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Andersen's Tolerance Toward Aggressive Financial Reporting: Are They Different?

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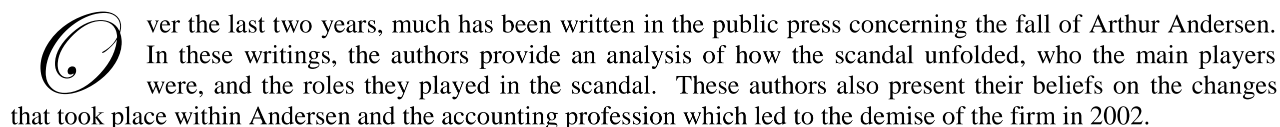
ABSTRACT

Over the last two years, the public press has expressed differing views on whether the demise of Arthur Andersen is an anomaly or a systematic problem in the profession. Some authors have asserted that Arthur Andersen was a firm somehow different than the other Big Five accounting firms while others in the public press believe that the failure of Andersen is the outcome of a systematic problem in the accounting profession. In this study, I examine whether there is a difference between the tolerance of Arthur Andersen and the tolerance of the other Big Five accounting firms toward aggressive financial reporting. I find that there is no difference between the tolerance of Arthur Andersen and the tolerance of the other Big Five accounting firms toward aggressive financial reporting.

INTRODUCTION



Over the last two years, much has been written in the public press concerning the fall of Arthur Andersen. In these writings, the authors provide an analysis of how the scandal unfolded, who the main players were, and the roles they played in the scandal. These authors also present their beliefs on the changes that took place within Andersen and the accounting profession which led to the demise of the firm in 2002.

One book that has received much attention is *Final Accounting: Ambition, Greed, and the Fall of Arthur Andersen* by Barbara Ley Toffler. In this book, the author described her four year experience as a partner of Arthur Andersen selling ethics programs to Andersen clients. She noted that the firm's founder was the very model of integrity, religiously following his maxim, "think straight, talk straight". However, the author asserted that the worldwide split in 2000 between Arthur Andersen and Andersen Consulting and other factors exposed the firm as the weakest of the Big Five Accounting firms. [1] She noted that after the spilt, Andersen was mainly concerned with revenue. If a client was worth millions to the firm, then the firm did everything to ensure that the client would not change auditors.

In addition to the split between Arthur Andersen and Andersen Consulting, others in the public press have focused on other aspects that were unique to Andersen. In a Business Week article, Byrne (2002) noted that Andersen was the only Big Five accounting firm that allowed a local partner to override the firm-wide internal team of accounting experts that reviewed complicated accounting issues facing local offices. Lea (2002) noted that Andersen staff had a reputation for aggressive accounting and an unflagging commitment to their clients that exceeded other Big Five accounting firms. This commitment was rewarded with a partner compensation package that was unmatched by any other accounting firm.

Despite the portrayal of Andersen as a firm somehow different than other Big Five accounting firms, others in the public press contend that the fall of Andersen should not be attributed to Andersen being somehow different. These authors believe that the demise of Andersen is not an anomaly but the outcome of a systematic problem in the public accounting profession. Nusspickel (2002) stated that the failure of Andersen may be a signal of the change in audit methodologies by all of the Big Five accounting firms. During the 1990's, the Big Five accounting firms changed their audit methodology from examining a large number of transactions to focusing more on processes and

controls. The author questioned whether the audit staff of the Big Five had enough training in these new methodologies to implement them successfully.

Others point to the fact that Arthur Andersen is not alone in fighting lawsuits from shareholders or dealing with complaints asserted by the SEC and IRS. Fortune magazine noted that Pricewaterhouse Coopers is especially vulnerable because of a civil fraud complaint filed by the SEC for allowing Xerox to inflate its revenues by $3 billion between 1997 and 2000 (Kahn 2003). The article also noted that Deloitte & Touche is under investigation because, along with Andersen, it helped Enron avoid $2 billion in taxes with complex offshore shelters.

In The CPA Journal, Goldwasser (2002) asserted that the fall of Andersen is indicative of a bigger problem in the accounting profession which is the economic importance of the client to the partner in charge of the audit. The author believed that the SEC ignored this issue when it created its new independence rules in 2000. If any further action is taken by the SEC, the author believes that the SEC should deal with this long-ignored issue.

Although the public press has expressed differing views on whether the demise of Andersen is an anomaly or a systematic problem in the profession, I have not identified any published empirical research that has examined whether there are unique aspects to Arthur Andersen that led to their collapse in 2002. This paper will focus on the tolerance of Arthur Andersen toward aggressive financial reporting. If the demise of Andersen was an anomaly, it would be reasonable to conclude that differences should exist between the tolerance of Arthur Andersen and the tolerance of the other Big Five accounting firms toward aggressive financial reporting. Andersen's willingness to allow Enron, WorldCom, and other companies to practice aggressive financial reporting has been well documented as a key factor in its demise. [2]

The empirical issue examined in this paper is whether there is a difference between the tolerance of Arthur Andersen and the tolerance of the other Big Five accounting firms toward aggressive financial reporting. If the results of this study suggest that a difference does exist, this would suggest that there were fundamental differences between Andersen and the other Big Five accounting firms. However, if the results of this study suggest that there is no difference in the tolerance toward aggressive financial reporting between Andersen and the other Big Five accounting firms, this would provide some evidence that the fall of Andersen may be a signal of a systematic problem in the public accounting profession.

PRIOR LITERATURE

There has been a large amount of research examining differences among public accounting firms. Most of these studies have focused on differences between Big Five and non-Big Five accounting firms. DeAngelo (1981) asserted that larger firms perform better audits because they have a greater reputation at stake, have more resources, and attract more highly skilled employees. Some of these studies have found differences between Big Five and non-Big Five accounting firms.

Krishnan (2003) examined whether the association between stock returns and discretionary accruals is different for clients of Big Five and non-Big Five accounting firms. The author noted that the association between stock returns and discretionary accruals was greater for companies audited by Big Five accounting firms than for companies audited by non-Big Five accounting firms. Krishnan (2003) also found that discretionary accruals of clients of Big Five accounting firms had a greater association with future profitability than discretionary accruals of clients of non-Big Five accounting firms.

Krishnan and Schauer (2000) examined whether not-for-profit entities' compliance with eight GAAP reporting requirements is different among Big Five, large non-Big Five, and small non-Big Five accounting firms. The authors found that the extent of noncompliance decreases as one moves from small non-Big Five to the large non-Big Five to the Big Five accounting firms.

Mutchler (1986) examined whether differences exist between Big Five and non-Big Five accounting firms in their propensity to issue a going concern modified report. Her results suggested that Big Five accounting firms are

more likely than non-Big Five accounting firms to issue a going concern modified report. The author suggested that these findings indicate that larger firms are more willing to take a more conservative stance in issuing the appropriate opinion, have a better technical ability to detect the going concern issue, or have more clients with such issues.

Although many studies have examined whether differences exist between Big Five and non-Big Five accounting firms, there is very little empirical research examining whether differences exist among the Big Five accounting firms. Most studies have grouped the Big Five accounting firms together and have not attempted to examine differences within this group.

Griner et al. (1994) examined whether the adoption of SAS No. 58, *Reports on Audited Financial Statements*, was associated with an increase in the incidence of uncertainties referenced in audit reports for each of the Big Five accounting firms and for all non-Big Five accounting firms. The authors found that none of the Big Five accounting firms experienced a statistically significant increase while the non-Big Five accounting firms experienced a statistically significant increase. The only Big Five accounting firm that experienced a marginally significant increase in the proportion of reports referencing uncertainties was Touche Ross, the smallest of the Big Five accounting firms in the time period under investigation.

Wheeler et al. (1993) examined whether differences exist among the Big Five accounting firms in their propensity to modify their audit reports for a change in accounting principle. The results revealed no between-firm differences for accounting changes producing larger than four-percent income effects. Significant between-firm differences were present for changes producing income effects of less than four percent and for accounting changes whose effects were explicitly described as immaterial in the financial statements.

Schultz (1993) examined whether differences exist among the Big Five accounting firms in the type of opinion received by companies defending pending litigation. After controlling for a company's financial condition and size, the author found that Big Five accounting firms differ in their tendency to modify audit reports for pending litigation.

Although there has been very little empirical research on the differences among the Big Five accounting firms, the fall of Arthur Andersen has brought this issue to the forefront. It is important to examine whether the portrayal of Arthur Andersen as a firm somehow different than the other Big Five accounting firms by certain authors in the public press is supported by empirical evidence. As we further investigate the fall of Arthur Andersen, the results of this study could assist in the discussion of this issue.

METHODS

Accounting practitioners and academics have long recognized that earnings management is one of the main causes of aggressive financial reporting. Earnings management occurs when managers use judgment in financial reporting and in structuring transactions to alter financial reports to either mislead stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on reported accounting numbers [Dechow and Skinner (2000), Healy and Wahlen (1999)].

Earnings management cannot be observed directly. Prior research in earnings management has focused on either the choice of accounting methods or the management of accruals. DuCharme et al. (2001) noted that the management of accruals approach captures the subtle income management techniques allegedly used to avoid detection by outsider users. Accruals not only reflect the choice of accounting methods but also the effect of recognition timing for revenues and expenses, asset write-downs, and changes in accounting estimates.

I measure discretionary accruals using the cross-sectional variation of the Jones (1991) accruals estimation model as modified by Dechow et al. (1995). Subramanyam (1996) noted that the cross-sectional Jones model is generally better specified than its time-series counterparts. The cross-sectional Jones model estimates "normal" accruals as a function of the change in revenue and the level of property, plant, and equipment. The change in revenue is included because changes in working capital accounts, which are a part of total accruals, depend on

changes in revenue. Property, plant, and equipment is included to control for the portion of total accruals related to non-discretionary depreciation expense. The differences between total accruals and "normal" accruals are the discretionary accruals.

The purpose of this study is to examine whether there is a difference between the tolerance of Arthur Andersen and the tolerance of the other Big Five accounting firms toward aggressive financial reporting. The level of earnings management, as measured by the cross-sectional Jones model, is used as the measure of an accounting firm's tolerance toward aggressive financial reporting. Firms that exhibit a lower level of earnings management practice less aggressive financial reporting.

In my multivariate analysis, discretionary accruals are regressed on a dummy variable indicating whether the company was audited by Arthur Andersen or the other Big Five accounting firms and several control variables. These control variables attempt to control for other factors that could impact a company's propensity to manage earnings. These factors include: 1) leverage, 2) operating cash flows, 3) size, 4) equity offerings, and 5) type of audit report.

Leverage may be positively or negatively associated with discretionary accruals. Press and Weintrop (1990) found that closeness to the violation of debt covenants is associated with discretionary accrual choices. DeAngelo et al. (1994) noted that troubled companies have large negative accruals because contractual renegotiations provide incentives to reduce earnings. In contrast, DeFond and Jiambalvo (1994) found that highly leveraged firms have incentives to make income increasing discretionary accruals. To control for the possible positive or negative effect of high leverage, I include a firm's debt to total assets as a measure of the amount of leverage.

Dechow et al. (1995) noted that discretionary accruals are negatively correlated with operating cash flows. Firms that have significant positive operating cash flows are in a better financial position than firms with negative operating cash flows and are less likely to practice earnings management. To control for the possible effects of operating cash flows, I include a firm's operating cash flows to total assets.

Larger firms may have greater accrual-generating potential because of the difficulty that outsiders may have in distinguishing discretionary and non-discretionary accruals. Becker et al. (1998) found that the size of a firm is positively correlated with discretionary accruals. Gillett and Uddin (2002) noted that a company's size is a good indication of a chief financial officer's intentions to report fraudulently. To control for the possible effects of firm size, I include a firm's natural log of total assets.

Healy and Wahlen (1999) noted that the evidence shows that at least some firms appear to manage earnings for stock market reasons. Discretionary accruals should be positively correlated with equity offerings because managers will normally manage earnings upward in response to equity offerings. To control for possible effects of equity offerings, I include the ratio of a firm's issuance of stock to total equity.

Francis and Krishnan (1999) found that auditors are less likely to issue a standard unqualified opinion for firms with high discretionary accruals. To control for the possible effects that discretionary accruals have on the type of audit report issued, I include a dummy variable that measures whether or not a firm received a standard unqualified opinion. Discretionary accruals should be negatively correlated with a standard unqualified opinion because auditors are less likely to issue a standard unqualified opinion for firms with high discretionary accruals.

SAMPLE SELECTION AND UNIVARIATE RESULTS

My sample consists of firms with a fiscal year ending between August 1, 2000 and July 31, 2001. On August 7, 2000, an arbitrator for a Paris-based International Court of Arbitration granted Andersen Consulting their request to split from Arthur Andersen. Toffler (2002) asserted that the worldwide split between Arthur Andersen and Andersen Consulting was a key factor that exposed the firm as the weakest of the Big Five accounting firms. If differences existed between Arthur Andersen and the other Big Five accounting firms, these difference should be present at one of Andersen's most vulnerable times, subsequent to the split between Arthur Andersen and Andersen Consulting.

Companies audited by Non-Big Five accounting firms are excluded because the purpose of this study is to examine whether differences exist between Arthur Andersen and the other Big Five accounting firms. This perspective is taken because the majority of the articles in the public press compared Andersen to the other Big Five accounting firms and did not compare Andersen to the non-Big Five accounting firms.

I excluded financial institutions with Standard Industrial Classifications (SICs) between 6000 and 6999 because computing discretionary accruals for these firms is problematic. Utility companies (SICs between 4000 and 4999) are also excluded because the regulatory nature and unique financial reporting practices in this sector may make the incentives to manage earnings different from the incentives of non-regulated sectors. I also eliminated firms that did not have the necessary data available on the Compustat database for the calculation of discretionary accruals. This sample selection process yielded 1,288 firms from the 2002 Compustat database. Of these firms, 199 firms were audited by Arthur Andersen and 1,089 firms were audited by the other Big Five accounting firms.

Table 1 reports descriptive statistics for all variables used in this study. Table 2 provides parametric t-tests for differences between companies audited by Arthur Andersen and companies audited by the other Big Five accounting firms for estimated discretionary accruals, ratio of debt to total assets, ratio of operating cash flows to total assets, natural log of total assets, ratio of sale of stock to total equity, and type of audit report.

Table 1:
Descriptive Statistics for Sample Firms

	Companies audited by Arthur Andersen			**Companies audited by the other Big Five firms**			**All Companies**		
	Mean	**Median**	**Standard Deviation**	**Mean**	**Median**	**Standard Deviation**	**Mean**	**Median**	**Standard Deviation**
DA	-.0256	-.0187	.1110	-.0174	-.0100	.1104	-.0178	-.0119	.1107
ANDERSEN	1.00	1.00	0.00	0.00	0.00	0.00	.1572	0.00	.3652
LEV	26.69	25.48	21.51	25.47	23.32	26.95	25.67	23.65	26.42
OCF	.0706	.0838	.1033	.0667	.0846	.1576	.0659	.0844	.1520
SIZE	6.06	6.23	2.09	5.61	5.64	2.57	5.65	5.82	2.50
ISSUE	.2535	.0452	.6606	.2496	.0176	1.09	.2503	.0219	1.04
REPORT	.8514	1.00	.3567	.8113	1.00	.3915	.8250	1.00	.3864

Where:
DA = estimated discretionary accruals
ANDERSEN = 1 if company was audited by Arthur Andersen, 0 otherwise
LEV = ratio of debt to total assets
OCF = ratio of operating cash flows to total assets
SIZE = natural log of total assets
ISSUE = ratio of sale of stock to total equity
REPORT = 1 if standard unqualified opinion, 0 otherwise

There is no statistically significant difference (t-value = 0.8991) in the estimated discretionary accruals for companies audited by Arthur Andersen and companies audited by the other Big Five accounting firms. This finding suggests that there is no difference between the tolerance of Arthur Andersen and the tolerance of the other Big Five accounting firms toward aggressive financial reporting.

Except for the natural log of total assets (t-value = -2.1755), there is no statistically significant difference (all of the t-values < 1.30) in the ratio of debt to total assets, ratio of operating cash flows to total assets, ratio of sale of stock to total equity, and type of audit report for companies audited by Arthur Andersen and companies audited by the other Big Five accounting firms. The significance of the natural log of total assets suggests that companies audited by Arthur Andersen were larger in size compared to companies audited by the other Big Five accounting firms.

Table 2:
Parametric T-Tests for Differences between Companies Audited by
Arthur Andersen and Companies Audited by the Other Big Five Accounting Firms

Variables	T-value	P-value
DA	.8991	.3688
LEV	-.5641	.5728
OCF	-.3126	.7546
SIZE	-2.1755	.0298
ISSUE	-.0450	.9641
REPORT	-1.2617	.2073

Where:
DA = estimated discretionary accruals
LEV = ratio of debt to total assets
OCF = ratio of operating cash flows to total assets
SIZE = natural log of total assets
ISSUE = ratio of sale of stock to total equity
REPORT = 1 if standard unqualified opinion, 0 otherwise

This finding suggests that one of the reasons Andersen may have failed was the size of their clients. As has been noted, Arthur Andersen was not alone in fighting lawsuits from shareholders or dealing with complaints asserted by the SEC and IRS. The failure of a client may have had a greater impact on Arthur Andersen than the other Big Five accounting firms because, on average, Andersen clients were larger. [3] Arthur Andersen was probably not more tolerant of aggressive financial reporting, as noted by the insignificance of the estimated discretionary accruals variable, but Andersen may have been more vulnerable because their clients were larger.

These conclusions are preliminary because this analysis does not control for other factors that could impact estimated discretionary accruals. The next section presents the multivariate tests which include control variables for leverage, operating cash flows, size, equity offerings, and type of audit report.

RESULTS

To test whether there is a difference in the tolerance of Arthur Andersen and the tolerance of the other Big Five accounting firms toward aggressive financial reporting, estimated discretionary accruals are regressed on a dummy variable indicating whether the company was audited by Arthur Andersen or the other Big Five accounting firms and several control variables. Leverage, operating cash flows, size, equity offerings, and type of audit report are included to control for the effects on discretionary accruals. The OLS regression model is specified as follows for firm “i” in year “t”:

$$DA_{it} = \alpha_0 + \alpha_1 ANDERSEN_{it} + \alpha_2 LEV_{it} + \alpha_3 OCF_{it} + \alpha_4 SIZE_{it} + \alpha_5 ISSUE_{it} + \alpha_6 REPORT_{it} + \varepsilon_{it}$$

Where:

DA_{it} = estimated discretionary accruals
$ANDERSEN_{it}$ = 1 if the company was audited by Arthur Andersen, 0 otherwise
LEV_{it} = ratio of debt to total assets
OCF_{it} = ratio of operating cash flows to total assets
$SIZE_{it}$ = natural log of total assets
$ISSUE_{it}$ = ratio of sale of stock to total equity
$REPORT_{it}$ = 1 if standard unqualified opinion, 0 otherwise

In Table 3, I present the results of the OLS regression model. The model's F-ratio of 12.134 indicates that the overall fit of the model is significant at $p < 0.0001$. The adjusted R^2 for the model is 8.98%. The coefficient for the

ANDERSEN variable is not significant (p = .2999) indicating that there is no difference in the estimated discretionary accruals of clients audited by Arthur Andersen and clients audited by the other Big Five accounting firms.

Table 3:
OLS Regression of Discretionary Accruals on Whether the Company was Audited by Arthur Andersen and Control Variables

Independent Variable	Predicted Sign	Coefficients	T-statistics	P-value
Intercept	n\a	-.0323	-2.665	.0078
ANDERSEN	?	.0096	1.037	.2999
LEV	?	-.0002	-1.303	.1929
OCF	-	-.0865	-3.596	.0003
SIZE	+	.0038	2.660	.0079
ISSUE	+	-.0001	-0.24	.9808
REPORT	-	-.0253	-2.815	.0050

Where:
ANDERSEN = 1 if company was audited by Arthur Andersen, 0 otherwise
LEV = ratio of debt to total assets
OCF = ratio of operating cash flows to total assets
SIZE = natural log of total assets
ISSUE = ratio of sale of stock to total equity
REPORT = 1 if standard unqualified opinion, 0 otherwise

The public press has expressed differing views on whether the demise of Arthur Andersen is an anomaly or a systematic problem in the profession. This study suggests that Andersen was not different from the other Big Five accounting firms on at least one measure, tolerance toward aggressive financial reporting. It is interesting to note that clients of Arthur Andersen were, on average, larger than the clients of the other Big Five Accounting firms, but there was no difference in the tolerance toward aggressive financial reporting.

Of the control variables included in the OLS regression model, operating cash flows, size, and type of audit report are significantly associated with discretionary accruals. The negative coefficient on the operating cash flows variable is consistent with the belief that firms with significant positive operating cash flows are in a better financial position than firms with negative operating cash flows and are less likely to practice earnings management.

The positive coefficient on the size variable is consistent with the idea that larger firms have greater accrual-generating potential because of the difficulty that outsiders may have in distinguishing discretionary and non-discretionary accruals. The negative coefficient on the type of audit report variable supports the notion that companies with a standard unqualified opinion are less likely to practice earnings management.

I performed several other tests for sensitivity analysis. First, the same regression model was run with the absolute value of estimated discretionary accruals assigned as the dependent variable. The results of this regression model, not presented, are consistent with the previous results. In this regression model, the coefficient for the ANDERSEN variable is not significant (p = .5050) indicating that there is no difference in the absolute value of the estimated discretionary accruals of clients audited by Arthur Andersen and clients audited by the other Big Five accounting firms.

To ensure that the results are not different under varying environments, the same regression model was run for companies with a fiscal year ending between January 1, 1998 and December 31, 1998 and January 1, 1999 and December 31, 1999. Once again, the ANDERSEN variable was not significant. This lack of significance held whether the dependent variable was estimated discretionary accruals or the absolute value of estimated discretionary accruals.

CONCLUSION

Over the last two years, much has been written in the public press concerning the fall of Arthur Andersen. Although the public press has expressed differing views on whether the demise of Andersen is an anomaly or a systematic problem in the profession, I have not identified any published empirical research that has examined whether there are unique aspects to Arthur Andersen that led to their collapse in 2002. In this study, I examine whether there is a difference between the tolerance of Arthur Andersen and the tolerance of the other Big Five accounting firms toward aggressive financial reporting.

After controlling for leverage, operating cash flows, size, equity offerings, and type of audit report, I find that there is no difference between the tolerance of Arthur Andersen and the tolerance of the other Big Five accounting firms toward aggressive financial reporting. There are certain authors in the public press that have portrayed Andersen as a firm somehow different than the other Big Five accounting firms. The results of this study do not support these authors' beliefs on at least one measure, tolerance toward aggressive financial reporting.

It is interesting to note that the results from the univariate analysis suggest that companies audited by Arthur Andersen were larger in size when compared to companies audited by the other Big Five accounting firms. Arthur Andersen may not have been more tolerant toward aggressive financial reporting, as noted by the insignificance of the discretionary accruals variable, but Andersen may have been more vulnerable because their clients were larger.

Although my results suggest that there is no difference between the tolerance of Arthur Andersen and the tolerance of the other Big Five accounting firms toward aggressive financial reporting, there may be other factors that differentiate Andersen from the other Big Five accounting firms. The existence of these factors will limit the importance of the findings of this paper. The results of this study are also dependent upon the accuracy of the cross-sectional Jones model in measuring discretionary accruals. To the extent it does not, my results may be biased.

Some authors have noted that the cleanup in Corporate America would probably have benefitted more had Andersen been reformed rather than killed. Dwyer (2003) questions whether the surviving Big Four accounting firms are too few to be allowed to fail and, thus, are effectively beyond the reach of regulators. As we begin to examine whether society would have benefited more had Andersen been reformed, the findings of this study should assist in these discussions.

SUGGESTIONS FOR FUTURE RESEARCH

Although the findings of this paper suggest that there is no difference between the tolerance of Arthur Andersen and the tolerance of the other Big Five accounting firms toward aggressive financial reporting, there may be other measures that differentiate Arthur Andersen and the other Big Five accounting firms. An interesting avenue for future research is whether the governance structure of Andersen clients was different than the governance structure of clients of the other Big Five accounting firms. Future research could also examine the impact of the fall of Arthur Andersen on stock returns. It would be interesting to examine the extent that former Andersen clients' stock returns were impacted by Andersen's collapse.

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ENDNOTES

1. Although the previous research noted in this paper covers periods before and after mergers, the term "Big Five" is used to identify the largest international accounting firms before and after the mergers for convenience purposes.
2. I recognize that other factors contributed to the fall of Andersen. One factor that has received reasonable attention is the assertion that the SEC and the Department of Justice were waiting for a chance to make an example of a major accounting firm and it was unluckly for Andersen that one of its clients failed first. (See Nusspickel (2002) for a more thorough discussion of this factor.)
3. This statement does not assert that the size of the company was the only factor that contributed to the fall of Arthur Andersen. Other factors, such as the influence of politics, should also be considered. These factors are not part of this study and, thus, are not discussed in this paper.

NOTES