

# Market Expectations for First-Time Going-Concern Recipients

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*Prior research on market reaction to going-concern modifications indicates that unanticipated modifications cause a negative market reaction, whereas anticipated modifications produce no similar reaction. This paper uses previously proposed measures of market expectations and a naive model—actual subsequent viability status—to assess market reaction to going-concern report recipients. Our results indicate that a naive measure of market expectations provides information to the market that is incremental to previously developed measures when using market reaction as an indication of changed expectations. Multiple regression analyses controlling for firm size, going-concern expectation, bankruptcy probability, changes in financial condition, default status, and delisting support our finding of differential abnormal returns based on subsequent viability, and indicate a need for improved models of market expectations.*

## 1. Introduction

This paper addresses the issue of market expectations for firms receiving going-concern-modified opinions. Fleak and Wilson (1994) and Jones (1996), among others who find information content in the going-concern opinion, argue that it is important to partition firms based on *market expectations* of the audit opinion. Intuitively this appears to be a logical approach, as one would not expect to find a reaction to an expected going-concern modification, but would expect to find a negative reaction to a going-concern modification where the market does not strongly suspect viability concerns.

Understanding market expectations about future viability is important for examining going-concern modifications. The primary argument for the existence of the going-concern modification is to provide additional information to financial statement users beyond other disclosures (Bell and Wright [1995]). To assess spe-

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cifically when the going-concern opinion provides additional information to the market, we need a better understanding of market expectations prior to the going-concern opinion.

Prior research has proposed several measures of expectations for the going-concern-modified report. Mutchler (1983, 1985) designed a discriminant model based on financial statement ratios that minimized the classification error between going-concern opinions and clean opinions. Fleak and Wilson (1994) proposed a measure of firm decline (as measured by stock returns during a period prior to the going-concern report). In addition, Zmijewski's (1984) model of bankruptcy has been used as a measure of market expectations.

This paper assesses these proposed measures along with a naive model of market expectations—the actual subsequent viability status of the company. Our findings indicate that a naive model provides information incremental to the other proposed measures of market expectations. When our sample of first-time going-concern report recipients is partitioned on subsequent viability, we find that, as expected, subsequently viable firms exhibited negative average abnormal stock returns for variable event periods surrounding the announcement of the report. Additionally, firms that subsequently filed for bankruptcy generally exhibited no statistically significant reaction to the announcement. Regression analysis provides further support that the bankruptcy partition is significantly associated with market expectations, as measured by abnormal returns. After controlling for previously proposed bankruptcy and market expectations, as well as other variables proposed in the literature, our naive partition remained significantly related to market returns across varying event windows, while the competing measures generally became insignificant. Our results indicate that improved models of market expectations of bankruptcy and audit report type may be possible and further research may provide valuable information about the accuracy of market expectations of financially distressed firms, and hence, on when the going-concern opinion provides information to the market.

The remainder of this paper proceeds as follows. Section 2 discusses the prior literature and choice of subsequent viability status as an alternative measure of market expectations. Section 3 describes the research methods, followed by the results presented in Section 4. A conclusion and discussion of our results is presented in the final section.

## 2. Prior Research and Subsequent Viability as a Proxy for Market Expectations

Many prior studies have examined the market's reaction to the issuance of a going-concern-modified audit report (Chow and Rice [1982]; Davis [1982]; Elliott [1982]; Dodd et al. [1984]; Dopuch et al. [1986, 1987]). More recent research provides evidence that recipients of *expected* modifications do not experience negative stock price adjustments, while recipients of *unexpected* modified reports do experience a negative stock price reaction (Loudder et al. [1992]; Fleak and Wilson

[1994]; Jones [1996]). These studies illustrate the necessity to partition samples of going-concern report recipients into expected and unexpected recipient groups.

In this study, we assume that the market has *some* expectation about the future *viability* of the firm. For firms that subsequently go bankrupt, it is likely that prior to receipt of the audit report the market has already assessed a higher probability that this bankruptcy will occur than for firms that subsequently remain viable. In addition, the market has likely assessed a higher probability that a modified audit opinion will be issued. Thus, a going-concern-modified audit opinion is less likely to provide negative information content to the market for firms that the market has already assessed as having a higher probability of an impending bankruptcy. However, for firms that continue to be viable, it is less likely that the market expects either subsequent bankruptcy or a report modification. Thus, the receipt of a going-concern modification to a company that the market perceives as viable would be expected to be viewed as a negative signal, causing a negative adjustment in share prices. This argument suggests that subsequent viability status may serve as a naive model to compare with probability of bankruptcy assessments.<sup>1</sup>

This view is consistent with a belief-revision process. Since the market has some prior expectation of firm bankruptcy [ $P(B)$ ], the receipt of a going-concern-modified audit opinion for a firm for which the market already has assessed a high  $P(B)$  would cause little, if any, revision in  $P(B)$ . The result would be minimal share price adjustment. However, the receipt of a going-concern-modified audit opinion for a firm for which the market has previously assessed a lower  $P(B)$  would result in a much larger change in estimated  $P(B)$ . This would lead to a substantial reduction in share prices.

The link between subsequent viability and market expectations of a *going-concern report* is more tenuous. First, it can be argued that the job of the auditor is not to predict bankruptcy, but to signal financial stress and warn that liquidation of certain assets may be imminent (AICPA [1988]). Further, bankruptcy is an action sometimes *chosen* by a firm facing asset liquidation or as a strategic move on the part of management. Thus, while bankruptcy may be highly correlated with the receipt of a going-concern modification, the auditor's primary responsibility is not to predict the filing of a bankruptcy. It is for this reason that subsequent viability status provides an interesting proxy for market expectations of a going-concern report. Since the link between subsequent viability status and auditor's report choice is tenuous, we would expect that other previously documented factors in going-concern prediction (e.g., Mutchler [1983]; Mutchler et al. [1997]) should relate much more closely to the market's reaction to a going-concern modification than our naive model. A finding that market reaction is related to subsequent viability after controlling for known factors would indicate that there is room for improving the extant models of market expectations about an audit report.

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1. The choice of subsequent viability status as a proposed alternative proxy for market expectations is certainly debatable. Subsequent viability is an *ex post* measure and using an *ex post* measure for expectations implicitly assumes market prescience. However, we do not argue that the market has perfect knowledge of the firm's future, just some rational expectation of firm viability.

### 3. Research Methods and Sample Selection

#### 3.1 Research Methods

We limited our analysis to first-time going-concern report recipients because companies receiving such reports may be more likely to exhibit specific share price adjustments to this new information from the auditor. For those companies receiving continuing going-concern modified reports, it is less clear as to how share prices might react to the company's receipt of a continuing going-concern report (Mutchler et al. [1997]).

To compare market differentiation of subsequently bankrupt and viable companies, we will present both univariate tests and multiple regression tests. We calculate abnormal stock returns occurring between day  $-10$  and day  $+10$  (relative to the annual report issuance date) and we separately analyze the returns of bankrupt and viable companies. Abnormal returns,  $AR_{it}$ , are calculated for each firm using their raw return adjusted for size (Fama and French [1992]). On the last trading date of the year prior to the year in which the going-concern report was issued, all NYSE firms on CRSP are ranked on market value of equity (i.e., price times number of shares) and divided into 10 groups. The NYSE size deciles are then used to group all firms on Amex and NASDAQ. Since most Amex and NASDAQ stocks are smaller than NYSE stocks, the deciles are bottom weighted in number of stocks. Abnormal returns are then calculated as the raw return for the sample stock minus the return for the portfolio of stocks in the same size decile.<sup>2</sup> To combine abnormal returns in each viability group, we calculate average abnormal returns,  $AAR_{it}$ .

We compare the  $AAR_{it}$ s for the bankrupt and nonbankrupt groups for the event day and a three-day event window surrounding the issuance of the audit report. Dodd et al. (1984) provide evidence that audit qualifications are rarely released to the media prior to release of the annual report or 10-K, whichever is issued first. Conversely, the annual financial performance (earnings) signal is typically reported in the *Wall Street Journal* and the financial press two to six weeks prior to release of the annual report. Accordingly, Dodd et al. (1984) and Fleak and Wilson (1994) rely on this timing relationship to help control for the effects of the earnings signal by using relatively narrow event windows around the annual report/10-K release dates.

Similar to these earlier studies, our study uses a narrow event window centered on the earlier of the annual report or 10-K release date. However, as an additional control, and as the sample selection section indicates, we also eliminate any com-

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2. We also calculate abnormal returns as raw returns minus the CRSP equally weighted index and as raw return minus the mean return for the security over the prior 250 days. Due to nonsynchronous trading and the distressed nature of our sample firms, we calculated the capital asset pricing model betas using corrections for nonsynchronous trading. The results using the three alternative measures of abnormal return are substantially identical to those presented, indicating that our results are not overly sensitive to definition of abnormal return.

pany that had a news release unrelated to information contained in the annual report/10-K reported in the *Dow Jones News Service* (which includes the *Wall Street Journal Index*) during our event period.

Finally, based on the results of Dodd et al. (1984) who found different abnormal returns in the period leading up to the audit report release date (i.e., the "run-up period"), we also assess abnormal returns for our two groups for the period preceding the release of the auditor's report. We expect that the returns for the subsequently bankrupt firms will be more negative in the preceding period if the market received information on the company's condition and accurately assessed their future viability.

### 3.2 Multiple Regression Model

A cross-sectional regression model is then used to investigate the association between abnormal security returns, predictive measures proposed in prior research and our naive partition of actual subsequent viability status. Abnormal returns ( $AR_i$ ) for the event period are regressed on subsequent bankruptcy status, bankruptcy, and going-concern opinion prediction variables, and several control variables that may affect share prices. The dependent variable ( $AR_i$ ) is the abnormal return of the  $i$ th firm over a one-day or three-day event window centered on the day the audit opinion is publicly available. The independent variable of interest is the two-state subsequent viability variable (BKT).

We include a going-concern report expectation variable in our regression model based on the multiple discriminant model used by Mutchler (1983) and Fleak and Wilson (1994). Even though we analyze only companies receiving a going-concern modified opinion, since we are interested in differential market reaction based on the market's expectation of subsequent viability, we also assess and control for the markets' expectation of a going-concern report. Thus, the discriminant model is used to partially assess whether each of the firms in our sample is expected to receive a going-concern audit report and uses a set of financial statement ratios to predict the auditors' going-concern decision.<sup>3</sup> The ratios we use are cash flow from operations/total liabilities (CFTL), current assets/current liabilities (CACL), total long-term debt/total assets (LTDTA), total liabilities/total assets (TLTA), net income before tax/net sales (NBSA), and net worth/total debt (NWTD). To be consistent with Fleak and Wilson (1994), we use Mutchler's (1983) coefficients and estimate the model as

$$\begin{aligned} \text{PREDGC} = & (0.159)\text{CFTL} + (0.132)\text{CACL} + (-0.032)\text{LTDTA} \\ & + (-0.138)\text{TLTA} + (0.187)\text{NBSA} + (0.120)\text{NWTD}. \end{aligned} \quad (1)$$

3. We use this model to be consistent with prior research. In addition, as discussed later in this section, we included control variables for other factors not included in this prediction model, but found in other going-concern report prediction models.

The discriminant model typically minimizes the classification error based on the actual auditor's going-concern decision. However, our sample contains only firms that received a going-concern opinion. Hence, we used Fleak and Wilson's (1994) minimum cutoff score of 0.01 to classify our sample companies into those expected to receive a going-concern report and those expected to receive a clean report.<sup>4</sup>

We then include a measure of the probability of bankruptcy in our regression. Prior research examining the effects of auditor going-concern report decisions (e.g., Mutchler [1985]; Hopwood et al. [1989]; McKeown et al. [1991]; Mutchler et al. [1997]), as well as research on bankruptcy and stock returns (e.g., Clark and Weinstein [1983]; Eberhart et al. [1990]; Chen and Church [1996]) have all demonstrated the need to assess financial distress when examining firm failure. The probability of bankruptcy variable was calculated using the discriminant model presented in Zmijewski (1984). Since companies receiving a going-concern-modified audit opinion do not exhibit identical levels of financial stress, this probability of bankruptcy measure is included to assess the potential effect of differential levels of financial stress on market prices.<sup>5</sup>

We then include company size (measured by the natural log of market value of equity) as a control variable in the regression model because evidence from prior studies (e.g., Fama and French [1992]; Banz [1981]; Keim [1983]; Atiase [1985]) indicates there is a significant size effect on stock returns. Additionally, the information content of public information releases such as audit opinions may also be greater for small companies because there is less privately developed information for these firms. Also, prior audit qualification studies (e.g., Firth [1978]; Chow and Rice [1982]; Loudder et al. [1992]; Fleak and Wilson [1994]) have included size as a control variable in their audit report analyses, and Dodd et al. (1984) found different levels of abnormal return when their sample of qualified audit firms was segmented by size.

We also include control variables for debt default status of the company at the time of the report. Prior research has shown that companies in default are significantly more likely to receive a going-concern-modified report than companies not in default (Chen and Church [1992, 1996]; Mutchler et al. [1997]). Further, Mutchler et al. (1997) separately analyzed technical default of debt covenants (i.e., not

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4. Discriminant scores ranged from -1.34 to 1.09, with the exception of one outlier. To provide some assurance that our lack of significant results for this variable, as discussed later, was not driven by our choice of minimum cutoff score, we varied the cutoff score by five increments of 0.01 above and below our initial cutoff. Additionally, we measured this variable as the continuous raw PREDGC score from the discriminant model. The resulting regression results from these alternative specifications were not significantly different from the results reported.

5. To accurately assess bankruptcy probability at the report date, we calculate the probability using financial statement information issued concurrently with the audit report. While this is consistent with prior research, it does not control for changes in the market's assessment of  $P(B)$  caused by changes in financial statement data. To help alleviate this concern, we also included a measure of change in  $P(B)$ . Inclusion of this measure is discussed further in footnote 7. The addition of the change measure did not affect the results presented.

complying with certain financial ratio requirements) and payment defaults (i.e., missing specified debt payments). They found both of these variables to be significantly associated with the receipt of a going-concern report. Foster et al. (1998) also determined that both of these default variables are associated with bankruptcy and the issuance of a going-concern report. Accordingly, we include these two default indicator variables to control for expected going-concern report receipt and the resultant possible effect on share prices.<sup>6</sup>

A control variable measuring improvement or deterioration of firm condition was used to control for alternative explanations of share price reaction. The measure we used was the cumulative market-adjusted returns (CMR) during the run-up period  $[-250, -6]$ , similar to Fleak and Wilson (1994). A dummy value of 1 is assigned if the CMR is negative and a value of 0 is assigned otherwise.<sup>7</sup>

Finally, we included a dummy variable for whether the company had its stock delisted for deleterious reasons in the subsequent two years. Although an auditor does not report on the potential failure of a company's stock, from an investors' standpoint, delisting can be considered an investment failure (Beatty [1993]). If there is information in the annual report that suggests that the company may soon delist, we would expect that investors would react negatively to this information. Thus, we classify failure from an investment standpoint consistently with Beatty (1993) and Willenborg and McKeown (1998). Accordingly, if the stock was delisted with CRSP tape codes 550 to 572 or 574 to 584, we considered this an investment failure.

Thus, the multiple regression model used in this study is as follows:

$$\begin{aligned} \text{WCAR}_i = & a_0 + a_1\text{BKT} + a_2\text{PREDGC} + a_3\text{SIZE} + a_4\text{TECHDFT} \\ & + a_5\text{FINDFT} + a_6\text{DECLINE} + a_7\text{DLST} + a_8\text{PROBF}, \end{aligned} \quad (2)$$

where

- WCAR<sub>*i*</sub> = abnormal returns to company *i* over the event window  
 BKT = 1 if bankrupt; 0 otherwise,  
 PREDGC = prediction of audit report type calculated from Mutchler (1983)  
 SIZE = firm size, as measured by the natural log of the market value of common equity as of the report date

6. We also included a default-by-bankruptcy interaction term to the model to assess any differential effects of default based on subsequent viability. The inclusion of the interaction term was not significant.

7. Additionally, we measured firm decline in several alternative ways. We measured firm decline continuously as the cumulative market-adjusted returns in the run-up period. We also calculated the change in the PREDGC from the going-concern prediction discriminant model. We assessed both a continuous change measure and a dichotomous indicator variable of decline if the PREDGC score had fallen. Additionally, we calculated the change in bankruptcy probability from the Zmijewski (1984) discriminant model. Again we used both a continuous change measure and a dichotomous decline indicator variable. The use of any of these alternative specifications of firm improvement/decline did not substantially alter the results reported in this paper.

- TECHDFT = 1 if in technical default of debt covenants; 0 otherwise  
FINDFT = 1 if in payment default; 0 otherwise  
DECLINE = 1 if cumulative market-adjusted returns  $< 0$  during the run-up period  $[-250, -6]$ ; 0 otherwise  
DLST = 1 if delisted for deleterious reasons; 0 otherwise  
PROBF = probability of bankruptcy calculated from Zmijewski (1984).

We assessed both one-day and three-day event windows centered on the day the audit report was released. If the market reacts differently to the going-concern report recipient companies based on subsequent viability status, so that eventually bankrupt companies have smaller negative share price adjustments, we would expect a positive coefficient on the BKT indicator variable in our multiple regression model.

### 3.3 Sample Selection

A sample of companies receiving first-time going-concern audit reports and their subsequent resolution is needed to test differential market reaction. It is possible that varying industry characteristics could influence audit reporting regarding going-concern (Anandarajan and LaSalle [1995]). Prior researchers examining similar issues have excluded companies in the banking, financial services, real estate, and regulated industries sectors (see Burgstahler et al. [1989]; Kennedy and Shaw [1991]; Han and Jennings [1992]). Further, two of our measures of financial stress were also developed when these idiosyncratic industries were excluded from model specification (Mutchler [1983]; Zmijewski [1984]). Consequently, to minimize cross-industry reporting and analysis effects, we limit our analyses to manufacturing firms (SIC 2000-3999).

*Compact Disclosure* (CD)—the SEC was our source for identifying all manufacturing companies with first-time going-concern audit reports in the years 1990-1992. Financial and audit report data were initially obtained from CD-SEC and verified from annual reports and 10-K filings (on Laser Disclosure and the Q-Data microfiche service). Default data were obtained from the company's annual report or 10-K filings (CD-SEC and LEXIS-NEXIS).

The following sources were used to identify the subsequent resolutions of the going concern uncertainties faced by the firms in our sample: (1) *Wall Street Journal Index*, (2) CD-SEC, (3) Predicast's *Index of Corporate Change*, (4) *Bloomberg's Financial Services News File*, and (5) a list of public company bankruptcies obtained from New Generation Research Inc., publishers of the yearly *Bankruptcy Almanac*. Only firms for which two years of subsequent financial statements were found, and that were not acquired or in bankruptcy, were designated as nonfailed firms.

A two-year time horizon was used in this study to provide a better assessment of subsequent firm viability than evaluating firm status after one year (e.g., Mutchler and Williams [1990]). Although SAS No. 59 and the Private Securities Liti-



gation Reform Act (1995) specify a one-year horizon for going-concern evaluations, Carmichael and Pany (1993) note that as a practical reporting matter, auditor reporting decisions are not constrained to a 12-month reporting horizon.<sup>8</sup> Our study classifies companies as viable only if they did not file for bankruptcy during the subsequent two years. Accordingly, the firms in our sample are more representative of "viable" firms since they have survived for at least two years after receiving their first-time going-concern-modified report.

The public release of the auditor's report was considered to be the earlier of the date of the 10-K filing or news release indicating that the company received a going-concern audit report. Since news releases containing audit report information are rare prior to the 10-K filing,<sup>9</sup> we generally used the SEC stamped receipt date as the date the audit report was publicly available.

Market and specific company share price data were obtained from the CRSP NYSE/ASE and NASDAQ tapes for the period. Lastly, we examined the *Dow Jones News Service* (which contains the *Wall Street Journal Index*) and eliminated any company that had a news release unrelated to the annual report during the three-day event window. The resulting sample consisted of 121 companies traded on the New York Stock Exchange (NYSE), the American Stock Exchange (ASE), or NASDAQ that received a first-time going-concern audit report during the period 1990-1992. Of these companies, 28 filed for bankruptcy within the subsequent two fiscal years. The remaining 93 companies remained viable for at least the two subsequent years.<sup>10</sup> Our sample consisted of companies from 74 different four-digit SIC codes; the maximum number of firms in any single code is 4. The results of our sample selection procedure are presented in Table 1.

## 4. Results

### 4.1 Univariate Results

Initially we assessed our unpartitioned portfolio of going-concern report recipients to ascertain that our aggregate results were comparable to those of prior studies examining market reaction to qualified audit reports. The overall average

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8. Carmichael and Pany (1993) note that auditors are faced with the practical problem of considering the audit report timing lag (i.e., the time from the date of the financial statements to the date of the auditor's report) in their consideration of reporting on troubled companies. They argue that this "15-month" problem (i.e., 12 months plus the 3-month reporting lag) indicates that, as a practical matter, auditors are not constrained to the one-year reporting horizon specified in SAS No. 59.

9. For our sample of 121 companies, only one had a news release containing audit report information prior to the 10-K filing/annual report release.

10. Prior going-concern research examining samples of bankrupt companies (e.g., Hopwood et al. [1994]; Mutchler et al. [1997]) has demonstrated that separate models are needed when analyzing stressed and nonstressed bankrupt companies. All of our subsequently bankrupt companies exhibited at least one of the four signs of financial stress frequently used in the literature (Hopwood et al. [1994]; Mutchler et al. [1997]). Further, 12 of our subsequently viable companies did not exhibit any of the signs of financial stress. If we exclude these 12 companies from our viable sample, the results are not significantly different than those presented.

**TABLE 1**  
**Sample Selection and Resolution Summary**

<b>Sample Selection</b>	
Going-concern firms with 10-K or annual report filing date available	268
Unable to determine subsequent viability	(24)
Returns data not available on CRSP	(113)
Announcement period contaminated	(10)
Total firms	<u>121</u>
<b>Subsequent Firm Status</b>	
Bankrupt	28
Viable	93
Total firms	<u>121</u>

abnormal return ( $AAR_t$ ) for the combined sample of 121 companies for the one-day event window was  $-0.66$ , and the window cumulative abnormal return ( $WCAR_t$ )<sup>11</sup> for the three-day event window  $t - 1$  to  $t + 1$  was  $-0.75$ . Neither of these results are significantly different from zero ( $p > 0.10$ ), which is consistent with the insignificant findings of earlier researchers examining market reaction to unpartitioned samples of firms (e.g., Chow and Rice [1982]; Davis [1982]; Elliott [1982]; Dodd et al. [1984]).

Table 2 presents the average abnormal returns ( $AAR_t$ ) occurring between day  $-10$  and day  $+10$  for the bankrupt and viable firms separately. Panel A of Table 2 shows the average abnormal returns over the various trading days surrounding the audit report release date. Panel B of Table 2 presents the results of the comparisons for the window cumulative abnormal returns ( $WCAR_t$ ).

The difference between the two groups in  $AAR_t$  on the event date of 5.0% (panel A), and the cumulative difference of 5.92% for the three-day window (panel B), are significant at the 2 and 1 percent levels, respectively. The  $t$  test results also indicate that, in general, the daily  $AR_{i,t}$ s and the differences in  $AR_{i,t}$ s between these two groups outside of the event date are generally insignificant at conventional levels.<sup>12</sup> Also, as expected, the subsequently bankrupt firms suffered significantly negative ( $p < 0.01$ ) abnormal returns in the run-up period ( $-250, -6$ ). While the subsequently viable group also suffered negative abnormal returns during the run-up period, they were not significantly different from zero.

We also present the  $WCAR_{i,t}$ s for the period  $(-1, +10)$  in panel B. Dawkins and Bamber (1998) demonstrate that the market may have a delayed price reaction to information released but not yet widely publicized in the media. Thus, we also analyze share price reaction for the period up through 10 days after the report was

11. We compute the window cumulative abnormal return ( $WCAR_t$ ) as the return of the company during the window period, less the return of a same-size decile portfolio.

12. To calculate the  $t$  tests we computed standard deviations cross-sectionally using the individual  $AR$ s.

**TABLE 2**  
**Excess Returns around the Audit Report Release Date**

Trading day	Bankrupt <sup>a</sup>			Subsequently Viable <sup>b</sup>			Mean Diff.	t-value
	Mean	S.D. <sup>c</sup>	%<0	Mean	S.D. <sup>c</sup>	%<0		
<i>Panel A: Daily returns (AAR<sub>t</sub>)</i>								
-10	-1.98	8.91	64	-0.87	5.78	71	-1.11	-0.77
-9	-0.83	5.79	64	0.02	8.73	66	-0.85	-0.48
-8	1.89	10.72	57	-0.41	8.42	59	2.30	1.18
-7	1.01	7.93	50	-0.29	7.41	57	1.30	0.79
-6	-0.11	6.21	50	0.46	7.96	59	-0.57	-0.35
-5	1.72	9.03	50	1.41	17.09	63	0.31	0.09
-4	-1.13	9.93	64	-1.36	8.23	61	0.23	0.12
-3	-1.49	16.10	61	0.49	9.53	56	-1.98	-0.80
-2	-2.53	9.47	68	0.25	5.56	69	-2.78	-1.92
-1	2.14	11.95	54	-0.34	6.46	73	2.48	1.41
0	3.14	14.40	54	-1.86 <sup>e</sup>	8.27	69	5.00	2.31 <sup>e</sup>
1	-1.48	11.35	61	-0.06	7.16	65	-1.54	-0.85
2	-1.21	12.01	64	-0.55	9.53	57	-0.66	-0.30
3	0.95	10.48	54	-0.35	9.64	58	1.30	0.61
4	4.61 <sup>g</sup>	12.01	43	1.49	12.37	59	3.12	1.17
5	-2.05	8.44	64	0.66	11.32	65	-2.71	-1.16
6	3.09	9.67	39	0.37	5.94	55	2.72	1.80
7	-3.99 <sup>g</sup>	9.68	71	-0.34	13.25	66	-3.66	-1.34
8	2.69	12.77	50	1.10	8.11	52	1.59	0.78
9	1.91	11.04	71	-1.09	10.16	61	2.99	1.33
10	-2.97	8.83	71	-0.74	9.18	60	-2.23	-1.13
<i>Panel B: Window returns (WCAR<sub>t</sub>)</i>								
[-205, -6]	-40.81 <sup>d</sup>	33.32		-19.89	111.69		-20.98	-0.97
[-1, +1]	3.79	14.20		-2.13 <sup>f</sup>	10.57		5.92	2.32 <sup>d</sup>
[-1, +10]	4.82 <sup>e</sup>	11.15		-1.13	10.72		5.95	2.53 <sup>d</sup>

<sup>a</sup>The number of firms in the bankrupt portfolio is 28.

<sup>b</sup>The number of firms in the subsequently viable portfolio is 93.

<sup>c</sup>The cross-sectional standard deviations of individual firms' abnormal returns (AR<sub>*t*</sub>) or average abnormal returns (AAR<sub>*t*</sub>) are used to compute standard deviations for each group.

<sup>d</sup>Significant at  $p < 0.01$  (two-tailed).

<sup>e</sup>Significant at  $p < 0.02$  (two-tailed).

<sup>f</sup>Significant at  $p < 0.03$  (two-tailed).

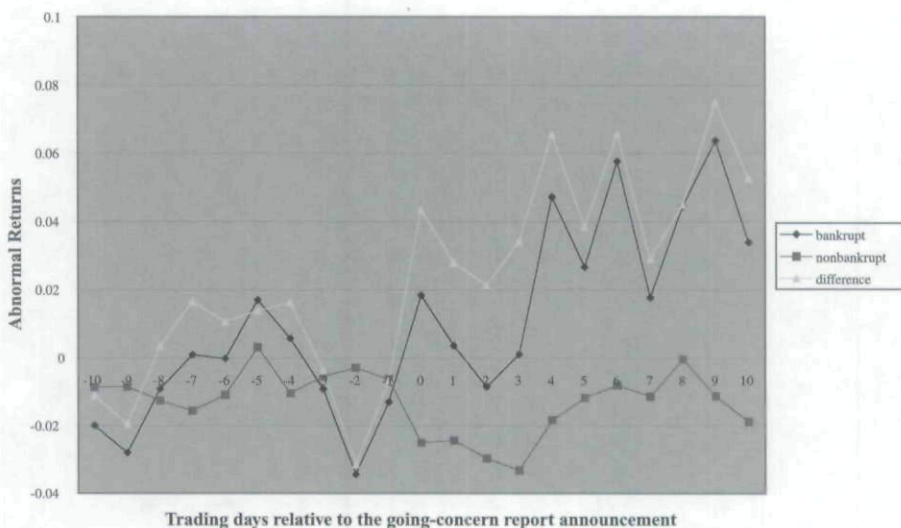
<sup>g</sup>Significant at  $p < 0.05$  (two-tailed).

publicly available. Consistent with the earlier results, the 5.95 percent difference in WCAR<sub>*s*</sub> for the delayed period is also significant at the 1 percent level.

Figure 1 charts the cumulative abnormal returns (CAR<sub>*t*</sub>) for the bankrupt sample and the subsequently viable sample for the 21-day period (-10, +10), as well as the cumulative difference. As the figure indicates, the two groups show little difference in returns until the event date, upon which the bankrupt group consistently outperformed the subsequently viable group.

FIGURE 1

**Cumulative Abnormal Returns from Day -10 through +10 for the Bankrupt and Subsequently Viable Groups (Day 0 is the Event Date)**



The univariate tests indicate that overall our sample is consistent with the findings in earlier research regarding unpartitioned samples of going-concern report recipients. Further, the tests provide support that the market reacts differentially to first-time modified audit reports for bankrupt and subsequently viable firms.

#### 4.2 Multivariate Results

Table 3 presents descriptive statistics for the independent variables used in the multivariate regression. While the results for differences in size of the companies (SIZE) and the frequency of predicting a going-concern report (PREDGC) between both bankrupt and viable groups are similarly insignificant ( $p < 0.08$  and  $p < 0.15$ , respectively), subsequently bankrupt firms were more likely to be identified as declining (DECLINE) compared to the subsequently viable group ( $p < 0.02$ ). In addition, subsequently bankrupt firms exhibited significantly higher probability of failure (PROBF) under Zmijewski's model (1984) compared to subsequently viable firms ( $p < 0.01$ ).

The correlation results presented in panel B of Table 3 indicate that, as would be expected, the prediction of a going-concern audit report (PREDGC) and our measure of change in financial condition (DECLINE) are significantly positively correlated ( $p < 0.01$ ). In addition, the change in the financial condition (DECLINE)

**TABLE 3**  
**Descriptive Statistics for the Independent Variables<sup>a</sup>**

	DLST	SIZE	PREDGC	DECLINE	TECHDFT	FINDFT	PROBF
<i>Panel A: Mean statistics by group</i>							
Bankrupt	0.71	8.46	0.68	0.96	0.29	0.29	0.85
Subsequently Viable	0.37	8.92	0.57	0.77	0.35	0.24	0.61
<i>t</i> test between groups	3.17	-1.49	1.01	2.30	0.58	0.55	9.46
(prob > <i>t</i> )	(0.01)	(0.08)	(0.15)	(0.02)	(0.28)	(0.29)	(0.01)
<i>Panel B: Correlation coefficients</i>							
BKT	0.34 <sup>b</sup>	-0.13	0.09	0.21 <sup>b</sup>	-0.06	0.05	0.29 <sup>b</sup>
DLST		-0.37 <sup>b</sup>	0.13	0.03	0.19 <sup>c</sup>	0.09	0.19 <sup>c</sup>
SIZE			-0.03	0.01	0.10	-0.07	-0.02
PREDGC				0.27 <sup>b</sup>	-0.12	0.12	0.60 <sup>b</sup>
DECLINE					0.06	0.07	0.27 <sup>b</sup>
TECHDFT						-0.41 <sup>b</sup>	-0.04
FINDFT							0.07

<sup>a</sup>Variable definitions:

BKT = 1 if the firm filed for bankruptcy, 0 otherwise.

DLST = 1 if the firm delisted for deleterious reasons, 0 otherwise.

SIZE = Natural log of market value of equity as of the issuance of the going-concern report.

PREDGC = Prediction of audit report type calculated from Mutchler (1983).

TECHDFT = 1 if in technical default of debt covenants; 0 otherwise.

FINDFT = 1 if in payment default; 0 otherwise.

DECLINE = 1 if cumulative market-adjusted returns < 0 during period [-250, -30], 0 otherwise.

PROBF = Probability of bankruptcy calculated from Zmijewski (1984).

<sup>b</sup>Significant at  $p < 0.01$ .

<sup>c</sup>Significant at  $p < 0.05$ .

and the eventual bankruptcy of the firm (BKT) are also positively correlated ( $p < 0.01$ ). As would be expected, delisting (DLST) is positively correlated with eventual bankruptcy (BKT) and technical default (TECHDFT), and negatively correlated with size. Also, probability of failure (PROBF) is positively correlated with subsequent bankruptcy (BKT), and prediction of a going-concern-modified audit report (PREDGC) ( $p < 0.01$ ), as well as with delisting (DLST) ( $p < 0.05$ ). The correlations between the other variables in the model are not significant at conventional levels ( $p > 0.10$ ). Since our sample consists solely of firms receiving a going-concern report, it is not particularly surprising that the default variables (TECHDFT and PAYDFT) and the bankruptcy variable (BKT) are not highly correlated, as we are only capturing a small, highly stressed portion of viable firms.

Table 4 presents the results of the multivariate regression for the event date,

**TABLE 4**  
**Regression Results**

$$\text{Model}^a: \text{WCAR}_i = a_0 + a_1\text{BKT} + a_2\text{SIZE} + a_3\text{PREDGC} + a_4\text{TECHDFT} \\ + a_5\text{PAYDFT} + a_6\text{DECLINE} + a_7\text{DLST} + a_8\text{PROBF}$$

*Panel A:* 1-day window: Day of going-concern announcement

	a	a <sub>1</sub>	a <sub>2</sub>	a <sub>3</sub>	a <sub>4</sub>	a <sub>5</sub>	a <sub>6</sub>	a <sub>7</sub>	a <sub>8</sub>	adj. R <sup>2</sup>
Coefficient	-0.01	0.05	0.00	-0.02	-0.06	0.02	-0.00	-0.01	-0.01	0.08
(t value)	(-0.19)	(2.36) <sup>c</sup>	(0.50)	(-0.84)	(-2.62) <sup>b</sup>	(0.84)	(-0.14)	(-0.51)	(-0.17)	

*Panel B:* 3-day window: 1 day before going-concern announcement to one day after

	a	a <sub>1</sub>	a <sub>2</sub>	a <sub>3</sub>	a <sub>4</sub>	a <sub>5</sub>	a <sub>6</sub>	a <sub>7</sub>	a <sub>8</sub>	adj. R <sup>2</sup>
Coefficient	0.00	0.08	0.00	0.03	-0.04	0.03	-0.05	-0.05	-0.05	0.11
(t value)	(0.08)	(3.10) <sup>b</sup>	(0.41)	(1.38)	(-1.74) <sup>c</sup>	(1.29)	(-1.63)	(-2.00) <sup>d</sup>	(-1.20)	

*Panel C:* 12-day window: 1 day before going-concern announcement to 10 days after

	a	a <sub>1</sub>	a <sub>2</sub>	a <sub>3</sub>	a <sub>4</sub>	a <sub>5</sub>	a <sub>6</sub>	a <sub>7</sub>	a <sub>8</sub>	adj. R <sup>2</sup>
Coefficient	0.04	0.08	0.00	0.04	-0.04	0.04	-0.06	-0.05	-0.05	0.13
(t value)	(0.53)	(3.20) <sup>b</sup>	(0.42)	(1.53)	(-1.75) <sup>d</sup>	1.42	(-2.10) <sup>d</sup>	(-2.02) <sup>d</sup>	(-1.54)	

<sup>a</sup>Variable definitions:

WCAR<sub>i</sub> = size-adjusted cumulative abnormal return for the event window.

BKT = 1 if the firm filed for bankruptcy within the two subsequent years, 0 otherwise.

SIZE = natural log of market value of equity as of the issuance of the going-concern report.

PREDGC = prediction of audit report type calculated from Mutchler (1983).

TECHDFT = 1 if in technical default of debt covenants; 0 otherwise.

PAYDFT = 1 if in payment default; 0 otherwise

DECLINE = 1 if cumulative market-adjusted returns <0 during period [-250, -30], 0 otherwise.

DLST = 1 if firm is delisted within subsequent two years, 0 otherwise.

PROBF = Probability of bankruptcy calculated from Zmijewski (1984).

<sup>b</sup>Significant at the 0.01 level (two-tailed).

<sup>c</sup>Significant at the 0.02 level (two-tailed).

<sup>d</sup>Significant at the 0.05 level (two-tailed).

<sup>e</sup>Significant at the 0.10 level (two-tailed).

the 3-day event window, and the delayed 12-day event window surrounding the audit report release date.<sup>13</sup> As presented in the table, the variable of interest, BKT, is significant in all three models. These consistent findings provide strong support that the bankruptcy partition is associated with market expectation and share price adjustments for our sample of first-time going-concern report recipients.

13. In estimating these regression models, we found that the variance inflation factors are all less than 1.2. This is far below Montgomery and Peck's (1982) benchmark of 5 to 10. Thus, multicollinearity is unlikely to be a problem. In addition, we tested for heteroskedasticity using White's test (1980) and found no evidence indicating a problem.

As would be expected, since the annual report is generally the first announcement of covenant violation, the TECHDFT variable is significantly negative at the 1 percent level in the event-day model, and marginally significant ( $p < 0.10$ ) for the 3- and 12-day windows. Although payment default is highly correlated with the issuance of a going-concern report (Foster et al. [1998]), it is unlikely that this is new information to the market on issuance of the annual report, as payment default is often a publicized event. Thus, as would be expected, PAYDFT is not significant at conventional levels. The DLST variable is significant at the 5 percent level in the regression for the 3-day event window and the 12-day event window.<sup>14</sup>

Interestingly, however, the regression results for these first-time going-concern report recipients indicate that of the bankruptcy and stress-related control variables (PREDGC, DECLINE, PROBF) only the DECLINE variable for the 12-day window is significant in our analyses ( $p < 0.02$ ). In general, with the exception of the DECLINE variable in this one analysis, neither firm size nor other measures of financial stress are significantly associated with abnormal returns surrounding the audit report release date once subsequent viability is included.

## 5. Discussion and Conclusions

We hypothesized that abnormal security returns surrounding the announcement of a first-time going-concern audit report would vary with the subsequent viability of the company if the market had a prior expectation of the subsequent performance of the company. Our aggregate results, consistent with prior research, indicate that abnormal returns surrounding the announcement of a going-concern audit report, unpartitioned on subsequent viability, are not significantly different from zero for the entire group of 121 firms. When partitioned based on subsequent viability status, abnormal returns were significantly lower for the viable group compared to the subsequently bankrupt group. Thus, the market appears to have significantly adjusted downward their viability expectations for the subsequently viable firms, but not for the subsequently bankrupt firms, upon receipt of a first-time going-concern-modified audit report. These results were robust to varying the length of the event window and controlling for size, several measures of market expectations (PREDGC, PROBF, TECHDFT, PAYDFT and DECLINE) found to be significant in earlier studies, and an alternative measure of firm failure (DLST).

We interpret our results to indicate that actual subsequent bankruptcy or viability acts as a proxy for market expectations of firm performance that is not currently included in measures of market expectations developed in the literature. Our multivariate regression results indicate that receipt of a first-time going-concern

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14. We also ran the regressions excluding the DLST variable. In all three regressions, the BKT variable remained significant at the 1 percent level. When we ran the regressions without the BKT variable, however, the DLST variable was insignificant in all analyses. We believe that this provides further support that subsequent viability status as characterized by bankruptcy is the primary distinguishing characteristic between the market reactions for the firms in our sample.

audit report was interpreted by the market as significantly more negative for companies that ultimately are viable (for at least two subsequent years) when compared to the firms that subsequently went bankrupt.

Our finding of negative returns for the subsequently viable companies is consistent with a prior expectation of firm continuance by the market, or a lower assessed  $P(B)$  prior to the receipt of the going-concern-modified opinion. Thus, the receipt of a first-time going-concern report was viewed as negative news. Likewise, our finding of generally insignificant abnormal returns for eventually bankrupt companies is consistent with a higher assessed prior  $P(B)$  by the market. Thus, minimal additional information content was contained in the going-concern modification for the subsequently bankrupt firms.

Our finding that the market reacts differentially to expected versus unexpected going-concern audit reports is certainly not new. Fleak and Wilson (1994), Jones (1996), and others have previously demonstrated this. However, our multivariate analysis provides some evidence that a naive partition, subsequent viability status, is an incremental measure of market expectations for a going-concern audit report when used in conjunction with other methods of prediction presented in the literature. Our results indicate that when actual subsequent viability status is added to a multivariate regression model containing proposed measures of market expectations, the subsequent viability partition maintains significant explanatory power, while the other measures become largely insignificant.

The finding that a naive proxy, subsequent viability status, adds incremental explanatory power to the proxies that have been used in prior studies provides considerable motivation for researchers to consider expanded models of market expectations for firms receiving going-concern audit reports and financially distressed firms in general.

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