

Can Auditors Be Independent? – Experimental Evidence on the Effects of Auditors' Client Type

Christopher Koch*

Assistant Professor
Chair of Business Administration, Accounting and Auditing
University of Mannheim

Martin Weber

Professor of Finance and Banking
Chair of Business Administration, Finance, and Banking
University of Mannheim

Jens Wüstemann

Professor of Accounting and Auditing
Chair of Business Administration, Accounting, and Auditing
University of Mannheim

This version: August 2009

*Corresponding author: Dr. Christopher Koch, Schloss Ostfluegel, O 257, 68131 Mannheim, Germany, Tel.: +49 621 181 2359, Fax:+49 621 181 1694, E-Mail: ckoch@bwl.uni-mannheim.de. Part of this paper was written while the first author was a visiting researcher at Yale University. We are very grateful to two of the big 4 audit firms for supporting this study. The comments of Jannis Bischof, Thomas Carrington, Holger Daske, Aasmund Eilifsen (discussant), Michael Favere-Marchesi (discussant), Don Finn (discussant), Jere Francis, Anna Gold, Frank Hartmann, Christopher Humphrey, Kathryn Kadous (discussant), Hansrudi Lenz, Jason MacGregor, Ernst Maug, Bill Messier, Gary Monroe, Ed O'Donnel, Steven Salterio, Ulrike Stefani (discussant), Jeroen Suijs, and workshop participants at the Erasmus University of Rotterdam and the University of Mannheim, the 2007 Symposium of the European Auditing Research Network in Aarhus, Denmark, the 2008 Auditing Section Midyear Conference in Austin, TX, the 2008 Annual Congress of the European Accounting Association in Rotterdam, the Netherlands, the 2008 Annual Meeting of the German Academic Association for Business Research in Berlin, Germany, the UF 2009 International Conference on Assurance and Governance in Gainesville, FL, the 2009 Annual Conference of the Accounting Section of the German Academic Association for Business Research (Best Paper Award) are greatly appreciated. Financial support from the German Research Foundation (DFG Grant SFB504) is gratefully acknowledged.

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ABSTRACT

We investigate the consequences of shifting the role of auditors' client from the management to the oversight board. In our experimental setting, each professional auditor is associated either with management, which has a preference for aggressive accounting, or with an oversight board, which has a preference for conservative accounting. Overall, we find that auditors are not influenced by client type in their audit opinions. Meanwhile, we observe that the effects of threats to independence depend on auditors' client type. First, auditors with high client retention incentives are lenient towards the management when it is their client but object to it when their client is the oversight board. Second, auditors under high accountability pressure are lenient towards the management regardless of the type of their client. Implications are that both client retention incentives and accountability pressure represent distinctive threats to auditors' independence and that the effectiveness of an audit committee in enhancing auditors' independence depends on the underlying threat.

JEL: C90, K22, M42

Keywords: *audit committee; auditors' independence; client retention incentives; accountability pressure*

Data Availability: *Data are available from the authors upon request.*

1. Introduction

In recent years, regulators worldwide have shifted the role of auditors' client from the management to the oversight board. In the U.S., the Sarbanes-Oxley Act of 2002 mandates that each listed company has to establish an independent audit committee that is directly responsible for the appointment, compensation and oversight of the auditor (Section 301). This constituted a change in auditors' client, since the management was regularly in charge of nominating the auditor and negotiating audit fees pre-SOX (SEC, 2003; Mayhew & Pike, 2004). Similarly, the European Directive on statutory audits of 2006 mandates that each public-interest entity shall have an audit committee responsible for monitoring the work of the auditor, reviewing auditors' independence, and issuing recommendations on auditors' appointments (European Union, 2006). This directive has to be transformed into national laws by the member states. In the U.K., the establishment of an audit committee is now prescribed by the Disclosure Rules and Transparency Rules (Financial Services Authority, 2009), while it was only recommended before by the Combined Code on Corporate Governance (Financial Reporting Council, 2008). In Germany, the supervisory board has the responsibility to monitor the auditor and to issue recommendations on auditor appointments already since 1998 (German Federal Parliament, 1998; Gassen & Skaife, 2009).

In an experiment with professional auditors, we investigate the effects of auditors' client type on auditors' behaviour. The first objective is to test for the overall effect of the change in auditors' clients. This shall provide evidence of whether auditors are really motivated to provide high-quality audits when they are "hired, evaluated and, if necessary, terminated by the audit committee" (SEC 2003), and whether it was justified before this change in auditors' client to argue that "it strains imagination to see the auditor as independent of the management" (Abdel-Khalik, 2002, p. 100). The second objective is to test whether client type influences auditors'

reactions to the main threats to their independence, namely client retention incentives and accountability pressure. Client retention incentives can arise when an auditor has financial incentives to become lenient towards the management in order to retain their mandate (DeAngelo, 1981; Magee & Tseng, 1990). Transferring the decision-making power regarding auditors' retention from the management to the audit committee will mitigate this incentive. The other threat is accountability pressure. Auditors who feel accountable towards the management might be at risk of adopting the preferences of the management in terms of their own judgment (Bazerman, Morgan & Loewenstein, 1997; Bazerman, Loewenstein & Moore, 2002; Moore, Tetlock, Tanlu & Bazerman, 2006). Such behaviour might occur when auditors unconsciously try to avoid conflict with parties they feel accountable to (Tetlock, 1983; 1985). An audit committee as an auditor's client is intended to ensure that auditors no longer feel accountable to the management by "providing a forum separate from management in which auditors [...] can candidly discuss concerns" (SEC, 2003).

Our experimental design reconstructs both the setting in which the auditors have the management as their client and a setting in which an oversight board¹ is the client in question. We take on the perspective of regulators who are concerned that auditors' independence is at risk when auditors face management with strong incentives to increase earnings (SEC, 2003) and describe the management as having a preference for aggressive accounting². In contrast, we describe the oversight board as having a preference for conservative accounting. This preference structure runs parallel with reality, as audit committees should be independent but, at the same time, face a high risk of litigation, especially in cases where earnings are overstated (Hoi, Robin & Tesson, 2007). In order to explore how a change in client type affects auditors' reactions to potential threats to auditors' independence, we measure auditors' perceived client retention incentives and accountability pressure in a post-experimental questionnaire. The experimental task consists of the evaluation of two accounting cases. The primary dependent variable is the

audit opinion. We classify auditors' independence as being at risk when auditors are willing to issue an unqualified opinion for a financial statement that reflects the management's preference for aggressive accounting. This classification is consistent with Antle (1984), who suggests as a measure of auditors' independence the willingness of auditors to follow the preferences of the manager.

To reconstruct a realistic manipulation of auditors' clients, we make use of the German institutional setting. In Germany, there are about 20,000 companies with statutory audits where auditors' clients can be either the management or the supervisory board, depending on the company's decision regarding the formation of a supervisory board and the company's bylaws. These are private limited companies with more than 50 employees, making them large enough that they are obliged to be audited, but less than 500 employees, which gives them the choice of whether or not to create a supervisory board. In contrast, in the US, the independent audit committee is now responsible for the appointment of the auditors for all companies with statutory audits, with only very few exceptions.

Overall, our experimental findings support that auditors' propensity to issue adverse, qualified and unqualified audit opinions is not affected by client type. This finding can be interpreted as indicating that auditors are able to maintain independence from the client. We further test how auditors' client type affects auditors' incentives by investigating the interaction effects of auditors' client type and auditors' reaction to potential threats to auditor independence. The findings are the following. First, auditors with high client retention incentives are more willing to accept the management's preferred accounting method when they are employed by the management, but they are more sceptical about doing so when they are employed by an oversight board. Second, perceived accountability pressure is a statistically significant main effect: auditors are more likely to issue unqualified audit opinions when they feel under high accountability pressure for both client types. These findings imply that, on the one hand, for an auditor to have

an oversight board as its client seems to change the auditors' reaction to financial incentives, while on the other hand, this shift in the type of the client does not seem effective in influencing auditors' reaction to accountability pressure.

Our study makes three main contributions. First, we investigate whether client type affects auditors' behaviour by manipulating client type in a realistic manner. Prior studies have regularly only considered management as potential clients of auditors (e.g., Hackenbrack & Nelson, 1996; Kadous, Kennedy & Peecher, 2003; Blay, 2005). Experiments with alternative parties as auditors' clients have been only designed in experiments with students as participants (Kadous et al., 2003, fn. 19; Mayhew & Pike, 2004). Second, we extend prior experimental research on auditors' reactions to client retention incentives by examining not only the influence of managers with a preference for aggressive accounting on auditors' judgment but that of conservative oversight boards. Third, we test whether client retention incentives and accountability pressure represent two distinctive threats to auditors' independence. This addresses the research gaps identified by Bamber and Iyer (2007, p. 2), that “(p)rior accounting research does not address the effect of social forces or incentives on auditors' objectivity” (Bamber & Iyer, 2007, 2), and by Bonner (2007, p. 220), that it is “crucial to attempt to separate the effects of social [...] consequences from the effects of monetary consequences when studying accountability”. Prior research has investigated accountability pressure, but mainly in the context of hierarchical relationships within the audit firm, and attempts have not been made to separate the effects of financial incentives and accountability pressure (DeZoort & Lord, 1997).

The next section develops hypotheses by drawing from theory and prior literature, the third section describes the experimental design, the fourth section reports the results and the fifth section concludes the paper and addresses limitations.

2. Theory and Hypotheses

Overall effect of client type

In our experiment, we investigate, first of all, the overall effect of client type on auditors' independence. This effort shall serve to test the underlying assumption of the Sarbanes-Oxley Act and the European Directive on statutory audits: that client type can affect auditors' independence. For this test, in our experimental design, we take on the perspective of regulators who are concerned that auditors' independence is at risk when auditors face management with strong incentives to increase earnings (SEC, 2003) and who describe the management as having a preference for aggressive accounting. In contrast, we describe the audit committee as having a preference for conservative accounting. This mirrors reality where audit committees are supposed to be independent but face at the same a high degree of litigation risk, especially in cases of overstated earnings (Hoi et al., 2007). These descriptions also mean that client types are set at opposed levels, which shall provide a strong test for the following research question.

RQ1: Are auditors more willing to accept an aggressive accounting method when their client is management with a preference for aggressive accounting than when their client is an oversight board with a preference for conservative accounting?

Client retention incentives and client type

After estimating the overall effect of client type, we examine whether client type affects auditors' responses to potential threats to auditors' independence. One important potential threat derives from client retention incentives. Economic theory suggests that audit firms have financial incentives to retain their clients, since they can earn future quasi-rents from current clients (e.g.,

DeAngelo, 1981). The effects of these client retention incentives on auditors' independence depend on auditors' client types. When auditors' clients are the management, client retention incentives can pose the danger that auditors become lenient in their audit decisions and are more willing to accept the management's preferred accounting method than they should be (e.g., Magee & Tseng, 1990). On the other hand, when auditors' clients are oversight boards whose incentives are aligned with those of the investors, auditors' independence can be enhanced and auditors can become less likely to accept an aggressive accounting method preferred by the management (Lee & Gu, 1998). The reason for these differing effects of different client types on auditors' behaviour is that in the latter case, auditors no longer have to fear being replaced when they disagree with the management if their clients are independent oversight boards (Dye, 1991).

Experimental studies almost exclusively focus on the investigation of scenarios where auditors are employed by the management. A stylised finding is that auditors' independence is at risk in this scenario, at least when the client retention incentives are high. For example, auditors are more willing to accept the accounting method proposed by the management when the risk of losing the client is high (Farmer, Rittenberg & Trompeter, 1987; Blay, 2005), when the client is important (Lord, 1992; Beeler & Hunton, 2002; Chang & Hwang, 2003; Favere-Marchesi & Pincus, 2006), when the auditor's compensation scheme rewards client retention (Trompeter, 1994), or when the client represents future business opportunities (Beeler & Hunton, 2002; Moreno & Bhattacharjee, 2003). The potential negative effects of client retention incentives on auditors' independence are especially likely to occur when the auditor is highly committed to retaining the client (Kadous et al., 2003). Experiments with auditors have not investigated the effects of oversight boards as auditors' clients yet. An abstract economic experiment with students as subjects suggests that it can have positive effects (Mayhew & Pike, 2004).

The first hypothesis investigates whether auditors' client type affects auditors' reactions to potential threats to auditor independence. Based on the findings of the analytical and

experimental studies discussed above, we expect that client type and client retention incentives will interact. That is, we expect that a high level of client retention incentives can endanger an auditor's independence when the auditor's client is the management, whereas high client retention incentives can enhance an auditor's independence when the auditor's client is an oversight board. While prior research has provided evidence of the influence of management as auditors' clients, our study provides new evidence regarding auditors' behaviour when their clients are oversight boards.

H1: Client retention incentives and client type interact; i.e., auditors are most likely to issue unqualified opinions when their client retention incentives are high and when their clients are management bodies with a preference for aggressive accounting.

Accountability pressure and client type

Another important threat to auditors' independence is accountability pressure. Accountability pressure can arise when a judgment or a decision has to be justified towards another party that is considered important (Tetlock, 1985). When the view of that other party is known, it has the effect that people unintentionally gravitate in their own judgment towards the preferences of that party (Tetlock, 1983; Lerner & Tetlock, 1999). This judgment process is called the acceptability heuristic (Tetlock, 1985). The underlying cause of this heuristic is that people seek the social approval of others (Schlenker, 1980) and attempt unconsciously to adopt a socially acceptable and compliant position (Tetlock, 1985; Tetlock, Skitka & Boettger, 1989; Lerner & Tetlock, 1999).

As long as an auditor has the management as its client, the risk is present that auditors will unconsciously adopt the preferences of the management due to the acceptability heuristic

(Bazerman et al., 1997). In such a setting, all antecedents for the acceptability heuristic are fulfilled: First, the management is an important other party, since it is the auditor's client. Second, the auditor has to justify its judgments and decisions to the management—e.g., they have to justify any adjustments that they consider necessary (Gibbins, Salterio & Webb, 2001; Sanchez, Agoglia & Hatfield, 2007). Third, the auditor knows the management's preferred accounting method. This is the case because the preliminary financial statement is prepared by the management. Furthermore, auditors are also explicitly required to derive an understanding of management's position and incentives when planning the audit and when considering fraud risk (AU 312.16 and AU 316.07).

Currently, regulators emphasise the role of the oversight board as a client of auditors. This could have the consequence that auditors feel mainly accountable towards the audit committees. The antecedents of the acceptability heuristic also are fulfilled in this setting. First, the audit committee is an important other party. Second, auditors now have extensive justification requirements to fulfil with regards to the audit committee. For example, the Sarbanes-Oxley Act require them in section 204 to inform the audit committee about “(1) all critical accounting policies and practices to be used; (2) all alternative treatments of financial information [...] that have been discussed with management” (SEA 1934, Section 10a, k)). Finally, auditors can infer the preferences of the audit committee either from their experiences with previous audits of the company or from discussions with the audit committee during the planning of the audit. In this scenario, the consequence of the acceptability heuristic would be that auditors gravitate unconsciously towards the preferences of the oversight board. Similarly, regulators hope that the audit committee, as an auditor's client, can provide “a forum separate from management in which auditors [...] can candidly discuss concerns”, thereby ensuring “that the outside auditors, through their own review, objectively assess the company's financial reporting practices” (SEC, 2003).

Prior research on the effects of accountability pressure felt by auditors towards their clients is limited. One of the very few studies on this topic is that of Buchman et al. (1996). In their experiment, they manipulate whether auditors are accountable to no one, to the management or to the audit partner. They find weak evidence that auditors who are accountable towards the management employ the acceptability heuristic. Similarly, Bamber and Iyer (2007) observe in a field-based analysis that auditors who identify more strongly with the management are more likely to acquiesce to the client-preferred treatment norms. Experimental or field studies on the effects of the acceptability heuristic on auditors who feel accountable towards an oversight board are non-existent.³

In our experiment, we investigate the interaction effect between client type and accountability pressure. First, we aim to contribute to the limited prior evidence on the effects on auditors' independence of accountability pressure felt with regard to the management. Second, we intend to provide new evidence regarding the effects of accountability pressure felt with regard to an oversight board. Based on the accountability theory, we formulate the following hypothesis:

H2: Accountability pressure and client type interact; i.e., auditors are most likely to issue unqualified opinions when they feel under high accountability pressure and when the clients in question are management bodies with a preference for aggressive accounting.

Accountability pressure and client retention incentives are often intertwined. For example, the importance of the client enhances both client retention incentives and accountability pressure (Lerner & Tetlock, 1999; Bamber & Iyer, 2007). Meanwhile, accountability pressure is distinct from client retention incentives, since it can also arise, without the presence of monetary

incentives, purely from the desire to avoid conflict (Tetlock, 1985). It is necessary to distinguish between these two potential threats to auditors' independence for two main reasons. First, while auditors might be aware that they are influenced in their judgment by financial considerations, they are probably not aware of the effects of accountability pressure. Accountability pressure influences auditors' judgment unconsciously, which could mean that even auditors who intend to remain independent are at risk of having their independence impaired (Bazerman et al., 2002). Second, potential measures to ensure auditors' independence might differ in their effectiveness, depending on the underlying threat to be remedied (Bamber & Iyer, 2007). For example, Moore et al. (2006) argue that the prohibition of certain non-audit services in the Sarbanes-Oxley Act might have been effective in counteracting client retention incentives, but that auditors' independence would remain endangered due to accountability pressure. Therefore, it is "crucial to attempt to separate the effects of social [...] consequences from the effects of monetary consequences when studying accountability" (Bonner, 2007, p. 220).

Auditor Rank

Mixed evidence is available regarding whether auditors' rank mitigates the effects of client retention incentives on auditors' independence. Some studies suggest that auditors of higher rank are more likely to be sensitive to client retention incentives, as their performance evaluation and compensation often rely strongly on the fee they generate (Trompeter, 1994; Haynes, Jenkins & Nutt, 1998). Other studies suggest that auditors of higher rank are more likely to withstand client retention incentives because they are more aware of the presence of counteracting incentives, such as litigation or reputation risks (Farmer et al., 1987; Moreno & Bhattacharjee, 2003).

Hardly any evidence exists of whether auditors of higher rank are better able to cope with accountability pressure. While Buchman et al. (1996) do not find any evidence for such positive effects of experience, and Bamber et al. (2007) do observe some positive effects. Arguments as to

why such positive effects might exist can be derived from the finding that auditors of higher rank possess greater communication and interpersonal skills (Tan & Libby, 1997).

Giving this missing or mixed evidence, we ask the following research question.

RQ2: Do the effects of client retention incentives and accountability pressure differ across auditors of different ranks?

3. Experimental design

Experimental procedure

Two of the international Big 4 audit firms agreed to support the experiment. At one audit firm, auditors participated in the experiment at the end of the first day of a two-day training program designed for all levels of experience that was held in three different regions in Germany. At the other audit firm, the experiment was conducted prior to a German nationwide partner/manager meeting, and the participants were asked to sign up for the experiment beforehand. Altogether, 72 auditors participated in four sessions.⁴ The format of all sessions was the same, and in each session, one of the authors was present together with his or her research assistants in order to ensure that the experiment would proceed in a controlled manner.

The outline of the experimental procedure, which consisted of three parts, is shown in Figure 1. In the first part, it was randomly determined for each auditor whether the client in question was the management or the supervisory board. The audit client and the audit appointment process were described, followed by framing questions. Auditors were also informed that about one in eight auditors would be randomly selected for a simulated meeting with the client of about ten minutes after the experiment. The random selection for this meeting took place for each auditor individually after that auditor had handed in the experimental

materials. Then, all auditors had the task of evaluating two ambiguous accounting cases each. Thirdly, the auditors filled out questionnaires that included questions related to their perceived client retention incentives, their feelings of accountability pressure, and their level of experience.

--- Insert Figure 1 here ---

Experimental task and dependent variables

Auditors evaluated two accounting case studies under German GAAP.⁵ The order in which the cases were presented was randomly varied across subjects. The first case covered the measurement of provisions for warranties and the second case covered allowances for bad debt. These accounting issues have often been considered in previous auditing research (e.g., Buchman et al., 1996; Turner, 2001; Jenkins & Haynes, 2003) and are relevant to auditor-client meetings, since they affect reported earnings (Gibbins et al., 2001). We designed the cases to be ambiguous, since prior research suggests that auditors' independence is most strongly affected by client retention incentives (Hackenbrack & Nelson, 1996; Salterio & Koonce, 1997) and accountability pressure (Chaiken, Liberman & Eagly, 1989; Boiney, Kennedy & Nye, 1997) when no clear guidelines exist.

In each case study, the accounting method used by the audited company in its preliminary financial statement was presented at the beginning. Then, five pieces of evidence were introduced stepwise in order to simulate the audit process in which the auditor gathers audit evidence step by step. This procedure also allowed us to elicit auditors' evaluations of each piece of evidence immediately after it was presented, and it ensured that the auditors were motivated to consider all pieces of evidence carefully. In the end, the auditors judged the conformity of each company's accounting method with GAAP, chose the appropriate measurement amount, and decided what

audit opinion to issue. Details on the eliciting and coding of all dependent variables are provided in Table 1.

Our primary dependent variable is the audit opinion, since issuing the correct audit opinion is the auditor's primary task. Furthermore, it is assumed that the client is especially concerned about receiving an unqualified opinion when making the decision regarding whether to retain the auditor (e.g., DeAngelo, 1981), which is also why auditors will experience the strongest need for justification and high accountability pressure for this decision (Buchman et al., 1996; Turner, 2001). Auditors in our experiment issued all types of audit opinions: unqualified opinions were issued 66 times, qualified opinions 56 times and adverse opinions 19 times.

Audit opinion is classified as a binary variable. We coded unqualified opinions as one and both qualified and adverse opinions as zero. Our results hold when classifying audit opinion as an ordinal variable by coding unqualified opinions as two, qualified opinions as one and adverse opinions as zero, and when classifying audit opinion as a continuous variable. In our analyses, we use logistic regressions by pooling all data. This results in a total of 144 observations from 72 auditors. Due to missing data, the main logistic regression analyses include 132 observations from 67 auditors. The results of these analyses hold when including subject as a random effect.

--- Insert Table 1 here ---

Independent variables

Manipulated variable: client

Client type was randomly assigned: Thirty-seven subjects were accountable to the management and 35 auditors were accountable to the oversight board. The accountability relationship was established by informing auditors about the background of the audit engagement. They were informed who hired them, what the preferences of their client were, and that a meeting with the

client would take place in the end in which the auditor should defend his audit judgments and decisions. After auditors had received this information, they were asked to characterize this scenario and to describe similar self-experienced scenarios. These framing questions had the intention to ensure that auditors internalized the experimental setting.

The distinctiveness of the German institutional setting allows us to manipulate auditors' client in a realistic way. A realistic manipulation is essential in an experiment with professional auditors in order to avoid confounding demand effects. In Germany, like in many code law countries, a two-tiered board structure is in place for limited companies (e.g., Hopt, 1997; Plessis, Großfeld, Luttermann, Saenger & Sandrock, 2007).⁶ This means that the supervisory board (*Aufsichtsrat*) and the management (*Vorstand/Geschäftsführung*) are two distinct bodies of the corporation (e.g., Leuz & Wüstemann, 2004). While the management governs the company, the supervisory board controls the management. With the Corporate Control and Transparency Act of 1998, the supervisory board was generally made responsible for nominating the auditor for election at the annual shareholder meeting, appointing the auditor, and negotiating the compensation terms (Gassen & Skaife, 2009). Furthermore, the supervisory board has been made the primary recipient of auditor's internal long-form audit report (Leuz & Wüstemann, 2004). Meanwhile, the management is still responsible for appointing the auditor in private limited companies with fewer than 500 employees that are not required to have a supervisory board (Theisen, 2007).⁷ As all corporations with more than 50 employees are required by law to be audited⁸, the consequence is that in private limited companies with more than 50 but fewer than 500 employees, either the management or the supervisory board can be in charge of nominating the statutory auditor.

With respect to auditors' appointment, the institutional settings in Germany, in the other members states of the European Union and the in the U.S. is comparable in many ways. The German Corporate Control and Transparency Act of 1998 emphasized the role of the supervisory

board as auditors' client, while the U.S. Sarbanes-Oxley Act of 2002 and the European Directive on statutory audits of 2006 did the same with the audit committee. Meanwhile, it is possible to manipulate auditors' client within the German institutional setting in a more realistic and more clear-cut way than, for example, within the U.S. institutional setting. While German federal law and corporate bylaws give the management the explicit authority to be auditors' client for a large number of companies with mandatory audits, the management cannot formally be auditors' client in statutory audits in the U.S. Only informally can management be the key decision-maker in determining auditors' appointment at some companies in the U.S. (Cohen, Krishnamoorthy & Wright, 2008).

In our experiment, the management has preferences for aggressive reporting. In the description, it is said that management would miss earnings forecasts, forfeit bonus payments and face the risk of being dismissed when choosing a more conservative accounting method. We chose this characterization of the management, because we wanted to take on the perspective of regulators who are concerned that auditors' independence is at risk when they face management with strong incentives to increase earnings (SEC, 2003). This assumption about the incentives present is also in line with empirical findings that management regularly engages in earnings management (Nelson, Elliott & Tarpley, 2002).

We describe the oversight board as having preferences for conservative reporting. In the description, we point out that the members face litigation risk in case of aggressive reporting and that the members have the desire to restrict possibilities for future dividend payouts in order to ensure the viability of the company. In reality, audit committee members are supposed to be independent. Nevertheless, audit committee members have incentives to favor conservative reporting in order to reduce litigation risk (Hoi et al., 2007). We decided to characterize the oversight board as being conservative instead of neutral in order to increase the contrast to management's preferences, thereby ensuring the statistical power of the experiment.

Measured variables: client retention incentives, accountability pressure and auditors' rank

As described above, client retention incentives and accountability pressure are intertwined. Nevertheless, it is crucial to distinguish between these two potential threats to auditors' independence, since the effectiveness of remedies for mitigating these threats might depend on the source of the threats (Bazerman, Moore, Tetlock & Tanlu, 2006; Bamber & Iyer, 2007). We follow Bonner's (2007, 220) recommendation that post-experimental questions be used to distinguish between the two different threats (see Table 2 for details on the measured and manipulated independent variables).

Client retention incentives are determined in terms of the importance of the client (DeAngelo, 1981; Farmer et al., 1987) and the likelihood that the client will switch the audit firm in case of disagreements (e.g., Dye, 1991; Teoh, 1992; Lennox, 2000). We constructed an experimental setting with high client retention incentives. The client was described as being very important, as it contributed one-fourth of the total audit fees of the local office, and the risk of dismissal was described as being very high because the client has demonstrated in the past that it is willing to switch auditors in the case of disagreement. In a post-experimental questionnaire, we elicit a proxy for perceived client-retention incentives by aggregating auditors' evaluation of two questions. First, auditors were asked how likely they consider the threat of being dismissed to be in the case of client-auditor dissent. A similar perception question was also used by Trompeter (1994). Other studies manipulated the risk of dismissal via descriptions (e.g., Farmer et al., 1987; Johnstone, Bedard & Biggs, 2002). Second, auditors were asked how likely they consider it that to be that other auditors will make concessions in judgment based on this threat. This shall elicit whether auditors have the goal to retain the client even if this requires making concessions. Similarly, Kadous et al. (2003) (Kadous et al., 2003) measure auditors' goal commitment to build

a justifiable case for the client's preferred accounting method. We use an indirect questioning in order to mitigate social desirability bias (Fisher, 1993).

Accountability pressure arises when one expects to justify one's own decision to an important other party (Tetlock, 1983). In our experiment, we created accountability pressure by requiring auditors to justify their decisions to the clients, both in written form and in an announced face-to-face meeting (Tan, 1995; Brazel, Agoglia & Hatfield, 2004; DeZoort, Harrison & Taylor, 2006). We ensured that auditors were aware of the justification requirement throughout the study by repeating it before each judgment and decision task. In a post-experimental questionnaire, auditors were first asked how insistently they would maintain their audit judgments toward colleagues, and were then asked how strong their desire was to avoid conflict with their clients in the upcoming meetings. The first question is intended to measure subjects' perceived personal responsibility as a measure for accountability, since responsibility is often characterised as an antecedent of accountability (Schlenker, Britt, Pennington, Murphy & Doherty, 1994). The second questions measures conflict avoidance as another concept underlying accountability, since subjects with a high degree of desire to avoid conflict have been found to be especially sensitive to accountability pressure (Chen, Shechter & Chaiken, 1996; Lerner & Tetlock, 1999). The aggregate answer to these two questions is our proxy for perceived accountability pressure.

We required auditors to have at least two years of work experience. This threshold was chosen by considering two conflicting objectives. While it was necessary to require this level of experience in order to ensure that the auditors understood the experimental setting, it was also necessary not to require a higher level of experience in order to ensure that the variation in rank within the experiment was still high enough to test for differences in behaviour between ranks. The average experience of the participants was 9.5 years, with a minimum of two years. The distribution of participating auditors over the different hierarchical levels was reasonably

balanced: 21 staff members, 18 managers, 18 senior managers and 12 partners. We classified the auditors at staff and manager levels as being of lower rank and the auditors at senior manager and partner levels as being of higher rank. In doing so, we perform a median split.

--- Insert Table 2 here ---

Correlation of independent variables

We examine the pairwise correlation between the independent variables for two reasons (see Table 3). First, we are interested in investigating whether our constructs for client retention incentives and accountability pressure measure different aspects. We find that client retention incentives and accountability pressure are uncorrelated, which suggests that the two constructs are distinct from each other. Second, the analysis serves as a check for whether client type or auditors' rank has unanticipated effects on the subjective measured variables. We find no significant correlations between these variables.

--- Insert Table 3 here ---

4. Results

Overall effect of client type

In our experiment, we describe each auditor's client as being either a management body with a preference for aggressive accounting methods or an oversight board with a preference for conservative accounting; we investigated whether this influences auditors' opinion decision (RQ1). Overall, we find no indication that auditors acquiesce to clients' preferences in their audit opinions decisions. Auditors employed by management issue unqualified opinions in 48.6% of all

cases, while auditors employed by oversight boards do so in 44.9% of all cases. This difference is not significant (see Table 4). Meanwhile, we find that auditors are influenced by client type in judgment tasks. Auditors employed by the management consider audit evidence more often in contradiction to the aggressive accounting method chosen in the financial statements, and they judge the conformance of the financial statements with German GAAP to be lower (see Table 4).

The finding that auditors are not influenced in their audit decisions by client type, and that they are even more sceptical in their audit judgments when their clients are the management, can be explained by drawing from the theory of Turner (2001). According to Turner, one has to distinguish between belief and action tasks when investigating the effects of motivational factors. Belief tasks are defined as judgments that do not directly affect the audit outcome (e.g., the evaluation of audit evidence), while action tasks refer to decisions that directly affect the audit outcome (e.g., the audit opinion decision). In belief or judgment tasks, auditors are concerned about quality. This explains why auditors in our experiment are sceptical of their clients' preferences when evaluating evidence, since one dimension of audit quality is professional scepticism (Gramling, 1999). For action or decision tasks, people experience feelings of responsibility most intimately (Tversky, 1972; Turner, 2001), and this intensifies accountability pressure (Lerner & Tetlock, 1999). Consistent with this reasoning is the finding that auditors hired by the management are marginally significantly more likely to accept the aggressive accounting method chosen by the management than are auditors hired by an oversight board ($p = 0.071$; see Table 5).

--- Insert Table 4 here ---

--- Insert Table 5 here ---

Effects of client retention incentives

We expected that the influence of client type on auditors' decision to accept an aggressive accounting method would depend on the level of auditors' client retention incentives (H1). Our findings are consistent with this hypothesis. In the overall logistic regression analysis, the interaction between client type and client retention incentives is significant ($p = 0.016$; see Table 6). This indicates that auditors with high client retention incentives are more likely to issue unqualified audit opinions when their clients are management bodies. It implies that giving an oversight board the authority to hire the auditor can encourage that auditor to be more critical in its decision to accept or reject an aggressive accounting method chosen by the management.

--- Insert Table 6 here ---

Effects of accountability pressure

We expected that the influence of client type on an auditor's decision to accept an aggressive accounting method would depend on the level of that auditor's self-reported feelings of accountability (H2). Our results are not fully consistent with this hypothesis, since the interaction effect of accountability pressure with respect to client type is not significant ($p = 0.253$; see Table 6). Instead, accountability pressure has a highly significant main effect on audit opinions ($p < 0.001$; see Table 6). This suggests that auditors are at risk of having their independence impaired not only when they are employed by the management but also when they are employed by an oversight board. One explanation might be that auditors still feel accountable towards the management even if their clients are oversight boards. This might be the case, since auditors still have frequent meetings with the management and with employees of the management during the

audit. Therefore, it could be speculated that it is difficult for an oversight board as an auditor's client to influence the auditor through accountability pressure.

Effects of auditors' rank

Furthermore, we investigate the research question of whether the effects of the potential threats of auditor independence differ across auditor of different ranks (RQ2). First, we do not find evidence that the reactions to client retention incentives differ across auditors of different rank, since these two variables produce no significant effect. Second, we find a significant interaction of accountability pressure with auditors' rank ($p = 0.004$; see Table 6). The direction of this effect implies that auditors of higher rank are better able to cope with accountability pressure.

5. Conclusion

In an experiment with professional auditors, we examined whether the shift auditors have experienced, in which their clients have become oversight boards rather than management bodies, has changed those auditors' behaviour. We also considered whether client type influences auditors' reactions to main threats to independence.

Overall, we find that auditors remain unaffected by client type in their audit opinion decisions. The reason for this seems to be that auditors employed by the management are more sceptical in their evaluation of audit evidence, which counteracts the effects of client type. This finding can be interpreted as showing that auditors are able to remain independent even when employed by the management.

We further test whether auditors react differently to potential threats to auditors' independence depending on their assigned client type. First, we find evidence for such a difference in behaviour based on client retention incentives. Auditors that are employed by the

management and that report high client retention incentives are likely to acquiesce to the management's preferences, while auditors that are employed by oversight boards and report the same incentives are more likely to resist. Second, we observe that auditors' behaviour does not depend on client type when they feel under high accountability pressure. Auditors in both client conditions become more lenient towards the management's preferred accounting method when they report a high level of motivation to avoid conflict with the client. Therefore, these results imply that auditors consider oversight board to be in charge of making decisions regarding their reappointment or termination, but that they still feel accountable to the management. The findings also provide evidence that client retention incentives and accountability pressure are potential threats to auditors' independence that are distinct from each other and that the effectiveness of potential remedies differs for the two threats (e.g., Bazerman et al., 2006).

Two main limitations of the experimental design should be considered when interpreting the results. First, we measure client retention incentives and accountability pressure instead of manipulating these factors. We decided to do so because the two threats to auditors' independence are usually intertwined in reality. While this choice ensures the realism of the experimental setting, which is essential in experiments with professional auditors, it reduces the ability to draw causal inferences. Second, we contrast the alleged problematic setting in which a management body with incentives that encourage aggressive reporting is the auditor's client with the setting in which an oversight board with incentives that encourage conservative reporting has this position. The aim is to manipulate client type at both typical and strong levels in order to create a powerful test of the overall research question: whether client type can influence auditors' independence. One downside of this manipulation is that it is not possible to infer whether the results are driven by client identity or client preferences. In future research, it might be worthwhile to attempt to disentangle the two factors by manipulating them separately.⁹

¹ We summarize both audit committees and supervisory boards under the umbrella term “oversight board”.

² We define aggressive accounting as income-increasing and conservative accounting as income-decreasing.

³ More extensive is the research on the effects of accountability pressure felt towards the reviewers within the audit firm (DeZoort and Lord, 1997).

⁴ 72 subjects indicated auditing as their main field, among whom were 52 male and 15 female auditors; five participants did not indicate their gender. In total, 84 subjects participated. We excluded 12 participants who indicated IT-auditing, tax consulting or consulting as their main field. Our main results hold, nevertheless, when we include all subjects in our analysis.

⁵ The effects of the independent variables do not differ between the two case studies as it is indicated by the interaction effects between the independent variables and a dummy variable for case which is not statistically significant (see Table 5 and Table 6).

⁶ This applies to stock corporations (Aktiengesellschaften). It also applies to private limited corporations (Gesellschaften mit beschränkter Haftung) with more than 500 employees who have to form a supervisory board under section 1, paragraph 3 of the One-Third Codetermination Act (Gesetz über die Drittelbeteiligung der Arbeitnehmer im Aufsichtsrat, Drittelbeteiligungsgesetz).

⁷ Section 52 Gesetz betreffend die Gesellschaften mit beschränkter Haftung, GmbHG (Private Limited Liability Company Act). Furthermore, private limited companies are free to pass corporate bylaws that can even give management the power to directly choose the auditor.

⁸ Sections 267, 316 Handelsgesetzbuch (German Commercial Code) requires a company to be audited when two of the following three requirements are fulfilled in two consecutive financial years: 1) more than 50 employees, 2) a balance sheet total of more than 4 015 000 Euro, 3) sales of above 8 030 000 Euro.

⁹ Meanwhile, power analyses suggest that trying to disentangle both factors might require considerably larger sample sizes. For example, the difference in the mean value for the proportion of unqualified audit opinions according to the results in Table 1 is estimated to be 3.7% between the two client conditions. To detect this small difference as the true difference in a new study with a statistical power of 80% would require 2854 participants for each condition (Rate of UQ in the oversight board condition 44.9%, Chi-Square test, $\alpha=0.05$, two-sided). To detect smaller differences resulting from a less extreme manipulation of the main effect would require even larger sample sizes.

References

- Abdel-Khalik, A.R. (2002). Reforming Corporate Governance post Enron: Shareholder's Board of Trustees and the Auditor. *Journal of Accounting & Public Policy* 21, 97-103.
- Antle, R. (1984). Auditor Independence. *Journal of Accounting Research* 22, 1-20.
- Bamber, E.M., & Iyer, V.M. (2007). Auditors' Identification with Their Clients and Its Effect on Auditors' Objectivity. *Auditing* 26, 1-24.
- Bazerman, M.H., Loewenstein, G., & Moore, D.A. (2002). Why Good Accountants Do Bad Audits. *Harvard Business Review* 80, 96-103.
- Bazerman, M.H., Moore, D.A., Tetlock, P.E., & Tanlu, L. (2006). Reports of Solving the Conflicts of Interest in Auditing are Highly Exaggerated. *Academy of Management Review* 31, 43-49.
- Bazerman, M.H., Morgan, K.P., & Loewenstein, G.F. (1997). The Impossibility of Auditor Independence. *Sloan Management Review* 38, 89-94.
- Beeler, J.D., & Hunton, J.E. (2002). Contingent Economic Rents: Insidious Threats to Audit Independence. *Advances in Accounting Behavioral Research* 5, 21-50.
- Blay, A.D. (2005). Independence Threats, Litigation Risk, and the Auditor's Decision Process. *Contemporary Accounting Research* 22, 759-789.
- Boiney, L.G., Kennedy, J., & Nye, P. (1997). Instrumental Bias in Motivated Reasoning: More When More Is Needed. *Organizational Behavior & Human Decision Processes* 72, 1-24.
- Bonner, S.E. (2007). *Judgment and Decision Making in Accounting* Englewood, NJ: Prentice Hall.
- Brazel, J.F., Agoglia, C.P., & Hatfield, R.C. (2004). Electronic versus Face-to-Face Review: The Effects of Alternative Forms of Review on Auditors' Performance. *The Accounting Review* 79, 949-966.
- Buchman, T.A., Tetlock, P.E., & Reed, R.O. (1996). Accountability and Auditors' Judgments about Contingent Events. *Journal of Business Finance & Accounting* 23, 379-398.
- Chaiken, S., Liberman, A., & Eagly, A.H. (1989). Heuristic and Systematic Information Processing Within and Beyond the Persuasion Context. In J.S. Uleman, & J.A. Bargh, *Unintended Thought*. New York: Guilford Press, pp. 212-252.
- Chang, C.J., & Hwang, N.-C.R. (2003). The Impact of Retention Incentives and Client Business Risks on Auditors' Decisions Involving Aggressive Reporting Practices. *Auditing* 22, 207-218.
- Chen, S., Shechter, D., & Chaiken, S. (1996). Getting at the Truth or Getting Along: Accuracy-Versus Impression-Motivated Heuristic and Systematic P. *Journal of Personality and Social Psychology* 71, 262-275.
- Cohen, J., Krishnamoorthy, G., & Wright, A. (2008). Corporate Governance in the Post-Sarbanes-Oxley Era: Auditor Experience.
- DeAngelo, L.E. (1981). Auditor Independence, "Low Balling", and Disclosure Regulation. *Journal of Accounting & Economics* 3, 112-127.
- DeZoort, F.T., & Lord, A.T. (1997). A Review and Synthesis of Pressures Effects in Accounting. *Journal of Accounting Literature* 16, 28-85.
- DeZoort, T., Harrison, P., & Taylor, M. (2006). Accountability and Auditors' Materiality Judgments: The Effects of Differential Pressure Strength on Conservatism, Variability, and Effort. *Accounting, Organizations & Society* 31, 373-390.
- Dye, R.A. (1991). Informationally Motivated Auditor Replacement. *Journal of Accounting & Economics* 14, 348-374.

- European Union. (2006). Directive 2006/43/EC on Statutory Audit of Annual Accounts and Consolidated Accounts and amending Council Directives 78/660/EEC and 83/349/EEC. *Official Journal of the European Union L 157* 87-106.
- Farmer, T.A., Rittenberg, L.E., & Trompeter, G.M. (1987). An Investigation of the Impact of Economic and Organizational Factors on Auditor Independence. *Auditing* 7, 1-14.
- Favere-Marchesi, M., & Pincus, K.S. (2006). The Impact of Accountability on Auditors' Processing of Nondiagnostic Evidence. *Advances in Accounting Behavioral Research* 9, 1-26.
- Financial Reporting Council. (2008). The Combined Code on Corporate Governance.
- Financial Services Authority. (2009). 2009/42 Supervision Manual (Controlled Functions).
- Fisher, R.J. (1993). Social Desirability Bias and the Validity of Indirect Questioning. *Journal of Consumer Research* 20, 303-315.
- Gassen, J., & Skaife, H.A. (2009). Can Audit Reforms Affect the Information Role of Audits? Evidence from the German Market. *Contemporary Accounting Research*, Forthcoming.
- German Federal Parliament. (1998). German Corporate Control and Transparency Act. *BGBI I*, 786-794.
- Gibbins, M., Salterio, S., & Webb, A. (2001). Evidence About Auditor-Client Management Negotiation Concerning Client's Financial Reporting. *Journal of Accounting Research* 39, 535-563.
- Gramling, A.A. (1999). External Auditors' Reliance on Work Performed by Internal Auditors: The Influence of Fee Pressure on This Reliance Decision. *Auditing* 18, 117-135.
- Hackenbrack, K., & Nelson, M.W. (1996). Auditors' Incentives and Their Application of Financial Accounting Standards. *The Accounting Review* 71, 43-59.
- Haynes, C.M., Jenkins, J.G., & Nutt, S.R. (1998). The Relationship Between Client Advocacy and Audit Experience: An Exploratory Analysis. *Auditing* 17, 88-104.
- Hoi, C.-K., Robin, A., & Tessori, D. (2007). Sarbanes-Oxley: Are Audit Committees up to the Task? *Managerial Auditing Journal* 22, 255-267.
- Hopt, K.J. (1997). The German Two-Tier Board (Aufsichtsrat): A German View on Corporate Governance. In K.J. Hopt, & E. Wymeersch, *Comparative Corporate Governance*. Berlin, New York: Walter de Gruyter, pp. 3-20.
- Jenkins, J.G., & Haynes, C.M. (2003). The Persuasiveness of Client Preferences: An Investigation of the Impact of Preference Timing and Client Credibility. *Auditing* 22, 143-154.
- Johnstone, K.M., Bedard, J.C., & Biggs, S.F. (2002). Aggressive Client Reporting: Factors Affecting Auditors' Generation of Financial Reporting Alternatives. *Auditing* 21, 47-65.
- Kadous, K., Kennedy, S.J., & Peecher, M.E. (2003). The Effect of Quality Assessment and Directional Goal Commitment on Auditors' Acceptance of Client-Preferred Accounting Methods. *The Accounting Review* 78, 759-778.
- Lee, C.-W.J., & Gu, Z. (1998). Low Balling, Legal Liability and Auditor Independence. *The Accounting Review* 73, 533-555.
- Lennox, C. (2000). Do Companies Successfully Engage in Opinion-Shopping? Evidence from the UK. *Journal of Accounting & Economics* 29, 321-337.
- Lerner, J.S., & Tetlock, P.E. (1999). Accounting for the Effects of Accountability. *Psychological Bulletin* 125, 255-275.
- Leuz, C., & Wüstemann, J. (2004). The Role of Accounting in the German Financial System. In J.P. Krahnen, & R.H. Schmidt, *The German Financial System*. Oxford: Oxford University Press, pp. 450-481.
- Lord, A.T. (1992). Pressure: A Methodological Consideration for Behavioral Research in Auditing. *Auditing* 11, 89-108.

- Magee, R.P., & Tseng, M.-C. (1990). Audit Pricing and Independence. *The Accounting Review* 65, 315-336.
- Mayhew, B.W., & Pike, J.E. (2004). Does Investor Selection of Auditors Enhance Auditor Independence? *The Accounting Review* 79, 797-822.
- Moore, D.A., Tetlock, P.E., Tanlu, L., & Bazerman, M.H. (2006). Conflicts of Interest and the Case of Auditor Independence: Moral Seduction and Strategic Issue Cycling. *Academy of Management Review* 31, 10-29.
- Moreno, K., & Bhattacharjee, S. (2003). The Impact of Pressure from Potential Client Business Opportunities on the Judgments of Auditors across Professional Ranks. *Auditing* 22, 13-28.
- Nelson, M.W., Elliott, J.A., & Tarpley, R.L. (2002). Evidence from Auditors about Managers' and Auditors' Earnings Management Decisions. *The Accounting Review* 77, 175-202.
- Plessis, J.J.d., Großfeld, B., Luttermann, C., Saenger, I., & Sandrock, O. (2007). *German Corporate Governance in International and European Context*. Berlin, Heidelberg, New York: Springer.
- Salterio, S., & Koonce, L. (1997). The Persuasiveness of Audit Evidence: The Case of Accounting Policy Decisions. *Accounting, Organizations & Society* 22, 573-587.
- Sanchez, M.H., Agoglia, C.P., & Hatfield, R.C. (2007). The Effect of Auditors' Use of a Reciprocity-Based Strategy on Auditor-Client Negotiations. *The Accounting Review* 82, 241-263.
- Schlenker, B.R. (1980). *Impression Management: The Self-concept Social Identity and Interpersonal Relations*. Belmont, CA: Brooks-Cole.
- Schlenker, B.R., Britt, T.W., Pennington, J., Murphy, R., & Doherty, K. (1994). The Triangle Model of Responsibility. *Psychological Review* 101, 621-652.
- SEC. (2003). Final Rule: Standards Relating to Listed Company Audit Committees, Release No. 33-8220. SEC Washington DC.
- Tan, H.-T. (1995). Effects of Expectations, Prior Involvement, and Review Awareness on Memory for Audit Evidence and Judgment. *Journal of Accounting Research* 33, 113-135.
- Tan, H.-T., & Libby, R. (1997). Tacit Managerial versus Technical Knowledge as Determinants of Audit Expertise in the Field. *Journal of Accounting Research* 35, 97-113.
- Teoh, S.H. (1992). Auditor Independence, Dismissal Threats, and the Market Reaction to Auditor Switches. *Journal of Accounting Research* 30, 1-25.
- Tetlock, P.E. (1983). Accountability and Complexity of Thought. *Journal of Personality & Social Psychology* 45, 74-83.
- Tetlock, P.E. (1985). Accountability: The Neglected Social Context of Judgment and Choice. *Research in Organizational Behavior* 7, 297-332.
- Tetlock, P.E., Skitka, L., & Boettger, R. (1989). Social and Cognitive Strategies for Coping With Accountability: Conformity, Complexity, and Bolstering. *Journal of Personality and Social Psychology* 57, 632-640.
- Theisen, M.R. (2007). *Information und Berichterstattung des Aufsichtsrats*. Stuttgart: Schäffer-Poeschel.
- Trompeter, G. (1994). The Effect of Partner Compensation Schemes and Generally Accepted Accounting Principles on Audit Partner Judgment. *Auditing* 13, 56-68.
- Turner, C.W. (2001). Accountability Demands and the Auditor's Evidence Search Strategy: The Influence of Reviewer Preferences and the Nature of the Response (Belief vs. Action). *Journal of Accounting Research* 39, 683-706.
- Tversky, A. (1972). Elimination by Aspects: A Theory of Choice. *Psychological Review* 79, 281-299.

Figure 1

Experimental procedure. After the third part, the meeting announced in the first part took place.

<p><u>Part 1</u></p> <p><u>Manipulation of client</u> Random assignment of auditors to client condition Information about clients' preferences Announcement that one in eight auditors will have a client meeting at the end of the study in which they will need to defend their judgments. Framing questions on the setting</p> <p><u>Independent variables</u> Management favoring aggressive reporting Oversight board favoring conservative reporting</p>	<p><u>Part 2</u></p> <p><u>Evaluation of accounting cases</u> Information about preliminary financial statement Stepwise presentation of five pieces of evidence Questions on auditors' judgments and decisions.</p> <p><u>Dependent variables</u> Evidence evaluation GAAP conformance Measurement Audit opinion (See Table 1 for details)</p>	<p><u>Part 3</u></p> <p><u>Questionnaire</u> Post-experimental questionnaire on demographic data and threats to auditors' independence</p> <p><u>Independent variables</u> Client retention incentives Accountability pressure Auditors' rank (see Table 2 for details)</p>
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Table 1

Dependent variables.

Type of task	Dependent variable	Elicitation method	Characteristics
	Audit opinion (primary dependent variable)	“What audit opinion would you issue?”	Coding of audit opinions: - Unqualified opinion (= 1) - Qualified or adverse opinion (= 0)
Decision/ action task	Measure- ment	“In your opinion, what value should be reported in the financial statement under German GAAP?”	Income-decreasing adjustments as the difference of auditor’s measurement and the measurement in the preliminary financial statement. Possible ranges for adjustments: +15 to -110 Mio. € for the provision case, +10 to -115 Mio. € for the receivables case. (Negative values indicate that auditor’s measurement would have an income decreasing effect.)
	GAAP conform- ance	“Is the accounting method used in conformance with German GAAP?”	11-point Likert scale ranging from 0 (= not in conformance with GAAP) to 10 (= fully in conformance with GAAP).
Judgment/ belief task	Evidence evaluation	How do you evaluate this piece of evidence?	11-point Likert scale ranging from -5 (= fully inconsistent) to +5 (= fully consistent) for each piece. -25 to +25 aggregated over all five pieces of each case.

Table 2

Independent variables.

	Elicitation method	Classification
Client	Random assignment	Client (categorical): Management (37 auditors) Oversight board (35 auditors)
Client retention incentives (CRI)	<u>Risk of losing the client</u> “In your experience, what is the proportion of audits where the auditor is likely to be replaced in the case of dissent between the auditor and the management [oversight board]?” 11-point Likert scale ranging from 0 (0%) to 10 (100%). Mean (SD) = 3.61 (2.38) <u>Reaction to the risk of losing the client</u> “Do you agree to the following statement: ‘In this study, auditors are more willing to adjust their judgment to the accounting method preferred by the audited company when they have to fear losing the client.’” 7-point Likert scale ranging from 1 (= fully disagree) to 7 (= fully agree). Mean (SD) = 4.50 (1.67)	Client retention incentives (CRI) (continuous) = Risk of losing the client + Reaction to the risk of losing the client Mean (SD) = 8.12 (3.38)
Account-ability pressure (AP)	<u>Conflict avoidance</u> “In this study, I had the intention to avoid conflict in the prospective meeting with the management [supervisory board]” 7-point Likert scale ranging from 1 (= fully disagree) to 7 (= fully agree). Mean (SD) = 2.80 (1.90) <u>Personal responsibility</u> “I would persist on my evaluations [stated in this study] even if other colleagues from my audit firm disagreed.” 7-point Likert scale ranging from 1 (= fully disagree) to 7 (= fully agree). Mean (SD) = 3.37 (1.56)	Accountability pressure (AP) (continuous) = Conflict avoidance + Personal responsibility Mean (SD) = 6.17 (2.37)
Auditors’ rank (Rank)	Hierarchy level	Rank (categorical): High (18 Senior manager and 12 partner) Low (21 Staff and 18 manager)

Table 3

Pairwise correlations of independent variables at a subject level.

	Client [Mgmt.]	CRI	AP	Rank [High]
Client [Mgmt.]	-			
CRI	-0.17	-		
AP	0.08	0.11	-	
Rank [High]	0.05	-0.18	0.04	-

See Table 2 for definition of the variables.

This table shows that the manipulated and measured independent variables are not significantly correlated.

n = 67-71 (varying number of observations due to missing data)

***/**/*: significant on a 1%/5%/10%-level.

Table 4

Descriptive statistics of the main effect of client.

Panel A: Audit opinion (main dependent variable)

		<u>Management</u>		<u>Oversight board</u>		<u>p-value</u>
		Q	UQ	Q	UQ	(ChiSq)
Provision case	abs.	12	24	12	23	0.933
	(%)	(33.3%)	(66.7%)	(34.3%)	(65.7%)	
Receivables case	abs.	25	11	26	8	0.510
	(%)	(69.4%)	(30.6%)	(76.5%)	(23.5%)	
Overall⁺	abs.	37	35	38	31	0.608
	(%)	(51.4%)	(48.6%)	(55.1%)	(44.9%)	

Panel B: Other dependent variables

		<u>Management</u>		<u>Oversight board</u>		<u>p-value</u>	
		Mean	(SD)	Mean	(SD)	(t-test)	
Provision case	Measurement	-24.0	(24.0)	-16.5	(21.1)	0.165	
		n = 36		n = 34			
	GAAP conformance	4.89	(3.13)	6.22	(2.76)	0.060	*
		n = 36		n = 35			
Receivables case	Audit evidence	-3.70	(6.20)	2.31	(5.71)	<0.001	***
		n = 37		n = 35			
	Measurement	-58.6	(36.7)	-59.4	(37.9)	0.927	
		n = 36		n = 35			
Overall⁺	GAAP conformance	2.43	(2.51)	3.53	(2.96)	0.098	*
		n = 37		n = 34			
	Audit evidence	-7.41	(7.90)	-1.94	(10.54)	0.016	**
		n = 37		n = 35			
Overall⁺	Measurement	-41.3	(35.4)	-38.3	(37.5)	0.521	
		n = 72		n = 69			
	GAAP conformance	3.64	(3.07)	4.90	(3.14)	0.012	**
		n = 73		n = 69			
Overall⁺	Audit evidence	-5.55	(7.29)	0.19	(8.69)	<0.001	***
		n = 74		n = 70			

See Table 1 and Table 2 for definitions of independent and dependent variables. Q stands for qualified and adverse opinions, UQ for unqualified opinions.

This table shows that auditors employed by the management are more sceptical in judgment tasks (GAAP conformance, audit evidence) than auditors employed by the oversight board, but not in decision tasks (measurement, audit opinion).

⁺ Overall tests include a dummy variable for case as a control.

***/**/*: significant on a 1%/5%/10%-level.

Table 5

Logistic regression analysis on the audit opinion – impact of audit evidence evaluation.

Term	Estimate	SE	L-R ChiSq	p-value
Intercept	0.04	0.20		
Client [Management]	0.38	0.21	3.26	0.071 *
Case [Provision]	0.72	0.19	14.55	<0.001 ***
Audit evidence	0.09	0.03	12.65	<0.001 ***

See Table 1 and Table 2 for definition of independent and dependent variables. The variable case is included in order to control for potential case specific effects.

This table shows that auditors are marginally significantly more likely to issue unqualified opinions when their client is the management when controlling for auditors' evaluation of audit evidence.

$R^2 = 0.18$

n = 141

Estimates are for log ratios of 1/0 [unqualified opinion/qualified and adverse opinion].

***/**/*: significant on a 1%/5%/10%-level.

Table 6

Logistic regression analysis on the audit opinion – full model.

Term	Estimate	SE	L-R ChiSq	p-value
Intercept	-4.16	1.31		
Client [Management]	0.05	0.29	0.03	0.870
CRI	0.12	0.09	1.62	0.203
CRI * Client [Management]	0.17	0.07	5.83	0.016 **
AP	0.49	0.14	13.93	<0.001 ***
AP * Client [Management]	-0.10	0.09	1.31	0.253
AP * CRI	0.03	0.03	0.83	0.364
Rank [High]	0.14	0.45	0.09	0.759
Rank [High] * Client [Management]	0.38	0.45	0.73	0.393
Rank [High] * CRI	-0.04	0.14	0.07	0.791
Rank [High]* AP	-0.55	0.20	8.20	0.004 ***
Case [Provision]	1.01	0.22	25.14	<0.001 ***

See Table 1 and Table 2 for definition of independent and dependent variables. The variable case is included in order to control for potential case specific effects.

This table shows that the overall effect of client type is insignificant (RQ1), that client type interacts with perceived client retention incentives (H1), that client type does not interact with perceived accountability pressure, but that accountability has a main effect (H2), and that auditors' rank does not interact with perceived client retention incentives, but with perceived accountability pressure (RQ2).

$R^2 = 0.230$

n = 132

Estimates are for log ratios of 1/0 [unqualified opinion/qualified and adverse opinion].

***/**/*: significant on a 1%/5%/10%-level.