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Bankruptcy and Auditor's Reporting in The Netherlands

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ABSTRACT

We study the reporting behavior of Dutch organizations subject to statutory audit in the three years prior to their bankruptcy. We find that only 12 percent of companies file timely audited financial statements or an exemption in the year prior to bankruptcy, 56 percent (64) in year two (three) before the bankruptcy. Second, management discloses discontinuity risks in just 29 percent of the pre-bankruptcy filing. Third, only 11 percent of organizations have a filed audit opinion for the fiscal year prior to bankruptcy. However, for the majority (63 percent or 39 instances out of 62) of audit opinions issued for the fiscal year before the insolvency, the auditor did not include a material uncertainty relating to going concern (GCO) in its audit opinion and therefore constitute a type-II GCO error (error of omission). We estimate the total GCO type-II (I) error rate at 0.03 (99.26) percent of audit opinions issued.

Keywords: Bankruptcies, Audit Quality, Going Concern Opinion

JEL Classifications: M42, G33, M41, M48

Data Availability: All data used in this study is publicly available, but subject to license fees.

I. Introduction

Our economic system requires risk taking, failures in the form of bankruptcies are an integral part of this system (Knegt, Beukelman, Popma, van Willigenburg, and Zaal 2005). The auditors' responsibility relating to going concern reporting is an important and recurring topic in the debate over the auditing profession (Brydon 2019; CTA 2020; IAASB 2020). Auditors are regularly accused of not performing sufficient auditing procedures relating to the going concern assumption of financial reporting. In a recent report the advisory Commission Future Accountancy of the Dutch Ministry of Finance recommended that the subject of (dis)continuity gets a *'bigger and more recognizable position in the audit'* (CTA 2020, 54). The Brydon 2019 report goes further and recommends the implementation of a resilience statement in financial reporting. Extending the scope of the audit and the responsibility of the auditor is a potentially expensive measure, as auditors need to incur additional audit hours, potentially involve more specialists, face a larger malpractice liability risk and this might lead to higher audit fees. To study the extent of this issue, reliable data on bankruptcies and auditor's going concern reporting decisions is necessary. However, reliable large scale empirical panel data on bankruptcies and the auditor's reporting in the period before the bankruptcy have not been available for the Netherlands (Bosman 2021). Furthermore, existing archival research focusses mainly on (non-Dutch) listed companies (Carson et al. 2013; Geiger, Gold, and Wallage 2019). Finally, according to the AFM survey data, auditors are issuing more and more going concern opinions (GCO's) from 2.27% of statutory audit opinions issued in 2012 to 3.09% in 2019[1]. The question arises whether this is due to auditor conservatism, which potentially has adverse effects for auditees (Thoman 1996; Deng, Melumad, and Shibano 2012; Chy and Hope 2021) or a better reflection of risk and the underlying economic reality.

Bankruptcies form an important social cost. The unpaid debt of insolvent entities is estimated at EUR 4.4 billion or 0.7 percent of GDP (CBS 2015). For approximately 30.1 percent of insolvencies criminal or unlawful harm is done to the creditors according to CBS (2015). We hand-collected data from the court reporting of the bankruptcy collectors (*'curatoren'*) where available. We estimate the jobs and debt affected by bankruptcies subject to statutory audits between 2012 and 2020 at a total loss of 127.670 jobs and insolvency claims of EUR 15,742.9 million, from which EUR 801.2 million relates to the tax authorities and 136.8 million to the employee insurance agency (*'UWV'*). These amounts are calculated before considering the eventual recovery rate achieved by the insolvency collector. The societal damage of the average (median) consolidated bankruptcy at the time of bankruptcy filing is the loss of 297 (82) jobs, 36.4 (5.2) million euro in insolvency claims, of which EUR 1.9 million (0.5) relates to the tax authorities and EUR 0.3 million (0.1) relates to the employee insurance agency. These numbers demonstrate that the distribution of insolvency claims is highly skewed. A few large insolvencies represent most of the damage. We therefore provide a detailed overview of the top-25 bankruptcies by damage in the Netherlands. These numbers highlight the societal impact and importance of timely and reliable going concern reporting.

The biggest concern for society is when a company files for bankruptcy and the auditor did issue an unqualified audit opinion without a paragraph pointing to the material uncertainty relating to going concern within 12 months (ISA 570.13, IAS 1) from the last balance sheet date (type II 'error'). The opposite situation, where the auditor recognizes a material uncertainty related to going concern and reports this in the audit opinion and the company does subsequently not file for bankruptcy (type I 'error') could make going concern

[1] In 2020 10,58% of issued statutory audit opinions had a GCO according to the AFM. We do not focus on the GCO rate in 2020 here due to the external shock of the COVID-19 pandemic. Another important note is that the AFM Monitor also includes "unknown" audit opinions. The percentages reflected here are calculated adjusted for the unknown audit opinions. The nature of the audit opinion was reported to be unknown by the audit firm for 15,62% (38,10%) of the statutory audit opinions issued in 2019 (2012).

opinions less informative, which is also an issue. As the primary concern of society and regulators are the type II errors, this study focus is on the companies that went bankrupt and examine their reporting behavior in the three years prior to the bankruptcy.

From data of more than 208.328 organizations we identified 572 bankruptcies of organizations that were, at some point, subject to mandatory audit in the three years leading up to the insolvency. We find that only 12 percent of companies file timely audited financial statements or an exemption in the year prior to bankruptcy, 56 percent (64) in year two (three) before the bankruptcy. Furthermore, we find that the reporting lag, the time between the balance sheet date and the publication of the financial statements at the trade register, is with an average of 295 days (median 303 days) relatively long. The non- or delayed filing of (an exemption for) adopted financial statements is therefore an important red flag for stakeholders. Moreover, management discloses discontinuity risks in only 29 percent of the pre-bankruptcy filings.

In the year before the bankruptcy, audit opinions are only filed for 11 percent of organizations. Where this was 65 percent in year two before the bankruptcy and 79 percent in year three. However, where audit opinions for the pre bankruptcy year were filed, 63 percent of those opinions fail to recognize a material uncertainty relating to going concern (GCO). We find 39 type-II GCO errors, where a total of 183,979 statutory audits have been performed in this period. In only 23 cases the auditor issued a GCO, and the organization did end up in bankruptcy in the 12 months after balance sheet date. Based on the AFM Monitor market data we estimate the type-I (II) GCO error rate at 99.26 (0.03) percent of audit opinions issued. We find that in 99.26 (92.16) percent of instances a bankruptcy does not follow 12 (36) months after the balance sheet for which a GCO was issued. The risks of a self-fulfilling prophecy effect of a GCO, where a GCO would directly cause a bankruptcy, on a macro-level therefore seems relatively small. Finally, we observe an increasing trend in the amount of GCO's issued and a corresponding increase in the type-I error rate over the years. The Type-II error rate is small, depended on 39 events. However, the last Type-II error we identified was for an audit opinion issued in 2019, for the auditee's fiscal year 2018. We did not observe any Type-II GCO errors for the audit opinions issued in 2020.

II. Research Method

We obtained data for the Dutch economy from the National Statistics Bureau (CBS). The CBS estimates the unpaid debt of insolvent entities is estimated at EUR 4.4 billion or 0.7 percent of GDP (CBS 2015). For approximately 30.1 percent of insolvencies criminal or unlawful harm is done to the creditors according to CBS (2015). This is currently the last year for which CBS has an estimate relating to the unpaid debt of insolvent companies and organizations is 2015.

Not all companies and institutions in the CBS bankruptcy statistics are subject to statutory audit under the law on the supervision of audit firms (*Wet toezicht accountantsorgsanisaties*) and are therefore not audited by audit firms under AFM audit oversight[2]. We contacted the AFM data analytics team to obtain descriptive data from the AFM Monitor. The AFM Monitor is a yearly survey of all audit firms with an audit license and includes data on the (self-reported) number of statutory audits and the (self-reported) number of GCO’s for the entire Dutch statutory audit market. Based on this data we can calculate the percentage of GCO’s of all the statutory audit opinions. These numbers are reflected in Table 1 and show that the percentage of GCO’s issued varies between 2.10 percent in 2016 and 10.58 percent in 2020. However, the high percentages of GCO’s in 2020 is most likely highly impacted by the outbreak of the COVID-19 epidemic, which caused additional uncertainties with respect to the continuity of many organizations.

[INSERT TABLE 1 HERE]

Our goal is to collect complete and reliable data on the individual insolvencies of organizations subject to statutory audit that went bankrupt between 2012 and 2020 and the three fiscal years before the individual bankruptcy filing. First, all bankruptcy related de-registration of firms between 2012 and 2020 were identified in the Reach database of Bureau van Dijk. To ensure completeness a dataset was purchased from Company.info with all organizations in the Netherlands that filed an income statement. Only mid-sized and larger entities are required to file an income statement in the Netherlands and these organizations are also subject to mandatory audit. Second, the trade register was consulted for 208.328 legal entities for which an auditor was involved at a certain point in time according to Company.info. These datasets were merged, from which 2,043 unique bankruptcies of individual legal entities were identified.

Small legal entities and certain legal forms that are not subject to mandatory statutory audit were left out. The same applies for bankruptcies for which we were not able to purchase all financial statements at the trade register, which left a sample of 572 bankruptcies between 2012 and 2020. We filtered out organizations that are not subject to mandatory audit in at

[2] The Authority Financial Markets is the governmental oversight body of the Dutch auditing profession.

least one of the three years leading up to the bankruptcy by the size criteria in the Dutch commercial code, the filing size the reported to the chamber of commerce and/or the involvement of an auditor that follows the statutory audit framework of the audit opinion. Most insolvencies in our sample were in the wholesale and retail, manufacturing, and construction industries respectively.

[INSERT TABLE 2 HERE]

We collected all originally filed PDF documents of the financial statements and the audit opinion from Company.info, the Reach database from Bureau van Dijk and/or directly from the trade register. We excluded 11 bankruptcies since we were not able to purchase all originally filed financial statements for these organizations. Financial statement data were obtained from Reach and supplemented with hand-collected data from the original filed financial statements. Information relating to the audit opinions were collected using an automated data gathering algorithm and independently hand-collected data to test the performance of the data gathering algorithm. We reconciled all differences between the hand collection and the algorithm. Furthermore, we performed extensive logical checks on the hand-collection and re-performed a fifth of the hand collection work for the quality review. The insolvency claims information was obtained by hand collection from the most recent insolvency reports filed at the courts.

III. Empirical Results

Our first analysis is on the filing of financial statements in the three years before bankruptcy. Second, we analyze the disclosure of discontinuity risk by management. Third, we investigate whether organizations received a going concern or otherwise modified audit opinion. Fourth, we discuss our estimation of the jobs and debt affected by insolvencies and provide an overview of the largest bankruptcies in the Netherlands by insolvency claims. Lastly, we discuss the GCO error rates.

Filing

Financial statements generally need to be prepared within five months after balance sheet date (Art 2:210 sub 1 BW). This period can be extended with a maximum of five months by the general shareholders meeting due to special circumstances[3]. The prepared financial

[3] As Vergoossen and Meershoek (2018) point out, over half of organizations make use of this extension, which questions the 'special circumstances' required by the law.

statements need to be audited by an audit firm with an AFM license and then be adopted by the general meeting of shareholders within two months. Without the necessary audit opinion, financial statements cannot be adopted. The audited financial statements need to be filed within eight days after adoption (Art 2:394 sub 1 BW). The financial statements need to be filed and published within twelve months after the balance sheet date (Art 2:394 sub 3 BW)[4]. An alternative to the preparation, adoption and filing of financial statements is to file a liability statement at the trade register (Art 2:403 BW), where the parent company that publishes consolidated audited financial statements declares liability for the debt of the subsidiary, which then does not need to prepare, adopt, and file its own financial statements.

Since 1987 the Dutch commercial law states that the non-timely filing of financial statements leads to the non-rebuttable assumption that the organization was improperly managed and the rebuttable assumption that this improper management caused the bankruptcy (Knegt et al. 2005). However, as Knegt et al (2005) point out, it is usually not feasible for the insolvency collector to start a lawsuit against the management, since this is a costly procedure and usually it is hard to collect any assets from that. According to an insolvency specialist and professor we interviewed, this issue got worse due to high court ruling 2015:3636 HR Hoeksema/RM Trade. This ruling allows bankruptcy proceedings to not even start due to lack of assets (*'bij gebrek aan baten'*) and therefore does not even start the procedure of a lawsuit against management. In a recent study Pool, Pluut, and Vriesendrop (2021) find that in only 46 percent of bankruptcies the insolvency collector acts upon reported irregularities. Insolvency collectors only act on 53 percent of violations of the bookkeeping duty and 35 percent of the instances of violation of the filing obligations. In short, executives of bankrupt insolvencies might just get away with their misbehavior.

We investigated whether audited and adopted financial statements were timely filed at the trade register. We find that only 12 percent of organizations file timely audited financial statements or an exemption in the year prior to bankruptcy, 56 percent (64 percent) in year two (three) before the bankruptcy. The bankruptcy filing does probably interrupt the financial statement preparation and audit in the year before bankruptcy, evidenced by the low non-filing rate of 84 percent compared with 10 (4) percent for year two (three) before the bankruptcy.

[INSERT FIGURE 1 HERE]

[4] For our analyses we therefore use a criterium of 365 days after balance sheet date for fiscal years 2016 and later. For fiscal years before 2016 the final filing deadline was 396 days, which we reflected in our data.

[INSERT TABLE 3 HERE]

The relative low percentage of timely complete filing of financial statements or exemptions is mainly due to filing past the twelve-month deadline, the filing of non-adopted non-audited draft financial statements (*'voorlopige jaarrekening'*) and the non-filing of audit opinions. These results highlight the problem of the timeliness and quality of filings and echo earlier concerns by Vergoossen and Meershoek (2018), Litjens and Suijs (2020), and Bosman (2021). We also find an effect of the corona pandemic on the timeliness of filings. On April 24, 2020, the Temporary Law COVID-19 Justice and Security ('*Tijdelijke wet COVID-19 Justitie en Veiligheid'*) was enacted in the Netherlands[5]. This law (temporarily) changes the Dutch Civil Code to the extent that the late filing of financial statements is no longer an improper performance of duties of company directors. Therefore, company directors are not personally liable for the company's liabilities in case of insolvency if the filing delay is due to the corona-crisis. This law therefore impacts our data for bankruptcies in 2020, that still needed to prepare and adopt the financial statements for fiscal years ending in 2019. We find 91% of 2019 financial statements are completely missing for companies that filed for bankruptcy in 2020, where the average over the rest of the sample period is 81%.

Moreover, for those companies that do file, we find that the reporting lag, the time between the balance sheet date and the publication of the financial statements at the trade register, is with an average of 295 days (median 303 days) relatively long. The non-filing or delayed filing of (an exemption for) adopted financial statements is therefore an important red flag for stakeholders.

Management Disclosure

An important principle in financial reporting is that management is responsible to prepare the information and make assertions which are then audited by the auditor. The question therefore arises whether management makes disclosures relating to the discontinuity risks in their financial statements. We hand collected data from the accounting principles section and the disclosures to the financial statements. To the extend management discusses the going concern situation, other than a standard text stating that the financial statements have been prepared under the going concern assumption, our dummy variable takes the value one.

[INSERT FIGURE 2 HERE]

[5] The authors are indebted to Philip Wallage for pointing this out.

We find that management discloses continuity risks only in 29 percent of filed and adopted financial statements for the year prior to bankruptcy. The large majority of adopted financial statements therefore do not have a disclosure of management of the continuity risk or situation. This finding speaks to the need of a resilience statement with an explicit going concern assessment by management as proposed by Brydon (2019).

Audit Opinions

In the year before the bankruptcy, audit opinions are filed for only 11 percent of organizations. Where this was 64 percent in year two before the bankruptcy and 79 percent in year three. We find 39 type-II GCO errors, where a total of 183,979 statutory audits have been performed in this period. However, where audit opinions for the pre bankruptcy year were filed, 63 percent (39 out of 62) of opinions fail to recognize a material uncertainty relating to going concern (GCO). In only 23 cases the auditor issued a GCO, and the organization did end up in bankruptcy in the 12 months after balance sheet date. New information might come up after the issuance of an audit opinion, which therefore could not be reflected in the audit opinion but could impact the continuity of the organization. These results are consistent with the results of Litjens (2010) and slightly worse than the estimation of US listed firms (Gutierrez, Krupa, Minutti-Meza, and Vulcheva 2019).

[INSERT FIGURE 3 HERE]

Besides whether the auditor issued a GCO or not, we are also interested in modified audit opinions (MAOs). MAOs include qualified audit opinions, disclaimer of opinions and adverse audit opinions. In the year prior to bankruptcy 9 percent (6 out of 64) audit opinions is modified, compared to 19 (14) percent in year two (three) before bankruptcy. The relatively high instances of MAOs indicate issues with the financial statements and/or internal control system of the organizations that end up in bankruptcy.

[INSERT FIGURE 4 HERE]

Besides a GCO or MAO the auditor can also include a key audit matter (KAM) in its audit opinion. The auditor might inform stakeholders in a KAM about the discontinuity risk and how the audit firm addressed this. KAMs are however voluntary for non-public interest entity (PIE) audits, and we identified 14 KAM's in the audit opinions in the three years before bankruptcy. From those KAM's only half discussed the discontinuity risk.

Jobs and Debt affected by Insolvencies

Reporting and auditing comes at a cost, however as the CBS statistics show bankruptcies are also costly for society. We obtained the most recent reports of the bankruptcy collectors from the databases Faillisementsverslagen.com and Company.info, as of the summer of 2021. We hand collected data on the insolvency claims as of the time of bankruptcy, including the portion related to the tax authorities and employee insurance agency (*'UWV'*).[6] The number of employees was collected from the most recent filed financial statements.

For this analysis we grouped entities belonging to the same ultimate parent based on the shareholder structure available in Company.info, we reviewed whether bankruptcy declarations were made at or around the same date and manually reviewed the dataset on double counting. We identified 432 bankruptcies of independent companies or groups. Creditors sometimes make the same claim to several entities belonging to the same ultimate parent, for example due to an Art 2:403 BW liability statement or guarantee. We read the insolvency reports to identify such double counting or double claims where possible and manually excluded these from our dataset.

As a first step we prepared descriptive data on the 25 largest bankruptcies by debt. This debt totals EUR 11.446,5 million euros in insolvency claims of which EUR 213.9 million relates to claims of the tax authorities and EUR 27.5 million to the employee insurance agency. It is important to note that these figures are before the recovery rate achieved by the insolvency collector, this data proved to be very hard to structurally collect. A total of 43,449 employees were involved in these bankruptcies. This number is also without corrections to the later sale of certain segments, such as parts of the La Place activities of V&D which were later sold by the insolvency collector. The last four columns on the right of Table 4 relate to the filing date of the last adopted financial statements, the years before the year of bankruptcy, the audit firm involved and whether a GCO was issued, respectively.

[INSERT TABLE 4 HERE]

We made some surprising findings. The largest bankruptcy by claim size, Petroplus International B.V., did not file Dutch financial statements prior to its bankruptcy. Petroplus

[6] We discussed our data procedure with a financial specialist of the Dutch anti-fraud agency FIOD, a PhD candidate in law who published on data from insolvency reports and an insolvency collector. Furthermore, we reviewed the method adopted by Knegt et al (2005). Based on this information we collected these data-points from the standardized chapters 8.2, 8.3, 8.4 and 8.6 from the Dutch insolvency court proceedings reports. We translated all amounts to absolute numbers in Euro's.

only filed financial statements of a Swiss AG, audited by a Swiss auditor, without filing an Art 2:403 BW liability statement. Another interesting finding is that there was no material uncertainty in the audit opinion of Royal Imtech N.V., only three months before its bankruptcy. The going concern risk was a key audit matter (KAM), however the auditor stated in their audit opinion. The auditor even goes so far as stating in the KAM description: *"Although a level of uncertainty remains, we concur with management's conclusion in note 2 to the consolidated financial statements that there remain no material uncertainties with respect to going concern"* (Royal Imtech N.V. 2015, 166). Three months later the bankruptcy proceedings were opened for Imtech. The (fraudulent) bankruptcy of Eurocommerce caused its auditor Nijhof to collapse as well. Jubilant Energy (Holding) B.V. received a GCO from KPMG two years before its bankruptcy and then switched to the audit firm Londen en Van Holland, which did not issue a GCO in the year before bankruptcy. We identified four instances of organizations who shift to a more lenient auditor relating to GCO in our sample.

We estimate the jobs and debt affected from these bankruptcies as of the time of the bankruptcy at 127.670 jobs and insolvency claims of EUR 15,742.9 million, from which EUR 801.2 million relates to the tax authorities and 136.8 million to the employee insurance agency. Compared to the estimation of the top-25 bankruptcies, this shows the highly skewed nature of bankruptcy damages. The largest bankruptcies cause most of the damage.

[INSERT FIGURE 5 HERE]

GCO Error Rates

Given the extensive data collection of our study, we assume that we identified all bankruptcies of organizations subject to statutory audit. Combined with the data from the AFM Monitor we can estimate the statistical "error" rates for the Dutch auditing profession. GCO Type-I error rates are defined as the issuance of a GCO without the bankruptcy of the auditee within 12 months after balance sheet date (false positive). Type-II errors are defined instances where a non-GCO audit opinion was issued, and the auditee subsequently goes bankrupt within 12 months after the last audited balance sheet (false negative). We made a separate estimation for the audit opinions 2012 to 2019 to exclude the effect of the Covid-epidemic. We estimate the GCO type-I (II) error rate at 99.26 (0.03) percent and find limited impact of the Covid-epidemic year 2020. Furthermore, we limited our sample to the audit opinions issued between calendar years 2012 and 2018, to study the long-term effects of a GCO. We find that in 92.16 percent of instances a bankruptcy does not follow 36 months after the balance sheet for which a GCO was issued. The risks of a self-fulfilling prophecy effect of a GCO, where a GCO would directly cause a bankruptcy, on a macro-level therefore seems relatively small. Finally, we observe an increasing trend in the amount of GCO's issued and a corresponding increase in the type-I error rate over the years. The Type-II error rate is small, depended on 39 events. However, the last Type-II error we identified was for an audit opinion issued in 2019, for the auditee's fiscal year 2018. We did not observe any Type-II GCO errors for the audit opinions issued in 2020.

[INSERT TABLE 5 HERE]

[INSERT FIGURE 6 HERE]

[INSERT FIGURE 7 HERE]

IV. Conclusion and limitations

From data of more than 208.328 organizations we identified 572 bankruptcies subject to mandatory audit between 2012 and 2020. Therefore, at most 0.31 percent of all statutory audits is affected by bankruptcies and bankruptcies of audit clients are therefore relatively rare events[7]. We estimate the total number of jobs and debt affected by the bankruptcies at 127.670 jobs and insolvency claims of EUR 15,742.9 million, from which EUR 801.2 million relates to the tax authorities and 136.8 million to the employee insurance agency. We find that the distribution of debt affected by insolvencies is highly left (positively) skewed, and largest bankruptcies therefore cause most of the damage. These numbers highlight the societal impact and importance of timely and reliable going concern reporting, also when bankruptcy of statutory audit clients is a rare event.

We find that only 12 percent of companies file timely audited financial statements or an exemption in the year prior to bankruptcy, 56 percent (64) in year two (three) before the bankruptcy. This finding calls for the implementation of a follow-up system that forces organization to file timely audited and adopted financial statements in the Netherlands. Germany successfully implemented such a system in 2006 and significantly improved the compliance rate with financial regulation (Bernard, 2016).

In addition, we find that management discloses discontinuity risks in just 29 percent of the pre-bankruptcy filings. This finding speaks to the need of a resilience statement with an explicit

[7] We stress at most, since not all pre-bankruptcy financial statements are audited and therefore included in the 183,979.

going concern assessment by management as proposed by Brydon (2019). Only 11 percent of organizations have a filed audit opinion for the fiscal year prior to bankruptcy. We find 39 type-II GCO errors, where a total of 183,979 statutory audits have been performed in this period. However, for the majority (63 percent) of audit opinions issued for the fiscal year before the insolvency, the auditor did not include a material uncertainty relating to going concern (GCO) in its audit opinion. We estimate the GCO type-I (II) error rate at 99.26 (0.03) percent. The overall macro informativeness of going concern opinions seems therefore rather poor. Yet, a GCO is only a single indicator, where for example financial ratio's including market data can provide richer (additional information) with confidence intervals and could be complemented by GCO information (Gutierrez et al. 2020).

It is important to recognize the limitations of our research. We selected on whether a company ended up in bankruptcy and therefore did not include situations where the auditor issued a GCO but the company, ultimately, survived. There is currently no database of register with the approximately 20,000 yearly statutory audits that are performed in the Netherlands, including whether a GCO was issued. Our data therefore only includes instances where a bankruptcy was eventually necessary and not those situations where a GCO timely warned stakeholders and a bankruptcy was avoided. In short, we do currently not have a control group with non-bankrupt organizations under statutory audit. There are several instances where an organization does not end up in bankruptcy, but a GCO was still justified, for example because of non-bankruptcy default events, debt restructuring, new financing rounds, and/or governmental support, these instances have not been considered in this study.

We identified instances where the auditor did discuss the going concern risk in the audit opinion but did not deem that risk material. For purposes of this study, consistent with prior (international) research, these opinions were not considered GCO's. However, when we do consider the voluntary disclosures, we still observe 39 type-II errors. Another limitation is that we found many non- or incomplete filings. These data gaps made it hard to estimate whether an organization is subject to statutory audit or not. We therefore included organizations subject to mandatory audit in at least one of the three years leading up to the bankruptcy by the size criteria in the Dutch commercial code, the filing size the reported to the chamber of commerce and/or the involvement of an auditor that follows the statutory audit framework of the audit opinion. This procedure might cause an overestimation of the actual bankruptcies subject to statutory audit.

We also observed that the absence of an audit opinion is sometimes described in the filed financial statements as being related to the auditor still working on the going concern assessment. A concern with these situations is that, due to client confidentiality, the auditor does currently not have an own communication channel to inform the stakeholders about the material going concern risk it identified and is dependent on management to make this disclosure.

Lastly, it is important to note that our estimation of the debt affected by insolvencies of statutory audit clients is calculated before considering the recovery rate achieved by the insolvency collector or the sale and continuation of parts of the bankrupt assets, as this data proved to be very hard to reliably collect. Despite these limitations we believe this study is an important contribution to the current debate over the (Dutch) auditing profession and in understanding the challenges and issues related to auditor's going concern report.

References

Bernard, D. (2016). Is the risk of product market predation a cost of disclosure? *Journal of Accounting and Economics*, *62*(2–3), 305–325. https://doi.org/10.1016/j.jacceco.2016.07.001

Bosman, T. (2021). The measurement of audit quality in the Netherlands: a practical note. *Maandblad Voor Accountancy En Bedrijfseconomie*, *95*(1/2), 17–31. https://doi.org/10.5117/mab.95.56820

Brydon, D. (2019). *Assess, Assure and Inform: Improving Audit Quality and Effectiveness*. (December). Retrieved from https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/852960/brydon-review-final-report.pdf

Carson, E., Fargher, N. L., Geiger, M. A., Lennox, C. S., Raghunandan, K., & Willekens, M. (2013). Audit reporting for going-concern uncertainty: A research synthesis. *Auditing*, *32*(SUPPL.1), 353–384. https://doi.org/10.2308/ajpt-50324

Centraal Bureau voor de Statistiek (CBS). (2015). Faillissementen: oorzaken en schulden 2015. *Contemporary Accounting Research*, 1–87. Retrieved from https://www.cbs.nl/-/media/_pdf/2016/50/2016-faillissementen-oorzaken-en-schulden-2015.pdf

Chy, M., & Hope, O. K. (2021). Real effects of auditor conservatism. *Review of Accounting Studies*, (November 2020). https://doi.org/10.1007/s11142-020-09568-3

CTA. (2020). *Vertrouwen op controle - Rapport van de Commissie toekomst accountancysector*. Retrieved from https://www.rijksoverheid.nl/documenten/kamerstukken/2020/01/30/vertrouwen-op-controle-eindrapport-van-de-commissie-toekomst-accountancysector

Deng, M., Melumad, N., & Shibano, T. (2012). Auditors' Liability, Investments, and Capital Markets: A Potential Unintended Consequence of the Sarbanes-Oxley Act. *Journal of Accounting Research*, *50*(5), 1179–1215. https://doi.org/10.1111/j.1475-679X.2012.00458.x

Geiger, M. A., Gold, A., & Wallage, P. (2019). *A Synthesis of Research on Auditor Reporting on Going- Concern Uncertainty: An Update and Extension*. Retrieved from https://foundationforauditingresearch.org/files/papers/a-synthesis-of-research-on-auditor-reporting-on-going-concern-uncertainty.pdf

Gutierrez, E., Krupa, J., Minutti-Meza, M., Vulcheva, M. (2020). Are going concern opinions useful in predicting client defailts? Universidad de Chile Working Paper

Gutierrez, E.F., Krupa, J., Minutti-Meza, M., & Vulcheva, M, Do going concern opinions provide incremental information to predict corporate defaults? (2020). Review of Accounting Studies, forthcoming, http://dx.doi.org/10.2139/ssrn.2910604

IAASB. (2020). *FRAUD AND GOING CONCERN IN AN AUDIT OF FINANCIAL STATEMENTS*. Retrieved from https://www.iaasb.org/publications/fraud-and-going-concern-audit-financial-statements

Knegt, R., Beukelman, A. M., Popma, J. R., van Willigenburg, P., & Zaal, I. (2005). *Fraude en misbruik bij faillissement: een onderzoek naar hun aard en omvang en naar de mogelijkheden van bestrijding*. Retrieved from https://zoek.officielebekendmakingen.nl/kst-27244-25-b1.pdf

Litjens, R. (2010). Meer verklatingen met toelichtende paragraaf. *De Accountant, maart 2010, 24-27*. Retrieved from: https://www.accountant.nl/globalassets/accountant.nl/blad/2010-nr.-3/acc_2010_3_continuiteit_en_accountantsverklaring.pdf

Litjens, R., & Suijs, J. (2020). *Can Firms foresee Proprietary Cost of Mandatory Public Disclosure ?* Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3588345

Poot, J., Pluut, H., & Vriesendorp. R. (2021). Belemmeringen bij de aanpal van onregelmatigheden door de curator. *Recht der Werkelijkheid, 42(1),* https://doi.org/10.5553/RdW/138064242021042001002

Royal Imtech N.V. (2015). *Annual report 2014*. Gouda.

Thoman, L. (1996). Legal damages and auditor efforts. *Contemporary Accounting Research*, *13*(1), 275–306. https://doi.org/10.1111/j.1911-3846.1996.tb00501.x

Vergoossen, R. G. A., & Meershoek, T. (2018). De gedeponeerde jaarstukken van controleplichtige rechtspersonen. *Maandblad Voor Accountancy En Bedrijfseconomie*, *92*(3/4), 97–109. https://doi.org/10.5117/mab.93.24968

TABLE 1
Sample Selection and Composition

Panel A: Sample Selection

Bankruptcies identified between 2012 and 2020	**2,043**
Small legal entities - not subject to statutory audit	(1,308)
General partnerships - not subject to statutory audit	(63)
Sole proprietorship - not subject to statutory audit	(42)
Foundations - not subject to statutory audit	(36)
Not able to purchase all filed financial statements	(11)
Limited partnerships - not subject to statutory audit	(7)
Partnerships – not subject to statutory audit	(4)
Bankruptcies between 2012 and 2020 subject to statutory audit	**572**

Panel B: Sample Composition per Industry

Section	Two-digit NACE Rev.2	Obs
A	Agriculture, forestry, and fishing	4
B	Mining and quarrying	-
C	Manufacturing	105
D	Electricity, gas, steam, and air conditioning supply	4
E	Water supply; sewerage, waste management and remediation activities	4
F	Construction	97
G	Wholesale and retail trade; repair of motor vehicles and motorcycles	157
H	Transportation and storage	14
I	Accommodation and food service activities	4
J	Information and communication	12
K	Financial and insurance activities	49
L	Real estate activities	12
M	Professional, scientific, and technical activities	44
N	Administrative and support service activities	35
O	Public administration and defense; compulsory social security	-
P	Education	6
Q	Human health and social work activities	23
R	Arts, entertainment, and recreation	1
S	Other service activities	1
		572

TABLE 1
Bankruptcy and Filing of Financial Statements in The Netherlands

	Source	2020	2019	2018	2017	2016	2015	2014	2013	2012	SUM
Bankruptcies of all Dutch Companies and Institutions	CBS	2,703	3,209	3,145	3,291	4,399	5,271	6,645	8,376	7,349	**44,388**
Identified Bankruptcies subject to statutory Audit	TABLE 2	35	70	49	25	55	67	72	89	110	**572**
Total statutory Audit Opinions	AFM Monitor	19,450	19,333	19,870	19,783	20,588	20,854	21,753	20,920	21,428	**183,979**
Statutory Audit Opinions: Nature of Opinion unknown	AFM Monitor	(2,819)	(3,019)	(3,329)	(3,464)	(3,830)	(4,207)	(7,725)	(4,604)	(8,165)	**(41,162)**
Statutory Audit Opinions: Nature is known	AFM Monitor	16,631	16,314	16,541	16,319	16,758	16,647	14,028	16,316	13,263	**142,817**
Statutory Going Concern Opinions (GCO)	AFM Monitor	1,759	504	494	434	352	390	337	408	301	**4,979**
Percentage GCO as % of known Opinions	Calculation	*10.58%*	*3.09%*	*2.99%*	*2.66%*	*2.10%*	*2.34%*	*2.40%*	*2.50%*	*2.27%*	***3.49%***

TABLE 2

Sample Selection and Composition

Panel A: Sample Selection

Bankruptcies identified between 2012 and 2020	**2,043**
Small legal entities - not subject to statutory audit	(1,308)
General partnerships - not subject to statutory audit	(63)
Sole proprietorship - not subject to statutory audit	(42)
Foundations - not subject to statutory audit	(36)
Not able to purchase all filed financial statements	(11)
Limited partnerships - not subject to statutory audit	(7)
Partnerships – not subject to statutory audit	(4)
Bankruptcies between 2012 and 2020 subject to statutory audit	**572**

Panel B: Sample Composition per Industry

Section	**Two-digit NACE Rev.2**	**Obs**
A	Agriculture, forestry, and fishing	4
B	Mining and quarrying	-
C	Manufacturing	105
D	Electricity, gas, steam, and air conditioning supply	4
E	Water supply; sewerage, waste management and remediation activities	4
F	Construction	97
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H	Transportation and storage	14
I	Accommodation and food service activities	4
J	Information and communication	12
K	Financial and insurance activities	49
L	Real estate activities	12
M	Professional, scientific, and technical activities	44
N	Administrative and support service activities	35
O	Public administration and defense; compulsory social security	-
P	Education	6
Q	Human health and social work activities	23
R	Arts, entertainment, and recreation	1
S	Other service activities	1
		572

TABLE 3
Tijdig deponeren van gecontroleerde jaarrekeningen

Aantal Jaren tot Faillissement	**t-1**	**t-2**	**t-3**
Filed timely FS with audit Opinion	10.49%	52.45%	62.41%
Filed 403 Liability Statement	1.92%	3.15%	1.40%
Timely and complete Filings	12.41%	55.59%	63.81%
Filed FS with Audit Opinion past Deadline	0.35%	12.41%	17.13%
Filed timely FS without Audit Opinion	2.80%	7.52%	7.52%
Files FS without Audit Opinion past Deadline	0.70%	4.20%	2.45%
Filed Draft Financial Statements	2.45%	10.49%	4.72%
Non-Filings	81.29%	9.79%	4.37%
Overdue and/or incomplete Filings	87.59%	44.41%	36.19%

TABLE 4
Top-25 Bankruptcies 2012-2020 by Insolvency Claims

	Bankrupt Group	Insolvency Claims EUR mln	Of which tax authorities	Of which employee insurance	Employees based on FS	Bankrupt on	Filed last adopted FS	FS years until BKR	Auditor	GCO – Material Uncert.
1	Petroplus International B.V.	3,512.4	0.0	0.0	2,845	06-08-2012	3-5-2010	2	EY (CH)	No
2	O.W. Bunker (Netherlands) B.V.	1,610.6	0.3	0.1	7	21-11-2014	22-4-2014	1	Deloitte	No
3	Royal Imtech N.V.	1,413.2	23.0	0.6	22,193	13-8-2015	12-5-2015	1	KPMG	No
4	Phanos N.V. (Arkos)	770.9	14.0	0.5	382	19-5-2012	13-2-2012	2	PwC	Yes
5	Ferdinand Stinger Holding B.V. (Eurocommerce)	502.4	9.4	0.0	113	12-7-2012	23-8-2011	2	Nijhof	No
6	Madroel Energie B.V. (Rijnmond Energie)	402.5	2.2	0.0	0	20-10-2015	6-2-2015	2	PwC	Yes
7	CirclePrinters Holding B.V. (Roto Smeets)	301.6	7.6	4.8	722	30-7-2019	11-2-2019	2	KPMG	No
8	Jubilant Energy (Holding) B.V.	266.8	0.0	0.0	35	22-9-2017	13-3-2017	1	LVH	No
9	PaperlinX Netherlands Holdings B.V.	230.0	0.0	0.0	20	31-7-2015	12-9-2013	2	KPMG	No
10	V&D Group Holding B.V. (V&D / La Place)	223.5	11.1	6.5	6,324	31-12-2015	14-5-2014	1	PwC	No
11	Koops Furness N.V.	206.7	17.0	0.0	1,200	22-8-2014	3-6-2013	2	EY	No
12	Unlimited Sports Group B.V. (Aktiesport / Perry)	195.0	19.8	4.3	1,217	23-2-2016	16-4-2014	3	KPMG	No
13	Swets & Zeitlinger Group B.V. (Jongbloed)	184.2	3.8	3.8	551	29-9-2014	8-8-2014	1	PwC	Yes
14	Mexx Lifestyle B.V.	179.6	2.1	2.2	2,499	13-3-2015	28-5-2014	3	Deloitte	Yes
15	Hoppen-Boudewijn Beheer B.V. (Heja)	175.9	2.6	0.3	24	8-11-2012	12-2-2012	2	PwC	Yes
16	Rosla N.V. (Orca Finance Netherlands N.V.)	168.5	0.0	0.0	1	25-2-2015	24-1-2014	3	EY	Yes
17	Porto Kali Holdings B.V. (Office Real Estate)	167.1	0.2	0.0	0	3-4-2012	23-11-2011	2	RSM	Yes
18	SEI Holding B.V. (Alternative Investments)	156.2	0.0	0.0	1	20-3-2014	27-3-2013	3	V&V	Yes
19	ABIS Shipping Company B.V.	152.3	7.0	0.4	77	29-11-2016	24-2-2015	2	PwC	No
20	Simed Health Care Group B.V.	144.8	0.4	0.6	314	1-5-2015	22-5-2014	3	Horlings	No
21	Thermphos Holding B.V.	125.2	3.8	0.6	1,077	12-2-2013	11-4-2011	3	PwC	No
22	Scheuten Solar Holding B.V.	103.4	0.2	0.3	400	30-3-2012	19-1-2012	2	EY	No
23	Heiploeg Holding B.V.	102.5	1.1	1.8	3,063	28-1-2014	27-3-2013	2	PwC	No
24	Aannemingsbedrijf H.J. Jurriëns B.V.	102.7	46.8	0.5	191	15-4-2016	27-8-2015	2	Blömer	No
25	BVR-Groep N.V.	93.0	41.4	0.4	213	20-2-2013	19-7-2012	2	BDO	No
Total Top-25		**11,446.5**	**213.9**	**27.5**	**43,449**					

Estimation based on the Insolvency Reports available in the summer of 2021.

TABLE 5
GCO "Error" Rates

Panel A: GCO Type I "Error" Rates in the Netherlands 2012 to 2018

Category	2018	2017	2016	2015	2014	2013	2012	SUM
GCO's issued for FY t-1	494	434	352	390	337	408	301	**2,716**
BKR within 12m after BS	2	2	3	1	6	2	4	**20**
BKR in 12-24m after BS (T-1)	17	15	10	8	13	22	18	**103**
BKR in 24-36m after BS (T-1)	5	21	14	9	13	11	17	**90**
GCO's without BKR (T-I)	470	396	325	372	305	373	262	**2,503**
GCO with BKR 12m after BS	0.40%	0.46%	0.85%	0.26%	1.78%	0.49%	1.33%	**0.74%**
Type-I Error Rate								
BKR in 12-24m after BS (T-1)	3.44%	3.46%	2.84%	2.05%	3.86%	0.49%	1.33%	**3.79%**
BKR in 24-36m after BS (T-1)	1.01%	4.84%	3.98%	2.31%	3.86%	5.39%	5.98%	**3.31%**
GCO's without BKR (T-I)	95.14%	91.24%	92.33%	95.38%	90.50%	91.42%	87.04%	**92.16%**

Panel B: Type II "Error" Rates in the Netherlands 2012 to 2020

Category	Source	2012-2020	2012-2019
Statutory Audit Opinions: Nature is known	AFM Monitor	142,817	126,186
Thereof with a GCO	AFM Monitor	(4,979)	(3,220)
Known statutory Audit Opinions without a GCO		137,838	122,966
Type-II GCO Errors	Figure 3	**39**	**39**
Type-II GCO Error Rate		0.03%	0.03%

Estimation of the GCO error rates of the Dutch audit profession, under the assumption that all bankruptcies (BKR) of organizations subject to statutory audit have been identified in this study. GCO Type-I error rates are defined as the issuance of a GCO without the BKR of the auditee within 12 months after balance sheet date (BS). In Panel A we include the period until the audit opinions issued in calendar year 2018, for the auditee's fiscal year 2017, as we want to observe whether the auditee files for bankruptcy up to 36 months after balance sheet date and we have bankruptcy data until the end of 2020.

Type-II errors are defined instances where a non-GCO audit opinion was issued, and the auditee subsequently goes bankrupt within 12 months after the last audited balance sheet. In Panel B we add an alternative sampling period of 2012 to 2019 was added, to ensure our estimated are not significantly impacted by the Covid-19 pandemic. Note that our estimates are conservative because we only include audit opinions for which the nature is known in the number of issued GCO's. The actual Type-I rate might therefore be higher and the actual Type-II rate might be lower.

Figure 1: Filings of Financial Statements Three Years before Bankruptcy

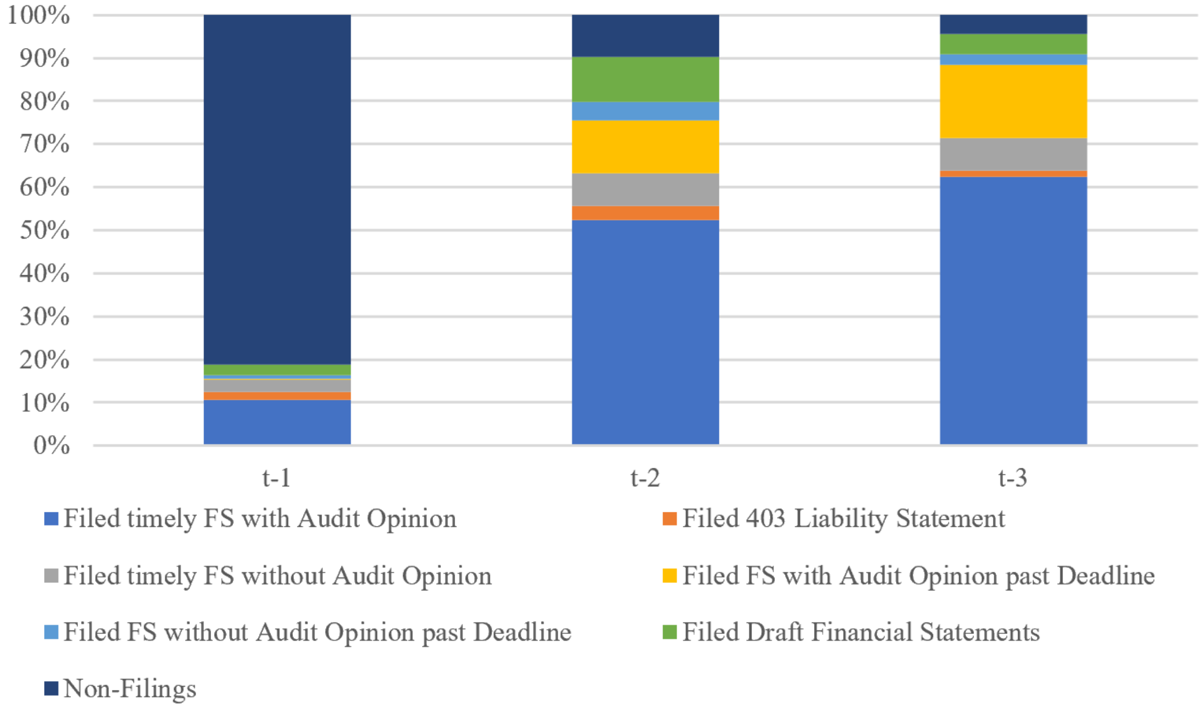

Figure 2: Management Disclosure of Continuity Risks in Filed Financial Statements Three Years before Bankruptcy

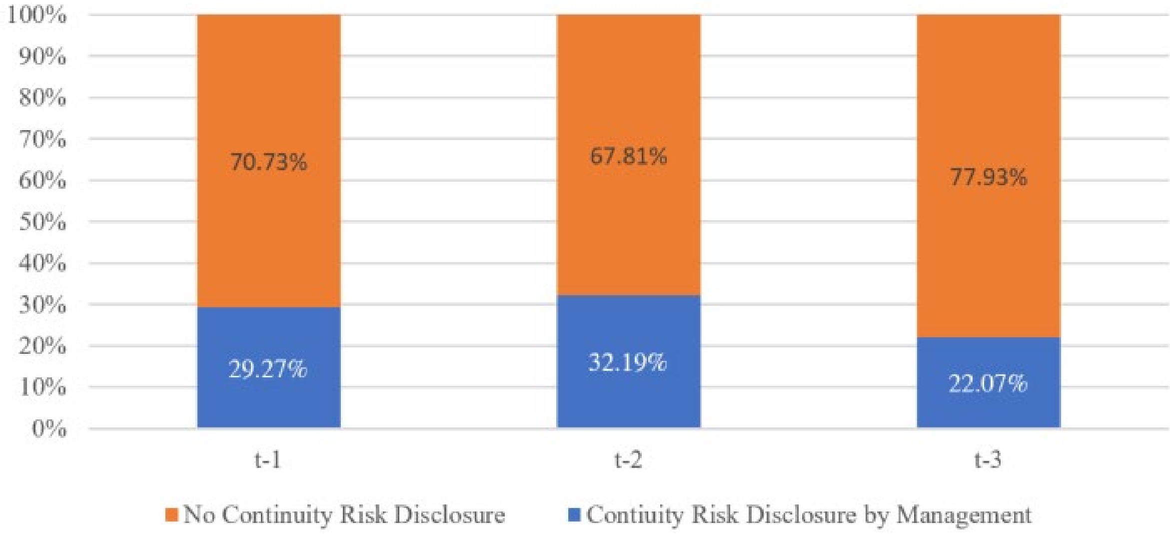

Figure 3: Filing of Going Concern Audit Opinions Three Years before Bankruptcy

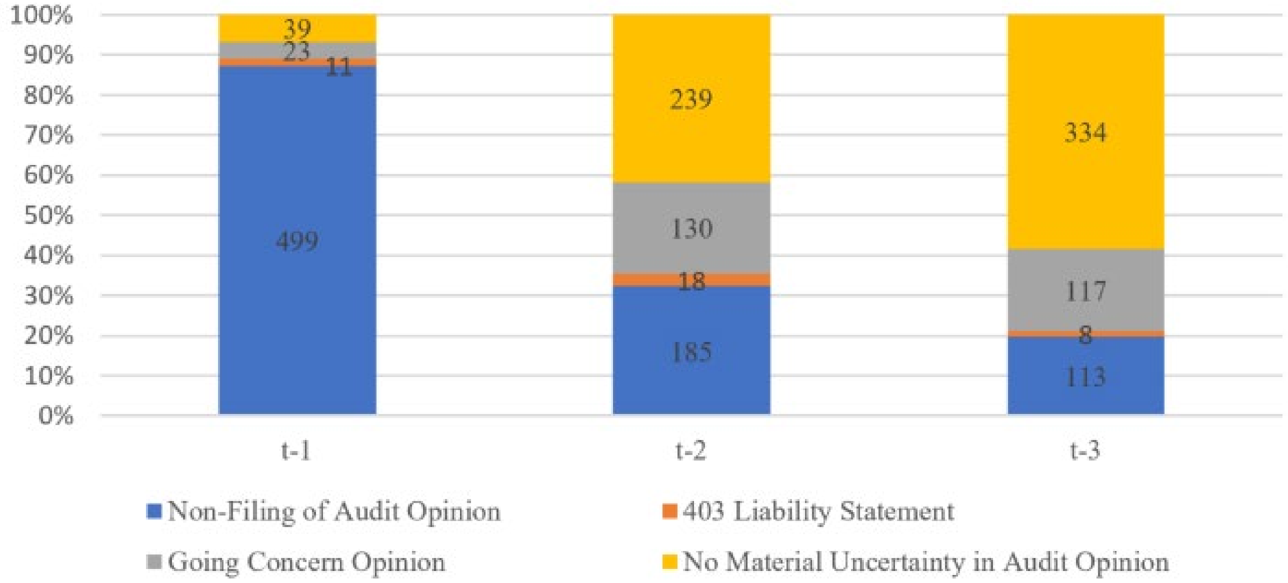

Figure 4: Filing of Modified Audit Opinions Three Years before Bankruptcy

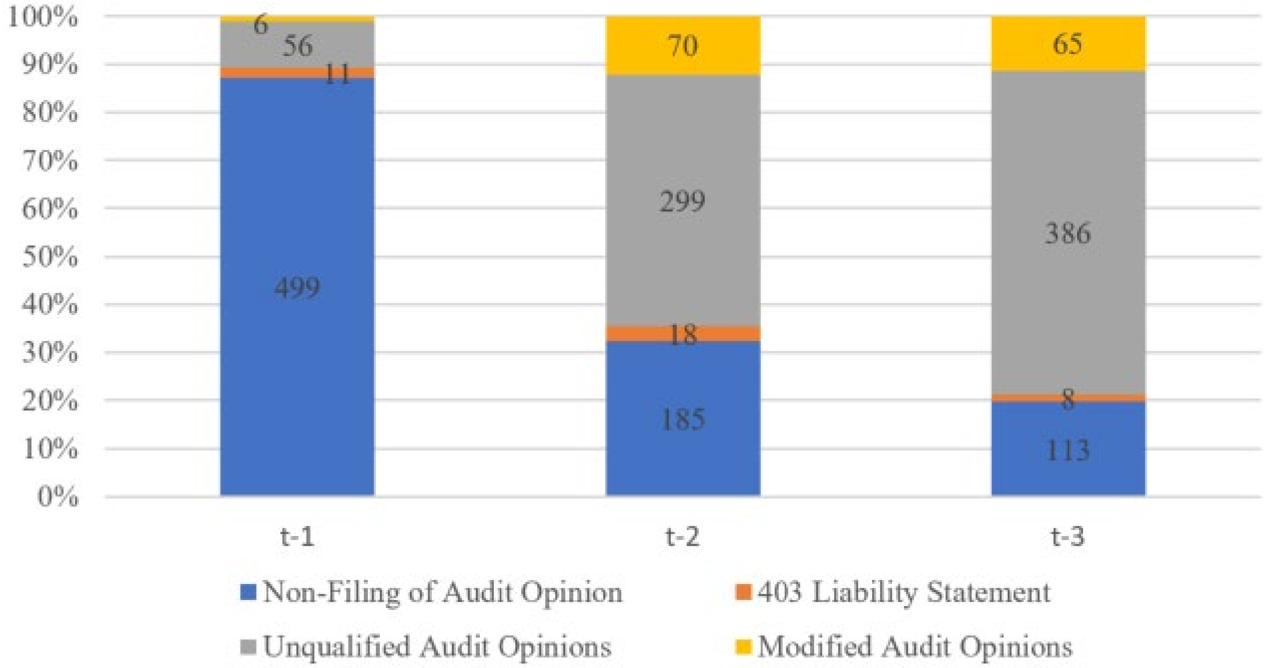

Figure 5: Scatterplot of the Distribution of Debt affected by Insolvency in Euro

(N=432 Bankruptcies of independent groups)

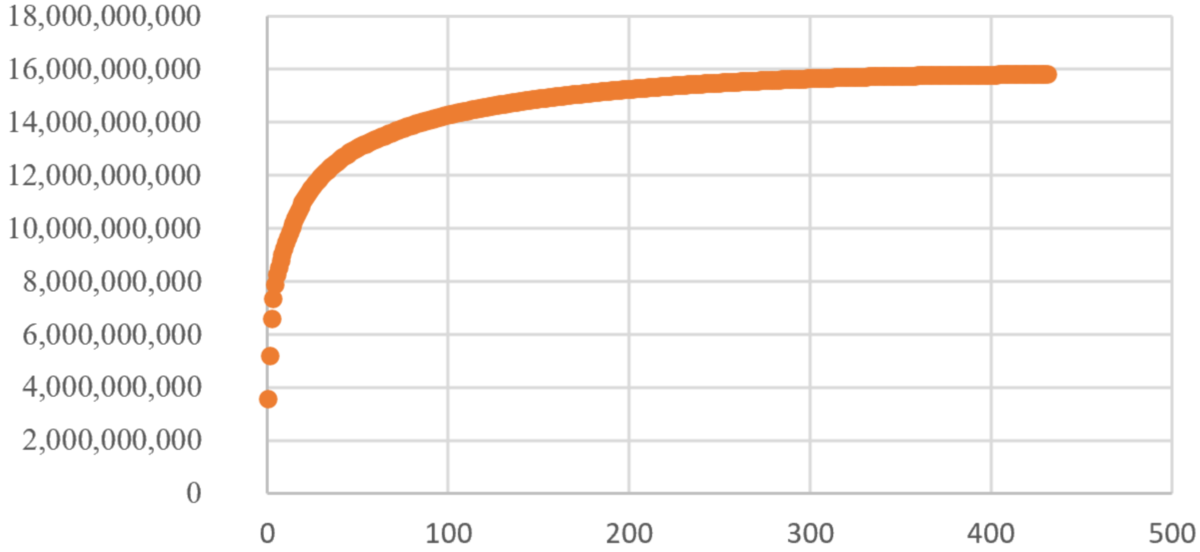

Figure 6: Going Concern Opinions issued and subsequent Bankruptcies

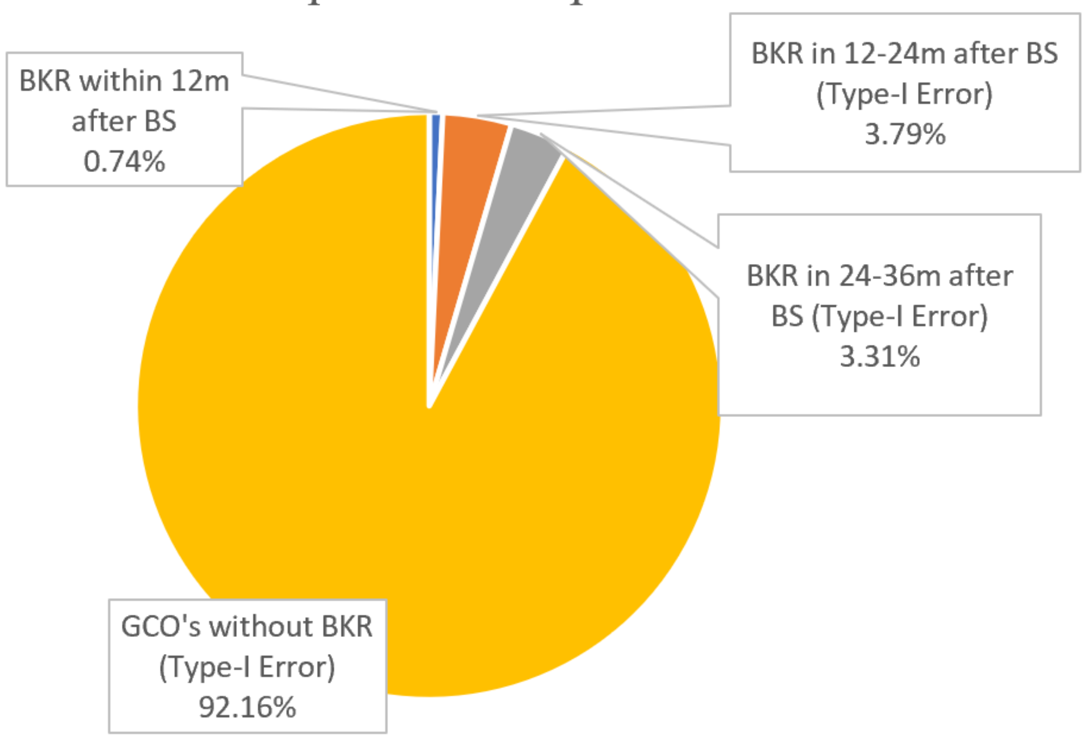

Figure 7: Non-Going Concern Opinions issued and subsequent Bankruptcies