

UNIVERSITY OF ALGARVE

**THE INTRA-INDUSTRY EFFECTS OF GOING CONCERN
WITHDRAWN AUDIT REPORTS**

Cristina Sorocovici

**Dissertation submitted to the School of Economics of the University of Algarve
in partial fulfillment of the requirements for the degree of
Master in Finance**

Advisors:

**Ph. Dr. Luís Miguel Serra Coelho
Ph. Dr. Rúben Miguel Torcato Peixinho**

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ABSTRACT

The market reaction to the disclosure of corporate news and the intra-industry effect of such announcements are two important topics in the accounting and finance domain. For instance, Taffler, Lu and Kausar (2004) shows that the market underreacts to the announcement of a going concern opinion (GCO), but completely anticipates the announcement of a going concern withdrawal (GCW) (Kausar, Taffler and Tan, 2006). In addition, Coelho, Peixinho and Terjesen (2014) shows that the GCO disclosure generates an intra-industry competitive effect in the industry rival firms. However, little is known about the intra-industry effect of a GCW.

This master thesis investigates investors' reaction to the withdrawal of a going concern audit opinion. In particular, this research clarifies if this good news impacts in the industry rivals of GCW firms and contributes to understand if investors process immediately the implications of such news. The sample consists of 95 US companies that had their going concern audit opinion withdrawn between 1995 and 2008. It particularly investigates whether industry rivals of GCW firms experience abnormal returns in the surrounding days to the announcement of such good news by the announcing firms.

The results show that, contrary to the GCW firms, rival firms are associated to negative abnormal returns of approximately -1,5% for the (-5, 5), (-6, 6) and (-10, 10) windows surrounding the GCW announcement. In addition, there is some evidence that this competitive effect is due to investor's reaction immediately after the announcement day and not by an anticipation of the information. The robustness tests indicate that the competitive effect is likely to be influenced by the first GCW cases per industry and is not driven by the most representative industries in the GCW sample.

Keywords: intra-industry effect, going concern withdrawal, audit report, competitive effect, good news

RESUMO

Um dos princípios básicos subjacentes à atividade da uma empresa é o princípio da sua continuidade. Este princípio assume que a empresa continue a operar no futuro e que não pretende suspender a atividade, liquidar a empresa ou abrir um processo de falência. Partindo desse pressuposto, a entidade é obrigada a avaliar anualmente os seus ativos e a sua capacidade de cumprir com este princípio fundamental na contabilidade. As empresas de maior dimensão estão obrigadas à certificação legal das suas contas através de um auditor independente que, entre outras questões, deve avaliar se os pressupostos de continuidade se verificam. Nos casos em que tal não se verifica, o auditor tem a responsabilidade de divulgar esta situação no seu relatório. A notícia da possível incapacidade da empresa para continuar em atividade é tornada pública no relatório anual de auditoria da empresa, que conclui com a opinião modificada da continuidade (GCO). "A GCO é a confirmação anual do auditor independente da deterioração da situação financeira da empresa, a existência de dúvidas significativas sobre a capacidade da empresa para continuar a sua atividade, e de aperto das restrições de dívida." (Herbohn, Rangunathan e Garsden, 2007).

A publicação de um relatório de auditoria colocando em causa o princípio da continuidade é interpretado pelo mercado como um evento de más notícias (e.g., Taffler, Lu and Kausar, 2004; Kausar, Taffler and Tan, 2009). Esta interpretação deriva do facto da empresa poder entrar em falência no curto prazo caso não sejam tomadas medidas adequadas para restaurar a sua atividade normal. Taffler, Lu e Kausar (2004) e Kausar, Taffler and Tan (2009) mostraram que o mercado reage de forma diferente consoante a informação seja negativa (GCO) ou positiva (GCW). Estes artigos concluem que o ajustamento em baixa do valor de mercado aquando da divulgação do GCO não é suficiente uma vez que existem retornos anormais negativos no ano seguinte à data do evento. No entanto, concluem que o mercado antecipa completamente o efeito positivo da divulgação de um GCW na empresa anunciante.

Entretanto, o efeito das notícias associadas a problemas de continuidade nas empresas que operam no mesmo setor de atividade das empresas anunciantes está pouco explorado na literatura. Um dos poucos estudos que analisa o impacto do GCO nas empresas rivais da anunciante (Coelho, Peixinho e Terjesen, 2014) releva que o GCO

tem também impacto nas empresas do mesmo setor de atividade ao identificar um efeito competitivo na indústria. Este estudo identificou retornos anormais positivos nas empresas do mesmo setor de atividade da empresa alvo como consequência do anúncio do GCO por parte da empresa alvo.

Existe alguma literatura que investiga o impacto da má notícia revelada pelo GCO quer nas empresas anunciantes quer nas empresas da mesma indústria. Contudo, existem poucos estudos sobre o impacto da boa notícia associada à retirada do GCO por parte dos auditores. A retirada das dúvidas do auditor em relação ao princípio da continuidade da empresa (GCW) é efetuada quando o auditor independente entende que os problemas identificados aquando do GCO foram resolvidos e que a empresa já não se encontra em risco de falência. Este GCW é considerado um evento bastante favorável para a empresa alvo. Apesar disso, não existem estudos que avaliem o impacto deste evento nas empresas do mesmo setor de atividade.

Esta dissertação de mestrado investiga o impacto da divulgação de um GCW nas empresas do mesmo setor de atividade da empresa anunciante e efetua uma primeira análise a este tema ainda não explorado na literatura financeira. O estudo empírico envolve uma amostra de 95 empresas norte-americanas para as quais os auditores retiraram o relatório desfavorável de auditoria (GCO) após considerarem que os problemas relacionados com a continuidade das empresas estavam resolvidos e 2.673 empresas que operavam no mesmo setor de atividade aquando desse evento para o período entre 1995 e 2008. Em particular, são calculados os retornos anormais para estas empresas rivais nos dias em torno da divulgação pública do GCW com o objetivo de testar se esta informação tem impacto nas empresas concorrentes do mesmo setor de atividade.

Os resultados desta dissertação revelam que, tal como sugerido em estudos anteriores, o anúncio do GCW não tem qualquer impacto significativo no valor de mercado das empresas anunciantes nos dias em torno desse anúncio. Mais interessante para o âmbito deste estudo, os resultados revelam uma situação diferente para as empresas que operam no mesmo setor de atividade. Para estas empresas, os resultados sugerem um efeito competitivo devido à deteção de retornos anormais negativos nos dias em torno do anúncio do GCW por parte das empresas alvo. Em particular, os

períodos (-5, 5), (-6, 6) e (-10, 10) estão associados a retornos anormais significativos de aproximadamente -1,5%. Os resultados sugerem também que este efeito competitivo se deve a uma reação dos investidores à notícia e não a um possível efeito de antecipação uma vez que os retornos anormais negativos estão concentrados na semana posterior à divulgação da notícia. Os testes de robustez sugerem também que o efeito de competição é potenciado pelo primeiro caso de GCW para cada indústria e os retornos anormais não se verificam apenas nas indústrias com mais casos na amostra.

Conjuntamente, os resultados desta dissertação sugerem que o anúncio público de que os problemas relacionados com a continuidade das empresas estão resolvidos tem impacto nas empresas rivais do anunciante. O efeito competitivo detetado pode ser útil para os investidores no seu processo de tomada de decisões de investimento. Os resultados desta dissertação devem, no entanto, ser lidos com prudência uma vez que o número de casos identificados não é suficientemente grande para se poder efetuar testes potentes à robustez das conclusões.

Palavras-chave: efeito intra-indústria, retirada de opiniões de continuidade desfavoráveis, relatório de auditoria, efeito competitivo, boas notícias

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DECLARATION

I declare that this thesis and the work presented in it are my own and has been generated by me as the result of my own original research. I also declare that all the authors and reviewed studies are properly cited in the text and listed in the included references listing.

Cristina Sorocovici, December 2014

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CHAPTER 1 - INTRODUCTION

One of the basic principles underlying the initiating of an entity is the going concern. This prime principle requires that a company will continue to operate normally in the future, it does not intend to stop working and is not compelled to enter into bankruptcy, liquidation or significantly reduce their activity. Based on this assumption, an entity is required to assess property items at their current value, according to the utility of the item, the state and its active market price. Auditors are responsible for the assessment of entity's ability to continue as a going concern. When auditors are aware of material uncertainties related to events or conditions that may cast significant doubt upon the entity's ability to continue as a going concern, those uncertainties shall be disclosed in the company's annual audit report (Staff Audit Practice Alert, 2009). An auditor will evaluate whether there is substantial doubt about the entity's ability to continue as a going concern for a reasonable period of time. In case of recognizing the lack of financial stability of the company, the auditor will issue a going concern opinion (GCO). "A GCO is an independent confirmation by an auditor of a firm's deteriorating financial condition, the existence of significant doubt about a firm's ability to continue as a going concern, and of tightening of debt constraints." (Herbohn, Ragunathan and Garsden, 2007).

By all means, the release of a GCO is interpreted as bad news by the market (e.g., Taffler, Lu and Kausar, 2004; Kausar, Taffler and Tan, 2006), as the company may end up bankrupt if it doesn't take proper actions to restore its normal activity. There is some evidence that, the disclosure of a GCO affects not only the target firm but also firms that operate in the same industry. For instance, Coelho, Peixinho and Terjensen (2014) shows that, at the announcement date, the value of the value-weighted (equally weighted) portfolio of industry rivals increases, on average, 0.37% (0.24%) on a risk-adjusted basis. This small percentage increase in the rivals' market price actually represents over \$171 billion, in 2009 constant dollars, clearly demonstrating the economic importance of these findings. The GCO competitive effect is stronger when the announcing firm is more profitable but is mitigated when a positive earnings surprise is contemporaneous to the disclosure of the qualified audit report.

For those cases where the GCO firm recovers from their going concern uncertainties, in a way that there is no doubt about its ability to continue as a going concern, the auditor is expected to withdraw his previous GCO audit report (GCW). The disclosure of a GCW is interpreted as an unqualified audit opinion and signals that the entity regained the normal activity and there is no evidence of an eventual collapse. Previous studies have already shown that the market reaction to going concern disclosures is dependent on the nature of the event: the market underreacts to the negative content of a GCO (e.g., Taffler, Lu and Kausar, 2004) whereas fully anticipates the positive content of a GCW (Kausar, Taffler and Tan, 2006).

Despite the market impact of a GCW disclosure in the target firm has been already explored, little is known about the effect of such good news in their industry rivals. This master thesis focuses related issues by exploring the intra-industry effect of a going concern withdrawn opinion. In particular, it investigates if rival firms exhibit abnormal returns around the GCW announcement date. This research contributes to understand whether investors of rival firms value the disclosure of a going concern withdrawn audit opinion by a firm operating in the same industry.

The sample of this study consists of 95 cases of firms traded on the NYSE, AMEX and NASDAQ for which auditors withdrawn a going-concern audit report between 1995 and 2008 and 2.673 rival firms. Results reveal that GCW firms are not associated to abnormal returns in the days surrounding the announcement of such good news. This result confirms that markets fully anticipate the positive content of such GCW reports (Kausar, Taffler and Tan, 2009) and suggests that the GCW announcement does not offer relevant information to investors of announcing firms. More interestingly, results show some evidence of a negative abnormal performance for the portfolio of rival firms, rejecting the null hypothesis of this study. This finding highlights that the content of a GCW disclosure has important information for firms operating in the same industry of the announcing firms as it is expected to generate an intra-industry competitive effect. The robustness tests emphasize that the intra-industry competitive effect depends on the industry where the announcing firm is operating. In fact, some industries are more likely to experience the competitive effect than the others.

The next section contains the background of the tangent literature. Section three describes the data and the methodology and section four presents and discusses the results of our research. Last section concludes and highlights some remarks for the future work.

CHAPTER 2 - LITERATURE REVIEW

2.0 Introduction

Firms are expected to operate uninterrupted in the foreseeable future. The disclosure of a going concern opinion (GCO) raises serious doubts on the ability of the firm to continue its normal condition and calls attention to an increased risk of bankruptcy. The GCO constitutes an extreme bad news event as the existing literature shows that the announcing firms experience negative abnormal stock returns in different time frames surrounding the event date. In contrast, the withdrawal of such opinion (GCW) is associated to good news as auditors consider that going concern uncertainties were eliminated and previous studies find positive abnormal returns in the pre-GCW window.

Several studies investigate whether investors react to the disclosure of a GCO both in short and medium-term. However, the amount of studies addressing the specific issue of a GCW is limited. So far, one of the main references in the GC domain is that of Kausar, Taffler and Tan (2006). This paper investigates the medium term stock price behavior of the first-time GCO companies. According to the results, one year prior to the GCO (GCW) announcement, the GCO firms' mean buy-and-hold abnormal returns decline by -58% (median = -48%) whereas, the GCW firms' mean buy-and-hold abnormal returns rise by 71% (median = 34%). Generally, the GCO firms underperform in the first year following the GCO by -16%, revealing that markets underreact to this extreme bad news. On the contrary, it assimilates immediately the withdrawal of a first-time GCO as there is no evidence of significant market reaction following the announcement of a withdrawn going-concern opinion.

Despite several studies addressing the impact of a GCO and GCW on the announcing firms, little is known about the impact of such information on their industry rivals. In one of the few exceptions, Coelho, Peixinho and Terjensen (2014) discusses the reaction of industry rival firms to the announcement of a GCO. They suggest that GCOs generate an intra-industry competitive effect, characterized by the increase in the equity market value of the portfolio of the industry rivals. This study highlights the importance of accounting information in financial markets, demonstrating that the

market is incapable of correctly pricing how the GCOs affect both the announcing firms and their competitors. Despite this first comprehensive analysis on the impact of a GCO disclosure in the industry rivals, there are no studies addressing whether industry rivals react to the GCW announcement or not. As such, this thesis provides the first analysis to understand this issue.

2.1 Market reaction to new information

a. Market under and overreaction

Efficient markets are characterized by assimilating new relevant news into stock prices immediately when information is made public. In the words of Fama (1970) "it is impossible to beat the market because prices already incorporate and reflect all relevant information". However, several studies provide evidence of market underreaction and overreaction following the disclosure of new relevant information. Underreaction to new information occurs when the average return on the firm's stock in the period following an announcement of good (bad) news is higher (lower) than its expected return. Overreaction to new information occurs when the average return on the firm's stock in the period following an announcement of good (bad) news is lower (higher) than its expected return. In other words, an abnormal reaction is observed when the initial market reaction following the disclosure of new information was not efficient and this mistake is, at least, partially corrected in the following period, spreading the impact of the announcement on the price over time.

Kausar and Taffler (2005) explore behavioral finance models of market underreaction to the bad news and overreaction to the good news. The authors use the going concern audit opinion as bad news event and its withdrawal as good news event. One of the explored models is the one of Daniel, Hirshleifer and Subrahmanyam (1998), which assumes that "investors are overconfident and exhibit biased self-attribution" meaning that the investors create a pattern out of their past long-term trading experiences and if the market information they receive is different from their expectations, they react with hesitation to either good or bad news. The Barberis, Shleifer and Vishny (1998) model of behavior divides investors in two categories: representative investors and conservatist investors. The first fail to consider the laws of

probability and react in such a way that the information they have received is of the return generating process, the second are slow to improve their previous judgments in response to new information. The Hong and Stein (1999) model points out two types of investors: “newswatchers” who trade on private information, and “momentum traders” who trade on simple projections by investigating the changes of the past prices.

These behavioral finance models are useful to understand the documented differential market reaction to new information depending on their nature: markets tend to fully incorporate the content of the good news while they underreact to the disclosure of the bad news. Kausar (2005) examines this issue by exploring the going concern anomaly conditional on the nature of the news in the U.S. He uses the going-concern opinion as news event because such disclosures impacts on firms’ financial distress and is therefore of potentially severe influence on investors. He finds that the market gives an asymmetric response to first time GCOs (bad news) and their consequent withdrawal (good news). The results show that the market underreacts to bad news disclosures presenting a -16% downward drift in the year following the publication of the going concern modified opinion. In contrast, the same research shows that there are no subsequent abnormal returns to the going concern withdrawn audit opinion (good news).

Coelho, John and Taffler (2010) show similar evidence in the case of bankruptcy announcements. They investigate how the market deals with the announcement of both strategic and non-strategic Chapter 11s, which are both negative events but with significant different underlying motivations. In particular, strategic bankruptcies are seen as managers trying to maximize the value for shareholders at the expense of debtholders whereas non-strategic bankruptcies are your every-day business failure. Coelho et al (2010) show that the market underreacts to the announcement of non-strategic Chapter 11s while overreacting to the parallel strategic event.

Chan (2003) presents an interesting study by collecting a sample that contained all forms of news, without any selection criteria. This method gives a unique context to the paper as previous studies were exploring abnormal reactions only to events that show unusual patterns. The aim was to investigate if underreaction or overreaction remains a feature of the data by looking at a wider class of events than previously

examined (using a vast sample of headlines for a large, randomly selected group of firms). The tested hypothesis was that stocks exhibit no abnormal return after public news and concluded that it was not the case. Stocks that encountered negative returns same as the incidence of the news story continued to underperform. Stocks that dealt with good news revealed less drift. Stocks with extreme returns that had no news headlines for a given month encountered a turnaround in the subsequent month and little abnormal performance after that. The post-event drift was very robust and mostly taking place after bad news. The conclusion of overreaction was rather weaker, since the reversal of returns could be driven by liquidity effects. Even after waiting a week to follow a no-news long-short strategy, the reversal continued to appear. The same model of news drift and no-news reversal during the first month was shown by the buy-and-hold abnormal returns. The study showed that underreaction was mostly limited to small stocks as the drift patterns were less evident when increasing the size quintiles and at the same time, were stronger for low-priced stocks even if the results for higher-priced stocks did hold too.

In contrast to some studies showing that markets tend to overreact to good news and underreact to bad news, Alwathnani and Dubofsky (2014) suggest that investors overreact to extreme good or bad earnings news. The initial unexpected earnings surprise (SUE) signal triggers a strong market price reaction over the three-day period around the earnings announcement date. Confirming SUE signals create additional return momentum, but the price impact of the confirming SUE news is weaker than the price impact of the initial SUE news. Lastly, firms reporting earnings performance that are inconsistent with their initial SUE rankings exhibit a strong price reversal. The evidence that the authors provide shows a securities market that is prone to an overreaction to salient and extreme earnings measures casting serious doubt on the traditional view that interprets the finding of the earnings momentum literature as an investor underreaction to earnings news.

Zhang et al. (2013) bring together two related literatures on information risk and transaction costs to deliver a wider research on price discovery around and after earnings announcements. They analyse what authors called the Information Content hypothesis showing that "public disclosure has a higher relative importance in firms with higher information risk, and hence traders will react more strongly to the earnings

surprises of firms with higher information risk; however, this hypothesis predicts no effect of information risk on subsequent drift”. The second test is the Transaction Cost hypothesis which shows that ”transaction costs constrain the initial market reaction and this leads to a positive association with post-earnings announcement returns”. In this study, the authors have examined the initial market reaction and the subsequent post announcement returns. Their findings revealed the direct information risk effect, when the earnings of firms with higher information risk bring more new information to the market and produce higher initial market reaction. Also they conclude that higher information risk generates higher transaction costs, which slow down the flow of information into stock prices and explain their higher post-earnings announcement returns. But once the transaction costs are being taken under control, the post-earnings strategy doesn’t earn abnormal risk-adjusted returns. Generally, this paper shows how important are the firm level information environments in determining the market reaction to public disclosures.

b. Market reaction to bad news

Several studies suggest that the market tends to process bad news slowly. For instance, Taffler et al. (2004) investigate the medium-term price reaction to GCO disclosures by London Stock Exchange (LSE) firms over the one calendar year period subsequent to their publication in the firm’s annual report. Particularly, they investigate whether such price relevant information is seized fully by or around the GCO release date according to the efficient markets hypothesis, or whether the implications of this bad news disclosure appear to be difficult to assimilate, taking time to be absorbed by the stock market. The results show that over the 12-month period starting with the beginning of the month following the GCO disclosure date, the sample firms underperform by between 24% and 31%, depending on the benchmark adopted.

Kausar et al. (2009) further investigate the market reaction to the announcement of first-time going concern opinions in the United States, and their subsequent withdrawal. Results show that the market does not assimilate the going concern opinion signal on a timely basis in the United States, leading to a market underreaction of –14% over the following one year period. They also explore the market reaction to going-

concern withdrawals in the following 12-month period, and conclude that the disclosure of such good news is, in contrast, processed on a timely basis by the market.

Coelho (2008) explored how the US equity market reacts to bankruptcy announcements. He finds a strong negative mean post-bankruptcy announcement drift which fluctuates between -24% and -44% in the subsequent year to the event date depending on the adopted method of measuring abnormal returns. After performing a series of robustness tests, the author shows that the post-bankruptcy drift is not absorbed by known factors like the post-earnings announcement drift, the post-first-time going concern drift, the momentum effect, the book-to-market effect, industry clustering or the level of financial distress. He shows that the main result is robust to different methods for conducting longer-term event studies. Overall, the results confirm that the market is unable to deal properly with severe bad news events. In addition, Coelho and Taffler (2008) shows that, despite the market anticipation of bankruptcy announcements and the strong negative price reaction to the bankruptcy announcement, prices of bankrupt firms continue to decrease, leading to a post-bankruptcy abnormal return of minus 28% during the 12-months following the event date. These findings are in line with Taffler et al. (2004) and Kausar et al. (2009) and reinforce the notion that the market needs almost a year to completely assimilate bad news.

Another research in this field is based on the information of the Korean stock market. Lee and Cho (2014) analyze whether stock prices respond to public news and how such a response influences the effectiveness of the momentum strategy. Their findings show that stock prices respond asymmetrically to public news, and this result is supported by the transaction costs hypothesis they tested, rather than their “bad news travel slowly” hypothesis. In their research, they register that stocks with news headlines generate positive momentum profits one year after the news. Those profits are attributable mostly to the return drift of loser stocks with news, but are canceled out by losses caused by the return reversals of winner stocks with and without news.

2.2 Going Concern Opinions

As can be witnessed in a variety of studies, the GCO firms underperform in comparison to similar non-GCO financially distressed firms in the 12 months before the announcement of the event. Also, the GCO firms make significantly more GCO-related disclosures in the 12 month period before the event than do equivalently non-GCO financially distressed firms for the same period. (Herbohn, Rangunathan and Garsden, 2007)

a. Auditors and the GCO decision

Even though the auditing standard on going concern is the same to all the auditors, the "threshold" for issuing or withdrawing a going concern opinion seems to vary from time to time suggesting that the auditors are inconsistent in issuing or withdrawing such an opinion (Tronnes, 2010 and Tronnes, 2011). According to SAS No. 59, this "threshold" must happen when doubt about the correctness of the going concern assumption changes from "not substantial" to "substantial". Figure one shows the "threshold" and the conditions of crossing it from one side to another.

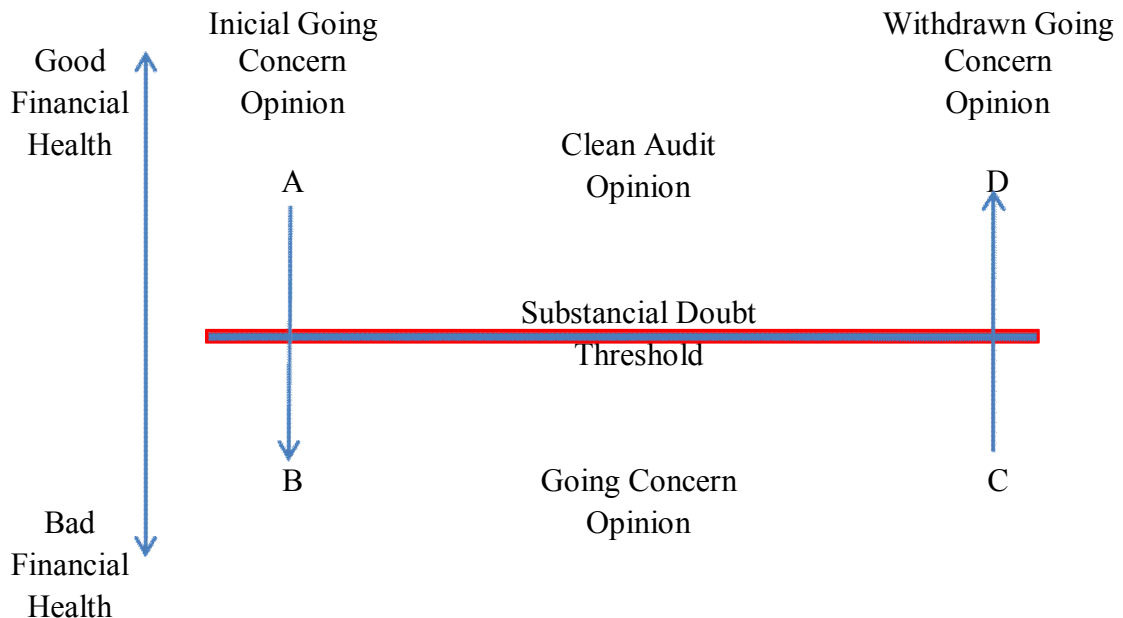


Figure 1: Substantial Doubt Threshold for Issuing and Withdrawing Going Concern Modifications

It is this threshold that might be interpreted in a different and individual way by auditors, which causes the inconsistency in issuing the going concern modification or its' withdrawal in the first place. The research concludes that the issue of inconsistency is noticeable when the companies change auditors. The new auditors tend to have a higher threshold in withdrawing the going concern modification than the previous auditors had in issuing the first time modification. It is only a matter of different interpretation of the standards and the result of the auditors facing the pressure of Reputation, Litigation and Dismissal Risks (Tronnes, 2011). Also, a risk premium in the year of the GCW was documented in the audit payments for the audit companies that kept their client after issuing a GCO in the previous year (Tronnes, 2010). The information delivered by the audit reports is valuable for different stakeholders, and the inconsistency in issuing one might be a matter of the further wrongful interpretation by its' users.

b. Investors and shareholders

A joint study of the US and UK investors' reaction to the GCO release reveals a negative reaction at both, the time of the announcement and a longer-term afterwards. Such a response only indicates to the direct relevance of the GCO information to the capital markets, betraying also a stronger adverse reaction of the UK invertors in comparison to the US investors in the short and long-term.

Kausar, Taffler and Tan (2006) compare the information content of the GCO issued by auditors in the U.S. and in the U.K.. They test whether this effectively identical information cue carries similar meaning (i.e. is equally informative) to investors across these two very comparable institutional and market environments. One important difference between the U.S. and U.K. legal regimes relates to the strikingly different bankruptcy codes. Results demonstrate how effectively the same accounting signal, the auditor's going-concern opinion, has very different levels of informativeness to investors in the U.S. and the U.K. due to the differences in their bankruptcy regimes.

Comparing the U.S. and U.K. institutional frameworks, the U.S. is biased more towards the rights of debtors, and therefore preservation of the firm as a going-concern is a priority, whereas the U.K. focuses more on the rights of creditors and therefore

premature liquidation is more likely. Once a firm enters bankruptcy proceedings in the U.K., it is unlikely that stockholders' equity has any residual value. Consequently, a going-concern opinion, which signals increased bankruptcy risk, should have a more negative market response in the U.K. than a going-concern opinion in the U.S.

Authors show that there is a significant negative market reaction to the going-concern modified audit opinion in both institutional environments around the day that it is announced, and additionally over the subsequent one-year period. They observe a differential market response to the GCO announcement between the U.S. and the U.K.. Over the 3-day interval centered on the GCO announcement date average abnormal returns are -4.2% in the U.S. and -6.8% in the U.K.. Over the one-year period starting at the beginning of the following month, average firm buy-and-hold abnormal returns are -18.1% in the U.S. and -31.3% in the U.K.. In conclusion, U.K. firms experience more severe negative market reaction to the GCO announcement than U.S. firms.

In the research that analyzes the GCO and GCW event from the shareholders' point of view, Kausar (2005) concludes that the institutions trade rationally in comparison to the opposite behavior of the retail investors. Using the going-concern modified audit report disclosure domain, this study tests whether investors rationally incorporate new pessimistic (optimistic) information and if the markets under or overreact to bad (good) news in the going concern domain. The author finds an asymmetric market response to first time going-concern modified audit report disclosures (bad news) and withdrawal of the going-concern modified audit report disclosures (good news). He finds that the market underreacts to going-concern modified audit report disclosures (bad news), resulting in a downward drift of around -16% over the one-year period subsequent to the publication of going-concern modified audit opinion. In contrast, investors efficiently incorporate the withdrawal of such adverse reports as no abnormal returns are observed following the event date.

Kausar (2005) also explores the trading behaviour of different classes of investors in GCO firms and test whether institutional investors and retail investors exhibit similar trading biases. The results show that the institutional holdings decline from 16.7% to 5.3% over the two year period around the GCO event, meanwhile, retail holdings increase from 69.4% to 82.7%. On the other hand, there is no significant

change during the 9 quarters around the GCW date for either institutional or retail holdings. Such results reveal that institutional investors reduce their holdings in such stocks on a timely basis in contrast to retail investors who appear to increase their holdings in such distressed stocks. These results suggest that the evidence of stock mispricing and extended post-going-concern drift might then be explained by limits to arbitrage argument with retail investors keeping stock prices artificially high by trading inappropriately in these stocks because of behavioural biases identified in the literature and skilled investors (professional arbitrageurs) having limited incentive to trade in these small firms because of high costs.

Kausar et al. (2013) find that the socioeconomic, religious and racial/ethnic characteristics of GCO investors are very similar to those of retail investors who are more attracted towards speculative, and lottery-type stocks. This study also finds that the net buying behavior of GCO investors is also significantly related to local socioeconomic characteristics. Inicially, the authors show that GCO firm stocks are particularly attractive to retail investors who trade for speculative reasons. In fact, these stocks have lottery-type characteristics, representing cheap bets with negative expected return with a small probability of a high payoff around the GCO event date, and these characteristics become even more pronounced over the following 12-months. In contrast to the sophisticated investors, retail investors searching for cheap bets are likely to behave in an opposite way and buy such speculative stocks. Therefore, the established going-concern anomaly may be largely driven by retail investor prone to “gambling in the market” by increasing their holdings in the GCO firms, and the volume of their trades.

While examining whether the going-concern anomaly is driven by the trading activities of retail investors who are attracted to GCO stocks because of their lottery-type characteristics, Kausar et al. (2013) find that GCO firms with dollar volume of small buy orders exceeding dollar volume of small sell orders at the GCO date underperform those GCO firms with a negative net small order imbalance by almost -28% over the following one-year period. Therefore, abnormal retail buying around GCO events is an important driver of the observed market underreaction. Authors also find increased individual investor tendency to purchase those stocks. Such trading behavior inhibits the timely assimilation of the adverse information conveyed by the

GCO audit report into market prices. After performing several other tests without any substantial explanations for the GCO anomaly, authors conclude that the gambling-motivated behaviour of retail investors is in all probability the cause of the anomalous short-term market reaction and the affiliated long-term market reaction to the announcing of a GCO.

Taking into consideration that the market reaction is a consequence of market participants' behavior (i.e., retail and large investors), the effects of the disclosure of such important negative accounting information depends on the degree of sophistication of the receiver. In this context, Kausar, Taffler and Tan (2006) investigate the relationship between market reaction to GCO and the sophistication of the shareholders. The study demonstrates that the institutional holdings have declined in the 9 quarters period around the GCO announcement, the retail holdings have increased and the insider holdings haven't changed materially. The incorrect trading behavior of the retail investors keeps the stock prices artificially high, and this might explain the stock mispricing and extended post-GCO drift. On the other hand, the abnormal stock market reaction to going concern audit reports is affected by information asymmetries such as managerial ownership, firm size and proportion of debt (Ittonen, 2011).

2.3 Intra-industry information transfers

Market reaction to GCO and GCW has been investigated in several studies from the announcement firm perspective. In general, these studies suggest that the GCO is an unambiguous case of bad news since markets react negatively to the announcement of such information. In addition, these studies also show that the market reaction to GCOs is incomplete as negative abnormal returns continue to be observed in the one-year period following the event date. In contrast, markets fully anticipate the favorable content of a GCW and there is no abnormal return following the event disclosure. However, little is known about whether going-concern uncertainties of GCO firms impact in their rival firms. In one of the few studies in this domain, Coelho, Peixinho and Terjesen (2014) find a competitive effect of GCOs for firms operating in the same industry. This section reviews some studies that address the effect of important news to the industry rivals of the announcing firms.

In a seminal study, Lang and Stulz (1992) investigate whether bankruptcy announcements are related to a contagion or competitive effect on the rival firms operating in the same industry of the announcing firms. The contagion effect is represented by the loss of wealth encountered by firms with similar cash flow features to those of the bankrupt firm owing to the fact that the bankruptcy announcement reveals information about the present value of cash flows for these firms. The competitive effect is the gain of wealth encountered by competitors due to the fact that the bankruptcy announcement reveals information about the present and future competitive positions of firms in the industry of the bankrupt firm. They show that the competitive effect is presiding in industries with low leverage and competition degree. This is shown by the 1% fall in the value of a value-weighted portfolio of the common stocks of competitors in the whole sample contrasting with the increase by 2,2% of the portfolio in the sample with low leverage and a low degree of competition on one side and the loss by 3,2% of the portfolio in the sample with high leverage and a high degree of competition on the other side.

Intra-industry effect has been analysed in the bank failure content. In fact, the bank regulating system is considered to be often guided by the contagion effect of bank failure, especially of a large one (Aharony and Swary, 1983). Such an event can be the cause of loss of trust in the bank system, which might lead to weakening the economic situation. After analyzing the stock prices of three different sized solvent bank groups and the failed banks, Aharony and Swary (1983) conclude that there is no evidence of contagion effect in the case of bank failure, that was caused by fraud and internal factors. While analyzing the case of the bank failure caused by external factors, the authors registered a decrease in the stock prices of the solvent banks, which was considered rather a common reaction to the negative signals, than a contagion effect.

In search of the "pure" contagion effect, defined as the contagion effect originated from a bank failure caused by fraud and internal irregularities, Kanas (2004) analysed one of the largest bank failures known worldwide, the failure of Bank of Credit and Commerce International (BCCI). The study was based on the three developed economies where BCCI had established operations, the U.S., the U.K. and Canada. The results have shown the existence of the contagion effect in the U.K. even before the announcement date, the capital markets have reacted negatively and this was

reflected into the share prices of all three banks in the U.K.. These reactions have questioned the BCCI regulation in U.K.. In the U.S. and Canada, no contagion effect was registered, and this indicates that in these countries the bank regulation is adequate in the way that it prevents the spread of the contagion effect caused by the fraudulent governance of a bank, even if it is a large one.

Brewer and Jackson (2002) investigate the impact of commercial banks and life insurance companies' financial distress. Contrary to the majority of the existing literature, they focus on the inter-industry effect instead of intra-industry effect. The study finds a strong shareholder wealth effect, which is considered to take place not entirely due to the contagion effect, but also to geographic proximity, asset and liability portfolio composition and regulatory expectations.

There is also evidence that the disclosure of a GCO affects not only the target firm but also firms that operate in the same industry. In the real state context, Elliott, Highfield and Schaub (2006) conclude that a competitive effect is being observed at the disclosure of the GCO. This study suggests that there is no evidence to support the contagion effect since the investors consider the audit, hence the announcing of a GCO, a firm-specific problem and do not consider that it affects the whole industry. The competitive effect on the other hand, finds an explanation in the reaction of the customers and the investors, who are moving their business and proprietorship respectively, from the affected firm to a competing firm. As a consequence, the rival firm is experiencing an increase in sales, profits, market share, followed by higher stock prices.

Using a larger sample of GCO firms of different industries, Coelho, Peixinho and Terjensen (2014) show that, at the announcement date, the value of the value-weighted (equally weighted) portfolio of industry rivals increases, on average, 0.37% (0.24%) on a risk-adjusted basis. This small percentage increase in the rivals' market price actually represents over \$171 billion, in 2009 constant dollars, clearly demonstrating the economic importance of these findings. The GCO competitive effect is stronger when the announcing firm is more profitable but is mitigated when a positive earnings surprise is contemporaneous to the disclosure of the qualified audit report.

CHAPTER 3 - DATA AND METHODOLOGY

3.1 Data collection process

The data collecting process for the research sample consists of dividing the work in two major parts. First, it identifies the going concern announcing companies (GCO cases) and second, recognizes which of them experienced a GCO withdrawal in the subsequent year (GCW cases).

Following the previous studies of Coelho, Peixinho and Terjensen (2014) and Kausar, Taffler and Tan (2009), this study uses the 10-K Wizard's free text search tool to identify the sample firms. In particular, it uses "continue as a going concern" and "raise substantial doubt" as keywords to identify firms associated to going concern uncertainties that have information in the EDGAR (Electronic Data Gathering, Analysis, and Retrieval) system in the period of time between 01/01/1994 and 31/12/2007. This first step provides a large number of results consisting of thousands of firms, which undergo a further filtration in the CRSP/COMPUSTAT merged file. COMPUSTAT database contains accounting information for U.S. firms while CRSP database provides daily prices for those firms. All the firms that are not found in the merged file are eliminated as well as those that are not traded on the NYSE, AMEX and NASDAQ in the one year prior to the GCO announcement. Furthermore, utility firms, financial firms, foreign companies, firms "in a development stage" and those which have already filed for bankruptcy are also excluded from the sample. This process identifies 439 initial GCO cases.

The next stage consists of identifying the industry rivals of GCO firms using the 4-digit SIC (Standard Industrial Classification) codes tool that is used to identify the primary business of the announcing companies and their competitors. In order for the competitors to be considered in the sample, they have to meet several selection criteria. Likewise the GCO firms, they should have enough information available on COMPUSTAT in the year previous to the GCO reporting, trade common stock on NYSE, AMEX or NASDAQ in the year prior to the GCO event date, have themselves a clean 10-K report in the preceding two years and eventually, do not report profits during the two-week period around the GCO event date. For a higher level of comparability, in

the final sample are accepted only the GCO cases which have no less than five industry rivals.

The final step consists of identifying those cases for which auditors withdrawn the GCO audit report in order to identify the GCW cases. This is crucial as the aim of this thesis is to investigate the intra-industry effect of a GCW disclosure. As such, from these initial 439 GCO cases, we identify 95 GCW cases and a total of 2.673 rival firms. The higher concentration of GCW cases happened in 2004 in a number of 20 cases out of a total of 95, which is 21,0%, in 2000 and 2002 when where registered 14 GCW cases in each of the years (14,7% of total) and 12 GCW cases in 2008 (12,6%). The remaining years have registered less than 10 cases per year, with only one GCW case in 1995, 1996 and 2003, 2 cases in 1998, 3 cases in 1997, 4 cases in 2001 and 2005, 6 cases in 2006 and 2007 and 7 cases in 1999. The highest rate of GCW cases were registered within "Pharmaceutical Preparations" industry (SIC code 2834) and "Services-Computer programming, data processing, etc." industry (SIC code 7370).

Another important detail to highlight is the real event date which, for the majority of the GCW cases is the 10-K filing date. Besides that, there are firms which disclose their GCWs before the 10-K report. In this case, the press release date is considered to be the event date. The data for the research is collected from the 10-K fillings.

3.2 Descriptive statistics

The descriptive statistics are presented in Table 1. This table summarizes statistics associated to the GCW firms and their industry rivals. GCW firms are non-utility, non-financial U.S. firms trading on the NYSE, NASDAQ or AMEX that received a clean audit report in the subsequent year to their first-time going concern audit report between 01/01/1995 and 31/12/2008. Industry rivals are publicly traded firms with the same 4-digit SIC code as the GCW firm, and data available on both CRSP and COMPUSTAT. All accounting data is collected from the 10-K report one year before the GCW publication date.

Description of the variables in table 1:

Size represents the equity market capitalization in U.S. Dollars in Millions (\$m), measured at the release date of the GCW audit report.

Revenue represents total revenues in \$m.

ROA represents the return on assets, computed as the ratio of EBIT to total assets.

CF Operations represents the cash-flow from operations in \$m.

Z-score represents a composite measure of financial distress computes as in Zmijewski (1984).

Big 4 is a dummy that assumes the value 1 if the firm is audited by a Big 4 audit firm or one of its predecessors and zero otherwise.

Panel A of the table shows that, generally, the GCW firms are relatively small, with a mean market capitalization of \$129,4 million and median market capitalization of only \$69,5 million. The mean revenue of these firms is \$185,8 million while the median value of the same variable is only \$18,8 million. The firms in the GCW sample are still unprofitable demonstrating negative ROA (mean ROA = 44,1 percent; median ROA = 26,1 percent) and even the mean cash-flows from operations are positive = \$0,27 million. These firms are still in difficulty of generating positive cash-flows from operations as shown by the median value of cash-flows from operations = -\$3,8 million. The mean Z-score is 0,38 demonstrating that the sample firms are presenting a high level of distress. More than a half of GCW firms (61,1 percent) are audited by a Big 4 audit firm.

Table 1. Panel A. Descriptive statistics: GCW firms.

Variables	Mean	Std. Dev.	Low. Quart.	Median	Upp. Quart.
Size	129,4	178,1	22,9	69,5	156
Revenue	185,8	849,10	6,9	18,8	63,5
CF Operations	0,27	71,03	-10,3	-3,8	0,27
ROA	-44,10%	55,30%	-63,10%	-26,10%	-5,80%
Z-Score	0,38	9,01	-4,51	-2,31	3,49
Big 4	61,10%	-	-	-	-

Panel B of the table reveals the information on the industry rivals. With a median market capitalization of \$236,3 million and a median total revenue of only \$49,2 million, the 2.673 rival firms prove to be relatively small even if some of them are significantly large firms as the mean market capitalization for the 2.673 rival firms is \$6.066,4 million with a mean total revenue of \$1.382,5 million. The negative mean ROA of -24,7% and median ROA of -8,7% disclose their incapacity to generate profits.

The rival firms have a better indicator of cash-flows from operations compared to the GCW firms, with a mean value of \$238,6 million and a median of -\$1,2 million. With a Z-score of -2,94, the rival firms have a low probability of meeting financial difficulties. The majority of the rivals (89,6%) are audited by a Big 4 audit firm.

Table 1. Panel B. Descriptive statistics: Industry rivals.

Variables	Mean	Std. Dev.	Low. Quart.	Median	Upp. Quart.
Size	6066,4	31501	68,67	236,3	886,8
Revenue	1382,5	6.256,00	12,47	49,2	261
CF Operations	238,6	1338	-12,37	-1,2	21,1
ROA	-24,67%	133,70%	-34,70%	-8,66%	6,34%
Z-Score	-2,94	30,6	-7,41	-5,35	-2,54
Big 4	89,60%	-	-	-	-

3.3 Methodology

Following the sample definition and data description, this section employs standard event study methods to investigate the impact of the GCW announcement on the announcing firms and industry rivals' stock prices. Initially, the abnormal return of the announcing company is calculated, which determines the deviation of the current return of the common stock from what is expected to generate, as described in equation 1:

$$AR_{f,d} = r_{f,d} - E(r_{f,d}) \quad (1)$$

where:

$r_{f,d}$ – is the real return generated by the common stock of the GCW firm f on the day d ;

$E(r_{f,d})$ – is the estimated return generated by the common stock of the GCW firm f on the day d .

The estimated return is computed by using the market model, one of the most common models used. The abnormal return on a distinct day within the event window represents the difference between the actual stock return (R_i) on that day and the normal return, which is predicted based on two inputs; the typical relationship between the

firm's stock and its reference index (expressed by the α and β parameters), and the actual reference market's return (R_m).

$$R_i = \alpha_i + \beta_i R_m + e_i \quad (2)$$

where:

R_i – is the return on stock i in period t ;

β_i – measures the sensitivity of a stock to stock market movements;

R_m – is return on the market in period t .

To measure the total impact of an event over a particular period of time (named the 'event window'), we add up individual abnormal returns to create a 'cumulative abnormal return' for every GCW firm f using the equation 3:

$$CAR_{f,i} = \sum_{i=1}^{i_2} AR_{f,i} \quad (3)$$

where:

$AR_{f,i}$ – are the calculated abnormal returns using formula (1);

i – is a certain interval of time.

As used in the sample studies that hold multiple observations of individual event types, we further calculate cumulative average abnormal returns, which represent the mean values of identical events. The mean value of the CARs is determined as follows:

$$\overline{CAR}_i = 1/n \sum_{f=1}^n CAR_{f,i} \quad (4)$$

where:

$CAR_{f,i}$ – are the values of the cumulative abnormal returns calculated using formula (3);

n – is the number of firms in the sample with information on the returns during the time interval i .

The rivals' abnormal returns are computed accordingly to Lang and Stulz (1992) approach, which assumes the creation for every GCW firm of a value-weighted rivals' portfolio containing the competing firms that passed through the rough selection process described on page 17. Thereby, a portfolio is being created for each GCW case within an industry with the sole purpose of showing the shifting composition of the industry. The abnormal returns of the industry rivals' portfolio are acquired by calculating the market model variables with the help of the value-weighted portfolio's returns. For obtaining the expected returns of the industry portfolios, were used the ordinary least square betas. Eventually, in order to be selected into the industry portfolio, rivals need to have at least 60 daily returns during the evaluation period and to trade no less than one time throughout this period.

CHAPTER 4 - RESULTS

This chapter presents the results of this thesis. The first section reports the cumulative abnormal returns for GCW firms and their industry rivals surrounding the GCW event date. This allows investigating whether GCW information disclosure affects the price dynamics of announcing firms and firms operating in the same industry. The second section tests the robustness of the results by eliminating cases identified in the higher concentration year and cases belonging to most representative industries as well as computing results by industries with multiple GCW cases and presenting results by industry for all cases.

4.1 Main results

Table 2 displays the short-term cumulative abnormal daily stock returns associated with the disclosure of GCW report for both the announcing firms and their industry rivals. GCW firms are non-utility, non-financial U.S. firms trading on the NYSE, NASDAQ or AMEX that receive a clean audit report in the subsequent year to their first-time going concern audit report between 01/01/1995 and 31/12/2008. Industry rivals are publicly traded firms with the same 4-digit SIC code as the GCW firm, and data available on both CRSP and COMPUSTAT.

The cumulative abnormal return (CAR) is the market model residual in percent. The abnormal performance for industry rivals is the equally weighted average return of the 95 value-weighted rival portfolios.

Description of the variables in table 2:

Period is shown in trading days considering trading-day zero as the GCW event-date.

N is the number of cases that were used in obtaining the cumulative abnormal returns.

CAR is the mean cumulative abnormal return.

P-value is the significance level of the results, it is a number between 0 and 1. If p-value (≤ 0.05), it indicates strong evidence against the null hypothesis, p-value (> 0.05) indicates weak evidence against the null hypothesis and a p-value close to the cutoff (0.05) is considered to be marginal (could go either way).

% Positive is the percentage of positive cumulative abnormal returns.

Panel A presents the abnormal returns for different time windows for the GCW cases and reveals that abnormal returns are not statistically significant since the p-values associated with the CARs are higher than 0.1. These results suggest that there are no statistical differences between the price performance of GCW firms immediately before the event, during the event and immediately after the event when it is compared to the price performance estimated by the market model. In other words, the announcement of a GCW does not impact significantly in the stock returns of announcing firms.

Table 2. Panel A. Cumulative abnormal daily stock returns for GCW firms.

Period	N	CAR	P-value	% Positive
(-6; -2)	95	-0,011275	0,868	40%
(-1; 0)	95	-0,018687	0,167	38%
(-1; 1)	95	-0,015492	0,608	44%
(2; 6)	95	0,005712	0,550	44%
(-6; 6)	95	-0,021056	0,970	45%
(-10; 10)	95	-0,058882	0,168	36%

Panel B of table 2 presents the abnormal returns for different time windows for the portfolios of GCW firms' industry rivals. The results suggest that before the announcement of such good news to the announcing firms, abnormal performance of their industry rivals is not statistically significant as the p-values associated to the (-6, -2) and (-1, 0) periods are higher than 0.1.

Table 2. Panel B. Cumulative abnormal daily stock returns for the industry rivals.

Period	N	CAR	P-value	% Positive
(-6; -2)	95	-0,003082	0,272	42%
(-1; 0)	95	-0,001658	0,918	46%
(-1; 1)	95	-0,004627	0,703	42%
(2; 6)	95	-0,00434	0,074	40%
(-5; 5)	95	-0,015638	0,025	36%
(-6; 6)	95	-0,012049	0,037	41%
(-10; 10)	95	-0,014938	0,031	34%

However, when one considers the subsequent days to the event and looks to the windows defined around the event-day (e.g., (-5, 5), (-6, 6) and (-10, 10), the results

indicate that industry rivals exhibit negative and significant price performance. For instance, the CAR (-5, 5) associated to the 95 portfolios of industry rivals is -1,56% and is statistically significant (p-value = 0.025). The results for the (2, 6) period reinforce that the negative abnormal performance of industry rivals is due to investor's reaction immediately after the announcement day.

These first results suggest that the market value of GCW firms is not affected by the announcement of this event but their industry rivals are affected by such announcement. In particular, the negative abnormal performance of industry rivals reveals the presence of a *competitive effect* within the industries.

4.2 Robustness tests

This section tests the robustness of the main conclusion presented in the previous section. As the general statistics in Table 1 show, the majority of GCWs happened in 2004 and belong to "Pharmaceutical Preparations" industry (SIC code 2834) and "Services-Computer programming, data processing, etc." industry (SIC code 7370). Therefore, this first robustness test analyzes how exactly the event year and industry concentration affect the main results. The test begins by creating two sub-samples. The first sub-sample consists of rival firms for all GCW cases excluding those that took place in the year of 2004. The second sub-sample consists of rival firms for all GCW cases excluding those belonging to the two industries with the highest number of occurrences. Abnormal stock returns of these two sub-samples are computed as described in the equations of chapter 3.

Table 3 presents the short-term cumulative abnormal daily stock returns associated with the disclosure of GCW report for industry rivals. GCW firms are non-utility, non-financial U.S. firms trading on the NYSE, NASDAQ or AMEX that receive a clean audit report in the subsequent year to their first-time going concern audit report between 01/01/1995 and 31/12/2008. Industry rivals are publicly traded firms with the same 4-digit SIC code as the GCW firm, and data available on both CRSP and COMPUSTAT.

The cumulative abnormal return (CAR) represents the market model residual in percent. The abnormal performance for industry rivals represents the equally weighted average return of the 95 value-weighted rival portfolios.

Description of the variables in table 3:

Period is shown in trading days considering trading-day zero as the GCW event-date.

N is the number of cases that were used in obtaining the cumulative abnormal returns.

CAR is the mean cumulative abnormal return.

P-value is the significance level of the results, it is a number between 0 and 1. If p-value (≤ 0.05), it indicates strong evidence against the null hypothesis, p-value (> 0.05) indicates weak evidence against the null hypothesis and a p-value close to the cutoff (0.05) is considered to be marginal (could go either way).

% Positive is the percentage of positive cumulative abnormal returns.

Additionally, in Panel E:

Sic Code represents the 4-digit SIC code of each individual industry.

Events represents the number of GCW events within each individual industry.

Rivals represents the average number of rivals per GCW event.

The results for the first sub-sample are described in Panel A of Table 3. As can be seen, after eliminating the GCW cases reported in 2004, results for rival firms are not as strong as the main ones. In fact, the only negative CAR with a slight statistical significance ($p=0,09116$) can be noticed in the 5 days window around the event date (-5; 5). Therefore, there is some evidence that the year with highest concentration of GCW has an important influence in the main results.

Table 3. Panel A. Cumulative abnormal daily stock returns for industry rivals – excluding GCW cases in 2004.

Period	N	CAR	P-value	% Positive
(-6; -2)	75	0,001061	0,68285	0,45333
(-1; 0)	75	-0,002179	0,94	0,42667
(-1; 1)	75	-0,004776	0,85414	0,4
(2; 6)	75	-0,00236	0,17586	0,45333
(-5; 5)	75	-0,012986	0,09116	0,4
(-6; 6)	75	-0,006076	0,209	0,46667
(-10; 10)	75	-0,008721	0,1985	0,38667

Panel B of table 3 presents the cumulative abnormal returns for rival firms of GCW cases excluding those operating in the two industries with more occurrences. In this case, the results are in line with the ones reported for the full sample analysis. As can be seen, there are no significant abnormal returns for the (-6, -2), (-1, 0), and (-1, 1)

windows. However, there is some evidence of significant negative abnormal reaction in the (2, 6) period and significant negative abnormal reaction at a 5% level for the larger periods surrounding the GCW event date. This significant abnormal reaction is around -1,5% for the (-5, 5), (-6, 6) and (-10, 10) windows. Therefore, these results suggest that the competitive intra-industry effect documented in the main analysis is not dependent on industry concentration.

Table 3. Panel B. Cumulative abnormal daily stock returns for industry rivals – excluding GCW cases of firms operating in the "Pharmaceutical Preparations" (SIC code 2834) and "Services-Computer programming, data processing, etc." (SIC code 7370).

Period	N	CAR	P-value	% Positive
(-6; -2)	81	-0,003044	0,33031	0,40741
(-1; 0)	81	-0,003562	0,60523	0,46914
(-1; 1)	81	-0,005939	0,5717	0,4321
(2; 6)	81	-0,004843	0,05782	0,38272
(-5; 5)	81	-0,018553	0,01262	0,33333
(-6; 6)	81	-0,013827	0,03213	0,39506
(-10; 10)	81	-0,015244	0,04279	0,33333

As the activity of a specific firm is always influenced by external environmental factors, the next robustness test investigates if the competitive intra-industry effect observed previously depends on external factors related to industry or is related to firm's internal factors. These tests also imply the creation of two sub-samples. First sample consists of rival firms for all the consecutive GCW cases during a one-week period of time of the firms belonging to the same 4-digit SIC code industry. The second sample, on the other hand, integrates all rival firms for the first GCW cases of a calendar year of the firms belonging to any 4-digit SIC code industry in the main sample.

According to the data in Panel C of Table 3, the abnormal daily returns of the GCW firms in the same 4-digit SIC code industry are non-significant for most of the windows analysed. However, the abnormal return computed for the (-6, 6) window is slightly significant at a 10% level. These results suggest that the competitive effect is not driven by firms associated to multiple GCW events.

Table 3. Panel C. Cumulative abnormal daily stock returns for industry rivals – Multiple-firm GCW events. Abnormal performance of industries experiencing consecutive disclosures of qualified audit reports by firms in the same 4-digit SIC code industry within a one-week period.

Period	N	CAR	P-value	% Positive
(-6; -2)	73	-0,004259	0,34721	0,41096
(-1; 0)	73	-0,00413	0,50665	0,43836
(-1; 1)	73	-0,006162	0,58234	0,42466
(2; 6)	73	-0,001692	0,24054	0,41096
(-6; 6)	73	-0,012113	0,0868	0,41096

Panel D presents the CARs of rival firms for the first GCW events of the year within different intervals of time. As can be seen, the results are stronger than the ones presented in table C for multiple-firm GCW events. For instance, one week before the event (-6; -2), there is a significant negative anticipation of -2,2% ($p=0,009$). In contrast, in the one week following the event date (2, 6), there is no abnormal reaction to the publication of a GCW. More important, although the non-significant result for the (-1, 1) period, there is a significant abnormal reaction in the (-6, 6) period surrounding the event date of -4,8%. Altogether, these results indicate that the competitive effect is stronger for the first GCW case within each industry and this effect is stronger in the days immediately before the GCW announcement.

Table 3. Panel D. Cumulative abnormal daily stock returns for industry rivals – robustness tests. First GCW case per calendar year and industry. Only the first GCW event per calendar year and 4-digit SIC code industry is kept in the sample.

Period	N	CAR	P-value	% Positive
(-6; -2)	11	-0,021912	0,00953	0,18182
(-1; 0)	11	0,01555	0,03808	0,72727
(-1; 1)	11	0,001127	0,8647	0,36364
(2; 6)	11	-0,027565	0,14872	0,27273
(-6; 6)	11	-0,04835	0,01814	0,27273

The last robustness test analyzes the abnormal performance of certain 4-digit SIC code industries from the main sample. This test aims at analysing which industries are more associated to the competitive effect since the specific characteristics of each industry may explain their propensity to this phenomenon. To perform this test, abnormal returns of rival firms are now computed by industry for those that are associated to a minimum of 5 GCW events.

Panel E of Table 3 presents the results for this robustness test and identifies five industries associated to a minimum of 5 GCW cases: "Pharmaceutical Preparations" (SIC code 2834), "Biological Products, except Diagnostic Substances" (SIC code 2836), "Radiotelephone Communications" (SIC code 4812), "Computer Programming, Data Processing, and other Computer Related Services" (SIC code 7370) and "Prepackaged Software" (SIC code 7372).

Table 3. Panel E. Cumulative abnormal daily stock returns for industry rivals –Industry specific market reaction. Abnormal performance for each 4-digit SIC code industry from the sample.

SIC Code	Period	N	Rivals	CAR	P-value	% Positive
2834	(-6; -2)	8	55,375	-0,01597	0,41823	0,375
2836	(-6; -2)	6	55,3333	-0,01073	0,21576	0,16667
4812	(-6; -2)	5	12,6	0,02898	0,30541	0,8
7370	(-6; -2)	6	50,6667	0,0136	0,69865	0,66667
7372	(-6; -2)	9	79,8889	0,00446	0,90836	0,55556
2834	(-1; 0)	8	55,375	0,01721	0,24353	0,5
2836	(-1; 0)	6	55,3333	0,0006	0,74558	0,66667
4812	(-1; 0)	5	12,6	0,00522	0,5781	0,6
7370	(-1; 0)	6	50,6667	-0,0011	0,72581	0,33333
7372	(-1; 0)	9	79,8889	0,0029	0,83932	0,55556
2834	(-1; 1)	8	55,375	0,01023	0,56583	0,375
2836	(-1; 1)	6	55,3333	0,00742	0,34218	0,66667
4812	(-1; 1)	5	12,6	-0,00714	0,62117	0,6
7370	(-1; 1)	6	50,6667	-0,00672	0,95736	0,33333
7372	(-1; 1)	9	79,8889	-0,00128	0,4903	0,33333
2834	(2; 6)	8	55,375	0,0215	0,46721	0,625
2836	(2; 6)	6	55,3333	-0,00929	0,25428	0,33333
4812	(2; 6)	5	12,6	0,00447	0,50725	0,4
7370	(2; 6)	6	50,6667	-0,03201	0,12688	0,33333
7372	(2; 6)	9	79,8889	-0,01961	0,09324	0,22222
2834	(-6; 6)	8	55,375	0,01576	0,70808	0,5
2836	(-6; 6)	6	55,3333	-0,01261	0,07798	0,16667
4812	(-6; 6)	5	12,6	0,02631	0,33499	0,8
7370	(-6; 6)	6	50,6667	-0,02514	0,39132	0,5
7372	(-6; 6)	9	79,8889	-0,01642	0,24018	0,33333
2834	(-10; 10)	8	55,375	0,01218	0,93959	0,5
2836	(-10; 10)	6	55,3333	-0,01691	0	0
4812	(-10; 10)	5	12,6	0,03921	0,4628	0,6
7370	(-10; 10)	6	50,6667	-0,04698	0,29416	0,16667
7372	(-10; 10)	9	79,8889	-0,02359	0,2559	0,33333

Taking into consideration the limited number of observations, the results are not significant. In fact, almost all the CARs are statistically non-significant, except the 1,96% decrease one week following the GCW announcement ((2; 6), $p=0,09324$) in the "Prepackaged Software" industry (SIC code 7372) and the 1,26% decrease in the one-week window around the event date (-6; 6) in the "Biological Products, except Diagnostic Substances" industry (SIC code 2836) with $p=0,07798$. Therefore, these results do not allow a robust conclusion due to the limited number of cases in each industry.

CHAPTER 5 - CONCLUSIONS AND FUTURE WORK

This master thesis examines whether the disclosure of a going concern withdrawal impacts on the rival firms of the announcing firm. The analysis was performed over 95 firms traded on the NYSE, AMEX, NASDAQ for which auditors withdrawn a going-concern audit report between 1995 and 2008 and 2.673 rival firms. The good news associated to this disclosure revealed to have a significant negative impact on the rival firms operating in the same industry to the announcement firm. This significant negative impact on rival firms suggests that GCW audit reports generate a competitive intra-industry effect.

This master thesis confirms previous studies' results showing that the GCW does not impact in the market value of the announcing firms in the days surrounding the event date. More interestingly, this study provides the first approach in the impact of such news in the rivals of the announcing firms. In particular, results show significant negative abnormal returns of approximately -1,5% for the (-5, 5), (-6, 6) and (-10, 10) windows surrounding the GCW announcement. In addition, there is some evidence that this competitive effect is due to investors' reaction immediately after the announcement day and not by an anticipation of the information. The robustness tests indicate that the competitive effect is likely to be influenced by the first GCW cases per industry and is not driven by the most representative industries in the GCW sample.

Taken together, the results of this thesis suggest that the GCW announcement brings important information to the market value of firms operating in the same industry with the announcement firms. This competitive intra-industry effect may be used in the decision making process of investors when taking investment decisions.

These results must be read with caution as the number of GCW firms is somehow limited. This limitation conditioned the robustness tests as the constitution of sub-samples reduced even more the number of cases under scrutiny. As such, as suggestion for further work, one can update the sample with more recent GCW cases allowing a larger sample and increase the power of the statistic tests. Another opportunity is to perform a multivariate analysis allowing a better understanding of the cause-effect relation in this domain.

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ATTACHMENTS

Table 1. General statistics

This table summarizes statistics associated to the GCW firms and their industry rivals. GCW firms are non-utility, non-financial U.S. firms trading on the NYSE, NASDAQ or AMEX that receive a clean audit report in the subsequent year to their first-time going concern audit report between 01/01/1995 and 31/12/2008. Industry rivals are publicly traded firms with the same 4-digit SIC code as the GCW firm, and data available on both CRSP and COMPUSTAT.

All accounting data is collected from the 10-K report one year before the GCW publication date.

Panel A: GCW firms

Variables	Mean	Std. Dev.	Low. Quart.	Median	Upp. Quart.
Size	129,4	178,1	22,9	69,5	156
Revenue	185,8	849,10	6,9	18,8	63,5
CF Operations	0,27	71,03	-10,3	-3,8	0,27
ROA	-44,10%	55,30%	-63,10%	-26,10%	-5,80%
Z-Score	0,38	9,01	-4,51	-2,31	3,49
Big 4	61,10%	-	-	-	-

Panel B: Industry rivals

Variables	Mean	Std. Dev.	Low. Quart.	Median	Upp. Quart.
Size	6066,4	31501	68,67	236,3	886,8
Revenue	1382,5	6.256,00	12,47	49,2	261
CF Operations	238,6	1338	-12,37	-1,2	21,1
ROA	-24,67%	133,70%	-34,70%	-8,66%	6,34%
Z-Score	-2,94	30,6	-7,41	-5,35	-2,54
Big 4	89,60%	-	-	-	-

Where:

Size represents the equity market capitalization in US Dollars in Millions (\$m), measured at the release date of the GCW audit report.

Revenue represents total revenues in \$m.

ROA represents the return on assets, computed as the ratio of EBIT to total assets.

CF Operations represents the cash-flow from operations in \$m.

Z-score represents a composite measure of financial distress computed as in Zmijewski (1984).

Big 4 is a dummy that assumes the value 1 if the firm is audited by a Big 4 audit firm or one of its predecessors and zero otherwise.

Table 2. Cumulative abnormal daily stock returns for GCW firms their industry rivals

This table displays the short-term cumulative abnormal daily stock returns associated with the disclosure of GCW report for both the announcing firms and their industry rivals. GCW firms are non-utility, non-financial U.S. firms trading on the NYSE, NASDAQ or AMEX that receive a a clean audit report in the subsequent year to their first-time going concern audit report between 01/01/1995 and 31/12/2008. Industry rivals are publicly traded firms with the same 4-digit SIC code as the GCW firm, and data available on both CRSP and COMPUSTAT.

The cumulative abnormal return (CAR) is the market model residual in percent. The abnormal performance for industry rivals is the equally weighted average return of the 95 value-weighted rival portfolios.

Panel A: GCW firms

Period	N	CAR	P-value	% Positive
(-6; -2)	95	-0,011275	0,868	40%
(-1; 0)	95	-0,018687	0,167	38%
(-1; 1)	95	-0,015492	0,608	44%
(2; 6)	95	0,005712	0,550	44%
(-6; 6)	95	-0,021056	0,970	45%
(-10; 10)	95	-0,058882	0,168	36%

Panel B: Industry rivals

Period	N	CAR	P-value	% Positive
(-6; -2)	95	-0,003082	0,272	42%
(-1; 0)	95	-0,001658	0,918	46%
(-1; 1)	95	-0,004627	0,703	42%
(2; 6)	95	-0,00434	0,074	40%
(-5; 5)	95	-0,015638	0,025	36%
(-6; 6)	95	-0,012049	0,037	41%
(-10; 10)	95	-0,014938	0,031	34%

Where:

Period is shown in trading days considering trading-day zero as the GCW event-date.

N is the number of cases that were used in obtaining the cumulative abnormal returns.

CAR is the mean cumulative abnormal return.

P-value is the significance level of the results, it is a number between 0 and 1. If p-value (≤ 0.05), it indicates strong evidence against the null hypothesis, p-value (> 0.05) indicates weak evidence against the null hypothesis and a p-value close to the cutoff (0.05) is considered to be marginal (could go either way).

% Positive is the percentage of positive cumulative abnormal returns.

Table 3. Cumulative abnormal daily stock returns for industry rivals – robustness tests

This table presents the short-term cumulative abnormal daily stock returns associated with the disclosure of GCW report for industry rivals. GCW firms are non-utility, non-financial U.S. firms trading on the NYSE, NASDAQ or AMEX that receive a clean audit report in the subsequent year to their first-time going concern audit report between 01/01/1995 and 31/12/2008. Industry rivals are publicly traded firms with the same 4-digit SIC code as the GCW firm, and data available on both CRSP and COMPUSTAT. The cumulative abnormal return (CAR) represents the market model residual in percent. The abnormal performance for industry rivals represents the equally weighted average return of the 95 value-weighted rival portfolios.

Where:

Period is shown in trading days considering trading-day zero as the GCW event-date.

N is the number of cases that were used in obtaining the cumulative abnormal returns.

CAR is the mean cumulative abnormal return.

P-value is the significance level of the results, it is a number between 0 and 1. If p-value (≤ 0.05), it indicates strong evidence against the null hypothesis, p-value (> 0.05) indicates weak evidence against the null hypothesis and a p-value close to the cutoff (0.05) is considered to be marginal (could go either way).

% Positive is the percentage of positive cumulative abnormal returns.

Panel A: Year of concentration. The GCWs from 2004 are eliminated from the sample.

Period	N	CAR	P-value	% Positive
(-6; -2)	75	0,001061	0,68285	0,45333
(-1; 0)	75	-0,002179	0,94	0,42667
(-1; 1)	75	-0,004776	0,85414	0,4
(2; 6)	75	-0,00236	0,17586	0,45333
(-5; 5)	75	-0,012986	0,09116	0,4
(-6; 6)	75	-0,006076	0,209	0,46667
(-10; 10)	75	-0,008721	0,1985	0,38667

Panel B: Industry of concentration. GCWs disclosed by firms competing in the "Pharmaceutical Preparations" (SIC code 2834) and "Services-Computer programming, data processing, etc." (SIC code 7370) industries are eliminated from the sample.

Period	N	CAR	P-value	% Positive
(-6; -2)	81	-0,003044	0,33031	0,40741
(-1; 0)	81	-0,003562	0,60523	0,46914
(-1; 1)	81	-0,005939	0,5717	0,4321
(2; 6)	81	-0,004843	0,05782	0,38272
(-5; 5)	81	-0,018553	0,01262	0,33333
(-6; 6)	81	-0,013827	0,03213	0,39506
(-10; 10)	81	-0,015244	0,04279	0,33333

Table 3. Cumulative abnormal daily stock returns for industry rivals – robustness tests (continuation)

Panel C: Multiple-firm GCW events. Abnormal performance of industries experiencing consecutive disclosures of qualified audit reports by firms in the same 4-digit SIC code industry within a one-week period.

Period	N	CAR	P-value	% Positive
(-6; -2)	73	-0,004259	0,34721	0,41096
(-1; 0)	73	-0,00413	0,50665	0,43836
(-1; 1)	73	-0,006162	0,58234	0,42466
(2; 6)	73	-0,001692	0,24054	0,41096
(-6; 6)	73	-0,012113	0,0868	0,41096

Panel D: First GCW case per calendar year and industry. Only the first GCW event per calendar year and 4-digit SIC code industry is kept in the sample.

Period	N	CAR	P-value	% Positive
(-6; -2)	11	-0,021912	0,00953	0,18182
(-1; 0)	11	0,01555	0,03808	0,72727
(-1; 1)	11	0,001127	0,8647	0,36364
(2; 6)	11	-0,027565	0,14872	0,27273
(-6; 6)	11	-0,04835	0,01814	0,27273

Additionally, in Panel E:

Sic Code represents the 4-digit SIC code of each individual industry.

Events represents the number of GCW events within each individual industry.

Rivals represents the average number of rivals per GCW event.

Table 3. Cumulative abnormal daily stock returns for industry rivals – robustness tests (continuation)

Panel E: Industry specific market reaction. Abnormal performance for each 4-digit SIC code industry from the sample.

SIC Code	Period	N	Rivals	CAR	P-value	% Positive
2834	(-6; -2)	8	55,375	-0,01597	0,41823	0,375
2836	(-6; -2)	6	55,3333	-0,01073	0,21576	0,16667
4812	(-6; -2)	5	12,6	0,02898	0,30541	0,8
7370	(-6; -2)	6	50,6667	0,0136	0,69865	0,66667
7372	(-6; -2)	9	79,8889	0,00446	0,90836	0,55556
2834	(-1; 0)	8	55,375	0,01721	0,24353	0,5
2836	(-1; 0)	6	55,3333	0,0006	0,74558	0,66667
4812	(-1; 0)	5	12,6	0,00522	0,5781	0,6
7370	(-1; 0)	6	50,6667	-0,0011	0,72581	0,33333
7372	(-1; 0)	9	79,8889	0,0029	0,83932	0,55556
2834	(-1; 1)	8	55,375	0,01023	0,56583	0,375
2836	(-1; 1)	6	55,3333	0,00742	0,34218	0,66667
4812	(-1; 1)	5	12,6	-0,00714	0,62117	0,6
7370	(-1; 1)	6	50,6667	-0,00672	0,95736	0,33333
7372	(-1; 1)	9	79,8889	-0,00128	0,4903	0,33333
2834	(2; 6)	8	55,375	0,0215	0,46721	0,625
2836	(2; 6)	6	55,3333	-0,00929	0,25428	0,33333
4812	(2; 6)	5	12,6	0,00447	0,50725	0,4
7370	(2; 6)	6	50,6667	-0,03201	0,12688	0,33333
7372	(2; 6)	9	79,8889	-0,01961	0,09324	0,22222
2834	(-6; 6)	8	55,375	0,01576	0,70808	0,5
2836	(-6; 6)	6	55,3333	-0,01261	0,07798	0,16667
4812	(-6; 6)	5	12,6	0,02631	0,33499	0,8
7370	(-6; 6)	6	50,6667	-0,02514	0,39132	0,5
7372	(-6; 6)	9	79,8889	-0,01642	0,24018	0,33333
2834	(-10; 10)	8	55,375	0,01218	0,93959	0,5
2836	(-10; 10)	6	55,3333	-0,01691	0	0
4812	(-10; 10)	5	12,6	0,03921	0,4628	0,6
7370	(-10; 10)	6	50,6667	-0,04698	0,29416	0,16667
7372	(-10; 10)	9	79,8889	-0,02359	0,2559	0,33333