

Auditor Independence in a Private Firm Setting

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Abstract

Although private firms predominate in the economy worldwide, there has been little, if any, prior research on auditor independence in a private firm setting. We investigate whether auditors are willing to sacrifice their independence in exchange for retaining clients that pay abnormally large fees for audit and/or non-audit services. Using a very large sample of private Norwegian firms, we analyze the relation between auditor fees (total fees, audit fees, and non-audit fees) and auditors' propensity to issue a going concern opinion. In contrast to regulators' concerns, our empirical results provide no evidence that auditors compromise their objectivity through fee dependence. These results are robust to including a large number of control variables into the model, to controlling for the expected portion of fees, to different sample specifications, to the use of both association and changes specification, and to a large number of sensitivity analyses. Since we document that Norway is a low litigation environment, we attribute this finding primarily to auditors' concerns for their reputation.

Keywords

Auditing; auditor independence; private firms; reputation; accounting

“If one’s reputation is a possession, then of all my possessions, my reputation means most to me...” (Arthur Ashe in “Days of Grace”)

1. Introduction

The purpose of this study is to analyze, in a *private firm setting* characterized by *low litigation risk*, whether external auditors are willing to sacrifice their independence in order to retain clients that pay large fees for audit and/or non-audit services. Although private firms predominate in the economy worldwide, there has been little, if any, prior research on auditor independence for private firms (likely due to the difficulty in obtaining data). To our knowledge, this is the first large-scale study of auditor independence among private firms. We believe an analysis of auditor independence in a private firm setting is warranted, as the role of auditors may be different in private firms, in which agency conflicts are generally different (due to more concentrated ownership), than in public firms (Coffee 2005).

The question of auditor independence - which is synonymous with auditor objectivity and the auditor’s ability to withstand client pressure - has received increased attention from regulators, academics, and practitioners around the world in recent years due to highly publicized audit failures. Regulators often argue that independence is compromised through an auditor’s dependence on non-audit as well as on “excessive” audit fees. Some academics, however, argue that regulators fail to consider the cost to auditors of compromising their independence (e.g., loss of reputation) and that regulators ignore the possibility that non-audit services may actually improve audit quality (e.g., DeFond, Raghunandan, and Subramanyam 2002).

To investigate whether higher levels of audit and non-audit fees impair auditor objectivity in the private firm market, we use a very large sample of Norwegian private limited liability firms.¹ Specifically, we analyze the relation between abnormal (or unexpected) auditor fees (total fees, audit fees, and non-audit fees) and auditors' propensity to issue a going concern opinion (or an audit opinion with other qualifications). Norway provides an interesting setting because (1) all firms with limited liability have to file financial statements using the same GAAP with a governmental body (the Brønnøysund Register Center), (2) all firms face similar regulatory requirements (e.g., same tax rules), (3) detailed data are available for a variety of audit opinion modifications, and especially because (4) all firms must have an audit and disclose their auditor fees. Finally, (5) as detailed in the paper, Norway represents a low litigation environment for audit firms (in contrast to more litigious environments like the U.S.). The latter is important as prior U.S.-based research has not been able to differentiate between expected litigation costs and reputation effects when interpreting results.

Using a large sample of Norwegian privately owned firms (between 20,339 and 433,176 firm-years depending on the test), we find no evidence that fees have the negative consequences that regulators fear. That is, we find no evidence of a negative association between fees for audit and/or non-audit services and the likelihood of issuing going concern qualifications or other types of qualified audit opinions. These results are robust to including a large number of control variables into the model, to controlling for the expected portion of fees, to different sample specifications and different time periods,

¹ There are two types of limited liability firms in Norway. We analyze those that are prohibited by company law to offer shares to the public in general (henceforth private firms or non-publicly traded firms). In addition to these firms, there are a much smaller number of public limited liability companies (corresponding to PLCs using U.K. terminology) that are allowed to offer shares to the general public and seek listing on stock exchanges.

and to the use of both association and changes specification. Finally, our inferences are robust to a large number of sensitivity analyses.²

Since Norway is a low litigation environment, finding no evidence that auditors compromise their independence suggests that auditors are concerned with their reputations. Integrity and independence are among the most important economic assets of audit firms, and our results suggest reputation concerns dominate any short-term financial gain auditors could obtain from compromising their objectivity.

Based on our empirical findings, we conclude that regulatory agencies should proceed with caution before placing further restrictions on auditors' services. In fact, they may want to reconsider some of the more recent rules that limit audit firms' ability to provide certain non-audit services. Such a call for regulatory action may be especially relevant, as recent restrictions on auditors (both in Norway, the U.S., and elsewhere) have not been based on academic input (e.g., Francis 2004).

We contribute to the literature in several ways. First, most of the extant literature on auditor independence focuses on publicly listed companies, primarily in the U.S., the U.K., or Australia. The majority of companies worldwide, however, are not publicly listed. The lack of evidence on non-publicly traded firms despite their economic importance and likely differences from public companies provides an interesting research opportunity. Our study thus provides some insight into the role of the external audit function for *private* firms that face different incentives than do listed firms. Specifically, research has shown that whereas firms with dispersed ownership may suffer agency

² We later document that audit qualification rates in our sample are comparable to those in prior research, that the accuracy of going concern qualifications is as good in Norway as in the U.S., and finally that the overall rate of auditor switching (both unconditionally and conditional upon receiving a qualified audit opinion) in our sample is similar to that found in extant research.

conflicts between managers and shareholders, in firm with more concentrated ownership a major potential agency cost is the appropriation of private benefits of control by controlling shareholders at the expense of minority shareholders (e.g., Dyck and Zingales 2004; Coffee 2001; Coffee 2005). We believe research on auditor independence in Norway is relevant for researchers and regulators in other countries since harmonization efforts have made the institutional settings between Norway and the rest of Europe quite similar and since auditor independence is of general interest in all countries that require audited financial statements.

Second, we study auditor independence in a context where the overall level of investor protection is high but where auditors are less likely to be sued for negligence and misconduct. According to Francis (2004, 361), “the U.S. is a global outlier in terms of the auditor’s exposure to legal liability.” Auditors in Norway may behave differently than auditors in the U.S. due to differences in legal structures and litigation risks. While prior research has not been able to parse out the differential effects of reputation and litigation (e.g., DeFond et al. 2002; Craswell, Stokes, and Laughton 2002), given the much lower incidence of litigation and the limited frequency of auditor license revocations in Norway, we can more reliably attribute our results to auditors’ reputation concerns.

Third, one of the concerns with the prior research in this area is that data typically are from a single year only (e.g., Kinney and Libby 2002; Reynolds, Deis, and Francis 2004) and prior studies thus have examined associations only. Given our large sample spanning several years we are able to employ changes specifications which may provide more reliable inferences than basing conclusions on levels alone.³

³ We have data on all forms of audit opinion qualifications and in additional analyses we examine also these. However, for brevity we consider only going concern opinions for our main tests.

In the next section, we discuss related literature and describe our institutional setting. Section 3 explains the sample and the empirical models. In sections 4 and 5, we discuss the main empirical results and results of additional analyses, respectively. Finally, Section 6 concludes the paper.

2. Background and Institutional Setting

In this section, we first briefly review the extant research on threats to auditor independence from client fees. Next we discuss our institutional setting.

2.1 Auditor fees and threats to independence

The external auditor plays a crucial role in promoting financial reporting quality, because auditors lend credibility to accounting information by providing independent verification of manager-prepared financial statements (e.g., Simunic and Stein 1987). In other words, the external audit potentially reduces agency costs between firms (managers) and external parties. However, outsiders cannot be expected to trust a company's reported financial information without confidence in the auditor's independence.

We investigate the threats to auditor independence posed by (audit and/or non-audit) fee dependence. In particular, we examine whether the exercise of auditor objectivity in the formulation of the audit opinion is affected by the amount of fees received from the client. In order to issue a qualified opinion, an auditor must be able to objectively evaluate firm performance and withstand any client pressure to issue a clean opinion (DeFond et al. 2002; Watkins, Hillison, and Morecroft 2004). A line of research, starting with DeAngelo (1981) and Watts and Zimmerman (1986), suggests that an

auditor's incentive to compromise independence relates to the economic significance of client fees. This research argues that, because of an economic bond, auditors concerned with the possible loss of fee revenue are more likely to acquiesce to clients' wishes.

DeAngelo (1981, 113) states that "the existence of client-specific quasi-rents to incumbent auditors ... lowers the optimal amount of auditor independence."⁴ Survey evidence reported by Nelson, Elliott, and Tarpley (2002) and Trompeter (1994) provides further support for this argument; the more economically dependent the auditor is on the client, the more likely the auditor is to succumb to client pressure.

Notwithstanding these arguments, the relation between audit remuneration and auditors sacrificing their independence is theoretically ambiguous. The reason is that the auditors do not only consider the benefit of higher expected fees when compromising their objectivity, but also the expected costs of audit failures. In particular, costs related to the loss of reputation and litigation reduce the incentives for auditors to compromise their independence (DeAngelo 1981; Simunic 1984; Chung and Kallapur 2003). Auditors care deeply about their reputation, and in fact, the outsiders' trust in auditors' ability and willingness to challenge their clients could be auditors' most important asset. Specifically, if the auditor acquiesces to her client and damages her reputation, she may potentially lose fees from other current and future clients. Thus, based on these conflicting arguments, it is not surprising that the extant research on whether auditors compromise their independence through fee dependence provides mixed evidence.

⁴ Consistent with DeAngelo's arguments, Magee and Tseng (1990) develop a multi-period analytical model and find that the auditor's value of incumbency presents a threat to independence.

2.1.1 Audit versus non-audit fees

To empirically test the impact of fee dependence on objectivity, some researchers concentrate on the potential role of *non-audit* service fees. The reason for focusing on non-audit fees stems from regulators' concern that auditors are willing to sacrifice their independence in exchange for retaining clients that pay lucrative consulting and other non-audit fees. However, Hansen and Watts (1997) and Reynolds and Francis (2001) argue that both audit and non-audit fees should create similar incentives to the auditor. For example, Reynolds and Francis (2001) note that fee dependence is inherent in auditor-client contracting, and that the strength of the economic bond tends to be independent of whether the source of fees is auditing or non-auditing (see also Reynolds et al. 2004). Similarly, DeFond et al. (2002) argue that, since the benefits of retaining clients consist of the higher fees they generate, higher *total* fees, regardless of their origin, threaten auditor independence. Based on these arguments, we examine the effects of both audit and non-audit fees (and use the generic term "auditor fees" when we are not discriminating between the source of fees, i.e., between fees for audit and non-audit services).

2.1.2 Auditor fees and earnings quality

Most of the prior empirical literature tests the relation between fees and some measure of earnings management or accruals quality (and/or the likelihood of meeting or beating earnings targets). Consistent with DeAngelo's (1981) arguments, Gul, Chen, and Tsui (2003) find a positive association between discretionary accruals and audit fees in Australia, and Frankel, Johnson, and Nelson (2002) find a positive relation between the provision of non-audit services and measures of earnings management in the U.S. (see

also Ahmed, Duellman, and Abdel-Meguid 2006).⁵ However, subsequent studies have criticized the findings and interpretations of Frankel et al. For example, after controlling for firm performance, Ashbaugh, LaFond, and Mayhew (2003) find that there is no longer a positive relation between non-audit fees and abnormal accruals (see also Chung and Kallapur 2003; Larcker and Richardson 2004; Reynolds et al. 2004).

2.1.3 Auditor fees and qualified audit opinions

As an alternative to testing auditor fee dependence using accrual measures, we focus on the auditor's propensity to issue going concern audit opinions. According to DeFond et al. (2002), such an investigation may provide a more direct test of auditor independence than research investigating earnings management. First, the literature has documented the difficulties associated with measuring discretionary accruals (e.g., Guay, Kothari, and Watts 1996; Hribar and Collins 2002; Dopuch, Mashruwala, Seethamraju, and Zach 2007) and the quality of such analysis thus depends on the strength of the discretionary accrual specification employed (Reynolds et al. 2004). Second, in contrast to the indirect influence of auditors on earnings characteristics, the auditor directly influences the type of audit opinion, and measuring the audit opinion is unambiguous (DeFond et al. 2002).⁶

Prior research provides mixed evidence on the relation between fees and qualified audit opinions. On the one hand, DeFond et al. (2002) examine the relation between audit and non-audit fees and the issuance of a going concern audit opinion - one of the most

⁵ In addition, Choi, Kim, and Zang (2006) conclude that auditors' incentives to compromise audit quality differ systematically for more profitable clients (with positive abnormal fees) vis-à-vis less profitable clients.

⁶ In part motivated by the problems introduced by relying on accrual quality models, Hope, Kang, Thomas, and Yoo (2007) focus on investors' perceptions of auditor independence, as reflected in their required rate of return on equity capital.

severe audit qualifications. Using a sample of 1,158 financially distressed publicly listed U.S. firms in 2001-2002, they find no association between fees and impaired auditor independence. They attribute their results to auditors' concerns over the loss of reputation and litigation costs, and argue that these costs dominate the expected benefits from compromising auditor independence. Craswell et al. (2002) report similar findings for a sample of Australian firms.

In contrast to the above findings, Wines (1994) reports results consistent with apparent independence impairment. Specifically, using a sample of 76 large Australian public firms over the 1980-1989 period, he finds that non-audit fee dependence is related to a reduced likelihood of qualification. Lastly, using a small matched sample of 29 financially distressed U.K. firms, Basioudis, Papakonstantinou, and Geiger (2006) find that firms with high audit fees are more likely to receive a going concern modified audit opinion, whereas firms with high non-audit fees are less likely to receive a going concern modified opinion.

To summarize, both the research examining measures of accrual quality and the research examining audit opinion qualifications provide mixed evidence. We now turn to discussing our setting: privately owned firms in Norway.

2.2 Private firms and institutional setting

Empirical research on the possible consequences of compromised auditor independence is dominated by (but not limited entirely to) research on publicly listed U.S., Australian, or U.K. firms. We are not aware of any studies that analyze whether the Anglo-Saxon evidence on audit quality for public companies generalizes to other countries with different legal systems and in particular, to non-common law countries

with less ability to sue auditors for negligence and misconduct (Francis 2004).⁷ In this study, we empirically investigate the potential for fee dependence to affect auditors' willingness to issue qualified audit opinions in *non-publicly traded* firms. In spite of their economic importance and likely differences from public companies, little is known about financial reporting by private firms (Ball and Shivakumar 2005). In particular, there is very limited research on the role of auditing for private firms.⁸ Coffee (2001; 2005) argues that the role of the auditor may be different in private firms than in public firms because of private firms' higher ownership concentration, and in particular because these firms often have controlling shareholders.⁹ This means that the agency costs relate relatively more to a controlling shareholder versus minority shareholder conflict rather than a manager versus shareholders conflict.¹⁰ In such firms the extraction of private benefits of control is a potential serious concern (e.g., Dyck and Zingales 2004).¹¹

It is not obvious whether external auditors play a lesser or a stronger role in private firms than in public firms. On the one hand, Coffee (2005) discusses how the existence of controlling shareholders can affect auditor independence. That is, Coffee argues that it is difficult for the auditor to escape the control of the party that it is expected to monitor. On the other hand, Lennox (2005) posits that the monitoring value

⁷ How auditors assess the cost of audit failures is vital, since the lower the expected cost, the higher the expected benefit of sacrificing independence (*ceteris paribus*) (DeAngelo 1981; Chung and Kallapur 2003).

⁸ Ball and Shivakumar (2005) attribute the dearth of research to the difficulty of obtaining financial data for private firms. There is some limited evidence on auditing in the private firm market. For example, Bauwhede and Willekens (2004) find no evidence that earnings management is related to audit firm size in their sample of 1,302 privately held Belgian firms. Chaney, Jeter, and Shivakumar (2004) investigate audit pricing among a large sample of private U.K. firms and provide evidence that private firms do not pay a Big 8 premium on average. Lennox (2005) uses a sample of 540 private U.K. firms and finds that the association between audit firm size and management ownership is non-linear.

⁹ We report the results of controlling for CEO ownership and other firm-specific corporate governance characteristics in Section 5.4.

¹⁰ Just like for public firms, lenders, suppliers, customers, and employees likely find the auditors' function useful for private firms.

¹¹ Coffee (2005) and Ming and Wong (2003) describe ways controlling shareholders can compel the company to sell its output to, or buy its materials from, a firm that they independently own.

of auditing may be higher in private firms because they are less vulnerable to takeovers and because they are required to disclose less non-accounting information.

This study may thus enhance our understanding of private firms, which are predominant in the economy in most countries. To illustrate this point, more than 99% of all limited liability firms in Norway during the 1994-2005 period were not listed on a stock exchange. Berzins, Bøhren, and Rydland (2007) analyze *all* limited liability firms in Norway and show that (in aggregate) nonlisted firms have about four times more employees than listed firms, have three times higher revenues, and twice the amount of assets. They further provide indirect evidence suggesting that the relative importance of nonlisted firms in Norway is representative for most countries in the world. Related to auditing of private firms, there are millions of small and medium sized corporations in Europe with audited annual reports (Pacter 2004) and private firms make up a significant portion of the market for audit services (Chaney, Jeter, and Shivakumar 2004).¹²

There are several reasons why Norway is a useful environment to study auditor independence in private firms. First, consistent with the statements of Francis (2004), Norway is a low litigation environment compared with the U.S.¹³ According to the professional magazine *Revisjon og Regnskap* (“Accounting and Auditing,” various

¹² For example, private firms constitute 99.9 percent of all private nonagricultural entities in Europe in 1993 (Mulhern 1995). Chaney et al. (2004) report that over 90 percent of registered U.K. companies are private, and that in their sample of firms, over 50 percent of the audit fees received by U.K. auditors are attributable to private firms. Similarly, according to Bauwhede and Willekens (2004), in Belgium fewer than 150 companies are publicly listed as compared to about a quarter of a million Belgian companies that file financial statements with the Belgian National Bank.

¹³ On behalf of the Ministry of Finance, the Financial Supervisory Authority of Norway (FSAN) licenses and supervises the statutory auditors. FSAN supervises the profession by responding to complaints and indications of auditors’ negligence or misconduct, collecting information on the conduct of audits, and reviewing the conduct of audits of targeted auditors or audit firms. In practice FSAN has delegated many of the practical aspects of its supervisory authority, in particular related to quality control, to The Norwegian Institute of Public Accountants. Thus, the Institute is supposed to be the “first line of defense,” but if deemed necessary, FSAN takes disciplinary actions against auditors. In particular, serious malpractice may result in revoking an auditor’s license to conduct statutory audits.

issues), published by The Norwegian Institute of Public Accountants, there were only 38 court cases against auditors in Norway from 1945 to 2000. For the more recent period 2000-2004 period we have searched for court cases against auditor and found only ten, four of which resulted in the auditor being acquitted. The majority of the court cases are related to other issues than auditing of financial statements. These numbers appear very small compared to a total of 5,154 authorized auditors and 514 authorized audit firms in Norway in 2003, and approximately 1.6 million audited financial statements during the 1994-2004 period. Furthermore, during the 1996-2002 period, only an average of seven (individual) authorized auditors had their licenses revoked per year (source: FSAN).

Second, European accounting regulation is primarily based on a firm's legal form, rather than its listing status (Burgstahler, Hail, and Leuz 2006). Specifically, the Norwegian Accounting Act requires *all* private and public limited liability companies to file annual financial statements that comply with the same accounting standards (with some minor exceptions as explained later), and these statements are made publicly available.

Third, financial statements filed by Norwegian private firms *must be audited*.^{14,15} The auditing environment in Norway is otherwise similar to that in other Western European countries (Eilifsen 1998).

¹⁴ To our knowledge, Sweden is the only other country where all limited liability firms are required to be audited. In both countries there is currently a regulatory debate over whether the very smallest private firms should be exempt from the audit requirement.

¹⁵ Although not the focus of our paper, audit report accuracy is also important. For example, did the auditor issue a going concern opinion when there is a subsequent business failure and a clean opinion when there is no subsequent business failure? Eilifsen and Gjesdal (2001) report that the fraction of bankrupt companies receiving going concern modifications in Norway (62%) is comparable to or higher than figures reported in U.S. studies in the pre-Enron era (i.e., Hopwood, McKeown, and Mutcher (1994) and Venuti (2004) report rates between 40-50%). Furthermore, Lensberg, Eilifsen, and McKee (2006) find that the most significant variable for predicting bankruptcy among Norwegian firms is the prior auditor opinion. These studies thus provide some support for the information value of the auditor's report in Norway.

Fourth, firms have been required to disclose auditor fees (i.e., audit and non-audit fees separately) in the annual report since 1990 (as per the Accounting Act paragraphs 7-31A/7-44 and the Auditor Act paragraph 5-3). Our data providers have collected information on total remuneration to auditors (e.g. the sum of audit and non-audit fee) since 1996 and on audit and non-audit fees separately for the 1997 – 2002 period. Consequently, in contrast to the small samples used in most previous research, we can use large samples over several years. Furthermore, private and public companies are subject to the same tax laws and other company regulations. Thus, similar to many other European countries, the laws and major regulatory arrangements for Norwegian financial reporting are substantially equivalent for public and private companies.¹⁶

The Financial Supervisory Authority of Norway and the Norwegian Ministry of Finance made regulatory changes in 2003 and 2005 that tighten the rules regarding the types of non-audit services that can be offered by the audit firm to the audit client. To our knowledge, the decisions in Norway to restrict non-audit services were not based on research. Similarly, Francis (2004) argues that the Securities and Exchange Commission's proposal in 2000 to ban all non-audit services in the U.S. and the introduction of the Sarbanes-Oxley Act in 2002, which severely restricts audit firms from providing consulting services, were not based on academic input. As Simunic (1984) points out, hiring the auditor to perform non-audit services may benefit firms due to "knowledge spillovers," whereby client-specific information that the auditor gains while performing non-audit services is used to enhance the quality of the audit. This could be especially relevant for private firms. Compared with listed companies, private firms are

¹⁶ In addition to these four points, our approach of examining auditor independence in one country only, rather than across countries, implies that all firms are subject to the same institutional framework, and thus, there are no omitted country-level factors in our study.

typically small and may have less expertise internally and therefore have a greater demand for services that auditors provide. In addition, these firms often face higher costs of obtaining non-audit services from independent consultants due to their geographic location (i.e., they are often located outside of urban centers). One of the objectives of this study is thus to provide evidence that will enable regulators and others to assess whether the perceived lack of auditor independence warrants new rules that limit non-audit services by the incumbent auditor (or that place restrictions on fee dependence on individual clients), and more generally whether fee dependence in fact leads to a less independent audit.

3. Sample and Research Design

3.1 Sample

We obtain data on audit and non-audit fees (and industry affiliation prior to 2000) from D&B Norge AS, the Norwegian subsidiary of Dun & Bradstreet. All other data are from Creditinform AS.¹⁷ We merge data using the company organizational number (a unique identifier).

In our main tests we report results for two sample periods: 1997-2002 and 2001-2002. The former sample spans more years and is thus larger and more representative. However, the latter sample contains data on three potentially important control variables that are unavailable in earlier years: who the auditor is, whether there has been a switch in auditor, and data necessary to compute auditor industry specialization. We end our sample period in 2002 because, even though fee disclosure continues to be required after

¹⁷ Creditinform AS specializes in credit ratings and buys accounting data and other firm specific information from the Brønnøysund Register Center. The international database Amadeus and D&B Norge AS obtain Norwegian data from Creditinform AS.

2002, our data provider stopped reporting audit and non-audit fees separately in 2003. In additional analyses we report results through 2005 using only total fees.

Table 1 summarizes our sample selection criteria. Our starting point is all private limited liability firms in Norway. Since many of these firms are very small, we exclude firms with less than 1 million Norwegian krone (NOK) in sales revenue or total assets as well as firms with total auditor fees less than NOK 10,000.¹⁸ We further remove firms for which we do not have data available for audit opinions or other variables used in our tests, and following prior research we exclude financial firms. Following prior research (e.g., DeFond et al. 2002), we focus our tests on firms that are defined as financially distressed (i.e., firms with negative net income or negative operating cash flow in the current year) and that have positive non-audit fees.¹⁹ Our final sample consists of 49,154 (1997-2002) and 20,339 (2001-2002) firm-year observations, respectively.

3.2 Logistic regression model

Our tests examine the effects of (abnormal) audit and non-audit fees on the probability of issuing going concern opinions, possibly the most serious audit qualification provided.²⁰ In additional analyses, we study auditors' propensity to issue any other form of qualified audit opinions.

¹⁸ The average exchange rate between NOK and USD during 1997-2002 was 8.03. We later report result of sensitivity analyses in which we (1) apply more stringent size criteria so that we exclude more small firms and (2) report results separately for Big 4 and non-Big 4 auditors.

¹⁹ In additional analyses we report results without imposing these restrictions (and thus have significantly larger samples).

²⁰ As in the U.S., going concern opinions in Norway may be given in an explanatory paragraph (unqualified opinion with emphasis of matter paragraph) or as a disclaimer of opinion. Going concern opinions as disclaimers are very rare events in the U.S. Among all companies listed on NYSE from 1980 – 2001, Davis (2004) identified only 309 disclaimers for non-financial firms and approximately 85% of the disclaimers were related to going concern issues. Going concern opinions as disclaimers are also rare in Norway: Only 3.9% of all going concern opinions are given as disclaimers. We do not distinguish between the two

We estimate the following logit regression that models the auditor's propensity to issue a going concern audit opinion, controlling for a number of variables that prior research has shown to potentially affect this decision.

$$\begin{aligned}
 GC - QUAL = & \alpha_0 + \alpha_1 AbnFEE + \alpha_2 LnTA + \alpha_3 LnAGE + \alpha_4 LEV + \alpha_5 STINV \\
 & + \alpha_6 OP_CF + \alpha_7 LOSS + \alpha_8 ROA + \alpha_9 BIG4 + \alpha_{10} ChAUD + \alpha_{11} PYGC \\
 & + \alpha_{12} IND + \alpha_{13} YR + \varepsilon
 \end{aligned} \tag{1}$$

GC-QUAL is an indicator variable that takes the value of one for going concern modified audit opinions (zero otherwise). *AbnFEE* is either abnormal (or unexpected) total auditor fees (audit plus non-audit fees), abnormal audit fees or abnormal non-audit fees separately, or abnormal audit and non-audit fees included jointly.²¹ The notion of fee dependence refers to the extent to which the auditor is influenced by unusually high (or low) fees. Therefore, to control for the expected component of audit and non-audit fees, we compute excess auditor remuneration following prior research (e.g., Frankel et al. 2002; DeFond et al. 2002; Choi, Kim, and Zang 2005; Hope et al. 2007). We describe our abnormal fee model in Section 3.3.

The control variables are based on prior research and are intended to control for the impact of client firm size, complexity, and risk on auditors' decisions to qualify or modify their opinions (e.g., Craswell et al. 2002; Frankel et al. 2002; DeFond et al. 2002). We use firm size (*LnTA*; log of total assets in thousands of NOK) to control for the impact client size can have on the propensity to be independent. We control for firm age (*LnAGE*) since younger firms are more prone to failure and have less experience with

methods of issuing going concern opinions in our tests since the results are the same whether we use going concern opinions included in otherwise unqualified reports or going concern opinions given as disclaimers.
²¹ The specification with both audit and non-audit fees included in effect estimates the effect of one fee variable on the propensity to issue modified opinions while controlling for the effect of the other fee variable. This may be important as Whisenant, Sankaraguruswamy, and Raghunandan (2003) provide empirical evidence that audit and non-audit fees are simultaneously determined.

accounting controls. Leverage (*LEV*; sum of long- and short-term interest bearing debt divided by total assets at year end) controls for the level of financial risk. We include investments in liquid assets (*STINV*; short-term investments in securities and cash, scaled by total assets) as a liquidity measure following DeFond et al. (2002). To control for operating risk and the probability of bankruptcy, we use cash flow from operations (*OP_CF*; cash flow from operations divided by total assets at year end), accounting loss (*LOSS*; indicator variable for loss), and return on assets (*ROA*; income before extraordinary items divided by average total assets). We include auditor size (*BIG4*) to control for the impact audit quality could have on the exercise of professional judgment. We also control for change in audit firm (*ChAUD*) as an indicator of client firm risk and potential effects on audit report modifications (Lennox 2000). As described above, *BIG4* and *ChAUD* are only available for the 2001-2002 sample period. Since going concern opinions tend to be sticky, we control for the existence of a prior-year going concern qualification (*PYGC*).²² We add industry controls (two-digit SIC industry) in order to account for systematic differences in the riskiness or complexity of the audit function across industries. Finally, we include time period (*YR*) to control for possible shifts in the propensity to issue qualified opinions over time.

3.3 Abnormal fee model

To compute abnormal (or unexpected) fees, we regress the auditor fee measures on two audit firm variables and 13 client firm variables, as well as year and industry fixed effects, and use the residuals from these regressions as our proxy for abnormal fees. The

²² An alternative approach, which yields consistent results, is to only include firms which receive a qualified opinion for the first time.

explanatory variables control for normal fees charged by the auditor for a given level of effort and risk.²³

$$\begin{aligned}
 FEE = & \alpha_0 + \alpha_1 LnSALES + \alpha_2 SqrtSales + \alpha_3 LnEMPLOY + \alpha_4 ChLEV \\
 & + \alpha_5 INVENT + \alpha_6 ACCREC + \alpha_7 GROWTH + \alpha_8 ROA \\
 & + \alpha_9 INVNC + \alpha_{10} INVAFFIL + \alpha_{11} INTANG + \alpha_{12} GAAP + \alpha_{13} CAPITAL \\
 & + \alpha_{14} BIG4 + \alpha_{15} INDSPEC + \alpha_{16} YR + \alpha_{17} Industry + v
 \end{aligned} \quad (2)$$

For our 2001-2002 sample, we include an indicator variable for Big 4 audit firm (*BIG4*) because large audit firms offer more insurance for the client (e.g., Dye 1993) and provide higher quality audits (e.g., Becker, DeFond, Jiambalvo, and Subramanyam 1998). DeAngelo (1981) notes that the ability of an auditor to detect material error in the financial statements is a function of auditor competence, and auditors that specialize in an industry are likely to be more competent. We further control for auditor industry specialization (*INDSPEC*) measured as the number of clients the firm's auditor has in a particular industry-year divided by the total number of firms in that industry-year (using two-digit SIC codes).²⁴

The remainder of the instruments are employed in both the 1997-2002 and 2001-2002 samples. Given the importance of firm size in explaining auditor fees, we include three size-based explanatory variables: the log of sales revenues (*LnSALES*), the square root of sales (*SqrtSALES*), and the log of number of employees (*LnEMPLOY*).²⁵ To

²³ It is possible that audit and non-audit fee measures have different explanatory variables. For this reason we have tried a number of different specifications for abnormal audit and non-audit fees. Since the specifications yield consistent inferences, and for simplicity, we report results using the same models for both fee measures.

²⁴ The sample used to calculate *INDSPEC* consists of *all* audited firms in 2001 and 2002 with available information on industry affiliation and auditor identification. No inferences are affected if we instead measure *INDSPEC* by clients' revenue (i.e., the sum of revenue of all clients an auditor has in a particular industry divided by total revenue of all firms in that industry).

²⁵ As alternative controls for size non-linearities, we have (1) instead used the square of sales and (2) run the test adding an interaction term between *LnSALES* and all other instruments. No inferences are affected with these alternative specifications. The size variables are obviously positively correlated and some of the

further control for variations in client firm characteristics, we include the change in financial leverage during the year (*ChLEV*), inventories (*INVENT*) and accounts receivable (*ACCREC*) scaled by total assets at year end, percentage growth in sales (*GROWTH*), return on assets (*ROA*), investments in non-current assets (*INVNC*; change in non-current assets divided by total assets at beginning of year), an indicator variable equal to one if the firm has invested in affiliated companies during the year and zero otherwise (*INVAFFIL*), intangible asset intensity defined as intangible assets scaled by total assets (*INTANG*), an indicator variable equal to one if the firm uses regular GAAP and zero if the firm uses “simplified GAAP” for small firms (*GAAP*),²⁶ and an indicator variable equal to one if the firm has increased or decreased its paid in capital during the year and zero otherwise (*CAPITAL*; because changes in paid in capital require attestation by the auditor).²⁷ Finally, we control for both time period (year) and industry affiliation (controlling for potential industry variation in complexity and litigation risk) through indicator variables for two-digit SIC codes. We estimate equation (2) and use the error term (ν) as our measure of abnormal fees.

other variables also exhibit significant correlations. However, consistent with prior literature we are primarily interested in obtaining a model with reasonable fit. In any case, variance inflation factors (VIF) do not suggest the presence of serious multicollinearity (i.e., the highest VIF in any of our tests is 5.5).

²⁶ In general, GAAP is identical for all listed and unlisted firms in Norway. However, very small firms (that satisfy certain size requirements, including having fewer than 50 employees) are exempted from certain disclosure requirements and measurement rules. In practice differential reporting may have little effect since small firms usually do not have the transactions that give rise to the more detailed disclosure requirements or complicated measurement rules. Nevertheless, we control for use of “small firm GAAP” in our tests and in one of our sensitivity analyses we delete these very small firms from our sample.

²⁷ To reduce the potential impact of extreme observations, we winsorize *OP_CF*, *GROWTH*, *ROA*, *LEV*, *ChLEV*, and *INVNC* (see next section for definitions) at the 1% and 99% of their distributions. We have also considered commonly used procedures such as to delete the top and bottom one percent of the independent variables. No inferences are affected by outlier removal choices.

4. Empirical Results

4.1 Descriptive statistics

Table 2 presents descriptive statistics for the variables used in our main regression (Equation 1) as well as in the computation of abnormal fees (Equation 2). With the exception of *BIG4*, *ChAUD*, and *INDSPEC*, for simplicity we report these descriptive statistics based on the 1997-2002 sample. The table shows that 14% of our sample of financially distressed firms received a going concern qualification.²⁸ The mean total fees, audit fees, and non-audit fees are 67, 40, and 27 (rounding) thousand NOK, respectively.²⁹ Not surprisingly, the sample firms are small (with mean total assets of 50 million NOK), relatively young (mean age of 14 years), and (by construction) frequently reporting accounting losses (mean of 62%). Big 4 auditors are employed by 35% of the firms and 16% changed auditors during the year.³⁰

4.2 Results of estimation of abnormal fees

Table 3 presents the OLS regression results of estimating Equation 2 for the 1997-2002 (Panel A) and 2001-2002 sample (Panel B). The adjusted R^2 s are relatively high at about 60% for audit and total fees and 35-37% for non-audit fees. If we had obtained a low R^2 , then our model would be more likely to suffer from omitted variables, as a large

²⁸ If we follow DeFond et al.'s (2002) approach of only including firms that receive a going concern opinion for the first time, our sample has an identical fraction of firms reporting going concern opinions as they do (8.3%).

²⁹ Although the auditor fee amounts may appear small, they are in fact very similar as percent of total assets compared with that reported in prior research (0.135% of total assets in our sample compared with 0.113% of total assets reports by DeFond et al. (2002), Table 1).

³⁰ For comparison, in his sample of publicly traded U.S. firms, Krishnan (1994) reports a mean of 7% for auditor switching in his full sample. In Krishnan's sample of firms that receive a going concern qualified audit report, he reports a mean audit switching of 20%. Sundgren (1998) examines small Finnish firms and documents switching rates between 9.68% and 14.29% depending on the sample used. In our sample of much smaller privately owned firms in Norway, the mean auditor switching percent is 20% conditional upon receiving a going concern qualification (based on the 2001-2002 sample).

portion of auditor remuneration should be normal. As predicted, auditor remuneration (i.e., both audit and non-audit fees) is significantly positively associated with the three firm size variables *LnSALES*, *SqrtSALES*, and *LnEMPLOY*.³¹ Fees are further positively related to *GROWTH*, *INVAFFIL*, *GAAP*, *CAPITAL*, *BIG4*, *INDSPEC* (significant in two out of three specifications), and *INTANG* (only significant for the larger sample), negatively associated with *INVENT*, *ACCREC*, *ROA*, and *INVNC*, and not consistently related to *ChLEV*. As explained above, our model also incorporates year and industry fixed effects (not shown in table).

4.3 Logit regression results

Table 4 presents the results of estimating Equation (1) for the two sample periods. We first note that, across the eight estimations, the abnormal fee variables are *not* negatively associated with auditors' propensity to issue a going concern opinion. More specifically, Panel A (1997-2002) shows that abnormal total fees and abnormal non-audit fees are positively and significantly related to the propensity to issue going concern opinions. There is no significant association between abnormal audit fees and going concern qualifications. In Panel B (2001-2002) which includes three additional control variables (*BIG4*, *ChAUD*, and *INDSPEC* – the latter is only employed in the abnormal fee estimation), none of the abnormal fee variables exhibits any significant relation with going concern opinions. Based on the results in Table 4, there is thus no evidence

³¹ Reported significance levels for this and subsequent tests are two-sided and based on Newey-West standard errors that correct for both heteroskedasticity and autocorrelation (Newey and West 1987). Results for our main test are similar and no inferences are affected if we instead estimate the regressions annually and use the Fama-MacBeth procedure (Fama and MacBeth 1973).

supporting the contention that fee dependence leads to lower auditor objectivity and hence a reduced likelihood of issuing a going concern opinion.

The control variables generally have the predicted signs. Larger and more mature (i.e., “older”) firms, more liquid and more profitable firms, and firms audited by Big 4 auditors are less likely to receive a qualified opinion. More highly levered firms and firms with losses and prior-year going concern opinions are more likely to receive a qualified opinion. Whether the firm has or has not changed auditors does not seem to influence the propensity to receive a going concern qualification.

To summarize the findings from Table 4, we do not observe any evidence that auditor fee dependence is associated with reduced auditor objectivity with respect to issuing modified audit opinions.

5. Additional Tests and Further Discussion

5.1 Results for change specifications

Although it would be more important to use change tests if we had found evidence of impaired objectivity (i.e., to test for causality), change tests represent a useful additional test specification as results are less likely to be affected by potential correlated omitted variables, as we in effect use the firm as its own control.³²

We report results of two changes specifications in Panel A of Table 5.³³ In the first (with subscript “t” in Panel A1), the dependent variable is coded as “1” if the audit opinion is qualified and if there was no qualification in the previous year. The

³² Changes specifications may also be useful in addressing possible endogeneity concerns, especially in conjunction with the use of abnormal fee models that control for the expected amount of fees.

³³ For brevity, Table 5 reports only the estimated coefficients (and significance levels) of abnormal fees. Specifically, control variables are included in these regressions but not tabulated.

independent variables represent changes from the previous year. In the second test (with subscript “t+1” in Panel A2), the dependent variable is defined as “1” if *next* year’s audit opinion is qualified and there was no qualification in the previous year. The independent variables in Panel A2 are the same as in Panel A1.

None of the estimated coefficients are significant. Thus, we find no evidence that higher fees lead to a lower propensity to issue modified audit opinions. These results complement and strengthen the conclusions drawn from our association tests.

5.2 Results for most recent time period using total fees

As explained, after 2002 we do not have data on audit and non-audit fees separately, but we do have data on total fees. Given that the media has focused more on auditor independence issues in recent years than in the past, and because of recent changes in auditor legislation described above, we test whether inferences are the same for the more recent 2003-2005 period.

Consistent with prior results, Panel B of Table 5 finds no significant association between fees and qualified opinions during recent years.

5.3 Results for Norwegian publicly listed companies

Although the focus of our paper is to investigate auditor independence in private firms, as an additional analysis we repeat the test using all non-financial Norwegian firms listed on the Oslo Stock Exchange for the 1997-2005 period with all data available (N = 1,246). Panel C of Table 5 shows that *GC-QUAL* is not significantly related to abnormal total fees for public firms. These results are potentially important since they lend further

credence to the argument that reputation is an important explanation for our main findings (rather than the fact that we examine private as opposed to public firms).

5.4 Other sensitivity analyses

In addition to the various specifications tested above, in the following we (1) repeat the tests without imposing the constraint that firms be defined as financially distressed and have positive non-audit fees, (2) test for subsamples of Big 4 versus non-Big 4 auditors, (3) analyze a subsample of firms that likely are most important to the auditor in terms of fees, (4) remove the smallest firms, (5) use the non-audit fee ratio, (6) analyze firms with positive abnormal fee only, (7) add firm-level governance variables as controls, and (8) examine effects on audit report qualifications other than going concern opinions. The results of these tests are not tabulated for brevity, but are available from the authors upon request.

We first repeat both our association and change tests using a much larger sample of firms. Specifically, we no longer impose the requirement that firms be financially distressed and have positive non-audit fees. This means we have up to 433,176 observations for tests using abnormal total fees.

Although we control for Big 4 auditor in our reported tests, as an alternative approach (and our second robustness check) we estimate the tests separately for non-Big 4 and Big 4 samples. It is conceivable that the independence threat could vary between these two groups of audit firms. However, we observe no pattern of significant differences between the two samples. Most importantly, we do not detect any evidence of impaired objectivity from fee dependence in either sample.

Since it is possible that auditors' incentives to compromise independence are related to client importance, our third sensitivity test focuses on the most important clients (Watts and Zimmerman 1986; DeAngelo 1981). First, following Chung and Kallapur (2003), we use fees to construct measures of client importance. Client importance is measured as the ratio of a client's total fees to the audit firm's total fees from all clients, the ratio of client's audit fee to the audit firm's total fees from all clients, or the ratio of client's non-audit fees to the audit firm's total fees from all clients.³⁴ We then run the tests on three subset of firms consisting of the ten percent of firms that have highest scores on each of the three client importance variables. We also run all tests on the subset of client firms that have the have highest fees (as NOK 200,000 in fee from one client is presumably more important than NOK 20,000 from 10 clients). Specifically, we analyze subsets of firms for which total, audit, or non-audit fees were above the 90 percentile of total, audit, or non-audit fee respectively.

In the fourth test, we remove the smallest firms from our sample, as these firms may be of least interest in a non-Norwegian context and when comparing our results with those of publicly traded firms or private firms in other countries where mandatory auditing is required but only when a size threshold is exceeded. Specifically, we exclude the first quartile of firms in terms of total assets and rerun our tests.

In the fifth test, as a specification check on our tests on the effect of non-audit fee dependence, we also considered non-audit fee *ratio* (instead of including the audit and non-audit fees jointly).

³⁴ The client importance variables are, as *INDSPEC*, calculated on the largest possible sample of firms available.

According to Choi et al. (2006) and Hope et al. (2007), economic bonding between the client and audit firm is less likely to occur for any level of negative abnormal fees. Consequently, in the sixth sensitivity test we run all tests using only the subsample with positive abnormal fees.

Although our models already include numerous control variables, in our seventh test we further add control variables related to firm-level corporate governance issues (e.g., Larcker and Richardson 2004; Coffee 2005). In particular, we control for firm ownership percentage by the CEO, whether the CEO is also the chairman of the board, government ownership, and foreign ownership.

Finally, to check if large fees negatively impact auditors' likelihood of issuing audit qualifications other than going concern opinions, we repeat tests using several alternative qualifications as dependent variables. Creditinform has categorized deviations from a clean audit report into 12 categories in addition to the going concern opinion. Thus, we have detailed data on exactly what type of audit qualifications was issued. We group the 12 categories into four clusters and repeat our tests.³⁵

Consistent with the tabulated empirical results, the additional robustness tests provide the same conclusion: There is no evidence that auditors are willing to impair their objectivity over fees received from their clients.

³⁵ These categories are “clarifications,” “reservations” (i.e., minor limitations with respect to scope or minor disagreements with management), “unable to issue an opinion” (i.e., substantial limitations with respect to scope/disclaimer of opinion), and “negative opinion” (i.e., substantial disagreement with management/adverse opinion). The latter is the most serious and the first is the least important audit modification. Further details on these subcategories are available from the authors upon request.

5.5 Further discussion

We find no evidence that auditors abuse their trust in the private firm market. Specifically, there is no evidence that large fees received from clients translate into a lower likelihood of issuing qualified audit opinions, suggesting that concerns raised by regulators over auditors' reliance on client fees resulting in diminished auditor independence may be misplaced or exaggerated, at least with respect to going concern qualifications for our sample of Norwegian private firms. Since we document that expected litigation costs are small in Norway, a likely interpretation of our findings is that auditors care deeply about their reputation. Thus, they are not willing to forego their independence by issuing fewer going concern opinions when they receive (large) fees from their clients. In contrast, prior research that has documented similar findings for samples of U.S. firms has *not* been able to parse out the effects of reputation effects and litigation costs.

The value of reputational capital has been studied and documented in a variety of settings outside of auditing. As but one example, Fombrun (1996) documents a large number of business and non-business cases in which reputation and credibility is essential. In Fombrun's words, "In our time, competition for reputation operates as never before" (Fombrun 1996, 18). For examples of more scholarly work on the value of reputational capital, see for instance Shapiro (1983), Beatty and Ritter (1986), and Resnick, Zeckhauser, Swanson, and Lockwood (2006).³⁶

We find that neither audit nor non-audit fees relate negatively to the probability of going concern qualifications. Although some authors argue that objectivity can be

³⁶ Shapiro (1986) models the value of occupational licensing (such as the certification of auditors). He argues and finds that, by raising professionals' training levels, licensing helps alleviate moral hazard problems associated with the provision of high quality services.

impaired based on both audit fees and non-audit fees, regulators have recently put more emphasis on non-audit fees and in particular restricted the provision of such services to audit clients. Our research does not speak directly to whether such prohibitions are warranted or not; at a minimum we can conclude that non-audit fees per se do not seem to imply a lower likelihood of issuing qualified opinions. Other researchers have specifically examined the effects of non-audit services by auditors. According to this line of research, there is at least a potential for such services to have a positive effect on the quality of the audit work.³⁷ For example, Simunic (1984) models the relation between audit and non-audit fees and empirically demonstrates that knowledge spillovers exist between audit and non-audit tasks. Joe and Vandervelde (2007) conduct an experimental study and show that auditor-provided non-audit services can be beneficial in that knowledge transfer aids risk assessments. In particular, they find that higher risk assessments were made by auditors who performed both services than by auditors who only provided audit services. Similarly, Gleason and Mills (2007) find that a specific type of non-audit service, tax services, actually improves the quality of the audit work.

6. Conclusion

The audit report communicates the auditor's findings to outsiders and plays a crucial role in warning financial statement users of impending problems with the firm's financial reporting or internal controls, including going concern problems. However, for the audit opinion to play a credible role as a warning signal, the auditor must be able to

³⁷ While arguments can be made both for and against the provision of non-audit services by auditors, Zeff (2003) and Francis (2004) argue that one potential benefit of such a ban is getting auditors focused on their *raison d'être*, the independent attestation of financial statements.

objectively evaluate firm performance and withstand any client pressure to issue a clean opinion.

Some (but not all) prior research suggests that client fee dependence does not appear to compromise auditor objectivity for publicly listed companies in the U.S. and Australia (DeFond et al. 2002; Craswell et al. 2002). However, it is far from clear that these results generalize to (1) a *private* client firm setting and (2) an institutional environment in which auditors *face low litigation risk*. In this paper, we investigate the impact of auditor fees on auditor objectivity in a setting of low litigation risk using a very large sample of private firms in Norway. Specifically, we test whether large audit and non-audit fees are associated with a lower incidence of going concern audit opinions (as well as other audit opinion qualifications).

In contrast to concerns raised by media and regulators, using a battery of tests our empirical results do not support regulators' contentions that (abnormally large) fees jeopardize auditor independence. These results are robust to the inclusion of a large number of control variables and to a variety of test specifications. Prior U.S. research on publicly traded companies has reached a similar conclusion. However, that research has not been able to distinguish between reputation or litigation effects as explanations. As part of our study, we document that the litigation risk is low for auditors in Norway (in contrast to the environment in the U.S.). Thus, we are able to more reliably attribute our results to auditors' concerns for their reputations.

With respect to potential policy implications of our study, we conclude that regulators should not rush to push through new regulations restricting auditors' actions, and that they may also want to revisit recent regulations affecting auditors. In general, since regulations may also have negative consequences (not examined in this paper), we

would advise regulators to base their decisions - to a greater extent than to date - on research evidence.

We can of course never rule out the possibility that we have not controlled for factors that could impact the relation between fees and the propensity to issue qualified audit opinions. However, given the extensive set of control variables included in our models, the control for the expected portion of fees, and the use of both association and changes tests, we do not consider the possibility of omitted variables a serious threat to our conclusions.

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Table 1: Sample Size and Sample Selection Criteria

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	All-years
No of private limited liability companies	110,694	118,359	126,335	130,300	135,562	138,176	140,625	141,502	143,965	138,470	1,323,988
<i>Exclusion criteria</i>											
Sales < 1 mill NOK	49,501	52,701	56,475	58,199	60,761	61,565	62,751	61,853	60,871	61,149	585,826
Total Assets < 1 mill NOK	15,374	15,564	16,103	15,668	15,524	15,282	15,521	16,079	16,239	14,027	155,381
Total auditor remuneration < 10 000 NOK	10,832	11,556	11,619	10,955	10,348	10,207	9,135	8,680	8,755	12,815	104,902
Firm age, industry affiliation, audit report or prior year's financial statement not available	1,529	1,876	2,151	2,302	13,428	3,458	6,326	3,284	3,571	2,379	40,304
Financial institutions	328	381	425	502	446	464	467	445	462	479	4,399
AF and NAF not available	33,130	0	0	0	0	0	0	51,161	54,067	47,621	186,702
Firms not financially distressed	-	23,913	25,557	23,858	21,772	27,408	28,372				150,880
Firms with NAF = 0	-	6,534	7,082	7,364	4,781	7,076	6,277				39,114
No of financially distressed firms with NAF > 0		5,834	6,923	11,452	8,502	12,716	11,776				57,203
Firms receiving other than going concern qualifications		946	1,118	1,503	773	1,983	1,726				8,049
No of firms in the 1997-2002 sample		4,888	5,805	9,949	7,729	10,733	10,050				49,154
ChAUD not available	-	4,888	5,805	9,949	7,729	0	0	-	-	-	28,371
No of firms in the 2001-2002 sample						10,353	10,046				20,399

Financially distressed firms are firms with negative net income before extraordinary items or negative cash flow from operations. Other variables are defined in the note to Table 2.

Table 2: Descriptive Statistics**Panel A: Descriptive Statistics for Variables in Main Tests**

	<i>N</i>	<i>Mean</i>	<i>St.dev</i>	<i>Q1</i>	<i>Median</i>	<i>Q3</i>
<i>GC-QUAL</i>	49,154	0.14	0.35	0	0	0
<i>TF</i>	49,154	67.02	160.17	23	36	65
<i>AF</i>	49,154	39.93	82.69	15	23	40
<i>NAF</i>	49,154	27.09	104.06	6	11	23
<i>TA</i>	49,154	49,592	593,738	2,456	5,823	17,633
<i>AGE</i>	49,154	14.13	14.17	5	10	17
<i>LEV</i>	49,154	0.45	0.30	0.19	0.43	0.66
<i>STINV</i>	49,154	0.14	0.18	0.02	0.06	0.19
<i>OP_CF</i>	49,154	-0.09	0.22	-0.17	-0.05	0.02
<i>LOSS</i>	49,154	0.62	0.49	0	1	1

Panel B: Descriptive Statistics for Variables in Abnormal Fee Estimation Models

	<i>N</i>	<i>Mean</i>	<i>St.dev</i>	<i>Q1</i>	<i>Median</i>	<i>Q3</i>
<i>SALES</i>	49,154	42,726	213,477	4,018	8,912	23,375
<i>EMPLOY</i>	49,154	24	176	3	7	16
<i>ChLEV</i>	49,154	0.02	0.19	-0.05	0.01	0.10
<i>INVENT</i>	49,154	0.21	0.24	0	0.10	0.36
<i>ACCREC</i>	49,154	0.20	0.20	0.02	0.14	0.32
<i>GROWTH</i>	49,154	0.44	1.63	-0.10	0.03	0.22
<i>ROA</i>	49,154	-0.04	0.18	-0.10	-0.02	0.04
<i>INVNC</i>	49,154	0.03	0.23	-0.05	-0.01	0.04
<i>INVAFFIL</i>	49,154	0.09	0.29	0	0	0
<i>INTANG</i>	49,154	0.03	0.09	0	0	0.02
<i>GAAP</i>	49,154	0.17	0.37	0	0	0
<i>CAPITAL</i>	49,154	0.14	0.35	0	0	0

Panel C: Additional Descriptive Statistics for *BIG4*, *ChAUD*, and *INDSPEC* (2001-2002 sample)

	<i>N</i>	<i>Mean</i>	<i>St.dev</i>	<i>Q1</i>	<i>Median</i>	<i>Q3</i>
<i>BIG4</i>	20,339	0.35	0.48	0	0	1
<i>ChAUD</i>	20,339	0.16	0.37	0	0	0
<i>INDSPEC</i>	20,339	2.52	3.44	0.17	0.55	4.47

Notes to Table 2

As described in the text, we report results for two sample periods: 1997-2002 and 2001-2002. The main reason is that we have data on some potentially important control variables (*Big4*, *AudCh*, and *INDSPEC*) only for the more limited time period. For simplicity we report descriptive statistics based on the larger sample period only (except of course for the three additional variables reported in Panel C).

GC-QUAL = 1 if the firm received a going concern qualification, 0 otherwise. *TF* = Total fee paid to auditor in NOK 1 000 (= *AF* + *NAF*). *AF* = Total fee paid to auditor for auditing services in NOK 1 000. *NAF* = Total fee paid to auditor for non-auditing services in NOK 1 000. *TA* = Total assets at year end in NOK 1 000. *AGE* = Firms' age in years. *LEV* = Long and short-term interest bearing debt / total assets at year end. Short-term interest bearing debt = total short term debt - accounts payable - dividends - taxes payable - VAT and social service taxes - other short term debt. *STINV* = (Short term investments in securities + bank deposits + cash) / total assets at year end. *OP_CF* = Operating cash flow / total assets at year end. Operating cash flow = earnings - total accruals. Earnings = net income after taxes before extraordinary item and taxes on extraordinary items. Total accruals = change in current assets - change in cash - change in short term debt + change in short term interest bearing debt + change in dividends + depreciation + amortization - change in net deferred taxes. *LOSS* = 1 if net income after taxes before extraordinary item and taxes on extraordinary item < 0, 0 otherwise.

SALES = Total revenue from operating activities. *EMPLOY* = Number of employees. *ChLEV* = Change in leverage = $LEV_t - LEV_{t-1}$. *INVENT* = Inventory / total assets, both at year end. *ACCREC* = Accounts receivables / total assets, both at year end. *GROWTH* = Change in sales = $(SALES_t - SALES_{t-1}) / SALES_{t-1}$. *ROA* = Net income before taxes and extraordinary items / average total assets. *INVNC* = Change in non-current assets from t to t-1 / total assets previous year. *INVAFFIL* = 1 if firm has invested in affiliated companies or subsidiaries during the year, 0 otherwise. *INTANG* = Intangible assets / total assets, both at year end. *GAAP* = 1 if firm uses regular GAAP and 0 if firm uses simplified GAAP. *CAPITAL* = 1 if paid in capital has increased or decreased during the year, 0 otherwise.

BIG4 = 1 if auditing firm is a one of the BIG 4 auditing firms or their forerunners, 0 otherwise. *ChAUD* = 1 if firms changed auditor during the year, 0 otherwise. *INDSPEC* = Auditor industry specialization = number of clients the firms auditor has in industry j / total number of clients for all auditing firms in industry j. Two digits industry codes were used to calculate *INDSPEC*. The sample used to compute *INDSPEC* consists of all firms in 2001-2002 with available information on industry affiliation and auditor identification (245,901 observations).

OP_CF, *GROWTH*, *ROA*, *LEV*, *ChLEV*, and *INVNC* have been winsorized at 1 % and 99%. *INDSPEC* has been winsorized at 99%.

Table 3: OLS Estimations of Abnormal Fees**Panel A: 1997-2002 (N = 49,154)**

Dep.var.	<i>LnTF</i>		<i>LnAF</i>		<i>LnNAF</i>	
	<i>Coeff.</i>	<i>t-value</i>	<i>Coeff.</i>	<i>t-value</i>	<i>Coeff.</i>	<i>t-value</i>
<i>LnSales</i>	0.269 ***	56.72	0.270 ***	60.96	0.227 ***	32.85
<i>SqrtSales</i>	0.000 ***	11.98	0.000 ***	14.28	0.000 ***	7.30
<i>LnEmploy</i>	0.128 ***	31.00	0.151 ***	38.75	0.082 ***	14.27
<i>ChLEV</i>	-0.022	-1.51	-0.044 ***	-3.21	0.007	0.35
<i>INVENT</i>	-0.271 ***	-20.50	-0.125 ***	-9.72	-0.437 ***	-23.34
<i>ACCREC</i>	-0.400 ***	-26.06	-0.274 ***	-18.52	-0.488 ***	-22.20
<i>GROWTH</i>	0.017 ***	8.32	0.005 **	2.36	0.030 ***	10.79
<i>ROA</i>	-0.341 ***	-21.70	-0.319 ***	-21.15	-0.325 ***	-14.52
<i>INVNC</i>	-0.122 ***	-9.51	-0.111 ***	-9.17	-0.122 ***	-6.73
<i>INVAFFIL</i>	0.129 ***	18.29	0.100 ***	15.01	0.154 ***	14.97
<i>INTANG</i>	0.083 **	2.54	0.067 **	2.19	0.133 ***	2.79
<i>GAAP</i>	0.244 ***	24.16	0.192 ***	21.14	0.264 ***	18.08
<i>CAPITAL</i>	0.163 ***	20.47	0.087 ***	11.86	0.249 ***	21.44
<i>Constant</i>	1.011 ***	26.89	0.464 ***	13.17	0.425 ***	7.80
Adj R ²	57.62		59.88		34.58	

Panel B: 2001-2002 (N = 20,339)

Dep.var.	<i>LnTF</i>		<i>LnAF</i>		<i>LnNAF</i>	
	<i>Coeff.</i>	<i>t-value</i>	<i>Coeff.</i>	<i>t-value</i>	<i>Coeff.</i>	<i>t-value</i>
<i>LnSales</i>	0.254 ***	34.46	0.254 ***	37.38	0.215 ***	19.46
<i>SqrtSales</i>	0.000 ***	8.12	0.001 ***	10.41	0.000 ***	4.49
<i>LnEmploy</i>	0.118 ***	18.43	0.148 ***	24.50	0.063 ***	7.08
<i>ChLEV</i>	0.036	1.46	-0.007	-0.32	0.104 ***	3.06
<i>INVENT</i>	-0.258 ***	-12.93	-0.107 ***	-5.44	-0.426 ***	-15.45
<i>ACCREC</i>	-0.398 ***	-16.96	-0.270 ***	-11.86	-0.466 ***	-14.09
<i>GROWTH</i>	0.017 ***	5.59	0.008 ***	2.66	0.025 ***	6.24
<i>ROA</i>	-0.349 ***	-14.38	-0.333 ***	-14.35	-0.321 ***	-9.42
<i>INVNC</i>	-0.145 ***	-6.84	-0.122 ***	-6.18	-0.157 ***	-5.29
<i>INVAFFIL</i>	0.127 ***	11.33	0.102 ***	9.65	0.142 ***	8.70
<i>INTANG</i>	0.040	0.88	0.054	1.31	0.075	1.14
<i>GAAP</i>	0.270 ***	17.36	0.210 ***	14.94	0.300 ***	13.37
<i>CAPITAL</i>	0.177 ***	14.56	0.084 ***	7.41	0.284 ***	16.21
<i>BIG4</i>	0.148 ***	6.41	0.108 ***	5.51	0.182 ***	5.50
<i>INDSPEC</i>	0.006 *	1.65	0.002	0.47	0.013 **	2.36
<i>Constant</i>	1.126 ***	19.68	0.568 ***	10.75	0.537 ***	6.27
Adj R ²	58.60		60.30		37.00	

Notes to Table 3

This table reports ordinary least squares (OLS) estimated coefficients (Coeff.) and corresponding t-values for the abnormal fee models estimated on the 1997-2002 (Panel A) and 2001-2002 (Panel B) samples described in Table 1. Two-digit industry indicator variables and year indicator variables are included in the models but not tabulated. Ln denotes the natural logarithm. Reported significance levels are two-sided and based on Newey-West standard errors that correct for both heteroskedasticity and autocorrelation (Newey and West 1987).

SqrtSALES = the square root of *SALES*. Please see notes to Table 2 for other variable definitions.

Table 4: Logit Regressions of the Propensity to Issue Going Concern Audit Opinions on Abnormal Auditor Fees (Total Fees, Audit Fees, and Non-Audit Fees) and Control Variables

Panel A: 1997-2002 (N = 49,154)

	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>		<i>Model 4</i>	
	<i>Coeff.</i>	<i>t-value</i>	<i>Coeff.</i>	<i>t-value</i>	<i>Coeff.</i>	<i>t-value</i>	<i>Coeff.</i>	<i>t-value</i>
<i>AB_TF</i>	0.084 **	2.35						
<i>AB_AF</i>			0.037	1.01			0.006	0.16
<i>AB_NAF</i>					0.061 **	2.42	0.059 **	2.20
<i>LnTA</i>	-0.384 ***	-22.43	-0.380 ***	-22.36	-0.383 ***	-22.44	-0.383 ***	-22.41
<i>LnAGE</i>	-0.250 ***	-9.24	-0.246 ***	-9.07	-0.248 ***	-9.19	-0.248 ***	-9.17
<i>LEV</i>	2.413 ***	33.26	2.411 ***	33.23	2.414 ***	33.26	2.414 ***	33.27
<i>STINV</i>	-0.779 ***	-5.31	-0.774 ***	-5.27	-0.778 ***	-5.30	-0.778 ***	-5.30
<i>OP_CF</i>	1.031 ***	11.78	1.027 ***	11.71	1.029 ***	11.75	1.029 ***	11.76
<i>LOSS</i>	0.944 ***	16.91	0.941 ***	16.86	0.945 ***	16.91	0.945 ***	16.91
<i>ROA</i>	-4.475 ***	-29.58	-4.482 ***	-29.61	-4.471 ***	-29.54	-4.471 ***	-29.55
<i>PYGC</i>	2.908 ***	63.37	2.911 ***	63.44	2.909 ***	63.36	2.908 ***	63.35
<i>Constant</i>	-0.565 ***	-3.22	-0.609 ***	-3.49	-0.578 ***	-3.31	-0.576 ***	-3.28
Pseudo R ²	37.97		37.96		37.97		37.97	

Panel B: 2001-2002 (N = 20,339)

	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>		<i>Model 4</i>	
	<i>Coeff.</i>	<i>t-value</i>	<i>Coeff.</i>	<i>t-value</i>	<i>Coeff.</i>	<i>t-value</i>	<i>Coeff.</i>	<i>t-value</i>
<i>AB_TF</i>	0.070	1.31						
<i>AB_AF</i>			0.046	0.83			0.019	0.32
<i>AB_NAF</i>					0.057	1.53	0.052	1.30
<i>LnTA</i>	-0.368 ***	-13.77	-0.365 ***	-13.78	-0.368 ***	-13.82	-0.369 ***	-13.80
<i>LnAGE</i>	-0.257 ***	-6.04	-0.255 ***	-5.98	-0.256 ***	-6.03	-0.257 ***	-6.04
<i>LEV</i>	2.235 ***	21.36	2.233 ***	21.33	2.234 ***	21.36	2.234 ***	21.36
<i>STINV</i>	-1.140 ***	-5.00	-1.136 ***	-4.99	-1.142 ***	-5.00	-1.143 ***	-5.01
<i>OP_CF</i>	0.971 ***	7.58	0.969 ***	7.54	0.971 ***	7.58	0.972 ***	7.59
<i>LOSS</i>	1.074 ***	11.55	1.072 ***	11.54	1.075 ***	11.54	1.075 ***	11.54
<i>ROA</i>	-4.291 ***	-19.71	-4.295 ***	-19.72	-4.288 ***	-19.71	-4.289 ***	-19.71
<i>BIG4</i>	-0.162 ***	-2.61	-0.163 ***	-2.63	-0.162 ***	-2.61	-0.161 ***	-2.60
<i>ChAUD</i>	0.023	0.31	0.023	0.32	0.023	0.32	0.023	0.31
<i>PYGC</i>	3.098 ***	40.65	3.100 ***	40.68	3.098 ***	40.63	3.098 ***	40.63
<i>Constant</i>	-1.050 ***	-3.90	-1.078 ***	-4.04	-1.053 ***	-3.93	-1.044 ***	-3.89
Pseudo R ²	36.84		36.83		36.84		36.84	

Notes to Table 4

This table reports Logit estimated coefficients (Coeff.) and corresponding t-values for the going concern models estimated on the 1997-2002 (Panel A) and 2001-2002 (Panel B) samples described in Table 1. Two-digit industry indicator variables and year indicator variables are included in the models but not tabulated. *AB_TF*, *AB_AF*, and *AB_NAF* are abnormal total fees, abnormal audit fees, and abnormal non-audit fees, respectively, and are computed as the residuals of the models estimated in Table 3. Reported significance levels are two-sided and based on Newey-West standard errors that correct for both heteroskedasticity and autocorrelation (Newey and West 1987). Please see notes to Table 2 for variable definitions.

Table 5: Additional Tests

Panel A: Changes specifications. Logit regressions of the propensity to issue going concern qualifications on changes in abnormal fees (total fees, audit fees, and non-audit fees) and changes in control variables (not shown) in the 1998-2002 period (N = 34,661)

Panel A1: Change from no going concern modification in year t-1 to going concern modification in year t (ChGC-QUAL_t)

Model:	Model 1		Model 2		Model 3		Model 4	
	Coeff	T-value	Coeff	T-value	Coeff	T-value	Coeff	T-value
<i>AB_TF</i>	-0.004	-0.07						
<i>AB_AF</i>			0.041	0.72			-0.060	-1.17
<i>AB_NAF</i>					0.006	0.28	0.006	0.26

Panel A2: Change from no going concern modification in year t to going concern modification in year t+1 (ChGC-QUAL_{t+1})

Model:	Model 1		Model 2		Model 3		Model 4	
	Coeff	T-value	Coeff	T-value	Coeff	T-value	Coeff	T-value
<i>AB_TF</i>	0.057	1.00						
<i>AB_AF</i>			0.034	0.62			0.034	0.06
<i>AB_NAF</i>					0.002	0.08	0.002	0.10

Panel B: Logit regressions of the propensity to issue going concern audit opinions on abnormal total auditor fees (*AB_TF*) and control variables (included but not shown) for period 2003-2005 (N = 46,576)

Period	Dependent variable	Coeff.	t-value
2003-2005	<i>AB_TF</i>	-0.033	-0.85

Panel C: Logit regressions of the propensity to issue going concern audit opinions on abnormal total auditor fees (and control variables (not shown) for all firms listed on the Oslo Stock Exchange. Sample period: 1997-2005 (N = 1,246)

Period	Dependent variable	Coeff.	t-value
1997-2005	<i>AB_TF</i>	0.025	0.09

Notes to Table 5

This table report estimated coefficients and corresponding t-values for various definitions of abnormal fee used in Equation (1) or modified versions of Equation (1), as explained below. Control variables are included in the models, but not presented for brevity. The estimation method is Logit with Newey-West standard errors.

In Panel A, models 1 to 4 are change versions of the four models presented in Table 4. Compared with the sample in Table 4, Panel A, the sample is reduced because change in abnormal fee cannot be calculated for 1997 (which is the first year the split into AF and NAF is available) and because some firms do not have financial statements for three consecutive years. The dependent variable in Panel A1 is $ChGC-QUAL_t$, which equals 1 if firm did not receive a going concern qualification in year t-1 but did in year t, and 0 otherwise. In Panel A2, the dependent variable is $ChGC-QUAL_{t+1}$, which equals 1 if firm did not receive a going concern qualification in year t but did in year t+1, and 0 otherwise. The control variables are change versions of the variables presented in Table 4, Panel A, computed as value at year t less value at year t-1 except for $LOSS$ and $PYGC$. In the change model, the change in $LOSS$ is equal to 1 if $LOSS = 1$ year t and not in year t-1, and 0 otherwise. $PYGC$ as well as industry controls are excluded from the model. Abnormal fee in year t is estimated using the model presented in Table 3, Panel B, and change in abnormal fee (denoted by the prefix *Ch*) is computed as the residuals at year t less the residual t-1.

In Panel B, the model is identical to model 1 presented in Table 4, Panel B. The sample consists of financially distressed firms in the years 2003-2005. Abnormal fees are estimated using the model presented in Table 3, Panel B.

In Panel C, the model is identical to model 1 presented in Table 4, Panel A. The sample consists of all listed companies with available information. Abnormal fees are estimated using the model presented in Table 3, Panel A.