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Audit Quality and the Going-concern Decision-making Process: Spanish Evidence

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ABSTRACT *In this study, we attempt empirically to investigate the relationship between audit quality and the probability that a financially distressed company would receive a going-concern opinion. Auditor decision-making in the presence of going-concern uncertainties may be characterized as a two-stage process. The first stage is the identification of a potential going-concern problem and the second stage is to determine whether the particular company should receive a qualified going-concern opinion. A sample of 1,199 non-financial Spanish company-years has been obtained from the database issued by the Stock Exchange National Commission for the fiscal years ending between December 1991 and December 2000. The results indicate that audit quality (measured by the auditor's level of independence and knowledge) affects the probability that a financially distressed company would receive a going-concern opinion. This probability is influenced not only by the auditor's ability to detect financial uncertainties, but also by the auditor's decision-making as to what type of opinion should be finally issued.*

1. Introduction

The empirical issue examined in this paper is whether audit quality increases the likelihood of a financially distressed company receiving a qualified audit report for going-concern uncertainty. The accounting literature on this topic supports the notion that audit quality has two components: auditor competence and auditor independence. The auditor's responsibility to evaluate and disclose going-concern problems has been the subject of much debate for a long time. Although there is no unanimous opinion regarding the body (financial statement users or the company's auditor) that should evaluate the risk that an individual

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company is facing (see Campbell and Mutchler, 1988; Asare, 1990), in most countries regulators have given this responsibility to the auditor. In Spain, auditors are required to consider the ability of an entity to continue as a going-concern for a period not exceeding one year beyond the date of the financial statements (*Instituto de Contabilidad y Auditoría de Cuentas*, or ICAC, 1991). Therefore, independent auditors have been charged with the responsibility of warning investors when there are doubts about the continuity of a company. Zavgren (1983, p. 1) affirms that the primary rationale for requiring the audit profession to evaluate a going-concern assumption is to provide users of financial statements with an early warning of potential financial problems. The audit opinion may provide particularly useful information, given the auditor's intimate knowledge of the client's activities and future plans (see Fleak and Wilson, 1994; Jones, 1996).

Previous research on auditors' decisions in this arena has concluded that financial-based bankruptcy prediction models are more accurate than auditors' opinions in classifying companies as being bankrupt (Altman and McGough, 1974; Altman, 1982; Levitan and Knoblett, 1985; Koh and Killough, 1990; Koh, 1991). This empirical evidence has served to direct criticism at the audit profession for not providing adequate early warning signals of impending client failure. The financial press, regulators and the public view the issuance of an unqualified audit report to a company that subsequently files for bankruptcy as an indicator of poor quality audit work. Accordingly, auditors have been considerably criticized for their inability to detect problem companies or for their reluctance to disclose going-concern uncertainties in the audit report.

However, these studies provide limited insights into the auditor's decision-making process and do not explicitly investigate if the reluctance to issue a qualification may be attributed to failings on the part of the auditor, whether in terms of auditors having insufficient knowledge or being overly dependent, economically, on the client. For example, different authors (Kida, 1980; McKeown *et al.*, 1991; Krishnan and Krishnan, 1996) pointed out that auditors may be able to identify problem companies and yet may choose not to issue a going-concern opinion. In this sense, the going-concern decision has been described as a two-stage process. The first is the identification of a company with a potential going-concern problem. This identification will depend on two factors: financial distress and the auditor's ability to detect it, i.e. auditor competence. The second stage is to determine whether a company with a going-concern problem should receive an audit report with a going-concern opinion. This decision will depend on the auditor's independence; that is, his/her evaluation of the economic trade-offs. On the one hand, the audit company faces the risk of losing the client if it issues a qualification, yet, on the other, failing to qualify the company exposes the auditor to litigation and loss of reputation (Krishnan and Krishnan, 1996).

Different papers have analysed the economic trade-offs facing the auditor that arise in the going-concern decision, using different proxies. Krishnan and Krishnan

(1996) indicate that auditor litigation risk and the relative importance of the client in the auditor's portfolio are factors in the audit opinion decision. Louwers (1998) demonstrates that auditors only appear to focus on the client's financial health, and therefore their opinions are not influenced by incentives associated with their loss function. Reynolds and Francis (2001) conclude that reputation protection and litigation avoidance are sufficient to override the possible impairment of objectivity resulting from economic dependence. DeFond *et al.* (2002) conclude that market-based incentives, such as loss of reputation and litigation costs, predominate over the expected benefits from compromising auditor independence. Vanstraelen (2002), in a Belgian context, provides empirical evidence showing that the auditor's going-concern opinion is associated with levels of audit fees and the recent loss of audit clients.

The purpose of this study is to determine how audit quality affects auditor decision-making in the context of going-concern uncertainty in Spanish companies. The study of the Spanish case is relevant as the Spanish audit market has different characteristics to the typical audit markets of Anglo-Saxon countries, from which most of the existing empirical audit literature originates. First, there are some differences regarding the development of the audit profession. In Spain the auditing profession is a new one, with the examination of limited company financial statements by independent auditors only having been compulsory since 1988, following the passing of the *Ley de Auditoría* (Audit Law). However, despite the fact that the auditor is a fairly new professional figure, some authors have revealed the presence of an expectation gap, i.e. an important difference between the role currently perceived/achieved by auditors and the role expected of them. Second, there also exist some key differences in Spanish audit regulations. One of the most relevant is the relative lack of measures for preserving auditor independence. Spanish companies may apply some pressure on their audit firm with the intention of avoiding a qualified audit report. Finally, some proven incentives that help maintain high audit quality present in countries with a long auditing tradition, reputation loss and litigation risk, for instance, seem to be weak in the Spanish case.

Therefore, this study provides some new insights into auditor behaviour relating to going-concern opinions in an environment characterized by a recently developed profession, a quickly established audit expectations gap and continuing low levels of incentives to maintain high-quality audits. Following previous literature, we expect that the client's probability of receiving a going-concern opinion will vary according to the auditor's competence and independence. Auditor competence is related to the auditor's specialization in the client's industry and tenure. Auditor independence is assumed to be associated with the relative proportion of the auditor's revenues received from the client, the auditor's reputation and his/her conservatism.

The study focuses on a sample of companies approaching bankruptcy. Using available information, we distinguish between problem companies with a going-concern opinion and problem companies without a going-concern opinion. This enables us to explore the reasons that explain the client's probability of receiving a going-concern opinion: the auditor's competence and/or independence. Indeed, in the case of financially distressed companies, it is likely that auditors may be aware of a continuity problem but may not have an economic incentive to issue a going-concern opinion.

Our results reveal that the probability of issuing a going-concern opinion depends not only on the level of the company's financial distress, but also on auditor independence, i.e. the lack of incentives associated with the auditor's loss function. On the other hand, we have found no association with proxies related to auditor's competence.

The remainder of the paper is organized as follows: the next section contains a wide review of literature in order to present a general framework for the study and the theoretical justification for our principal hypotheses. Section 3 analyses the Spanish context, while section 4 describes our tests. Section 5 reports the results and the final section concludes the study.

2. Auditor Quality and the Auditor's Going-concern Opinion Decision

Prior research has analysed the relationship between the behaviour of the audit profession and the issuance of a going-concern opinion. Many previous papers (Altman, 1982; Menon and Schwartz, 1987; Hopwood *et al.*, 1989; McKeown *et al.*, 1991; Chen and Church, 1992) compared the type of audit opinion issued for a sample of failing companies with the predictions obtained from bankruptcy models. Generally, these studies found that less than half of all companies filing for bankruptcy had received a previous going-concern opinion and that the statistical models were better failure predictors than the auditor's opinion. This evidence led to allegations that the accounting profession has failed to perform its professional responsibilities and has, correctly, been harshly criticized for its low predictive power.

However, other studies have questioned these conclusions (see Kida, 1980; Menon and Schwartz, 1987; Wilkerson, 1987; McKeown *et al.*, 1991; Krishnan and Krishnan, 1996). Their principal argument is that the research designs of those studies do not reflect the context of the auditor's decision-making adequately, nor do they explicitly introduce variables measuring audit quality[1] into their models. Two reasons justify the analysis of the relationship between the issuance of going-concern opinions and audit quality. First, as has been shown in prior research, the market for audit services is one that can be characterized as being quality-differentiated (Dopuch and Simunic, 1982; Simunic and Stein, 1987, 1996; Craswell *et al.*, 1995). Audit quality is defined as the probability of an auditor both discovering and reporting a breach in the client's accounting system (DeAngelo, 1981). Neither aspect of the probability can be observed, but an important number of studies have used different approaches for measuring audit quality. In this paper, we consider that the probability of discovering and reporting breaches would be reflected in certain features of the audit firm, such as competence and independence (Watts and Zimmerman, 1986). Second, prior research (Krishnan and Krishnan, 1996; Francis and Krishnan, 1999; Davis and Ashton, 2000; Reynolds and Francis, 2001) has found that audit quality affects the auditor's behaviour in reporting decisions. Using this evidence we want to test if auditor heterogeneity on reporting behaviour may be related to auditor competence and independence.

With respect to auditor decision-making, Kida (1980) distinguishes between the identification of a company problem and the issuance of qualified opinions. The identification of a distressed company does not necessarily lead to a qualification decision. Following this reasoning, different authors (Mutchler, 1984; Wilkerson, 1987; Krishnan and Krishnan, 1996) describe the going-concern decision as a two-stage process: the first stage is the identification of a company with a potential going-concern problem while the second stage is to decide whether a going-concern opinion is appropriate. Both stages are very closely related to issues of audit quality. Identifying a client as a potential receiver of a going-concern opinion will depend on the client's financial health and on the level of auditor competence needed to detect it, while deciding to disclose the going-concern uncertainty is a clear question of independence. In summary, the definition of these two stages allows us a better understanding of the context in which the auditor's opinion is formulated, as well as the separation of the audit evidence evaluation from the actual decision made by the auditor.

Therefore, the client's probability of receiving a going-concern opinion will depend on three factors: the company's level of financial distress, the degree of auditor competence and the level of auditor independence. With respect to financial distress, the weaker the company's financial health, other things being equal, the more likely it is to receive a going-concern qualification. Previous studies (McKeown *et al.*, 1991; Hopwood *et al.*, 1994; Carcello *et al.*, 1995) found a positive relationship between the extent of financial distress and the probability of receiving a going-concern opinion. In this paper, we choose to focus on financially distressed companies because in general terms healthy companies do not usually receive a going-concern opinion (McKeown *et al.*, 1991).[2]

With regard to auditor competence, different authors (Barnes and Huan, 1993; Lennox, 1999) have indicated that the low proportion of going-concern opinions given to financially distressed companies may be explained by bankruptcy being a highly unpredictable event. Therefore, the auditor's lack of competence in attempting to evaluate the company's ability to continue may explain his/her failure to issue going-concern opinions. The related hypothesis is formulated as follows:

H1: The probability of financially distressed companies receiving a going-concern opinion increases with auditor competence.

In this paper, we assume that auditor competence is not fixed, and the probability of detection of failure increases with tenure and specialization.

With respect to auditor independence, prior research suggests that auditor decision-making in the presence of going-concern uncertainties not only includes the evaluation of audit evidence but also the decision regarding the disclosure of the results of that evaluation. Prior papers (Kida, 1980; Levitan and Knoblett, 1985; Mutchler, 1985; Menon and Schwartz, 1987; Barnes and Huan, 1993) dealing with going-concern uncertainties concluded that auditors, based on financial information, tended to classify companies with continuity problems correctly. Therefore, it is necessary to distinguish between the auditor's competence to make the correct judgement concerning continuity and his/her tendency to issue qualified opinions which depends on the perceived outcomes of qualifying or not qualifying (Kida, 1980). These conclusions show that the auditor's identification of an unhealthy company must be separated from the decision to issue a going-concern opinion by taking into account the auditor's independence. Regarding the latter issue, it is hypothesized that:

H2: The probability of financially distressed companies receiving a going-concern opinion increases with auditor independence.

Krishnan and Krishnan (1996) suggest that researchers should try to assess the role of these trade-offs in the qualification decision, taking account that the auditor is a utility maximizer who confronts different incentives (Wilkerson, 1987; Raghunandan and Rama, 1995; Reynolds and Francis, 2001). Previous research has identified two economic incentives facing auditors when evaluating the reporting alternatives concerning a company's ability to continue as a going-concern. First, the cost incurred by auditors in issuing a going-concern opinion is the possibility of losing the client and related future quasi-rents (assuming that the client switches auditors due to dissatisfaction). Second, such an opinion avoids the costs associated with the inappropriate issuance of a non-qualified opinion – namely the potential costs of litigation and reputation loss.

3. Spanish Context

The potential impact of national and cultural differences on reporting decision behaviour is a relevant issue. With respect to reporting decision behaviour, the Spanish audit market possesses some peculiarities that differentiate it from markets in other countries. The origin of the market of audit services in Spain is related to the implementation of the 1988 Eighth EC Directive on Company Law. The Audit Law obliged corporations over a certain size to appoint an auditor to give an opinion about the company's financial statements. The objective of the Audit Law was to give the maximum transparency to the company's accounting information, and to promote the better functioning of Spanish companies, greater comparability with other EC companies and a better functioning of the market systems.

The legal establishment of auditing in Spain was accepted by society in general with much enthusiasm, as auditing was considered to satisfy an urgent need in the modernization of the national economy. The audit environment in the late 1980s and early 1990s portrayed a high degree of harmony. Legislation had established a fundamental role for the audit function in improving Spanish corporate governance and the transparency of corporate financial reports. Empirical research revealed differences in expectations of the audit function between the audit profession and a range of user groups, but the gap was considerably less than in other countries such as the UK (for a review, see García Benau *et al.*, 1993). At the end of the decade, the general atmosphere associated with auditing appeared to be positive and entertained high hopes (García Benau and Humphrey, 1992). Over the following ten years, this atmosphere has changed dramatically. The enthusiasm surrounding the transparency of corporate financial information under an audit function has been replaced by the more usual set of public questions regarding the capacity of auditors. Some corporate financial scandals and the substantial fines for inadequate auditing that were imposed on several of the major international companies by the Spanish audit regulatory body have led in Spain to a growing recognition of the concept of an 'audit expectations gap' and a significant questioning of the reputation of the profession in terms of its capacity to serve the public interest (García Benau *et al.*, 1999a). Politicians, academics, financial journalists and even some members of the accounting profession have become increasingly critical of the quality of auditing practice in Spain. The reasons for this change can be found in the competition in the audit market, the lack of safeguards concerning auditor independence and the professional associations' deficient quality control systems.

The Audit Law produced a substantial change, especially increasing demand for audit services due to the fact that a far greater number of companies were legally required to have an external audit. In the early 1990s, the audit market grew at an enormous rate (García Benau *et al.*, 1999a). Later, however, the Spanish audit market suffered from stagnation (see Paz-Ares, 1996, and surveys in the *International Accounting Bulletin* 27/11/95, 31/10/96 and 30/11/98). This stagnation generated the development of aggressive client-capture policies. A change in Spanish audit legislation in 1997 further added to the competitive nature of the audit market, by increasing the size of companies required to submit their annual accounts to audit. This measure reduced the number of companies subject to audit by approximately 20% (García Benau *et al.*, 1999a, p. 716). DeAngelo (1981) suggests that when auditors are faced with competitive pricing pressures, they might choose to lower audit quality in order to keep clients. In the Spanish context one might speculate that auditors may have become less willing to report going-concern problems if revenue losses were to be the likely consequence.

Moreover, Spanish legislation has not been particularly strict in specifying safeguards aimed at maintaining the audit profession's independence (Gonzalo, 1995; Paz-Ares, 1996; Cañibano and Castrillo, 1999). Specifically, there are no policies to reduce manager influence over auditor changes. Following the Spanish legislation, the auditor will be contracted for a minimum of three years and a maximum of nine. However, when the initial contract has expired, the company can renew its contract with the same auditor on a yearly basis. A company can break its audit contract if a 'just cause' exists, but the Law does not clarify what this just cause may be (Gómez Aguilar and Ruiz Barbadillo, 2000). A company can, therefore, hire and fire its auditor without any time limitation. In addition to this, Spanish companies are not required to disclose any information concerning its change of auditors and the regulation does not stipulate any requirements for communication between the auditor and the company's shareholders – there are no legal documents required for disclosing disagreements between the auditor and his/her client.

In this context, managers have a strong influence over auditor reporting decision behaviour, given their greater capacity to impose their own viewpoint when a disagreement exists. This situation has an important implication in that stricter auditors have a higher probability of losing their clients than their more indulgent competitors (Paz-Ares, 1996; Larriba and Serrano, 1999; Gómez Aguilar and Ruiz Barbadillo, 2003).

Furthermore, the profession has not made any effort to improve its quality control systems. Following the Spanish regulation, the professional bodies (the Spanish Institute of Chartered Accountants, the Register of Economic Auditors and the Register of Commercial Graduates) have to enforce auditing standards and punish non-compliant auditors. However, no cohesive professional infrastructure exists in Spain and the above professional bodies have not exercised an effective quality control (Bougen, 1997). Even ICAC has questioned the effectiveness of the professional auditing bodies' existing regulatory procedures (Ruiz Barbadillo *et al.*, 2000, p. 137).[3] Deis and Giroux (1992, p. 466) indicate that auditor performance is influenced by the rigour and visibility of the profession's enforcement actions; for this reason it is possible to think that Spanish audit firms have a limited incentive to issue going-concern reports.

Also in the Spanish context there are no market-based institutional incentives, such as reputation loss and litigation costs, to promote auditor independence and outweigh economic dependence. Failure to issue a going-concern opinion when the company deserves it can harm the auditor's reputation. However, empirical Spanish evidence shows that fees are the principal factor in auditor choice (Prado Lorenzo *et al.*, 1995; García Benau *et al.*, 2000) and auditor reputation and audit quality are not important for Spanish companies (see García Benau *et al.*, 1999b, for a review).

Finally it is important to note that the litigation risk in Spain is very low. Unlike in other countries, to date no audit firm in Spain has been required to pay damages to any third party by a court of law (Ruiz Barbadillo *et al.*, 2000). All of the above-mentioned peculiarities of the Spanish audit market justify the importance of the analysis of the relationship between audit quality and going-concern decisions in such a context.

4. Empirical Study

Sample Design

The empirical analysis in this paper is conducted on the basis of a sample extracted from the database issued by the National Securities Market Commission for the fiscal years ending within the December 1991 to December 2000 period. This database includes audited financial information regarding all companies that issue shares on the Madrid Stock Exchange. It also represents the only source of financial information that includes not only the annual accounts but also the complete audit report.

The database includes 4,817 audited company-years for the years 1991–2000. Additional qualitative criteria led us to exclude financial and insurance service companies from the final sample (the meaning of their financial ratios may differ significantly from the rest of the companies and could generate misleading results). Companies already in liquidation were also excluded, since there is no doubt concerning their problem of continuity and, therefore, audit reports provide little additional information to potential users. Following this procedure, our sample was reduced to 3,119 observations.

From this sample we determined those companies that were potentially financially distressed. Wilkerson (1987) suggests that when investigating qualification decisions, it is important to collect experimental and control samples in which the overall degrees of economic uncertainty associated with the companies was similar. If this is not done, then any significant differences may relate to differences in economic uncertainties rather than auditor decision-making (Hopwood *et al.*, 1994, p. 412). We define a company as stressed if it exhibits at least one of the following features in the financial statements under audit: (a) negative working capital; (b) negative retained earnings, or (c) a bottom-line loss (Hopwood *et al.*, 1994; Raghunandan and Rama, 1995; Carcello *et al.*, 1997; Geiger and Raghunandan, 2002; Vanstraelen, 2002). These variables are also based on the so-called contrary factors identified in the Spanish guidelines (ICAC, 1991). Additionally, we have monitored the existence of those factors that can mitigate financial distress problems. When there are mitigating factors, the auditor may feel justified in not qualifying even if they know there are going-concern problems. Using methodology similar to that of Reynolds and Francis (2001) to evaluate the existence of mitigating factors we examined the subsequent fiscal year financial statements in order to identify important sales of assets or the issuance of new debt or equity. Those mitigating factors may influence the auditor's decision. Accordingly, companies that exhibited either one or both factors were excluded from the group. This screening resulted in a sample of 1,199 potentially distressed company-years.

Model Specification

In order to analyse the relationship between the auditor's opinion for distressed companies and the indicators of financial distress, auditor competence and/or independence, we use the following logistic regression model:

$$\begin{aligned} &GOING-CONCERN\ QUALIFICATION\ (GCQ) \\ &\quad = F(PROBFAIL, TENURE, SPECIALIZATION, CLIENTSIZE, \\ &\qquad AUDITORSIZE, RECEIVABLE, INVENTORY) \end{aligned}$$

The dependent variable is coded 1 when a going-concern uncertainty is disclosed in the audit report and 0 otherwise. In this respect, we paid close attention to the nature of the explanatory paragraph. If the paragraph mentioned either going concern, or doubt regarding ability to continue, or if it was a going-concern disclaimer then the dependent variable takes value 1.

The first independent variable, *PROBFAIL*, is related to the company's financial health. Prior research has shown that auditors issue going-concern opinions more often when the financial statements indicate severe distress. As in prior studies (Carcello *et al.*, 1995, 1997; Carcello and Neal, 2000; DeFond *et al.*, 2002) we captured financial distress using the coefficients given in Zmijewski (1984).[4] According to Bamber *et al.* (1993), the ZFC index (Zmijewski, 1984) is a standard normal variable.[5] With the intention of obtaining the variable *PROBFAIL*, we compute the fitted probability of a failure 'p' following:

$$\hat{p} = 1 - F(-x\hat{\beta})$$

where F is the standard normal cumulative distribution function and the fitted values of the index $x\hat{\beta}$ are obtained using the data of Spanish firms for the vector of variables proposed by Zmijewski (1984) – taking as valid the coefficients given in Zmijewski (1984). Therefore, we expected that the higher the value of *PROBFAIL*, the greater the company's probability of receiving a going-concern opinion.

TENURE is the length of the auditor–client relationship measured by the number of years. Over the years an auditor develops an in-depth knowledge of the client's business operations, processes and systems, which is crucial to performing effective audit work (Elitzur and Falk, 1996; O'Leary, 1996; Geiger and Raghunandan, 2002). When auditors have a long-term relationship with their clients, this may lead to a better understanding of the client's financial condition and therefore they are more likely to detect going-concern problems. However, other researchers argue that long audit contracts reduce the incentives for auditors to carry out their duties with due professional diligence and with the required independence (Petty and Cuganesan, 1996; Catanach and Walker, 1999). In this sense, the tenure variable could show the opposite behaviour.

SPECIALIZATION is a proxy to measure the audit firm's industry specialization.[6] Auditing research has focused on industry specialization as a way of improving auditor performance (Danos and Eichenseher, 1982; Craswell *et al.*, 1995). Following prior research (O'Keefe *et al.*, 1994; Craswell *et al.*, 1995) audit quality can be assumed to increase with an auditor's market share. Commonly, the audit market share is measured through audit fees. However, since such data are not publicly available in Spain, we have used a common surrogate for audit fees, i.e. the square root of the income of the companies audited by each auditor (Palmrose, 1986; Johnson and Lys, 1990). We define industry specialization as the proportion of industry sales audited by each auditor (Simunic, 1980; Palmrose, 1986). Each industry consists of all the companies within each two-digit Spanish Standard Industry Classification (CNAE).[7] We expect that the auditor's *SPECIALIZATION* will be positively associated with an easier identification of financial distress and, therefore, with a higher probability of issuing a going-concern opinion.

The variable *CLIENTSIZE* is a proxy to measure the expected cost of possible client loss if a qualified opinion is issued. Prior evidence found that auditors are indeed more likely to accept controversial accounting treatments by clients when the risk of client loss is high. The auditors' perception of the likelihood of client loss cannot be measured directly, but empirical evidence suggests that larger companies tend to have larger audit fees, thus creating economic incentives for the auditor to issue an unqualified opinion in others to retain the client (Krishnan, 1994; Geiger *et al.*, 1998). Since fee data are not available in Spain, this variable is measured by the ratio of client's assets to total clients' assets of the auditor.

AUDITORSIZE is a proxy to capture the reputation effect. Auditors' concern for their reputation is likely to be an important determinant when issuing a going-concern opinion to a distressed company, as a loss of reputation can reduce the present value of audit services (Watts and Zimmerman, 1986, p. 316; Krishnan and Krishnan, 1996, p. 572). Since the failure to issue a going-concern opinion when the company deserves it can harm the auditor's reputation, we expect a positive relationship between cost of reputation loss and the client's probability of receiving a going-concern opinion. *AUDITORSIZE* is calculated by dividing sales audited by each auditor into sales audited in the entire audit market (Francis and Wilson, 1988; Johnson and Lys, 1990).[8]

RECEIVABLE and *INVENTORY* are proxies for potential losses from litigation. Litigation risk provides economic incentives to auditors for issuing qualified opinions when questions arise concerning the company's ability to continue as a going concern. Reporting conservatism can protect auditors because qualified audit reports issued prior to bankruptcy reduce both the incidence and the magnitude of litigation if bankruptcy subsequently occurs (Kinney and Smith, 1992; Carcello and Palmrose, 1994). We captured the auditor's evaluation of litigation risk using variables that empirical evidence reveals as being positively associated with litigation (Stice, 1991). *RECEIVABLE* is calculated as receivables to total assets, and *INVENTORY* is the ratio of inventories to total assets (Dopuch *et al.*, 1987; Krishnan and Krishnan, 1996).

5. Results

Descriptive Statistics and Univariate Analysis

Table 1 shows the statistical distribution of the 1,199 year-firm observations that satisfy two conditions: that the companies concerned appear to face financial problems and that their financial statements do not show the existence of mitigating factors. Those observations have been grouped according to the presence/absence of going-concern opinion in their audit report and, as can be seen in Table 1, in only 100 out of the 1,199 cases did auditors express their concern about the continuity of the company. Therefore, it would appear that auditors are quite reluctant to issue going-concern opinions. Furthermore, audit firms show different tendencies in the issuance of going-concern opinions ($\chi^2 =$ 21,397; $p = 0.002$). This finding can be explained by the different quality of the service that they provide.

Table 2 shows the different samples used in prior literature in order to facilitate a comparative analysis of our sample. The last column shows the results of percentages of financially distressed companies that received going-concern opinions.

All of these studies followed procedures very similar to the ones used in this paper in order to determine companies facing financial problems, with most of the empirical evidence available drawn from the USA. Even when the periods

Table 1. Classification of the company-year audit reports included in the sample according to the company's financial health, the existence of mitigating factors and its audit firm

	Financially distressed companies						
	Going-concern opinion		Clean audit report		Healthy companies		
Audit firm	No.	%	No.	%	No.	%	Total No.
Arthur Andersen	27	3.5	302	39.5	436	57.0	765
Coopers & Lybrand	5	2.8	69	38.8	104	58.4	178
Deloitte Touche	10	9.7	37	35.9	56	54.4	103
Ernst & Young	12	4.7	69	27.2	173	68.1	254
KPMG	11	4.4	104	41.4	136	54.2	251
Price Waterhouse	9	3.2	96	34.5	173	62.2	278
Second-tier companies	26	2.0	422	32.7	842	65.2	1,290
Total	100	3.2	1,099	35.2	1,920	61.6	3,119

$\chi^2 = 21.397$; $p = 0.002$.

Table 2. Comparative analysis of the samples of previous studies

Countries	Study	Financially distressed companies	Percentage of going-concern opinions
USA	Raghunandan and Rama (1995)	174 (pre-SAS 1995)	22
		188 (post-SAS 1995)	35
	Krishnan and Krishnan (1996)	1,837	6.77
	Carcello *et al.* (1997)	440	3
	Louwers (1998)	698	7
	Reynolds and Francis (2001)	2,439	9.2
	DeFond *et al.* (2002)	2,428	4
	Geiger and Raghunandan (2002)	635	3
	Martin (2000)	61	18
France	Martin (2000)	30	3
Germany	Martin (2000)	31	0
Belgium	Vanstraelen (2002)	392	13.5

under study differ greatly, and are possibly affected by important specific factors (e.g. the issuance of SAS 95, changes in civil liability or economic situations), the data show a low number of going-concern opinions issued by auditors to financially distressed companies. Notwithstanding the fact that the Spanish context is very different (given the shorter tradition of auditing and lower risk litigation) to that of the USA, in general terms the behaviour of the auditing profession is not much different concerning its propensity to issue qualified reports. Taking Vanstraelen (2002) into account, we might conclude that the market environment of auditing in Belgium is more similar to the Spanish one. The data relating to Germany and France show a lower percentage of unhealthy companies presenting going-concern opinion. Table 3 reports descriptive statistics for the sample of 1,199 financially distressed observations.

In Table 4, the explanatory variables are first tested univariately. This intends to reveal if there are significant differences between financially distressed companies that received a going-concern opinion and those that did not. The z-statistic is used to compare the means of the two groups. As can be seen in Table 4, there are significant differences between those companies with observable financial problems that received a going-concern opinion and those that did not. With respect to the *PROBFAIL* variable, we can see that symptoms of financial problems are greater in those companies that received qualified reports, which is consistent with previous literature on the subject.

However, the results obtained by the variables used to infer auditor knowledge are not those expected. The *TENURE* variable shows that there are no significant differences between companies receiving going-concern opinions and those that do not with respect to the length of auditor tenure, which is contrary to that expected. The average length of audit contracts of those companies receiving going-concern opinions is 4.32 years, while among those companies not

Table 3. Descriptive statistics on the model's variables

Variable	Minimum	Maximum	Mean	Standard deviation
PROBFAIL	0.00	1.00	0.20	0.31
TENURE	1	11	4.59	2.67
SPECIALIZATION	0.00	0.96	0.19	0.24
CLIENTSIZE	0.02	1	0.23	0.35
AUDITORSIZE	0.00	0.73	0.20	0.27
RECEIVABLE	0	0.82	0.16	0.18
INVENTORY	0	0.98	0.08	0.15

PROBFAIL: Probability of company's failure; *TENURE*: Number of years being audited by the same audit firm; *SPECIALIZATION*: Audit firm's market share in the client's industry; *CLIENTSIZE*: Client's assets to total clients' assets of the auditor; *AUDITORSIZE*: Audit firm's market share; *RECEIVABLE*: Receivable/total assets: *INVENTORY*: Inventory/total assets.

receiving this qualification it is 4.61 years. Therefore, the shorter the contract length, the higher the probability that the company would receive a going-concern opinion. This result supports the argument that the long audit contracts may harm the independence and/or professional diligence of the auditor.

With respect to *SPECIALIZATION*, this variable does not show as a high value in those companies receiving qualified reports (0.131), which, given the above results, implies that the lower the auditor's degree of knowledge in specific sectors, the greater the company's probability of receiving going-concern opinions.

Table 4. Univariate analysis of the explanatory variables classified according to the existence of going-concern opinion or not

	Mean		Median		Standard deviation		
Variables	No GC	GC	No GC	GC	No GC	GC	z-statistic
PROBFAIL	0.174	0.557	0.031	0.648	0.281	0.381	8.967***
TENURE	4.61	4.32	4.00	4.00	2.695	2.287	0.501
SPECIALIZATION	0.193	0.131	0.088	0.080	0.246	0.240	0.359
CLIENTSIZE	0.232	0.189	0.025	0.019	0.353	0.354	2.703***
AUDITORSIZE	0.197	0.211	0.048	0.072	0.274	0.271	3.042***
RECEIVABLE	0.156	0.208	0.089	0.171	0.178	0.169	3.877***
INVENTORY	0.081	0.130	0.005	0.053	0.143	0.203	3.900***

***, ** and * denote significance at the 99%, 95% and 90% confidence levels respectively.
PROBFAIL: Probability of company's failure; *TENURE*: Number of years being audited by the same audit firm; *SPECIALIZATION*: Audit firm's market share in the client's industry; *CLIENTSIZE*: Client's assets to total clients' assets of the auditor; *AUDITORSIZE*: Audit firm's market share; *RECEIVABLE*: Receivable/total assets; *INVENTORY*: Inventory/total assets.

The variables that represent the economic trade-offs generate the results expected and show clear differences between both groups. The *CLIENTSIZE* variable aims to reflect the estimated costs of client loss if a qualified opinion is issued. It might be regarded that the clients receiving going-concern opinions have a relative weight in the auditor's portfolio that is less than the relative weight of those distressed companies that do not receive qualified reports.[9] The results obtained concerning the auditor reputation using the variable *AUDITORSIZE* are as expected. Therefore, those companies with auditors enjoying a greater reputation are more likely to receive going-concern opinions. With regard to the variables *RECEIVABLE* and *INVENTORY* that we use to infer litigation risk, it can be observed that the companies receiving going-concern opinions show values higher than those companies that did not receive qualified reports.

In summary, the results at a univariate level generate evidence that there are important statistical differences with respect to their level of financial distress, perceived costs, the level of reputation and the risk of litigation perceived by the auditor, between those companies that have received going-concern opinions and those that have not.

Table 5 shows the Pearson correlations between the independent variables. Collinearity is not a serious problem among these variables given that the bivariate Pearson correlations are not greater than $r = 0.182$.

Multivariate Analysis

Table 6 reports the results from a logit analysis of the model used to estimate the relationship between audit quality and the auditor's going-concern reporting decision. Three goodness-of-fit measures (the likelihood ratio test, the pseudo-R^2 and the percentages of concordant pairs) are shown. The χ^2 model is highly significant, suggesting that the variables in the models did indeed have joint significance. The logit pseudo-R^2 indicates how well the data fit the presumed underlying theoretical distribution. Pseudo-R^2 is computed as a χ^2 model divided by the number of observations minus the number of variables plus one plus the χ^2 model. The value of pseudo-R^2 is 0.227. Also we detail the percentage predicted correctly by both models (79.4% predicted correctly).

This finding is consistent with the result of the univariate analysis. The variable *PROBFAIL* shows a coefficient consistent with the expected sign and is statistically different from zero. Therefore, it means that the higher the financial distress level, the higher the probability of the company receiving a going-concern opinion. The financial situation of a company therefore influences the auditor decision.

The variables related to *TENURE* and *SPECIALIZATION* also show the expected sign, but the coefficients do not reach statistical significance. The *CLIENTSIZE* variable presents the expected sign, and its coefficient is different from zero. This finding demonstrates that the less important a client is in the

Table 5. Pearson correlation between explanatory variables

	PROBFAIL	*TENURE*	*SPECIALIZATION*	*CLIENTSIZE*	*AUDITORSIZE*	*RECEIVABLE*	*INVENTORY*
PROBFAIL	1	−0.084	−0.005	−0.051	−0.014	−0.004	0.086
TENURE		1	0.141	−0.037	0.088	−0.019	−0.048
SPECIALIZATION			1	−0.131**	0.147**	−0.006	−0.110
CLIENTSIZE				1	−0.182*	−0.013	0.024
AUDITORSIZE					1	0.000	−0.046
RECEIVABLE						1	0.005
INVENTORY							1

***, ** and * denote significance at the 99%, 95% and 90% confidence levels respectively.

PROBFAIL: Probability of company's failure; *TENURE*: Number of years being audited by the same audit firm; *SPECIALIZATION*: Audit firm's market share in the client's industry; *CLIENTSIZE*: Client's assets to total clients' assets of the auditor; *AUDITORSIZE*: Audit firm's market share; *RECEIVABLE*: Receivable/total assets: *INVENTORY*: Inventory/total assets.

Table 6. Logistic regression results

Variables	Expected sign	Coefficient (Wald)
Constant	?	−3.620*** (91.453)
PROBFAIL	+	2.644*** (75.644)
TENURE	+	0.011 (0.060)
SPECIALIZATION	+	−0.061 (0.032)
CLIENTSIZE	−	−3.722*** (12.128)
AUDITORSIZE	+	2.593*** (15.113)
RECEIVABLE	+	0.013 (0.001)
INVENTORY	+	0.321 (0.114)
Pseudo-R^2		0.229
χ^2 Statistic (with 7 degrees of freedom)		117.618***
% Correctly classified		79.7

***, ** and * denote significance at the 99%, 95% and 90% confidence levels respectively.

PROBFAIL: Probability of company's failure; *TENURE*: Number of years being audited by the same audit firm; *SPECIALIZATION*: Audit firm's market share in the client's industry; *CLIENTSIZE*: Client's assets to total clients' assets of the auditor; *AUDITORSIZE*: Audit firm's market share; *RECEIVABLE*: Receivable/total assets; *INVENTORY*: Inventory/total assets.

auditor's portfolio, the more likely that company is to receive a qualified report if it presents financial problems. This result is consistent with previous literature and is in line with the Spanish environment where Spanish companies show a great capacity to influence auditor behaviour. This is possible in a highly competitive environment, such as the Spanish auditing profession, where the auditor can be changed with relative ease. Auditors have little incentive to divulge their clients' financial problems in their audit report if they feel that they could lose such an important client.

The *AUDITORSIZE* variable is also significant, demonstrating that the larger auditors, and therefore those whose reputation would suffer more, have evident incentives to divulge going-concern problems in their clients. This means that auditor reputation is a key factor in the auditor reporting decision. Auditors appear to value independent behaviour as a way to avoid any market punishment.

Finally, the *RECEIVABLES* and *INVENTORY* valuables are not statistically significant and therefore litigation risk does not affect auditor behaviour. This result is in line with the low litigation risk pertaining in Spain.

6. Conclusions

The aim of our study was to discover the relationships, if any, between the issuance of going-concern opinions and the level of competence and independence of audit firms. This paper has highlighted the topic of the auditor decision process and, in particular, the process of issuance of going-concern opinion. Previous related literature has focused on the financial health of the company and the auditor's ability to predict business failure by comparing predictive capability of the financial models and the issuance of going-concern opinions. In this paper, we have gone one step further, through the development of a model of issuance of going-concern opinions, that not only includes variables related to the company's financial health, but also audit quality attributes, i.e. auditor competence and independence.

We have considered two phases in the auditor's reporting decision, the first being the auditor's study of the company's accounting information. The success of this phase, i.e. the identification of uncertainties involving the continuity of the company, will depend on the professional education, experience and skills of the auditor. The following phase refers to the type of opinion that the auditor will disclose, given the evidence obtained in the previous phase. This decision will rely upon the level of the auditor's independence and the estimated cost of signing a qualified report.

The results demonstrate that obtaining a going-concern opinion depends on both the company's financial problems and auditor independence. This means that the auditor's knowledge or technical ability does not significantly affect the auditor's decision. In contrast, those variables relating to independence behave as expected. The larger the client, the less probable it is that they will receive a going-concern opinion when their circumstances demonstrate that such an opinion is a deserved one. This leads us to state that the auditor feels client pressure in so far as the issuance of this type of opinion could result in the loss of the client (as proxied by client size) and the present and future quasi-rents that the auditor's contract provides. This pressure increases with the size of the client.

In turn, the variable representing the auditor's reputation demonstrates that the larger the audit firm, and therefore the volume of quasi-rents that it obtains from its clients, the more likely it is to issue a going-concern opinion. When an auditor considers what type of opinion will be reported, he or she is very aware of the potential loss of reputation if he or she is discovered delivering a more favourable report than the company really deserves. Those clients who consider that the credibility of their accounts information has been affected by the opportunistic behaviour of their auditor can revise downwards the latter's fees to keep them in line with the auditor's new quality image or even rescind the contract and seek new auditors with a better reputation. These results permit us to conclude that the market appears to be enforcing auditor independence, which is a very positive result given the special characteristics of the regulation and the audit profession in Spain. Finally, the variables related to client litigation risk as an estimate of the auditor's conservative attitude are not statistically significant. This result is expected, given that the Spanish audit market shows a low likelihood of auditor's opportunistic behaviour being sanctioned.

We must mention that the above results have two important limitations. First, certain variables demonstrated by other studies to be significantly related to going-concern opinions such as non-audit fees (DeFond *et al.*, 2002) and the characteristics of corporate governance (Carcello and Neal, 2000), have not been included. Second, another deficiency could be associated with the selection of proxies used to infer auditor competence and independence.

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Notes

1. In this respect, Wilkerson (1987) and Krishnan and Krishnan (1996) have remarked that in order to properly analyse the auditor's decision-making when issuing its opinion, it is necessary to contemplate the whole context of the process, since not only does it include an evaluation of evidence but also the decision concerning the choice of audit opinion.
2. The identification of distressed companies is very important in this paper because the use of available information enables us to distinguish between healthy and unhealthy companies. We need to work only with a sample of financially distressed companies because these companies show similar financial uncertainties and their auditors face a similar critical context affecting their decision-making. Within similar auditors' decision-making environments, we can test if the variables representing audit quality significantly influence the probability of the auditor issuing a going-concern opinion.
3. The audit law not only established a legal audit obligation for medium-sized and large limited companies but also laid down a model stipulating the responsibilities of the audit profession and the way in which it was to be regulated (for a review see García Benau and Humphrey, 1992; Bougen, 1997; Bougen and Vazquez, 1997). The model established in Audit Law has been described as interventionist. The absence of any significant professional tradition in auditing, together with the lack of agreement between the leading professional associations, were two key factors in the interventionist model instituted. The system of audit regulation in Spain established is regarded as being mixed, in which the professional bodies have a considerable degree of power and flexibility but are fully aware that their operations are subject to the approval and oversight of a public organism. In effect, a key regulatory institution established by the Audit Law was the Accounting and Audit Institute (*Instituto de Contabilidad y Auditoría de Cuentas*, ICAC). Its principal powers rested on its responsibility for the operation of the disciplinary regime for the audit profession and its capacity to investigate the quality of audit work performed by auditors. The ICAC was also given the final authority to act on a range of issues such as the issuance of auditing standards and guidelines, professional audit quality control systems and the qualifying process for becoming a registered auditor. Many of theses powers, however, were to be assumed only in situations where the professional accounting bodies deemed not to have behaved adequately.
4. The model developed by Zmijewski (1984) drives an index based on assets profitability, liquidity and financial risk. Among other studies, the one by Jones (1987) and the more recent study by Laitinen and Kankaanpää (1999) provide an extensive review of failure prediction models. As stated by Laitinen and Kankaanpää (1999), the

comparison of the prediction ability of alternative techniques in accounting has been difficult, if not impossible, because of the different starting points used in alternative studies. In their study they have compared the most frequently used prediction approaches using an identical model and financial data one, two and three years prior to the failure of finished companies. The results indicate that no superior method has been found and concluded that, in general terms, the different financial models have a similar predictive capability since they are, in fact, including similar independent variables regarding liquidity, profitability and leverage.

5. The model developed by Zmijewski (1984) has the following functional form:

$$ZFC = -4.336 - 4.513\,(ROA) + 5.679\,(FINL) + 0.004\,(LIQ)$$

where: $ZFC =$ Financial condition index; $ROA =$ Return on assets (the ratio of net income to total assets); $FINL =$ Financial leverage (the ratio of total debt to total assets); $LIQ =$ Liquidity (the ratio of currents assets to current liabilities).

6. Spanish evidence suggests that auditors expend economic resources to specialize (García Beanu *et al.*, 1998; García-Ayuso and Sánchez, 1999).
7. Different studies use brand names to capture the reputation effects. Empirical research suggests that the international accounting firms have reputations for higher audit quality because these firms have more reputation capital to protect. In this sense, the Big six have more incentive to avoid reputation-damaging criticism and to maintain their investment in reputation capital (Simunic and Stein, 1987; Francis and Wilson, 1988; DeFond, 1992). Normally this variable is measured by the dichotomy between Big six and non-Big six auditors, not by capturing the differences between international firms.
8. Approximately 50% of the litigation against auditors involves client bankruptcy or severe financial distress (St. Pierre and Anderson, 1984; Palmrose, 1987). Given this environment, auditors may attempt to reduce their litigation exposure by acting more conservatively when issuing opinions to distressed clients (Krishnan and Krishnan, 1996, 1999; Francis and Krishnan, 1999).
9. The results obtained from this variable must be analysed taking into account that larger companies are less likely to fail because there are usually significant social costs and both banks and government try to avoid large company bankruptcies. Therefore their financial statements should receive a lesser proportion of going-concern opinions.

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