

# **Program Evaluation: The Sarbanes-Oxley Act of 2002**

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## **Abstract**

Following the corporate scandals which rocked the stock markets as well as investor confidence in 2001 and 2002, reform was needed to increase transparency in the investing process and increase investor confidence. At the heart of the act were changes to the Management Discussion & Analysis (MD&A) section of company's annual reports. By using a randomly selected group from the Forbes 500 list, a pretest-posttest multiple group design was used to test the effectiveness of the Sarbanes-Oxley Act of 2002 through measuring the page length of company's MD&A section in the year before, and the year of, Sarbanes-Oxley's implementation. This study shows an increase in the page length of the MD&A sections of the selected companies, with issues of trend being the only major threat to validity.

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## **Introduction**

The Sarbanes Oxley Act of 2002 was one of the most far-reaching and ambitious reforms of America's corporate and securities laws in 70 years. The Act was "intended to establish investor confidence by improving the quality of corporate disclosure and financial reporting, strengthen the independence of accounting firms, and increase the role and responsibility of corporate officers and directors in financial statements and corporate disclosures."<sup>1</sup> One major goal of the Act was aimed at increasing the "transparency" of the corporate process, to make everything more understandable and more comfortable for investors. This paper will evaluate the effectiveness of the Act, as its impact on investor confidence and corporate honesty has repercussions for the stock markets and therefore the economy as a whole. While this paper will show whether Sarbanes Oxley has worked as it was intended, its findings are limited by both the availability of data and the lack of interpretation of the content of the Act.

## **Overview of Transparency of Corporate Information**

The stock market crash of 1929 not only ushered in the Great Depression, it led to the formation of the federal securities laws. Congress adopted two laws in 1933 and 1934 to establish these laws as well as create the Securities & Exchange Commission as the primary regulator in this area.

In creating the federal securities laws, Congress decided to design a framework based on transparency rather than merit. In other words, the SEC's task is to adopt rules and regulations that provide adequate information to investors for them to make a reasonable investment decision. The SEC does not regulate based on the merits of a particular company or transaction. In comparison, a handful of states still have laws that allow state regulators to prevent companies not deemed worthy from selling their securities in that state.

## **The SEC's Disclosure Framework**

For the most part, the SEC requires public companies to provide information to investors by having them file reports with the SEC each quarter (with one of those reports being an annual report). Companies are free to provide information to investors at other times and most companies do. Some of this information is provided through filings made with the SEC while other information is more informal, by press release or presentations to investors.

The heart of each quarterly and annual report is called "Management's Discussion & Analysis" (also known as "MD&A"). In the MD&A, management of the company is

supposed to provide an overview of its strategy and interpret the trends and uncertainties it faces. Management also explains the company's financial statements through a discussion. It is also expected to address the assets of the company and resources that the company has, and will, need.

### **Sarbanes-Oxley Act Reform**

In the wake of Enron's collapse and other well-known scandals, investors grew increasingly angry, Congress held a series of hearings, and many members introduced bills. Still, it was not until the sudden failure of WorldCom that momentum on the Hill produced a new piece of legislation: the Sarbanes-Oxley Act of 2002 was rushed through the House and was approved unanimously in the Senate. Because this bill was passed so quickly, it led many to question if the seemingly hurried decision-making process produced a bill that would accomplish what it intended.

The scope of the Sarbanes-Oxley Act of 2002 is remarkable considering how quickly it was passed. First, it sought to reform the accounting industry and created an entirely new self-regulatory agency – the Public Company Accounting Oversight Board – to set auditing standards. Second, it significantly increased the penalties for misconduct by executives and set automatic triggers for those penalties. Finally, it mandated that the SEC adopt a slew of new rules aimed at improving the transparency of information to investors.

Some of these new rules are tailored to the perceived abuses perpetuated by the companies that have been the poster children of the past few years. For example, Enron employees had their contributions in the company's 401(k) plan frozen when the company quickly went down the tubes. There are new rules that will not permit that specific situation to occur again.

### **Effectiveness of Sarbanes-Oxley Act**

Although the Sarbanes-Oxley Act has not yet been fully implemented, the influence of this new law can already be seen. Commentators talk about a "sea change" in the culture of corporate boardrooms. The number of companies that have restated their financial statements over the past year dwarfs those from the past. (This is accomplished by filing amended statements after a company's initial filing to ensure that all pertinent data is enclosed.) Corporate websites now contain much more information for investors than ever before. While many companies are acting in a self-interested manner in the amount of disclosures they are now giving, the Sarbanes-Oxley Act specified even more additional disclosures.

One area where this additional disclosure is highly noticeable is in the company's annual report which is filed with the SEC at the end of a company's fiscal year, this filing is known as a Form 10-K. 10-K's are more basic than the annual report given to shareholders, and contain just the raw data—not the extraneous material that companies submit to their shareholders in their “glossy” annual reports. Since 10-K's are so basic, prior to the implementation of the Sarbanes-Oxley Act, the material contained in them did not change significantly from year to year. As stated previously, the MD&A section is truly the heart of the annual report, and therefore is also the heart of the 10-K. Because of this, this section was theoretically affected the most by the implementation of the Sarbanes-Oxley Act. Because of this, it is a good assumption that that Sarbanes-Oxley Act did change the length of the MD&A sections included in company's annual filing of their 10-K's.

Collecting data on this hypothesis is simple due to the accessibility of the data. The SEC maintains a free database of the filings of all public companies through their automated EDGAR filing system. These files go back several years, and include every public disclosure made by these companies.<sup>2</sup> Unfortunately, while there is data available for several years prior to the passage of Sarbanes-Oxley, complete data on fiscal year 2003 will not be available until April of 2004, until after annual reports are due. Additionally, after the passage of Sarbanes-Oxley, many companies began hosting their own online databases of their public filings which are accessible through the investor relations sections on their home pages. Because of the lack of additional years of post-treatment data this design should be a pretest-posttest multiple group design.

### **Research Design**

The null hypothesis for this quasi-experimental, no control group, pretest-posttest design with random selection is that the Sarbanes-Oxley Act did not affect the length of the MD&A sections of Form 10-K submissions by U.S. public companies. If the model is significant and is properly specified, we can then reject the null hypothesis and state that the Sarbanes-Oxley Act did affect the length of the MD&A sections of company's 10-K filings. This hypothesis is only useful if it is generalizable to a group or population, and it is only generalizable if the data encompasses an entire population (in this case all U.S. public companies) or takes a random – and hopefully representative – sample.

This model takes the latter route, and selects a random sample of the group, thus making the results of the design highly generalizable. To accomplish this randomization a list of companies was needed. Many rankings of public companies exist, but one that ranks companies by multiple indicators is the *Forbes* 500 list, which ranks American public companies by a combination of sales, profits, assets and market value. Using the 2002 version of this list as a starting point,<sup>3</sup> 60 companies were selected by choosing

a random company in the first 20, and by taking every eighth following company until the desired sample size was reached. From this list, data was collected on length of the MD&A sections of their Form 10-K filings for 2002 and 2001. This data provides a preliminary analysis of whether the law has been effective in achieving its goal of providing more transparency.

In addition to the collection of the length data over two years, the companies were grouped into five categories. These categories were representative of their business sector, and while five categories can not be representative of all of American businesses, they serve as an indicator of whether other variables might affect the dependent variable. These categories for business type were Financial, Energy Provision, Generic Sales, Technology/Defense, and Other as a reference category. Additionally the *Forbes* 500 super-rank of the company was also recorded, as it was an external indicator of company performance.

### **Design Findings**

The trend in the data for this design was easily recognizable from the outset. Without even running a regression it can be seen that amongst the randomly selected companies the average length increase was just under 20 percent. While this "eyeballed" data is rather compelling, a regression was needed to provide more certainty to the hypothesis test. "Eyeballed" data can be misleading, as the changes in the dependent variable could have been caused by numerous criteria other than Sarbanes-Oxley. For this regression the dependent variable is length, and the independent variable of chief theoretical interest is the year, which functions as a dummy for before and after Sarbanes-Oxley. Additional independent variables were dummies for business type, as well as the numeric company rank. The results were as follows:

### **Model Summary**

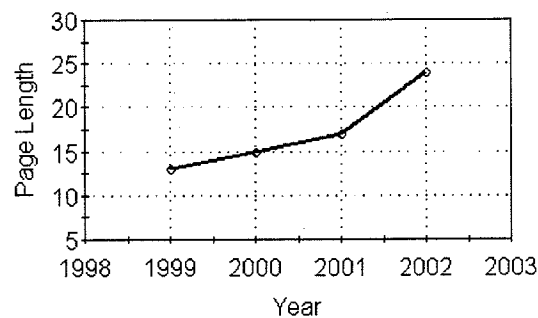
Variables	B	Std. Error	Sig.
(Constant)	24.527	5.924	.000
Year	4.833	2.772	.084
Dummy Financial	4.214	4.011	.296
Dummy Energy	5.133	5.346	.339
Dummy Sales	-10.930	4.005	.007
Dummy Tech/Defense	-3.816	4.411	.389
Forbes Rank	-.037	.011	.001

The results of this model can be interpreted as follows. With an adjusted R-square of .195, the independent variables explain 20 percent of the variation in the dependent variable which is length. While the model only had three significant variables, one of the three was the variable of chief theoretical interest. While at first glance the year variable does not appear to be significant, the regression automatically uses a 2-tailed test for significance, which in this case is incorrect. The year variable should be calculated using a 1-tailed test; this means that **the year variable is significant at the .042 level.** Additionally the output shows that as the year moves from 2001 to 2002 (before to after Sarbanes-Oxley), page length of the MD&A section of company's form 10-k increases by 4.8 pages. **The sales variable and rank variables were also both significant at below the .05 level.** The sales dummy is interpreted as, as a company moves from outside the sales group to inside the sales group (from zero to one) page length decreases by almost 11 pages. Why this would occur could have many different individual interpretations, but one interpretation is that "sales" companies have less to disclose because they are smaller companies or that they have less to disclose overall due to smaller assets. *Forbes* rank can be interpreted as when *Forbes* rank increases by one, page length decreases by .04. This makes sense as higher ranked companies are smaller, and thus would have less to discuss or disclose.

The model as a whole has few issues with validity. Ideally the R-square would be higher, but around 20 percent of variance explained is acceptable in social sciences. The model does have a small problem with heteroskedasticity<sup>4</sup>, which could be solved by the use of robust estimators.

The major flaw of this model is that because of the limited sample size, the variables for year, and the variable marking the implementation of Sarbanes-Oxley are not separated. Due to this lack of separation, the changes that are seen in the model could actually be caused by a trend in the data. Because of this, additional data would be incredibly useful to this model, and should be included in any future research.

While fully demonstrating a trend (or lack thereof) in the data can only be proven by gathering additional years of data on all the companies in the study, preliminary data shows that while there has been a trend towards increasing page length, the implementation of Sarbanes-Oxley has accelerated that trend. Through taking a random sample of 25 percent of our sample group and measuring average page length in 1999, and 2000 in addition to the two other years of data, we can see that while there seems to be a trend towards larger MD&A sections in the years preceding the implementation of Sarbanes-Oxley, a visible spike in page length did occur in 2002, the year of Sarbanes-Oxley's passage.

**Average Page Length**

The results of this model are also clearly generalizable, at the very least to large U.S. companies, who the Act was initially targeted at. Overall, however, the model has few issues, all of which can be corrected in future research, and has results which are generalizable to the Act's targets.

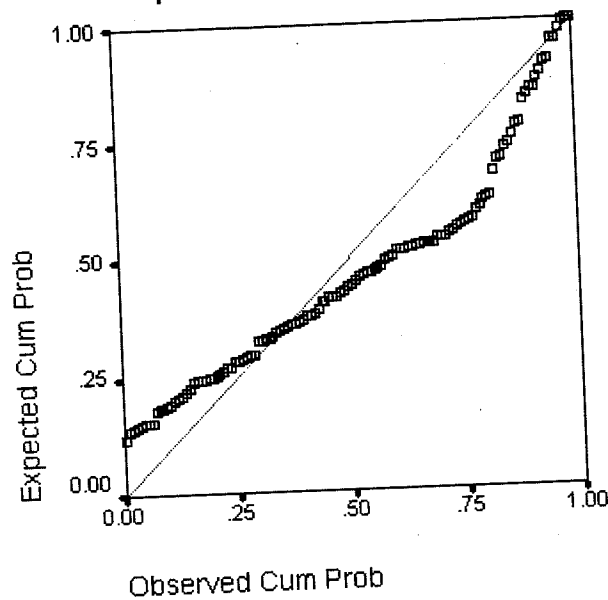
While the issue of trend is troubling, a compelling argument can be made for the impact of Sarbanes-Oxley. With the interpretation of the variable of chief theoretical interest being relatively clear, and the proper specification of the model not being in question the null hypothesis can be rejected in favor of the hypothesis that the Sarbanes-Oxley Act did affect the length of the MD&A sections of Form 10-K submissions by U.S. public companies. Further research will be needed to fully resolve the issue of trend in this data.

### **Conclusion**

In conclusion, it is clear that this model has shown that the Sarbanes-Oxley act has had an impact on company's 10-K's. From the results of this model, it can be inferred that the Act is on some level achieving its goal of increasing the transparency of corporate reporting, combined with existing anecdotal evidence, the answer is clear. Sarbanes-Oxley, hurried or not, is bringing about a substantial change in the way America does business. With the NYSE just once again crossing the 10,000 mark, for now American investors seem to be putting aside the fear that haunted investors following the collapse of Enron and the ensuing corporate accounting scandals; in some part this can be attributed to Sarbanes-Oxley.

Appendix A

Normal P-P Plot of Regression  
Dependent Variable: length of MDA





**Endnotes**

1. "The Sarbanes-Oxley Act Of 2002:A Summary" (2003) *The National Legal Center for the Public Interest*, Volume 7, Number 4.
2. SEC EDGAR Search, from <http://www.sec.gov/edgar/searchedgar/companysearch.html>.
3. 2002 Forbes 500 List, from <http://www.forbes.com/2002/03/27/forbes500.html>.  
(2002 data was used as '02 was the year Sarbanes-Oxley was passed)
4. See Appendix A

**SOURCES**

"The Sarbanes-Oxley Act Of 2002: A Summary" (2003) *The National Legal Center for the Public Interest*, Volume 7, Number 4.

"2002 Forbes 500 List." (March 27, 2002). Retrieved from <http://www.forbes.com/2002/03/27/forbes500.html>.

Securities and Exchange Commission. SEC EDGAR Search. Retrieved from <http://www.sec.gov/edgar/searchedgar/companysearch.html>.