

Non-audit fees, disclosure and audit quality

Clive S. Lennox

Bristol University, England

ABSTRACT

This paper investigates the effect of non-audit services on audit quality. Following the announcement of the requirement to disclose non-audit fees, approximately one-third of UK quoted companies disclosed before the requirement became effective. Whilst distressed companies were more likely to disclose early, auditor size, directors' shareholdings and non-audit fees were not significantly correlated with early disclosure. These results cast doubt on the view that voluntary disclosure of non-audit fees was used to signal audit quality. The evidence also indicates a positive weakly significant relationship between disclosed non-audit fees and audit qualifications. This suggests that when non-audit fees are disclosed, the provision of non-audit services does not reduce audit quality.

INTRODUCTION

DeAngelo (1981a) has argued that audit quality depends on the joint probability of an auditor discovering *and* disclosing a problem in an accounting system. Given that a problem has been discovered, the probability that an auditor discloses the problem depends on the degree of independence. The theoretical relationship between non-audit services and audit quality is ambiguous. On the one hand, non-audit services may increase auditors' client knowledge and therefore increase the probability that problems are discovered. Therefore, for a given level of independence, non-audit services may increase audit quality. On the other hand, non-audit services may increase or reduce auditor independence. If non-audit services provide auditors with client-specific rents, companies may be able to obtain more favourable reports by threatening to switch auditor – in this case, non-audit services may reduce independence (DeAngelo, 1981a; Antle, 1984; Simunic, 1984; Acemoglu and Gietzmann, 1997).¹ However, non-audit services may increase a client's dependence on its auditor, thereby reducing the credibility of the switch threat (Goldman and Barlev, 1974).

Address for correspondence

Economics Department, 8 Woodland Road, Bristol University, Bristol BS8 1TN, England.

The empirical literature has analysed the effect of non-audit services on audit quality in two ways. First, surveys of accounting information users have generally concluded that non-audit services are perceived to be a threat to independence. This is because an audit firm may be unwilling to criticize the work carried out by its consultancy division, and it may not wish to lose lucrative consultancy services (Pany and Rekers, 1983, 1988; Shockley, 1981; Knapp, 1985). However, these studies do not address the effect of non-audit services on audit quality. Even if non-audit services reduce auditor independence, their net effect on audit quality may be positive if they increase the probability that problems are discovered. Second, some studies have investigated the effect of non-audit services on audit reporting (Wines, 1994; Barkess and Simnett, 1994; Craswell, 1998). Since auditors can choose whether to disclose problems by giving clean or qualified opinions, this approach uses audit reports to capture quality. The methodology implicitly assumes that auditors cannot disclose problems by qualifying when problems have not been discovered (they cannot 'cry wolf').²

There are relatively few studies into the relationship between non-audit fees and audit qualifications because many countries either ban the provision of non-audit services or do not require the disclosure of non-audit fees. Most EU countries ban the provision of some or all non-audit services.³ In the US, non-audit services are allowed but companies do not have to disclose non-audit fees.⁴ In contrast, non-audit services are not banned and non-audit fees are disclosed in the UK and Australia.

Extant research into the relationship between non-audit fees and audit qualifications has been confined to Australia. Whilst Wines (1994) found a negative relationship between non-audit fees and audit qualifications, one problem with the study was its failure to control for the effects of financial distress on audit reporting. This contrasts with Barkess and Simnett (1994) and Craswell (1998) who found no significant relationship between non-audit fees and audit qualifications. The contribution of this paper to the literature is twofold: first, it analyses the relationship between non-audit fees and audit qualifications in the UK; second, it is the first study to examine the voluntary disclosure of non-audit fees.⁵

TESTABLE HYPOTHESES

UK companies with financial years beginning after 1 October 1991 are required to disclose non-audit fees paid to auditors. Proposals to introduce the disclosure requirement were first announced in 1989. During the second reading of the Companies Bill, Lord Young stated,

The large accountancy firms have increasingly offered their audit clients a range of other services . . . I think that we need to recognise the concern some people feel about possible conflicts of interest on the part of the auditors. I believe that the appropriate antidote is disclosure, and I therefore propose to take a power to

require the fees paid to auditors, or their associates, for other services to be disclosed in company accounts, as audit fees are now. That will give shareholders a fuller basis on which to judge the relationship between the company and its auditors.⁶

When fees are undisclosed, there may be greater scope for implicit collusion or ‘auditor-manager side-contracting’, whereby managers provide auditors with financial incentives to give favourable reports (Acemoglu and Gietzmann, 1997). Therefore, it is important to distinguish between the effects of non-audit services on audit quality when fees are disclosed and when they are not disclosed. Managers and auditors who use non-audit services to facilitate collusion would find disclosure more costly compared to non-colluding managers and auditors. Hence, early disclosure might be used to signal greater independence (less collusion) and higher audit quality.

The five hypotheses tested in this paper are based on the general argument that non-audit services are positively related to audit quality. Companies with greater separation of ownership and control wish to disclose early (*H1*); distressed companies wish to disclose early (*H2*); large audit firms prefer their clients to disclose early (*H3*); companies with high non-audit fees disclose early (*H4*); and non-audit services positively affect the probability of receiving an audit qualification (*H5*).

The pre-announcement of the disclosure requirement gave companies the opportunity to disclose non-audit fees before the requirement was made mandatory. Hypotheses 1 and 2 are tested using observable proxies for the demand for audit quality. Theory and empirical evidence suggest that there is a greater demand for audit quality when agency costs are high (Bar-Yosef and Livnat, 1984; DeFond, 1992). Therefore, if voluntary disclosure is associated with greater audit quality, companies should have more incentive to disclose early when there is a greater separation of ownership from control. The first hypothesis is:

H1: There is a negative relationship between early disclosure and the fraction of equity owned by company directors.

Existing evidence suggests that concerns about audit quality are particularly acute in distressed companies. Audit failures are often associated with corporate failures such as the Bank of Commerce and Credit International and Polly Peck, and financial distress is strongly correlated with litigation against auditors (St. Pierre and Anderson, 1984; Palmrose, 1988). Therefore, if voluntary disclosure of non-audit fees is associated with greater audit quality, distressed companies might have more incentive to signal audit quality by disclosing early.

H2: There is a positive relationship between financial distress and early disclosure.

In contrast to *H2*, it could be argued that distressed companies have more incentive to collude with auditors to avoid receiving unfavourable audit

reports, in which case one would expect distressed companies to be less likely to voluntarily disclose non-audit fees.

DeAngelo (1981b) has argued that large audit firms have more valuable reputations because of higher client-specific rents which may be lost for issuing negligent reports. Whilst *H1* and *H2* assumed that managers decide when to disclose non-audit fees, high reputation auditors might put more pressure on management to disclose early if disclosure is a signal of quality.

H3: There is a positive relationship between auditor size and early disclosure.

The theoretical relationship between non-audit services and audit quality is ambiguous; non-audit services may increase the likelihood of problem discovery, but may also increase (or decrease) auditor dependence. If early disclosure is a signal of audit quality *and* non-audit services increase quality, one would expect companies to have more incentive to disclose early when non-audit fees are large.

H4: There is a positive association between non-audit fees and early disclosure.

Finally, non-audit services might increase audit quality either by increasing the probability that problems are discovered and/or by increasing auditor independence. *H5* is tested by using audit qualifications as a surrogate for audit quality, and by examining the association between non-audit services and audit reporting.

H5: There is a positive association between disclosed non-audit fees and audit qualifications.

In contrast to *H5*, non-audit services could reduce audit quality by increasing auditor dependence – in this case, one would expect a negative association between disclosed non-audit fees and audit qualifications.

DATA COLLECTION, SAMPLE AND VARIABLES

In this study, the population of interest is all UK listed companies between 1988 and 1994. Data were collected from three sources – microfiche copies of companies' annual reports, *Stock Exchange Financial Yearbooks* (SEFYs) and the data used to estimate the bankruptcy model of Lennox (1999a). Companies were required to have microfiches for at least two consecutive years, because previous studies have shown that a company is more likely to receive a clean (modified) audit opinion in the current year if it received a clean (modified) opinion in the previous year (Monroe and Teh, 1993;

Mutchler, 1985; Nogler, 1995; Lennox, 1999b). Such persistence effects in audit reporting are consistent with evidence that a change in opinion can trigger losses for the auditor through litigation and/or client loss (Lys and Watts, 1994; Krishnan and Stephens, 1995).

Annual reports yielded information on directors' shareholdings ($DIRSH_{it}$), number of employees (EMP_{it}), company auditors, non-audit fees (NAF_{it}), audit fees and audit opinions. Most reports (97%) contained clean audit opinions – others disclosed going-concern problems, fundamental uncertainties (such as provisions made for tax, slow-moving stocks, bad debts or litigation), and non-compliance with Statements of Standard Accounting Practice (SSAPs). Companies that entered administration, receivership or liquidation were noted from SEFYs – all such companies are here defined as failing. Microfiches were available for 987 companies between 1988 and 1994, giving 5,801 observations for the audit, employee and shareholding variables and 2,412 observations for the non-audit fee variable. A financial distress variable ($DIST_{it}$) was constructed for these companies using 6,416 predicted bankruptcy probabilities for the period 1987–94. These were obtained from Lennox (1999a), who found that bankruptcy was a function of the economic cycle, industry sector, company size, profitability, cashflow and leverage.⁷ The intersection of the distress and other variables reduced sample sizes to 5,572 for the audit, employee and shareholding variables and 2,266 for the non-audit fee variable.

By checking all year-ends, 837 (97.33%) companies were found to have complied before, on, or after the required disclosure date, whilst 23 (2.67%) companies were still not disclosing non-audit fees by 1994.⁸ Prior to the announcement of the disclosure requirement, no companies disclosed non-audit fees despite having had the opportunity to do so. This is consistent with the view that voluntary disclosure was not a signal of audit quality. The majority of companies (59.07%) first disclosed on the required date – five companies (0.58%) disclosed three reporting periods before the required date, 30 (3.49%) disclosed two periods before and 265 (30.81%) disclosed one period early. A few companies disclosed after the required date – 27 (3.14%) disclosed one period late and two companies (0.23%) disclosed two periods late.

It is unclear why 23 companies were still not reporting non-audit fees by 1994. One reason may have been that some non-purchasing companies failed to disclose zero non-audit fees. Between 1991 and 1994, the proportion of companies reporting zero non-audit fees rose from 1.08% to 2.67%. This suggests that either companies were less likely to purchase non-audit services after the introduction of the disclosure requirement, or that some of the non-disclosers might not have purchased non-audit fees and did not immediately feel the need to report 'zero'. The estimation results for Tables 3 and 4 were derived after dropping the 23 'non-disclosers', since there was no way of

knowing whether these companies purchased non-audit services and if so how much they purchased. This treatment should not change the main conclusions, since there were relatively few non-disclosers (2.67%). The 29 'late-disclosers' were pooled with the 508 companies who first disclosed on the required date. However, the results in Tables 3 and 4 were qualitatively unchanged when both the non-disclosers and late-disclosers were dropped from the estimation sample.

Table 1 shows the time-series pattern of fees, bankruptcy and audit reporting. Mean audit ($AVAF_t$) and non-audit ($AVNAF_t$) fees were fairly static after the introduction of the disclosure requirement. Whilst this could indicate that disclosure did not materially affect the demand for non-audit services, there was an increase in the number of companies reporting zero non-audit fees and one cannot rule out the possibility of an unobserved change in non-audit fees prior to disclosure.

The number of failing companies ($NFAILS_t$) was particularly high during the recession. The number of qualifications (Q_t) also rose dramatically in 1990 but remained high during the subsequent economic recovery (1993–94). Whilst changes in the macroeconomic environment may have caused the initial jump in 1990, the relatively high number of qualifications after the recession (1993–94) indicates a structural break in audit reporting. One explanation is the introduction of the disclosure requirement – if disclosure increased audit quality, the requirement may have caused an increase in the frequency of audit qualifications. However, it is difficult to test whether the disclosure requirement caused a structural break in audit reporting for two reasons. First, it is unclear whether the impact would have occurred when the disclosure announcement was first made or when companies began to disclose non-audit fees. Second, other changes in the audit regulatory environment could have caused the increase in audit qualifications. Self-regulation became tougher between 1992 and 1994 with the establishment of the Financial Reporting Review Panel (FRRP).⁹ Moreover, SAS 600 stressed the importance of auditors disclosing fundamental uncertainties, particularly for going-concern problems.¹⁰

If SAS 600 caused a structural break in audit reporting, one would expect an increase in the number of reports disclosing fundamental uncertainties and going-concern problems, but no change for other types of qualifications. If the disclosure requirement or FRRP caused the structural break, one would expect an increase in all types of qualifications. Panel B distinguishes between four types of audit reports – 'fundamental uncertainties', 'subject to' qualifications, 'except for' qualifications, and 'qualified disclaimers'. Each of these four types is also divided according to whether the reports disclosed going-concern or other problems. Rows 1–4 show that between 1992 and 1994 auditors gave fewer 'subject to' qualifications and disclosed more 'fundamental uncertainties' – this change in reporting behaviour was particularly marked for going-concern disclosures. The numbers of 'except for'

Table 1 Non-audit fees, financial health and audit reporting (1988–94)

	1988	1989	1990	1991	1992	1993	1994	Total
Panel A								
$AVAF_t$	240	273	290	289	289	293	296	.
$AVNAF_t$	.	.	.	210	225	204	210	.
$NFAILS_t$	10	25	27	21	6	3	1	93
Q_t	11	9	31	36	33	30	29	179
GQ_t	3	3	18	25	26	21	19	115
NGQ_t	8	6	13	11	7	9	10	64
Panel B								
$FUGQ_t$	1	2	0	0	9	17	19	48
$FUNGQ_t$	3	0	2	2	2	7	9	25
SGQ_t	1	1	13	24	17	3	0	59
$SNGQ_t$	4	4	9	6	4	1	0	28
EGQ_t	1	0	1	1	0	0	0	3
$ENGQ_t$	1	2	2	3	0	1	1	10
DGQ_t	0	0	4	0	0	1	0	5
$DNGQ_t$	0	0	0	0	1	0	0	1

Notes:

$AVAF_t$ = Mean audit fees paid in year t (£000).

$AVNAF_t$ = Mean non-audit fees paid in year t (£000).

$NFAILS_t$ = Number of companies that issued their final reports in year t , prior to entering bankruptcy.

Q_t = Number of audit reports disclosing fundamental uncertainties or which were qualified in year t .

GQ_t = Number of audit reports disclosing fundamental uncertainties or qualified for going-concern issues in year t .

NGQ_t = Number of audit reports disclosing fundamental uncertainties or qualified for issues other than going-concern in year t .

$Q_t = GQ_t + NGQ_t$.

$FUGQ_t$ = Number of audit reports disclosing fundamental uncertainties relating to going-concern issues.

$FUNGQ_t$ = Number of audit reports disclosing fundamental uncertainties for issues other than going-concern.

SGQ_t = Number of 'subject to' qualifications given for going-concern issues.

$SNGQ_t$ = Number of 'subject to' qualifications given for issues other than going-concern.

EGQ_t = Number of 'except for' qualifications given for going-concern issues.

$ENGQ_t$ = Number of 'except for' qualifications given for issues other than going-concern.

DGQ_t = Number of qualified disclaimers given for going-concern issues.

$DNGQ_t$ = Number of qualified disclaimers given for issues other than going-concern.

qualifications and 'qualified disclaimers' were very similar before and after the recession. Whilst the numbers involved are small, they do suggest that the change in reporting behaviour was caused by SAS 600 rather than the disclosure requirement of FRRP.

Table 2 describes other key features of the data. On average, boards of directors owned 10–20% of issued ordinary share capital; companies were

Table 2 Descriptive statistics

Panel A: Means, medians and ranges

	^a Q_{it}	^a GQ_{it}	^a $DIRSH_{it}$	^a EMP_{it}	^a AUD_{it}	^b NAF_{it}	^b $NAFR_{it}$	^c $DIST_{it}$
Mean	0.029	0.017	0.175	5,933	0.693	215	0.369	0.014
Median	0	0	0.096	688	1	57	0.361	0.001
Min.	0	0	0	0	0	0	0	0
Max.	1	1	0.967	304,000	1	11,300	0.936	0.999

Panel B: Correlation matrix

	^a Q_{it}	^a GQ_{it}	^a $DIRSH_{it}$	^a EMP_{it}	^a AUD_{it}	NAF_{it}	$NAFR_{it}$	$DIST_{it}$
Q_{it}	1.000							
GQ_{it}	0.795*	1.000						
$DIRSH_{it}$	0.019	-0.012	1.000					
EMP_{it}	-0.044*	-0.036*	-0.226*	1.000				
AUD_{it}	-0.010	-0.009	-0.193*	0.144*	1.000			
NAF_{it}	-0.026	-0.017	-0.190*	0.521*	0.137*	1.000		
$NAFR_{it}$	0.079*	0.075*	0.034	-0.020	0.081*	^b 0.232*	1.000	
$DIST_{it}$	0.277*	0.313*	0.047*	-0.081*	-0.023	^d -0.050	^d 0.021	1.000

* Significant at 1% level.

Notes:

^aNumber of observations = 5,801.

^bNumber of observations = 2,412.

^cNumber of observations = 5,572.

^dNumber of observations = 2,266.

Q_{it} = 1 if auditor disclosed a fundamental uncertainty or gave a qualified audit report to company i in year t ; = 0 otherwise.

GQ_{it} = 1 if auditor disclosed a fundamental uncertainty or gave a qualified audit report due to going-concern issues to company i in year t ; = 0 otherwise.

$DIRSH_{it}$ = Ordinary shareholdings of directors divided by total number of ordinary shares.

EMP_{it} = Number of employees for company i in year t .

AUD_{it} = 1 if company hires a 'Big Six' auditor in year t ; = 0, otherwise. The 'Big Six' audit firms were KPMG Peat Marwick, Coopers & Lybrand, Price Waterhouse, Touche Ross, Ernst & Young and Arthur Andersen.

NAF_{it} = Non-audit fees paid by company i in year t (£000).

$NAFR_{it}$ = Ratio of non-audit fees to total (audit and non-audit) fees paid by company i in year t .

$DIST_{it}$ = Predicted bankruptcy probability (derived from Lennox (1999a)) for company i in year t .

usually small (the median number of employees was 688) but there were a few very large companies (the mean number of employees was 5,933); approximately 70% of companies hired one of the Big Six audit firms and 36% of audit client revenue was from the sale of non-audit services.

The correlation matrix shows that small financially distressed companies were most likely to receive qualified reports. Directors' ordinary shareholdings ($DIRSH_{it}$), auditor size (AUD_{it}) and non-audit fees (NAF_{it}) were all strongly correlated with company size (EMP_{it}). This means that it is important to control for company size when testing hypotheses $H1-H5$.

RESULTS

Hypotheses *H1–H4* are tested by analysing the effects of directors' shareholdings ($DIRSH_i$), financial distress ($DIST_i$), auditor size (AUD_i) and non-audit fees (NAF_i and $NAFR_i$) on the timing of companies' first disclosures.¹¹ The dependent variable ($EDISC_i$) takes a value of one if company i disclosed early, and zero if company i disclosed on time or late. The number of employees (EMP_i) is included to control for company size. All data were taken from the years that non-audit fees were first disclosed.

H1 predicted a negative relationship between early disclosure ($EDISC_i$) and directors' shareholdings ($DIRSH_i$). Table 3 shows that although the relationship was negative it was not statistically significant. Consistent with *H2*, there was a highly significant positive relationship between financial

Table 3 Probit model explaining the promptness of non-audit fee disclosure (dependent variable is $EDISC_i$; z-statistics in parentheses)

	Model 1	Model 2	Model 3
Experimental variables			
$DIRSH_i$	-0.39e-02 (-1.57)	-0.40e-02 (-1.63)	-0.43e-02 (-1.81)*
$DIST_i$	28.22 (4.25)***	28.23 (4.26)***	27.75 (4.28)***
NAF_i	0.01e-02 (1.09)	.	.
$NAFR_i$	.	-0.09 (-0.36)	.
AUD_i	-0.08 (-0.73)	-0.07 (-0.62)	.
Control variables			
EMP_i	0.11e-05 (0.33)	0.03e-04 (1.08)	.
CONSTANT	-0.45 (-4.10)***	-0.41 (-3.03)***	-0.47 (-7.22)***
Observations	785	785	785
Pseudo R^2	0.072	0.071	0.070

Notes:

***Significant at the 0.01 level. **Significant at the 0.05 level. *Significant at the 0.10 level.

The financial distress ($DIST_i$) variable was available for 785 of the 837 companies which complied before, on, or after the required disclosure date. The 23 companies which had not disclosed non-audit fees by 1994 were omitted from the sample. The 29 companies that disclosed late were included – however, the results are robust to their omission. Robust standard errors were obtained using the Huber option in STATA. Data for all variables relate to the years when non-audit fees were first disclosed. The explanatory variables are defined in Table 2.

$EDISC_i = 1$ if company i disclosed non-audit fees early; = 0, otherwise.

distress ($DIST_i$) and early disclosure. However, the evidence does not support hypotheses $H3$ and $H4$ – the effects of auditor size (AUD_i) and non-audit fees (NAF_i and $NAFR_i$) were insignificant.¹² Overall, these results cast some doubt on the signalling explanation.

$H5$ is tested by examining the effect of non-audit fees (NAF_{it} and $NAFR_{it}$) on audit qualifications (Q_{it} and GQ_{it}). Previous research has shown that there is strong persistence in audit reporting and that auditors are more likely to give qualified reports to small distressed companies (Craswell, 1998; Monroe and Teh, 1993; Carcello *et al.*, 1995; McKeown *et al.*, 1991; Lennox, 1999b). Therefore, lagged reports (Q_{it-1} and GQ_{it-1}), company size (EMP_{it}) and financial distress ($DIST_{it}$) variables are included in the reporting models. Finally, large auditors may be more likely to give qualified reports if they are more likely to discover problems or if they are more independent. Thus, there may be a positive relationship between auditor size (AUD_{it}) and audit qualifications.

Table 4 reports the results for six audit qualification models. Models 1 and 2 omit the non-audit fee variables and are estimated for the period 1988–94; models 3–6 use the shorter time period when non-audit fees were disclosed. Coefficient estimates were similar across both samples implying that the results are unaffected by any structural changes in audit reporting. With the exception of directors' shareholdings ($DIRSH_{it}$), coefficient estimates were similar for all qualifications (Q_{it}) and going-concern qualifications (GQ_{it}). Consistent with previous research, the main determinants of audit reporting were lagged reports (Q_{it-1} and GQ_{it-1}) and financial distress ($DIST_{it}$). The effects of company size (EMP_{it}) and auditor size (AUD_{it}) were insignificant. The relationship between non-audit fees and audit qualifications was positive but not highly significant, which is consistent with recent Australian studies (Craswell, 1998; Barkess and Simnett, 1994). Whilst the lack of statistical significance means that $H5$ is not strongly supported, the positive coefficient on non-audit fees is inconsistent with the argument that non-audit services reduce audit quality.

CONCLUSION

Following the announcement of the disclosure requirement, one-third of UK quoted companies disclosed non-audit fees before the requirement became effective. Whilst distressed companies were more likely to disclose early, directors' equity holdings, auditor size and non-audit fees did not significantly affect the timing of companies' disclosures. This casts some doubt on the view that early disclosure was used as a signal of quality. A limitation of the paper is that only financial distress had highly significant effects on disclosure timing. This could be because early disclosure was largely a random event or because the 'disclosure' model omits important explanatory

Table 4 Probit models of audit reporting (z -statistics in parentheses)

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Dependent variables						
Experimental variables						
NAF_{it}	.	.	0.01e-03 (0.15)	.	0.02e-02 (1.50)	.
$NAFR_{it}$	.	.	.	0.66 (2.05)**	.	0.68 (1.49)
Control variables						
Q_{it-1}	1.91 (14.94)***	.	2.01 (11.42)***	1.97 (11.24)***	.	.
GQ_{it-1}	.	2.21 (12.06)***	.	.	2.21 (10.38)***	2.15 (10.04)***
$DIST_{it}$	5.46 (9.15)***	5.61 (9.11)***	14.02 (5.68)***	14.16 (5.80)***	13.07 (5.25)***	13.26 (5.38)***
AUD_{it}	0.02 (0.19)	-0.02 (-0.18)	0.13 (0.87)	0.10 (0.66)	-0.03 (-0.16)	-0.07 (-0.37)
EMP_{it}	-0.12e-04 (-1.57)	-0.25e-04 (-2.20)**	-0.11e-04 (-0.92)	-0.11e-04 (-0.97)	-0.55e-04 (-2.09)**	-0.43e-04 (-2.13)**
$DIRSH_{it}$	0.03e-02 (0.14)	-0.51e-02 (-1.86)*	0.03e-02 (0.11)	0.02e-02 (0.07)	-1.05e-02 (-2.38)**	-1.12e-02 (-2.51)**
$CONSTANT$	-2.23 (-22.48)***	-2.32 (-20.17)***	-2.26 (-13.74)***	-2.50 (-11.44)***	-2.14 (-12.36)***	-2.37 (-9.67)***
Observations	5,509	5,509	2,244	2,244	2,244	2,244
Pseudo R^2	0.291	0.359	0.306	0.312	0.381	0.386

Notes:

***Significant at the 0.01 level. **Significant at the 0.05 level. *Significant at the 0.10 level.

Robust standard errors were obtained using the Huber option in STATA. All variables are defined in Table 2. For models 3–6, there were 76 observations where auditors disclosed fundamental uncertainties or qualified reports – 50 of these were for going-concern issues.

variables. One avenue for future research would be to investigate further the early disclosure of non-audit fees (perhaps using Australian data).

Given the insignificant relationship between non-audit fees and audit qualifications and the survey evidence that non-audit services impair independence, it seems likely that non-audit services increase the probability of problem discovery *and* reduce auditor independence. The net effect on audit quality appears to be positive but insignificant indicating that non-audit services do not reduce quality. On balance, the results suggest that current UK policy may be justified in not banning non-audit services. This conclusion is strengthened if policy-makers take account of the economies of scope that may accrue from allowing the joint provision of audit and non-audit services.

Using qualified reports to capture audit quality is a potential limitation of this field of research. The methodology is particularly problematic if auditors sometimes give qualified reports when problems are suspected rather than actually discovered – future research into this question would be extremely useful.

NOTES

- 1 Auditors also have incentives not to compromise audit quality because of the potential loss of reputation and the threat of liability.
- 2 For example, consider a fictional auditor who always qualifies irrespective of whether any problems are discovered. In such a case, audit reports would be of minimal quality and qualifications would not be a good measure of quality.
- 3 Belgium, France and Italy ban the provision of all non-audit services – other EU countries allow tax and financial advisory services. Bookkeeping services are banned in all EU countries except Denmark, Ireland, Luxembourg, Netherlands, Portugal, Sweden and the UK. Legal and corporate recovery services are also banned in Belgium, France, Italy and Portugal (Buijink *et al.*, 1996).
- 4 Accounting Series Release No. 250 required public disclosure of the type and quantity of non-audit services as a percentage of the total audit fee – however, this requirement was only in force between 1978 and 1981.
- 5 Using survey evidence, Scheiner (1984) found that the mandatory US disclosure requirement did not affect the demand for non-audit services – however, Scheiner did not investigate the issue of voluntary disclosure.
- 6 Hansard Parliamentary Debates, House of Lords, 16 January 1989, column 10.
- 7 The financial data used to estimate the bankruptcy model were collected from Datastream. The effects of company size are controlled for using the number of employees due to the relatively large number of missing Datastream observations for assets and turnover.
- 8 The remaining 127 companies did not have microfiche available at the disclosure requirement date due to corporate failure, mergers and missing fiche.
- 9 On 24 December 1991 the *Financial Times* wrote, 'The system of audit regulation and inspection introduced on 1st October [1991] under the Company's Act 1989 is providing an extra safeguard for ensuring the competence and integrity of auditors.' On 7 January 1992 the *Financial Times* wrote, 'It is more difficult for auditors to defend themselves when they have given unqualified opinions on the

- growing number of accounts being censured by the Financial Reporting Review Panel.’
- 10 Whilst SAS 600 became effective in September 1993, its introduction had been preceded by a great deal of debate concerning auditors’ reporting responsibilities.
 - 11 Wines (1994) and Craswell (1998) used the ratio of non-audit fees to total (audit and non-audit) fees ($NAFR_i$), whereas Barkess and Simnett (1994) used the level of non-audit fees (NAF_i). The main advantage with the ratio is that the level of non-audit fees is highly correlated with company size whereas the ratio is not. However, the ratio suffers from the disadvantage that higher audit fees could imply higher rents, but higher audit fees reduce the ratio of non-audit to total fees.
 - 12 Twelve dummy variables were also included to control for auditor-specific effects. Only one of these dummies was statistically significant at the 5% level – clients of Coopers & Lybrand were less likely to disclose compared to clients of other auditors.

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