Auditors are critical information intermediaries in financial markets. They ensure investors that the financial statements presented by firm’s management reflect the underlying firm situation and their going-concern opinion provides an independent assessment that the company is likely to continue to operate in the near future. The effective functioning of auditors, especially with respect to the audit report and its going-concern opinion has been questioned in the past. It has been debated whether the GCO is valuable at all and whether it has relevance to investors. This criticism is based on the facts that auditor’s GCO assessments are frequently identified as incorrect ex post and the assumption that investors can derive similar or the same information that is provided in the GCO from other sources that are as accurate but potentially even timelier. This dissertation contributes to this discussion by analyzing how signals by other information intermediaries are related to the auditor’s decision to issue GCOs and auditor reporting misclassification rates, and whether markets indeed value GCOs when similar information has previously been communicated via these signals by other information intermediaries.


6.1 Summary of the Results
Chapter 3 establishes the association between credit ratings and going-concern opinions. Both credit ratings and the auditor’s GCO are based on firm fundamental factors concerning the financial viability of a firm. Credit rating agencies and auditors both have access to firms proprietary information and are therefore able to indirectly communicate information to investors that otherwise would be unknown. Yet, the scope and focus of their assessments differ. While audit engagements encompass the testing whether the financial statements presented are in line with the underlying firm information, their focus is considerably broader than the examination of the probability and likelihood that companies can and will repay their obligations, which is what credit rating agencies focus on. One can therefore assume that credit rating agencies and auditors are likely to request different private information of their clients. This difference in focus and potential use of information may make credit ratings informative to auditors. Besides the difference in focus, credit rating agencies also have extensive experience and expertise and cover large proportions of the market which allows them to use industry wide information to compare firms and establish credit ratings. This might help auditors in their assessments. Moreover, because credit ratings are also used as part of investment regulations and debt covenants, changes in credit ratings might trigger consequences for the firm and may thus be an important factor to consider in the auditor’s going-concern decision. Based on these arguments I predict that worse credit ratings and credit rating downgrades are positively associated with the auditor’s probability to issue GCOs. I find results consistent with this argumentation and additionally show that these associations are stronger for more recent and more severe downgrades. Auditor specialists have been shown to be more likely to issue GCOs for the same level of risk of clients, which is often interpreted as audit quality. I test whether the association between credit rating information and the probability to issue GCOs differs for auditor specialists and non-specialists. I find some evidence that the association between credit rating levels and GCOs is weaker for auditor specialists which is consistent with specialists having superior experience and expertise and therefore relying less on external sources during their assessment process.

Given this evidence, the question arises whether auditors indeed obtain incremental information from signals by third-party specialists like credit ratings that helps them to reduce their reporting misclassifications. Given auditors’ incentives to minimize reporting errors due to their costs, one would expect them to use credit ratings in their assessment if credit ratings indeed contain incremental information that reduces the ambiguity surrounding the auditor’s GCO or provides additional information to auditors. Alternatively, credit rating agencies and auditors might arrive at the same conclusion independently. If auditors then observe credit rating downgrades that confirm their own assessment, this might raise their suspicion that the company in question may not survive the next fiscal year. This could be particularly the case when credit rating downgrades trigger operational or financing changes in organizations, such
as covenant violations, which potentially impact (re)financing decisions. An independent assessment confirming the auditor’s suspicion potentially also changes auditor’s expected payoff structure regarding the decision whether to issue a GCO. If credit rating agencies downgrade a company that is in financial distress, auditors do not issue a GCO and the company later files for bankruptcy, potential litigation concerns increase for auditors. This is particularly so, because investors will be dissatisfied with auditors for not having issued a GCO even after the credit rating downgrade. Based on these arguments, auditors might therefore issue more GCOs after credit ratings have been downgraded. This increase in issuance of GCOs would be reflected in more Type I and less Type II errors.

The findings in Chapter 4 are consistent with the explanation that auditors’ going-concern reporting behavior becomes more conservative after credit ratings have been downgraded. Especially more severe and more recent credit rating downgrades are positively associated with the probability of Type I errors. For credit ratings of two or more notches, there is a negative association between downgrades and Type II errors. This result is more pronounced when controlling for litigation risk, which supports the notion that auditors become more conservative as the threat of litigation increases if they were to fail to issue a GCO after a credit rating has been downgraded. Chapter 4 also addresses the argument that non-specialized auditors potentially provide lower quality audits. If non-specialist auditors indeed invest less resources in a particular industry and have less experience and expertise, they are, on average, more likely to have higher reporting error rates. Hence, they might find credit ratings and the information therein incrementally useful in their assessment. I test this hypothesis and find weak evidence that non-specialist auditors have lower Type II error rates. Overall, these results imply that credit ratings function as external warning signals that increase auditor conservatism.

Besides auditors who observe credit ratings and might be influenced in their decisions, investors are also aware of changes in credit ratings. Prior literature shows that markets value changes in credit ratings, which is reflected in changes in stock prices and trading volume (e.g., Hull et al. 2004; Norden and Weber 2004; Hite and Warga 1997). Prior auditing literature argues that the going-concern opinion is only relevant to investors if it provides new information. Given that GCOs are issued on an annual basis only and that investors can derive information from other sources, like the annual report itself, it has been argued that the GCO is not relevant to investors. Some studies show that markets only react to the unexpected component of GCOs (e.g., Loudder et al. 1992; Fleak and Wilson 1994; Jones 1996). Taking these argumentations, and the findings from Chapter 3 and 4 together, I examine how markets react to GCOs that have been preceded by signals from other information intermediaries regarding a firm’s financial health, such as credit rating agencies. Chapter 5 therefore considers signals by two important information intermediaries, namely credit rating agencies and
equity analysts, and how their signals concerning firms’ future viability are related to market reactions to GCOs.

The results of the analyses in Chapter 5 show that downgrades of signals of deteriorating firm performance directly related to a firm’s liquidity and solvency, such as credit rating downgrades and downgrades in analysts’ cash flow forecasts, mitigate market reactions to GCOs. As expected, this mitigating effect is more pronounced the stronger the downgrade is and the more recent it occurs to the auditor’s signature date, which is in line with the argument that GCOs are less foreseen. While there is a mitigating effect, the results further reveal that market reactions to GCOs are only negligible when the preceding downgrades in credit ratings, cash flow forecasts or analyst investment recommendations leave little to no ambiguity that a GCO is to be expected. Since these drastic revisions are very rare, it can be concluded that investors overall value GCOs above and beyond the information provided by other information intermediaries.

6.2 Limitations and Future Research
Although considerable attention has been devoted to the empirical research design, there are some limitations inherent in the studies conducted. Since all studies consider credit ratings and changes therein, there are some common limitations. First of all, the samples are limited to companies that are covered by Standard & Poor’s (and equity analysts for Chapter 5). The descriptive statistics of all three studies indicate that the samples are significantly different compared to the overall population of firms. One therefore has to be careful in drawing inferences from the findings represented to other settings. As the restriction to be covered by Standard & Poor’s results in a sample of larger firms that are mostly audited by larger auditors, the generalizability of the results to smaller and especially local auditors is limited. Further, I focus on credit ratings from Standard & Poor’s only. This limits the sample because there is a small share of the market that is covered by other credit rating agencies but not by S&P, and it prevents me from accounting for differences in split ratings and potential timing differences in credit rating changes. Including at least the other two major credit rating agencies, Moody’s and Fitch, would provide a more complete picture. However, it would also increase the complexity of the analyses because one would have to account for the effects among credit ratings from different rating agencies.

Similar to other studies in this field of research, I also face an endogeneity concern because I cannot disentangle whether auditors derive information from credit rating agencies or whether both parties use the same underlying firm information and publish it at different points in time. While I try to alleviate this concern by controlling for firm fundamentals, I cannot eliminate it. The part of the analysis concerning differences between auditor specialists and non-specialists mitigates this concern partly because one should not find a difference between specialists and non-specialists if GCOs are simply
based on information that is standardized across clients and engagements. Part of the problem of not being able to disentangle the effects is that credit rating agencies were not required to disclose detailed descriptions of the rating process or the factors that they incorporate in the rating process. In order to mitigate this concern, future research could evaluate Standard & Poor’s corporate methodology (published in November 2013) which has been published as a result of recent regulatory changes and provides a more detailed description concerning the information that is used during the rating process (Standard & Poor’s 2013a).

Another limitation of this dissertation which is also a future research opportunity relates to the sample period. The sample period is chosen based on the data availability of audit opinions in Audit Analytics, yet it might be interesting to extend the sample period for several reasons. Prior to 2000, equity analysts had access to proprietary firm information. This allowed them to provide investors with detailed investment advice. As a result of Regulation Fair Disclosure which became effective in October 2000 companies were not allowed to provide proprietary information to information intermediaries that might use them for trading purposes (www.sec.gov). Credit rating agencies, however, were exempted from this regulation and were still allowed to use proprietary information as part of their assessment until 2010. However, in 2010, this regulation has been changed and credit rating agencies potentially have more restricted information access now. Extending the sample period to before 2000 and into the future would therefore allow to further investigate whether the private information component of the performance signals of information intermediaries is the driver of the results of my studies. This would be particularly interesting with respect to Chapter 5 where I analyze the incremental value of GCOs in addition to downgrades by both credit rating agencies and equity analysts.

The conclusions regarding the auditor specialization analyses in Chapter 3 and 4 need to be considered carefully because the computation for the auditor industry portfolios is restricted to listed companies. Publicly listed companies are potentially only a small portion of all clients in that industry which is why one needs to be careful to generalize the results. Generally, it would also be interesting to extend the study to other countries and regulatory regimes. Auditor litigation concerns for example, might affect auditors’ reporting behavior and how likely they are to use signals from other information intermediaries to corroborate their own findings. Additionally, the results might differ for shareholder vs. stakeholder oriented countries as the roles of auditors, credit rating agencies and equity analysts and their interdependencies are different in different regulatory regimes.

105 It is not sure whether credit rating agencies indeed have restricted information access because there are several ways to circumvent the regulation and still obtain proprietary information legally.
6.3 Contributions and Implications

The three empirical studies conducted as part of this dissertation contribute to the academic literature and have implications for auditors, firms’ stakeholders as well as regulators. First of all, I extend existing literature concerning going-concern opinions and credit ratings as I establish a link between these two. Moreover, I contribute to the literature on going-concern misclassifications as I provide evidence in line with the argument that auditors alter their going-concern reporting decisions in response to credit rating changes, which are also signals by independent, specialized parties that provide indications regarding a firm’s future viability. This also contributes to the finance literature which examines the relevance of credit ratings to various market participants. Chapter 5 supplements the literature on the relevance of going-concern opinions to stock market investors as I provide evidence that the stock market values going-concern assessments beyond the information that is provided by other information intermediaries.

The results reported also have implications for auditors and the audit profession. Particularly, the results in Chapter 5 indicate that investors perceive the auditor’s going-concern opinion as useful and value the professional assessment. Even while other studies show that the financial information on which the audit opinion is based are informative enough and argue that investors only react to the unexpected component of GCOs, I find that the cases in which the market reaction to GCOs is nullified is extremely rare. It is important that auditors are aware of this and understand the relevance of GCOs not only to firms but also to investors and be cautious in their assessments. Chapters 3 and 4 also speak to this as there is some evidence consistent with the notion that auditors tend to become more conservative in response to credit ratings. Given that this results in more Type I and less Type II errors, auditors need to consider whether credit rating downgrades of financially distressed firms create situations that are potentially prone for auditor reporting errors. Increasing the awareness that this might be the case could help auditors to adjust their behavior and provide more accurate assessments. Moreover, Chapter 4 might increase awareness of non-specialized auditors that they could derive information from other information intermediaries which might help them in closing the performance gap to specialized auditors. Yet, they need to be careful not to become too conservative.

Finally, the findings of this dissertation may also have regulatory implications. Regulators are usually concerned with the functioning of entire markets and this thesis contributes to several ongoing discussions that are relevant for capital markets. First, the auditor’s going-concern opinion has been criticized for its standardized wording, binary nature and lack of timeliness. Recently, it has been proposed to change the format of the audit report, e.g. by the IAASB, to improve audit reporting. The request has been made to include an explicit statement as to whether material uncertainties in relation to the GCO have been identified. Opponents have argued that it is not necessary to provide
GCOs as investors can derive the same information from other sources. Chapter 5 of this study shows that market participants value the GCO in its current form. Moreover, it indicates that although other information intermediaries provide indications regarding firms’ financial status that are more differentiated (i.e. at least on an ordinal scale), investors seem to derive value exactly from the binary statement contained in the GCO. While this does not mean that regulators should not extend the information provided by auditors, it means that the binary assessment is valued and suggests that it would be best continued to exist in this unambiguous nature. Secondly, the results imply that auditors are particularly prone to making reporting errors when other information intermediaries also attest to a deteriorating firm performance. Potentially, regulators are interested in increasing awareness of these situations, which might help to reduce audit reporting error rates. At the same time, regulators could also provide more specific guidelines regarding credit ratings and their changes as there seems to be a strong correlation between credit rating downgrades and issuance of GCOs which seems to result in more conservative reporting behavior by auditors. Given the public demand to regulate credit rating agencies more strictly and replace them in statutory references, policy makers might find the results of this dissertation interesting because speculative grade credit ratings could potentially be supplemented with the auditor’s GCO, which is also perceived as relevant by market participants beyond the information contained in credit ratings. Overall, this dissertation provides evidence that there is clearly an association between auditors’ GCO reports and the signals provided by other information intermediaries, but especially credit ratings. It is recommended to policy makers to be aware that regulatory changes in one domain do not only affect that particular group of information intermediaries but also indirectly affect multiple other market participants and the need to carefully consider the overall effect on all stakeholders.