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The impact of changes to auditors' reporting and audit committee strength on bank directors' perceptions and decisions: An experimental investigation

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This study investigates the impact of two changes to the auditor's report—a separate section addressing going concern uncertainties (GCU section [GCUsec]) and information on management and auditor responsibilities—and the characteristics of the audit committee on bank directors' perceptions and decisions. In a $2 \times 2 \times 2$ between-subjects experimental design with 85 German bank directors, we observe that a GCUsec in the auditor's report leads to more unfavourable decisions. Contrarily, explanations of responsibilities and different characteristics of the audit committee do not significantly impact on bank directors' perceptions and decisions. We thus confirm the effectiveness of the International Auditing and Assurance Standards Board (IAASB)'s revision of the International Standard on Auditing (ISA) 570 to enhance the informational value and decision usefulness of the auditor's report.

KEYWORDS
auditor's report, bank director, going concern uncertainty

1 | INTRODUCTION

Factors increasing the decision usefulness of financial statements remain a focal point of research in this field. An important factor is the audit of financial statements by independent auditors who produce auditors' reports which have long been criticised by investors for their poor information value (IAASB, 2011). To increase the value of such reports and thereby reduce the audit expectation gap, some material changes have been implemented over the last decade. Focus group research by Gray et al. (2011) reveals that stakeholders perceive a going concern opinion as important information. One improvement in international and national standards is that if a material uncertainty exists regarding a company's ability to continue as a going concern and adequate disclosure of the material uncertainty is made in the financial statements, the auditor must add to the auditor's report an extended separate section concerning going concern uncertainty (GCU) (referred to below as a GCU section [GCUsec]) (ISA 570 revised, IDW PS 270 n.F.). However, the audit opinion remains unqualified. Previously, the auditor just had to include a note on the GCU in the auditor's report. In this section, the uncertainty is highlighted for the financial statement addressees under the heading 'Material Uncertainty Related to Going Concern', whereas an unmodified audit opinion is expressed (IAASB, 2015a).[1] This paragraph refers to a matter that has been appropriately presented or disclosed in the financial statements that, in the auditor's judgement, is of such importance that it is fundamental to user understanding of the financial statements (IAASB, 2015c). By disclosing a separate section under its own heading, the importance of such information is highlighted and the likelihood is increased that the information is recognised and processed by users. The requirement to add such a separate section to the auditor's report was implemented in 2015 by the ISA 570 (revised) 'going concern', which was converted to German standards by The Institut der

Wirtschaftsprüfer in Deutschland e.V. (Institute of Public Auditors in Germany, Incorporated Association) (IDW) Auditing Standard 270 (revised) in 2018.

While one strand of research investigates the market reactions following the disclosure of a (first-time) GCU, another focuses on the impact regarding the form in which the information is disclosed (Bédard et al., 2019). Usually, the market only reacts to 'new' information. Therefore, it is debatable whether a GCUsec in the auditor's report is informative at all, because it is merely a repetition of the information concerning the GCU, which is also provided in the notes to financial statements (Carson et al., 2013; Mock et al., 2013). However, Anandarajan et al. (2002) and Bédard et al. (2019) show that GCU information in the auditor's report can provide incremental value to investors under specific circumstances, even though it might not contain additional information. In this context, we investigate the added value of a GCUsec for investors and creditors in Germany.

Another change to the auditor's report is the mandatory inclusion of a description of the responsibilities of each party to prepare and audit the financial statements, so as to reduce the audit expectation gap, implemented by the revision of the ISA 700 in 2016. The German IDW PS 400 was adapted similarly in 2016, at first only for the audit of PIEs. The audit expectation gap is defined as the gap between auditor and financial statement user perceptions pertaining to the annual audit of a company's financial statements (IAASB, 2011). While financial statement addressees often expect the absolute assurance that the financial statements are free from material misstatements, auditors merely guarantee reasonable assurance (Epstein & Geiger, 1994). Furthermore, financial statement users attribute the responsibility for the adequacy of the financial statements to the auditors, although, in fact, it is management's responsibility (Anderson et al., 1998). By adding descriptions of each party's responsibilities in the preparation and audit of the financial statements, this ambiguity can be eradicated.

Another recent development concerns aspects of corporate governance, because the Wirecard scandal has shown that corporate governance systems are also still in need of improvement. Currently, the new German law for strengthening the integrity of the financial market (*Finanzmarktintegritätsstärkungsgesetz*—FISG) explicitly addresses changes aimed at strengthening corporate governance. For example, the implementation of an audit committee is now mandatory for PIEs, and it increases the requirements for professional qualifications of audit committee members. At least one member must possess expertise in financial reporting and at least another in auditing. Moreover, the audit committee as a whole shall be familiar with the industry in which the company operates. The audit committee is an important element of corporate governance, as it is a monitoring authority regarding the financial reporting process (Agoglia et al., 2011). Therefore, the strength of a company's audit committee also potentially influences shareholder reactions and decisions, as a strong audit committee raises confidence in the financial statements. For instance, less earnings management is pursued in the presence of an audit committee whose members are independent and possess the appropriate financial expertise (Bédard et al., 2004; Ben Amar, 2014; Xie et al., 2003), which ultimately leads to positive market reactions (DeFond et al., 2005). We assume that the influence of the audit committee and the level of its monitoring duty are even stronger if there is doubt about a company's ability to continue as a going concern in the next business year.

In this paper, we experimentally investigate whether developments in auditor reporting and corporate governance affect bank director perceptions and decision-making in Germany, as regulatory changes were recently implemented concerning these factors. Hence, another commonality of these factors is their topicality. We use a $2 \times 2 \times 2$ between-subjects design with 85 German bank directors. Bank directors are typically highly knowledgeable, acting as creditors, investors and financial intermediaries in the German Corporate Governance setting. Moreover, banks are an important part of corporate governance in Germany (Boolaky & Quick, 2016; Quick & Inwinkl, 2020).

More specifically, we examine the potential impacts of both, a GCUsec and explanations regarding the responsibilities of a company's management and supervisory board, as well as the impact of auditor responsibilities on the bank directors' perceptions and decisions. Concerning corporate governance, we manipulate the strength of the audit committee with regard to financial expertise, independence and frequency of meetings (Agoglia et al., 2011).

We asked specifically about bank directors' decisions in granting loans, making personal investments or recommending share purchases to customers. Furthermore, we asked about the perceived reliability of the financial statements, the ability to continue as a going concern and the financial situation of the company.

Overall, our findings suggest that additionally disclosing a GCUsec in the auditor's report leads to more unfavourable decisions by bank directors. Bank directors recommend and invest less and grant loans with decreased probability if a GCUsec is included in the auditor's report. This could be explained by a reduction in information risk associated with the assurance function of the auditor. Verified information is more credible and results in more intensive reactions to such information. In contrast, we do not find significant impacts of the disclosure of a responsibilities paragraph in the auditor's report or the strength of the audit committee on bank directors' perceptions and decisions.

To the best of our knowledge, this is the first study to focus on the impacts of auditor report expansion and improvement, as well as audit committee strength on bank director perceptions and decisions in Germany.[2] We empirically measure the added value of the ISA 570 (revised) and ISA 700 (revised) and corresponding standards in Germany (revised IDW Auditing Standards 270 and 400) concerning the reporting of a GCU and the responsibility of auditor and management.

Our study contributes to recent research in several ways: First, while prior research mainly investigated whether (the previous) GCU note in the auditor's report had incremental value beyond management's notes to the financial statements, the current study focuses on a specific (extended) GCUsec as obligated by ISA 570 (revised). Prior research indicates that an unqualified audit opinion including the (old) short GCU note leads addresses to perceiving the given information as too passive and 'mute', since the information is also included in the financial statements (Boritz, 1991). Conversely, other behavioural papers provide empirical support for the hypothesis that the auditor's report can act as an independent second opinion that makes the information in financial statements more salient to users (Guiral-Contreras et al., 2007). Thus, in the light of inconclusive research findings, our study follows recent calls for research on the information value of auditor's reporting on GCU, over and above management disclosure in the financial statements (Bédard et al., 2016). Second, prior studies were mainly performed in the North American setting (Anandarajan et al., 2002; Bédard et al., 2019), while the informational value of such a GCU information in Europe remains mostly unexplored (Bédard et al., 2016). Moreover, research using bank loan officers yields mixed results on the incremental information value of the GCU note included in the auditor's report (e.g. Bamber & Stratton, 1997; Elias & Johnston, 2001; LaSalle & Anandarajan, 1997). This could be explained by the audit regulation requiring a note which might have been too mute and passive, beyond what is already reported in the financial statements. We take advantage of a regulatory environment in which the respective German audit standard (IDW PS 270 n.F.) was aligned to the revision of ISA 570, leading to the inclusion of a longer (possibly less mute and passive) GCUsec as compared with the former GCU note. Thus, our research provides further insight into the information value of the extended information on GCU provided in the auditor's report, above and beyond the reporting in financial statements. We answer this open question by using German bank directors as participants and thereby investigate whether the revision of ISA 570 adds value.

Third, while prior literature investigated whether responsibility explanations reduced the audit expectation gap (Gold et al., 2012), we focus on its impact on financial statement addressee perceptions and decisions. Fourth, we contribute to the corporate governance literature, by investigating the effect of different audit committee characteristics with regard to financial expertise, independence and the frequency of meetings on bank director perceptions and decisions in a two-tier corporate governance system. Lastly, we use bank directors as subjects, because they are of particular relevance as creditors, investors and financial intermediaries (Quick & Inwinkl, 2020). The findings of this study should be of interest to both standard setters—particularly the IAASB—because we empirically evaluate the potential added value of the ISA 570 (revised) and researchers who focus on aspects of corporate governance and auditing, by extending and contributing to this research area. Moreover, the results should be of interest to practitioners, more specifically auditors and financial statement readers, being the addressees of the auditor's report.

The remainder of the paper is organised as follows. The next section provides some background information, an overview of prior research and develops the hypotheses. Section 3 describes the experimental design and the subjects participating in the study, followed by the research results in Section 4. The final section summarises the main findings, discusses their implications and the study's limitations and identifies areas for future research.

2 | BACKGROUND, PRIOR RESEARCH AND DEVELOPMENT OF HYPOTHESES

2.1 | Section on GCU

The IAASB revised its ISA 570 with regard to going concerns. For audits of financial statements for the periods ending on or after 15 December 2016, this revised standard also implies new regulations for the auditor's report: While the auditor had to add a short note on going concerns in the case of adequate disclosure of material uncertainty in the financial statements so far, "the auditor's report shall [now] include a separate section under the heading 'Material Uncertainty Related to Going Concern'" (IAASB, 2015a). In Germany, the new requirements of the ISA 570 were converted to German standards by the IDW Auditing Standard 270 (revised), which came into force for audits of financial statements for periods beginning on or after 15 December 2017.

Figure 1 illustrates going concern implications for the auditor's report according to ISA 570 revised and IDW PS 270 n.F. If the financial statements have been prepared using the going concern basis of accounting, but this assumption is inappropriate, the auditor must express an adverse opinion (Figure 1, decision 1). If the use of the going concern basis is appropriate and there is no material uncertainty, the auditor is obliged to express an unmodified audit opinion, assuming that the financial statements are free from material misstatements and that the auditor can obtain appropriate audit evidence (Figure 1, decision 2). If the auditor concludes that the use of the going concern basis is appropriate, but there is a material uncertainty and adequate disclosure of the material uncertainty is not made in the financial statements, the auditor must express a qualified or adverse opinion (Figure 1, decision 3). However, if adequate disclosure of the material uncertainty is made in the financial statements, the auditor expresses an unmodified opinion and adds a separate section to the auditor's report (GCUsec) (Figure 1, decision 4). This paper focuses on the GCUsec (Figure 1, decision 4).

Many archival studies[3] have examined market reactions to auditor's reports in the pre-GCUsec period where the auditor's report contained a short note related to going concerns. Most research finds no specific response to the issuance of the GCU note itself, as the auditor's report reflects what is also disclosed in the financial statements. Hence, it does not provide additional information to investors (Carson et al., 2013,[4] Mock et al., 2013). In contrast, there are negative effects on excess returns (Menon & Williams, 2010), measures of usefulness (Bédard et al., 2016) and trading reactions of institutional investors (Geiger & Kumas, 2018).

Experimental research on the information value of GCU-related notes included in the auditor's reports yields mixed results (Bessell et al., 2003). Several papers find that CGU notes included in the auditor's reports do not provide any specific information that is useful for financial statement users beyond what is contained in the financial statements themselves (Bessell et al., 2003; Elias & Johnston, 2001; Houghton, 1983; LaSalle & Anandarajan, 1997). In their experimental study with nonacademic members of the Australasian Institute of

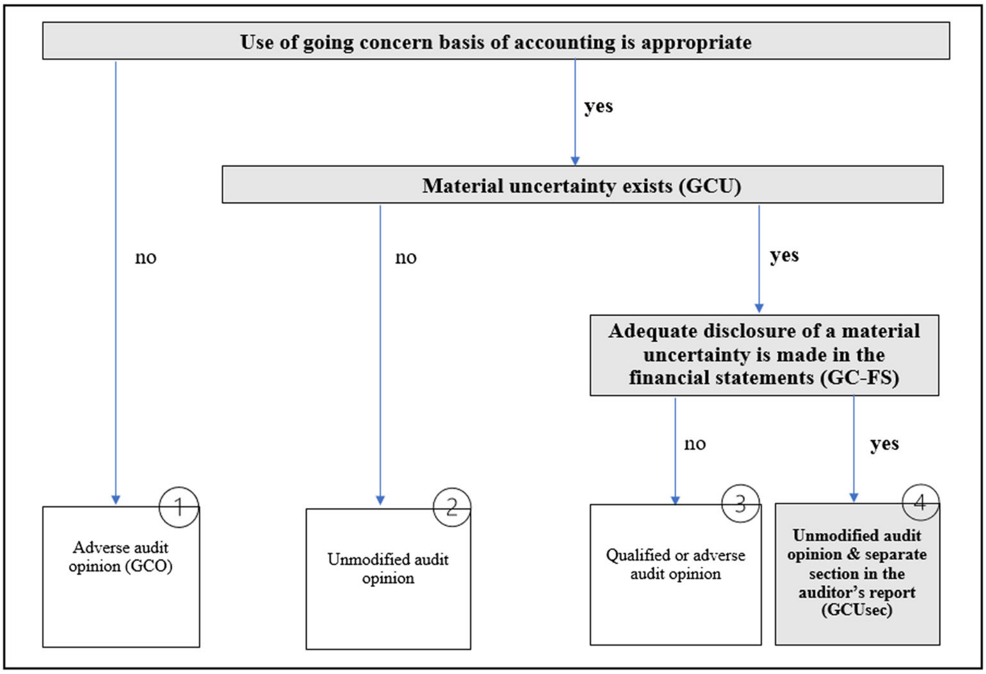


FIGURE 1 Auditor reporting requirements concerning going concern. [Colour figure can be viewed at wileyonlinelibrary.com]

Banking and Finance (AIBF), Bessell et al. (2003) find that a GCU note does not provide incremental information, because it does not convey additional information once the information is already disclosed in the financial statements. Using Canadian bank loan officers, Anandarajan et al. (2002) show that negative loan officer reactions are strongest when the US format unqualified auditor's report is extended by a GCU note, compared with an unqualified report along with GCU reported in the financial statements. Overall, the results are consistent with early criticisms pointed out by Boritz (1991) that the combination of an unqualified opinion with only a short GCU note and adequate reporting in the financial statements might be too mute and passive. Similarly, to assess whether the two types of audit opinions allowed in Spain (i.e. GCU note and unqualified versus qualified) affect loan officer perceptions of auditor independence, Guiral et al. (2014) perform an experiment with 80 experienced loan officers. They find that only a GCO is interpreted as a primary warning signal, whereas an unqualified audit opinion including a GCUsec is not perceived as a warning signal.

Supporting findings related to specific information on GCU in the auditor's report, Bédard et al. (2019) examine the impact of a GCUsec in addition to the disclosure of a GCU in the financial statements on investor reactions in a 'natural experiment' provided by a change in Canadian auditing standards. In the case of a GCUsec, findings indicate incremental negative abnormal returns and lower abnormal trading volume but only if the related first-time GCU disclosure in the financial statements was formulated in a linguistic tone reflecting weak severity. In such a situation, the information in the GCUsec is partially new to the financial statement addressees and therefore encompasses additional information content. Bédard et al. (2019) point out that investors perceive GCU disclosures in the financial statements as more credible when accompanied by a GCUsec in the auditor's report, implying incremental value to investors.

The impact of reporting a GCU in the auditor's report can be explained by agency theory (Jensen & Meckling, 1976). Due to information asymmetries between management and a company's stakeholders, a hidden action problem exists, that is, stakeholders cannot assess the correctness of information stemming from management (Arrow, 1985). As a consequence, moral hazard may occur, and management may use this situation to maximise its own benefit at the expense of the stakeholders (Darrough & Stoughton, 1986). Therefore, it is likely that information from management is perceived as less credible. It is thus the key function of audits to increase the credibility of financial reports, and auditors have less incentive to misreport than management (Healy & Palepu, 2001). Hence, information from auditors, including those on a GCU as a part of the auditor's report, seems more credible than identical information in the management's financial statements[5] (Bédard et al., 2019; Christensen et al., 2014). The informational value is even further enhanced if the disclosed information is negatively connoted (Czapinski & Lewicka, 1979). In the light of prior research, the information value might also depend on the expansion and improvement of the provided information on GCU in the auditor's report.[6] Hence, we formulate our first set of hypotheses as follows:

> **H1a.** The disclosure of a GCUsec in the auditor's report results in less reliance on financial reporting by bank directors' than the nondisclosure.

H1b. The disclosure of a GCUsec in the auditor's report results in more negative decisions about loan granting by bank directors' than the nondisclosure.

H1c. The disclosure of a GCUsec in the auditor's report results in more negative decisions about recommending share purchase by bank directors' than the nondisclosure.

H1d. The disclosure of a GCUsec in the auditor's report results in more negative decisions about investing in shares by bank directors' than the nondisclosure.

H1e. The disclosure of a GCUsec in the auditor's report results in negative perceptions of the company as a going concern by bank directors' than the nondisclosure.

H1f. The disclosure of a GCUsec in the auditor's report results in negative perceptions of the company's financial situation by bank directors' than the nondisclosure.

2.2 | Explanations of responsibilities in the auditor's report

The existence of the audit expectation gap is evident from many research studies, regardless of time and nation (e.g. Gold et al., 2012; Haniffa & Hudaib, 2007; Humphrey et al., 1993; Lin & Chen, 2004; Porter et al., 2012). One element of the expectation gap is that between auditor and financial statement user perceptions concerning the preparation of a company's financial statements (IAASB, 2011). Financial statement users assign a higher responsibility for the financial statements to the auditor than is reasonably accomplishable (Porter et al., 2012; Ruhnke & Schmidt, 2014). Recent studies reveal that financial statement users still believe that the auditor is also responsible for the preparation of financial statements and management reports (Association of Chartered Certified Accountants [ACCA], 2019; Coram & Wang, 2021; Gold et al., 2012). A series of studies on the audit expectation gap conducted questionnaire surveys and applied semantic differential belief statements. They predominantly revealed an audit expectation gap between auditors and bankers regarding the responsibility for maintaining accounting records and for preparing financial statements in Australia, Singapore, Malaysia, Egypt, Bangladesh and Iran (Best et al., 2001; Dixon et al., 2006; Fadzly & Ahmad, 2004; Pourheydari & Aboudaiedi, 2011; Schelluch, 1996; Siddiqui et al., 2009). By contrast, Porter et al. (2012) showed that financial community audit beneficiaries (including bankers) in the UK and New Zealand mostly agree that preparing the company's financial statements is not an auditor responsibility.

In order to improve user understanding of an audit and narrow the audit expectation gap, the IAASB revised its ISA 700,[7] dealing with the auditor's report. Since 2016, explanations of the responsibilities of management and auditor were added to the auditor's report (IAASB, 2015b). Due to these disclosures, financial statement addressees are presumably more aware that management is responsible for the preparation of (consolidated) financial statements and the management report, while the auditor obtains reasonable assurance on whether the (consolidated) financial statements as a whole are free from material misstatements. The addition of a separate section describing management's responsibilities for preparing the financial statements indicates that the standard-setter assumed the existence of a related expectation gap.

We assume that financial statement addressees place more trust in auditors and their reporting than in management. The latter has more and better information than the stakeholders. Management might act for self-serving reasons and therefore be less reliable than auditors (Bédard et al., 2019; DeZoort & Salterio, 2001; Healy & Wahlen, 1999). Auditors, in contrast, have to fulfil a societal role (European Commission, 2010) and create and strengthen public trust (Tagesson & Eriksson, 2011). Therefore, we assume that financial statement readers, in our case bank directors, perceive higher risks if they are aware that management is responsible for preparing the financial statements and not the auditor. The higher the perceived risk, the more unfavourable decisions emerge from the company's point of view, such as conveying a lower willingness to grant loans to the company.

Though bank directors are generally educated professionals, in Germany, they are quite diverse regarding their accounting and auditing expertise. The vast majority of German banks are smaller cooperative and loan and savings banks.[8] Such directors—on average—do not possess distinct auditing expertise. Moreover, such directors specialised in either private or in corporate banking before becoming a director. In the case of private banking, they might well have less accounting and auditing expertise, compared with the starting point of their banking education and might not keep up with the fast-changing accounting and auditing regulatory environment.

Furthermore, the legal requirements for bank director expertise are formulated in a very general way. The German Banking Act (*Kreditwesengesetz*—KWG) states that the management board members of an institution shall have the necessary professional qualifications, be trustworthy and dedicate sufficient time to performing their functions. A prerequisite for the professional qualifications of management board members is that they have adequate theoretical and practical knowledge of the business concerned, as well as managerial experience (Section 25c [1]). Hence, accounting and auditing expertise are not explicitly postulated.

Prior research also found a persistent expectation gap with respect to auditor responsibilities for sophisticated users (Gold et al., 2012), supporting the assumption that educated financial statement users may also be unaware of management versus auditor responsibilities.

Accordingly, we hypothesise that bank directors who receive an auditor's report, including explanations concerning the responsibilities of management, the supervisory board and the auditor, make more unfavourable decisions, because they are aware that management is responsible for preparing the financial statements:

> **H2a.** The disclosure of a responsibilities section in the auditor's report describing the management, supervisory board and auditor responsibilities results in less reliance on financial reporting by bank directors' than the nondisclosure.

> **H2b.** The disclosure of a responsibilities section in the auditor's report describing the management, supervisory board and auditor responsibilities results in more negative decisions about loan granting by bank directors' than the nondisclosure.

> **H2c.** The disclosure of a responsibilities section in the auditor's report describing the management, supervisory board and auditor responsibilities results in more negative decisions about recommending share purchase by bank directors' than the nondisclosure.

> **H2d.** The disclosure of a responsibilities section in the auditor's report describing the management, supervisory board and auditor responsibilities results in more negative decisions about investing in shares by bank directors' than the nondisclosure.

> **H2e.** The disclosure of a responsibilities section in the auditor's report describing the management, supervisory board and auditor responsibilities results in negative perceptions of the company as a going concern by bank directors' than the nondisclosure.

> **H2f.** The disclosure of a responsibilities section in the auditor's report describing the management, supervisory board and auditor responsibilities results in negative perceptions of the company's financial situation by bank directors' than the nondisclosure.

2.3 | Strength of the audit committee

In the case of companies receiving an auditor's report containing a GCUsec, the financial statement addressees might also consider other nonfinancial aspects in their decision-making. The audit committee is responsible for monitoring the statutory audit of the financial statements and is therefore also informed about aspects concerning going concern uncertainties. Hence, we assume that if there is doubt about the company's ability to continue as a going concern, the strength of the audit committee becomes more critical, impacting on addressees' decision-making in terms of increasing confidence.

In Germany, a two-tier corporate governance system is in force, which means the board of directors consists of two independent institutions. The management board is responsible for managing the company, whereas the supervisory board controls and advises the management board in its activities. The supervisory board shall, according to recommendation D.3 of the German Corporate Governance Code, establish an Audit Committee as a subcommittee for monitoring the accounting, the accounting process, the effectiveness of the internal control system, the risk management system, the internal audit system and the audit of the financial statements and compliance (German Corporate Governance Code 2019). For PIEs, the implementation of an AC is mandatory (Paragraph 107 [4] Stock Corporation Act). Therefore, we focus on the strength of the AC and not on the supervisory board in general.

As it is a fundamental corporate governance mechanism (Agoglia et al., 2011), several studies dealing with aspects of corporate governance focus particularly on the audit committee. DeZoort et al. (2002) assert that four dimensions emerge when considering the effectiveness of the audit committee: composition, authority, resources and diligence. In this context, the impact of these aspects on a broad range of factors like financial reporting decisions, earnings management or perceived audit risk is investigated in prior research. Consistent with Agoglia et al. (2011), we proxy the strength of the audit committee with the expertise and independence of its members and its activity levels.[9]

To the best of our knowledge, prior research has not analysed the impact of audit committee strength on the perceptions and decisions of bankers. With regard to the impact on capital market participants, there are some archival but no experimental previous research outcomes.

Many archival studies show that audit committee member expertise has positive effects on the perceptions of investors (e.g. DeFond et al., 2005; Karamanou & Vafeas, 2005) and financial reporting quality (e.g. Intintoli et al., 2018; Karamanou & Vafeas, 2005; Keune & Johnstone, 2012; Krishnan, 2005; Krishnan et al., 2011).

In contrast, other studies could not find a significant impact of expertise on financial reporting quality (e.g. Gebrayel et al., 2018; Ghosh et al., 2010; Song & Windram, 2004).

Concerning independence, prior archival studies show that the independence of audit committee members is positively evaluated by the capital market (e.g. Chen & Li, 2013) and can increase the firm value (Fauver et al., 2017) with a positive impact on the quality of financial reporting (measured by earnings management activities) (e.g. Cassell et al., 2018; Klein, 2002; Krishnan, 2005; Yang & Krishnan, 2005). Certain exceptions include the studies by Gebrayel et al. (2018) and Intintoli et al. (2018), which do not find a significant correlation between independence and the extent of earnings management.

Further, the frequency of audit committee meetings is negatively associated with earnings management (Xie et al., 2003) and perceived audit risk (Stewart & Munro, 2007) and increases the probability of detecting the activities of earnings management (Choi et al., 2004). In contrast, Yang and Krishnan (2005) do not find a notable effect between the frequency of meetings and extent of earnings management in the quarterly statements.

Altogether, a strong audit committee can have a positive impact on financial reporting quality by reducing earnings management and evoking positive market reactions. Therefore, our third set of hypotheses is as follows:

H3a. A relatively stronger audit committee will have a relatively more positive impact on bank director reliance on financial reporting than a relatively weaker audit committee.

H3b. A relatively stronger audit committee will have a relatively more positive impact on bank director decisions about loan granting than a relatively weaker audit committee.

H3c. A relatively stronger audit committee will have a relatively more positive impact on bank director decisions about recommending share purchase than a relatively weaker audit committee.

H3d. A relatively stronger audit committee will have a relatively more positive impact on bank director decisions about investing in shares than a relatively weaker audit committee.

H3e. A relatively stronger audit committee will have a relatively more positive impact on bank director perceptions of the company as a going concern than a relatively weaker audit committee.

H3f. A relatively stronger audit committee will have a relatively more positive impact on bank director perceptions of the company's financial situation than a relatively weaker audit committee.

3 | RESEARCH DESIGN

3.1 | Experiment

3.1.1 | Case materials

To test our hypotheses, we conducted an experiment with a $2 \times 2 \times 2$ between-subjects design. The experiment entailed three treatment variables—GCUsec (present vs. absent), responsibilities of management, supervisory board and auditor (responsibilities paragraph in the auditor's report vs. no paragraph) and the strength of the audit committee (strong audit committee vs. weak audit committee). This resulted in eight experimental conditions, with each participant receiving just one condition.

The experimental materials were administered in German, consisting of a general introduction, introducing ourselves (the researchers) and assuring the participants of anonymity and confidentiality. All participants received then a description of a fictitious company called Mobile AG, including some general information about its headquarters and subsidiaries, the nature of its business, employees and stock exchange listing on the Prime Standard of the Frankfurt Stock Exchange. This was followed by a more detailed description of Mobile AG's business situation, including some important key indicators like net income, total assets and EBIT,[10] key facts concerning its corporate governance (*Manipulation of AC*) as well as the firm's auditor. It specifically mentioned that Mobile AG explains in its risk report[11] that its continuance as a going concern depends on the financial support from its parent company due to a redemption payment of a bond.[12] Subsequently, the participants were randomly presented with one of the four auditor's reports of the current year (*Manipulation of RESP and GCU section*).[13]

After having read the case materials, the participants were asked to answer some questions concerning the hereinafter-described dependent variables, manipulation checks, and demographic items.

3.1.2 | Dependent variables

After the participants had read the information about the fictitious company, they answered a few questions: First, the experimental task required the participants to judge their reliance on the consolidated financial statements and the management report of Mobile AG, on a 7-point Likert scale (RELY)—to quantify the likelihood of granting a loan to the company on a scale from 0 to 100% (LOAN), on recommending nonprofessional investors to buy shares of Mobile AG on a scale from 0 to 100% (ADVICE) or investing in the shares of Mobile AG themselves on a scale from 0 to 100% (INVEST), on evaluating the likelihood that the company can continue as a going concern on a scale from 0 to 100% (GOING CONCERN) and on evaluating the financial situation of the company on a 7-point Likert scale (FINANCIAL SITUATION).

3.1.3 | Treatment variables

Three different manipulations were applied at two levels: (1) GCU section in the auditor's report (*CGUsec*), (2) disclosure of responsibilities of the management and supervisory board and the auditor's responsibilities in the auditor's report (*RESP*) and (3) strength of the audit committee (*AC*).

The first treatment variable *GCUsec* was manipulated at two levels: a GCUsec was either added or not to the auditor's report. This GCUsec was as follows:

Without qualifying our opinion, we draw attention to Note 4.1 in the group management report, which indicates that its continuance as a going concern depends on the financial support from 'Support GmbH,' because a bond due on 3 June 2019 is not redeemable by the company on its own, according to the liquidity planning. These conditions indicate the existence of a material uncertainty that may cast significant doubt about the Company's ability to continue as a going concern.

The second treatment variable *RESP* was also manipulated at two levels: A paragraph about the management and supervisory board, as well as auditor responsibilities, was either added or not to the auditor's report.

The last treatment concerned the strength of the audit committee (*AC*), presented by audit committee characteristics, also manipulated at two levels: strong and weak audit committee.[14] If the materials included a strong audit committee, the audit committee was described as follows:

> All audit committee members are financially and personally independent of 'Mobile AG.' They have many years of knowledge and experience in applying accounting principles and internal control procedures and are familiar with the audit. The audit committee meets frequently (eight to nine times per year).

The description of the weak audit committee was as follows:

> The audit committee members are independent of 'Mobile AG'. Two members are former officers of the company. The chair of the audit committee has fundamental experience in applying accounting principles and internal control procedures. The audit committee meets infrequently (once or twice per year).

To improve the quality and validity of our research materials, four international researchers with substantial experience in experimental research were asked to provide feedback. Moreover, five bankers pretested the case. Both of these led to several amendments. The final materials were approved by the Institutional Review Board of the university of one of the authors.

3.2 | Participants

In this study, we chose German bank directors as participants, due to the extremely high relevance of banks in the German economy. The German system is based on three pillars—privately owned banks, banks with government involvement including the regionally focused savings banks and small credit cooperatives (Hackethal, 2004). It is a decentralised universal bank-based financial system (Elsas & Krahnen, 2004; Hardie & Howarth, 2009) with universal banks offering financial services and providing a significant share of finance through both debt and equity holdings. Bank borrowing is the largest single external source of finance, especially via long-term loans (Deutsche Bundesbank, 2012; Hackethal et al., 2005).

For several reasons, banks play a major role in the German corporate governance system (Cable, 1985; Chirinko & Elston, 2006; Goergen et al., 2008; La Porta et al., 2000). They are often represented on the supervisory boards of companies, possessing the power to elect their own managers to the boards (Dittmann et al., 2010). Furthermore, they control large blocks of shareholder voting rights, either through direct ownership or indirectly through stockbroking services, that is, a large amount of shares is deposited by the owners with banks and the bank then acts on their behalf (Becht & Boehmer, 2003; Boolaky & Quick, 2016; Franks & Mayer, 2001). Additionally, banks handle the majority of new issues of marketable securities of the firm, often placing them with their own customers in addition to serving as financial intermediaries and offering investment advisory services. Therefore, bank directors are high-quality subjects who act as creditors, investors and financial intermediaries (Quick & Inwinkl, 2020).

Using the BaFin database of banks (*Bundesanstalt für Finanzdienstleistungsaufsicht* = Federal Financial Supervisory Authority), we were able to identify all registered German banks (1384) as the database. Then, we manually collected the names of all German bank directors from bank websites (3827 as of Spring 2019) and sent an invitation of participation to one director of each bank (647 participations)—briefly introducing our research project by stating the basic information and offering a (personal) web link. After 1 month, we sent a reminder. Overall, this e-mail request resulted in 47 usable responses, a response rate of 7.3%.

Additionally, we identified and contacted 47 bank directors via the career-oriented social networking site 'Xing'. Six directors were interested and willing to participate, resulting in a participation rate of 12.8%, while the response rate was 29.8%. We also dispatched a link in a banking group with 2520 members, inviting them to participate in our research project—249 persons reacted to this link, resulting in 48 usable responses; the response rate of this medium being 9.9% and the participation rate 1.9%.

To test for nonresponse bias in the group contacted by e-mail, we compared both early and late responses (after sending the second reminder) by performing *t*-tests for all dependent variables, assuming that late responses serve as indicators of nonresponse (Quick & Schmidt, 2018; Wallace & Mellor, 1988). No significant differences were found between these two groups, which thus does not indicate the existence of a nonresponse bias.[15]

Overall, our final sample consists of 101 participants (including those who failed to answer the manipulation check questions correctly) with the following demographics (Table 1).[16]

On average, the participants had over 24 years of practical experience in banking (YEARS mean = 24.18, range = 1–46). The average number of firms for which the subjects had taken part in credit-granting decisions was quite high (NR_FIRMS mean = 1055.20), but the level of experience with such decisions varied considerably (range = 0–9,999). The same applied to investment advice (NR_ADV mean = 944.87, range = 0–9,999). The exact age of the participants could not be requested for ethical reasons; however, the majority were between 40 and 49 years old. Most were male (GENDER

TABLE 1 Demographic information.

Variable	N	Mean	SD	Min	Max	Median
YEARS	90	24.18	9.5124	1	46	25
NR_FIRMS	89	1055.20	2055.1890	0	9,999	200
NR_ADV	89	944.87	1518.0300	0	9,999	500
AGE	90	1 = 5 2 = 13 3 = 34 4 = 28 5 = 10	1.0280	1	5	3
GENDER	90	1 = 75 2 = 15 3 = 0	0.3748	1	2	1
EDUCATION	90	1 = 7 2 = 23 3 = 18 4 = 38 5 = 4	1.0815	1	5	3
POSITION	90	1 = 48 2 = 42	0.5017	1	2	1
FR_EXPERT	90	5.36	1.1149	2	7	5
AUD_EXPERT	90	4.56	1.5659	1	7	5
RISK	90	4.02	1.2629	1	7	4
TRUST_REPORT	90	4.64	1.3350	1	7	5
TRUST_BOARD	90	4.39	1.1870	2	7	4
TRUST_AUD	90	5.30	1.1558	2	7	6

Note: YEARS is the number of years the participant has been working in banking; NR_FIRMS is the number of firms the participant has granted credit; NR_ADV is the number of private investors the participant has provided advice for; AGE is the age of the participant (1 = <30, 2 = 30–39, 3 = 40–49, 4 = 50–60, 5 = > 60); GENDER is the gender of the participant (1 = male, 2 = female, 3 = diverse); EDUCATION is the highest educational qualification (1 = less than high school, 2 = high school, 3 = college/bachelor, 4 = master or university diploma, 5 = PhD); POSITION is the position of the participant within the bank (1 = board member, 2 = other); FR_EXPERT is the self-assessed financial reporting knowledge on a 7-point Likert scale; AUD_EXPERT is the self-assessed auditing knowledge on a 7-point Likert scale; RISK is the self-assessed risk attitude on a 7-point Likert scale anchored at 1 = risk-averse and 7 = risk-prone; TRUST_REPORT is the self-assessed trust in annual reports on a 7-point Likert scale; TRUST_BOARD is the self-assessed trust in directors of companies on a 7-point Likert scale; TRUST_AUD is the self-assessed trust in auditors on a 7-point Likert scale.

TABLE 2 Number of participants per experimental condition.

Experimental condition	Going concern uncertainty section (GCU section)	Responsibilities (RESP)	Audit committee (AC)	Number of participants (after dropping MC-failures)
1	Yes	Yes	Strong	16
2	No	Yes	Strong	6
3	Yes	No	Strong	9
4	No	No	Strong	10
5	Yes	Yes	Weak	13
6	No	Yes	Weak	9
7	Yes	No	Weak	12
8	No	No	Weak	10

male = 75, female = 15) and sat on the board of directors (POSITION 48 = board member, 42 = other).[17] Most participants' highest education level is a masters or an equivalent university degree (33 participants) (EDUCATION mean = 3.10; 1 = less than high school, 2 = high school, 3 = college/bachelor, 4 = master or university diploma, 5 = PhD). Their self-assessed expertise in both financial reporting and auditing tended to be high (FR_EXPERT mean = 5.36; AUD_EXPERT mean = 4.56; both on a 7-point Likert scale), and on average, they were neither risk-averse nor risk-friendly (RISK mean = 4.02 on a 7-point Likert scale). They placed a high level of trust in auditors (TRUST_AUD mean = 5.30), while the level of trust in annual reports and the board of directors was higher than the

TABLE 3 Means and standard deviations of dependent variables by experimental conditions.

Variable Experimental condition	RELY Mean	Std. dev.	LOAN Mean	Std. dev.	ADVICE Mean	Std. dev.	INVEST Mean	Std. dev.
1	4.63	1.36	0.23	0.19	0.11	0.18	0.16	0.15
2	3.83	1.72	0.37	0.27	0.24	0.21	0.34	0.30
3	5.67	1.22	0.23	0.23	0.10	0.16	0.12	0.18
4	4.40	1.35	0.34	0.32	0.23	0.26	0.17	0.25
5	4.85	1.82	0.11	0.12	0.06	0.12	0.06	0.08
6	4.78	0.97	0.37	0.21	0.26	0.17	0.31	0.19
7	4.50	1.38	0.20	0.18	0.05	0.08	0.12	0.09
8	4.80	1.81	0.48	0.36	0.40	0.32	0.44	0.31
Variable Experimental condition	**GOING CONCERN Mean**	**Std. dev.**	**FINANCIAL SITUATION Mean**	**Std. dev.**				
1	0.48	0.30	2.56	1.09				
2	0.65	0.24	3.50	1.38				
3	0.62	0.24	3.00	0.87				
4	0.57	0.28	3.20	1.31				
5	0.48	0.24	2.46	1.13				
6	0.65	0.26	3.33	1.32				
7	0.48	0.20	2.92	1.24				
8	0.56	0.29	3.30	1.57				

TABLE 4 Means and standard deviations of dependent variables by factor levels.

Variable		RELY		LOAN		ADVICE		INVEST	
Factor	**Level**	**Mean**	**Std. dev.**	**Mean**	**Std. dev.**	**Mean**	**Std. dev.**	**Mean**	**Std. dev.**
GCU section	Yes	4.84	1.49	19.3	18.3	8.2	14.0	11.5	13.1
	No	4.51	1.46	38.9	29.2	28.7	25.1	31.1	27.5
RESP	Yes	4.61	1.48	24.1	21.1	14.5	17.8	18.2	19.6
	No	4.80	1.49	30.9	28.9	19.0	25.4	21.0	25.1
AC	Strong	4.68	1.46	27.7	24.6	15.7	20.6	17.9	21.3
	Weak	4.73	1.52	27.1	26.1	17.5	23.0	21.1	23.4
Variable		**GOING CONCERN**		**FINANCIAL SITUATION**					
Factor	**Level**	**Mean**	**Std. dev.**	**Mean**	**Std. dev.**				
GCU section	Yes	50.4	25.1	2.70	1.09				
	No	60.1	26.1	3.31	1.35				
RESP	Yes	53.4	27.1	2.82	1.23				
	No	55.3	24.6	3.10	1.24				
AC	Strong	55.7	27.4	2.95	1.16				
	Weak	53.0	24.5	2.95	1.31				

average (TRUST_REPORT mean = 4.64; TRUST_BOARD mean = 4.39; all on a 7-point Likert scale).

The experimental materials included three manipulation checks to determine whether the manipulations of the treatment variables were successful. First, the participants evaluated the statement in the auditor's report that the audit firm indicated has a material uncertainty, potentially casting significant doubt on the company's ability to continue as a going concern, on a 7-point Likert scale (1 = strongly disagree; 7 = strongly agree). Second, they had to determine whether the audit firm explicitly described the respective responsibilities of management and auditor in the provided auditor's report, on a similar 7-point Likert scale (1 = strongly disagree; 7 = strongly agree). Sixteen participants failed to pass at least one of these manipulation checks and were therefore excluded from further analyses.[18] The third question—"How would you assess the corporate governance of 'Mobile AG' concerning its strength (e.g. independence, expertise)?"—was designed to control for the perceived strength of the audit committee. Answered on a 7-point Likert scale (1 = very weak; 7 = very strong), a mean of 4.41 for strong corporate governance compared with a mean of 2.27 for weak corporate governance ($t = 6.5447$, $p = 0.000$) indicated a successful manipulation.

Table 2 provides an overview of the eight experimental conditions and the number of participants (excluding manipulation check failures) per cell.

TABLE 5 MANOVA results for the dependent variables (Wilks' lambda).

	MANOVA results			
	Statistic	Df	*F*-value	*P*-value
Intercept	0.52	7	1.46	0.050
GCU section	0.76	1	4.62	0.001
RESP	0.96	1	0.60	0.701
AC	0.97	1	0.46	0.802
GCUsec × RESP	0.91	1	1.40	0.233
GCUsec × AC	0.93	1	1.05	0.394
RESP × AC	0.89	1	1.76	0.132
GCUsec × AC × RESP	0.96	1	0.55	0.740
Residuals		76		
N	83			

TABLE 6 Results for the dependent variable RELY.

Panel A	ANOVA results Type III sum of squares	Df	*F*-value	*P*-value
Intercept	14.82	7	0.97	0.463
GCUsec	4.11	1	1.88	0.175
RESP	2.03	1	0.93	0.339
AC	0.20	1	0.09	0.766
GCUsec × RESP	0.01	1	0.01	0.937
GCUsec × AC	6.46	1	2.95	0.090*
RESP × AC	4.60	1	2.10	0.152
GCUsec × AC × RESP	0.88	1	0.40	0.529
Residuals	168.83	77		
N	85			
Panel B **Cell**			**Means**	**Mean**
GCUsec				4.84
NO GCUsec				4.51
RESP				4.61
NO RESP				4.80
STRONG AC				4.68
WEAK AC				4.73
Panel C **Comparison**			**Post hoc tests**	***P*-value (two-tailed)**
GCUsec versus NO GCUsec				0.320
RESP versus NO RESP				0.554
STRONG versus WEAK AC				0.891

*Significant at 0.1 level.
**Significant at 0.05 level.
***Significant at 0.01 level.

4 | RESULTS

Table 3 shows the means of the dependent variables for each experimental condition. At first glance, it is quite obvious that the decisions in the conditions containing a GCUsec in the provided auditor's report (conditions 1, 3, 5 and 7) tend to be more unfavourable, that is, the means are lower in the majority of cases than in the groups without a separate GCUsec (except for the dependent variable *RELY*).

Table 4 presents the means of the dependent variables separated by each treatment factor (GCUsec, responsibilities and audit committee). The direction of the means supports the hypotheses H1b–H1f and H2a–H2f: with one exception concerning H1a (*RELY*) for which the means are higher if a separate GCUsec is added to the auditor's report. In terms of the responsibility paragraphs, all means of the dependent variables are lower when the responsibilities of management and auditor are disclosed in the auditor's report. Concerning the impact of the strength of the audit committee (H3a–H3f), the means yield mixed results.

To examine whether the differences in means are statistically significant and support our hypotheses, we first conduct a MANOVA.[19] The results are shown in Table 5 and reveal that a GCUsec has a significant effect on the dependent variables (GCUsec: $F = 4.62$; p-value $= 0.001$).

We also conduct ANOVAs for each dependent variable. The results are shown in Tables 6–11. Table 6, Panel A shows the ANOVA results for bank director reliance on the provided financial statements and management report, Panel B the means for each treatment factor and Panel C the post hoc analyses. There was no significant impact in any of the treatment variables (GCUsec: $F = 1.88$; p-value $= 0.175$/RESP: $F = 0.93$; p-value $= 0.339$/AC: $F = 0.09$; p-value $= 0.766$). Thus, our hypotheses H1a, H2a and H3a are not supported, indicating that neither changes to the auditor's report nor the strength of the audit committee increase the reliance on the consolidated financial statements and management report. In any event, there is a significant interaction effect between the GCUsec and the strength of the AC ($F = 2.95$; p-value $= 0.090$). The interaction pattern in Figure 2 shows that a separate GCUsec can strengthen the reliance on the financial statements, but only if the AC of the company is strong. This effect is also confirmed by an associated pairwise comparison of means (p-value $= 0.090$).[20] A possible interpretation might be that if the

TABLE 7 Results for the dependent variable LOAN.

Panel A	ANOVA results Type III sum of squares	Df	*F*-value	*P*-value
Intercept	10228.04	7	2.60	0.018
GCU section	7303.19	1	13.01	< 0.001***
RESP	389.00	1	0.69	0.408
AC	2.39	1	0.00	0.948
GCU section × RESP	0.95	1	0.00	0.967
GCU sectionx AC	1001.08	1	1.78	0.186
RESP × AC	569.78	1	1.02	0.317
GCU section × AC × RESP	35.72	1	0.06	0.802
Residuals	43223.65	77		
N	85			

Panel B Cell	Means Mean
GCUsec	19.3%
NO GCUsec	38.9%
RESP	24.1%
NO RESP	30.9%
STRONG AC	27.7%
WEAK AC	27.1%

Panel C Comparison	Post hoc tests *P*-value (two-tailed)
GCUsec versus NO GCUsec	0.000***
RESP versus NO RESP	0.217
STRONG versus WEAK AC	0.911

*Significant at 0.1 level.
**Significant at 0.05 level.
***Significant at 0.01 level.

auditor focuses on the GCU in his/her report, the information is perceived as more reliable and the participants become more critical. Then, the AC—but only a strong AC—can help to increase reliance on the financial statements, being a separate monitoring party.

The second dependent variable is the likelihood of the bank directors granting a loan to the fictitious company. Table 7, Panel A depicts the ANOVA results concerning the variable *LOAN* with a significant effect for the treatment GCUsec ($F = 13.01$; p-value < 0.001), while the treatment variables RESP and AC are insignificant (RESP: $F = 0.69$; p-value = 0.408/AC: $F = 0.00$; p-value = 0.948). Panel B displays the means for each treatment factor, and Panel C relates the post hoc analyses.[21] In the case of a GCUsec, the means are significantly lower (p-value = 0.000) if a GCUsec is added to the auditor's report (19.3%) than when the information is only disclosed in the notes to the financial statements (38.9%), supporting H1b.

In Table 8, Panel A, the ANOVA results for the next dependent variable, ADVICE, are presented. The bank directors were asked how likely they would be to recommend a nonprofessional investor to buy Mobile AG's shares. Again, the disclosure of a GCUsec has a notable impact on the bank directors' recommendations ($F = 21.39$; p-value < 0.001). Panel B indicates the means of each factor and Panel C the post hoc analyses, demonstrating that bank directors are less likely to advise buying shares in the fictitious firm if a GCUsec is disclosed (8.2%) than if it is not disclosed (28.7%). Thus, H1c is supported. The treatments RESP and AC have no significant impact on the likelihood of recommendation (RESP: $F = 0.35$; p-value = 0.559/AC: $F = 0.23$; p-value = 0.634), while the means of the treatment RESP have the right direction concerning our predicted hypothesis H2c.

The next condition tested was how likely the bank directors would be to invest in shares of Mobile AG themselves. Table 9, Panel A exhibits the ANOVA results. The disclosure of a GCUsec ($F = 20.52$; p-value < 0.001) had a remarkable impact on the investment decisions of bank directors, confirmed by the results of post hoc tests in Panel C. Panel B shows that 31.1% would invest in the firm's shares if a separate GCUsec is not disclosed in the auditor's report, while only 11.5% would invest if this was indeed the case. Again, the disclosure of responsibilities (RESP) and the strength of the audit committee (AC) do not have an impact on investment decisions (RESP: $F = 0.00$; p-value = 0.987/AC: $F = 0.59$; p-value = 0.445), though the means of RESP, shown in Panel B, were in line with our expectations concerning H2d.

TABLE 8 Results for the dependent variable ADVICE.

Panel A	ANOVA results Type III sum of squares	Df	*F*-value	*P*-value
Intercept	10868.41	7	4.14	< 0.001
GCUsec	8022.50	1	21.39	< 0.001***
RESP	129.42	1	0.35	0.559
AC	85.58	1	0.23	0.634
GCUsec × RESP	314.36	1	0.84	0.363
GCUsec × AC	973.55	1	2.60	0.111
RESP × AC	328.64	1	0.88	0.352
GCUsec × AC × RESP	285.53	1	0.76	0.386
Residuals	28883.00	77		
N	85			
Panel B **Cell**			**Means**	**Mean**
GCUsec				8.2%
NO GCUsec				28.7%
RESP				14.5%
NO RESP				19.0%
STRONG AC				15.7%
WEAK AC				17.5%
Panel C **Comparison**			**Post hoc tests**	***P*-value (two-tailed)**
GCUsec versus NO GCUsec				<0.001***
RESP versus NO RESP				0.349
STRONG versus WEAK AC				0.710

*Significant at 0.1 level.
**Significant at 0.05 level.
***Significant at 0.01 level.

TABLE 9 Results for the dependent variable INVEST.

Panel A	ANOVA results Type III sum of squares	Df	*F*-value	*P*-value
Intercept	12316.75	7	4.57	< 0.001
GCUsec	7894.95	1	20.52	< 0.001***
RESP	0.10	1	0.00	0.987
AC	226.79	1	0.59	0.445
GCUsec × RESP	36.29	1	0.09	0.760
GCUsec × AC	1470.19	1	3.82	0.054*
RESP × AC	1905.00	1	4.95	0.029**
GCUsec × AC × RESP	521.18	1	1.35	0.248
Residuals	29630.26	77		
N	85			
Panel B **Cell**			**Means**	**Mean**
GCUsec				11.5%
NO GCUsec				31.1%
RESP				18.2%
NO RESP				21.0%
STRONG AC				17.9%
WEAK AC				21.1%
Panel C **Comparison**			**Post hoc tests**	***P*-value (two-tailed)**
GCUsec versus NO GCUsec				< 0.001***
RESP versus NO RESP				0.561
STRONG versus WEAK AC				0.502

*Significant at 0.1 level.
**Significant at 0.05 level.
***Significant at 0.01 level.

There are also significant interaction effects of the treatments GCUsec and AC ($F = 3.82$; p-value $= 0.054$) as well as RESP and AC ($F = 4.95$; p-value $= 0.029$). Figure 3 shows that the disclosure of a separate section in the auditor's report keeps the participants from investing, but only if the AC is weak. This effect is also statistically confirmed by a comparison of means (p-value $= 0.000$) and contrast coding (p-value $= 0.000$).[22] There is also a significant interaction effect of the treatments RESP and AC ($F = 4.95$; p-value $= 0.029$). Figure 4 indicates that the responsibilities paragraphs may reduce the likelihood of investing but only if the AC is weak. However, while contrast coding is weakly significant (p-value $= 0.094$),[23] the comparison of means shows insignificant effects for this prediction (p-value $= 0.120$).

In Table 10, Panel A presents the ANOVA results for the dependent variable GOING CONCERN, asking for the likelihood of continuing as a going concern. Though the ANOVA results do not show a significant effect for any of the treatment variables (GC: $F = 2.57$; p-value $= 0.113$/RESP: $F = 0.01$; p-value $= 0.931$/AC: $F = 0.41$; p-value $= 0.524$), the post hoc tests in Panel C reveal significant results. That is, the disclosure of a separate GCUsec had a marginal impact on bank director perceptions of this category (p-value $= 0.090$), and the direction of means in Panel B supports H1e. Thus, the disclosure of a separate GCUsec in the auditor's report leads to unfavourable perceptions by the bank directors concerning the likelihood of the going concern.

The last dependent variable is the assessment of the current financial situation of the company, the ANOVA results of which are presented in Table 11, Panel A. As before, only the treatment variable GCUsec has a significant impact on bank director perceptions concerning the financial situation of Mobile AG ($F = 4.63$; p-value $= 0.035$), while the disclosure of responsibilities ($F = 0.25$; p-value $= 0.616$) or the strength of the audit committee ($F = 0.05$; p-value $= 0.822$) does not influence the assessment of the financial situation. The means are presented in Panel B, showing that the financial situation is evaluated as poorer if a GCUsec is disclosed, supporting our predicted hypothesis H1f. The ANOVA results are confirmed by the post hoc tests in Panel C.

In summary, the results confirm our first set of hypotheses H1b–H1f, reporting that the disclosure of a GCUsec in the auditor's report will have a negative impact on bank director decisions from the

TABLE 10 Results for the dependent variable GOING_CONCERN.

Panel A	ANOVA results Type III sum of squares	Df	F-value	P-value
Intercept	4027.49	7	0.85	0.548
GCUsec	1734.44	1	2.57	0.113
RESP	5.09	1	0.01	0.931
AC	276.53	1	0.41	0.524
GCUsec × RESP	1175.44	1	1.74	0.191
GCUsec × AC	234.35	1	0.35	0.557
RESP × AC	267.80	1	0.40	0.531
GCUsec × AC × RESP	226.32	1	0.34	0.564
Residuals	51290.83	76		
N	84			
Panel B Cell			**Means**	**Mean**
GCUsec				50.4%
NO GCUsec				60.1%
RESP				53.4%
NO RESP				55.3%
STRONG AC				55.7%
WEAK AC				53.0%
Panel C Comparison			**Post hoc tests**	***P*-value (two-tailed)**
GCUsec versus NO GCUsec				0.090*
RESP versus NO RESP				0.732
STRONG versus WEAK AC				0.628

*Significant at 0.1 level.
**Significant at 0.05 level.
***Significant at 0.01 level.

company's point of view. Except for the first dependent variable, representing reliance on the presented financial statements (H1a), the bank directors make more unfavourable decisions or have worse perceptions of Mobile AG's situation, because of the verification of the GCU. The auditor's report is a more credible source, thereby explaining why the information additionally disclosed by the auditor is assessed more positively by the bank directors, resulting in different decisions.

In contrast, the results do not support our second set of hypotheses H2a–H2f. The participating bank directors seem to be highly experienced financial statement addressees who are aware of the responsibilities of management and auditor, regardless of the information in the auditor's report. Therefore, since this information might not be new to them, the perceptions and decisions between these groups do not present significant differences.

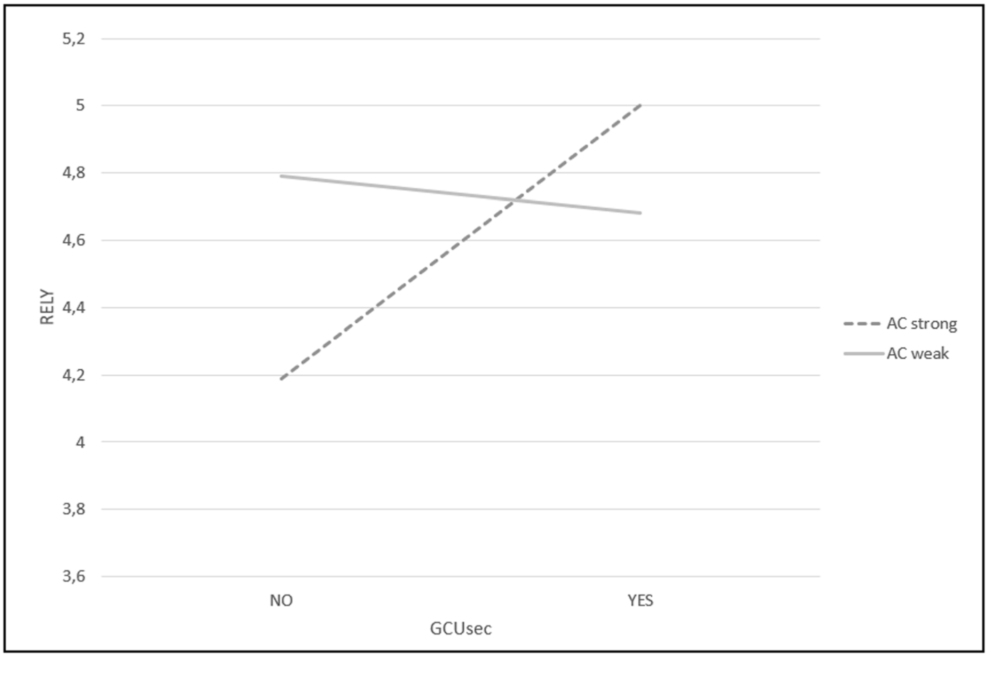
Further, our results do not support our last set of hypotheses H3a-H3f, and hence, the strength of the audit committee does not have an impact on bank director perceptions and decisions in this scenario. A possible explanation for this result is a fundamentally negative perception of the audit committee's effectiveness in general (DeZoort et al., 2002); therefore, being perceived by stakeholders is less important than other mechanisms (Cohen et al., 2002). Moreover, the organisation of the two-tier corporate governance system—which is predominant in Germany—might result in a lack of trust in the supervisory board and, consequently, may have a spillover effect on the perception of the audit committee being a part of the supervisory board. For instance, German boards consist of up to 20 members, of which up to 50% are labour representatives who might have a lower level of expertise in auditing and accounting. This organisational aspect might lead to information asymmetries within the board, making it difficult to involve every member appropriately (Jungmann, 2006). As the audit committee is only part of the supervisory board, the bank directors might not react to different characteristics of the audit committee and only to the strength of the supervisory board as a whole. Moreover, German directors hold this office part-time and are often members of several boards simultaneously.[24] These aspects might prevent bank directors from basing their decisions on the strength of the audit committee.

TABLE 11 Results for the dependent variable FINANCIAL_SITUATION.

Panel A	ANOVA results Type III sum of squares	Df	*F*-value	*P*-value
Intercept	10.53	7	0.99	0.447
GCUsec	7.05	1	4.63	0.035**
RESP	0.39	1	0.25	0.616
AC	0.08	1	0.05	0.822
GCUsec × RESP	1.85	1	1.22	0.274
GCUsec × AC	0.02	1	0.01	0.916
RESP × AC	0.10	1	0.07	0.799
GCUsec × AC × RESP	0.08	1	0.05	0.823
Residuals	117.28	77		
N	85			
Panel B **Cell**			**Means**	**Mean**
GCUsec				2.70
NO GCUsec				3.31
RESP				2.82
NO RESP				3.10
STRONG AC				2.95
WEAK AC				2.95
Panel C **Comparison**			**Post hoc tests**	***P*-value (two-tailed)**
GCUsec versus NO GCUsec				0.023**
RESP versus NO RESP				0.300
STRONG versus WEAK AC				0.990

*Significant at 0.1 level.
**Significant at 0.05 level.
***Significant at 0.01 level.

FIGURE 2 Interaction effect between GCU section (GCUsec) and audit committee (AC) for the variable RELY.



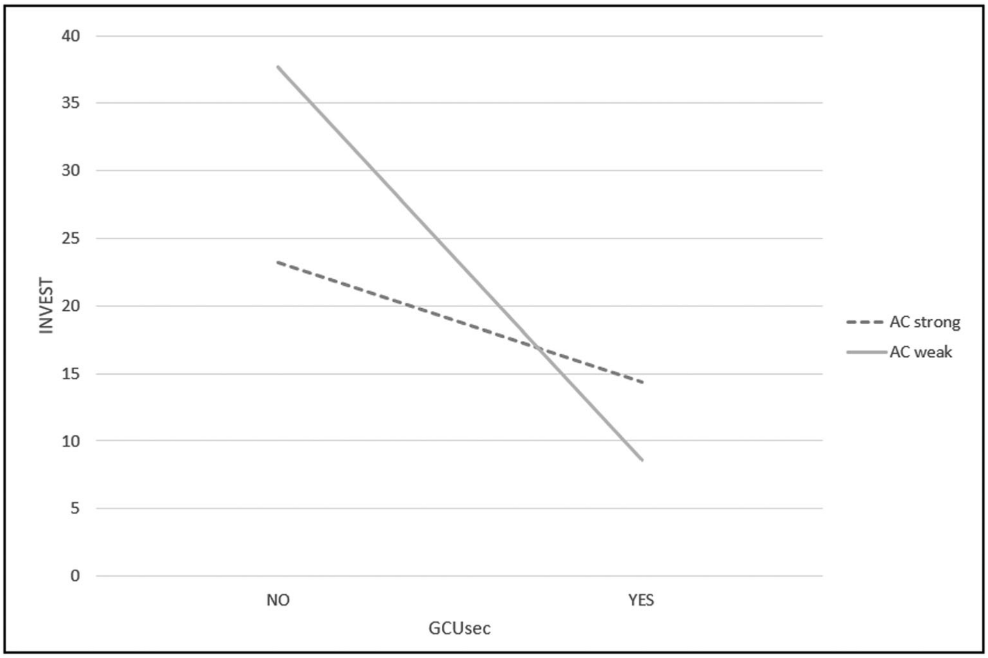


FIGURE 3 Interaction effect between GCU section (GCUsec) and audit committee (AC) for the variable INVEST.

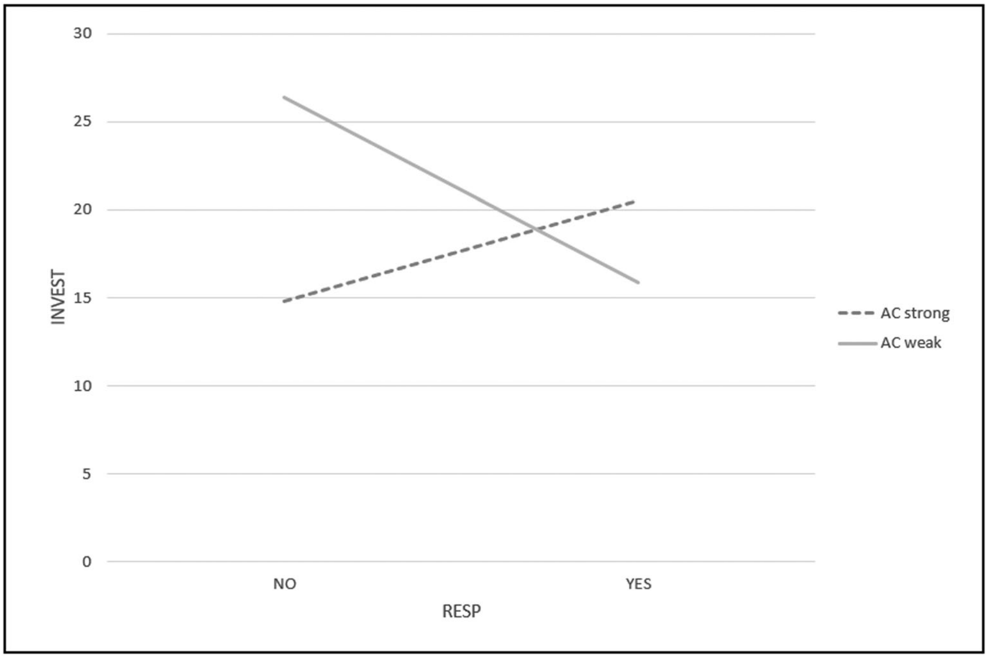


FIGURE 4 Interaction effect between RESP and audit committee (AC) for the variable INVEST.

5 | CONCLUSION

In the last decade, the IAASB revised some of its standards concerning auditor reporting. One material amendment was the revision of the ISA 570, extending the reporting on a company's GCU by establishing the duty for auditors to add a separate GCUsec to the auditor's report. While this information is not new to financial statement addressees, as the information is also included in the notes to the financial statements of the company, it might be evaluated more favourably due to its prominent position in the auditor's report and its expansion compared with the former GCU note.

Another amendment was the revision of the ISA 700, implementing the duty to add explanations of the responsibilities of management and auditor to the auditor's report, in order to reduce the audit expectation gap.

Therefore, we experimentally investigate the impacts of both a GCUsec and a responsibilities description on financial statement addressee perceptions and their decision-making behaviour. We use German bank directors, as banks play an outstanding simultaneous role in Germany as investors, providers of capital and financial intermediaries. Furthermore, they are an important part of the German corporate governance system (Boolaky & Quick, 2016). Another important part of corporate governance is the audit committee of a company's supervisory board. Prior research reveals a positive impact of the strength of the audit committee regarding its financial expertise, independence and activity level on a company's performance, financial reporting decisions and stake and shareholder reactions (Agoglia et al., 2011; Bédard et al., 2004; DeFond et al., 2005; Westphal & Zajac, 1998).

Therefore, our study investigates the impact of a GCUsec and a responsibilities paragraph in the auditor's report as additional sources of information, as well as the strength of the audit committee on German bank director perceptions and decisions, using the method of an experiment. Our findings support the disclosure of a GCUsec in the auditor's report, as intended by the IAASB with its revision of the ISA 570. Bank directors tend to make different —for the company more unfavourable—decisions if a GCUsec is disclosed because of the verification of the related information, proving the decision usefulness of a separate extended GCUsec in the auditor's report. Auditors are regarded as a highly credible source because of their independent and monitoring role in the financial reporting process. Hence, financial statement addressees may evaluate information published by the auditor more favourable than the information published by a company's management (Duréndez Gómez-Guillamón, 2003; Fan & Wong, 2005; Wallace, 2004).

In contrast, we do not find impacts of explanations of the responsibilities in the auditor's report, because bank directors are already informed parties and are most likely aware them. They do not need this related paragraph in the auditor's report; that is, adding detailed explanations of responsibilities does not change this subject group's perceptions. Neither do we find impacts of the strength of the audit committee on bank director perceptions and decisions, which may indicate a lack of trust in the two-tier corporate governance system.

Our study is not without limitations. In reality, additional data are required to decide on granting loans to a company that is presented in our case materials. However, in research projects, it is important to find the optimal amount of information provided to make a decision, while ensuring not to overtax the participants' willingness to participate, especially, since bank directors have a limited contingent of time and resources to participate in such research studies. Hence, the information provided was limited. However, the inclusion of different information could potentially result in varied outcomes. Moreover, the German banking system and corporate governance system differ from those in Anglo-American countries. Therefore, our findings may differ when using bank directors from the United States, UK, Australia or New Zealand (Quick & Inwinkl, 2020) or presenting an AC acting in a company within a one-tier system. Furthermore, our research assumes that bankers are not aware of the responsibilities of the auditor versus management. We are aware that this assumption might not always hold in reality and that existing research is inconclusive on this issue.

Our results could also differ when using different subjects (e.g. nonprofessional investors or financial analysts), a different industry in our case scenario or another event evoking GCU. Further, the reliability of our results might be limited due to the relatively small sample size (Simmons et al., 2011), which can be compensated for by using highly knowledgeable participants such as bank directors.[25] However, we were able to find highly significant results and contribute to this research area. The experimental case used several audit committee characteristics (independence, expertise and meeting frequency) to manipulate audit committee strength. However, using such a composite variable does not allow identifying which characteristics potentially impact on banker perceptions and decisions. Moreover, our experimental design regarding audit committee strength applies only two points of a continuum. Strictly speaking, this treatment's potential effects could only be attributed to the two specific instantiations of audit committee strength. Another relevant aspect might be that the difference between strong and weak audit committees in our setting was not large enough to create confidence,[26] hence, constituting a limitation as well.

Future research can perhaps focus on other financial statement user groups to investigate whether different addressees would react differently to the disclosure of a GCUsec or whether the audit committee has significant impacts. While Anandarajan et al. (2002) investigated alternative going concern reporting formats in Canada, and the present research employed German subjects as representatives of European countries, another opportunity for future research lies in using bank directors belonging to different banking and corporate governance systems or utilising archival data to investigate the impact of a GCUsec.

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CONFLICT OF INTEREST STATEMENT

One of the authors (Reiner Quick) is a member of the Editorial Advisory Board of IJA.

DATA AVAILABILITY STATEMENT

Data are available on request from the authors.

ETHICS STATEMENT

Approval has been granted by the ethics committee of Darmstadt University of Technology.

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ENDNOTES

[1] This approach is applicable if the disclosure of the material uncertainty is made adequately in the financial statements by management (ISA

570.22). If management's use of the going concern basis of accounting in the preparation of the financial statements is inappropriate, the auditor must express an adverse opinion (ISA 570.21) (see Figure 1).

[2] A comparable study investigating loan officers' perceptions across alternative going concern reporting formats in Canada was published by Anandarajan et al. (2002).

[3] Prior research uses heterogeneous terminology for GCU information provided in the auditor's report. In order to avoid confusion, we harmonised the wording and consistently used the term GCU note (referring to the short version) throughout this literature review.

[4] Geiger et al. (2019) continue with the synthesis from Carson et al. (2013) by reviewing and synthesising 149 academic studies authored since 2013.

[5] This prediction is empirically supported by a postexperiment question: We asked about the participants' general trust in management and auditors. The overall mean (standard deviation) on a 7-point Likert scale with endpoints 1 ('No Trust'") to 7 ('High Trust') is 4.4 (1.2) for trust in management and 5.3 (1.2) for trust in auditors. Hence, our participants trust more in auditors and their published information.

[6] We refrain from investigating the previously required short GCU note, since prior research did not reveal an additional information value for addressees. Also, the GCUsec replaced this foregoing GCU note practice in audit reporting. Thus, we compare the reporting of GCU in the financial statements accompanied by a GCUsec in the auditor's report, with only the reporting of GCU in the financial statements.

[7] Thus, IDW PS 400 was also revised in Germany, resulting in IDW PS 400 n.F.

[8] For a detailed description of the German banking system, see Section 3.2.

[9] The presented studies are only a sample of those in this broad research area.

[10] We used data of a real-world company, but changed it by multiplying by a specific factor.

[11] The risk report is part of a company's management report. In Germany, listed companies and privately held companies, which are not small in terms of the German Commercial Code, have to publish a yearly management report ('Lagebericht') which is not part of the financial statements but has to be in accordance with them. This report contains additional information about the company, for example, expected developments or opportunities and risks.

[12] We discussed several scenarios that could result in a GCU with German auditors, in order to choose a realistic scenario and recommended this specific scenario.

[13] For an English version of the case materials, see the Appendix.

[14] The use of such a composite variable to reflect the strength or effectiveness of an audit committee is quite common in research, for example, Abbott et al. (2003), Mitra et al. (2019), Rainsbury et al. (2009) and Zaman et al. (2011).

[15] RELY: mean early respondents = 4.5, mean late respondents = 4.6; $t = -0.156$, $p = 0.877$;
CREDIT: mean early respondents = 23.9%, mean late respondents = 20.7%; $t = 0.460$, $p = 0.648$;
ADVICE: mean early respondents = 12.3%, mean late respondents = 10.1%; $t = 0.421$, $p = 0.676$;
INVEST: mean early respondents = 9.1%, mean late respondents = 11.3%; $t = -0.480$, $p = 0.633$;
GOING_CONCERN: mean early respondents = 54.4%, mean late respondents = 47.9%; $t = 0.783$, $p = 0.438$;
FINANCIAL_SITUATION: mean early respondents = 2.7, mean late respondents = 2.8; $t = -0.456$, $p = 0.650$.

[16] Another 65 participants started to participate but did not answer all relevant questions (those concerning the dependent variables and manipulation checks). Moreover, we received some responses from participants who explained why they were not willing to participate. Thus, the response rate is higher than the participation rate. Since only 90 participants completed the entire survey, for many analyses, N is smaller than 101.

[17] While we preferred bank directors, and explicitly sent our invitations via e-mail to them, our design also allowed the participation of former bank directors or bank employees with an appropriate position.

[18] We defined failure as choosing the 'wrong' side of the Likert scale, that is, ticking 1–3 for case versions with and 5–7 for case versions without a responsibility paragraph. Answers of four (the mean scale) were not excluded.

[19] We excluded the dependent variable RELY from our MANOVA, because the effect of GCUsec is contradicting with the other dependent variables (see Table 4).

[20] Furthermore, we used the contrast coding approach of Buckless and Ravenscloft (1990). Contrast coefficients are 3 for the GCUsec-STRONG AC condition and −1 for the other three conditions. The analysis shows no significant effect (p-value = 0.209).

[21] We performed t-tests for post hoc analyses. The application of t-tests requires a normal data distribution and assumes equal variances in the two subsamples. The assumption of normality is often violated; because the risk of distortion is low and it is common to use t-tests, we assume our results to be robust.

[22] Contrast coefficients are 3 for the GCUsec-STRONG AC condition and −1 for the other three conditions.

[23] Contrast coefficients are 3 for the NO RESP-WEAK AC condition and −1 for the other three conditions.

[24] In Germany, an individual is allowed to hold up to 10 supervisory board seats at the same time (Section 100 of the German Stock Corporation Act).

[25] As a rule of thumb, experimental studies require at least 15 participants (Cohen et al., 2007). Cell sizes should be 30 for high power but not smaller than seven (Van Voorhis & Morgan, 2007). Our cell sizes are relatively small. However, cell sizes smaller than 15 occasionally occur in experimental accounting research, for example, Aghazadeh et al. (2020), Burton et al. (2011), Han and Tan (2010), Hoang and Trotman (2021) and Messier et al. (2011).

[26] Our description of the audit committee (strong vs. weak) is based on Agoglia et al. (2011).

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APPENDIX A: EXPERIMENTAL CASE

A.1 | Case

A.1.1 | General

'Mobile AG' is an automotive supply company with its headquarters in Frankfurt, Germany, and 80 offices in 40 countries around the world. It produces components for engines, gearboxes and undercarriages as well as friction solutions and antifriction bearings for a broad range of industry applications. The firm's strategy for the future focuses on environmentally friendly engines, urban and interurban mobility and the energy chain.

'Mobile AG' has 42,000 employees and its current labour agreement in Germany ends on 28 February 2020.

The stocks of 'Mobile AG' are listed in the Prime Standard of the Frankfurt Stock Exchange and is part of the SDAX index. The financial statements are prepared in accordance with the International Financial Reporting Standards (IFRS).

A.1.1.1 | Business situation

'Mobile AG' increased its sales from €6338 million (2017) to €7010 million (2018). The net income decreased from €59 million to €43 million. In comparison to 2017, the total assets have marginally decreased and summed to €5769 million at the year end of 2018 (2017: €5782 million). In 2018, a cash flow of minus €289 million was generated (2017: €33 million). The investment volume for the forthcoming business year is high.

Some further important key indicators of 'Mobile AG' (2017 data in parentheses) for the business year 2018 are as follows:

- EBIT: €76 million (€77 million)
- Earnings per share: €0.12 (€0.14)
- Return on equity: 3.9% (4.3%)
- Debt-to-capital ratio (debt capital/total assets): 0.88 (0.83)
- Price earnings ratio 12 (11)

'Mobile AG' is fully owned by 'Support GmbH.' In its risk report, 'Mobile AG' explains that its continuance as a going concern depends on financial support by 'Support GmbH', because a bond of 150 million due on 3 June 2019 cannot be redeemed by the company alone, according to its liquidity planning.

'

A.1.1.2 | Corporate governance

The management board of 'Mobile AG' consists of nine members. These chairpersons receive a fixed basic salary and some fringe benefits like cars. Additionally, the supervisory board, in December, annually determines a performance-related compensation which utilises group earnings as the performance indicator.

The supervisory board consists of 20 members, 10 of whom represent employees. All members receive a fixed payment at the year end and a reimbursement for expenses. The supervisory board has established an audit committee that monitors the accounting process and the audit, among other things.

[**STRONG**] All audit committee members are financially and personally independent of 'Mobile AG,' possessing many years of knowledge and experience in applying accounting principles and internal control procedures in addition to being familiar with the audit. The audit committee meets frequently (eight to nine times per year).

[**WEAK**] The audit committee members are independent of 'Mobile AG.' Two of them are former officers of the company, while the chair has fundamental experience in applying accounting principles and internal control procedures. The audit committee meets infrequently (once or twice per year).

A.1.1.3 | Auditor

Since 2012, the audit firm ABCD has been responsible for the statutory audit. ABCD, one of the Big 4 audit firms which operate on the German audit market, has always issued an unqualified audit opinion.

ABCD performs the statutory audit in accordance with the relevant norms.

ABCD was elected in the general meeting and appointed by the supervisory board of 'Mobile AG.'

The audit fee paid to ABCD for the statutory audit of the financial statements 2018 is €3.4 million. Moreover, ABCD earned €326,250 for the provision of nonaudit services in the same year.

A.2 | Independent auditor's report

A.2.1 | Opinions

We have audited the consolidated financial statements of 'Mobile AG' and its subsidiaries (the Group). In addition, we have audited the group management report of 'Mobile AG.'

In our opinion, on the basis of knowledge obtained in the audit,

- The accompanying consolidated financial statements comply, in all material respects, with the IFRS as adopted by the EU, … and, in compliance with these requirements, give a true and fair view of the assets, liabilities, and financial position of the Group as on December 31, 2018, and of its financial performance for the financial year from 1 January to 31 December 2018, and
- The accompanying group management report as a whole provides an appropriate view of the Group's position. In all material respects, this group management report is consistent with the consolidated financial statements, complies with German legal requirements and appropriately presents the opportunities and risks of future development.

A.2.2 | Material uncertainty related to going concern

Without qualifying our opinion, we draw attention to Note 4.1 in the group management report which indicates that its continuance as a going concern depends on financial support by 'Support GmbH', because a bond due on 3 June 2019 is not redeemable by the company on its own, according to the liquidity planning.

These conditions indicate the existence of a material uncertainty that may cast significant doubt about the Company's ability to continue as a going concern.

A.2.3 | Responsibilities of the management and supervisory board for the consolidated financial statements and the group management report

Management is responsible for the preparation of the consolidated financial statements that comply … with IFRSs … and the consolidated financial statements, in compliance with these requirements, give a true and fair view of the assets, liabilities, financial position and financial performance of the Group. …

In preparing the consolidated financial statements, management is responsible for assessing the Group's ability to continue as a going concern. They also have the responsibility for disclosing, as applicable, matters related to the Company's continuation as a going concern. …

Furthermore, management is responsible for preparing the group management report that, as a whole, provides an appropriate view of the Group's position and is, in all material respects, consistent with the consolidated financial statements, complies with German legal requirements, and appropriately presents the opportunities and risks of future development. …

The supervisory board is responsible for overseeing the Group's financial reporting process for the preparation of the consolidated financial statements and of the group management report.

A.2.4 | Auditor's responsibilities for the audit of the consolidated financial statements and group management report

Our objectives are to obtain reasonable assurance on whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error and whether the group management report as a whole provides an appropriate view of the Group's position and, in all material respects, is consistent with the consolidated financial statements and the knowledge obtained in the audit, complies with the German legal requirements and appropriately presents the opportunities and risks of future development, as well as to issue an auditor's report that includes our opinions on the consolidated financial statements and on the group management report.

…

We exercise professional judgement and maintain professional scepticism throughout the audit. We also:

- …
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern.

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