

The Relation of Audit Opinion and Auditor Change with Bankruptcy Emergence

Daniel Bryan*
Samuel L. Tiras**
Clark M. Wheatley***

*Department of Accounting, Lundquist College of Business
University of Oregon
Eugene, OR 97403-1208

**Department of Accounting & Law, School of Management
SUNY at Buffalo
Buffalo, NY 14260-4000

***School of Accounting, College of Business
Florida International University
Miami, FL 33199

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Corresponding author: Sam Tiras, Phone (716) 645-3215; Fax (716) 645-3823
e-mail: stiras@buffalo.edu

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ABSTRACT

When a firm's ability to operate as a going concern is impaired, an auditor must issue an alert, by the way of the audit opinion, to warn investors, creditors and other interested parties that the viability of the firm is in jeopardy. Given this warning, investors, creditors, and others will act to protect the remaining assets of the firm by forcing the firm into bankruptcy. It is likely, that the earlier these parties intervene, the greater the probability that the cause of the distress can be addressed and perhaps corrected. This study tests whether a going concern opinion does indeed protect the remaining assets of a firm, such that the issuance of a going concern opinion during the 12 months prior to a firm declaring bankruptcy is positively associated with that firm successfully emerging from bankruptcy. A firm switching auditors may, however, delay the auditor's signal. This delay in signaling that the firm is in jeopardy could render any attempts at reorganization futile, such that switching auditors shortly before a firm declares bankruptcy is negatively associated with that firm successfully emerging from bankruptcy. Our empirical results provide evidence that the issuance of a going concern opinion is positively, and switching auditors shortly before declaring bankruptcy is negatively, associated with a firm successfully emerging from bankruptcy. The results relating to the audit opinion, however, hold only when the going concern opinion is issued as a qualification (as was the case with SAS No. 34), and not as a modification (as is the case with SAS No. 59) to the standard audit report.

Key Words: Bankruptcy Emergence, Auditor Switch, Auditor Opinion, Accounting Choice.

Data Availability: Data is available from the sources identified in the text.

I. INTRODUCTION

When a firm's ability to operate as a going concern is impaired, an auditor must issue an alert to investors by way of an audit opinion to warn investors, creditors and other interested parties that the viability of the firm is in jeopardy. Given this warning, these stakeholders can act to protect the remaining assets of the firm (e.g., force bankruptcy) where the earlier the intervention, the greater the probability that the cause of the distress can be addressed and perhaps corrected. Nevertheless, of the public companies that filed bankruptcy protection under Chapter 11, only half were ever issued a *going concern opinion* prior to their filing (Altman 1982; Menon and Schwartz 1986; Chen and Church 1992; Johnson and Khurana 1995).¹

The purpose of this study is to examine whether a going concern opinion does indeed protect the remaining assets of a firm, such that the issuance of a going concern opinion during the 12 months prior to a firm's declaration of bankruptcy is positively associated with that firm successfully emerging from bankruptcy. If the issuance of a going concern opinion does provide interested stakeholders a warning of pending problems, these stakeholders are likely to undertake corrective action sooner than stakeholders of firms where no such warning was issued. The resulting intervention (bankruptcy) would, therefore, occur when there is a greater likelihood of salvaging the firm's operations, and thus a greater likelihood of successfully emerging from bankruptcy. Without the early warning of a going concern opinion, stakeholders may not be able to compel troubled firms to file bankruptcy nor may they be aware of problems within these organizations until it is too late to intervene.

¹ Under *Statement of Auditing Standard* (SAS) 34, the auditor expresses concern about an entities continued existence (going concern) by issuing a *qualified* audit report. The report would be a '*subject to*' qualification. SAS 59 superceded SAS 34 and no longer required the 'subject to' qualification. Rather, SAS 59 allows the auditor to issue an *unqualified* opinion that is *modified* to express the auditor's reservations regarding an entity's ability to continue as a going concern. Other than when we attempt to distinguish between a *qualification* and a *modification*, we refer to any opinion expressing concerns about an entity's continued existence as a "going concern" opinion.

To test how the auditor's opinion may be associated with bankruptcy emergence, we identify a set of firms that filed for Chapter 11 reorganization, for which the ultimate success or failure of the reorganization is publicly available. From this set of firms, we identify those firms that received a going concern opinion in the year prior to filing bankruptcy and we also identify those firms that switched auditors within three years prior to the filing. We collected data on auditor switches because the prior auditing literature suggests that an auditor change could be an attempt to suppress negative information (Schwartz and Soo 1995, 1996a, 1996b; Schwartz and Menon 1985; Knapp and Elikai 1990). If switching auditors can avoid a going concern opinion, stakeholders of firms that switched may receive little or no warning about potential problems facing these firms. To the extent that switching auditors suppresses negative information, the bankruptcy filings of firms that switched auditors would likely be too late for stakeholders of these organizations to intervene and correct the prevailing problems of these firms.

The prior accounting literature suggests that firms also suppress negative information by switching to, or choosing income-increasing accounting methods (Zmijewski and Hagerman 1981; Sweeney 1994). Income-increasing accounting methods present the firm's operations in the best possible light. Troubled firms that had employed income-decreasing accounting methods often switch to income-increasing methods to present themselves more favorably. Firms that are reporting based on income-increasing accounting methods may have either changed methods to boost sagging earnings or chosen to report earnings consistently in the best possible light. In either case, those firms that employ income-increasing accounting methods at the time they file bankruptcy may have filed bankruptcy too late to allow interested stakeholders an opportunity to intervene and correct the prevailing problems in a timely manner. Such delays would likely reduce the chance that these firms will successfully emerge from bankruptcy.

The results of our study support our argument that a going concern opinion provides an early warning of potential problems to interested stakeholders, such that the issuance of a going concern opinion is *positively* associated with bankruptcy emergence. We also find evidence that switching auditors may have suppressed warnings of problems for troubled firms, such that switching auditors is *negatively* associated with bankruptcy emergence. Finally, we find evidence (*albeit* weak) that choosing income-increasing accounting methods is also *negatively* associated with emergence.

It is likely (as indicated by the prior literature), that our results will vary across small and large firms. McKeown, Mutchler and Hopwood (1991) and Mutchler, Hopwood and McKeown (1997), for instance, point out that large firms are less likely to receive going concern opinions than small firms. One possible reason for their findings is that the operations of large firms are followed more attentively by capital markets participants than are the operations of small firms. This elevated attention, likely reduces the need for an early warning of potential problems from the auditor. Additionally, Nelson, Elliot and Tarpley (2000) claim that auditors are more likely to waive earnings management adjustments for large firms than for small firms. The waiving of adjustments would increase the likelihood that large firms could use income-increasing accounting methods to avoid a going concern opinion. Evidence by Zmijewski and Hagerman (1981) is consistent with this notion in that large troubled firms (indicated by the debt-to-asset ratio) do indeed reduce the appearance of distress by employing income-increasing accounting methods. Since auditors are less likely to waive earnings management adjustments for smaller firms, these small firms are likely to be less able to avoid or postpone a going concern opinion.

When we partition our tests by firm size, we find that the going concern opinion is significantly associated with bankruptcy emergence only for small firms. This indicates that the

going concern opinion may indeed be less important as an early warning for the stakeholders of larger firms. If the going concern opinion is less important as an early warning to the stakeholders of larger firms, then the adverse effects on emergence that (we hypothesize) follows from auditor switches would likely be less significant for large firms. As with the going concern opinion, we find that switching auditors is negatively associated with bankruptcy emergence only for small firms. This is consistent with the importance of the auditor's opinion being diminished for larger firms. As expected, however, the discretion allowed larger firms in managing earnings through income-increasing accounting choices is significantly (negatively) associated with bankruptcy emergence for those (large) firms. The lack of discretion afforded smaller firms with respect to managing earnings would indicate that the use of income-increasing accounting methods for smaller firms might not be associated with bankruptcy emergence. Not surprisingly, we find no evidence that income-increasing accounting methods are associated with bankruptcy emergence for small firms.

Finally, during the time period studied, 1981 to 1994, the American Institute of Certified Public Accountants (AICPA) amended the way in which going concern opinions are reported. Statement of Auditing Standards (SAS) No. 59, which became effective in 1989, explicitly requires the auditor to evaluate the going concern assumption when performing an audit. This requirement in SAS No. 59 seemed to place more responsibility (at least explicitly) on the auditor than did the predecessor standard, SAS No. 34. That standard, issued in 1981, required only that the auditor be aware of evidence that might indicate that the going concern assumption was violated. SAS No. 59 also changed the way in which going concern opinions are issued. Under SAS No. 59, a going concern opinion is expressed as a *modification* of the standard audit report, rather than a *qualification* to the audit report, as was the case under SAS No. 34.

Raghunandan and Rama (1995) provide evidence that auditors were more inclined to issue a going concern opinion under SAS No. 59, as a *modification*, than they were under SAS No. 34, as a *qualification*. This may have been due to the detailed guidelines presented in SAS No. 59 that allowed the auditor to more easily defend the choice to issue a going concern opinion, or may be due to auditors being less hesitant to issue a going concern opinion when it did not result in an audit *qualification*. The literature is conflicting, however, in that Carcello, Hermanson and Huss (1995), found no difference in the going concern opinions issued under SAS No. 34 and SAS No. 59, claiming SAS No. 59 was designed simply as an ‘expectations gap’ standard.

Our paper provides evidence that going concern opinions issued as a *modification* under SAS No. 59 may be a less effective warning of distress to interested stakeholders than was a going concern opinion issued as a *qualification* under SAS No. 34. Additionally, there were significantly more audit switches and income-increasing accounting choices under SAS No. 59 than under SAS No. 34. These results may be due to the change in the audit standard, from *qualification* to *modification*, or may be due to the greater frequency of going concern opinions under SAS No. 59 (issued to both firms that ultimately filed, and firms that ultimately did not file bankruptcy). In either case, our results suggest that SAS No. 59 diluted the effectiveness of the auditor’s going concern opinion.

The next section provides a review of bankruptcy literature and other literature to identify those variables that will serve as controls in our tests of hypotheses. Section three presents our test model and discusses our hypotheses. Section four describes the empirical measures used in the research and the sample selection criteria. Section five presents the empirical results and section six concludes the study.

II. REVIEW OF RELEVANT LITERATURE

Bankruptcy Research

The focus of prior bankruptcy research is generally on predicting which firms will file for bankruptcy protection. Altman (1968), Ohlson (1980), Zmijewski (1984), and others show that the accounting information available in the year (12 months) prior to a bankruptcy filing is predictive of whether a firm would file for Chapter 11 protection. Kane, Richardson and Meade (1998), however, find that bankruptcy prediction models are improved by transforming financial ratios into ranks. Hopwood, McKeown and Mutchler (1994) show that these models are more effective for firms already in stress (i.e., those firms more likely to receive a going concern opinion). Finally, Kane, Richardson and Graybeal (1996) and Richardson, Kane and Lobingier (1998) show that these bankruptcy models can be improved by considering whether the filing occurs during a recessionary period.

Studies by White (1984), Casey, McGee and Stickney (1986), Campbell (1996) and Bryan, Tiras and Wheatley (2000) extend these studies to consider whether the accounting information that has been found to be predictive of bankruptcy is also associated with bankruptcy emergence. These studies focus on post-bankruptcy filing because for those firms that have filed for bankruptcy protection, the question of significance becomes whether a firm will emerge from bankruptcy rather than whether a firm will declare bankruptcy.

This line of research has shown a relation between the accounting information released in the year prior to filing for a Chapter 11 reorganization and the ultimate success or failure of that reorganization. While the results have been mixed across studies, these studies on bankruptcy emergence have found that firms that emerge tend to be larger and have higher solvency, greater liquidity, better earnings prospects and more free (non-collateralized) assets.

Audit Research

Prior auditing research on going concern opinions often focuses on the willingness of the auditor to issue a going concern opinion. For instance, Levitan and Knoblett (1985) and Menon and Schwartz (1987) argue that auditors are reluctant to issue a going concern opinion until after their (non-quantifiable) misgivings are evident in the financial statements. If this were the case, however, a going concern opinion would clearly be too late of a signal for stakeholders to then act and salvage the firm. In addition, McKeown, Mutchler and Hopwood (1991) and Mutchler, Hopwood and McKeown (1997) find that auditors are less inclined to issue going concern opinions to large client firms. Finally, Mutchler (1986) shows that the size of the audit firm also influences whether the auditor issues a going concern opinion in that she finds that smaller audit firms are less likely to issue going concern opinions to small firms.

Similar to our study, Kennedy and Shaw (1991) attempt to test whether a going concern opinion is associated with bankruptcy emergence on a sample of firms declaring bankruptcy between 1973 and 1985. The motivation of their study was to test Menon and Schwartz's (1986) argument that a firm filing bankruptcy when no going concern opinion had been previously issued is not an audit failure if that firm ultimately emerges from bankruptcy. After controlling for those variables known to be associated with bankruptcy emergence, they found that going concern opinions were negatively associated with bankruptcy emergence for their sample of firms. This indicates that for their sample of firms, stakeholders of those firms that were issued a going concern opinion did not benefit by receiving an early warning of potential problems.

Kennedy and Shaw's (1991) sample period of 1973 to 1985, however, crosses two important time periods that substantially limit any comparison of their results with ours and may limit the applicability of their results to our research question. First, a new bankruptcy code was

adopted in 1978, with 1979 the first full year of implementation. When Kennedy and Shaw partitioned their sample to control for the different codes, their results on audit opinions were no longer significant. This finding may, however, have resulted from a lack of power due to a small sample size (only 58 bankruptcies were in their post-1979 sample). Second, SAS No. 34 was not issued until March 1981, more than half way through their sample period. Few of their sample firms, therefore, were likely to be issued a going concern opinion under SAS No. 34. Further, Carcello, Hermanson and Huss (1995) find that the behavior of auditors changed with the issuance of SAS No. 34, in that auditors were more willing to issue going concern opinions. Kennedy and Shaw (1991) did not indicate whether differences were found when SAS No. 34 was enacted.

Nogler (1995) finds that the recipients of going concern opinions virtually always file for bankruptcy protection, or undergo substantial debt restructuring. This finding is consistent with our claim that the going concern opinion prompts action on the part of interested stakeholders of these firms. Whether the stakeholders force a bankruptcy or the firm files the bankruptcy voluntarily in an effort to seek protection from interested stakeholders, the result is the same. Pryor and Terza (1998), however, provide evidence that the going concern opinion may be a self-fulfilling prophecy in that even after controlling for those variables known to be associated with bankruptcy, the going concern opinion is still associated with bankruptcy.

Prior auditing research on auditor switches has generally supported the premise that firms often switch auditors in an attempt to circumvent the audit process or delay filing bankruptcy (Kluger and Shields 1989; Johnson and Lys 1990; Haskins and Williams 1990; Dhaliwal, Schatzberg and Trombley 1993). There are, however, many other reasons firms change auditors, such as an attempt by a firm to increase the credibility of their financial statements (Knapp 1988)

or to decrease audit fees (Ettredge and Greenburg 1990). Krishnan (1994) and Krishnan, Krishnan and Stephens (1996), however, point out that subsequent auditors are *more* likely to issue a going concern opinion. A strategy of switching auditors to avoid a going concern opinion or other adverse actions, therefore, does not appear to be effective. Switching auditors may, however, delay the process and thus, reduce the chance that a signal of distress to interested stakeholders (either through a formal going concern opinion or through decreased accounting performance numbers) would occur when the greatest chance that corrective actions could be taken to salvage the firm.

III. MODEL AND HYPOTHESIS DEVELOPMENT

In this section, we develop our test model and formally state our hypotheses that the issuance of a going concern opinion within one year of a firm filing bankruptcy is positively associated, and switching auditors within three years of filing bankruptcy is negatively associated, with emergence. To test our going concern prediction, we create two separate (0,1) indicator variables that represent whether a firm received a going concern opinion within 12 months prior to filing bankruptcy. The first, $QUAL_j$, is set to one if the firm received a *qualified* audit opinion under SAS No. 34; otherwise, it is set to zero. The second, MOD_j , is set to one if the firm receives a *modified* audit opinion under SAS No. 59; otherwise, it is set to zero. To test our audit switching prediction, we create an (0,1) indicator variable, $SWITCH_j$, that is set to one if a firm switched auditors during the three years prior to filing bankruptcy; otherwise, it is set to zero. These variables (in addition to our control variables) are regressed on an (0,1) indicator variable that is set to one if the firm emerges from bankruptcy; otherwise, it is set to zero.

In testing whether income-increasing accounting choices are negatively related to bankruptcy emergence, we follow Zmijewski and Hagerman (1981) in defining income-

increasing accounting choices as: non-LIFO inventory valuation; non-accelerated depreciation methods; flow through method of Investment Tax Credits; and pension discount rates above the median. We set an (0,1) indicator variable, $INCR_j$, to one if a firm selects two or more of these income-increasing accounting choices; otherwise, it is set to zero.

The control variables we include in our tests are those variables identified in the prior literature as being highly associated with bankruptcy emergence. Based on the bankruptcy emergence literature discussed above, we include the current ratio; the quick ratio; return-on-assets and retained earnings-to-assets; and, inflation-adjusted plant, property and equipment less collateralized loans to proxy for solvency; liquidity; earnings prospects; firm size; and, free assets.² We also include a control variable for recessions that is set to one if the time period of the bankruptcy filing corresponds to a time period that Richardson, Kane and Graybeal (1996) and Richardson, Kane and Lobingier (1998) define as recessionary; otherwise, it is set to zero.³

In addition, we include two control variables that are suggested by the auditing and debt covenant literature. The first is an (0,1) indicator variable that is set to one if the auditor is a BIG 6 auditor; otherwise, it is set to zero. This variable is included because the auditing literature discussed above suggests that small audit firms are less inclined to issue going concern opinions

² Campbell (1996) finds that firms in the wholesale/retail, manufacturing and construction industries are more apt to file bankruptcy. As a sensitivity test, we retest our model by including indicator variables for those industries. The results of these additional tests (not presented) are similar to those from our base model. The one exception is that the indicator variable for income-increasing accounting methods is no longer significant in our pooled regressions. This variable is still significant, however, for large firms when we interact indicator variables for size in our regressions.

³ These two studies provide evidence that the prediction accuracy of bankruptcy models differs between recessionary periods and other periods. They, however, do not provide guidance on whether firms that file bankruptcy during a recession are more or less likely to emerge. One argument could be that firms filing bankruptcy during a recession are less likely to emerge since the economy is poor. A counter-argument, however, could be that firms filing bankruptcy as a result of a recession, would be more likely to emerge if (and when) the economy was to reverse. We, therefore, place no directional prediction on this control variable. If a prediction was to be offered, the dummy variable representing recession in Kane, Richardson and Graybeal (1996) is significantly positive in their recession-controlled tests, suggesting a positive association.

in certain situations than big audit firms. The second variable we include is the level of net worth. This variable is included as a control variable because Chen and Wei (1993) identify net worth as being the most commonly violated debt covenant. It is likely, therefore, that the level of net worth is an early warning of bankruptcy for a large proportion of our sample firms.

Finally, following Kane, Richardson, and Meade (1998), we rank transform the control variables that are (in their raw form) non-categorical. The resulting test model is:

$$EMERGE_j = \beta_1 SOL_j + \beta_2 LIQ_j + \beta_3 ROA_j + \beta_4 SIZE_j + \beta_5 NW_j + \beta_6 RE_j + \beta_7 FREE_j + \beta_8 REC_j + \beta_9 BIG6_j + \beta_{10} QUAL_j + \beta_{11} MOD_j + \beta_{12} SWITCH_j + \beta_{13} INCR_j + \varepsilon_j \quad (1)$$

where:

- $EMERGE_j$ = indicator variable set equal to 1 if firm j is reorganized or was acquired/merged, otherwise zero;
- SOL_j = rank transformation of interest-coverage (the sum of earnings before extraordinary items and interest expense, divided by interest expense);
- LIQ_j = rank transformation of quick ratio (current assets less inventory, divided by current liabilities);
- ROA_j = rank transformation of return-on-assets (net income divided by average total assets);
- $SIZE_j$ = rank transformation of log of inflation adjusted total assets (adjusted using the Gross National Product Index);
- NW_j = rank transformation of total stockholders' equity divided by total assets;
- RE_j = rank transformation of retained earnings divided by total assets;
- $FREE_j$ = rank transformation of free assets (property, plant, and equipment less collateralized loans - debt, less mortgages and other secured loans, *Compustat* data item 241 - divided by adjusted total assets);
- REC_j = indicator variable set equal to 1 if the bankruptcy filing occurred during a recessionary period;
- $BIG6_j$ = indicator variable set equal to 1 if firm j is audited by a Big 6 firm in the year prior to filing bankruptcy, otherwise zero;
- $QUAL_j$ = indicator variable set equal to 1 if firm j received a *qualified* audit opinion (under SAS No. 34), otherwise zero;
- MOD_j = indicator variable set equal to 1 if firm j received a *modified* audit opinion (under SAS No. 59), otherwise zero;

$SWITCH_j$ = indicator variable set equal to 1 if firm j switched auditors in the three years prior to filing for bankruptcy protection, otherwise zero;

$INCR_j$ = indicator variable set equal to 1 if firm j selects two or more income-increasing accounting methods (non-LIFO, flow through method of investment tax, aggressive pension costs rate, or non-accelerated depreciation), otherwise zero;

From equation (1), we predict that the coefficients (β_{10} and β_{11}) on the going concern opinions ($QUAL_j$ and MOD_j , respectively) will be positively associated with emergence ($EMERGE_j$) and that the coefficient (β_{12}) on auditor switching ($SWITCH_j$) will be negatively associated with emergence. These predictions are formally stated in our hypotheses, below (in alternative form).

H1: The issuance of a going concern opinion within the 12 months prior to filing for Chapter 11 bankruptcy protection is positively associated with emergence from bankruptcy ($\beta_{10} > 0$; $\beta_{11} > 0$).

H2: Switching auditors within the three years prior to filing for Chapter 11 protection is negatively associated with emergence from bankruptcy ($\beta_{12} < 0$).

While not a formal hypothesis, we also expect the coefficient (β_{13}) on income-increasing accounting methods ($INCR_j$) to be negatively associated with emergence, as suggested by the prior literature. This expectation will be met if firms can delay or avoid a going concern opinion by choosing or switching to income-increasing accounting methods. The next section discusses the empirical issues of this study.

IV. EMPIRICAL ISSUES

This section is divided into three parts. The first sub-section discusses the sample selection procedures. The second sub-section defines our variable measures. The final sub-section provides descriptive statistics of the data.

Sample Selection Criteria

Sample firms were identified by merging *Compustat* listed firms, excluding firms from regulated industries, with those identified by the *National Automated Accounting Research System (NAARS)* as having filed for Chapter 11 bankruptcy protection. This process yielded 375 bankruptcies over the 1981-1994 period.⁴ From this sample, 159 firms were eliminated due to missing data from *Compustat*. Data regarding the date and type of emergence (reorganized, acquired/merged or liquidated) was collected from the *Lexus/Nexus* bankruptcy files for 141 bankrupt firms. The status of the remaining bankruptcies could not be determined.⁵ Our sample consists of 110 firms (78%) that emerged from bankruptcy or were acquired/merged with another firm, and 31 firms (22%) that were liquidated.^{6, 7} The sample selection procedure is summarized in Table 1.

⁴ Our sample period is set to encompass SAS No. 34, which was issued in 1981. The first bankruptcy we identify for which all required data is available did not file bankruptcy until 1984. Data on emergence is collected through 1998, allowing firms declaring bankruptcy in 1994 as much as four years for the bankruptcy to be resolved (the ranges for resolution are 33 to 2142 days to emergence and 111 to 2114 days to liquidate).

⁵ Seventy-five firms were eliminated due to missing emergence data. In comparing these firms to our sample means, we find that our sample firms are more solvent, yield a higher return on assets, are slightly larger, and exhibit greater net worth. These findings suggest that the results from this study may be less applicable to firms in extreme financial distress.

⁶ Twenty observations (14 percent) in the sample are acquisitions or mergers. These were classified as emergence because they (1) were “sold” as going concerns when acquired or merged, and (2) were *not* liquidated. It is possible, although we have no evidence to support this, that the assets of these firms were later liquidated *piecemeal* by the acquiring firm. Retesting our regressions without these firms, however, does not alter our results. Also, our sample likely contains “prepackaged-bankruptcies” where the outcome is predetermined and the courts serve as a convenient tool for debt restructuring. Prepackaging could influence our results; we could not identify prepackaged-bankruptcies directly. Since firms that file prepackaged-bankruptcies are likely to emerge quickly (all major issues are resolved prior to the filing), it is likely that those firms in our sample that emerged the quickest are, or could be, prepackaged filings. We, therefore, test the sensitivity of our results by retesting our model after excluding firms that reorganize from bankruptcy within 60 days (20 firms) and find that our results do not change due to this exclusion.

⁷ In comparison, the percentage of liquidations from prior studies were 32 percent of Campbell's (1996) 1987 to 1992 sample; 27 percent of Kennedy and Shaw's (1991) 1973 to 1985 sample (including merged firms); 26 percent of Morse and Shaw's (1988) 1973 to 1982 sample; and, 50 percent of Casey, McGee, and Stickney's (1986) from 1970 to 1981 sample. The smaller percentage of liquidations in our sample is likely due to our data sources failing to report some of the smaller liquidations. As mentioned in a footnote above, any potential under-representation of liquidated firms are likely those firms in extreme financial distress and the inferences of our study may not hold for these firms.

Insert Table 1 here

Empirical Data Definitions

We identify those firms from *Compustat* that were issued *qualified* (under SAS No. 34) or *modified* (under SAS No. 59) audit reports. We further examined those firms by accessing those audit reports on *NAARS* to determine if the *qualification* or *modification* was due to a going concern issue. For those firms that received *qualified* audit reports under SAS No. 34 due to going concern issues, we set the $QUAL_j$ variable to one; otherwise $QUAL_j$ is set to zero. For those firms that received *modified* audit reports under SAS No. 59 due to going concern issues, we set the MOD_j variable to one; otherwise MOD_j is set to zero. $SWITCH_j$ is set equal to one if the auditor reported in *Compustat* changed during the three years prior to the firm filing for bankruptcy protection; otherwise $SWITCH_j$ is set equal to zero.⁸

Data for $INCR_j$ was gathered from the last *Compustat* reported 10-K filing prior to a firm's petition for bankruptcy protection. As in Ohlson (1980), if the firm's fiscal year-end occurred within three months of the bankruptcy filing, we calculated our variables using the previous year's financial statements. We set $INCR_j$ equal to one if a firm used at least two of the following income-increasing accounting methods: non-LIFO inventory accounting; non-accelerated depreciation method; flow through method for investment tax credits; or, a pension cost rate greater than the median for all *Compustat* firms for the year.⁹

⁸ During our sample period, there were two major mergers. In 1989 Ernst & Whinney merged with Arthur Young and Deloitte, Haskins & Sells merged with Touche Ross. The change in auditor code was adjusted for these mergers and was not considered as an auditor switch.

⁹ The electronics and computer industries experienced falling input costs over the period studied. Thus, for firms in those industries, we consider LIFO to be income-*increasing*. None of the sample firms from those industries, however, employed LIFO inventory accounting.

Descriptive Statistics

Table 2 presents descriptive statistics for our sample. Panel A provides the mean, median and standard deviation of our test and control variables for the full sample and for the sample partitioned by firm size. As one might expect from a sample of bankrupt firms, the sample exhibits negative solvency, negative return-on-assets and negative retained earnings. Other than solvency, all of these characteristics are significantly more negative for smaller firms. Small firms also switched auditors significantly more than did large firms, prior to their bankruptcy (37.1 percent and 21.1 percent, respectively). Small firms did not, however, receive significantly more going concern opinions, nor did they select significantly more income-increasing accounting methods than large firms. Finally, the rate of emergence is (weakly) significantly less for small firms than for large firms (71.4 percent and 84.5 percent, respectively).

Insert Table 2 here

Panel B presents the same descriptive statistics when we partition our sample by whether the firm received a going concern opinion or a *clean* opinion. The rate of emergence across the two subsamples is almost identical. We find that liquidity, return-on-assets, net worth and retained earnings are significantly more negative for those firms that received a going concern opinion than those that did not. Since these variables often serve as a basis for the audit opinion, this finding is in line with expectations. We find no evidence, however, that firms might avoid a going concern opinion by switching auditors or selecting income-increasing accounting methods. The percentages of firms that switched auditors or chose income-increasing accounting methods are almost the same for firms that received a going concern opinion or those that did not.

Descriptive statistics for our partition on whether the firms filed bankruptcy while SAS No. 34 was effective or while SAS No. 59 was effective are presented in Panel C. These statistics show that the emergence rate for our sample firms under SAS No. 59 is significantly lower than under SAS No. 34 (72.4 percent and 90.7 percent, respectively). This finding suggests that SAS No. 59 may have diluted the warning provided by the going concern opinion. The lower rate of emergence under SAS No. 59 could be attributable, however, to poor economic conditions during the period. Beyond the difference in emergence, there are also significantly more firms that switched auditors and chose income-increasing accounting methods under SAS No. 59 than under SAS No. 34 (35.7 and 66.3 percent under SAS No. 59 and 14.0 and 46.5 percent under SAS No. 34, respectively). These findings provide preliminary evidence of the interrelationship between the audit opinion, auditor switches and accounting method choice.

Panel D presents descriptive statistics when we partition on whether or not the sample firms switched auditors prior to bankruptcy. The table shows that 24 percent fewer of the firms switching auditors emerged than the firms that did not switch auditors (61.0 percent and 85.0 percent, respectively). This difference provides support for our premise that switching auditors may delay the bankruptcy process and delay stakeholders' intervention, hence decreasing the likelihood of emergence. The only firm characteristic that differs across switchers and non-switchers is that non-switchers are larger than switchers, consistent with the idea that it may be more difficult for larger firms to 'opinion shop.' Additionally, the prior literature has found that replacement auditors (auditors hired by firms that switched) tend to be more conservative than the original auditor, and are more likely to issue a going concern opinion (Krishnan 1994; Krishnan, Krishnan and Stephens 1996). We find, for our sample, that firms that switched auditors did indeed receive a significantly greater proportion of going concern opinions, but only

under SAS No. 59 where the going concern opinion was a *modification* to the standard audit report (58.5 percent and 41.0 percent, respectively). We find that under SAS No. 34 where the going concern opinion was a *qualification* to the standard audit report, significantly fewer going concern opinions were issued to firms that switched than did not switch (7.3 percent and 24.0 percent, respectively).

Finally, Panel E presents the descriptive statistics when we partition on whether the sample firms selected two or more income increasing-accounting methods or selected less than two income-increasing accounting methods. We find that a significantly greater proportion of firms that select less than two income-increasing accounting methods emerged from bankruptcy than did firms that selected two or more (87.5 percent and 71.8 percent, respectively). Those firms that select less than two income-increasing accounting methods are larger and have significantly higher net worth, less negative retained earnings and more free assets. While not significant, we find that under SAS No. 59, more going concern opinions were issued to firms that selected at least two income-increasing accounting methods than were issued to those firms that did not, but that the finding reverses under SAS No. 34. The pattern is the same as that found with audit switching under SAS No. 59 and SAS No. 34. Together, the findings from Panels D and E suggest that auditors are more conservative in their judgments under SAS No. 59 than they were under SAS No. 34, in that those firms that undertake actions to avoid a going concern opinion are the same firms that are most likely to receive one.

V. EMPIRICAL RESULTS

Tests of the Hypotheses

Table 3, panel A presents our results when the audit opinion, auditor switch, and accounting choice variables are tested individually and jointly, after controlling for those items

found to be significant in the prior bankruptcy emergence literature. In hypothesis 1, we predict that a going concern opinion is positively associated with bankruptcy emergence because it serves as a signal that incites investors and creditors to intervene and protect the remaining assets of the firm. As predicted, going concern opinions are significantly, positively associated with emergence from bankruptcy, but only under SAS No. 34. The coefficients on $QUAL_j$ are 0.236 and 0.192 for the individual test and the joint test, respectively, and both are significantly greater than zero at a five-percent level. These results support our first hypothesis when the going concern opinion is a *qualification* of the standard audit report, and thus provide evidence that an audit going concern *qualification* provides an early warning to interested stakeholders and that this warning is significantly associated with successful emergence from bankruptcy.

Under SAS No. 59, however, the association of going concern opinions with bankruptcy emergence is not significant, at the conventional levels. The signs on the coefficients on MOD_j are, in fact, negative (-0.043 and -0.032 for the individual test and the joint test, respectively). These results are in line with Raghunandan and Rama's (1995) finding that going concern opinions are issued far more frequently under SAS No. 59, as well as our finding above that documents that a higher proportion of firms switched auditors or selected income-increasing accounting methods under SAS No. 59. Taken together, these results suggest that the effectiveness of going concern opinions as early warning signals is diluted under SAS No. 59 and thus less effective than going concern opinions issued under SAS No. 34.

Insert Table 3 here

Our second hypothesis predicts that switching auditors will be negatively associated with bankruptcy emergence because firms that switch may be trying to avoid going concern audit

opinions (i.e., they are *opinion shopping*). If firms are successful in circumventing the role of the auditor's opinion, they will delay bankruptcy and permit further deterioration of the firm's assets. As predicted, $SWITCH_j$ is significantly, negatively associated with emergence from bankruptcy for both the individual test and the joint test (-0.185 and -0.140, respectively) at the five-percent level. These results provide evidence that switching auditors may indeed hinder the audit process and delay the going concern opinion, a warning that could have signaled interested stakeholders sooner, resulting in a higher likelihood of emergence.

Finally, we test the prediction that income-increasing accounting methods are negatively associated with bankruptcy emergence, because these choices may facilitate the avoidance of debt covenant violations, and hence, postpone possible bankruptcy. Our results weakly support this prediction, in that $INCR_j$ is significantly, negatively associated with bankruptcy emergence for the individual test (-0.113) at the ten-percent level. For the joint test, the sign on $INCR_j$ (-0.072) is again negative, but not significant at conventional levels. The lack of significance of $INCR_j$ when tested jointly with our measures of going concern opinions and audit switching provides additional evidence of the interrelationship of audit opinions, audit switching and accounting choice, as was indicated in the descriptive statistics above (Table 2, Panel C).

Tests of the Hypotheses – Sample Partitioned by Size

Thus far, we have controlled for size through the inclusion of a single control variable. McKeown, Mutchler and Hopwood (1991) and Mutchler, Hopwood and McKeown (1997) find, however, that auditors are less inclined to issue going concern opinions for their large client firms than their small client firms. This reluctance to issue going concern opinions to large firms may reduce the effectiveness of a going concern opinion as a timely warning to stakeholders of these firms (preventing them from taking actions that could enhance the likelihood of

emergence). Large firms, however, are under greater scrutiny than smaller firms. This increased scrutiny likely restricts larger firms from switching auditors in an attempt to suppress negative information and avoid a going concern opinion. The ability to avoid a going concern opinion through switching auditors may, therefore, be more difficult for large firms than small firms. Finally, Nelson, Elliot and Tarpley's (2000) finding that auditors are more likely to waive earnings management adjustments for large firms than for small firms suggests that large firms are more likely to avoid a going concern opinion through the choice of accounting methods than are small firms.

Overall, the prior literature suggests that emergence from bankruptcy for large firms would be *less* associated with going concern opinions and audit switching and *more* associated with income-increasing accounting methods, than would be emergence for small firms. To test this prediction, we create two (0,1) indicator variables to represent firm size (*Lg* and *Sm*). We interact these variables with the variables for going concern opinions, audit switching and income-increasing accounting methods to test whether the significance of these variables differs across size, as suggested by the prior literature.¹⁰ The resulting test model is:

$$EMERGE_j = \beta_1 SOL_j + \beta_2 LIQ_j + \beta_3 ROA_j + \beta_4 SIZE_j + \beta_5 NW_j + \beta_6 RE_j + \beta_7 FREE_j + \beta_8 REC_j + \beta_9 BIG6_j + \sum_{i=\{Lg, Sm\}} (\beta_{10i} i * QUAL_j + \beta_{11i} i * MOD_j + \beta_{12i} i * SWITCH_j + \beta_{13i} i * INCR_j) + \varepsilon_j \quad (2)$$

where:

Lg = indicator variable set equal to 1 if firm *j*'s total inflation-adjusted total assets are ranked in the *upper* half of the sample distribution, otherwise zero;

¹⁰ In performing these size-partitioned tests, we rank our sample firms by firm size (inflation-adjusted total assets) and classify firms in the upper half as large firms and the firms in the lower half as small firms. We also test our hypotheses by interacting the indicator variables with all the variables in the regression, to control for other systematic differences between small and large firms. Our results (not presented) for our variables of interest are almost identical to those reported, except return-on-assets and the recession indicator variable are significant only when interacted with the small firm indicator variable.

Sm = indicator variable set equal to 1 if firm j 's total inflation-adjusted total assets are ranked in the *lower* half of the sample distribution, otherwise zero;

and all other variable are as defined in equation (1).

Table 4 presents our results from regressing equation (2). The results of these additional tests support the predicted differences between large and small firms. We find that going concern opinions are significantly, positively associated with bankruptcy emergence only for small firms and again, only under SAS No. 34. The coefficients on $Sm*QUAL_j$ are 0.387 and 0.330 for the individual test and the joint test, respectively, both significant at a one-percent level. The coefficients on $Lg*QUAL_j$ are 0.015 and 0.016 for the individual test and the joint test, respectively, neither significant at conventional levels. The coefficients on $Sm*MOD_j$ and $Lg*MOD_j$ are not significant in any of our tests. These results suggest that if stakeholders of large firms are aware of potential problems that could lead to large firms filing bankruptcy, these stakeholders must receive that information from other sources. This is consistent with the argument that large firms are scrutinized more closely than are small firms and that this scrutiny could forewarn stakeholders of potential problems before a going concern opinion is issued.

Insert Table 4 here

Since our results indicate that the going concern opinion is not significantly associated with bankruptcy emergence for large firms, it seems unlikely that switching auditors would be associated with bankruptcy emergence for large firms either. Indeed, the results show that switching auditors is not associated with bankruptcy emergence for large firms. We find that $Lg*SWITCH_j$ is negative for both the individual and joint tests (-0.114 and -0.052, respectively) and not significantly different from zero at conventional levels of significance.

For small firms, however, we find that switching auditors shortly before filing bankruptcy is negatively associated with bankruptcy emergence. The coefficients on $Sm*SWITCH_j$ for both the individual and joint tests are negative (-0.233 and -0.134) and significant at the one-percent and ten-percent levels, respectively. These results for small firms are consistent with our findings that going concern opinions issued to small firms are significantly associated with bankruptcy emergence.

Finally, we find that emergence is negatively associated with income-increasing accounting methods, but only for large firms. $Lg*INCR_j$ is significantly, negatively related to emergence from bankruptcy for the individual test and the joint test (-0.132 and -0.124, respectively) at a ten-percent level of significance for both. On the other hand, $Sm*INCR_j$ is negative for the individual test (-0.089) but positive for the joint test (0.025), neither significant at conventional levels. The difference in results between large and small firms is consistent with Nelson, Elliot and Tarpley's (2000) finding that auditors are more likely to waive earnings management adjustments for large firms than for small firms. These results suggest that large firms are better able to avoid a going concern opinion and delay bankruptcy through their accounting method choices than are small firms.

VI. CONCLUSION

Much of the prior research on the relation between the auditor and bankruptcy has centered on whether a going concern opinion is related to a firm filing for bankruptcy protection and whether switching auditors may avoid a going concern opinion, even if switching did not preclude the firm from filing for bankruptcy. It is our contention that a going concern opinion provides an early warning to investors, creditors and other interested parties that the viability of a firm is in jeopardy. The existing literature, to date, has not investigated whether this early

warning is successful in safeguarding a firm's remaining assets, such that, intervention (i.e., forcing bankruptcy) could redirect activities and save the firm.

In this study, we test whether a going concern opinion does indeed safeguard the remaining assets of a firm, by testing whether the issuance of a going concern opinion in the year prior to a firm declaring bankruptcy is positively associated with that firm successfully emerging from bankruptcy. The form of the going concern opinion along with the auditor's explicit responsibilities, however, was changed by the issuance of SAS No. 59. SAS No. 59 requires the auditor to evaluate the going concern assumption and report concerns as a *modification* to the standard audit report. This was a departure from the predecessor standard, SAS No. 34, which required auditors to simply be aware of evidence that may indicate that the going concern assumption may be violated, and report such concerns as a *qualification* to the standard audit report.

The results of this study provide evidence that the going concern opinion issued under SAS No. 34 was significantly, positively associated with bankruptcy emergence, but that the going concern opinion issued under SAS No. 59 is not. Along with the prior literature's finding that far more going concern opinions were issued under SAS No. 59, these results provide evidence that SAS No. 59 diluted the going concern opinion and weakened its effectiveness as an early warning of potential problems.

We also find that Under SAS No. 59, there are more firms that switch auditors shortly before filing bankruptcy and more firms that select income-increasing accounting methods than under SAS No. 34. The more frequent occurrence of firms switching auditors and selecting income-increasing accounting methods under SAS No. 59 is a concern, because it is our contention that firms often choose one or both of these actions in an attempt to avoid a going

concern opinion, and we claim that a going concern opinion enhances the chances of a firm emerging successfully from bankruptcy. Our results support our contentions in that both switching auditors and selecting income-increasing accounting methods are negatively associated with bankruptcy emergence.

Finally, the prior literature has documented that larger firms are less likely to receive a going concern opinion, more apt to be highly scrutinized (thus, less able to selectively switch auditors), and more likely to be allowed by their auditors to manage earnings than are small firms. The implications of these prior findings are that we would likely see the association of bankruptcy emergence with going concern opinions and auditor switching be weaker, and the association of bankruptcy emergence with accounting choice be stronger, for larger firms than smaller firms. Our results support this prediction.

The implications of this study provide new insights into the interrelationships of going concern opinions, auditor switching and accounting choice. This insight could be important, not only to investors, creditors and other stakeholders, but also to policy makers who determine rules regarding the issuance of going concern opinions and disclosures relating to auditor switches and accounting methods. Future research that examines going concern opinions, auditor switching or accounting choice may benefit by considering the interrelationships we demonstrate. Further, future research on these issues may benefit by extending the test window beyond the point of declaration of bankruptcy to the point of bankruptcy resolution.

TABLE 1: SAMPLE SELECTION

Description	Firms	Percent
Compustat listed firms noted on NAARS as having filed for Chapter 11 Bankruptcy protection: 1981-1994:	375	100%
Less firms:		
Missing data on <i>Compustat</i>	<u>(159)</u>	42%
Subtotal	216	58%
Less firms missing emerge/liquidate data	<u>(75)</u>	<u>20%</u>
Final Sample	<u>141</u>	
Firms emerging from bankruptcy (percent of final sample)	<u>110</u>	<u>78%</u>

TABLE 2: DESCRIPTIVE STATISTICS

Panel A: Pooled Sample and Sample Partitioned by Size

Variable	Pooled Sample			Large Firms (n=71)			Small Firms (n=70)			Test of Means
	Mean	Med.	S.D.	Mean	Med.	S.D.	Mean	Med.	S.D.	
<i>Emerge_j</i>	78.0%	-	41.56	84.5%	-	36.44	71.4%	-	45.50	13.1% *
<i>SOL_j</i>	-1.058	-0.836	11.97	-1.067	0.012	3.55	-1.048	-1.904	16.67	-0.019
<i>LIQ_j</i>	0.500	0.390	0.44	0.546	0.468	0.41	0.453	0.312	0.46	0.094
<i>ROA_j</i>	-0.154	-0.117	0.27	-0.114	-0.062	0.16	-0.194	-0.159	0.34	0.079 *
<i>SIZE_j</i>	4.711	4.410	1.58	5.927	5.589	1.18	3.477	3.625	0.76	2.450 ***
<i>NW_j</i>	-0.076	0.053	0.68	0.031	0.045	0.28	-0.185	0.081	0.91	0.216 *
<i>RE_j</i>	-0.528	-0.163	1.19	-0.223	-0.102	0.51	-0.837	-0.239	1.56	0.613 ***
<i>FREE_j</i>	0.167	0.170	0.34	0.213	0.186	0.23	0.121	0.155	0.43	0.093
<i>REC_j</i>	0.177	-	0.38	0.197	-	0.40	0.157	-	0.37	0.040
<i>BIG6_j</i>	0.950	-	0.22	0.972	-	0.17	0.929	-	0.26	0.043
<i>QUAL_j</i>	0.191	-	0.39	0.155	-	0.36	0.229	-	0.42	-0.074
<i>MOD_j</i>	0.461	-	0.50	0.423	-	0.50	0.500	-	0.50	-0.077
<i>SWITCH_j</i>	0.291	-	0.46	0.211	-	0.41	0.371	-	0.49	-0.160 **
<i>INCR_j</i>	0.603	-	0.49	0.549	-	0.50	0.657	-	0.48	-0.108

TABLE 2: Continued

Panel B: Sample Partitioned by Audit Opinion

Variable	$GC_j = 1$ (n=34)			$GC_j = 0$ (n=107)			Test of Means
	Mean	Med.	S.D.	Mean	Med.	S.D.	
<i>Emerge_j</i>	78.3%	-	41.47	77.6%	-	42.16	0.7%
<i>SOL_j</i>	-2.324	-1.347	3.89	1.320	0.142	19.49	-3.644
<i>LIQ_j</i>	0.424	0.322	0.37	0.641	0.544	0.51	-0.217 ***
<i>ROA_j</i>	-0.186	-0.157	0.31	-0.094	-0.049	0.15	-0.092 **
<i>SIZE_j</i>	4.571	4.349	1.45	4.973	4.928	1.78	-0.402
<i>NW_j</i>	-0.210	0.003	0.78	0.175	0.175	0.28	-0.384 ***
<i>RE_j</i>	-0.739	-0.306	1.36	-0.131	-0.010	0.62	-0.608 ***
<i>FREE_j</i>	0.167	0.163	0.40	0.166	0.193	0.19	0.001
<i>REC_j</i>	0.173	-	0.38	0.184	-	0.39	-0.011
<i>BIG6_j</i>	0.967	-	0.18	0.918	-	0.28	0.049
<i>SWITCH_j</i>	0.293	-	0.46	0.286	-	0.46	0.007
<i>INCR_j</i>	0.620	-	0.49	0.571	-	0.50	0.048

Panel C: Sample Partitioned by Time Period

Variable	SAS No. 34 Period (n=43)			SAS No. 59 Period (n=98)			Test of Means
	Mean	Med.	S.D.	Mean	Med.	S.D.	
<i>Emerge_j</i>	90.7%	-	29.39	72.4%	-	0.45	18.2% ***
<i>SOL_j</i>	-1.983	-0.919	3.37	-0.652	-0.564	14.19	-1.332
<i>LIQ_j</i>	0.523	0.462	0.35	0.490	0.370	0.47	0.033
<i>ROA_j</i>	-0.141	-0.156	0.38	-0.159	-0.101	0.20	0.018
<i>SIZE_j</i>	4.672	4.309	1.82	4.728	4.414	1.46	-0.055
<i>NW_j</i>	-0.001	0.097	0.49	-0.109	0.045	0.75	0.108
<i>RE_j</i>	-0.386	-0.168	1.04	-0.590	-0.156	1.25	0.204
<i>FREE_j</i>	0.196	0.193	0.41	0.154	0.158	0.31	0.042
<i>REC_j</i>	0.000	-	0.00	0.255	-	0.44	-0.255 ***
<i>BIG6_j</i>	0.907	-	0.29	0.969	-	0.17	-0.062
<i>QUAL_j</i>	0.628	-	0.49	-	-	-	-
<i>MOD_j</i>	-	-	-	0.663	-	0.48	-
<i>SWITCH_j</i>	0.140	-	0.35	0.357	-	0.48	-0.217 ***
<i>INCR_j</i>	0.465	-	0.50	0.663	-	0.48	-0.198 **

TABLE 2: Continued

Panel D: Sample Partitioned by Audit Switches

Variable	<i>SWITCH_j</i> = 1 (n=41)			<i>SWITCH_j</i> = 0 (n=100)			Test of Means
	Mean	Med.	S.D.	Mean	Med.	S.D.	
<i>Emerge_j</i>	61.0%	-	49.39	85.0%	-	35.89	-24.0% ***
<i>SOL_j</i>	-2.085	-1.506	3.20	-0.637	-0.446	14.06	-1.448
<i>LIQ_j</i>	0.486	0.386	0.45	0.506	0.400	0.43	-0.020
<i>ROA_j</i>	-0.168	-0.106	0.22	-0.148	-0.120	0.29	-0.019
<i>SIZE_j</i>	4.372	4.241	1.45	4.850	4.611	1.62	-0.478 *
<i>NW_j</i>	-0.216	0.034	0.94	-0.019	0.060	0.53	-0.197
<i>RE_j</i>	-0.724	-0.188	1.59	-0.447	-0.155	0.98	-0.277
<i>FREE_j</i>	0.089	0.149	0.42	0.199	0.182	0.31	-0.110
<i>REC_j</i>	0.195	-	0.40	0.170	-	0.38	0.025
<i>BIG6_j</i>	0.902	-	0.30	0.970	-	0.17	-0.068
<i>QUAL_j</i>	0.073	-	0.26	0.240	-	0.42	-0.167 ***
<i>MOD_j</i>	0.585	-	0.50	0.410	-	0.49	0.175 *
<i>INCR_j</i>	0.683	-	0.47	0.570	-	0.50	0.113

Panel E: Sample Partitioned by Accounting Methods

Variable	<i>INCR_j</i> = 1 (n=85)			<i>INCR_j</i> = 0 (n=56)			Test of Means
	Mean	Med.	S.D.	Mean	Med.	S.D.	
<i>Emerge_j</i>	71.8%	-	45.28	87.5%	-	33.37	-15.7% **
<i>SOL_j</i>	-1.065	-0.907	15.35	-1.047	-0.551	2.22	-0.017
<i>LIQ_j</i>	0.502	0.404	0.44	0.497	0.442	0.44	0.005
<i>ROA_j</i>	-0.164	-0.125	0.32	-0.138	-0.098	0.15	-0.026
<i>SIZE_j</i>	4.450	4.346	1.48	5.107	4.810	1.65	-0.658 **
<i>NW_j</i>	-0.174	0.033	0.83	0.072	0.143	0.30	-0.246 **
<i>RE_j</i>	-0.724	-0.235	1.44	-0.230	-0.071	0.55	-0.493 ***
<i>FREE_j</i>	0.111	0.160	0.36	0.252	0.176	0.30	-0.141 **
<i>REC_j</i>	0.176	-	0.38	0.179	-	0.39	-0.002
<i>BIG6_j</i>	0.976	-	0.15	0.911	-	0.29	0.066
<i>QUAL_j</i>	0.141	-	0.35	0.268	-	0.45	-0.127
<i>MOD_j</i>	0.529	-	0.50	0.357	-	0.48	0.172
<i>SWITCH_j</i>	0.329	-	0.47	0.232	-	0.43	0.097

TABLE 2: Continued**Notes:**

The variables are defined as follows:

- $Emerge_j$ = indicator variable set equal to 1 if firm j is reorganized or was acquired/merged, otherwise zero;
- SOL_j = rank transformation of interest-coverage (the sum of earnings before extraordinary items and interest expense, divided by interest expense);
- LIQ_j = rank transformation of quick ratio (current assets less inventory, divided by current liabilities);
- ROA_j = rank transformation of return-on-assets (net income divided by average total assets);
- $SIZE_j$ = rank transformation of log of inflation adjusted total assets (adjusted using Gross National Product Index);
- NW_j = rank transformation of total stockholders' equity divided by total assets;
- RE_j = rank transformation of retained earnings divided by total assets;
- $FREE_j$ = rank transformation of free assets (property, plant, and equipment less collateralized loans - debt, less mortgages and other secured loans, *Compustat* data item 241 - divided by adjusted total assets);
- REC_j = indicator variable set equal to 1 if the bankruptcy filing occurred during a recessionary period;
- $BIG6_j$ = indicator variable set equal to 1 if firm j is audited by a Big 6 firm in the year prior to filing bankruptcy, otherwise zero;
- $QUAL_j$ = indicator variable set equal to 1 if firm j received a *qualified* audit opinion (under SAS No. 34), otherwise zero;
- MOD_j = indicator variable set equal to 1 if firm j received a *modified* audit opinion (under SAS No. 59), otherwise zero;
- $SWITCH_j$ = indicator variable set equal to 1 if firm j switched auditors in the three years prior to filing for bankruptcy protection, otherwise zero;
- $INCR_j$ = indicator variable set equal to 1 if firm j selects two or more income-increasing accounting methods (non-LIFO, flow through method of investment tax, aggressive pension costs rate, or non-accelerated depreciation), otherwise zero;

*, **, *** indicate significance at the ten, five and one-percent level, respectively for a two-tailed test.

TABLE 3: POOLED REGRESSION RESULTS

Variable	expected sign	Test of $QUAL_j$ and MOD_j	Test of $SWITCH_j$	Test of $INCR_j$	Joint Test
Adj. R^2		0.1482	0.1342	0.1111	0.1511
Intercept	?	0.343 1.68 *	0.593 2.91 ***	0.492 2.47 **	0.528 2.40 ***
SOL_j	+	0.008 3.99 ***	0.007 3.38 ***	0.008 3.65 ***	0.007 3.50 ***
LIQ_j	+	0.000 0.03	0.000 0.15	0.000 0.37	0.000 0.04
ROA_j	+	-0.006 -2.85 ***	-0.005 -2.50 **	-0.006 -2.84 ***	-0.005 -2.38 **
$SIZE_j$	+	0.003 2.14 **	0.002 1.65	0.002 1.72 *	0.002 1.78 *
NW_j	+	0.006 2.72 ***	0.004 2.15 **	0.005 2.38 **	0.005 2.45 **
RE_j	+	-0.004 -1.87 *	-0.003 -1.61	-0.004 -1.85 *	-0.004 -1.91 *
$FREE_j$	+	0.000 0.02	0.000 0.24	0.000 0.36	0.000 0.20
REC_j	?	0.221 2.51 **	0.160 1.86 *	0.155 1.78 *	0.211 2.41 **
$BIG6_j$	+	0.016 0.10	-0.089 -0.56	0.011 0.07	-0.012 -0.08
$QUAL_j$	+	0.236 2.32 ##			0.192 1.86 ##
MOD_j	+	-0.043 -0.52			-0.032 -0.39
$SWITCH_j$	-		-0.185 -2.45 ###		-0.140 -1.83 ##
$INCR_j$	-			-0.113 -1.57 #	-0.072 -1.01

TABLE 3: Continued**Notes:**

The regression equation is:

$$EMERGE_j = \beta_1 SOL_j + \beta_2 LIQ_j + \beta_3 ROA_j + \beta_4 SIZE_j + \beta_5 NW_j + \beta_6 RE_j + \beta_7 FREE_j + \beta_8 REC_j + \beta_9 BIG6_j + \beta_{10} QUAL_j + \beta_{11} MOD_j + \beta_{12} SWITCH_j + \beta_{13} INCR_j + \varepsilon_j$$

The variables are defined as follows:

- Emerge_j* = indicator variable set equal to 1 if firm *j* is reorganized or was acquired/merged, otherwise zero;
- SOL_j* = rank transformation of interest-coverage (the sum of earnings before extraordinary items and interest expense, divided by interest expense);
- LIQ_j* = rank transformation of quick ratio (current assets less inventory, divided by current liabilities);
- ROA_j* = rank transformation of return-on-assets (net income divided by average total assets);
- SIZE_j* = rank transformation of log of inflation adjusted total assets (adjusted using Gross National Product Index);
- NW_j* = rank transformation of total stockholders' equity divided by total assets;
- RE_j* = rank transformation of retained earnings divided by total assets;
- FREE_j* = rank transformation of free assets (property, plant, and equipment less collateralized loans - debt, less mortgages and other secured loans, *Compustat* data item 241 - divided by adjusted total assets);
- REC_j* = indicator variable set equal to 1 if the bankruptcy filing occurred during a recessionary period;
- BIG6_j* = indicator variable set equal to 1 if firm *j* is audited by a Big 6 firm in the year prior to filing bankruptcy, otherwise zero;
- QUAL_j* = indicator variable set equal to 1 if firm *j* received a *qualified* audit opinion (under SAS No. 34), otherwise zero;
- MOD_j* = indicator variable set equal to 1 if firm *j* received a *modified* audit opinion (under SAS No. 59), otherwise zero;
- SWITCH_j* = indicator variable set equal to 1 if firm *j* switched auditors in the three years prior to filing for bankruptcy protection, otherwise zero;
- INCR_j* = indicator variable set equal to 1 if firm *j* selects two or more income-increasing accounting methods (non-LIFO, flow through method of investment tax, aggressive pension costs rate, or non-accelerated depreciation), otherwise zero;

#, ##, ### indicate significance at the ten, five and one-percent level, respectively for a one-tailed test.

*, **, *** indicate significance at the ten, five and one-percent level, respectively for a two-tailed test.

TABLE 4: REGRESSION RESULTS PARTITIONED BY SIZE

Variable	expected sign	Test of $QUAL_j$ and MOD_j	Test of $SWITCH_j$	Test of $INCR_j$	Joint Test
Adj. R ²		0.1808	0.1319	0.1052	0.1808
Intercept	?	0.269 1.28	0.602 2.95 ***	0.469 2.25 **	0.359 1.53
SOL_j	+	0.009 4.15 ***	0.007 3.38 ***	0.008 3.63 ***	0.008 3.67 ***
LIQ_j	+	0.000 0.16	0.000 0.03	0.000 0.36	0.000 0.01
ROA_j	+	-0.006 -3.05 ***	-0.005 -2.44 **	-0.006 -2.82 ***	-0.006 -2.56 **
$SIZE_j$	+	0.003 1.90 *	0.002 1.16	0.003 1.57	0.004 1.91 *
NW_j	+	0.005 2.71 **	0.005 2.19 **	0.005 2.39 **	0.005 2.54 **
RE_j	+	-0.004 -1.75	-0.003 -1.62	-0.004 -1.85 *	-0.004 -1.82 *
$FREE_j$	+	0.000 0.37	0.000 0.23	0.000 0.39	0.000 0.28
REC_j	?	0.215 2.49 *	0.173 1.97 *	0.156 1.78 *	0.221 2.50 **
$BIG6_j$	+	0.045 0.29	-0.069 -0.43	0.009 0.06	0.031 0.19
$Lg*QUAL_j$	+	0.015 0.11			0.016 0.12
$Lg*MOD_j$	+	0.015 0.15			0.025 0.24
$Lg*SWITCH_j$	-		-0.114 -0.99		-0.052 -0.45
$Lg*INCR_j$	-			-0.132 -1.49 #	-0.124 -1.39 #
$Sm*QUAL_j$	+	0.387 3.11 ###			0.330 2.57 ###
$Sm*MOD_j$	+	-0.084 -0.85			-0.091 -0.84
$Sm*SWITCH_j$	-		-0.233 -2.42 ###		-0.134 -1.30 #
$Sm*INCR_j$	-			-0.089 -0.91	0.025 0.24

TABLE 4: Continued**Notes:**

The regression equation is:

$$EMERGE_j = \beta_1 SOL_j + \beta_2 LIQ_j + \beta_3 ROA_j + \beta_4 SIZE_j + \beta_5 NW_j + \beta_6 RE_j + \beta_7 FREE_j + \beta_8 REC_j + \beta_9 BIG6_j + \sum_{i=\{Lg, Sm\}} (\beta_{10i} i * QUAL_j + \beta_{11i} i * MOD_j + \beta_{12i} i * SWITCH_j + \beta_{13i} i * INCR_j) + \varepsilon_j$$

The variables are defined as follows:

- Emerge_j* = indicator variable set equal to 1 if firm *j* is reorganized or was acquired/merged, otherwise zero;
- SOL_j* = rank transformation of interest-coverage (the sum of earnings before extraordinary items and interest expense, divided by interest expense);
- LIQ_j* = rank transformation of quick ratio (current assets less inventory, divided by current liabilities);
- ROA_j* = rank transformation of return-on-assets (net income divided by average total assets);
- SIZE_j* = rank transformation of log of inflation adjusted total assets (adjusted using Gross National Product Index);
- NW_j* = rank transformation of total stockholders' equity divided by total assets;
- RE_j* = rank transformation of retained earnings divided by total assets;
- FREE_j* = rank transformation of free assets (property, plant, and equipment less collateralized loans - debt, less mortgages and other secured loans, *Compustat* data item 241 - divided by adjusted total assets);
- REC_j* = indicator variable set equal to 1 if the bankruptcy filing occurred during a recessionary period, otherwise zero;
- BIG6_j* = indicator variable set equal to 1 if firm *j* is audited by a Big 6 firm in the year prior to filing bankruptcy, otherwise zero;
- QUAL_j* = indicator variable set equal to 1 if firm *j* received a *qualified* audit opinion (under SAS No. 34), otherwise zero;
- MOD_j* = indicator variable set equal to 1 if firm *j* received a *modified* audit opinion (under SAS No. 59), otherwise zero;
- SWITCH_j* = indicator variable set equal to 1 if firm *j* switched auditors in the three years prior to filing for bankruptcy protection, otherwise zero;
- INCR_j* = indicator variable set equal to 1 if firm *j* selects two or more income-increasing accounting methods (non-LIFO, flow through method of investment tax, aggressive pension costs rate, or non-accelerated depreciation), otherwise zero;
- Sm* = indicator variable set equal to 1 if firm *j*'s total inflation-adjusted total assets are ranked in the *lower* half of the sample distribution, otherwise zero;
- Lg* = indicator variable set equal to 1 if firm *j*'s total inflation-adjusted total assets are ranked in the *upper* half of the sample distribution, otherwise zero;

#, ##, ### indicate significance at the ten, five and one-percent level, respectively for a one-tailed test.

*, **, *** indicate significance at the ten, five and one-percent level, respectively for a two-tailed test.

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