

**Are analysts misleading investors?
The case of going-concern opinions**

Rúben M T Peixinho*

University of Algarve and CEFAGE-UE, Portugal

Richard J Taffler**

Warwick Business School, UK

First Draft: March 07, 2010

Draft 3.0: December 01, 2010

*** Corresponding Author**

**Rúben M T Peixinho
Faculdade de Economia
Campus de Gambelas
Edifício 9
8005-139 Faro
Portugal
Telephone: +351 289 800 915
Fax: +351 289 800 063
E-mail: rpeixinh@ualg.pt**

**Richard J Taffler
Warwick Business School
Scarman Road
Coventry
CV4 7AL
United Kingdom
Tel: 0044 (0) 2476 582882
E-mail: richard.taffler@wbs.ac.uk**

Are analysts misleading investors?

The case of going-concern opinions

ABSTRACT

This paper addresses the role of security analysts in the short-term market reaction to the publication of a going-concern (GC) modified audit report. We find that the 3-day mean abnormal return associated with the GC announcement is at least -6.9% for firms with analyst coverage in comparison with only -2.9% for non-covered firms (significant at <0.01). Our results show that the significant more adverse reaction in the case of followed firms is driven by the trading behavior of retail investors, who are unable to understand that analysts do not always mean what they say. In particular, retail investors are misled by the 87% of cases where analyst recommendations exert positive or no “pressure” on these non-sophisticated clientele (i.e., “strong buy”, “buy” or “hold”). These optimistic pre-GC recommendations are likely to keep stock prices artificially high and lead investors to delay the incorporation of going-concern uncertainties into stock prices. We conclude that retail investor clientele of GC firms is misled by its naïve interpretation analyst stock recommendations. As such, investors should not rely solely on analysts’ recommendations in their investment decisions and should follow SEC’s advice to do their homework before investing.

Keywords: short-term market reaction, analyst coverage, stock recommendations, going-concern opinions

EFM classification: 130, 200, 710

Are analysts misleading investors?

The case of going-concern opinions

1. Introduction

This paper investigates whether security analyst activity helps investors deal appropriately with firms going-concern (GC) uncertainties. Research suggests that analyst sophistication and investor reliance on analyst expertise facilitate market efficiency. For instance, studies demonstrate that analyst coverage reduces information uncertainty (e.g., Jiang, Lee, and Zhang, 2005; Zhang, 2006), and that it has a positive impact on the speed with which the market assimilates new information into stock prices (Brennan, Jegadeesh, and Swaminathan, 1993; Elgers, Lo, and Jr, 2001; Bhattacharya, 2001; Gleason and Lee, 2003; Zhang, 2008). Moreover, the literature argues that the marginal contribution of security analysts may be greater in the bad news domain given managers' propensity to withhold bad news (e.g., Hong, Lim and Stein, 2000; Kothari, Shu and Wysocki, 2010).

In this study, we hypothesize that analyst coverage increases market awareness of a forthcoming GC modified audit report given that analysts are able to process a variety of information not readily available to investors (Ivkovic and Jegadeesh, 2004). If this is the case, analyst coverage should be inversely related to the degree of "surprise" with which the market responds to the going-concern announcement through reducing the level of information asymmetry and uncertainty associated with GC stocks. It follows that the magnitude of the short-term abnormal reaction to this bad news disclosure should be significantly lower in the case of firms followed by analysts. In addition, we explore the market reaction to the GC announcement conditional on the pre-event message about the firm's future prospects conveyed by the analyst's stock recommendation. This research question is particularly important given the known reluctance of analysts to report negativity on firms (e.g., McNichols and O'Brien, 1997). To the best of our knowledge, this is the first study which explores the role of security analysts in reporting on going-concern uncertainties, and how this impacts on the market reaction to this extreme adverse accounting event with associated implications for the future viability of the firm.

Paradoxically, our results show that prior analyst firm coverage does not facilitate investor recognition of impending going-concern problems. In particular, we show that the short-term market reaction to the publication of a GC modified audit report is significantly

more negative for firms with analyst coverage than firms not followed. For example, we find that the 3-day mean abnormal return associated with the going-concern announcement for firms subsequently receiving first-time going-concern opinions followed by at least one analyst is at least -6.9% . This compares with only -2.9% for non-covered firms (significant at <0.01).

In an attempt to explain this unexpected result, we explore whether analysts may be confusing investors by reporting more favorably on the prospects of these GC firms than is warranted given that their subsequent market performance is highly negative, and a high proportion go bankrupt or are delisted (e.g. Kausar, Taffler and Tan, 2009). This proposition is based on the idea that the main investor clientele for such small speculative stocks are non-sophisticated investors (Kausar, Taffler and Tan, 2010) who tend to follow analyst stock recommendations literally (Malmendier and Skantikumar, 2007). To this end, for that subset of stocks reported on by analysts, we distinguish between those with “optimistic” recommendations in the context of this particular bad news scenario (i.e., “strong buy”, “buy” or “hold”) and “non-optimistic” (“under perform” or “sell”). The short term market reaction to the GC opinion turns out to be consistent with our argument: the market is “surprised” by the GC announcement in the case of prior analyst optimism, but does not react at all to this adverse news event for those firms with non-optimistic ratings. In particular, the 3-day average abnormal return is no less than -8.8% (significant at <0.001) in the case of optimistic stock recommendations, which compares with a non-significant mean return ($+4.4\%$) for non-optimistic prior analyst signals. Our multivariate analysis results confirm this finding.

We may thus be able to explain the paradox of more adverse short-term market reaction to the GC announcement for firms followed by analysts compared with those not covered, in terms of the disproportionate number of optimistic stock recommendations relative to non-optimistic ones. In fact, no less than 87% of prior firm stock recommendations in our sample can be classified as optimistic with only 13% non-optimistic, despite all firms suffering going-concern uncertainties. Given the different levels of market “surprise” associated with the GC event, it is likely that this over-optimistic analyst reporting drives the apparent paradox of firm analyst following being associated with greater market surprise in the going-concern domain. This explanation may be further supported by noting that retail investors own the large majority of the stock of our GC firms (74%) with sophisticated investors, who in contrast are able to interpret analyst signals appropriately (Malmendier and Skautikumar, 2007), only holding a small proportion (16%). As such, as Kausar, Taffler and Tan (2010) demonstrate, the trading activity of the former set of investors predominantly drives the market prices of these

stocks. Given retail investors lack of access to alternative sources of information and analysis, and their naïve dependence on analyst recommendations in their stock investment decisions, we explain our puzzling results in terms of their being misled by security analyst optimism.

In this paper, we contribute to both the analyst and going-concern literatures. In particular, we find that, in the case of going-concern problems, analyst expertise does not accelerate the assimilation of such negative information into stock prices, contradicting studies showing a positive relation between analyst coverage and market efficiency (e.g., Bhattacharya, 2001; Gleason and Lee, 2003; Zhang, 2008). The going-concern market environment is characterized by small firm size, low coverage of such stocks, and especially the fact that the majority of GC firms' clientele are non-sophisticated investors who are unable to deconstruct optimistic analyst signals. We argue that this can help explain why analyst coverage seems, paradoxically, to *increase* the market impact of the going-concern announcement in the case of this extreme bad news event. Consistent with the findings of Malmendier and Shantikumar (2007), our results suggest that the disproportionate number of cases where analysts exert positive or no "pressure" on retail investors (i.e., "strong buy", "buy" or "hold" firm ratings) keep stock prices artificially high in the GC domain, and lead investors to delay the incorporation of such negative information into stock prices (e.g., Jegadeesh et al., 2004). This serves to resolve the conundrum of why the market reaction to the going-concern audit opinion is significantly adverse in the case of companies reported on by analysts compared with those not followed at all. We conclude that, on average, analysts mislead investors in their investment decisions relating to GC stock. Retail investors should not follow analyst recommendations literally, and should pay attention to other signals in such bad news domains. Such biased behavior is not a new finding for regulators. Our results support the SEC's concern about investors relying solely on recommendations when buying or selling a stock:¹

"We advise all investors to do their homework before investing. If you purchase a security solely because analyst (sic) said the company was one of his or her 'stock picks', you may be doing yourself a disservice. Especially if the company is one you've never heard of (...) Above all, remember that even the soundest recommendation from the most trust-worthy analyst may not be a good choice for you.

¹ See <http://www.sec.gov/investor/pubs/analysts.htm> for details.

That's one reason we caution investors never to rely solely on analyst's (sic) recommendations when buying or selling a stock."

The remainder of this paper is organized as follows: section 2 motivates our research and presents our hypotheses. Section 3 describes our data, and section 4 our method. Sections 5 and 6 report the results of our analyses. Section 7 discusses our results, and their implications, and section 8 concludes.

2. Motivation and research hypotheses

The going-concern assumption is one of the fundamental principles underlying the theory and practice of accounting. When an auditor considers that substantial doubt exist regarding the continuance of a firm in the foreseeable future, this is perceived by the market as an acute and unambiguous bad news case. Empirical studies show a significant adverse short-term market reaction to the publication of a GC modified audit report (e.g., Firth, 1978; Fleak and Wilson, 1994; Jones, 1996; Carlson, Glezen, and Benefield, 1998; Citron, Taffler, and Uang, 2008; Kausar, Taffler and Tan, 2010b) and reveal that the market takes time to assimilate the negative message conveyed by the GC audit report (e.g., Taffler et al., 2004; Kausar, Taffler and Tan, 2009).

The inefficiency with which the market deals with unfavourable information in general (e.g., Bernard and Thomas, 1989; Dichev and Piotroski, 2010) and CG uncertainties in particular (Taffler, Lu and Kausar, 2004; Kausar, Taffler and Tan, 2009) cannot be detached from several recent corporate scandals in which managers explicitly withheld bad news from investors (e.g., Cheng and Warfield, 2005; Charlton, 2006; Bergstresser and Phillipon, 2006; Burns and Kedia, 2006). Extant literature claims that this phenomenon is fuelled by the asymmetric incentives managers face to disclose unfavourable information in comparison to favourable information, by the hope that subsequent events turn in their favour or by agency problems (e.g., Hong, Lim, and Stein, 2000; Graham, Harvey and Rajgopal, 2005; Kothari, Shu and Wysocki, forthcoming). It follows that information asymmetry between firms and investors is likely to play an important role in explaining how the market reacts to the publication of a GC modified audit report.

In this study, we provide original evidence on whether security analysts facilitate investors' recognition of going-concern uncertainties in an extreme bad news domain

where managers' propensity to withhold bad news is likely to be more acute. Security analysts represent a vital source of information to investors that are looking for investment opportunities. However, the weight that analyst information represents on the decision-making process of investors is not equal to all investment community. Analyst opinions are particularly important for small investors since these less sophisticated agents are not able to produce their own predictions (De Bondt and Thaler, 1990) and because they may lack the time, skill or resources to analyze and interpret financial statements (Beaver, 2002). This is crucial in our study since 74% of GC stocks are held by retail investors before the GC announcement, which represents approximately 84% of the total trades within the one-year period before the event (Kausar, Taffler and Tan, 2010a). Hence, we hypothesize that analyst coverage reduces the information asymmetry and uncertainty of GC stocks and reduce the "surprise" with which the market reacts to the publication of a GC modified audit report. We formally test the following expectation:

H1: Firms with analyst coverage will experience a less negative market reaction to the auditor's going-concern modified opinion than firms with no analyst coverage.

From the informational vehicles that analysts use to communicate with the market, recommendations assume a vital information to retail investors since they provide a clear and unequivocal course of action (Elton, Gruber and Grossman, 1986). Analyst recommendations have a qualitative interpretation that allows us to investigate not only whether analyst coverage impacts on the short-term market reaction to the GC announcement but also whether their message influences this phenomenon. Generally, brokerage firms (e.g., Credit Suisse, UBS Warburg, Salomon Smith Barney, Morgan Stanley, Merrill Lynch) issue a "buy" recommendation when a stock is perceived to be undervalued by at least 10% whereas a "sell" recommendation is issued when a stock is believed to be overvalued by at least 10%. Companies rated with a "hold" recommendation are believed to be fairly priced. Interestingly, Malmendier and Shanthikumar (2007) show that, contrary to large investors, retail investors follow analyst recommendations literally. They find that retail investors exert positive pressure following both "buy" and "strong buy" recommendations and zero pressure following "hold" recommendations. In contrast, large investors exert buy pressure following "strong buy" recommendations, no reaction following "buy" recommendations and selling pressure following "hold" recommendations.

We hypothesize that the nature of analyst recommendations impacts on the “surprise” with which the market reacts to the publication of a GC modified audit report. Kausar, Taffler and Tan (2009) show that, in the one-year after the publication of the audit report, GC firms underperform by -14%. Considering that GC stocks underperform the market, analysts should provide value-relevant information to investors by encouraging them to sell these stocks. As Malmendier and Shanthikumar (2007) show, retail investors exert negative pressure on stocks only when analysts issue “underperform” or “sell” recommendations. As such, we expect market reaction to the publication of a GC audit report to be lower for these cases where analyst recommendations are consistent with the forthcoming GC audit report (non-optimistic recommendations) as a result of prior price adjustments when compared to those companies with no analyst coverage. This leads to the following expectation:

H2: Firms for which analysts are issuing non-optimistic recommendations will experience a less negative market reaction to the auditor’s going-concern modified opinion than firms with no analyst coverage.

For those cases where recommendations are inconsistent with the forthcoming GC audit report (i.e., “strong buy”, “buy” or “hold”), retail investors have no incentive from analysts to exert negative pressure on these stocks. These optimistic recommendations for companies with GC problems may mislead retail investors in their investment decisions and delay the incorporation of other negative information into stock prices (e.g., Jegadeesh et al., 2004). It follows that the “surprise” with which the market reacts to the publication of a GC modified audit report may be greater for these cases in comparison to those companies with no analyst coverage. We formally test the following expectation:

H3: Firms for which analysts are issuing optimistic recommendations will experience a greater negative market reaction to the auditor’s going-concern modified opinion than firms with no analyst coverage.

It is important to notice that some studies use analyst coverage as a control variable when exploring investor response to GC audit reports (e.g., Taffler et al., 2004; Kausar, Taffler and Tan, 2010b). Nevertheless, these control variables do not account for the nature of analyst opinion. This study provides original evidence on the relationship between the nature of analyst recommendations and the short-term reaction to the GC event.

3. Data and descriptives

3.1. Sample selection

Our sample consists of 924 non-finance, non-utility, industry firm-year observations with first-time going-concern modified audit reports published between 1994.01.01 and 2005.12.31 with stocks listed on the NYSE, AMEX or NASDAQ and with sufficient data on COMPUSTAT for our purposes.² The use of an unbiased GC sample is particularly important for two main reasons. First, identifying a first-time GC company is not a straightforward process since existing sources of data are not clean (e.g., Butler, Leone, and Willenborg, 2004; Kausar, Taffler, and Tan, 2009). Second, there is evidence that conflicting results in some of the going-concern literature are due to the use of biased samples (e.g., Asare, 1990; Kausar, Taffler, and Tan, 2009). For instance, Kausar, Taffler and Tan (2009) emphasize that Ogneva's and Subramanyam (2007) results are biased due to the use of a data source (CD-SEC) containing important flaws. Table 1 summarizes our sample construction process. It draws heavily on Kausar, Taffler, and Tan (2009) and is designed to eliminate the number of incorrect cases classified as GC firms.

We start by using 10k Wizard's free text search tool to explore the information on the EDGAR database and identify firms with going-concern modified audit reports from 1994 to 2005. The combination of keywords used as search strings are "raise substantial doubt" and "ability to continue as a going concern". This search identifies 29,102 audit reports from which we exclude 16,866 cases because firms are not available in the CRSP/COMPUSTAT merged file. Following recent studies addressing GC companies (e.g., Ogneva and Subramanyam, 2007; Kausar, Taffler, and Tan, 2009), we work exclusively with first-time GC cases. In particular, we define a GC modified audit report as first-time if a firm has not received a GC modified opinion in the previous fiscal year. The use of first-time GC cases is justified by the evidence that the informational value of a continuing going-concern report is less clear than that of a first-time report (Mutchler, Hopwood, and McKeown, 1997) and that a company with a going-concern qualification in a given year is more likely to receive a qualification the next year (Mutchler, 1985). From the 2,296 remaining cases, we delete another 1,017 since there is insufficient accounting or market data for our purposes in the COMPUSTAT or CRSP databases. In particular, we exclude: 1) companies not listed on the NYSE, AMEX and NASDAQ during the 12-months pre-GC date; 2) companies not trading ordinary common stock; 3) companies with unavailable accounting information for the 2-year period before the GC year.

² These 924 cases represent 871 companies.

Finally, we delete cases that could potentially bias our results due to their specific characteristics. In particular, we remove: 1) companies classified as “utilities” or “financials” according to the 49 industry portfolios defined by Kenneth French;³ 2) companies classified as foreign to ensure a consistent legal framework; 3) companies classified as in a “development stage” since these companies have unique characteristics and have a considerable higher than average chance of failure;⁴ 4) companies that file Chapter 11 before the audit report publication date.

The data used in this study is collected from three different sources: security analyst data is from I/B/E/S/ Recommendations – Detailed File whereas market and accounting data are provided by CRSP and COMPUSTAT respectively.

Table 1 here

3.2. Descriptive statistics

Table 2 provides sample firms descriptive statistics. Panel A of table 2 shows the annual distribution of the GC cases and reveals that the annual number of first-time GC modified audit reports disclosed is, for most of the years, between 60 and 100 cases. Panel B of table 2 shows that our sample is typically composed of small companies with high distress risk. For instance, our sample firms have low market capitalization (mean size = \$89.6m; median size = \$33.6m), low net sales (mean sales = \$103.7m; median sales = \$21.55m) and low total assets (mean total assets = \$120.7m; median total assets = \$25.34m). Not surprisingly, we find that our sample firms are highly financially distressed. In particular, the firms are losing money (mean return on assets = -63%; median return on assets = -37%), have low ability to meet short-term debt obligations (mean current ratio = 1.72; median current ratio = 1.16), and are highly leveraged (mean leverage ratio = 38%; median leverage ratio = 32%). The mean (median) Altman (1968) z-score is 1.15 (0.93), well below the reference cut-off score of 1.81, indicating a high probability of failure within the next year. In addition, the mean (median) score PREDGC is 0.20 (0.01),

³ This is because “utility” firms are affected by specific regulations and “financial” firms accounting information is not comparable to that of the remaining firms respectively.

⁴ The Statements of Financial Accounting Standards (SFAS) define a “*development stage enterprise*” as a company that: 1) devotes substantially all its efforts to establishing a new business and has not begun planned operations or 2) has begun operations, but has not generated significant revenue.

suggesting that our sample firms are close to the cut off score of 0.01 used by Blay and Geiger (2001) to distinguish “expected” from “unexpected” GC audit reports.⁵ Panel B of table 2 also indicates that book value per share of sample firms is low relative to the stock price (mean BM ratio = 0.77; median BM ratio = 0.40) and that stock firms have experienced negative returns over the previous 11-months prior to the GC announcement (mean monthly momentum [t=-12 to -2] = -4%; median momentum = -4%).

Panel C of table 2 reveals that although 85% of our GC firms have positive book value of equity only 8% of them report positive earnings in the year preceding the publication of a GC modified audit report and that only 2.5% pay dividends. We also find that almost 5% of our sample firms enter into bankruptcy/liquidation (delisting codes: 400, 572, 574) within the one-year period subsequent to the GC announcement date. Importantly, no less than 46% of our sample firms are delisted within the same period. On the other hand, almost one in five firms continue to be listed and appear to recover in the following fiscal year with their GC modified audit report lifted. Finally, two thirds of firms are audited by the one of the five audit companies that dominates the supply of audit services worldwide (BIG5).

Table 2 here

4. Method

4.1. Defining analyst coverage

Unless otherwise stated, firms are allocated to the “analyst coverage” portfolio if there is at least one new recommendation or one new EPS forecast available within the 6-month window prior to their GC announcement date. The 6-month window used to define analyst coverage is consistent with Das, Guo, and Zhang (2006), who estimate the level of analyst coverage based on a similar period. In order to provide robust results, we separate recommendation into 3 categories: a) reported recommendations; b) current recommendations and c) inferred recommendations. This procedure is justified since

⁵ The probability of a GC modified audit report (PREDGC) is based on the multiple discriminant model used by Mutchler (1985), Fleak and Wilson (1994) and Blay and Geiger (2001). The discriminant model typically minimizes the classification error based on an auditor’s decision of issuing/not issuing a GC modified audit report. However, since we work exclusively with GC firms, we follow Blay and Geiger (2001) and use Fleak’s and Wilson (1994) minimum cut off score of 0.01 to distinguish “expected” from “unexpected” reports.

working exclusively with recommendations readily obtained from the I/B/E/S database ignores analyst opinions when no recommendations are available for a specific time period. As such, our framework allows us to deal with the two different reasons for a missing recommendation: 1) the analyst did not issue a recommendation or 2) the analyst decided to cease coverage of the company.

Reported recommendations are those effectively issued by the analyst and are readily available on the I/B/E/S Recommendations – Detail File. Current recommendations are similar to reported recommendations, with one major difference. In particular, we assume that the last reported recommendation still applies to the current event-quarter when no recommendation is available on I/B/E/S detail file and simultaneously analyst do not stop the coverage of the firm. Inferred recommendations are similar to current recommendations with one difference. Drawing on Clarke et al. (2006),⁶ in the event-quarter for which an analyst ceases coverage of a firm, we infer an unfavourable recommendation for that event-quarter and for the subsequent two event-quarters.⁷

Table 3 presents descriptive statistics for our sample firms conditional on pre-event analyst coverage. We find that firms with analyst coverage are significantly larger than firms with no analyst coverage. This is consistent with Hong's, Lim, and Stein (2000) finding that size is the most important variable to explain analyst coverage. Our findings hold for three size proxies: market capitalization, sales and total assets. For instance, the mean (median) size measured as market capitalization one year before the GC date is \$219.8 million (\$82.3 million) for companies with analyst coverage and \$37.6 million (\$22.1 million) for companies with no analyst coverage (difference significant at the 0.1% level). We also observe that covered companies have significantly higher distress risk (mean $ZSCORE_{COVERED}=0.99$; mean $ZSCORE_{NON-COVERED}=1.23$, $p=0.0009$) and exhibit significantly stronger negative momentum (mean $MOM_{COVERED}=-0.06$; mean $MOM_{NON-COVERED}=-0.03$, $p<0.0001$) relative to non-covered companies. There is also some evidence that the average BM ratio of covered firms is significantly lower than the average BM ratio of non-covered firms. Finally, we find no significant differences for return on assets, current ratio, leverage, and the likelihood of a forthcoming GC modified audit report.

Table 3 here

⁶ Analyst decision to cease coverage of a firm is likely to be associated with unfavourable information about the firm's future prospects since analysts are reluctant to issue unfavourable investment advise (McNichols and O'Brien, 1997) and because analysts generally remain at the same brokerage company after deciding to stop covering a given firm (Clarke et al., 2006).

⁷ We limit the inferring of the unfavourable recommendation to the two event-quarters following coverage cease given the evidence that the impact of a recommendation change may last 6-month (Womack, 1996).

4.2. Computing short-term abnormal returns

As Kothari and Warner (2007) state, short-horizon methods for measuring abnormal returns are “relatively straightforward and trouble-free”. We investigate the short-term market reaction to the publication of a first-time GC modified audit report using the cumulative abnormal return (CAR) methodology. In particular, we study three different trading windows centered on the GC announcement date: (-1, +1), (-2, +2) and (-3, +3). Identifying the exact going-concern disclosure date is a crucial issue. In efficient capital markets, price adjustments to new information are expected to occur as soon as the new value-relevant information becomes available to investors.⁸ Drawing on Kausar, Taffler, and Tan (2009), we define trading day 0 as the GC announcement date taken from the SEC-EDGAR database.⁹ Abnormal returns (AR) are computed as follows:

$$AR_{it} = R_{it} - R_{mt} \quad (1)$$

where R_{it} is the return of firm i on day t and R_{mt} is the return of the smallest decile of the NASDAQ index on day t . We use this index since our sample firms usually have small size and the majority trades on the NASDAQ at the GC announcement date.¹⁰ The cumulative abnormal return (CAR) for security i from trading day a to trading day b is computed as:

$$CAR_{it} = \sum_{t=a}^b AR_{it} \quad (2)$$

where AR_{it} is defined as in equation 1. Cumulative abnormal returns are then averaged across the number of firms in the sample (n) to provide an average abnormal return for each period t . Formally:

⁸ Dodd et al. (1984) show that a qualified opinion can occur at any one of the following moments: i) when the annual earnings are first publicly announced; ii) when the annual report is made publicly available; iii) when the 10-k report is made publicly available, or iv) when the firm announces the qualification in a press release. As such, prior conflicting results about the value of the GC opinion may be explained, at least partially, by the use of different announcement dates. For instance, Firth (1978) defines the publication date of the annual report as the event date, Elliott (1982) uses the release date of earnings in the Wall Street Journal whereas Dodd et al. (1984) and Carlson, Glezen, and Benefield (1998) use the earlier of the receipt date of the 10-k or the annual report.

⁹ Kausar, Taffler, and Tan (2009) reveal that textual search of press articles using Factiva uncovers less than 1% of cases associated with prior publication of news of the forthcoming GC modified opinion in their sample.

¹⁰ From our 924 first-time GC cases, 691 trade on the NASDAQ at their GC announcement date. We also use the other deciles to compute the abnormal returns as well as the NASDAQ index. However, results are not sensitive to the index used to compute the abnormal returns.

$$\overline{CAR}_t = \frac{1}{n} \sum_{i=1}^n CAR_{it} \quad (3)$$

where CAR_{it} is defined as in equation 2. In order to properly deal with the problems resulting from extreme outliers that affect CARs, we winzorize the extreme values at the first (99th) percentile of both tails of the distribution as in Kausar, Taffler, and Tan (2009).¹¹ The parametric t-test is employed to examine the significance of the mean CARs whereas the non-parametric Wilcoxon signed rank-test is used to examine the significance of the median abnormal returns. The Fisher sign-test is also computed. When we split our sample in two portfolios, we use the two-tailed t-test and the Wilcoxon-Mann-Whitney test to investigate mean and median differences between groups, respectively.

4.3. Multivariate analysis

We test the robustness of our result using a multivariate approach, which evaluates the combined effect of analyst coverage and other variables on the short-term market reaction to the publication of a GC modified audit report. In particular, we use a binary logistic regression model to investigate if firms with pre-GC analyst coverage are less likely to experience a strong negative short-term market reaction to the GC announcement than other firms.¹² The model is as follows:

$$Pr(SNCAR_i = 1 | X_i) = \frac{e^v}{1 + e^v} \quad (4)$$

where $Pr(SNCAR_i=1)$ is the probability of firm i experiencing a strong negative abnormal return from trading day -1 to trading day +1 relative to the GC date (defined as day zero). The dependent variable (SNCAR) is a binary variable that identifies the companies for which the market was more surprised with the publication of a GC audit report and is defined as follows. First, we compute the 3-day abnormal return (CAR (-

¹¹ The non-winsorized results are not significantly different from the winsorized results.

¹² There are alternative econometric techniques that could be used to perform this test. The most obvious approach would be to estimate a regression using an OLS procedure. However, the use of a continuous dependent variable would be problematic in the context we address. In fact, our data is not a simple cross-section nor a simple time series since we have: 1) observations that are spread over time and 2) firms that appear more than once in our sample. As a consequence, simply pooling the data together to run an OLS regression would result in biased estimates of the relevant parameters (for details see Wooldridge, 2001).

1,+1)) centered on the GC disclosure date. Firms are then ranked accordingly to their 3-day abnormal returns and divided into two groups. Specifically, the bottom 33.3% performers are allocated to the “strong negative abnormal reaction” group and are classified as 1. All other firms are classified as 0. v represents the vector of independent variables, defined as follows:

$$v_i = \alpha_0 + \sum_{n=1}^{11} \beta_n X_{ni} + u_i \quad (5)$$

We use eleven independent variables in equation 5, which are expected to be related to the surprise with which the market receives the publication of a GC audit report. The explanatory variables are:

1. Non-optimistic recommendation (NONOPTM): This is a binary independent variable that equals 1 when the firm’s average reported recommendation within the 6-month period before the GC date is classified as “underperform” or “sell”. Negative recommendations should move prices down, thus we would expect that stock prices of firms with non-optimistic recommendations adjust faster and consequently to be less likely to experience a strong negative short-term market reaction to the GC announcement once this becomes publicly known;
2. Optimistic recommendation (OPTM): This variable equals 1 when the firm’s average reported recommendation within the 6-month period before the GC date is classified as “hold”, “buy” or “strong buy”. We conjecture that stock prices of firms receiving optimistic recommendations to adjust slower as a consequence of this conflicting sign to other unfavourable information. As such, we expect these stocks to be more likely to experience a strong negative short-term market reaction to the publication of a GC audit report;
3. Market capitalization (LOGSIZE): We control our results for size, which is a proxy for the information environment. Larger companies tend to have lower levels of information uncertainty, suggesting that investors are potentially more aware of firms’ going-concern problems. Consequently, the “surprise” effect associated with the publication of a GC audit report should be lower in the case of large firms. As such, we expect larger firms to be less likely to experience a strong negative short-term market reaction to the GC announcement. LOGSIZE

is defined as the natural log of the firms' market capitalization measured one year before the GC date;

4. Number of analysts following the firm (ANALY): This is another proxy for the level of information and is directly related to the analyst coverage environment. We expect firms with a greater number of analysts following to be less likely to experience a strong negative short-term market reaction to the GC announcement as a consequence of higher information available to investors. ANALY is defined as the number of analysts following the firm at the end of event-quarter -4, where event-quarters are defined as periods of 90 calendar days relative to the GC announcement date;
5. Book-to-market ratio (BM): The BM ratio may potentially explain cross-sectional abnormal returns given the relationship between BM ratio and firms' expected returns (e.g., Fama and French, 1992; Lakonishok, Shleifer, and Vishny, 1994). We expect value firms to be more likely to experience a strong negative short-term market reaction to the publication of a GC modified audit report given that these companies are less risky than growth stocks. The BM ratio is defined as book value of equity divided by market capitalization, where book value of equity is taken from the last annual accounts reported prior to the date used to calculate the market capitalization at one year before the GC announcement date;
6. Momentum (MOM): This is the other variable related to firms' returns (e.g., DeBondt and Thaler, 1985, 1987; Jegadeesh and Titman, 1993; 2001). Momentum controls for pre-GC stock returns and is defined as the monthly average of prior 11 months (t-12 to t-2) raw returns. Given that the market's expectation about a GC audit report are likely to be lower for firms with positive prior returns, we expect these firms to be more likely to experience a strong negative short-term market reaction to the GC announcement.
7. Return on assets ratio (ROA): This variable is a proxy for firm economic performance and is computed as the ratio of net income to total assets using data from the last annual financial accounts reported before the GC date. Considering that market expectations of a GC are likely to be higher for firms with negative profitability, we expect profitable firms to be more likely to experience a strong negative short-term market reaction to the GC announcement.

8. Altman's (1968) z-score (ZSCORE): This variable proxies for bankruptcy risk and is computed following Altman's (1968) model using accounting data from the fiscal year ending one year before the GC announcement date. Considering that higher z-scores are associated with lower distress risk, the markets' expectation of a GC audit report is likely to be higher for firms with lower z-scores. As such, we expect firms with higher z-scores (lower distress risk) to be more likely to experience a strong negative short-term market reaction to the GC announcement.
9. Probability of a GC audit report (PREDGC): This variable proxies for market expectations of a forthcoming GC modified audit report and is estimated following Mutchler's (1985) model using data taken from the last annual financial accounts reported before the GC date. The importance of this variable is related to the fact that the short-term market reaction to the publication of a GC announcement depends on the likelihood of such an announcement (e.g., Fleak and Wilson, 1994, Jones, 1996). We expect firms with higher PREDGC scores (lower distress risk) to be more likely to experience a strong negative short-term market reaction to the GC announcement.
10. Leverage (LEV): This variable proxies for default risk and is defined as total debt to total assets using data from the last annual financial accounts reported before the GC date. Given that higher distress risk is associated with higher LEV ratios, the market expectations of a GC modified audit report are likely to be higher for firms with low distress risk. Consequently, we expect firms with higher LEV ratios (high default risk) to be less likely to experience a strong negative short-term market reaction to the GC announcement.
11. Standardized unexpected earnings (SUE): This variable controls for earnings surprises and is defined as $\Delta NIq / |NIq|$, where ΔNIq is the quarterly earnings change computed as the difference between the quarterly income before extraordinary items (NIq) and the quarterly income before extraordinary items in the previous year (NIq-4). Positive earnings surprises should mitigate the impact of a GC announcement as they provide conflicting signals to the market. As such, we expect firms with positive earnings surprises to be less likely to experience a strong negative short-term market reaction to the publication of a GC modified audit report.

5. Initial evidence

5.1. Short-term market reaction to a first-time GC modified audit report

We first investigate the short-term market reaction to the announcement of a first-time GC modified audit report in order to revisit the impact of this accounting disclosure and understand its value-relevance to investors.

The short-term abnormal returns are presented in table 4. We find a highly negative and significant market reaction to the publication of a GC modified audit report on a risk-adjusted basis. For instance, the 3-day, 5-day and 7-day mean (median) CARs are -4.2%, -5.4% and -4.9% (-3.2%, -4.2% and -4.7%) respectively, all significant at the 0.01% level. Moreover, the number of negative abnormal returns is significantly greater than the number of positive abnormal returns for all event windows we consider. As such, our results indicate that investors find the publication of a GC modified audit report as value-relevant and are consistent with a number of studies addressing the same issue (e.g., Firth, 1978; Fleak and Wilson, 1994; Jones, 1996; Carlson, Glezen, and Benefield, 1998; Citron, Taffler, and Uang, 2008).

5.2. Short-term market reaction to a first-time GC modified audit report and analyst coverage

We now empirically test if the negative short-term market reaction to the publication of a GC modified audit report is mitigated in the case of firms benefiting from pre-event analyst coverage. To ensure the robustness of our results, we use the three categories of recommendations as defined in section 4.1. As such, when using reported (current) recommendations to define analyst coverage, we allocate firms to the “analyst coverage” portfolio if there is at least one reported (current) recommendation or a new annual EPS forecast available within the 6-month period prior to the GC report date. In the case of inferred recommendations, firms are allocated to the “analyst coverage” portfolio if there is at least one inferred recommendation or a new EPS forecast available within the coverage definition window. All the remaining firms are allocated to the “no analyst coverage” portfolio.¹³ As previously discussed, it is reasonable to expect short-term market reaction

¹³ As can be seen in table 5, when we use reported recommendations to define analyst coverage, we allocate 317 firms to the “analyst coverage” portfolio and the remaining 607 to the “no analyst coverage” portfolio. When we define a company as covered using current (inferred) recommendations, we classify 408 (474) firms to the “analyst coverage” portfolio. The remaining 516 (450) are allocated to the “no analyst coverage” portfolio. The characteristics of both “analyst coverage” and “no analyst coverage” firms do not differ very much from those shown in table 5 for alternative definitions of analyst coverage.

to be less negative for covered companies as a result of prior price adjustments to analyst opinions.

Table 5 summarizes our results. In panel A (B), we present the short-term market reaction to the announcement of a GC modified audit report using reported (current) recommendations to define analyst coverage. In panel C, we use inferred recommendations with the same purpose. We find that the short-term market reaction to the publication of a GC modified audit report critically depends on pre-event analyst coverage. However, contrary to our initial expectations, the short-term market reaction is significantly more negative for firms with analyst coverage than for firms with no analyst coverage. As an example consider the results in panel A. We find that the 3-day mean (median) abnormal returns are -2.9% (-2.7%) for non-covered firms and -6.9% (-4-6%) for covered firms, all significant at the 0.1% level. More importantly, both parametric and nonparametric tests show that the return performance between the portfolios is significantly different. Results in panel B and panel C are consistent with this finding, which leads us to reject our null hypothesis H1.

We also investigate to what extent the more extreme short-term reaction to the GC announcement of covered firms depends to the idiosyncratic characteristics of the firms. We conduct the same test above by distinguishing our sample firms according to size, momentum, distress risk and earnings surprise. Our results show that the significant differences in the short-term market reaction to the GC event depending on analyst coverage are particularly salient in the case of small firms, negative momentum firms and highly distressed firms. For larger firms, positive momentum firms and low distressed firms, analyst coverage does not increase the surprise with which the market receives the publication of a GC audit report. This suggests that analysts are misleading investors in the particular case of firms with higher levels of information uncertainty and firms associated with other pre-GC unfavourable information. We speculate that these sophisticated agents, which are reluctant to report negatively (McNichols and O'Brien, 1997), are thus contributing to delay the assimilation of negative information into stock prices of GC firms and fuelling an inaccurate expectation regarding the future prospects of these firms.

5.3. Short-term market reaction to a first-time GC modified audit report and the nature of analyst recommendation

In this section, we investigate whether the nature of analyst recommendations impacts on the negative abnormal returns surrounding the publication of a GC modified audit report. It is reasonable to assume that “strong buy”, “buy” and “hold” recommendations are an over-optimistic view on the prospects of GC firms than is warranted given the subsequent highly negative market performance of GC stocks and the high proportion of firms that go bankrupt or delisted (e.g., Kausar, Taffler and Tan, 2009). These optimistic recommendations issued before the announcement of a GC modified audit report may confuse investors and delay the incorporation of other unfavourable information into stock prices. On the other hand, “underperform” and “sell” (non-optimistic) recommendations are expected to exert negative pressure on retail investors (Malmendier and Shanthikumar, 2007) and thus contribute to construct a more accurate expectation regarding the future prospects of these firms. We specifically test null hypotheses H2 and H3 by allocating our 924 first-time GC companies to three portfolios. The first portfolio includes firms with no recommendations available within the 6-month period prior to the GC announcement date. The second (third) portfolio is that for which analyst average recommendation is non-optimistic (optimistic) in the same period.¹⁴

Table 6 summarizes our results and highlight that analysts are reluctant to issue unfavourable recommendations on GC firms. In fact, there is a significant higher number of optimistic recommendations in comparison to the number of non-optimistic recommendations. For instance, from the 196 (384) firms with reported (current) recommendations available within the 6-month period prior to the GC announcement date, we find that only 24 (26) have an average “non-optimistic” recommendation, representing only 13% (7%) of the total firms. Moreover, results suggest that the short-term market reaction to the publication of a GC modified audit report critically depends on the message conveyed by analysts. When firms’ average reported and current recommendations are classified as “non-optimistic”, there is no abnormal reaction to the announcement of a GC audit report. Conversely, for all remaining cases, there is a negative and significant short-term market reaction to the publication of a GC modified audit report. Importantly, contrary to reported and current recommendations that are easily understood by the non-sophisticated clientele, firms with “non-optimistic” inferred recommendations experience significant negative abnormal returns to this accounting disclosure. This reinforces the idea that retail investors follow analysts’ recommendations literally and they are unable to

¹⁴ We classify a case as “non-optimistic” if the firm average numeric recommendation is above 3.5 (“underperform” and “sell”). All the remaining cases are classified as “optimistic” (“strong buy”, “buy” and “hold”).

understand that coverage cessation is likely to be associated with unfavourable information. Overall, we conclude that for the few cases in which analysts are issuing “sell” or “underperform” recommendations immediately before the event, there is no “surprise” associated with the publication of a GC audit report.

There is also evidence that analyst coverage “per se” does not contribute to reduce the magnitude of the negative abnormal returns surrounding the publication of a GC audit report. The comparison between firms with no analyst coverage and firms with “non-optimistic” coverage shows, in general, no significant differences between the abnormal returns of these two groups of firms. However, when we compare firms with no analyst coverage and firms with “optimistic” coverage, we conclude that the short-term market reaction to the GC announcement is significantly more negative for firms with “optimistic” analyst coverage. For instance, panel A of table 6 shows that the average abnormal return for firms with no recommendations reported within the 6-month period before the GC audit report date is no less than -3.6% (significant at < 0.0001). This negative abnormal reaction is not significantly different from the returns of the “non-optimistic” portfolio. However, the negative abnormal returns for firms with “optimistic” analyst coverage is no less than -8.8% (significant at < 0.0001), which is significantly different from the results obtained for firms with no reported recommendations. Results in panel B and panel C confirm these findings, which are inconsistent with our null hypothesis H2 and consistent with our null hypothesis H3.

Figure 1 clearly illustrates the main finding of this section: when analyst recommendations exert negative pressure on retail investors (i.e., “underperform” or “sell”) before the announcement of a GC modified audit report, they reduce the “surprise” with which the market receives such announcement. Conversely, when analyst recommendations exert positive or no pressure on retail investors (i.e., “strong buy”, “buy” or “hold”), they increase the “surprise” with which the market receives the publication of a GC modified audit report. We conclude that analysts play an important role in the assimilation of pre-GC negative information in stock prices. However, the usefulness of their recommendations to investors critically depends on the content of such information.

6. Additional tests

This section aims to provide further evidence about the role of pre-event analyst opinions on the short-term market reaction to the GC announcement. Specifically, we provide a multivariate analysis and control our results for regulatory regime to test the robustness of our findings.

6.1. Multivariate analysis

We now use the model defined in equation 4 to test the combined effect of several independent variables describes in section 4.3. In our analysis, we use two dummy variables (NONOPTM and OPTM) to distinguish between three cases: 1) a firm with no analyst coverage; 2) a covered firm receiving a “non-optimistic” average recommendation; 3) a covered firm receiving an “optimistic” average recommendation. This avoids having perfect collinearity since the “base” category as no specific dummy associated (Gujarati, 2003). In our regression, the “base” category is that for which firms have no analyst following (i.e., when NONOPTM=0 and OPTM=0). Because we have two dummies to discriminate between three complementary cases, the intercept has a particular meaning. To be precise, positive (negative) and statistically significant estimates of the intercept indicate that no analyst coverage increases (decreases) the likelihood of a firm experiencing a strong negative abnormal return with the publication of a GC modified audit report.

Table 7 summarizes our results, which are highly significant (Wald $\chi^2 = 32.60$, p -value=0.0006). We find that the model’s intercept is negative and highly significant, suggesting that, *ceteris paribus*, firms with no analyst coverage are less likely to experience a strong negative short-term market reaction to the GC announcement controlling for all other factors. Importantly, the NONOPTM variable is also negative and significant at the 5% level, suggesting that firms receiving “non-optimistic” recommendations have a reduced likelihood of experiencing a strong negative short-term abnormal reaction to the GC event. We find two additional independent variables significant at the 10% level. The negative (positive) coefficient associated with the MOM (ZSCORE) variable suggests that firms with lower past performance (higher ZSCORE, i.e., lower distress risk) are more likely to experience a strong negative short-term market reaction to the GC announcement. None of the remaining variables are statistically significant at conventional levels.

We re-estimate equation 4 using different thresholds to define the worse performing firms to test the robustness of the results. Specifically, in sequential rounds, firms in the bottom 10%, 20%, 30%, 40% and 50% by 3-day CAR, are classified in the “strong negative abnormal reaction” portfolio. We then run distinct regressions only to find that the intercept is highly significant for all the cases and that the signals associated with the coefficients are robust as well as their significance. Overall, the multivariate analysis confirms our previous finding that analyst coverage, in general terms, amplifies the “surprise” associated with the publication of a GC audit report. However, when the average analyst recommendations exert retail investors to sell the stocks, analysts reduce the likelihood of a firm experiencing a strong negative short-term market reaction to the publication of a GC modified audit report.

6.2. Controlling for regulatory regime

Concerns that investors were being misled by analysts’ optimistic research reports (e.g., Stickel, 1990; Womack, 1996; Easterwood and Nutt, 1999; Ryan and Taffler, 2006; Barber et al., 2006) and by analyst conflicts of interest (e.g., Dugar and Nathan, 1995; Lin and McNichols, 1998; Michaely and Womack, 2005; Barber, Lehavy, and Trueman, 2007) were triggered by the stock market downturn of 2000-2002 and by several corporate episodes where analysts were issuing “buy” recommendations to firms that filed for bankruptcy shortly after it (e.g., Enron, WorldCom, Adelphia, Tyco). In 2002, the SEC approved the NASD Rule 2711 and NYSE Rule 472 in order to increase investors’ confidence about the integrity of financial markets and to provide them relevant information to access analysts’ research. Extant research shows that following the regulatory changes, optimistic recommendations have become less frequent whereas the neutral and pessimistic recommendations have become more frequent (e.g., Barber et al., 2006; Madureira et al., 2008; Mokoteli and Taffler, 2009).

We now investigate to what extent the new reporting environment impacts the short-term market reaction to this accounting event. We conjecture that more pessimistic pre-GC recommendations and the additional information that analysts are required to disclose following the implementation of the regulatory changes may provide investors with better information to interpret analyst message in the GC audit report. Table 7 summarizes our results. There are 723 (201) sample cases for which the GC disclosure date occurred prior to (following) the implementation of NASD 2711. Results show that, following regulatory changes, the short-term market reaction to the publication of a GC modified audit report is

no longer significantly more negative for firms with analyst coverage than firms not followed.

Panel A of table 8 shows that, for the pre-NASD 2711 period, the 3-day mean (median) abnormal return associated with the going-concern announcement for GC firms followed by analysts is -7.3% (-4.9%) which compares with -1.9% (-1.9%) for those cases where firms have no analyst coverage. Despite the significance of the negative abnormal returns for both portfolios, parametric and nonparametric tests show that the abnormal reaction for the “analyst coverage” portfolio is significantly more negative in comparison to the “no analyst coverage” portfolio. However, when we conduct the same test for the post-NASD 2711 period, we find that the differences in the negative abnormal returns surrounding the disclosure of this accounting event between firms with analyst coverage and firms with no analyst coverage are no longer significant at conventional levels. Panel B and C shows that results are robust when we use different recommendation categories to define analyst coverage.

Overall, our results suggest that regulatory changes introduced in 2002 were important to investors. We conclude that the “surprise” with which the market receives the publication of a GC modified audit report is no longer higher for the case of followed firms. This suggests that investors became, at least partially, more aware that relying solely on analyst’s recommendations to evaluate distressed firms might be unwise. It follows, that regulatory changes were effective in providing investors with better information to access analysts’ research in the GC audit report domain.

7. Discussion

This study provides original evidence on the role of security analysts in the dissemination of a major accounting event: the going-concern principle. Previous literature shows a strong and significant negative abnormal reaction to the publication of a GC modified audit report (e.g., Firth, 1978; Fleak and Wilson, 1994; Jones, 1996; Carlson, Glezen, and Benefield, 1998; Citron, Taffler, and Uang, 2008; Kausar, Taffler and Tan, 2010b). It is also known that this adverse reaction is attenuated when the market’s awareness of a potential forthcoming qualification is higher (e.g., Mutchler, 1985; Dopuch, Holthause and Leftwich, 1987). We supplement this discussion by showing that security analysts are fuelling the “surprise” with which the market receives such a bad news. In fact, our results show that the short-term market reaction to the publication of a GC

modified audit report is significantly more negative for firms with analyst coverage than firms not followed.

There are several studies claiming that analysts improve market efficiency (e.g., Gleason and Lee, 2003; Jiang, Lee and Zhang, 2005; Zhang, 2006; Zhang, 2008) and show that these sophisticated agents reduce information uncertainty and speed up the assimilation of new information into stock prices. On the other hand, previous research also finds that analysts are biased in their activity given the systematic positive differences between forecast and actual EPS and the permanent higher number of “buy” recommendations in comparison to the number of “sell” recommendations (e.g., Womack, 1996; McNichols and O’Brien, 1997; Brown, 2001; Barber et al., 2006; Ryan and Taffler, 2006). For instance, the Enron scandal revealed that almost 90% of analysts covering the firm were still recommending the firms’ stock as a “buy” or “strong buy” just six weeks before its bankruptcy filing date. This case, among other publicized cases, contributed to shrink investors’ confidence in the integrity of financial markets. However, there are thousands of small companies that do not benefit from such media attention for which similar stories could be told. Importantly, many of these firm stocks are owned by a majority of retail investors that have less access to alternative sources of information and analysis, and thus depend more on analyst opinions. This is the case of GC stocks, for which retail investors represent approximately 84% of trading volume (Kausar, Taffler and Tan, 2010a).

Our findings are in sharp contrast with the idea that prior analyst coverage reduces information uncertainty and speed up the assimilation of going-concern uncertainties into stock prices of GC firm. Paradoxically, we show that the short-term market reaction to the publication of a GC modified audit report is significantly more negative for firms with analyst coverage than firms not followed. For example, we find that the 3-day mean abnormal return associated with the going-concern announcement for firms subsequently receiving first-time going-concern opinions followed by at least one analyst is at least – 6.9%. This compares with only – 2.9% for non-covered firms (significant at <0.01). Some may argue that this result is a consequence of a natural association between analyst coverage and a more rapid assimilation of the information conveyed by a GC modified audit report. Two particular results lead us to reject this potential explanation. First, we find that the differences in negative abnormal returns between firms with and without analyst coverage are particularly evident for small firms and firms for which other negative signals are clearer (negative momentum, high distress risk). This suggests that analysts’ optimistic recommendations are reducing the impact of other unfavourable information

into stock prices and thus fueling an inaccurate expectation regarding GC stocks.¹⁵ Second, and more important, we show that retail investors are not been misled by analyst coverage “per se” but because their naïve interpretation of analyst over-optimistic recommendations. Drawing on Malmendier and Shanthikumar (2007), we show that when analyst recommendations exert positive or zero pressure on retail investors (i.e., “strong buy”, “buy” or “hold”), the “surprise” with which the market receives the GC modified audit report is higher for covered firms than firms with no coverage. In contrast, we find no similar conclusion when analyst recommendations exert negative pressure on retail investors (i.e., “underperform” or “sell”). Importantly, we show that the number of GC firms with optimistic recommendations dominate those with analyst coverage explaining why the overall reaction is significantly more adverse in the case of covered firms.

Peixinho and Taffler (2010) suggests that analysts communicate going-concern uncertainties to the market by downgrading GC stock recommendations from “buy” to “hold” and by being more prone to drop the coverage of such stocks in comparison to similar non-GC stocks as the event date approaches. Moreover, Kausar, Taffler and Tan (2010a) show a significant decline of mean institutional holdings on GC stocks from 17% to 11% within the one-year period before the GC date whereas retail investors increase their holdings from 69% to 74%. As such, we conjecture that retail investors are unable to understand analyst unfavourable message and this inability explains the higher “surprise” with which the market receives the GC audit report in the case of followed firms. It seems that , contrary to sophisticated investors, non-sophisticated clientele of GC firms does not understand that *“analysts do not always mean what they say (...) they frequently say ‘hold’ but mean ‘sell’, or say ‘buy’ when they mean ‘hold’”* (Shefrin, 2002).

Analyst recommendations explain, at least partially, why large investors are selling GC stocks to retail investors as they realize that a “hold” recommendation and analyst propensity to drop the coverage of a firm is likely to be associated to unfavourable information. Kausar, Taffler and Tan (2010a) provide a behavioral explanation to justify why investors act differently according to their degree of sophistication by arguing that retail investors are more prone to information processing bias when assimilating bad news than large investors. Recent research also suggests that human propensity to gamble explains why retail investors excessively overweight speculative stocks (e.g., Kumar, 2009). Our results provide evidence that over-optimistic analyst recommendations contribute to fuel this gambling behavior of retail investors. We further show that the regulatory changes introduced in 2002 were important to provide investors with better

¹⁵ It is important to notice that going-concern qualifications tend to follow a series of unfavourable economic events, such as sales decline, failures to make payments on debt, dividend reductions, production problems, loss contracts or quarterly losses (Elliot, 1982).

information to access analysts' research and mitigate the misleading phenomenon in the GC domain.

8. Conclusion

This study shows that the magnitude of the short-term abnormal reaction to the publication of a GC modified audit report is significantly higher in the case of firms followed by analysts. This unexpected result is justified by the disproportionate number of cases where analysts exert positive or no "pressure" on retail investors. Retail investors' behavior plays a crucial role in this domain since they represent approximately 84% of total trades within the one-year period before the disclosure of the auditor's report.

We find that when analyst recommendations are consistent with the forthcoming GC audit report and exert negative "pressure" on retail investors (i.e., "underperform" or "sell"), they do not obstruct the incorporation of going-concern uncertainties into stock prices. It follows no significant differences in the short-term market reaction between companies with analyst coverage and companies with no analyst coverage. However, non-optimistic recommendations represent no more than 13% of total cases. In contrast, for the large majority of cases where analyst recommendations are optimistic and exert positive or no "pressure" on retail investors (i.e., "strong buy", "buy" or "hold"), they seem to delay the incorporation of going-concern uncertainties into stock prices. For these cases with optimistic coverage, the short-term market reaction to the GC announcement is significantly more adverse in comparison to firms not followed. This suggests that investors are significantly more surprised with the publication of a GC modified audit report when analysts' recommendations contradict going-concern uncertainties.

We conclude that retail investors should not follow analyst recommendations literally and should reflect on SEC's advice to do their homework before investing. Analyst reluctance to report negatively on GC stocks, leads retail investor clientele of GC firms to be misled by its naïve interpretation of analyst stock recommendations.

REFERENCES

- Altman, E. (1968). Financial ratios, discriminant analysis and the prediction of corporate bankruptcy. *Journal of Finance*, 23: 589-609.
- Asare, S. (1990). The auditor's going-concern decision: A review and implications for future research. *Journal of Accounting Literature*, 9: 39-64.
- Ball, R., & Brown, P. (1968). An empirical evaluation of accounting income numbers. *Journal of Accounting Research*, 6: 159-178.
- Banz, R. (1981). The relationship between return and market value of common stocks. *Journal of Financial Economics*, 9: 3-18.
- Barber, B., Lehavy, R., McNichols, M., & Trueman, B. (2006). Buys, holds, and sells: The distribution of investment banks' stock ratings and the implications for the profitability of analysts' recommendations. *Journal of accounting and Economics*, 41: 87-117.
- Barber, B., Lehavy, R., & Trueman, B. (2007). Ratings changes, ratings levels, and the predictive value of analysts' recommendations. *Working Paper*, available at SSRN: <http://ssrn.com/abstract=1077733>.
- Beaver, W. (2002). Perspectives on recent capital market research. *The Accounting Review*, 77: 453-474.
- Beneish, M. (1991). Stock prices and the dissemination of analysts' recommendations. *Journal of Business*, 64: 393-416.
- Bergstresser, D., & Phillipon, T. (2006). CEO incentives and earnings management. *Journal of Financial Economics*, 80: 511-529.
- Bernard, V., & Thomas, J. (1989). Post-earnings-announcement drift: Delayed price response or risk premium? *Journal of Accounting Research*, 27: 1-36.
- Bernard, V., & Thomas, J. (1990). Evidence that stock prices do not fully reflect the implications of current earnings for future earnings. *Journal of Accounting and Economics*, 13: 305-340.

- Bhattacharya, N. (2001). Investors' trade size and trading responses around earnings announcements: An empirical investigation. *The Accounting Review*, 76: 221-244.
- Bhushan, R. (1989). Firm characteristics and analysts following. *Journal of Accounting and Economics*, 11: 255-274.
- Bjerring, J., Lakonishok, J., & Vermaelen, T. (1983). Stock prices and financial analysts' recommendations. *Journal of Finance*, 38: 187-204.
- Blay, A., & Geiger, M. (2001). Market expectations for first-time going-concern recipients. *Journal of Accounting, Auditing & Finance*, 16: 209-226.
- Block, S. (1999). A study of financial analysts: Practice and theory. *Financial Analysts Journal*, 55: 86-95.
- Brennan, M., Jegadeesh, N., & Swaminathan, B. (1993). Investment analysis and the adjustment of stock prices to common information. *The Review of Financial Studies*, 6: 799-824.
- Burns, N. & Kedia, S. (2006). The impact of performance-based compensation on misreporting. *Journal of Financial Economics*, 79: 35-67.
- Butler, M., Leone, A., & Willenborg, M. (2004). An empirical analysis of auditor reporting and its association with abnormal accruals. *Journal of Accounting & Economics*, 37: 139-165.
- Carlson, S., Glezen, G., & Benefield, M. (1998). An investigation of investor reaction to the information content of a going concern audit report while controlling for concurrent financial statement disclosures. *Quarterly Journal of Business and Economics*, 37: 25-39.
- Charlton, A. (2006). Airbus executive defends recent stock sale. *Associated Press*, June 16.
- Cheng, Q. & Warfield, T. (2005). Equity incentives and earnings. *The Accounting Review*, 80: 143-181.
- Citron, D., Taffler, R., & Uang, J. (2008). Delays in reporting price-sensitive information: The case of going concern. *Journal of Accounting and Public Policy*, 27: 19-37.
- Clarke, J., Ferris, S., Jayaraman, N., & Lee, J. (2006). Are analyst recommendations biased? Evidence from corporate bankruptcies. *Journal of Financial and Quantitative Analysis*, 41: 169-196.

- Craswell, A. (1985). Studies of the information content of qualified audit reports. *Journal of Business & Accounting*, 12: 93-115.
- Das, S., Guo, R., & Zhang, H. (2006). Analysts' selective coverage and subsequent performance of newly public firms. *The Journal of Finance*, 61: 1159-1185.
- DeBondt, W., & Thaler, R. (1987). Further evidence on investor overreaction and stock market seasonality. *Journal of Finance*, 42: 557-581.
- Dichev, I., & Piotroski, J. (2001). The long-run stock returns following bond ratings changes. *Journal of Finance*, 56: 173-203.
- Dodd, P., Dopuch, N., Holthausen, R., & Leftwich, R. (1984). Qualified audit opinions and stock prices: Information content, announcement dates, and concurrent disclosures. *Journal of Accounting & Economics*, 6: 3-38.
- Dopuch, N., Holthausen, R., & Leftwich, R. (1987). Predicting audit qualifications with financial and market variables. *The Accounting Review*, 62: 431-454.
- Dugar, A., & Nathan, S. (1995). The effect of investment banking relationships on financial analysts' earnings forecasts and investment recommendations. *Contemporary Accounting Research*, 12: 131-160.
- Easterwood, J., & Nutt, S. (1999). Inefficiency in analysts' earnings forecasts: Systematic misreaction or systematic optimism? *Journal of Finance*, 54: 1777-1797.
- Elgers, P., Lo, M., & Jr, R. (2001). Delayed security price adjustments to financial analysts' forecasts of annual earnings. *The Accounting Review*, 76: 613-632.
- Elliott, J. (1982). "Subject to" audit opinions and abnormal security returns outcomes and ambiguities. *Journal of Accounting Research*, 20: 617-638.
- Elton, E., Gruber, M., & Grossman, S. (1986). Discrete expectational data portfolio performance. *Journal of Finance*, 41: 699-713.
- Fama, E., & French, K. (1992). The cross-section of expected stock returns. *Journal of Finance*, 47: 427-465.
- Firth, M. (1978). Qualified audit reports: Their impact on investment decisions. *The Accounting Review*, 53: 642-650.

- Fleak, S., & Wilson, E. (1994). The incremental information content of the going-concern audit report. *Journal of Accounting, Auditing & Finance*, 9: 149-166.
- Gleason, C., & Lee, C. (2003). Analyst forecast revisions and market price discovery. *The Accounting Review*, 78: 193-225.
- Graham, J., Harvey, C. & Rajgopal, S. (2005). The economic implications of corporate financial reporting. *Journal of Accounting and Economics*, 40: 3-73.
- Herbohn, K., Rangunathan, V., & Garsden, R. (2007). The horse has bolted: revisiting the market reaction to going concern modifications of audit reports. *Accounting and Finance*, 47: 473-493.
- Hong, H., Lim, T., & Stein, J. (2000). Bad news travels slowly: Size, analyst coverage, and the profitability of momentum strategies. *Journal of Finance*, 55: 265-295.
- Ivkovic, Z., & Jegadeesh, N. (2004). The timing and value of forecast recommendation revisions. *Journal of Financial Economics*, 73: 433-463.
- Jegadeesh, N., Kim, J., Krische, S., & Lee, C. (2004). Analysing the analysts: When do recommendations add value? *Journal of Finance*, 59: 1083-1124.
- Jegadeesh, N., & Titman, S. (1993). Returns to buying winners and selling losers: Implications for stock market efficiency. *Journal of Finance*, 48: 65-91.
- Jegadeesh, N., & Titman, S. (2001). Profitability of momentum strategies: An evaluation of alternative explanations. *Journal of Finance*, 56: 699-720.
- Jiang, G., Lee, C., & Zhang, Y. (2005). Information uncertainty and expected returns. *Review of Accounting Studies*, 10: 185-221.
- Jones, F. (1996). The information content of the auditor's going concern evaluation. *Journal of Accounting and Public Policy*, 15: 1-27.
- Kausar, A., Taffler, R., & Tan, C. (2009). The going-concern market anomaly. *Journal of Accounting Research*, 47: 213-239.
- Kausar, A., Taffler, R., & Tan, C. (2010a). What drives the going-concern market underreaction anomaly. *Working paper*.

Kausar, A., Taffler, R., & Tan, C. (2010b). Legal regimes and investor response to accounting disclosures: The case of going-concern opinions. *Working paper*.

Keim, D. (1983). Size-related anomalies and stock return seasonality. *Journal of Financial Economics*, 12: 13-32.

Kothari, S., & Warner, J. (1997). Measuring long-horizon security price performance. *Journal of Financial Economics*, 43: 301-399.

Kothari, S.P., Shu, Susan and Wysocki, Peter D. (Forthcoming). Do Managers Withhold Bad News?. *Journal of Accounting Research*, MIT Sloan Research Paper No. 4556-05. Available at SSRN: <http://ssrn.com/abstract=803865>

Kumar, A. (2009). Who gambles in the stock market?. *Journal of Finance*, 64: 1889-1933.

Lakonishok, J., Shleifer, A., & Vishny, R. (1994). Contrarian investment, extrapolation, and risk. *Journal of Finance*, 49: 1541-1578.

Lin, H., & McNichols, M. (1998). Underwriting relationships, analysts' earnings forecasts and investment recommendations. *Journal of Accounting and Economics*, 25: 101-127.

Liu, P., Smith, S., & Syed, A. (1990). Stock price reactions to The Wall Street Journal's securities recommendations. *Journal of Financial and Quantitative Analysis*, 25: 399-410.

Malmendier, Ulrike and Shanthikumar, Devin M., (2007). Are small investors naive about incentives? *Journal of Financial Economics*, 85: 457-489.

Michaely, R., & Womack, K. (2005). Brokerage recommendations: Stylized characteristics, market responses, and biases. In Thaler, R. (Ed.), *Advances in Behavioral Finance II*. Princeton University Press, NJ.

Mokoteli, T., & Taffler, R. (2009). The roles of cognitive bias and conflicts of interest in analyst stock recommendations. *Journal of Business Finance & Accounting*, 36: 384-418.

Mutchler, J. (1985). A multivariate analysis of the auditor's going-concern opinion decision. *Journal of Accounting Research*, 23: 668-682.

Mutchler, J., Hopwood, W., & McKeown, J. (1997). The influence of contrary information and mitigating factors on audit opinion decisions on bankrupt companies. *Journal of Accounting Research*, 35: 295-310.

- Ogneva, M., & Subramanyam, K. (2007). Does the stock market underreact to going concern opinions? Evidence from the U.S. and Australia. *Journal of Accounting and Economics*, 43: 439-452.
- Peixinho, R. & Taffler, R. (2010). Do analysts know but not say? The case of going-concern opinions. Working paper.
- Ramnath, S., Rock, S., & Shane, P. (2008). The financial analyst forecasting literature: A taxonomy with suggestions for further research. *International Journal of Forecasting*, 24: 34-75.
- Ryan, P., & Taffler, R. (2006). Do brokerage houses add value? The market impact of UK sell-side analyst recommendation changes. *The British Accounting Review*, 38: 371-386.
- Shefrin, H. (2002). *Beyond Greed and Fear: Understanding Behavioral Finance and the Psychology of Investing*. Oxford University Press, New York.
- Stickel, S. (1990). Predicting individual analyst earnings forecasts. *Journal of Accounting Research*, 28: 409-417.
- Stickel, S. (1995). The anatomy of the performance of buy and sell recommendations. *Financial Analysts Journal*, 51: 25-39.
- Taffler, R. , Lu, J., & Kausar, A. (2004). In denial? Stock market underreaction to going-concern audit report disclosures. *Journal of Accounting & Economics*, 38: 263-296.
- Womack, K. (1996). Do brokerage analysts' recommendations have investment value? *Journal of Finance*, 51: 137-167.
- Wooldridge, J. (2001). *Econometric Analysis of Cross Section and Panel Data*. The MIT Press.
- Zhang, X. (2006). Information uncertainty and stock returns. *Journal of Finance*, 61: 105-136.
- Zhang, Y. (2008). Analyst responsiveness and the post-earnings-announcement drift. *Journal of Accounting and Economics*, 46: 201-215.

Table 1

Sample Selection Process for the First-Time GC Modified Audit Report

This table shows how our population of 924 non-finance, non-utility industry firms listed on the NYSE, AMEX or NASDAQ, for which the auditors disclosed a going-concern modified audit report for the first-time between 01.01.1994 and 31.12.2005 is derived.

The sample is obtained by using the 10k Wizard free search tool facility. The combination of keywords used for identifying our GC cases is “raise substantial doubt” and “ability to continue as a going-concern”. Conditional on a firm having data in the CRSP/COMPUSTAT merged database, we manually verify if the company has a GC modified audit report in that fiscal year and if the previous fiscal year is clean in order to identify the first-time GC companies. We then exclude all cases that filed Chapter 11 before the audit report publication date, all cases classified as development stage enterprise, foreign, utilities or financials, and cases with insufficient CRSP/COMPUSTAT data.

	N
Firm-year observations identified through 10k wizard	29.102
Firm-year observations not found in CRSP/Compustat merged	-16.866
Firm-year observations that do not constitute First-time GCM	-9.940
Firm-year observations with insufficient CRSP/COMPUSTAT data	-1.017
Firm-year observations classified as utilities or financials	-142
Firm-year observations classified as foreign	-56
Firm-year observations classified as development stage enterprise	-112
Firm-year observations filing Chapter 11 before audit report publication date	-45
First-time GCM sample cases (1994-2005)	924

Table 2

Descriptive Statistics

This table presents the descriptive statistics of our sample of 924 non-finance, non-utility industry firms listed on the NYSE, AMEX or NASDAQ, for which the auditors disclosed a going-concern modified audit report for the first-time between 01.01.1994 and 31.12.2005.

Panel A: Annual Distribution of the GC cases

Year	Number of cases
1994	21
1995	44
1996	62
1997	85
1998	96
1999	92
2000	69
2001	136
2002	145
2003	90
2004	38
2005	46
	924

Panel B: Continuous Variables

Variable	Mean	Median	St. Deviation
SIZE	89.57	33.66	167.08
SALES	103.68	21.55	227.20
TA	120.68	25.34	283.01
ROA	-0.63	-0.37	0.76
CR	1.72	1.16	1.71
LEV	0.38	0.32	0.31
ZSCORE	1.15	0.93	1.10
PREDGC	0.20	0.01	2.84
BM	0.77	0.40	1.23
MOM	-0.04	-0.04	0.07

SIZE = market value of equity measured by market capitalization in \$ million; SALES = sales in \$ million; TA = total assets in \$ million; ROA=return on assets (net income/total assets); CR = current ratio (current assets/current liabilities); LEV=total debt/total assets; ZSCORE=financial distress measure computed as Altman (1968); PREDGC=probability of a forthcoming GC modified audit report disclosure computed as Mutchler (1985). All variables are computed with data taken from the last annual financial accounts reported before the GC date. BM= book value of equity divided by market capitalization, where book value of equity is taken from the last annual accounts reported prior to the date used to calculate the market capitalization at one year before the GC announcement date; MOM = momentum, defined as the monthly average of prior 11 months (t-12 to t-2) raw returns.

Panel C: Other characteristics

Variable	Number of positive cases	% of sample
EQUITY	781	84.5
EPS	72	7.8
DIVID	23	2.5
DEAD	43	4.7
DELIST	422	45.7
AUDITOR	624	67.5
GCMW	171	18.5

EQUITY = book value of equity dummy (1 if positive, 0 otherwise); EPS = earnings per share dummy (1 if positive EPS, 0 otherwise); DIVID = dividend paid (1 if dividend paid, 0 otherwise). All variables are computed with data taken from the last annual financial accounts reported before the GC date.

DEAD = bankruptcy dummy (1 if the firm enters into Chapter 7, Chapter 11, voluntary liquidation or is wound up within one year of the audit report date, 0 otherwise); DELIST = delist dummy (1 if the firm is delisted due to any reason within one year of the audit report date, 0 otherwise); AUDITOR = audit quality proxy dummy (1 if BIG5, 0 otherwise); GCMW = going-concern withdrawn dummy (1 if the firm receives a non-GC modified opinion within one year, 0 otherwise).

TABLE 3
Descriptive Statistics – Non-covered vs. Covered Firms

This table presents descriptive statistics for our sample of 924 non-finance, non-utility industry firms listed on the NYSE, AMEX or NASDAQ, for which their auditors disclose a going-concern modified audit report for the first-time between 01.01.1994 and 31.12.2005. Each of our 924 companies is allocated to one of two portfolios conditional on the definition of “analyst coverage”. Companies are allocated to the “analyst coverage” portfolio if analysts report at least one new recommendation or issue one new annual EPS forecast within the 6-month period before the GC announcement date. All the remaining firms are allocated to the “no analyst coverage” portfolio. Results are reported separately. The last four columns report the mean and median differences between the variables of each portfolio. The significance of the t-test (Wilcoxon-Mann-Whitney test) is showed in brackets on the right of the mean (median) differences.

Variable	NO ANALYST COVERAGE (n = 607)			ANALYST COVERAGE (n = 317)			Mean Diference	p-value	Median Diference	p-value
	Mean	Median	St. Deviation	Mean	Median	St. Deviation				
SIZE	37.63	22.06	50.68	219.78	82.30	407.38	-182.15	(<0.0001)	-60.24	(<0.0001)
SALES	55.95	14.48	102.47	211.86	50.29	416.17	-155.91	(<0.0001)	-35.81	(<0.0001)
TA	50.97	16.07	98.17	270.12	60.61	540.48	-219.15	(<0.0001)	-44.54	(<0.0001)
ROA	-0.62	-0.35	0.76	-0.66	-0.41	0.78	0.04	(0.5434)	0.06	(0.5715)
CR	1.73	1.15	1.80	1.69	1.23	1.49	0.04	(0.7258)	-0.08	(0.5800)
LEV	0.37	0.33	0.31	0.37	0.31	0.32	0.00	(0.9709)	0.02	(0.5238)
ZSCORE	1.23	0.98	1.14	0.99	0.76	1.02	0.24	(0.0009)	0.22	(0.0003)
PREDGC	0.03	0.01	2.04	0.16	-0.01	5.88	-0.13	(0.7103)	0.02	(0.9097)
BM	0.87	0.42	1.57	0.63	0.35	0.89	0.24	(0.0039)	0.07	(0.1664)
MOM	-0.03	-0.03	0.07	-0.06	-0.06	0.07	0.03	(<0.0001)	0.03	(<0.0001)

SIZE = market value of equity measured by market capitalization in \$ million; SALES = sales in \$ million; TA = total assets in \$ million; ROA=return on assets (net income/total assets); CR = current ratio (current assets/current liabilities); LEV=total debt/total assets; ZSCORE=financial distress measure computed as Altman (1968); PREDGC=probability of a forthcoming GC audit report disclosure computed as Mutchler (1985). All variables are computed with data taken from the last annual financial accounts reported before the GC date. BM= book value of equity divided by market capitalization, where book value of equity is taken from the last annual accounts reported prior to the date used to calculate the market capitalization at one year before the GC announcement date; MOM = momentum, defined as the monthly average of prior 11 months (t-12 to t-2) raw returns.

Table 4
Short-term Market Reaction to the First-Time GC Modified Audit Report

This table presents the cumulative abnormal returns for our sample of 924 non-finance, non-utility industry firms listed on the NYSE, AMEX or NASDAQ, for which their auditors disclose a going-concern modified audit report for the first-time between 01.01.1994 and 31.12.2005. Abnormal returns are market-adjusted returns, where trading day $t=0$ is the GC announcement day taken from the SEC-EDGAR database. The smallest decile of the NASDAQ index is used as benchmark index. The two-tailed significance of the t-test (Wilcoxon signed rank-test) is reported in parentheses below the mean (median) CAR. The percentage of positive (negative) CARs is shown in the positive (negative) column, whereas the significance of the sign test is reported in parentheses.

Period (trading days)	CAR				Sign test
	Mean	Median	Positive	Negative	
(-1, +1)	-0.042 (<0.0001)	-0.032 (<0.0001)	39%	61%	(<0.0001)
(-2, +2)	-0.054 (<0.0001)	-0.042 (<0.0001)	37%	63%	(<0.0001)
(-3, +3)	-0.049 (<0.0001)	-0.047 (<0.0001)	37%	63%	(<0.0001)

Table 5
Short-term Market Reaction to the First-Time GC Modified Audit Report Conditional on Analyst Coverage

This table presents the cumulative abnormal returns for our sample of 924 non-finance, non-utility industry firms listed on the NYSE, AMEX or NASDAQ, for which their auditors disclose a going-concern modified audit report for the first-time between 01.01.1994 and 31.12.2005. Abnormal returns are market-adjusted returns, where trading day $t=0$ is the GC announcement day taken from the SEC-EDGAR database. The smallest decile of the NASDAQ index is used as the benchmark index. Two-tailed significance of the t-test (Wilcoxon signed rank-test) is reported in parentheses below the mean (median) CAR. The last two columns report the mean and median differences between the CARs of the portfolios under analysis. The significance of the t-test (Wilcoxon-Mann-Whitney test) is showed in brackets below the mean (median) differences.

In panel A (panel B), firms are allocated to the “analyst coverage” portfolio if there is at least one reported (current) recommendations available or one annual EPS forecast within the 6-month period prior to the GC announcement date. In panel C, firms are allocated to the “analyst coverage” portfolio if there is at least one inferred recommendation available or one annual EPS forecast within the 6-month period prior to the GC announcement date. All remaining firms are allocated to the “no analyst coverage” portfolio. Section 4.2.2.1 provides detailed explanation about the estimation of the recommendation categories.

Panel A: Reported Recommendations

Period (trading days)	NO ANALYST COVERAGE (A) (n = 607)		ANALYST COVERAGE (B) (n = 317)		DIFERENCE (A - B)	
	Mean CAR	Median CAR	Mean CAR	Median CAR	Mean CAR	Median CAR
(-1, +1)	-0.029 (<0.0001)	-0.027 (<0.0001)	-0.069 (<0.0001)	-0.046 (<0.0001)	0.040 (0.0011)	0.019 (0.0263)
(-2, +2)	-0.037 (<0.0001)	-0.034 (<0.0001)	-0.086 (<0.0001)	-0.065 (<0.0001)	0.049 (0.0009)	0.031 (0.0085)
(-3, +3)	-0.029 (0.0060)	-0.038 (<0.0001)	-0.090 (<0.0001)	-0.067 (<0.0001)	0.061 (0.0003)	0.029 (0.0037)

Panel B: Current Recommendations

Period (trading days)	NO ANALYST COVERAGE (A) (n = 516)		ANALYST COVERAGE (B) (n = 408)		DIFERENCE (A - B)	
	Mean CAR	Median CAR	Mean CAR	Median CAR	Mean CAR	Median CAR
(-1, +1)	-0.028 (0.0001)	-0.027 (<0.0001)	-0.060 (<0.0001)	-0.042 (<0.0001)	0.032 (0.0057)	0.015 (0.0542)
(-2, +2)	-0.040 (<0.0001)	-0.036 (<0.0001)	-0.072 (<0.0001)	-0.057 (<0.0001)	0.032 (0.0231)	0.021 (0.0643)
(-3, +3)	-0.031 (0.0052)	-0.036 (<0.0001)	-0.074 (<0.0001)	-0.058 (<0.0001)	0.043 (0.0095)	0.022 (0.0225)

Panel C: Inferred Recommendations

Period (trading days)	NO ANALYST COVERAGE (A) (n = 450)		ANALYST COVERAGE (B) (n = 474)		DIFERENCE (A - B)	
	Mean CAR	Median CAR	Mean CAR	Median CAR	Mean CAR	Median CAR
(-1, +1)	-0.024 (0.0024)	-0.023 (<0.0001)	-0.061 (<0.0001)	-0.041 (<0.0001)	0.037 (0.0010)	0.018 (0.0109)
(-2, +2)	-0.034 (0.0008)	-0.033 (<0.0001)	-0.073 (<0.0001)	-0.057 (<0.0001)	0.039 (0.0056)	0.024 (0.0245)
(-3, +3)	-0.028 (0.0208)	-0.039 (<0.0001)	-0.068 (<0.0001)	-0.050 (<0.0001)	0.040 (0.0171)	0.011 (0.0738)

Table 6
Short-term Market Reaction to the First-Time GC Modified Audit Report Conditional on Analyst Coverage – Controlling for Recommendation Rating

This table presents the cumulative abnormal returns for our sample of 924 non-finance, non-utility industry firms listed on the NYSE, AMEX or NASDAQ, for which their auditors disclose a going-concern modified audit report for the first-time between 01.01.1994 and 31.12.2005. Abnormal returns are market-adjusted returns, where trading day $t=0$ is the GC announcement day taken from the SEC-EDGAR database. The smallest decile of the NASDAQ index is used as the benchmark index. The two-tailed significance of the t-test (Wilcoxon signed rank-test) is reported in parentheses below the mean (median) CAR. The last two columns report the mean and median differences between the CARs of the portfolios under analysis. The significance of the t-test (Wilcoxon-Mann-Whitney test) is showed in brackets below the mean (median) differences.

In panel A (panel B), firms are allocated to the “non-optimistic” portfolio if their average reported (current) recommendation is classified as “non-optimistic”, i.e., if their average recommendation is numerically lower than 3.5. Firms are allocated to the “optimistic” portfolio if their average reported (current) recommendation is classified as “optimistic”, i.e., if their average recommendation is numerically higher than 3.5. All remaining firms for which there are no reported (current) recommendations available within that period are allocated to the “no coverage” portfolio. In panel C, I use exactly the same classification criterion based on inferred recommendations. Section 4.2.2.1 provides detailed explanation about the estimation of the recommendation categories.

Panel A: Reported recommendations

Period (trading days)	NO ANALYST COVERAGE (A) (n = 728)		NONOPTIMISTIC STOCKS (B) (n = 24)		DIFERENCE (A - B)	
	Mean CAR	Median CAR	Mean CAR	Median CAR	Mean CAR	Median CAR
(-1,+1)	-0.036 (<0.0001)	-0.030 (<0.0001)	0.044 (0.2713)	0.013 (0.1573)	-0.080 (0.0538)	-0.043 (0.0123)
(-2,+2)	-0.045 (<0.0001)	-0.039 (<0.0001)	-0.000 (0.9973)	0.005 (0.9559)	-0.045 (0.3341)	-0.044 (0.2087)
(+3,+3)	-0.041 (<0.0001)	-0.043 (<0.0001)	0.024 (0.6360)	0.041 (0.6175)	-0.065 (0.2078)	-0.084 (0.0957)

Period (trading days)	NO ANALYST COVERAGE (A) (n = 728)		OPTIMISTIC STOCKS (B) (n = 172)		DIFERENCE (A - B)	
	Mean CAR	Median CAR	Mean CAR	Median CAR	Mean CAR	Median CAR
(-1,+1)	-0.036 (<0.0001)	-0.030 (<0.0001)	-0.088 (<0.0001)	-0.053 (<0.0001)	0.052 (0.0019)	0.023 (0.0134)
(-2,+2)	-0.045 (<0.0001)	-0.039 (<0.0001)	-0.099 (<0.0001)	-0.066 (<0.0001)	0.054 (0.0046)	0.027 (0.0133)
(+3,+3)	-0.041 (<0.0001)	-0.043 (<0.0001)	-0.093 (<0.0001)	-0.066 (<0.0001)	0.052 (0.0180)	0.023 (0.0367)

Panel B: Current recommendations

Period (trading days)	NO ANALYST COVERAGE (A) (n = 540)		NONOPTIMISTIC STOCKS (B) (n = 26)		DIFERENCE (A - B)	
	Mean CAR	Median CAR	Mean CAR	Median CAR	Mean CAR	Median CAR
(-1,+1)	-0.031 (<0.0001)	-0.028 (<0.0001)	-0.007 (0.8373)	-0.023 (0.3509)	-0.024 (0.4642)	-0.005 (0.8386)
(-2,+2)	-0.042 (<0.0001)	-0.037 (<0.0001)	-0.042 (0.2880)	-0.029 (0.2665)	0.000 (0.9919)	-0.008 (0.9379)
(+3,+3)	-0.035 (0.0017)	-0.036 (<0.0001)	-0.013 (<0.0001)	0.041 (<0.0001)	-0.022 (0.6404)	-0.077 (0.2157)

Period (trading days)	NO ANALYST COVERAGE (A) (n = 540)		OPTIMISTIC STOCKS (B) (n = 358)		DIFERENCE (A - B)	
	Mean CAR	Median CAR	Mean CAR	Median CAR	Mean CAR	Median CAR
(-1,+1)	-0.031 (<0.0001)	-0.028 (<0.0001)	-0.064 (<0.0001)	-0.042 (<0.0001)	0.033 (0.0068)	0.014 (0.0758)
(-2,+2)	-0.042 (<0.0001)	-0.037 (<0.0001)	-0.073 (<0.0001)	-0.059 (<0.0001)	0.031 (0.0382)	0.022 (0.0627)
(+3,+3)	-0.035 (0.0017)	-0.036 (<0.0001)	-0.075 (<0.0001)	-0.068 (<0.0001)	0.040 (0.0175)	0.032 (0.0113)

Panel C: Inferred recommendations

Period (trading days)	NO ANALYST COVERAGE (A) (n = 458)		NONOPTIMISTIC STOCKS (B) (n = 187)		DIFERENCE (A - B)	
	Mean CAR	Median CAR	Mean CAR	Median CAR	Mean CAR	Median CAR
(-1,+1)	-0.025 (0.0011)	-0.024 (<0.0001)	-0.050 (<0.0001)	-0.038 (<0.0001)	0.025 (0.0803)	0.014 (0.0920)
(-2,+2)	-0.036 (0.0003)	-0.035 (<0.0001)	-0.039 (0.0828)	-0.047 (<0.0001)	0.003 (0.9010)	0.012 (0.3395)
(+3,+3)	-0.032 (0.0092)	-0.039 (<0.0001)	-0.031 (0.1812)	-0.030 (0.0060)	-0.001 (0.9597)	-0.009 (0.9412)

Period (trading days)	NO ANALYST COVERAGE (A) (n = 458)		OPTIMISTIC STOCKS (B) (n = 279)		DIFERENCE (A - B)	
	Mean CAR	Median CAR	Mean CAR	Median CAR	Mean CAR	Median CAR
(-1,+1)	-0.025 (0.0011)	-0.024 (<0.0001)	-0.068 (<0.0001)	-0.043 (<0.0001)	0.043 (0.0024)	0.019 (0.0495)
(-2,+2)	-0.036 (0.0003)	-0.035 (<0.0001)	-0.081 (<0.0001)	-0.059 (<0.0001)	0.045 (0.0065)	0.024 (0.0433)
(+3,+3)	-0.032 (0.0092)	-0.039 (<0.0001)	-0.082 (<0.0001)	-0.068 (<0.0001)	0.050 (0.0094)	0.029 (0.0341)

Figure 1
Short-term Market Reaction to the GC Announcement – Controlling for Recommendation Rating

This figure graphs the mean cumulative abnormal returns from event-trading-day -3 to event-trading-day +3 for our population of 924 non-finance, non-utility industry firms listed on the NYSE, AMEX or NASDAQ, for which their auditors disclose a going-concern modified audit report for the first-time between 01.01.1994 and 31.12.2005. Abnormal returns are market-adjusted returns, where trading day t=0 is the GC announcement day taken from the SEC-EDGAR database. The smallest decile of the NASDAQ index is used as the benchmark index. Results are reported separately for “non-optimistic” cases (n=24), “optimistic” cases (172) and non-covered cases (n=728).

Firms are allocated to the “non-optimistic” portfolio if their average reported recommendation is classified as “optimistic”, i.e., if their average recommendation is numerically lower than 3.5. Firms are allocated to the “optimistic” portfolio if their average reported recommendation is classified as “optimistic”, i.e., if their average recommendation is numerically higher than 3.5. All remaining firms for which there are no reported recommendations available within that period are allocated to the “no coverage” portfolio.

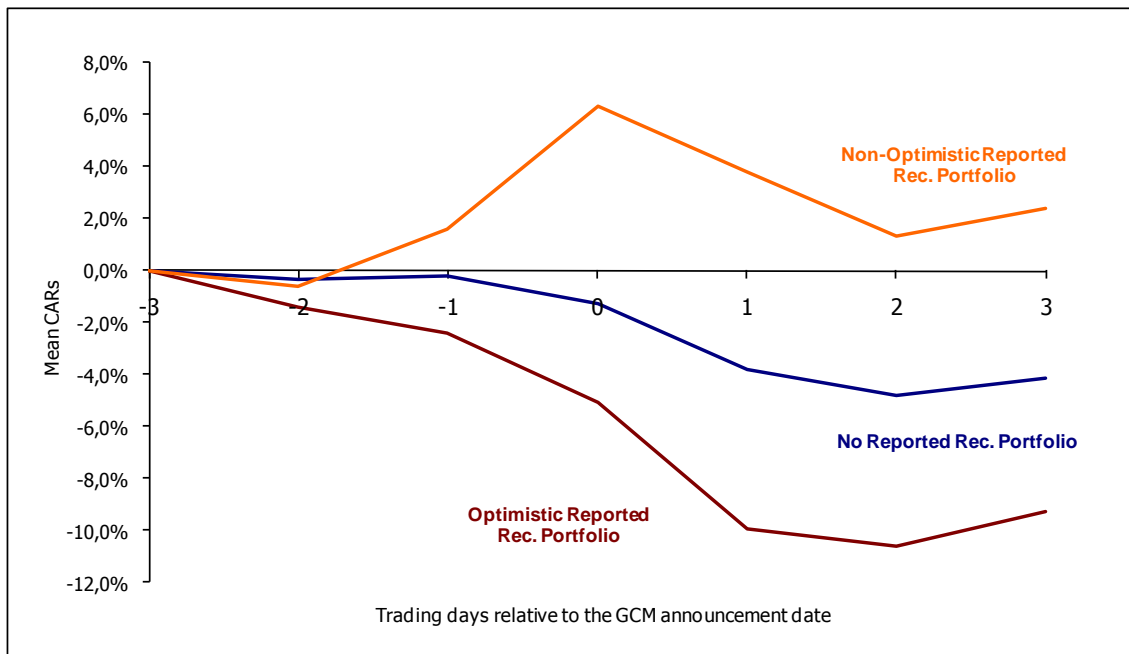


Table 7
Logistic Regression Model Estimating the Probability of a Firm Experiencing a Strong Negative Short-term Market Reaction to the Publication of a GC Modified Audit Report

This table presents the results of a binary logistic regression model estimating the probability of a GC firm experiencing a strong negative abnormal reaction for the (-1,+1) trading period centred on the GC event date. The GC companies are our sample of 924 non-finance, non-utility industry firms listed on the NYSE, AMEX or NASDAQ, for which their auditors disclose a going-concern modified audit report for the first time between 01.01.1994.

The binary logistic regression model is defined in equation 5. The binary dependent variable (SNCAR) is computed as follows. First, we compute the 3-day abnormal returns ($CAR_{(-1,+1)}$) centred on the GC event date. Firms are ranked accordingly to their 3-day abnormal returns and divided into two groups. The worst 33.3% returns are classified as 1, and 0 otherwise. Eleven independent variables are employed to estimate equation 5.: Dummy variable NONOPTM=1 if the firm's average reported recommendations within the 6-month period before the GC date is classified as "non-optimistic", i.e., "underperform" or "sell" recommendation, and 0 otherwise; Dummy variable OPTM= 1 if the firm's average reported recommendations within the 6-month period before the GC date is classified as "optimistic", i.e., "hold", "buy" or "strong buy" recommendation, and 0 otherwise; LOGSIZE=natural log of market capitalization measured one year before the GC announcement date; ANALY=number of analysts following the firm in quarter -4; BM= book value of equity divided by market capitalization, where book value of equity is taken from the last annual accounts reported prior to the date used to calculate the market capitalization at one year before the GC announcement date; MOM=monthly average of prior 11 month (t-12 to t-2) raw returns; ROA=return on assets (net income/total assets); CR = current ratio (current assets/current liabilities); ZSCORE=financial distress measure computed as Altman (1968); PREDGC=probability of a forthcoming GC audit report disclosure computed as Mutchler (1985); LEV=total debt/total assets. SUE=($\Delta NI_q / |NI_q|$), where ΔNI_q is the quarterly earnings change computed as the difference between the quarterly income before extraordinary items (NI_q) and the quarterly income before extraordinary items in the previous year (NI_{q-4}). All variables are computed with data taken from the last annual financial accounts reported before the GC date.

Predictor	Expected sign	Coefficient	Wald	p-value
Intercept	-	-1.27	20.96	<0.0001
NONOPTM	-	-1.51	5.65	0.0175
OPTM	+	0.08	0.13	0.7175
LOGSIZE	+	0.12	2.60	0.1071
ANALY	+	0.03	1.97	0.1600
BTM	+	-0.02	0.22	0.6427
MOM	-	-1.84	3.27	0.0708
ROA	-	-0.00	0.00	0.9827
ZSCORE	+	0.10	3.79	0.0517
PREDGC	+	-0.00	0.58	0.4449
LEV	-	-0.31	2.44	0.1186
SUE	-	-0.00	0.15	0.6983

Model χ^2 (d.f.=11) =32.60 with p=0.0006

Table 8
Short-term Market Reaction to the First-Time GC Modified Audit Report Conditional on Analyst Coverage – Controlling for Regulatory Regime

This table presents the cumulative abnormal returns for our sample of 924 non-finance, non-utility industry firms listed on the NYSE, AMEX or NASDAQ, for which their auditors disclose a going-concern modified audit report for the first-time between 01.01.1994 and 31.12.2005. Abnormal returns are market-adjusted returns, where trading day $t=0$ is the GC announcement day taken from the SEC-EDGAR database. The smallest decile of the NASDAQ index is used as the benchmark index. The two-tailed significance of the t-test (Wilcoxon signed rank-test) is reported in parentheses below the mean (median) CAR. The last two columns report the mean and median differences between the CARs of the portfolios under analysis. The significance of the t-test (Wilcoxon-Mann-Whitney test) is showed in brackets below the mean (median) differences.

Firms are allocated to the “Pre-NASD 2711” portfolio if the GC modified audit report was announced before the 9th of September 2002. All the remaining cases are allocated to the “Post-NASD 2711” portfolio. For each portfolio, firms are then reallocated conditional on analyst coverage.

In panel A (panel B), firms are allocated to the “analyst coverage” portfolio if there is at least one reported (current) recommendations available or one annual EPS forecast within the 6-month period prior to the GC announcement date. In panel C, firms are allocated to the “analyst coverage” portfolio if there is at least one inferred recommendation available or one annual EPS forecast within the 6-month period prior to the GC announcement date. All remaining firms are allocated to the “no analyst coverage” portfolio. Section 4.2.2.1 provides detailed explanation about the estimation of the recommendation categories.

Panel A: Reported Recommendations

Period (trading days)	NO ANALYST COVERAGE (A)		ANALYST COVERAGE (B)		DIFERENCE (A - B)	
	(Pre-NASD 2711)		(Pre-NASD 2711)			
	Mean CAR	Median CAR	Mean CAR	Median CAR	Mean CAR	Median CAR
	(n = 472)		(n = 251)			
(-1,+1)	-0.019 (0.0182)	-0.019 (0.0003)	-0.073 (<0.0001)	-0.049 (<0.0001)	0.054 (0.0002)	0.030 (0.0047)
(-2,+2)	-0.033 (0.0017)	-0.035 (<0.0001)	-0.092 (<0.0001)	-0.065 (<0.0001)	0.059 (0.0005)	0.030 (0.0052)
(+3,+3)	-0.024 (0.0396)	-0.035 (0.0005)	-0.095 (<0.0001)	-0.067 (<0.0001)	0.071 (0.0003)	0.032 (0.0026)
Period (trading days)	NO ANALYST COVERAGE (A)		ANALYST COVERAGE (B)		DIFERENCE (A - B)	
	(Post-NASD 2711)		(Post-NASD 2711)			
	Mean CAR	Median CAR	Mean CAR	Median CAR	Mean CAR	Median CAR
	(n = 135)		(n = 66)			
(-1,+1)	-0.070 (<0.0001)	-0.054 (<0.0001)	-0.055 (0.0100)	-0.033 (0.0017)	-0.015 (0.5570)	-0.021 (0.3916)
(-2,+2)	-0.050 (0.0049)	-0.029 (0.0024)	-0.037 (0.3722)	-0.053 (0.0074)	-0.013 (0.7837)	0.024 (0.7777)
(+3,+3)	-0.033 (0.1980)	-0.057 (0.0014)	-0.049 (0.2105)	-0.055 (0.0020)	0.016 (0.7235)	-0.002 (0.6752)

Panel B: Current Recommendations

Period (trading days)	NO ANALYST COVERAGE (A) (Pre-NASD 2711) (n = 401)		ANALYST COVERAGE (B) (Pre-NASD 2711) (n = 322)		DIFERENCE (A - B)	
	Mean	Median	Mean	Median	Mean	Median
	CAR	CAR	CAR	CAR	CAR	CAR
(-1,+1)	-0.018 (0.0324)	-0.020 (0.0013)	-0.061 (<0.0001)	-0.042 (<0.0001)	0.043 (0.0011)	0.022 (0.0143)
(-2,+2)	-0.038 (0.0005)	-0.038 (<0.0001)	-0.075 (<0.0001)	-0.059 (<0.0001)	0.037 (0.0249)	0.021 (0.0569)
(+3,+3)	-0.028 (0.0268)	-0.034 (0.0006)	-0.077 (<0.0001)	-0.058 (<0.0001)	0.049 (0.0103)	0.024 (0.0238)

Period (trading days)	NO ANALYST COVERAGE (A) (Post-NASD 2711) (n = 115)		ANALYST COVERAGE (B) (Post-NASD 2711) (n = 86)		DIFERENCE (A - B)	
	Mean	Median	Mean	Median	Mean	Median
	CAR	CAR	CAR	CAR	CAR	CAR
(-1,+1)	-0.070 (<0.0001)	-0.052 (<0.0001)	-0.058 (0.0019)	-0.039 (0.0005)	-0.012 (0.6206)	-0.013 (0.4910)
(-2,+2)	-0.046 (0.0080)	-0.029 (0.0043)	-0.044 (0.2069)	-0.045 (0.0052)	-0.002 (0.9597)	0.016 (0.7218)
(+3,+3)	-0.030 (0.2947)	-0.045 (0.0035)	-0.050 (0.1294)	-0.063 (0.0011)	0.020 (0.6487)	0.018 (0.5946)

Panel C: Inferred Recommendations

Period (trading days)	NO ANALYST COVERAGE (A) (Pre-NASD 2711) (n = 353)		ANALYST COVERAGE (B) Pre-NASD 2711) (n = 370)		DIFERENCE (A - B)	
	Mean	Median	Mean	Median	Mean	Median
	CAR	CAR	CAR	CAR	CAR	CAR
(-1,+1)	-0.011 (0.1821)	-0.016 (0.0182)	-0.061 (<0.0001)	-0.041 (<0.0001)	0.050 (<0.0001)	0.025 (0.0024)
(-2,+2)	-0.031 (0.0074)	-0.033 (0.0005)	-0.077 (<0.0001)	-0.059 (<0.0001)	0.046 (0.0049)	0.026 (0.0166)
(+3,+3)	-0.024 (0.0717)	-0.035 (0.0016)	-0.073 (<0.0001)	-0.051 (<0.0001)	0.049 (0.0104)	0.016 (0.0362)

Period (trading days)	NO ANALYST COVERAGE (A) (Post-NASD 2711) (n = 97)		ANALYST COVERAGE (B) (Post-NASD 2711) (n = 104)		DIFERENCE (A - B)	
	Mean	Median	Mean	Median	Mean	Median
	CAR	CAR	CAR	CAR	CAR	CAR
(-1,+1)	-0.064 (0.0008)	-0.052 (<0.0001)	-0.058 (0.0001)	-0.048 (<0.0001)	-0.006 (0.7729)	-0.004 (0.6016)
(-2,+2)	-0.044 (0.0471)	-0.029 (0.0122)	-0.060 (0.0028)	-0.041 (0.0016)	0.016 (0.5698)	0.012 (0.8321)
(+3,+3)	-0.012 (0.8164)	-0.058 (0.0020)	-0.051 (0.0132)	-0.047 (0.0022)	0.039 (0.4780)	-0.011 (0.8170)