Chapter 2
Audit Reporting for Going Concern Uncertainty: The Academic Debate

Abstract This chapter, using a narrative literature review, goes to the heart of the academic debate about Audit Reporting for Going Concern Uncertainty (GCU). With the aim of enhancing the understandability of the review, the studies are classified following the same, and well-known in the literature, categorization adopted by Carson et al. (2013). The purpose is to provide a worldwide faithful representation of what scholars have said over time with respect to Audit Reporting for GCU. This effort is necessary for a twofold reason: On the one hand it fills the gap of a missing worldwide representation of this richest debate; on the other, it helps scholars in understanding which are topics and subjects unexplored or underexplored that deserve academic and, not only, future engagement. Lastly, it provides auditors and regulators with a global synthesis about the determinants, accuracy and consequences of Going Concern Opinions (GCOs), fostering further fine tuning actions of regulatory frameworks across the world.

2.1 Looking for a Framework of Analysis: The Seminal Work of Carson et al. (2013)

Carson et al. (2012) published a very long working paper titled "Audit Reporting for Going Concern Uncertainty: A Research Synthesis" aimed at outlining the state of the art of the entire plethora of researches related to GCOs. The intent beyond that huge research was fostering the debate and providing the PCAOB with a strong background useful to move on in a fine tuning action of auditing standards related to GC. In fact, Carson et al. mainly reviewed studies coming from the USA (or based on USA data and auditing practices). As a result of Carson et al.'s great efforts, in 2013 a very popular research article, with the same title as the working paper, has been published in *Auditing: A Journal of Practice & Theory* edited by the American Accounting Association, one of the best journals on auditing matters worldwide.

To our knowledge, Carson et al.'s work represents a cornerstone for moving on with the aim of providing a global picture as regards Audit Reporting for GCU

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academic debate. Any kind of research project should be accompanied by a review of the existing literature, for which the researcher has to define the relevant territory. This is fundamental for specifying the questions that will be answered throughout the study. Traditionally, a literature review can be structured in different ways, among which it is possible to distinguish the narrative and the systematic ones.

Most times an academic debate is based on a systematic literature review (SLR) and only when the topics or fields under investigation are very wide is a more narrative approach recommended. Audit reporting for GCU falls into the latter situation. As a matter of fact, the number of studies all around the world on this topic seem uncountable. That is one of the reasons why Carson et al. have separated studies on GCOs into three main categories:

- Determinants of GCOs;
- Accuracy of GCOs issued or not issued, by auditors;
- Consequences of GCOs on clients and auditors.

Within each category they individuated a series of features that feed other sub-clusters of analysis regarding specific aspects. This is particularly true for the determinants of GCO. Theoretically, as we partially saw in Chap. 1, reason(s) behind a GCO can be an indefinite number. Hence, scholars are free to study and detect the reason(s) by using different research methods (theoretical, case studies, archival, experimental etc.). Thus, the GCO research field is an open source even if it is evident that some areas are overexplored and others underexplored.

Table 2.1 provides Carson et al.'s categories; Tables 2.2, 2.3 and 2.4 provide evidence of the main features for each category.

In this chapter, using the same categorization, I provide a narrative literature review on GCOs in the USA (both resuming and updating, up to 2017, Carson et al.'s dissemination work), Europe and the rest of the world separately. The distinction among geographical areas is not based on the scholars' nationality, rather, it is based on country data used for the analysis (for quantitative researches) and/or on countries in which the firms or studies the authors made reference to are used for developing studies (for qualitative researches).

As will be made clearer later, the number and typology of studies, categories, features and aspects investigated by scholars differ considerably among countries, even in the same geographical area. Indeed, the reviewed papers are a collection of

Table 2.1 Carson et al. studies on GCOs' categorization

Carson et al. GCOs' categorization								
Categories								
Determinants			**Accuracy**			**Consequences**		
Features			Features			Features		
…	…	…	…	…	…	…	…	…

Source Author elaboration

Table 2.2 Determinants of GCO

Determinants			
Features			
Client factors	Auditor factors	Auditor-client/relationship	Environmental factors
Specific aspects			
…	…	…	…
…	…	…	…
…	…	…	…

Source Author elaboration

Table 2.3 Accuracy of GCOs

Accuracy		
Features		
bankruptcy without a prior GCO	Prior GCO without bankruptcy	Variation of GCO accuracy across auditors
Specific aspects		
…	…	…
…	…	…
…	…	…

Source Author elaboration

Table 2.4 Consequences of GCOs

Consequences		
Features		
For current shareholders	For future shareholders	For capital providers
Specific aspects		
…	…	…
…	…	…
…	…	…

Source Author elaboration

a totally unbalanced panel used to draw out the essence of academic positions and future trends with regard to GCO. Even though the literature review has no systematic basis, many of the most popular academic research databases were used (Business Source Complete, Scopus, Web of Science, EconLit, JStor and Google Scholar) as well as other basic and sophisticated techniques of research, such as keywords usage (using different combinations) and the snowball papers extraction.

2.2 Studies and Trends in the USA

The USA represents the starting point of the literature. Firstly because of the referred work of Carson et al. and secondly because the majority of existing studies are based in the USA. Adopting the same categorization as Carson et al., studies regarding determinants, accuracy and consequences of GCOs are reviewed.

2.2.1 Determinants of GCOs

There exists a vast archival research stock intended to identify the characteristics causing the auditors to issue a GCO to an audit client. Through the analysis of these papers, four broad features can be identified as the determinants of a GCO:

- client factors;
- auditor's factors;
- auditor-client relationship;
- environmental factors.

Regarding the narrative literature review of USA researches on audit for GCOs, it is worthwhile noting that I decided to summarise research papers prior to Carson et al.'s first study (2012) only when, in my view, the results achieved from those researches by scholars are still valid and useful for the debate and/or when those studies have been useful or necessary to publish studies from 2012 onward.

2.2.1.1 Client Factors

The issuance of a GCO is one of the most difficult decisions to be taken by an auditor, since he or she is in the centre of a moral and ethical dilemma, i.e. exposing a financially distressed firm, through a GCO, to an escalating risk; or not informing stakeholders of the reality through a missed GCO.

Traditionally, the literature provides numerous kinds of client factors that can determine the issuance of a GCO for a company. Among them, we may principally distinguish those factors (aspects) that are publicly available on financial statements, such as:

- profitability;
- leverage;
- liquidity;
- company size;
- debt defaults;
- prior GCOs.

And other factors which are not financial statements-related, such as:

- market variables;
- strategic initiatives;
- corporate governance characteristics.

In Carson et al. (2013), another three aspects were explored: financial reporting quality, corporate governance and book values and liquidation values. Notwithstanding the great efforts of the authors in classifying research articles into a useful cluster for analysis, I notice that the three mentioned aspects are quite residual, encompassing a very small number of research papers. However, in the last five years any relevant research articles related to these aspects have been produced. For this reason I will not provide any updates in this regard.

There are ten pivotal American works regarding client factors (Mutchler 1985; LaSalle and Anandarajan 1996; Behn et al. 2001; Davis 2010; Bruynseels and Willekens 2012; Vermeer et al. 2013; Feng and Li 2014; Mayew et al. 2015; Chen et al. 2016a, b, 2017a, b).

According to Mutchler, it is fundamental to consider confidential business information for issuing a GCO in the most accurate way possible. Responding to the attempt of the Auditing Standards Board (ASB) to eliminate the subject-to opinion[1] of 1982–1983, she asserted the importance of the access to inside information to produce an opinion able to reflect more than what can be gleaned from publicly disclosed information. Her research was based on the relationship between GCOs and the information available to the public. Mutchler performed a discriminant analysis to test GCO models with a sample of manufacturing companies that received a GCO and a sample of manufacturing companies that did not, even if they exhibited potential difficulties.

LaSalle and Anandarajan (1996) dealt with the possibility reserved for auditors on the issuance of either an unqualified audit opinion with modified wording or a disclaimer of opinion for entities with substantial doubt concerning GC. They identified through the use of logistic regression those factors that can push the auditors into choosing one of these two options. The results obtained indicated that having more bad news, less good news and a weaker internal control system, influenced the auditors more to produce a disclaimer of opinion. Furthermore, they evidenced the tendency to issue this kind of opinion for larger and publicly traded firms, especially for cases in which the auditors perceived the risk of being sued for the legal liabilities that would probably arise from their opinions.

From Management Discussion and Analysis (MD&A), auditors are able to apprehend management plans for the future of their firms. This information constitutes an important insight when considering the possible mitigating effects on the substantial doubt of the ability of the firm to continue as a GC. In their research, Behn et al. (2001) extended Mutchler's study. They modelled and tested the relationship between GCOs and three different types of management plan

[1]A prior way, used up to the 1990s, to express a GCO.

disclosures. After the realization of his empirical research, he concluded that GCOs are clearly connected to public mitigating information relating to management plans: in fact, plans to issue equity and to borrow additional funds appeared to be strongly associated with unqualified opinions. In 2015 Mayew et al. decided to continue the exploration of the effects of MD&A disclosure on the issuance of a GCO, as Behn et al. did in 2001. They undertook an analysis of a sample of firms that filed for bankruptcy between 1995 and 2012, in order to identify the predictive power of an MD&A over a GCO, accompanied by the disclosures of financial ratios and market-based variables. They concluded by ascertaining that MD&A has an incremental power extending to three years prior to bankruptcy.

The study conducted by Davis (2010) focuses on financial ratios and their values as indicators of financial distress, especially for those firms that, after receiving a GCO in Year 1, received an unqualified opinion in Year 2. His analysis went through the examination of 52 companies responding to these characteristics through the use of the Altman Z-Score model.

Feng and Li (2014) investigated professional skepticism about management earnings forecasts when making GC decisions. From the use of publicly issued management earnings forecasts, they discovered that there exists a negative association among auditor's GCOs, subsequent bankruptcies and management earnings forecasts. They evidenced that auditors pay lower attention to this kind of prediction, according to their perception; this is based upon the assumption that usually management earnings are way too optimistic, especially in those situations, predicting inflated high earnings for the organization. In the conclusion of their study, they succeeded in confirming that auditors are reasonably skeptical about management earnings forecasts when making GC decisions.

In recent years the relationship between audit reporting and business strategy has also been enlightened by scholars. In particular, a few are empirical researches on turnaround initiatives and their relationship with auditing reports. Bruynseels and Willekens (2012) focused on the link between GC decisions for distressed firms and business risk information. Through a study on a sample of firms in the U.S. manufacturing sector, their research finds that strategic long-term initiatives and short-term cash flow initiatives are both needed to have a mitigating effect on GCO decisions. The results seem to show that these initiatives are both associated with a higher probability of receiving a GCO. In addition, the results show differences in the mitigating effect of turnaround initiatives. Similarly, Chen et al. (2017a, b), using a sample of U.S. financially distressed firms, found that firms that use innovative strategies are significantly more likely than defenders to receive a GCO. These results suggest that business strategy is indeed a significant determinant for auditors interested in GCOs.

Lastly, a key part of the U.S. market is taken up by non-profit organizations; this part of the market has not been studied as much as the profit sector and can be useful to discover more details on GCOs. In this regard, an interesting research has been recently provided by Vermeer et al. (2013). They developed a model that takes into consideration different financial and non-financial measures such as: current debt, cash flow, restricted funds, expenses, Big 4, size, previous GCOs. The

model's results showed that firms will have a higher risk of receiving a GCO if they are not in a good financial position, if they have saved more on programme activities, if they have a higher level of internal audit findings and the smaller they are. The model also showed that there is no relationship between audit firm type and type of audit opinion. In fact, 27% of the non-profit firms that received a GCO then filed for bankruptcy within the next four years. This study is important because it covers a sector that has had little research and can be used as a guideline for non-profit firms, their auditors and for comparison between profit and non-profit firms.

Lastly, Chen et al. (2016a, b) tested if and in which manner GCOs mighy determine an increase in the loan spread. They found that, on average, firms were issued a GCO pay 107 more basis points more than the others.

Table 2.5 details the studies on client factors, highlighting the aims and main results of each one.

2.2.1.2 Auditor Factors

Among the characteristics owned by the firms subject to a GCO, auditor firms can present some aspects influencing the issuance of this kind of opinion. Carson et al. in 2013 identified among them:

- auditor's economic dependence on the client;
- auditor size;
- auditor's judgement;
- industry specialization;
- auditor's compensation arrangements;
- auditor's organizational forms;
- auditor's psychology.

The majority of the literature analyzed is focused on the fees received by auditors and the resulting presence or lack of economic independence on the client (Ho 1994; Callaghan et al. 2009; Li 2009; Kao et al. 2014; Krishnan and Changjiang 2015; Read 2015).

Traditional literature on this topic has suggested significant agreement among auditors' GC judgements. In contrast, Ho (1994) discovered the existence of a missing agreement between more and less experienced auditors, who were given the same information about the financial health of the same problem company. Through the development of specific models, she succeeded in finding out that auditors with more expertise tended to express more positive GC judgements.

Subramanyam et al. started in 2002 to focus on this topic, as well; they evidenced that there is not some actual kind of association between non-audit fees and impaired auditor independence, or either total fees or audit fees, and the issuance of a GCO. Additionally, they discovered that this relationship is dominated by some other variables influencing the independence of the auditors, such as loss of

Table 2.5 Studies on client factors

Author	Year	Aim	Results
Mutchler	1985	Determine the extent to which auditors' GCO decisions could be predicted using publicly available information	Ratios and prior-year opinion variable have predictive accuracy
LaSalle and Anandarajan	1996	Identification of some factors associated with auditors' choice between the two types of GC reports	Firms receiving a disclaimer are more likely to have more bad news items, fewer good news items, and weaker internal controls than firms receiving an unqualified modified report
Behn et al.	2001	Association between management plans (as suggested by SAS No. 59) and GCOs	Auditors' GCO decision is strongly associated to publicly available mitigating information relating to several management plans
Davis	2010	Analysis of the financial profile of 50 companies who were received a GCO in year 2 and received a clean opinion in year 1	The Z-score analysis combined with the current ratio and cash flow from operations/current liabilities calculations provided an auditor with additional quantitative tools in supporting a decision to lift the GCM
Bruynseels and Willekens	2012	Study on the association between business risk information GC decisions for distressed clients	Short-term and long term (even potential) cash flow are necessary for strategic turnaround initiatives to mitigate the impact on the auditor's GC decision
Vermeer et al.	2013	Investigation into GCOs in non-profit organizations	Non-profits are more likely to receive a GC modified opinion if they are smaller, are in worse financial condition, expend less on programme-related activities, and have more internal control-related audit findings
Feng and Li	2014	The use of auditors' professional skepticism about management earnings forecasts during the valuation of the company's GC	Management earnings forecasts are negatively associated with both auditors' GCOs and subsequent bankruptcy
Mayew et al.	2015	Textual investigation of the information content in the MD&A section of a firm regarding its ability to continue as GC	The concern reported in the MD&A and the linguistic tone used provide significant explanatory power in predicting the firm's GC situation
Chen et al.	2016	Test, in the period 1992-2009, whether GCOs are associated with a hgher interest spread when contracting debt	Overall, authors find confirmation of the main hypothesis: the presence of GCOs determines an increase of 107 basis points on loan spread
Chen et al.	2017	Study about whether a firm's business strategy influences auditor reporting	Among a sample of financially troubled firms, prospectors are significantly more likely than defenders to receive a GCO

Source Author elaboration

reputation and litigation costs. They represent some bollards to gaining the expected benefits from compromising the auditor independence.

Later, Li (2009) discovered that the situation described in Subramanyam's study has been modified; fee dependence and the incidence of a GCO moved from being insignificant in 2001 to being positive in 2003. In fact, after the SOX Act, auditors became more conservative, being aware of the public pressure they were subject to. Kao et al.'s study (2014) reinforced the same thesis, asserting the importance of the effect of major events and government regulations on auditors' independence, especially relative to the short-run.

However, Callaghan et al. (2009) reached different conclusions asserting that:

> When examining the relationship between the propensity of auditors to render GCOs and non-audit fees (and other auditor fees) for a sample of bankrupt U.S. firms, they did not observe any association between GCOs and non-audit fees, audit fees, total fees, or the ratio of non-audit fees to total fees.

Subsequently, two scholars investigated the same matter. Read (2015) did not find any evidence on the relationship between audit and non-audit fees and the probability of the issuance of a GCO through the analysis of a sample of 203 bankrupt companies during 2002–2013. At the same moment, Krishnan and Changjiang (2015) investigated the relationship between managerial ability, audit fees and GCOs. They concluded that the notion that managerial ability is relevant to auditors' decisions is true.

As explained before, it is clear that literature on this subject is controversial, but generally, the most diffused opinions tend to be negative about the interdependence between audit fees and GCO issuance.

Regarding the audit firm size, two groups of scholars expressed their positions: O'Clock and Devine (1995) and Carcello et al. (2000).The study conducted by O'Clock and Devine was focused on the influences of framed information and firm dimension on the auditor's GC decision in issuing or not a GCO. The results indicated that actually differences exist across firms according to their size. Carcello et al. confirmed the same results in 2000, when they examined the relationship between partner compensation, plans and client size and auditors' propensity to issue GCOs to financially distressed clients. However, they discovered that auditors in small-pool firms tend be more influenced by client size than partners in large-pool firms while making certain GCO decisions. However, these studies are essentially quite old considering the great changes in the U.S. economy in the last 15 years. Thus, new attempts in detecting the size of auditors and audited firms are encouraged.

Another aspect of the auditor that has been addressed in two studies is the psychological dimension of the issuance of a GCO for the auditors, that can feel themselves trapped in a typical situation akin to game theory. In 1992 Asare examined how differences in audit judgements were manifested in audit actions. In 1997 Matsumura et al. realized a game-theoretic model in which a client could potentially avoid a GCO and its self-fulfilling prophecy effect by switching auditors.

While there is still conflicting evidence on whether GCOs have information content or whether GCOs are predictable, the evidence relating to the accuracy of the GCOs is more pervasive. Table 2.6 lists the studies on auditor factors, highlighting the aims and main results of each one.

2.2.1.3 Auditor-Client Relationship

The auditor-client relationship is one of most addressed themes in the GCOs determinants area; in fact, 12 papers are, to our knowledge, points of reference in reviewing USA trends on this topic (Mutchler 1986; Biggs et al. 1993; Krishnan and Stephens 1995; Louwers 1998; Rau and Moser 1999; Maers et al. 2003; Venuti 2004; Krishnan et al. 2007; Fargher and Jiang 2008; Robinson 2008; Chan 2009; Read and Yezegel 2016).

By the auditor-client relationship, we mean that relationship, dynamic in nature, that includes switching, opinion shopping, personal relationships, and the time lag in opinion. Special attention is devoted to the auditor-client tenure and the personal relationship between auditors and client.

In 1986, Mutchler started to write upon this subject and, after analyzing the decision patterns of the auditors, she concluded that there was no evidence of the influence of the client-auditor relationship on the decision to issue a unqualified opinion or a GCO. She suggested that most of the auditors operated in accordance with the "procedure" described by SAS No. 34 (1981, the first US audit reporting standard to discipline the GCO modification).

In 1993, Biggs et al. developed a computational model, called GCX, in order to analyze the auditor expertise within the domain of the GC judgement. They focused on three broad categories of knowledge, expressly: financial, event and procedural knowledge. Through the use of the GCX model, they succeeded in extracting three different contributions:

- the GC judgement involves knowledge of specific events related to particular clients and the ability to reason about those events;
- GCX proposes four reasoning processes operating on financial and event knowledge to perform the GC task: problem recognition, causal reasoning about problems, evaluative reasoning about plans to mitigate problems, and a process that renders one of three GC judgements;
- a central component of the GC judgement is causal reasoning based on knowledge of actual client-related events, such as extensive knowledge of their client's operations, their client's industry, and world events that affected their client's financial problems.

In 1998, Louwers analyzed the relationship between auditor incentives and the decision to issue a GCO to a financially distressed firm. He conducted an analysis of 808 firms in trouble for the period from 1984–1991. He developed a model of the GCO decision as a function not only of the client's financial conditions and

Table 2.6 Studies on auditor factors

Author	Year	Aim	Results
Asare	1992	The impact given by several processing of evidence (considering also mitigating factors) on auditor's judgements	Auditors who evaluate information followed by mitigating factors issued more unqualified (fewer modified) opinions than those who evaluated the same evidence in the reverse order
Ho	1994	Auditors' GC judgements change taking into consideration the difference in the level of experience of the auditor	There is a lack of consensus among both experienced and less experienced auditors who were given information for a problem firm
O'Clock and Devine	1995	Effects of framed information and firm size on the auditor's GC report modification decision	Auditors are susceptible to the effect of framed information; this result changes across firm size
Matsumura et al.	1997	Investigation into the strategic interaction between auditor and client when the auditor is considering whether to convey an intention to issue a GC report	Client will never replace the incumbent auditor in a scenario in which the auditor is considering whether to convey an intention to issue a GC report
Carcello et al.	2000	Go in depth on the Association of partner compensation plans and client size with auditors' attitude to issue GCOs	No evidence that auditors' GCO decisions are directly affected by partner compensation plans; on the other hand, there is an interaction effect between partner compensation plans and client size
DeFond et al.	2002	Relationship between non-audit services fees and auditor independence	No significant association between NAS fees and impaired auditor independence
Li	2009	Relationship between client importance (proportion of audit fees, non-audit service fees, or total fees) and auditor independence (as propensity to issue a GCO)	Higher audit fee and total fee ratios are positively associated with the auditor's decision to issue a GCO. Post-SOX important clients have higher likelihood to receive GCOs
Callaghan. et al.	2009	Relationship between the propensity of auditors to render GC opinions and non-audit fees	There is no association between GC opinions and non-audit fees, audit fees, total fees, or the ratio of non-audit fees to total fees
Kao. et al.	2014	The association between fee dependence and the incidence of GCOs	Rise in auditor conservatism
Read	2015	Association between the propensity of auditors to issue GC opinions and NAS fees (and audit fees)	No significant relationship between GC decisions and NAS fees and audit fees
Krishnan and Changjiang	2015	Relationship between measure of managerial ability, audit fees and a GCO	Incremental to firm-level attributes, both audit fees and the likelihood of issuing a GCO are decreasing in relation to managerial ability

Source Author elaboration

prospects, but also of factors associated with the auditor's loss function, which depends principally on prospective audit fees, auditor tenure and the client relationship.

In 1999, the study conducted by Rau and Moser evidenced the existence of possible biases in the decision to issue a GCO for those auditors with a certain amount of experience. These problems usually arise in situations in which there were some pre-existing relationships. At the end of their analysis, they concluded that:

> When provided with an identical set of information, seniors who performed another audit task for which the underlying facts of the case reflected positively (negatively) on the company's viability, subsequently made going-concern judgments that were relatively more positive (negative).

The "Weiss Report" (2002) was a study conducted with the purpose of providing information to the U.S. Senate on the incidence of bankruptcy in companies. This report constituted evidence for the deliberations of the SOX Act. In 2003, after the promulgation of the Act, Maers et al. reread the same report evidencing the point of criticism and the limitations of the information provided, especially in consideration of the auditor-client relationship and the accuracy of bankruptcy predictions.

In 2004, Venuti managed to address the same topic focusing on those firms that failed during the U.S. recession, which started in 2001.

Subsequently, the focus moved to the relationship between the auditor and client during the 2007–2008 crisis and its consequences. In 2007, a study was released by Krishnan et al. They examined GC modified audit opinions for former clients of Arthur Andersen, and compared them with opinions issued for other, newly acquired clients stating that:

> We find that auditors were less likely to issue going-concern modified audit opinions to small clients who switched from Andersen than to their existing clients. However, this trend reverses with an increase in client size, with large former Andersen clients more likely to receive going-concern opinions. Our results are consistent with suggestions that increased litigation risk associated with the larger ex-Andersen clients led to increased conservatism by the new auditors. We conjecture that the reduced conservatism for the smaller ex-Andersen clients is likely due to high ex ante conservatism of the Big 4 in not accepting clients perceived to be risky.

Going deeper through the consequences of the collapses of very important firms in the period from 2000 to 2002, Fargher and Jiang (2008) proved that auditors applied an increased conservatism in issuing their opinions and deciding on GCOs, reducing the incidence of failing companies without a prior GCO. Robinson in 2008 continued to investigate this relationship; in particular he examined whether the provision of a tax service could affect auditors' independence on the GCO decision, as it was recently prohibited by the Act mentioned before. This latter study was able to evidence how the provision of a tax service improved the likelihood of the issuance of a GCO prior to the company's failure, disproving the theories underlying the promulgation of the recent law.

In 2009, Chan investigated client importance and auditor independence within the local offices of audit firms. Distinguishing the period before the SOX Act (2001) and after (2003), he concluded that for the first case there was no evidence of this correlation, while the same could not be affirmed for the period after, especially for more important clients.

Other scholars tried to study more in depth the association between GCOs and auditor switching in case of GCO issue. The model used by Krishnan and Stephens (1995) found a positive relationship between the issue of the GCO and the possibility of a change in auditor. They also noticed that it is more probable that firms who change their auditors have already received that opinion before or will receive it after the switch to another auditor. These results show that firms do not obtain efficient results from a change in auditors or "opinion shopping" since both before and after the dismissal of an auditor they probably receive the same negative judgement. The problem of these results is that a switch of auditor does not necessarily mean that the firm is trying to "shop" its opinion and it could be caused by other factors. Even by removing, the more probable switches unrelated to "shopping" from the model's, results does not change but it is important to understand which are the alternative reasons for a switch to grasp all the topic and logic behind it. If instead the reason for this auditor change is caused by "shopping" of an opinion the results show unsuccessful effects of this "shopping". In addition, these results could be the effects of the additional standards imposed to avoid this practice used by firms, or the demonstration that the market autonomously avoids this situation without the need for new standards. All of these factors need further analysis to show an effective comprehension of auditor shopping.

Recently, in 2016, Read and Yezegel explored the possible association between auditor tenure length and audit failure (Type II error, that basically belongs to the accuracy feature, too) through the analysis of the audit reports for a sample of 401 U.S. publicly held companies that went bankrupt from 2002 to 2008. Their results indicated that long auditor tenure is not a factor of influence, but the overall evidence showed that audit failures were associated more often with the opinions produced by non-Big 4 auditors.

In conclusion, what emerges from the different analyses that were conducted is that there are some factors in the auditor-client relationship influencing the issuance of a GCO, especially for those periods that were not historically under the regulators' pressure. Table 2.7 lists the studies on auditor-client relationships, highlighting the aims and main results of each one.

2.2.1.4 Environmental Factors

Those factors that are external to the roles of the client, the auditor and their relationship can be addressed as environmental factors. The most important ones seem to be:

- the litigation environment;
- the auditing standards;
- audit procedure;
- audit wording.

On these topics, six papers decisively enrich the literature (Nogler 1995; Geiger and Raghunandan 2002; Chen et al. 2013; Kaplan and Williams 2013; Ference 2015; Daugherty et al. 2016).

The first insight that we can gather from this information is that the literature about this subject is relatively contemporary, with the exception of Nogler's study. This is a clear signal of the fact that the focus of the literature on GCOs moved only recently from looking for internal to external factors of influence. As the literature looks at all the concerns raised about the influence of the organization of the auditing standards, and also the audit wording and procedure, we can reconstruct a path in the evolution of the literature.

Nogler in 1995 provided a descriptive model of the procedure carried out by the auditors in order to issue a GCO on a client's financial statements. The conditions under which the opinions were and are currently issued were examined in relation to their resolutions, such as liquidation, dissolution, bankruptcy filing, or successful continuation of the firm. Successful resolutions were further analyzed to identify the characteristics associated with such successful resolutions. He concluded that the main sources of the factors influencing the issuance of a GCO can actually be traced to financial distress, but also to probability of litigation.

Twenty years later, Ference, after describing all the standards regulating disclosure on GC uncertainties, went deeper in analyzing the responsibilities of auditors; here are some data:

> In an attempt to mitigate losses associated with a business failure, a client's lenders, shareholders, and bankruptcy trustees may pursue a claim against a CPA firm. Indeed, approximately 30% of claims brought against CPAs in the AICPA Professional Liability Insurance Program are made by third parties. Moreover, nearly 60% of the program's 2013 financial statement services claims related to the failure to detect a misstatement or a disclosure error, especially going-concern disclosures. These claims are found in all types of financial statement services, even reviews and compilations.

In AR Section 80—*Compilation of Financial Statements*, paragraph 20, it is stated that it is possible to omit the disclosures only if it is not misleading, but it is hard to believe that some lack of disclosure is not misleading. After that, Ference reported some of the most frequent GC claims, together with risk management tips. Then, she reported on the latest standards for accounting in 2014, expressly SSARS No. 21, *Statement on Standards for Accounting and Review Services: Clarification and Recodification* and Accounting Standards Update (ASU) No. 2014–15, *Presentation of Financial Statements—Going Concern (Subtopic 205–40): Disclosure of Uncertainties About an Entity's Ability to Continue as a Going Concern*, which was analyzed in Chap. 1.

In 2016, Daugherty et al. examined whether the differences in the wording of the GC standards in the U.S. affect auditors' decisions and the extent of the audit tests.

Table 2.7 Studies on auditor-client relationship

Author	**Year**	**Aim**	**Results**
Mutchler	1986	Factors (related to the guidance given by SAS No. 34) that influence the issuance of a GCO in a set of problem companies	Auditors follow the guidance offered by SAS No. 34
Biggs et al.	1993	Introduce a new computational model of auditor expertise	The GCX model is reach in domain knowledge about the GC process, it considers auditors' behaviour and helps to understand what events may have led to a GC situation
Krishnan and Stephens.	1995	Investigation into audit opinion decisions for clients who switched, comparing the audit opinion decisions of the predecessor and successor auditors for clients who switched, relative to auditors' treatment of non-switching clients	No evidence were found
Louwers	1998	Investigation into determinants of GCOs related to the auditor's loss function	Auditors do not paid attention to factors such as litigations or negative operating results of client. Rather, they consider other indicators sympthomatic of a financial distress in fostering or not the issuance of GCOs
Rau and Moser	1999	Personal implication in other audit tasks and supervising seniors' GC judgements	Non Audit Services (tasks) have a greater influence on the senior's subsequent GC judgement
Maers et al.	2003	Investigation into the methodology adopted in the Weiss Report	The criteria adopted in the report had several incorrections leading to wrong forecasts for future bankruptcy
Venuti	2004	Investigation into the variables which cause the failure of auditors to issue a GCO during the U.S. recession	There are such assumption to accrual accounting that cause the failure in the issue of a GCO
Krishnan et al.	2007	Examination of how, overtime, Arther Andersen changes its opinion basing on the clients size	Auditors were less likely to issue GCOs to small clients who switched from Andersen than to their existing clients
Robinson	2008	The provision of tax services and its impact on auditor independence focusing on GCOs in bankrupted firms	Significant positive correlation between the level of tax services fees and the likelihood of correctly issuing a GCO prior to the bankruptcy filing
Fargher and Jiang	2008	Auditors' propensity to issue GC opinions before and after 2000-2002 (crisis period)	Auditors were more in favor to issue GCOs to financially stressed companies immediately after the US financial crisis

(continued)

Table 2.7 (continued)

Author	**Year**	**Aim**	**Results**
Chan	2009	Relationship between client importance (proportion of audit fees, non-audit service fees, or total fees) and auditor independence (as a propensity to issue a GCO)	Higher audit fee are positively associated with the auditor's propensity to issue a GCO. Post-SOX important clients have a higher likelihood to receive GCOs
Read and Yezegel.	2016	Association between auditor tenure length and audit failure (Type I and Type II misclassifications)	No significant association between auditor tenure and Type II errors for Big 4 audit firms; significant association analysing non-Big 4 firms

Source Author elaboration

They conducted an experiment on the issue, discussing the fact that in the situation in which auditors were given the same data for a GC assessment, they produced different results, following distinguishable criteria for evaluation. In conclusion, the results they reported revealed that differences in wording can significantly affect auditors' conclusions.

Furthermore, we can analyze the risk of litigation in the GCO context, through the help of Geiger's, Kaplan's and Chen's contributions.

In 1995 the U.S. House of Representatives promulgated the Private Securities Litigation Reform Act which reduced the threat of litigation faced by auditors, especially in the case of a GCO issuance decision. The same concept was later asserted by SEC in 2000, evidencing the influence on auditors' behaviour.

Geiger and Raghunandan in 2002 examined the impact of that legal environment, through the analysis of the audit reports on 1,871 companies, which found themselves in financial distress during the period 1992–1993, 1996–1997, and 1999–2000. They outlined that the increase in the threat of litigation pushed the auditors to issue fewer and fewer GCOs, caused by the fear of committing a prediction error, that could probably cause a "self-fulfilling prophecy" effect.

The same topic represented the interest of the study conducted in 2013 by Kaplan and Williams. In particular, they investigated whether issuing a GCO to financially distressed clients can prevent auditors from being sued in a litigation. This litigation risk represents an endogenous factor influencing the supposed to be free auditor's decision. They came up with the following conclusions, obtained by the use of a simultaneous equations approach:

- there exists a negative association between going concern reporting and auditor litigation, suggesting that auditors deter lawsuits by issuing going concern reports to their financially stressed clients;
- when auditors are named in lawsuits, having issued a going concern report reduces the likelihood of large financial settlements.

Chen et al. in 2013 moved the focus of their research to insider selling and the risk of litigation: they first investigated the influence of insider selling on the

issuance of a GCO and the subsequent consequences on the market; then, they focused their attention on the probability of attracting regulators' scrutiny and investor class action lawsuits, considering the previously mentioned factors. This concatenation of events can constitute an incentive to managers in pushing auditors for clean audit opinions. Through the use of empirical research, they concluded that actually the probability of receiving a GCO is negatively associated with the level of insider selling. In addition, they discovered that this negative relation is more pronounced for firms that are economically significant to their auditors, but the same cannot be affirmed when auditors have concerns about litigation exposure and reputation loss, and audit committees are more independent. Incidentally, this negative relation between GCOs and insider sales is significantly altered after SOX but in a less evident way. Table 2.8 provides studies on environmental factors, highlighting the aims and main results of each one.

2.2.2 Accuracy of GCOs

It is common to find studies examining the incidence of bankruptcy for firms without a prior GCO, or the proportion of firms who received a GCO, but do not subsequently fail.

These concerns made experts conceive two types of reporting misclassifications:

- Type I misclassification, arising when the auditor issues a GCO to a client, which does not subsequently fail;
- Type II misclassification, arising when the auditor decides not to issue a GCO to a client, which subsequently fails.

All the concerns on this topic are based on a statistical decision rule. Encountering both types of misclassification can result in potential costs:

- In the occurrence of a Type I misclassification, the auditor can bear the consequential costs of being dismissed as the auditor, for having caused the client to be perceived as unwdarranted and subsequently disgruntled,
    (a) For instance, $C\alpha$ represents the cost of lost audit revenues for the public accountant;
- In the occurrence of a Type II misclassification, the auditor may bear the costs related to litigation with the investors and the loss of reputation,
    (b) For instance, $C\beta$ is the cost related to the aforementioned consequences.

The auditor can decide to issue a GCO based on the possible economic incentives arising from the consideration of the ratio of the two costs, $C\beta/C\alpha$. In the situation in which the ratio is higher, the auditor prefers to issue a GCO since the cost of failing of doing is consistent (Matsumura et al. 1997; Carson et al. 2013).

Table 2.8 Studies on environmental factors

Author	Year	Aim	Results
Nogler	1995	Investigation into the influence given by corporate governance mechanisms on the propensity of directors to report fairly financial distress information	Information given by directors is often arbitrary and unhelpful to users, but robustness of corporate governance structures constrain directors to be more truthful in their GC disclosures
Geiger and Raghunandan	2002	The impact of the 'new' legal environment described after the SOX promulgation	GCOs were less likely (1) in 1996-97 than in 1992-93, and (2) in 1999-2000 than in 1996-97
Kaplan and Williams	2013	Auditors' protection from litigation in the case of a issuance of a GCO to financially stressed firms	Significant positive association between auditors' ex ante litigation risk and GC reporting
Chen et al.	2013	The impact of insider selling on the likelihood of firms receiving auditor GCOs	The probability of receiving a GCO is negatively associated with the level of insider selling. This negative relationship is more pronounced for firms that are economically significant to their auditors but less pronounced when (1) auditors have concerns about litigation exposure and reputation loss and (2) audit committees are more independent. This negative relationship is significantly weakened after SOX
Ference	2015	Discussion on the professional liability of the American Certified Public Accountants (CPA)	When the accountant is aware of a GC matter, he/she is obliged to extensively address the issue
Daugherty et al.	2016	The differences in the wording of the GC standards in the U.S. affect auditors' decisions and the extent of the audit tests	The results reportedly revealed that differences in wording can significantly affect auditors' conclusions

Source Author elaboration

The results extrapolated from the literature clearly indicate that the incidence of the "*proportion of firms filing for bankruptcy without a GCO is high, and the number of firms entering bankruptcy without a prior GCO in the population of audits is very low, often representing less than 1% of audit engagements*." However, even a small percentage can cause dramatic consequences, such as economic loss to investors.

On this matter, the joint reading of 10 papers feeds the debate (Mutchler and Williams 1990; Hopwood et al. 1994; Tucker et al. 2003; Wertheim and Fowler

2005; Geiger and Rama 2006; Ryu and Roh 2007; Myers et al. 2014; Geiger et al. 2014; Yeh et al. 2014; Blay et al. 2016).

Mutchler and Williams in 1990 created the basis of this literature, investigating the relationship between audit judgement and the related type of technology used by the different accounting firms. They observed a higher degree of accuracy in the decisions of the auditors using a more structured approach. They also evidenced that there is a relationship between audit technology and the risk profile of the audit client base. In contrast, at the end of the study, a negative correlation was found between decision accuracy and audit structure.

Starting from the Cohen Commission (1978) and previous research, suggesting that GCOs are inferior indicators of bankruptcy in comparison to statistical models, Hopwood et al. conducted a study in 1994 that succeeded in confuting that statement. The empirical results they obtained provided evidence supporting the contrary of the notion previously stated. Nonetheless, neither the auditors' opinions nor the bankruptcy prediction model are foolproof predictors of bankruptcy.

Going directly to the research of the new millennium, we can examine the study produced by Tucker et al. in 2003. They conducted:

> …an experimental economic test of a game-theoretic model of GCO judgment. Competing behavioral predictions are based on loss avoidance, risk seeking, altruism, and adversarial play…forecast accuracy, also has a significant effect on subject behavior: inaccurate forecasts did not lead auditors to express more clean opinions but led clients to switch auditors more frequently.

In 2005 Wertheim and Fowler focused on the accuracy of the GCOs, on the wave of the recent big failures of important firms, whose financial statements were audited by a giant, such as Arthur Andersen's public accounting firm. Their study presented an analysis of differences among audit firms in their propensity to issue a GCO for clients that subsequently filed for bankruptcy. It was conducted on a sample of 696 companies, which filed for bankruptcy between 1997 and 2001. The results produced indicated the existence of variations among Big-Five audit firm and non-Big-Five firms.

Continuing on the track marked by Wertheim, Geiger et al. (2014) analyzed the association between audit firm size and reporting accuracy, which historically provided mixed results. Their study, in particular, examined the amount of both types of reporting errors committed by the Big 4 audit firms over 11 years. Their results confirmed that Big 4 firms maintain constantly a higher reporting quality on GCOs than non-Big 4 firms.

Rye and Roh confirmed the same results in 2007 after having used a binary logit regression to analyze 1,332 firms that were non-bankrupt but financially stressed between 1997 and 1999.

On the wave of corporate accounting failures and regulatory proceedings, resulting in the enactment of the 2002 SOX Act, and the increased scrutiny of

auditors, Myers et al. in 2014 investigated the change in auditor behavior with respect to GC reporting. On the one hand, they noted that non-Big N auditors became more conservative, decreasing their Type II misclassifications while increasing their Type I misclassifications. On the other hand, Big N auditors became more accurate, decreasing their Type I misclassifications with no corresponding increase in Type II misclassifications. In conclusion, the increased amount of auditor scrutiny operated by PCAOB succeeded in improving overall accuracy.

A more experimental approach was adopted by Yeh et al. in 2014: they conducted a study with the objective of increasing the accuracy of GC prediction through the use of a hybrid random forest (RF) and rough set theory (RST) approach, adopting Intellectual Capital (IC) as a predictive variable. They showed that this hybrid approach can represent the best classification rate with the lowest occurrence of Types I and II errors.

Geiger et al. continued their studies in 2014 concentrating on the consequences of the Global Financial Crisis. They examined auditors' GCO opinions for financially stressed clients that subsequently entered into bankruptcy during the period from 2004 to 2010. They discovered that both Big 4 firms and non-Big 4 firms increased their propensity to issue GCOs to subsequently bankrupted firms, resulting in a higher accuracy, contrasting the diffused belief of negligent auditors' behaviour during the crisis.

Recently, Blay et al. (2016) evidenced how increased doubt made the propensity to issue a GCO grow, due to economic and psychological factors. This higher propensity caused a higher incidence of auditors' Type I error rates without decreasing their Type II error rates. Their study questioned the diffused belief that a higher propensity of GCOs issuance always reflects higher audit quality.

Table 2.9 reviews studies on accuracy of GCOs, highlighting the aims and main results of each one.

2.2.3 Consequences of GCOs

The issuance of a GCO is likely to cause ulterior problems to already financially distressed firms. Prior to the GCO issuance, the concerns about substantial doubt represented private information, known uniquely by company's management and auditors. This information, moving from being private to public, is able to make reactions arise for two different categories of stakeholders of listed companies, such as:

- consequences for Shareholders;
- consequences for Lenders.

On the consequences of GCOs, I was able to distinguish 20 papers from the international academic debate.

Table 2.9 Studies on accuracy of GCOs

Author	Year	Aim	Results
Mutchler and Williams	1990	The audit structure (different types of technology) have an impact on auditor judgement	There is a negative correlation between decision accuracy and audit structure
Hopwood et al.	1994	Comparison between auditors' opinions and statistical models as predictors of bankruptcy	Auditors' opinions are not inferior to the statistical models in predicting bankruptcy
Tucker et al.	2003	Experimental economic test of a game-theoretic model on the impact given by the issuance of a GCO	Potential self-fulfilling prophecy reduces the number of GCOs and increases the likelihood of the client switching from the auditor. Accuracy also has a relevant impact on GCOs
Wertheim and Fowler	2005	Differences among audit firms in their propensity to issue a GCO for clients that subsequently filed for Chapter 11 bankruptcy	Interesting variations among Big-Five audit firms, as well as differences between Big-Five and non-big-five firms
Geiger and Rama	2006	Level of accuracy in Big 4 audit firms and in non-Big 4 companies	Both type I and type II error rates for Big 4 audit firms are significantly lower compared to non-Big 4 firms
Ryu and Roh	2007	Investigation into the materiality judgements and the auditor's propensity to issue a GCO to financially troubled but non-bankrupt companies	Big Six auditors (Five) were less likely to issue a GCO to their clients than non-Big Six auditors (Five) firms
Myers et al.	2014	The impact of the enactment of Sarbanes-Oxley Act (2002) on auditors' behaviour	Non-Big (six-five-four) were more conservative (issuing more GCOs) while Big (six-five-four) auditors were more accurate reducing type I and II errors
Yeh et al.	2014	Increase the accuracy of GC prediction by using a hybrid random forest (RF) and rough set theory (RST) approach	They proposed a hybrid approach has the best way to classify clients and the lowest occurrence of Types II and I errors
Geiger et al.	2014	Study whether auditors' GCO decisions were less likely after the start of the recent "Global Financial Crisis" (GFC)	The propensity of auditors to issue a GCO prior to bankruptcy significantly increased after the onset of the GFC
Blay et al.	2016	The rate of GCOs across different countries	Non-Big 4 auditors located in states with relatively high first-time GC rates in the prior year are up to 6% more likely to issue first-time GCOs

Source Author elaboration

2.2.3.1 Consequences for Shareholders

With regard to the consequences of the GCO issuance for shareholders, I analyzed 15 studies which represent the thread of the entire issue (Fleak and Wilson 1994; Chen and Church 1996; Jones 1996; Carlson et al. 1998; Holder-Webb and Wilkin 2000; Blay and Geiger 2001; Elliot et al. 2006; Schaub 2006; Ogneva and Subramanyam 2007; Davis 2009; Menon and Williams 2010; Blay et al. 2011; Amin et al. 2014; Kausar et al. 2017; Khan et al. 2017).

The content of the GCO constitutes an incremental information for present and future investors. In an efficient market the returns on a firm's stocks are influenced by the expectations of the agents regarding the company's performance. Only new or unexpected information conveyed by the audit report would affect aggregate security prices.

The study conducted by Fleak and Wilson in 1994 provides evidence that the market distinguishes ex ante between firms that are deteriorating in financial condition and those that are not. Their market expectations approach used cumulative market-adjusted security returns to predict for the market's trend in each firm's expected cash flows. They concluded that unexpected auditors' GC qualifications are associated with abnormal security returns.

In 1996, Chen and Church deepened the research on the association between GCOs and the market's reaction to bankruptcy filings. They hypothesized that GCOs may reduce the surprise associated with bankruptcy: in fact, those companies that receive a GCO experience a less negative effect on returns in the period nearby bankruptcy than those receiving unqualified opinions, outlining the information value of the GCO.

In the same year, Jones assessed the information content of the GC evaluation made by auditors through the examination of the abnormal stock returns surrounding the publication of audit reports. He analyzed a sample of 86 audit reports with a GCO and a sample of 86 unqualified audit reports for financially distressed firms. He concluded, through the use of a portfolio test:

> that the mean abnormal return surrounding the release of the auditor's report was negative for firms which received going concern opinions and positive for distressed firms which received clean opinions. Ordinary least squares (OLS) regression tests indicated that mean abnormal returns surrounding the release of the auditor's report were lower for going concern opinions than for clean opinions and that the magnitude of the abnormal returns depended on the extent to which the opinion type was unexpected.

Carlson et al. (1998) studied the effect of a GCO on market valuation and they developed a covariance model (ANCOVA) which compared two sets of 88 firms, the first group with a GCO, and the control group without it. They found that financial statement readers find a going concern audit report (GCAR) useful for firm valuation purposes, contrary to prior research that found it confusing.

Holder-Webb and Wilkin in 2000 discovered that price responses to bankruptcy announcements were less severe for firms receiving GCOs than for firms receiving clean opinions

In 2001, Blay and Geiger tried to assess market reaction to GC report recipients. The results gathered through a multiple regression model indicated that a naive measure of market expectations was able to inform the market in an incremental measure to previously developed measures when using market reaction as an indication of changed expectations.

About the real estate market, in 2006, Elliot et al. were able to focus on the intra-industry information transfers from GCOs and the possible domino effect on competitive stock price reactions for other real estate firms. They found only moderate evidence

In the same year, Schaub conducted a broader research examining investor overreaction to the auditors' announcements of GCO issuances. He focused his analysis on evidence coming from 79 companies, receiving a GCO in the period 1984–1996. On the one hand, he was able to outline that the sell-off by investors on the announcement date was regularly followed by a major buy-back of the announcing firms' shares over the subsequent few days. On the other, the majority of the average losses on the announcement date, almost 70%, were regained in the following five days.

Two scholars, Ogneva and Subramanyam, conducted a comparative study on the differences of 12-months' market returns to first-time GCOs for Australia and USA in 2007. While the Australian market reacted in a modest negative way to the GCO announcements, the evidence from America suggested that the negative abnormal returns were associated with the choice of different expected returns.

Davis, in 2009, went deeper in analyzing the role of the GCO inside the financial market's system. Aware of the existence of the possibility of creating a self-fulfilling prophecy, increasing the cost and risk of extending credit to the beleaguered company, he analyzed the utility of this audit requirement. He examined the financial profile of 50 companies with a GCO in year 2 and that received an unqualified opinion in year 1, through the application of the Altman Z-Score model to the financial amounts and financial ratios.

In 2010, Menon and Williams managed to find evidence supporting the hypothesis of negative excess returns when a GCO was disclosed. This result was reinforced when the opinion expressly contained concerns about credit access, and the lack of respect of debt covenants, leading to even more negative returns. This effect was clearly coming from the reactions of institutional investors, since no detectable reaction at low levels of institutional ownership was found.

Blay et al. decided to continue their research in 2011, examining the proposition:

> the auditor's going-concern modified opinion is a valuable risk communication to the equity market that results in a shift of the market's perception of financially distressed firms.

In conclusion, they were able to assess that results the market interprets the GC modified audit opinion as an important communication of risk, shifting the structure of the market valuation for firms, evidencing some degree of financial distress.

More recently, in 2014, Amin et al. focused on the relationship between the GCO and the cost of equity capital. They used two different samples, one for

distressed firms and the other matched on propensity score. They documented a significant positive association between GCOs and rises in cost of equity capital.

In 2017, Kausar et al. deepened the research on the market's reactions with a brand new consideration focus: how legal regimes may affect the market's reaction to the auditor's GCO. They distinguished among two culture types: one is a creditor-friendly bankruptcy regime, such as the UK; the other is a debtor-friendly bankruptcy regime, such as the US. They observed that the first culture type reacted more adversely to a first-time GC opinion, indicating increased risk of loss associated with bankruptcy than investors do in the second culture type.

Lastly, in 2017, Khan et al. studied the effects of media news about GCOs on small and large trades. While the former are affected by the media, the second are not significantly influenced.

Table 2.10 resumes studies on consequences of GCOs for shareholders, highlighting the aims and main results of each one.

2.2.3.2 Consequences for Lenders

Regarding the consequences of the GCO issuance for lenders, seven studies decisively enrich the literature (Chen and Church 1992; Seipel and Tunnell 1995; LaSalle and Anandarajan 1997; Altman 1998; Foster et al. 1998; Feldmann and Read 2013; Amin and Harris 2017).

Chen and Church investigated the usefulness of default on debt obligations as an indicator of the issuance of a GCO. They analyzed a sample of 127 firms receiving a first-time GCO from 1982 to 1986 and a corresponding control sample, including firms possessing at least one problem company and receiving a clean opinion. Among them 98 were in default or in the process of restructuring their debt obligations to avoid subsequent default, while only one in the control sample found itself in default. They managed to show that auditors carefully consider default status in deciding whether to issue a GCO.

On the same track, Seipel and Tunnell 1995 went further in analyzing the contribution of GCOs to the decisions made by financial statement users. They focused on the association of such opinions with changes in risk, using different selection criteria for control firms, a different event window, and measuring risk shifts using Scholes-Williams beta.

In 1997, LaSalle and Anandarajan examined the difference in the reactions of bank loan officers to financial statements in the issuances of a disclaimer of opinion, rather than an unqualified report with an explanatory paragraph. They used between-subjects experiments to investigate loan officers' reactions to litigation occurrence:

> Results for litigation uncertainties show that a disclaimer (1) reduces the loan officers' willingness to grant a line of credit, (2) decreases loan officers' assessment of the entity's ability to service their debt, (3) reduces the assessed likelihood that the entity can improve its profitability, and (4) increases the point spread that would be charged if the entity was granted a loan.

Table 2.10 Studies on consequences of GCOs for shareholders

Author	Year	Aim	Results
Fleak and Wilson	1994	Aggregate security prices are subjected differently by expected or unexpected GCOs	The market distinguishes ex ante between firms that are deteriorating in financial condition and those that are not
Chen. and Church	1996	The association between GCOs and the market's reaction to bankruptcy filings	Firms receiving GCOs had less negative stock returns in the period surrounding bankruptcy concerns than those receiving clean opinions
Jones	1996	Stock market reactions to GCOs and stock market reaction to unqualified opinions received by financially distressed firms	Indipendently from the real degree of financial distress, firms received a GCO had higher negative abnormal returns then firms which did not receive a GCO
Carlson et al.	1998	Financial statement information (unexpected earnings, market returns, size, five financial ratios) are affected by GCARs	Users of inancial statement find a abnormal returns deriving form a GCO useful for firm valuation purposes
Holder-Webb. and Wilkin	2000	Verify if the expansion of requirements of SAS No. 59 impact on the price responses to bankruptcy announcement	Market price reaction is less negative for firms receiving SAS No. 59
Blay and Geiger	2001	The use of a naive model to test markets' reaction to unanticipated modifications or anticipated modification, give a better result than previous models	There is the need for an improved model of market expectations
Elliott et al.	2006	The impact given by GCOs announcements on the stock market price of the competing companies	Modest evidence of the impact among rival firms
Schaub	2006	Investor overreaction to GCOs made in the major financial press	The sell-off by investors on the announcement date is followed by a major buy-back of the announcing firms' shares over the next few days
Ogneva and Subramanyam	2007	Understand whether a modified GCO could influence the stock-market in the medium-term, following the auditors' report	They did not find any evidence that the GCO issuance is associated with abnormal negative market returns for the Australian sample
Davis	2009	Analysis on the financial profile of 50 firms who received GCOs in year 2 and received a clean opinion in year 1	The Altman Z-SCORE is a reliable predictor of a GCO

(continued)

Table 2.10 (continued)

Author	Year	Aim	Results
Menon and Williams	2010	Investigation into the value relevance of GCO	Negative excess returns when the GCAR is disclosed
Blay A. D. et al.	2011	Market's perception of a financially distressed firm changes in presence of GCO	When a company receives a GCO the market evaluation has focused more on its balance sheet than on both balance sheet and income statement
Amin et al.	2014	Link between the going concern opinion and the cost of equity capital	GCOs foster an increase of the cost of equity capital
Kausar et al.	2017	The impact given by different legal regime on the market's reaction to GCOs	Investors in a creditor-friendly bankruptcy countries react more negatively to a first-time GCO, than debtor-friendly bankruptcy countries
Khan et al.	2017	Investigation on whether the press release on GC modification has effects on small and large trades	Small trades observe abnormal release at the event date at around. No significant effects were detected for large trades

Source Author elaboration

In 1998, Foster et al. undertook a study to empirically investigate the relationships between loan defaults, violation of loan covenants, GCOs, and bankruptcy in bankruptcy prediction models, as Chen and Church had done in 1992. Foster et al. focused on two objectives:

- empirically testing the ability of loan defaults/accommodations and loan covenant violations to assess the failure risk;
- investigating the impact of failure to control for the aforementioned distress events on results from tests of the usefulness of GCOs in assessing bankruptcy risk.

They concluded that loan default/accommodation and loan covenant violation can both represent significant explanatory variables of bankruptcy prior to the event.

Altman in 1998, on the course plotted by Chen and Church and Foster et al., found evidence of the incidence of concurrent, or near concurrent, default-bankruptcy. He observed that default-bankruptcies were less common in the 1980s than the 1990s. Additionally, he observed that in half of the cases examined, the bond default date was identical to the bankruptcy date.

Much more recently, in 2013, Feldmann and Read explored the concerns about credit ratings information and GCOs for companies facing imminent bankruptcy. They applied logistic regression to financially distressed companies that filed for bankruptcy from January 1, 2000 to June 30, 2009 and were able to show that:

> …the likelihood of an auditor issuing a GC opinion is associated with the credit rating issued by Standard & Poor's (S&P) preceding the audit report date. In results supporting the idea that the auditor's opinion has informational value, the paper also finds that after issuance of a GC report, S&P's credit rating tends to be downgraded.

Lastly, in 2015, a unique study was proposed by Amin and Harris. They tested the consequences of GCOs in non profit organizations on three types of stakeholders: donor, service recipients and managers. Overall they found that a GCO has positive and negative effects depending on stakeholder and organization type.

Table 2.11 resumes studies on the consequences of GCOs for lenders, highlighting the aims and main results of each one.

Table 2.11 Studies on consequences of GCOs for lenders

Author	Year	Aim	Results
Chen and Church	1992	Verify the usefulness of default status in explaining the weak association between the issuance of GCOs and the occurrence of bankruptcies in auditing	Auditors consider default status in making GC decisions. They rigorous applied the procedure stated in SAS No. 59
Seipel. and Tunnell	1995	Analysis of the association of such opinions and changes in risk	The increase of a unsystematic risk is associated with the issue of a GC qualified opinion
LaSalle. and Anandarajan.	1997	The different reaction of bank loan officers to financial statements accompanied by a disclaimer of opinion rather than an unqualified report with an explanatory paragraph	Disclaimer of opinion (1) reduces the possibility for granting loans, (2) decreases loan officers' assessment of the entity's ability to service their debt, (3) reduces the assessed likelihood that the entity can improve its profitability
Foster et al.	1998	Investigation of relationships between loan defaults, violation of loan covenants, GCOs, and bankruptcy in bankruptcy prediction models	"Loan default/accommodation and loan covenant violation are both significant explanatory variables of bankruptcy"
Altman	1998	The utilization of debt defaults and GCOs in bankruptcy risk assessment	The incidence of concurrent, or near concurrent, default-bankruptcy dates were less common from the 1980s well into the 1990s
Feldmann and Read	2013	Relationship between credit ratings and GCOs	Credit rating have influence on GCO decision making process
Amin and Harris	2015	Test the consequences of GCOs for non profit organization on three class of stakeholders: managers, service recipients and donors	GCOs are value relevant, having positive and negative effects depending on stakeholder and organization type

Source Author elaboration

2.3 Studies and Trends in Europe

Analyzing the academic debate in Europe related to Audit Reporting for GCU presents a higher complexity. There are three main reasons:

- the lack of a research synthesis, such as that performed by Carson et al. for the USA. Thus, the framework needs to be contextualized for Europe;
- the presence of a smaller number of studies in comparison with those for the USA;
- there are some differences in terms of perspectives and critical issues addressed in European studies. Hence, the same categorization adopted by Carson et al. is not always suitable for reviewing purposes.

However, in order to allow the reader to use the same framework of analysis, I decided to adopt the same categorization. In addition, the debate, in the European context, differs for other structural reasons such as:

- different market size and structure;
- differences among sectors;
- differences in financial reporting standards;
- differences in the contextualization of the agency problem;
- smaller firm dimension, on average;
- partially different corporate governance systems and mechanisms.

Given these differences, the following paragraphs address the European academic debate on Audit Reporting for GCU in Europe.

2.3.1 Determinants of GCO

Similarly to the American side, four broad features can be identified as the determinants of a GCO:

- client factors;
- auditor factors;
- auditor-client relationship;
- environmental factors.

2.3.1.1 Client Factors

Information found in financial statements can lead auditors to issue GCOs depending on the idea they have of the company's global health. This idea can be applied to the financial information of the company, evaluating different factors of the company, such as profitability, liquidity, leverage, size and if it has had debt

defaults. There are different studies that find associations between the issuance of a GCO and different financial and non-financial measures of the companies.

As previously mentioned, another three residual aspects were explored: financial reporting quality, corporate governance and book values and liquidation values. Differently from the US side, some studies related to these features will be discussed for Europe because of their relevance for the academic debate.

Above all, there are seven studies that seem most relevant for the debate (Laitinen and Laitinen 1998; Ireland 2003; Ruiz-Barbadillo et al. 2004; Arnedo et al. 2008; Tsipouridou and Spathis 2013; Gallizo and Saladrigues 2016; Wu et al. 2016).

Laitinen and Laitinen (1998), in their model, found a relationship between a higher probability of receiving a GCO and poor profitability, high leverage or debt and a low level of growth. The model used by these authors uses 16 financial measures: net profit, operating cash flow, net sales, total assets, percentage change in net sales, ROE, ROI, equity to debt, quick ratio, debt to net sales, net sales per employee, operating cash flow per net sales, net profit per net sales, a bankruptcy risk measure, number of employees, and the average payment period for accounts payable. Their research found that the chance of being qualified as in distress for big Finnish firms will be higher as the growth of the firm decreases, as the part of the firm that is financed by equity decreases and as the number of employees decreases.

Ireland's (2003) work covers several determinants that can have an effect on GC and audit reporting in the UK. With his model, Ireland finds results that indicate high levels of liquidity and constant payments of dividends as two positive signals that lower the possibility of receiving GCOs, while having a high level of liabilities, having losses and with high debt to equity are factors that could increase the probability of receiving a GCO. Another minor factor that had an effect on the possibility of a GCO was the size of the firm: the smaller the firm the higher the possibility of a GCO. Ireland's analysis helps research on determinants by indicating with a multivariate analysis that a firm that had already received GCOs in prior periods had more probability of receiving GCOs again. However, the model also indicated that subsidiary firms that hired larger auditors, had less possibility of receiving GCOs. The research then proceeded to analyse if the type of company, listed or non-listed, had any effect on GCOs' results by analysis of both public and private companies. In the first univariate results, listed companies had a significantly lower probability of receiving a GCO modification than non-listed companies. Nevertheless, these results were not confirmed in the multivariate test, since no evidence was found that listed or public companies had a different effect on reporting modifications. The only difference that was confirmed in both tests was that subsidiary companies were more likely to receive GCOs than independent companies.

In recent years there have also been interesting studies about the relationship between GCOs and financial reporting quality. Tsipouridou and Spathis (2013) show no significant relevance of discretionary accruals and GCOs; this means that auditors do not take into account this information when reporting. Thus, it seems that a low financial reporting quality is not detrimental in fostering a GCO issuance.

The authors agree by saying that the variability in the GC decision is better explained by financial characteristics such as poor financial performance in the current fiscal year, prior year losses, audit opinion type received in the previous year and small firm size. In fact, as a result of Greece's crisis, an increasing number of GCOs were issued between 2010 and 2011.

With respect to recent times, studies indicate profitability, indebtedness and the company's liquidity as key factors in the advance detection of the inclusion of GCOs. Based on these factors Gallizo and Saladrigues (2016) focused on five selected variables in the Spanish financial environment:

- Return on Assets (ROA), which signals that the more positive the economic profitability ratio, the lower the probability of the company receiving a GCO;
- Short-term Debt, because it is one of the biggest threats for Spanish companies; the higher the ratio, the higher the probability that a firm will receive a GCO;
- Current Ratio, as one of the most important ratios and because it has been inserted in most of the studies about financial data used to predict GCO. There are conflicting results but most of the time a positive high ratio has an inverse relationship with the possibility of receiving a GCO;
- Liquidity Ratio, as a measure of the ability of a firm to comply with its financial obligations; the greater the level of liquidity coverage a company has, the lower the possibility of receiving a GCO;
- Size, expressed as the volume of the company's assets. Usually the bigger a company is, the lower probability it has to receive a GCO (the well known claim "too big to fail");
- Lastly, they add a binary variable expressing whether the company had a loss (1) or not (0).

Their model finds that firms that had less net losses and lower levels of financial distress will have a lower chance of receiving a GCO. One of the most important factors underlined in their study was not the relationship of a GCO with present losses but with long-term recurring losses, highlighting how harmful they are in leading to a GCO. Gallizo and Saladrigues found that in the 48 companies analysed in 2012, a greater level of current ratio, ROA and company liquidity, would decrease the possibility of a GCO.

Regarding the effects on financial reporting quality on the audit opinion, Ruiz-Barbadillo et al. (2004) searched for connections between a distressed company receiving a GCO and audit quality. The process of the decision making of auditors is considered in this research and has been divided into different stages. Firstly, the model looks for a possible GC distress, then it analyses if it is capable of causing the company enough critical distress to induce the auditor to issue a GCO. The model takes its sample from 1199 non-financial Spanish firms between 1991 and 2000. The results indicate that audit quality does indeed have an effect on the probability that a firm in financial difficulty would receive a GCO. This association is valid not only for the auditor's capacity to find financial uncertainties, but also for the decision of auditors regarding the kind of opinion to issue.

Arnedo et al. (2008) deepen the knowledge of audit related to the GC assumption, through two events that have not been analysed particularly in research on audit: the earnings overstatement and the wording used by auditors in the GC qualifications. They found many differences between discretionary accruals of Spanish GC and non-GC companies. Moreover they found that large parts of GC uncertainties are not written clearly and with a high amount of conditional language by the auditor. The results of the research outline the necessity to improve the mechanism of implementation, as GC audit standards are not adequate by themselves to efficiently control auditor behaviour. The research has not found signs that indicate the reason for wording differences is caused by the company's financial condition or other auditor motives. Even if Big 4 auditors do issue a greater number of GCOs, it is also probable that they are using wording strategy in the years in proximity to the failure. The analysis has provided proof that the Big 4 use of differentiation of words does indeed happen but tends to decrease as the companies reach bankruptcy. The results found in Arnedo et al.'s paper fortify the need to increase the implementation process that increases quality of auditors, since high quality audit standards have not been sufficient.

Finally, interesting evidence of the relationship between a GCO issuance and corporate governance mechanisms and settings has been provided by Wu et al. (2016). These authors search for a relationship between audit committee characteristics and the possibility of receiving GCOs by UK bankrupt firms. Their study starts by analysing the danger presented by auditor NAS (national audit services) to auditor GC decisions but it does not find any important link between NAS and the probability of receiving a GCO. However, it shows that the NAS and auditor GCO issuance relationship depends mostly on the attributes of the audit committee. In this case, it finds that clients with lower numbers of independent non-executive directors (NEDs) and financial specialists have less probabilities of being provided a GCO before failing. These results contribute to provide corporate governance regulators with an explanation of the relationships between audit committee independence and the level of financial specialization, and the auditors conclusion on GC. Table 2.12 lists studies on client factors, highlighting the aims and main results of each one.

2.3.1.2 Auditor Factors

Among others, the auditor factors that are more enlightened on the European side are the auditor's economic dependence on the client and the auditor size (Firth 2002; Basioudis et al. 2008; Hope and Langli 2010; Quick and Warming-Rasmussen 2015).

The impact on auditors that fees, incentives and the possibility of being dismissed have on their GCOs is an important issue. These effects could lower the efficiency of the GC reports and put at risk more investors.

At the beginning of the 21st century, Vanstraelen (2003) stated that an auditor, in choosing whether or not to disclose GCU in the audit report, potentially faces

Table 2.12 Studies on client factors

Author	Year	Aim	Results
Laitinen and Laitinen	1998	Develop a logistic model based on financial statement information to identify qualified audit reports	A reliable model to explain GC qualifications in the audit reports of Finnish environment with respect to publicly-traded companies
Ireland	2003	Multinomial logit model to analyse the determinants of both GC and non-GC related audit modifications (for listed and non-listed companies), including modifications for disagreements and limitations on scope	The determinants of audit reports differ between different types of audit opinions modification. In addition, subsidiary companies hiring big five are significantly less likely to receive clean opinions, whereas, non-subsidiary companies appointing large auditors are significantly more likely to receive GCOs
Ruiz-Barbadillo et al.	2004	Investigates the relationship between audit quality and the probability that a financially distressed company would receive a GCO	A GCO is a function on both the company's financial troubles and auditor independence. This means that the auditor's knowledge and experience have no effects on GC decisions
Arnedo et al.	2008	Significant differences between the discretionary accruals of Spanish GC and non-GC firms	Supports the need to strengthen the enforcement mechanisms that affect auditor incentives. The existence of excellent auditing standards is not enough in avoiding auditor abuses or to improve the quality of auditor reporting in roman codified countries
Tsipouridou and Spathis	2013	Relationship between audit opinions and earnings management, as measured by discretionary accruals, for listed firms on the Athens Stock Exchange (ASE)	Audit opinions are not related to earnings management. Client financial characteristics, such as profitability and size are determinants of the GCO decision
Gallizo and Saladrigues	2016	Relationship between GCAO and some features of the firm and auditor, including financial distress	The t probability of obtaining a GCO is more a function of persistent losses rather than a sudden decline of the firm's financial position
Wu et al.	2016	Associations between audit committee features and the likelihood of auditors' GC decisions	Failed firms with higher proportions of independent Non Executive Directors and financial experts on the audit committee are more likely to receive GCOs prior to bankruptcy, but there is no significant relationship between NAS fees and the likelihood of receiving a GCO

Source Author elaboration

economic obstacles, in terms of the cost of loss of the client, being sued by a third-party and harm to reputation. She chose Belgium as the setting for her study, since nearly all the already published documents on GC had focused on the Anglo-American framework, which has a higher risk of litigation than among Belgian companies. Indeed, she discovered that in Belgium auditors were less likely to issue a GCO if they had been paid high audit fees and had incurred a loss of clients in the previous year.

To better isolate the effects of auditor factors, Vanstraelen also tested some client factors such as:

a. financial condition of the client;
b. location of the client;
c. delay in holding the annual general shareholders meeting; and
d. bad news regarding the Board of Directors.

Specifically, the results suggest that the GCO decision is significantly correlated to recent loss of client, and the higher the audit fees the less the propensity of the auditors to issue GCOs. No association was found between the auditor's GCO decision and the other factors mentioned above. An exception is, of course, the influence of bad news about the Board of Directors and the company in general: Vanstraelen showed that these have a significantly negative effect on GCO decisions from auditors.

Quick and Warming-Rasmussen (2015) analysed the different possibilities of causes that put at risk the independence of an auditor. These could be caused by individual services, which were studied to understand if there is statistical evidence of this effect and is so what that effect is. Their study analyses data from Germany and finds that high self-interest, any benefit that could be received by the auditor, high familiarity threats, excessive sympathy towards the company, could compromise the auditor's decision.

The problems of audit fees is also analysed in the UK to try to resolve the issue of the possible effect of fees on the reporting decision of the auditor. Only Geiger's previous study had found a relationship between high fees and lower possibility of an issuance of GCO caused by economic dependence. Firth in 2002 and Basioudis et al. (2008) in the UK setting find statistical evidence that GC issuance is related to NAS fees and auditor fees. Their robust results confirm the concern of regulators and investors that these fees can bias auditor opinions. Regulators can use this study to find a way to regulate NAS fees since they result more influencing.

In Norway, Hope and Langli tested if the loss of auditor independence could be higher among private client firms than for publicly trade in a low litigation environment such as Norway that reduces the expected costs to the auditor associated with independence impairment. The authors tested whether auditors who receive higher fees are less likely to issue GCOs. In spite of their boost hypotheses they did not find evidence Table 2.13 points out studies on auditor factors, highlighting the aims and main results of each one.

Table 2.13 Studies on auditor factors

Author	Year	Aim	Results
Firth	2002	Relationships between NAS fees paid to auditors and audit fees, and the occurrence of qualified opinions	There is a positive association between consultancy fees and audit fees, and this is determined by some firm-specific events that generate a needs for consultancy services as well as additional audit efforts
Basioudis et al.	2008	Investigation about audit reports provided to companies in trouble waters in the UK and the magnitude of audit and NAS fees paid to the firm's auditors	The magnitude of both audit fees and non-audit fees are associated with the GCO release. As a matter of fact, stressed firms with high audit fees are more likely to receive a GCO, whereas companies with high non-audit fees are less likely to receive GCO
Hope and Langli	2010	Test for auditor independence impairment among (1) private client firms, in a low litigation environment (i.e., Norway)	The fee level's is not detrimental on the auditor independence
Quick and Warming-Rasmussen	2015	Investigation related to the effect of such features on independence perceptions in the case of German investors	A high self-interest and a high-familiarity features may impair auditor independence in appearance. In fact, a significant effect on investors' trust in auditor independence is not revealed

Source Author elaboration

2.3.1.3 Auditor-Client Relationship

In Europe, in recent years, two aspects have been mainly investigated by scholars with regard to the auditor-client relationship: auditor switching, rotation and tenure; and opinion shopping (Lennox 2000; Vanstraelen 2003; Ruiz-Barbadillo et al. 2006; Knechel and Vanstraelen 2007; Ruiz Barbadillo et al. 2009; Vandenbogaerde et al. 2011; Barnes and Renart 2013; Garcia-Blandon and Argiles-Bosch 2017).

Vanstraelen (2003) analysed what would be the effect of a GCO on the firm or the effect it could have on the auditor. The research focuses on the possibility of auditors avoiding GCOs for fear of retributions in the form of loss of prestige or for fear of a change in auditor. Belgium's accounting standards require a company to

keep an audit firm for a minimum of three years, which can be used as samples to show if there are different effects on the first, in which the auditor knows that it cannot be dismissed, and last years of this period. These standards could help measure the effects on auditors if the results of each year are compared, since the effect of auditor switching should be more believable from the last of the three years than from the first. The results of this research confirm this by showing a probability of four times lower in the first years than in the last year, if the company had received a GCO.

Vandenbogaerde et al.'s study uses a sample of private Belgian firms of 2006 to search for the possibility that there is a relationship between auditor independence and its dismissal and if this relationship is caused by the prestige of the firm. Although the analysis does not find significant data to confirm this hypothesis, it does find that clients have less probability of receiving GC modifications if their clients are in the last year of their contract. Nevertheless, the analyses find data that link high accruals have the probability to be welcomed by auditors that have a higher possibility of being sent away.

As regards the opinion shopping practice, many studies used models that compared GC results before and after the auditors' dismissal. Lennox decided to analyse the effect of audit shopping by evaluating the consequences that this would have had on firms if they made contradictory decisions with the auditor, both in firms that use this technique and firms that do not. The results show, as expected, that there is a higher probability for an auditor to be dismissed after submitting a GCO. In addition, the research also finds results of a lower probability of a GCO if the auditor changes.

More recently, Barnes and Renart (2013) investigated more in depth a specific feature of the relationship between auditor and client: the auditor's bargaining power. First, they explained that the auditor might be under pressure, leading to the kind of error where there is no prior GCO, but the company fails afterwards (Type I error). In this case, the results are clearly attributed to the lower bargaining power of the auditing firm. In contrast, they noticed that the auditors may succeed in resisting any pressure from the company not to issue GCOs when the auditing firm has less economic dependence, so that it has a relatively higher bargaining power with its clients. Obviously, this study is in line with the ones presented above, in particular Vanstraelen (2003) and Ruiz-Barbadillo et al. (2004), in which auditors' independence is measured against their willingness to issue or not GC qualifications. The aim of Barnes and Renart in their research is to explain that the independence of auditors is not subject to the needs of the client-company or the need of the auditing firm to "survive", but that shareholders and investors require a fair and clear evaluation of the firm. Building on these assumptions, the researchers chose Spain as a ground field to examine these issues, since the Spanish auditing environment is unregulated but highly concentrated. Moreover, since smaller Spanish companies are also being audited, its capital market is relatively denser, resulting in

lower dependence by investors on audited financial statements. Barnes and Renart introduce their analysis starting from an assumption on the GC errors. These are classified into three categories: the first is caused by the lack of experience and understanding of the auditor of the sector where the client has its business (the "incompetence hypothesis"); the second is caused by auditors' economic concerns (the "lack of independence hypothesis")[2]; finally, despite auditor's ability and independence, the result is far away from what is estimated. Although there is the certainty that the entity will or will not fail, the chance of error can still occur. In the end, Barnes and Renart discovered a high tendency of Spanish auditors to give GCOs, independently from the pressure of clients. Moreover, the significant results on Type I error let us understand that Spanish auditors are willing to issue qualified opinions to protect their reputation ("over-conservatism"), meaning that companies in Spain have less influence on auditors' decisions. Finally, this research is coherent with what Ruiz-Barbadillo et al. (2009) suggested about the reputational issue brought to life after the revocation of mandatory auditors' rotation in 1994.

Despite discretion, the decision to include the GCO in the report cannot be deferred any longer in terms of risk. This happens when the auditor forces the company to adjust its balance sheets downwards.[3]

Ruiz-Barbadillo et al. (2006), in their research, plan to supply more evidence about opinion shopping and its effects on different aspects of the connection between auditors and firms. This research is needed because the evidence up to 2006 has not been enough to give efficient options to standard regulators to assure that the GCO will not be influenced and that it will not be putting investors at higher risk. By increasing the knowledge in these arguments, researchers are trying to discover if clients do indeed use types of pressure to change the opinions they could receive. In their study, a relationship is found between the period that the auditor has been in his position of judgement on that firm and the probability of decline in opinion shopping. This link between judgement and tenure could be caused by the auditor's intention to keep his/her contract with the firm until the latter has recovered part of their monetary profit. After this profit is achieved, auditors start to evaluate more the risk of losing their status and take decisions by evaluating other factors. These seem to be the explanations that explain more efficiently auditors' behaviour over time, showing that they are more dependent on the firms' pressure at first, while gradually becoming more independent in their decisions while occupying that presssure.

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[2]Either the auditor resists disclosing a GCO to avoid the loss of clients, or the auditor is firmly convinced of the need to give a qualified opinion to protect his/her reputation.

[3]The auditor encourages revealing hidden liabilities and eliminating overpriced assets that may be overstated in the balance sheet to show a more solvent image.

Also Knechel and Vanstraelen (2007) analysed the association that could exist between audit quality and the period of time the auditor has been in his position. The research focuses on data from Belgian private companies in distress in which there is less possibility of disagreements between auditor and client. This setting is the perfect place to search for a possible association between tenure and audit quality but in this case does not show a decrease in quality of audit reports that have been made by auditors that have spent more time serving that client. The paper's results find no significant association of an effect of audit tenure on audit quality; this could be through different causes linked to the Belgian environment or because the sample they analyse includes only small, private, distressed firms. In the end even though these results do not find any association between the two, they do not conclude that there is no effect of auditing tenure in the EU countries and this encourages further investigation to find these results.

Garcia-Blandon and Argiles-Bosch (2017) are interested in analysing the relationship between audit quality and the period the auditor has worked for the client because of the EU regulations that have been implemented in 2014 to avoid loss of audit quality. To understand if standards of this new rotation policy are needed, the paper analyses a sample composed of listed Spanish companies in the period between 2005 and 2011. The analysis seem to find a small, or almost no, significant effect between audit or partner tenure and audit quality, which depends on the probability of issuing GCOs, as it is seen in studies that evaluate this effect in other countries. However, between the change of firm as auditors, and the change of partner in the same firm, it is found that partner change has a more significant and strong effect than a complete change in auditor company. Table 2.14 lists studies on the auditor-client relationship, highlighting the aims and main results of each one.

2.3.1.4 Environmental Factors

As far as the environmental factors are concerned, I noticed, essentially, two important studies: Martin 2000 and Carcello et al. 2009. Both studies were aimed at exploring how much the differences in accounting and auditing standards across countries determine the differences in audit reports.

Martin (2000) compares different regulations that have been used in different countries to enhance the efficiency and accuracy of accounting and auditing, but their differences could be leading to different determinants of GCOs between countries. In general, audit and accounting standards are similar for every country but their little differences and the effect that they may cause is what Martin's paper researches. The model, with its sample of 122 public firms that are in high distress, shows significant evidence that the GCO in the US is issued with more probability than a GCO in France or Germany. These results are of great importance because it might mean that even with similar accounting standards for each country a GCO received in Germany or France might have a diverse meaning. In US firms, it was found that there was a higher probability of firms to have received a GCO for debt related factors. While with French firms, the model indicates that it is less probable

Table 2.14 Studies on auditor-client relationship

Author	Year	Aim	Results
Lennox	2000	Test for opinion shopping by predicting the opinions companies would have received had they made opposite switch decisions	The auditor switching plays a decisive positive role in obtaining the desired opinion
Vanstraelen	2003	Examine the relationship between auditor economic incentives and the propensity to issue GCOs	Supports the contention that the auditor's GCO decision in Belgium is significantly associated with factors surrogating the perceived consequences of disclosing a GCU
Ruiz-Barbadillo et al.	2006	Investigation into the effect of long-term audit contracts on the likelihood of a company's engaging in opinion shopping	There exists a relationship between the length of audit engagement and the probability of opinion shopping
Knechel and Vanstraelen	2007	An exam of effects of auditor tenure on audit quality for private firms	The auditor tenures does not affect the auditor indipendence. On average, the evidence for tenure either increasing or decreasing quality is not found or weak
Ruiz-Barbadillo et al.	2009	Investigation on a ten years time span (1991–2000) aimed at revealing if the mandatory or not mandatory rotation affects the audit reporting behaviour	They did not find evidence about significant difference in the audit reporting behaviours during the passage from not mandatory to mandatory rotation
Vandenbogaerde et al.	2011	Investigation on the likelyhood that a client dismisses the incumbent auditor has an impact on the auditor's impairment of independence and whether this association is conditional on the importance of the client in the audit partner's client portfolio	The likelihood of an auditor dismissal has no effect on the attitude of releasing a GCO for financially distressed firms
Barnes and Renart	2013	Test of Spanish auditors attitude in releasing qualified opinions to protect their reputation	Results point out a high attitude by auditors to issue GCOs undeterred by pressure from client firms
Garcia-Blandon and Argiles-Bosch	2017	Impact of firm and partner tenure on audit quality, where audit quality is proxied by discretionary accruals	Without considering the interaction effects, firm and partner tenure do not seem to play a relevant role as determinants of audit quality. Importantly, the interaction of firm and partner tenure shows stronger effects on audit quality than both forms of tenure separately considered

Source Author elaboration

to have management changes or firms' takeovers then in US companies. Firms from Germany instead had more management changes then French firms but fewer takeovers than US firms. As a summary of his research, Martin noted that:

Table 2.15 Studies on environmental factors

Author	Year	Aim	Results
Martin	2000	Comparison of accounting and auditing standards for GCU across three countries—France, Germany, and the U.S.—belonging to different accounting and auditing cultures	Country-specific standards were essentially similar across countries, but financial reports revealed significantly higher GCOs incidence for U.S. firms than other countries, even when controlling for firm-specific features that might be associated with GCOs
Carcello et al.	2009	An exam of the potential effects in shifting form principle based to rules based standards after 2000	A relationship was found between the nature of GC audit standardsand auditor reporting on financially stressed companies

Source Author elaboration

> The observation of the difference in disclosure practices, though, is important to users because they must be aware that similar disclosures (or lack of disclosures) across countries may not have the same meaning. Failure to consider country-specific influences on GCU disclosure practices might lead investors to misestimate the level of uncertainty associated with the GC assumption when evaluating company risks and prospects.

Anyway, many steps ahead have been made since Martin's study. Notwithstanding, it remains a cornerstone that could drive scholars to address the issue of differences in standards.

Carcello et al. (2009) researched if the important new regulation imposed by the Belgian government in 2000 had the effect it intended to have on the quality of GCOs. Through a sample of Belgian private firms, the model analyses the effect of the change in regulations and the additions in the auditor's role to control for two new financial criteria, with which the firm must be aligned. Their research finds evidence on two important effects caused by the new regulation. Thanks to the new regulation if the firms are in accordance with the two new criteria, there is a lower probability that the auditor will issue GCOs when firms do not risk going bankrupt and there is a higher probability that the auditor will issue a GCO when firms are about to go bankrupt. This analysis shows that the intent of the regulations to give more responsibilities to auditors, so investors will feel more protected after the recent crises, is having the desired effect. Table 2.15 provides studies on environmental factors, highlighting the aims and main results of each one.

2.3.2 *Accuracy of GCOs*

As referred to when I expanded on the US academic debate, there might be two types of reporting misclassifications:

- Type I misclassification, arising when the auditor issues a GCO to a client, which does not subsequently fail;
- Type II misclassification, arising when the auditor decides not to issue a GCO to a client, which subsequently fails.

Sometimes, it occurs that Type II error can be caused not by auditors' inability, inexperience or conservatism. Another related factor has geographical and psychological roots: the proximity to areas affected by a high rate of GCOs. In Europe, excluding a few studies related to Belgium and the UK (Citron and Taffler 1992; Lennox 1999; Knechel and Vanstraelen 2007) there is a distinct lack of studies detecting in depth the accuracy rates of GCOs. Most of the times when and where these data are provided they represent the ground for studying other features and aspects or audit reporting for GCU.

For instance, studies have been conducted on the effects of the interaction between auditing standards and institutional factors, since their combined impact can affect auditor's decision-making. Prior researches demonstrated the significance of legal settings (e.g. those protecting more investors or with strong enforcement) in elucidating the differences across financial markets in several countries. Despite this attention paid to the interactions between accounting, finance and law, there is little research on how legal regimes influence investor response after the auditor issues a GCO. In particular, Kausar et al. (2017) have recently analysed how legal regimes (creditor vs. debtor-friendly code law) may influence investor response to the increased financial distress risk determined by the issuance of GCOs. They took US and UK bankruptcy law as the sample, and determined how the different aspects of the two may impact on market reaction. Specifically, finance and legal scholars observed that the US is built more towards the rights of the debtor, thus protecting a firm's GC status; whereas, UK safeguards more the rights of the creditor, thus liquidation processes are more likely. As a consequence, the authors believe that GCOs represent a negative signal to market investors more in the UK than in the US, in light of the different legal treatment of claimholders. Therefore, the results demonstrated that bankruptcy law will determine the informativeness of the GCO to capital market participants, as shown by the differential market reaction to GC announcements in both countries. This is in line with the belief that, in spite of the equality of this negative public signal, market investors will react more unpleasantly in a creditor-friendly than in a debtor-friendly bankruptcy system.

Table 2.16 outlines studies on the accuracy of GCOs, highlighting the aims and main results of each one.

2.3.3 Consequences of GCOs

As we have seen, the market reactions to audit opinions could have consequences not only for current and future shareholders, but also for lenders and other capital providers.

Table 2.16 Studies on accuracy of GCOs

Author	Year	Aim	Results
Citron and Taffler	1992	Likelihood of firm failure, auditor switch rates, the self-fulfilling prophecy and audit firm size are studied as variables potentially affecting the value of the audit report when GCOs are released	The probability of receiving a GCO is strongly associated with a decline of economic conditions of the firms. There is some evidence in support of an association between the presence of a GCO and auditor switching but no other associations were found
Lennox	1999	Evaluation and explanation of the accuracy and informativeness of audit reports in identifying failing companies	(1) a bankruptcy model could be better than audit reports in predicting financial distress overtime (2) audit reports have not incremental information in signaling the probability of bankruptcy
Knechel and Vanstraelen	2007	An exam of effects of auditor tenure on audit quality for private firms	The auditor tenures does not affect the auditor indipendence. On average, the evidence for tenure either increasing or decreasing quality is not found or weak
Kausar et al.	2017	How a legal regime may affect the market's reaction to the auditor's GCO	Code and bankruptcy law and investor's reaction

Source Author elaboration

Over time, also in Europe, some studies have addressed the issue of the so-called self-fulfilling prophecy phenomenon as the bankruptcy of a company that could have survived without receiving any GCO. In this respect scholars find validations (Gaeremynck and Willekens 2003; Vanstraelen 2003) and contradictions (Citron and Taffler 1992; 2001).

On the same subject, the literature which reveals a negative (or in a few cases, positive) stock reaction to different types of audit opinions, is extensive. Firth (1978), considering a sample of 247 observations in the UK market, found a small negative stock price reaction to GCOs. Several years later, Taffler et al. (2004), and Soltani (2000), confirmed the results achieved by Firth (1978). Soltani (2000) analysed the French market; he considered a larger sample (543 observations) and showed significant negative abnormal returns around the audit opinions releases. Pucheta-Martínez et al. (2004) analysed the Spanish market and found opposite results.

As regards Italy, only one study has been released in this specific research area. Ianniello and Galloppo, in 2015, showed that, on average, the qualifications expressed in the audit reports containing a GCO of the Italian listed companies had negative effects on the respective stock prices. At the same time, they highlighted

Table 2.17 Studies on the consequences of GCO

Author	Year	Aim	Results
Firth	1978	Measure of the abnormal returns associated with various "types" of qualification	Some types of audit qualification had a significant impact on investment decisions while others had very little. There was found to be no relationship between the accounting firm qualifying the accounts and the abnormal returns
Citron and Taffler	1992	Likelihood of firm failure, auditor switch rates, the self-fulfilling prophecy and audit firm size are studied as variables potentially affecting the value of the audit report when GCOs are released	The probability of receiving a GCO is strongly associated with a decline of economic conditions of the firms. There is some evidence in support of an association between the presence of a GCO and auditor switching but no other associations were found
Soltani	2000	Searching for evidence about the relationship between audit modifications and stock prices in France	Significant negative abnormal returns are revealed around audit opinions announcements
Citron and Taffler	2001	Investigation about possible auditor's decision to not issue a GCO to avoid subsequent bankruptcy of the audited firm	No evidence was found
Gaeremynck and Willekens	2003	Relationship between audit-report type and subsequent business stop for private companies in a low litigation environment	An endogenous relationship exists between bankruptcy and audit-report type, and between voluntary liquidation and audit-report type
Vanstraelen	2003	Examine the relationship between auditor economic incentives and the propensity to issue GCOs	Supports the contention that the auditor's GCO decision in Belgium is significantly associated with factors surrogating the perceived consequences of disclosing a GCU
Taffler et al.	2004	Stock price reaction to UK GCOs after the audit reports releases	The sample evidenced underperforms by between 24% and 31%, depending on the benchmark adopted
Pucheta-Martínez et al.	2004	Test whether there is a relationship between audit modifications and stock prices in Spain	Modified audit reports were not value relevant for investors

(continued)

Table 2.17 (continued)

Author	Year	Aim	Results
Ianniello and Galloppo	2015	Examine investor reactions to auditor opinions containing qualifications or an 'emphasis of matter' paragraph related to GC uncertainty or financial distress	Audit reports investigated have information content for investment decisions. Qualifications expressed in the audit report have a negative effect on stock prices. An unqualified opinion with an emphasis of matter paragraph regarding GCU or financial distress has a positive effect on stock prices

Source Author elaboration

that unqualified opinions containing a GCO positively affect stock prices. Using the Event Study methodology (ES), they analysed a data set covering 2007 to 2010, containing 97 observations from 41 unique firms.

Chapter 3 is dedicated to provide empirical evidence of Italian investors' perceptions of GCOs alongside the last global financial crisis (2008–2014). Thus, further insights about the relative literature are provided there. Table 2.17 resumes studies on the consequences of GCO, highlighting the aims and main results of each one.

2.4 Studies and Trends in the Rest of the World

In this Sect. 2.1 shall analyze and discuss the main studies regarding the GCO and its effects in other countries around the world.

In Australia, the two researches undertaken by Herbohn et al. (2007) and Ogneva and Subramanyam (2007) discovered that in the period following the disclosure of the GCO there is no evidence of any causal relation. Herbohn et al. (2007), further discovered that not only in the medium-term period following the disclosure of the report were some effects caused by the modified opinion present, but also in the short-time window. The only significant effect discovered by them was on the 12-months period prior to the disclosure of the auditors' report, which has shown a negative abnormal return on the stock market. These results are due to the fact that in Australia a continuous disclosure regime is present.

On the other hand, evidence from China provides a different outcome in comparison with the Australian one. In fact, the two studies conducted by Chen et al. (2000, 2017a, b) wanted to investigate, in the first one, the effect of modified audit opinion on the stock price, considering the GCO only as a dummy variable, whilst

the more recent study had a focus on GCO as a real explanatory variable. What has emerged from Chen et al.'s researches is that in a short-term period around the disclosure of a modified audit report the market reacted negatively; nevertheless the most severe effect was recorded on the GC case which, in the days following the disclosure of the report, had an average effect of −4.23% on the stock price. Instead in the long-term, no significantly negative effects on the stock price have been found, rather a slightly positive effect, justified by the author as compensation for the higher risk faced by the investors. However, also in China there is literary evidence of a causal relationship among GC modified audit opinions and future firms' financial performance.

Another research study by Chen et al. (2016a, b) explored the possibility of a company using opinion shopping to influence the report that it receives. Proof and the effects of audit opinion shopping have only been found in insignificant or unreliable ways and standards regulators do not have enough evidence to implement any effective regulations. The model shows that, to be successful in opinion shopping, a firm has an association with the type of the audit firms' organizational forms and the level of importance of the company that is being audited. In addition, the model shows that the firms that use this scheme to influence auditors are associated with higher accounting accruals, and lower profits. It is also confirmed that auditors that are being sent away have a lower probability of not issuing a GCO in comparison to the new auditors that are replacing them. The research also takes into consideration the stepping down of auditors at their own discretion and their replacement with partners of the same audit company. An example of this could be a partner that is conservative and not inclined to risk that prefers to change his role with a partner that is more inclined; this could lower the probability of a company receiving a GCO.

China, but in the People's Republic, has been studied using the same hypothesis as in the Taiwanese market (Hsu et al. 2011). The authors found a negative market reaction around the preparation and disclosure of the auditors' report, also showing an information leakage towards investors. Unluckily for the purpose of their study, no causal relationship between GCO and stock price fluctuation has been found, instead the negative market reaction could be due to other factors. What has been found as a main discovery is a negative market reaction around the disclosure of the GC modified report, but effects change from country to country.

As has been discussed for the USA and Europe studies, the effects of a modified GC report are not limited only to oscillation in the market's prices or returns, but have also been linked to the self-fulfilling prophecy. Incidentally, it has been demonstrated in Australia (Carey et al. 2008), in China (Ting et al. 2008), in Japan (Shirata and Sakagami 2008) that this phenomenon does not exist. Default factors in these countries arise from other variables contained in the financial statements. The only country where a slightly positive correlation has been faced between the two phenomena was Canada (Cormier et al. 1995), but results may not be a fair

representation as this paper was quite old and the method applied to reach the results was different from the ones used today. In fact, it has been successively demonstrated that even in Canada a relationship between the two does not exist, and even if, globally speaking, the GCO increases a little bit the probability of default, claiming the existence of a self-fulfilling prophecy, is quite far from reality.

Another phenomenon that has been detectedis auditors' reluctance to issue a first-time GCO as clients could shift, as it has been demonstrated that receiving a GCO is a statistically significant phenomenon that increases the probability of auditor switching; causing losses for the auditors and even for the firm that is changing the auditing company as they have to pay for a new service (Carey et al. 2008). In fact, to support the previously mentioned theory of Carey et al., and to further investigate the phenomenon, it has been shown that to avoid auditor-switching many local auditing firms have underreported the actual situation of a firm (Young and Wang 2010). It has also been demonstrated that the global financial crisis, over the whole market, has propelled GC reporting, as the number of reports containing this modification has significantly arisen thanks to the crisis. This increase of GC reporting has also been demonstrated to be present in Australia (Xu et al. 2013).

As with the global financial crisis, also local financial crises could replicate the phenomenon of the increase in reporting; the 1997 Asian Financial Crisis has been studied, to understand if those effects could be found even in a low-litigation risk environment. The conclusion reached by this study was a positive reply that highlighted the increase in reporting and the professionalism of Chinese auditing firms (Lam and Mensah 2006). This result has been steadily confuted, claiming that there was no scientific or statistical evidence that justified the results obtained in Hong Kong (LaSalle and Anandarajan 1996).

It has been further analyzed if other economic phenomena could influence the GC reporting quality, such as a change in policy (Mo et al. 2015), or regulatory sanctions (Firth et al. 2014). The results obtained from the first study, related to the 2006 Chinese Bankruptcy Law are not as relevant, in fact it has been shown that the issuance of this new law did not influence the major Chinese auditors; only the local top-10 ones showed an improvement in conservatism, whereas the smaller ones continued to report with the same low quality. As the second study has shown, regulatory sanctions, differently from changes in policy, have had a significantly positive effect on the increase in GC reporting and shaping auditors' behaviour, as auditors to face themselves in situation of sanctions, or to avoid legal consequences, became more conservative. As a matter of fact, this is a field still open for discussion, as results are often discordant. The general line is that a GCO affects the stock market, but it is not an unavoidable doom for a company receiving it. Future researches and papers will clarify the doubts and the discordancy remaining. Table 2.18 lists studies on GCOs in the rest of the world, highlighting the aims and main results of each one. It is worth to note that there are no relevant studies addressing the accuracy of GCOs in the rest of the world, Hence scholars are encouraged to fill this gap.

Table 2.18 Studies on GCOs in the rest of the world

Author	Year	Country	Determinants (D); Consequences (C)	Aim	Results
Cormier et al.	1995	Canada	D, C	Understand the variables and factors that cause a GCO issuance, and whether this kind of opinion could mean a bankruptcy determinant for companies receiving it	Financial and liquidity ratios have been found to be a cause for GC issuance. A positive correlation between GCO and failure has also been found
Chen et al.	2000	China	C	Understand whether there exists a relationship between GCO and future performance, and the successive effects during the short- and long-term	Evidence has been found of abnormal returns around the disclosure of the modified audit reports
Lam and Mensah	2006	China	C	Understand whether auditors reported accurately even in a low-litigation environment such as the Chinese one	They discovered that the analyses performed by Chinese auditors were as accurate as the US ones even if they were in a low-litigation environment
Herbohn et al.	2007	Australia	C	Understand whether a modified GCO could influence the stock market in the short- and medium-term	There is no statistical evidence of a change in price following the modified auditor report, but negative market effects have been registered in the 12-months period prior to the disclosure of the report
Ogneva and Subramanyam	2007	Australia	C	Understand whether a modified GCO could influence the stock market in the medium-term, following the auditors' report	They did not find any evidence that the GCO issuance is associated with abnormal negative market returns for the Australian sample

(continued)

Table 2.18 (continued)

Author	Year	Country	Determinants (D); Consequences (C)	Aim	Results
Carey et al.	2008	Australia	C	To understand the causal relationship among GCOs, and how it could affect the decision of switching an auditor compared to other kinds of reports. Second, whether there is an increase in probability for a company to fail after receiving a GCO	It has been shown that receiving a first-time GCO increases the probability of a company to switch auditing firm. No evidence has been found of any relationship between failure and issuance of a GCO
Shirata and Sakagami	2008	Japan	C	Understand whether the issuance of a GCO was the factor that doomed the bankrupted companies in the Japanese environment	They did not find any evidence that the GCO could mean the subsequent failure of a company, denying the possibility of a self-fulfilling prophecy
Ting et al.	2008	China	C	Understand whether the issuance of a GCO was the factor that doomed the bankrupted companies	They did not find any evidence that the GCO could mean the subsequent failure of a company, denying the possibility of a self-fulfilling prophecy
Hsu et al.	2011	Taiwan	C	Understand whether there exists a relationship between GCO during two events, the Audit Report filing and the Announcement day, and the market returns	Abnormal negative returns have been found five days after the audit report day
Xu et al.	2013	Australia	C	Understand if after the Global Financial Crisis auditors had more propensity to issue GCOs for risky clients	They discovered that the Global Financial Crisis positively influenced auditors' behaviour in issuing GCOs. A further discovery was that Big 4 firms anticipated the Global Financial Crisis, increasing the accuracy of GC reporting sooner than other firms

(continued)

Table 2.18 (continued)

Author	Year	Country	Determinants (D); Consequences (C)	Aim	Results
Firth et al.	2014	China	C	Understand whether the issuance of a sanction against auditors could improve the quality of their reports	Sanctioned auditors have more propensity to issue a GCO
Mo et al.	2015	China	C	Understand whether the 2006 Chinese Bankruptcy Law has changed Auditors' behavior in misrepresenting the fair view of a company	The law improved only the top-10 local auditing firms, as the Chinese Big 4 were almost at a higher level, to defend their international image. No effects have been shown on the minor local auditors that continued with the previous behaviour
Chen et al.	2016	China	D	Study if companies engage partners shopping within the same audit company	Companies are used to engage in partner-level opinion shopping. This happen more when the audit firm is a partenership than a corporation
Chen et al.	2017	China	C	Understand whether there exists a relationship between GCO and future performance, and the successive effects during the short- and long-term	A relation has been found between GCO and future performance, but the effects are only noticed in the short-term, whilst in the long-term there is no statistically significant effect

Source Author elaboration

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