	Value	Obs
1	37	9	23
3	9	9	25
4	36	11	22
4	34	11	26
4	27	11	30

Missing Values

Missing Value	Count	-----Percent of-----	
		All Obs	Missing Obs
.	13	33.33	100.00



2005 15

The SAS System

22:18 Sunday, April 24,

The UNIVARIATE Procedure  
Variable: bdnun

## Moments

N	26	Sum Weights	26
Mean	11.3076923	Sum Observations	294
Std Deviation	4.23102097	Variance	17.9015385
Skewness	0.34449027	Kurtosis	-0.0431947
Uncorrected SS	3772	Corrected SS	447.538462
Coeff Variation	37.4171923	Std Error Mean	0.82977148

## Basic Statistical Measures

Location		Variability	
Mean	11.30769	Std Deviation	4.23102
Median	11.00000	Variance	17.90154
Mode	11.00000	Range	18.00000
		Interquartile Range	6.00000

Tests for Location:  $\mu_0=0$ 

Test	-Statistic-	-----p value-----
Student's t	t 13.62748	Pr >  t  <.0001
Sign	M 13	Pr >=  M  <.0001
Signed Rank	S 175.5	Pr >=  S  <.0001

## Quantiles (Definition 5)

Quantile	Estimate
100% Max	21
99%	21
95%	18
90%	18
75% Q3	14
50% Median	11
25% Q1	8
10%	6
5%	6
1%	3
0% Min	3

2005 16

The SAS System

22:18 Sunday, April 24,

The UNIVARIATE Procedure  
Variable: bdnun

Extreme Observations

----Lowest----		----Highest---	
Value	Obs	Value	Obs
3	37	15	28
6	32	16	22
6	9	18	3
7	12	18	26
7	8	21	30

Missing Values

Missing Value	Count	-----Percent of-----	
		All Obs	Missing Obs
.	13	33.33	100.00

2005 17

The SAS System

22:18 Sunday, April 24,

The UNIVARIATE Procedure  
Variable: bdn

Moments

N	26	Sum Weights	26
Mean	0.65384615	Sum Observations	17
Std Deviation	1.16420987	Variance	1.35538462
Skewness	1.73740279	Kurtosis	2.02689626
Uncorrected SS	45	Corrected SS	33.8846154
Coeff Variation	178.055627	Std Error Mean	0.22832034

Basic Statistical Measures

Location		Variability	
Mean	0.653846	Std Deviation	1.16421
Median	0.000000	Variance	1.35538
Mode	0.000000	Range	4.00000
		Interquartile Range	1.00000

Tests for Location: Mu0=0

Test	-Statistic-	-----p value-----
Student's t	t 2.863723	Pr >  t  0.0084
Sign	M 4	Pr >=  M  0.0078
Signed Rank	S 18	Pr >=  S  0.0078

Quantiles (Definition 5)

Quantile	Estimate
100% Max	4
99%	4
95%	3
90%	3
75% Q3	1
50% Median	0
25% Q1	0
10%	0
5%	0
1%	0
0% Min	0

2005 18

The SAS System

22:18 Sunday, April 24,

The UNIVARIATE Procedure  
Variable: bdn

Extreme Observations

----Lowest----		----Highest---	
Value	Obs	Value	Obs
0	39	2	12
0	38	2	13
0	36	3	15
0	34	3	22
0	33	4	14

Missing Values

Missing Value	Count	-----Percent of-----	
		All Obs	Missing Obs
.	13	33.33	100.00

2005 19

The SAS System

22:18 Sunday, April 24,

The UNIVARIATE Procedure  
Variable: bdout

Moments

N	26	Sum Weights	26
Mean	10.3461538	Sum Observations	269
Std Deviation	4.56019568	Variance	20.7953846
Skewness	0.24220409	Kurtosis	-0.3671412
Uncorrected SS	3303	Corrected SS	519.884615
Coeff Variation	44.0762407	Std Error Mean	0.89432795

Basic Statistical Measures

Location		Variability	
Mean	10.34615	Std Deviation	4.56020
Median	11.00000	Variance	20.79538
Mode	5.00000	Range	18.00000
		Interquartile Range	7.00000

Tests for Location: Mu0=0

Test	-Statistic-	-----p value-----		
Student's t	t 11.56864	Pr >  t	<.0001	
Sign	M 13	Pr >=  M	<.0001	
Signed Rank	S 175.5	Pr >=  S	<.0001	

Quantiles (Definition 5)

Quantile	Estimate
100% Max	20
99%	20
95%	18
90%	18
75% Q3	13
50% Median	11
25% Q1	6
10%	5
5%	5
1%	2
0% Min	2

2005 20

The SAS System

22:18 Sunday, April 24,

The UNIVARIATE Procedure  
Variable: bdout

Extreme Observations

----Lowest----		----Highest---	
Value	Obs	Value	Obs
2	37	14	39
5	33	15	28
5	15	18	3
5	12	18	26
5	9	20	30

Missing Values

Missing Value	Count	-----Percent of-----	
		All Obs	Missing Obs
.	13	33.33	100.00

2005 21

The SAS System

22:18 Sunday, April 24,

The UNIVARIATE Procedure  
Variable: bdgray

Moments

N	26	Sum Weights	26
Mean	1.03846154	Sum Observations	27
Std Deviation	1.21592004	Variance	1.47846154
Skewness	0.93367633	Kurtosis	-0.1685821
Uncorrected SS	65	Corrected SS	36.9615385
Coeff Variation	117.088596	Std Error Mean	0.23846154

Basic Statistical Measures

Location		Variability	
Mean	1.038462	Std Deviation	1.21592
Median	1.000000	Variance	1.47846
Mode	0.000000	Range	4.00000
		Interquartile Range	2.00000

Tests for Location: Mu0=0

Test	-Statistic-	-----p value-----
Student's t	t 4.354839	Pr >  t  0.0002
Sign	M 7	Pr >=  M  0.0001
Signed Rank	S 52.5	Pr >=  S  0.0001

Quantiles (Definition 5)

Quantile	Estimate
100% Max	4
99%	4
95%	3
90%	3
75% Q3	2
50% Median	1
25% Q1	0
10%	0
5%	0
1%	0
0% Min	0

2005 22

The SAS System

22:18 Sunday, April 24,

The UNIVARIATE Procedure  
Variable: bdgray

Extreme Observations

----Lowest----		----Highest---	
Value	Obs	Value	Obs
0	39	2	15
0	38	3	3
0	36	3	22
0	34	3	33
0	32	4	14

Missing Values

Missing Value	Count	-----Percent of-----	
		All Obs	Missing Obs
.	13	33.33	100.00



2005 23

The SAS System

22:18 Sunday, April 24,

The UNIVARIATE Procedure  
Variable: admtg

## Moments

N	24	Sum Weights	24
Mean	4.7083333	Sum Observations	113
Std Deviation	1.5457984	Variance	2.38949275
Skewness	0.8434550	Kurtosis	1.16752212
Uncorrected SS	587	Corrected SS	54.9583333
Coeff Variation	32.8311169	Std Error Mean	0.31553478

## Basic Statistical Measures

Location		Variability	
Mean	4.708333	Std Deviation	1.54580
Median	4.000000	Variance	2.38949
Mode	4.000000	Range	6.00000
		Interquartile Range	1.00000

Tests for Location:  $\mu_0=0$ 

Test	-Statistic-	-----p value-----
Student's t	t 14.92176	Pr >  t  <.0001
Sign	M 12	Pr >=  M  <.0001
Signed Rank	S 150	Pr >=  S  <.0001

## Quantiles (Definition 5)

Quantile	Estimate
100% Max	8
99%	8
95%	8
90%	8
75% Q3	5
50% Median	4
25% Q1	4
10%	4
5%	2
1%	2
0% Min	2

2005 24

The SAS System

22:18 Sunday, April 24,

The UNIVARIATE Procedure  
Variable: admtg

Extreme Observations

----Lowest----		----Highest---	
Value	Obs	Value	Obs
2	33	5	36
2	28	6	22
4	39	8	12
4	38	8	13
4	30	8	20

Missing Values

Missing Value	Count	-----Percent of-----	
		All Obs	Missing Obs
.	15	38.46	100.00

2005 25

The SAS System

22:18 Sunday, April 24,

The UNIVARIATE Procedure  
Variable: adcmt

Moments

N	25	Sum Weights	25
Mean	4.48	Sum Observations	112
Std Deviation	1.75878746	Variance	3.09333333
Skewness	0.98504086	Kurtosis	-0.2554219
Uncorrected SS	576	Corrected SS	74.24
Coeff Variation	39.2586487	Std Error Mean	0.35175749

Basic Statistical Measures

Location		Variability	
Mean	4.480000	Std Deviation	1.75879
Median	4.000000	Variance	3.09333
Mode	3.000000	Range	5.00000
		Interquartile Range	2.00000

Tests for Location: Mu0=0

Test	-Statistic-	-----p value-----		
Student's t	t 12.73605	Pr >  t	<.0001	
Sign	M 12.5	Pr >=  M	<.0001	
Signed Rank	S 162.5	Pr >=  S	<.0001	

Quantiles (Definition 5)

Quantile	Estimate
100% Max	8
99%	8
95%	8
90%	8
75% Q3	5
50% Median	4
25% Q1	3
10%	3
5%	3
1%	3
0% Min	3

2005 26

The SAS System

22:18 Sunday, April 24,

The UNIVARIATE Procedure  
Variable: adcmt

Extreme Observations

----Lowest----		----Highest---	
Value	Obs	Value	Obs
3	36	6	22
3	34	7	30
3	33	8	20
3	32	8	26
3	27	8	39

Missing Values

Missing Value	Count	-----Percent of-----	
		All Obs	Missing Obs
.	14	35.90	100.00

2005 27

The SAS System

22:18 Sunday, April 24,

The UNIVARIATE Procedure  
Variable: adout

Moments

N	25	Sum Weights	25
Mean	4.48	Sum Observations	112
Std Deviation	1.73493516	Variance	3.01
Skewness	1.05120691	Kurtosis	-0.106199
Uncorrected SS	574	Corrected SS	72.24
Coeff Variation	38.7262312	Std Error Mean	0.34698703

Basic Statistical Measures

Location		Variability	
Mean	4.480000	Std Deviation	1.73494
Median	4.000000	Variance	3.01000
Mode	3.000000	Range	5.00000
		Interquartile Range	2.00000

Tests for Location: Mu0=0

Test	-Statistic-	-----p value-----
Student's t	t 12.91115	Pr >  t  <.0001
Sign	M 12.5	Pr >=  M  <.0001
Signed Rank	S 162.5	Pr >=  S  <.0001

Quantiles (Definition 5)

Quantile	Estimate
100% Max	8
99%	8
95%	8
90%	8
75% Q3	5
50% Median	4
25% Q1	3
10%	3
5%	3
1%	3
0% Min	3

2005 28

The SAS System

22:18 Sunday, April 24,

The UNIVARIATE Procedure  
Variable: adout

Extreme Observations

----Lowest----		----Highest---	
Value	Obs	Value	Obs
3	36	6	22
3	34	7	30
3	33	8	20
3	32	8	26
3	15	8	39

Missing Values

Missing Value	Count	-----Percent of-----	
		All Obs	Missing Obs
.	14	35.90	100.00

2005 29 The SAS System 22:18 Sunday, April 24,

The CORR Procedure

11 Variables: chginc chgeps bdmtdg bdnun bdin bdout bdgray admtg  
 adcmt adout mktval

Simple Statistics

Variable	N	Mean	Std Dev	Sum	Minimum	Maximum
chginc	38	-332.63658	1262	-12640	-7177	527.60000
chgeps	35	-0.76143	1.66428	-26.65000	-4.94000	4.55000
bdmtg	26	6.19231	2.54589	161.00000	1.00000	11.00000
bdnum	26	11.30769	4.23102	294.00000	3.00000	21.00000
bdin	26	0.65385	1.16421	17.00000	0	4.00000
bdout	26	10.34615	4.56020	269.00000	2.00000	20.00000
bdgray	26	1.03846	1.21592	27.00000	0	4.00000
admtg	24	4.70833	1.54580	113.00000	2.00000	8.00000
adcmt	25	4.48000	1.75879	112.00000	3.00000	8.00000
adout	25	4.48000	1.73494	112.00000	3.00000	8.00000
mktval	38	12867	34609	488939	0	207665

Pearson Correlation Coefficients  
 Prob > |r| under H0: Rho=0  
 Number of Observations

	chginc	chgeps	bdmtg	bdnum	bdin	bdout
chginc	1.00000	0.45920	-0.51127	-0.44259	-0.16481	-
chgeps		1.00000	-0.13525	0.10411	0.30408	
bdmtg			1.00000	0.5286	0.1486	
bdnum				1.00000		
bdin					1.00000	
bdout						1.00000
	38	35	26	26	26	26

Pearson Correlation Coefficients  
 Prob > |r| under H0: Rho=0  
 Number of Observations

	bdgray	admtg	adcmt	adout	mktval
chginc	-0.03638	0.00207	-0.32321	-0.33180	-0.22755
chgeps	0.28511	0.22459	0.04075	0.00882	0.00935
	0.8599	0.9923	0.1150	0.1052	0.1695
	26	24	25	25	38
	0.1769	0.3150	0.8535	0.9681	0.9575
	24	22	23	23	35

2005 30

The SAS System

22:18 Sunday, April 24,

The CORR Procedure

Pearson Correlation Coefficients  
 Prob > |r| under H0: Rho=0  
 Number of Observations

	chginc	chgeps	bdmtg	bdnum	bdin	
bdout						
bdmtg	-0.51127	-0.13525	1.00000	0.63300	0.21229	
0.55563	0.0076	0.5286		0.0005	0.2978	
0.0032	26	24	26	26	26	
26						
bdnum	-0.44259	0.10411	0.63300	1.00000	-0.01811	
0.96449	0.0236	0.6283	0.0005		0.9300	
<.0001	26	24	26	26	26	
26						
bdin	-0.16481	0.30408	0.21229	-0.01811	1.00000	-
0.23270	0.4211	0.1486	0.2978	0.9300		
0.2526	26	24	26	26	26	
26						
bdout	-0.41377	0.03259	0.55563	0.96449	-0.23270	
1.00000	0.0356	0.8798	0.0032	<.0001	0.2526	
	26	24	26	26	26	
26						
bdgray	-0.03638	0.28511	0.04920	0.04426	0.68795	-
0.19006	0.8599	0.1769	0.8113	0.8300	0.0001	
0.3524	26	24	26	26	26	
26						
admtg	0.00207	0.22459	0.23249	0.00878	0.31931	-
0.03039	0.9923	0.3150	0.2743	0.9675	0.1283	
0.8879	24	22	24	24	24	
24						
adcmt	-0.32321	0.04075	0.64367	0.73834	-0.21333	
0.75629	0.1150	0.8535	0.0005	<.0001	0.3059	
<.0001	25	23	25	25	25	
25						
adout	-0.33180	0.00882	0.60170	0.73636	-0.21626	
0.75556	0.1052	0.9681	0.0015	<.0001	0.2991	
<.0001	25	23	25	25	25	
25						
mktval	-0.22755	0.00935	-0.09862	0.40628	-0.09278	
0.41513	0.1695	0.9575	0.6317	0.0394	0.6521	
0.0350	38	35	26	26	26	
26						



2005 31

The SAS System

22:18 Sunday, April 24,

## The CORR Procedure

Pearson Correlation Coefficients  
 Prob > |r| under H0: Rho=0  
 Number of Observations

	bdgray	admtg	adcmt	adout	mktval
bdmtg	0.04920 0.8113 26	0.23249 0.2743 24	0.64367 0.0005 25	0.60170 0.0015 25	-0.09862 0.6317 26
bdnum	0.04426 0.8300 26	0.00878 0.9675 24	0.73834 <.0001 25	0.73636 <.0001 25	0.40628 0.0394 26
bdin	0.68795 0.0001 26	0.31931 0.1283 24	-0.21333 0.3059 25	-0.21626 0.2991 25	-0.09278 0.6521 26
bdout	-0.19006 0.3524 26	-0.03039 0.8879 24	0.75629 <.0001 25	0.75556 <.0001 25	0.41513 0.0350 26
bdgray	1.00000 26	0.08075 0.7076 24	-0.16189 0.4395 25	-0.16411 0.4331 25	0.34433 0.0850 26
admtg	0.08075 0.7076 24	1.00000 24	0.12390 0.5641 24	0.10953 0.6104 24	-0.08868 0.6803 24
adcmt	-0.16189 0.4395 25	0.12390 0.5641 24	1.00000 25	0.98644 <.0001 25	0.24608 0.2357 25
adout	-0.16411 0.4331 25	0.10953 0.6104 24	0.98644 <.0001 25	1.00000 25	0.24670 0.2345 25
mktval	0.34433 0.0850 26	-0.08868 0.6803 24	0.24608 0.2357 25	0.24670 0.2345 25	1.00000 38

2005 32

The SAS System

22:18 Sunday, April 24,

The REG Procedure  
 Model: MODEL1  
 Dependent Variable: chinc

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	9	3.07809	0.34201	2.12	0.0998
Error	14	2.25524	0.16109		
Corrected Total	23	5.33333			

Root MSE	0.40136	R-Square	0.5771
Dependent Mean	0.33333	Adj R-Sq	0.3053
Coeff Var	120.40763		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr >  t
Intercept	1	0.68055	0.42648	1.60	0.1329
bdmtg	1	-0.20501	0.06836	-3.00	0.0096
bdnum	1	-1.36605	0.48948	-2.79	0.0144
bdin	1	0.42651	0.15763	2.71	0.0171
bdout	1	1.38916	0.48510	2.86	0.0125
bdgray	1	1.27173	0.46614	2.73	0.0163
admtg	1	0.02933	0.06293	0.47	0.6484
adcmt	1	0.53188	0.33573	1.58	0.1355
adout	1	-0.39687	0.31162	-1.27	0.2236
mkttval	1	-0.00002412	0.00000760	-3.18	0.0067

2005 33

The SAS System

22:18 Sunday, April 24,

The REG Procedure  
 Model: MODEL1  
 Dependent Variable: cheps

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	9	2.50133	0.27793	1.95	0.1273
Error	14	1.99867	0.14276		
Corrected Total	23	4.50000			

Root MSE	0.37784	R-Square	0.5559
Dependent Mean	0.25000	Adj R-Sq	0.2703
Coeff Var	151.13569		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr >  t
Intercept	1	0.00172	0.40149	0.00	0.9966
bdmtg	1	-0.04550	0.06435	-0.71	0.4912
bdnum	1	-0.55352	0.46079	-1.20	0.2496
bdin	1	0.17740	0.14840	1.20	0.2518
bdout	1	0.56499	0.45667	1.24	0.2364
bdgray	1	0.50987	0.43882	1.16	0.2647
admtg	1	0.12011	0.05924	2.03	0.0621
adcmt	1	0.05007	0.31606	0.16	0.8764
adout	1	-0.09834	0.29336	-0.34	0.7424
mktval	1	-0.00000331	0.00000715	-0.46	0.6504

**Audit/Non-Audit Correlation Output**

The SAS System

08:55 Sunday, April 24, 2005 16

The CORR Procedure

6 Variables: chginc chgeps afeeyr1 afeeyr2 nafeeyr1 nafeeyr2

Simple Statistics

Variable	N	Mean	Std Dev	Sum	Minimum
Maximum					
chginc	18	-58.05278	222.55672	-1045	-491.00000
527.60000					
chgeps	17	-0.49588	1.89404	-8.43000	-4.94000
4.55000					
afeeyr1	16	901145	985241	14418325	17350
3521980					
afeeyr2	18	1871942	3721866	33694953	17950
16300000					
nafeeyr1	17	5703494	12494081	96959399	5250
47753000					
nafeeyr2	17	2949273	5207532	50137636	3750
20000000					

		Pearson Correlation Coefficients					
		Prob >  r  under H0: Rho=0					
		Number of Observations					
		chginc	chgeps	afeeyr1	afeeyr2	nafeeyr1	
nafeeyr2							
	chginc	1.00000	0.30879	0.24173	-0.42308	-0.37230	-
	0.21580		0.2278	0.3671	0.0802	0.1411	
	0.4055	18	17	16	18	17	
	17						
	chgeps	0.30879	1.00000	-0.06188	-0.12247	-0.00542	-
	0.02466			0.8199	0.6396	0.9841	
	0.9252	17	17	16	17	16	
	17						
	afeeyr1	0.24173	-0.06188	1.00000	0.97464	0.89582	
	0.78891		0.8199		<.0001	<.0001	
	0.0003	16	16	16	16	16	
	16						
	afeeyr2	-0.42308	-0.12247	0.97464	1.00000	0.93911	
	0.66385		0.6396	<.0001		<.0001	
	0.0037	18	17	16	18	17	
	17						
	nafeeyr1	-0.37230	-0.00542	0.89582	0.93911	1.00000	
	0.92057		0.9841	<.0001	<.0001		
	<.0001	17	16	16	17	17	
	16						
	nafeeyr2	-0.21580	-0.02466	0.78891	0.66385	0.92057	
	1.00000		0.9252	0.0003	0.0037	<.0001	
		17	17	16	17	16	
	17						

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