J Manag Gov
DOI 10.1007/s10997-010-9152-3

Audit committee and internal audit and the quality of earnings: empirical evidence from Spanish companies

Laura Sierra García · Emiliano Ruiz Barbadillo · Manuel Orta Pérez

Abstract Corporate scandals and failures such as Enron, WorldCom, etc. were highly catastrophic and had a terrible effect on stakeholders. The pressure of globalisation and the intense competition have lead to organisations encouraging good corporate governance. Organisations have to promote transparency and accountability of financial information. As Gramling et al. (J Account Lit 23:194–244, 2004) argued there are four important mechanisms of corporate governance include boards of directors, audit committees (among others) and internal and external audit functions. However, this paper will focus on the relationship between two corporate governance mechanisms (audit committee and internal audit function). Thus, our purpose is to analyse the relation between characteristics of the audit committee and internal audit function and earnings management measured as abnormal accruals to test the quality of financial statements. We hypothesise that the association between the effectiveness of the audit committee and the presence of an internal audit function and its relationship with this committee would indicate less opportunity for management to manipulate earnings. Using a sample of 108 non-financial Spanish companies that traded on the Madrid Stock Exchange between 2003 and 2006 (432 observations), we have found

L. Sierra García (✉)
Department of Business Management, Pablo de Olavide University, Ctra. de Utrera, km. 1, 41013 Seville, Spain
e-mail: lnsiegar@upo.es

E. Ruiz Barbadillo
Department of Business Management, University of Cádiz, Glorieta Carlos Cano, s/n, 11002 Cádiz, Spain
e-mail: emiliano.ruiz@uca.es

M. Orta Pérez
Department of Accounting and Finance, University of Seville, Avda. Ramón y Cajal, 1, 41005 Seville, Spain
e-mail: morta@us.es

Published online: 07 August 2010

that the size and number of meetings of the audit committee had a significant negative association with earnings manipulations. Also, our results suggest that a negative relation between having an internal audit function and earnings management.

Keywords Corporate governance · Earnings management · Audit committee · Internal audit function

1 Introduction

Since the end of the eighties and early nineties, the topic of corporate governance began to attract much attention in the academic world. We think that this interest was primarily due to two reasons: changes in the way of governing companies because of globalisation, competition, new technologies and social and environmental concern; and, secondly, as a result of financial scandals in several companies. These scandals were usually caused, in general terms, by the conflict of interest inherent in the relationship between the owner and managers. In this conflict, it was necessary to establish formulas for government to regulate the actions of all actors involved in companies. Furthermore, to enhance the credibility and transparency of financial information, as well as contributing to greater control of managers, different codes of corporate governance were issued in Europe in the nineties (such as the Cadbury Report in the UK, 1992; the Vienot I Report in France, 1995; the Olivencia Report in Spain 1998).

Different codes proposed a series of recommendations to improve the quality of the financial information through mechanisms to control the accountability of organisations. Good mechanisms such as an independent board of directors, effective audit committees, etc. are needed, both internally and externally, to help management to control their companies. Corporate governance mechanisms are defined by at least four mechanisms, among others: (1) Board of Directors and Management, (2) Audit Committees, (3) the Internal Audit Function and (4) the External Audit Function (Gramling et al. 2004).

In Spain, the issue of corporate governance started in 1998. That year, a document entitled "The Government of Societies" (known as the Olivencia Report) was published. Spain, as with other European countries, took from the Cadbury report (UK 1992) similar recommendations about the board of directors, audit committees, etc. Five years after the publication of the first code, the second phase of developments started in Spain. The "Report by the Special Commission for the Furtherance of Transparency and Security in Listed Markets and Companies" (referred to as the Aldama Report) was published. This report goes one step further in the principles of transparency and security, as well as the degree of information and loyalty required. In 2006 and following Anglo-Saxon countries, the Unified Code (known as the Conthe Report) was published. On 25 July 2005, the Government agreed to set up a Special Working Group to advise the Spanish Securities Markets Commission (Comisión Nacional del Mercado de Valores, CNMV) with regard to the harmonisation and updating of the Olivencia and the

Aldama Report recommendations for good governance in listed companies. In the table below, we outline the Spanish Corporate Governance system regarding board of directors, audit committee and internal audit function.

In 2002, between the first and the second report, a new law was passed in Spain. The Financial System Reform Act (Law 44/22 November 2002) seeks to achieve greater transparency and improve the credibility of financial information by regulating auditors' independence and providing for the mandatory creation of audit committees in listed companies. This law forced all Spanish firms that traded on the Stock Exchange to have an audit committee and imposed that the committee president and a majority of its members were independent. But this law did not regulate the characteristics of the audit committee; the companies themselves have to regulate this in their statutes. Also, after the Aldama report, the 26/2003 law was passed in Spain. This law addresses the following governance matters: shareholder agreements, substantive and disclosure rules of corporate governance, shareholders meetings and duties of directors. The law forced listed companies to publish an annual report on corporate governance for the 2004 financial year.

Based on the aforementioned and in order to ensure clarity, the *main objective* of this paper is to study the relationship between an effective audit committee and the presence of an internal audit function on the quality of financial information. We will focus on the audit committee because it is one of the elements responsible for overseeing the interests of shareholders and supervising financial statements. The audit committee should be efficient and provide maximum transparency. This organ of a company needs other groups, such as the internal audit function, to complete their effectiveness (Davidson et al. 2005). We will carry this out by examining the role that effective audit committees, and the presence of the internal audit function, play in mitigating earnings management from a sample of 432 non-financial Spanish companies that traded on the Madrid Stock Exchange between 2003 and 2006. Also, we want to point out that our research is important and unique because, to date, there has not been a study carried out on the relationship between the internal audit function and audit committees in Spain. In addition, our country has two laws on corporate governance that make it different from other European countries.

The remainder of this paper is organised as follows: Sect. 2 briefly reviews previous literature on the links between corporate governance mechanisms and earnings management. Furthermore, we provide our hypotheses. Section 3 describes the research design: the sample, model and main results. Finally, Sect. 4 sets out our conclusions.

2 The literature review: hypotheses

2.1 Audit committee

The effectiveness of an audit committee can be defined in different ways (NACD 2000; Rittenberg and Fair 1993). According to DeZoort et al. (2002) an effective audit committee can be defined as follows:

> Has qualified members with the authority and resources to protect stakeholder interests by ensuring reliable financial reporting, internal controls, and risk management through its diligent oversight efforts.

This definition details the way to review the literature on the effectiveness of audit committees. We will divide them into three groups of studies: independent directors, size, and number of meetings for the audit committee.

2.1.1 Audit committee: independence

A great number of studies are focused on the independence of directors (Beasley and Salterio 2001; Vafeas 2001; Klein 1998; Menon and Williams 1994; Vicknair et al. 1993; Verschoor 1993). Many of these authors concluded that an audit committee formed exclusively of external and independent directors would result in better accountability and transparency for organisations.

The hypothesis, that audit committees should be composed exclusively of external members, is endorsed by the Macdonald Commission (1988) and NASDAQ (1989), among others. The independence of the members increases the probability of the committee better carrying out its tasks and procedures, internal controls and practicing good corporate governance without there being manipulation. When revising the literature, we have focused on studies directly related to our research.

We found studies related to the independence of the audit committee and earnings manipulation. Klein (2002b) carried out a study of 692 companies in the US and the results showed that audit committee independence was negatively associated with abnormal accruals, and reductions in audit committee independence was associated with large increases in abnormal accruals. Yang and Krishnan (2005) found a significant connection between audit committee independence and quarterly discretionary accruals. Bradbury et al. (2004) found audit committee independence was related to higher quality accounting. Thus, the results indicate that audit committees are more effective when they are comprised of independent directors.

Also, in the Spanish context, we found that studies such as Pucheta-Martínez et al. (2005); provide evidence, in a sample of 86 Spanish firms between 1996 and 2001, that the existence of an audit committee and its composition did not affect the quality of financial reporting. Furthermore, Pucheta-Martínez and De Fuentes (2007), in a sample of 142 Spanish companies observed in 1999, argued that the voluntary formation of audit committees was positive related to independent members of the board. However, these studies were conducted before the new law in 2002 when corporate governance requirements were less severe and less related to the quality of financial statements. Nowadays, this has completely changed.

In summary, the majority of studies argue that the presence of external and independent directors in the audit committee increases the quality and credibility of financial statements. Furthermore, corporate governance codes, such as the Smith Report (2003) in England or the Unified Report (2006) in Spain, recommended the presence of independent members on the audit committee. This gives rise to the following hypothesis:

$H_{1.1}$ An independent Audit Committee is negatively related to Earnings Management.

2.1.2 Audit committee: size and meetings

The size and the number of meetings of audit committees are mentioned in numerous codes or recommendations on Corporate Governance, such as the Cadbury Report (1992) and the Smith Report (2003). These reports recommended a minimum of three members on the audit committee. The Blue Ribbon Committee Report (1999) recommended a minimum of three members and four meetings a year for effectiveness of audit committees. The Sarbanes–Oxley Act (2002) stipulates a minimum of three members.

With respect to the size of audit committees, there are studies such as Lipton and Lorsch (1992), Jensen (1993) and Yermack (1996). These authors argued that the number of members affects the decisions of the audit committee. Committees comprised of a low number of members are better coordinated (Steiner, 1972). Beasley and Salterio (2001), in a sample of 627 companies in Canada in 1994, provided evidence that an increment in the number of external members in the audit committee was positive related to the size and the duality of the board. However, Lin et al. (2006), in a study of 212 US companies, argued that there was a negative relationship between the size of the audit committee and earnings management. However, Rahman and Ali (2006), in a sample of 97 Malaysian companies, showed that accounting manipulation is positive related to the audit committee size. This supports the view that larger boards appear to be ineffective in their supervising duties compared to smaller boards.

However, Abbott et al. (2004), in 44 fraudulent and 44 non-fraudulent companies in the US, show that the audit committee size was not significant in whether fraud was committed or not. Additionally, Mangena and Pike (2005) did not find a relationship between the size of the audit committee and disclosure of the draft report. These results are important because interim reports are a way to improve financial reporting, and also reduce information asymmetry between managers and investors (Healy and Palepu 2001; Schadewitz et al. 2002).

Regarding the meetings of the audit committee, many authors have used the number of meetings held by audit committees to measure the effectiveness of these committees. Those committees that meet more frequently are often more effective than those committees that meet less often.

However, Collier and Gregory (1999) provided evidence that the presence of executive members in an audit committee was negatively related to the number of meetings. Likewise, McMullen and Raghunandam (1996) showed that those companies with financial problems had frequent meetings with the audit committee. Kalbers and Fogarty (1998) found that the number of meetings was related to the effectiveness of the audit committee. Buchalter and Yokomoto (2003) argued that audit committees should have a composition of three to five members, although it would depend on the size and class of business.

Other researchers have studied the relationship between the number of meetings and the quality of the external auditor. Abbott and Parker (2000) argued that those companies whose audit committee met at least twice a year were likely to hire a

big-four audit firm. However, Abbott et al. (2003), in their study carried out on 83 companies; found that the size of audit committees was not significant for their companies. Moreover, Goodwin and Kent (2006) provided evidence, in a sample of 401 Australian companies, that the more frequent the meetings, the higher the audit fees.

To sum up, we did not find a clear relationship between the size and number of meetings of the audit committee and the quality of financial statements. For this reason, we want to test our second and third hypothesis in the Spanish context:

$H_{1.2}$ The number of meetings of the Audit Committee is negatively related to Earnings Management.

$H_{1.3}$ The size of the Audit Committee is negatively (positively) related to Earnings Management.

2.2 Internal audit function

The internal audit function has become an important mechanism for corporate governance in the last few years (IIA 2005). First of all, we investigate whether firms have an internal audit function and improved corporate governance (Scarbrough et al. 1998; Raghunandan et al. 2001; Goodwin 2003; James 2003). Secondly, we look at whether the audit committee and the internal audit function have a good relationship; they could enhance good corporate governance. As Gramling et al. (2004) argue, the internal audit function is one of the four cornerstones of corporate governance. The head of the internal audit function should inform about their progress to the audit committee.

Several authors claim that a good relationship between the audit committee and internal auditors is necessary for the effectiveness of good internal control mechanisms and to improve the quality of financial statements. (Cooper and Craig 1984; Cooper et al. 1989; Rezaee and Lander 1993; Lightle and Bushong 2000; Nagy and Cenker 2002; Anderson 2004; Harrington 2004).

Kalbers (1992), in a survey, concluded that 31% of the respondents stated that internal auditors did not have meetings in private with the audit committee in a whole year. Likewise, Scarbrough et al. (1998) informed that 24% of the interviewed companies with an internal audit function did not have access to the audit committee. However, McHugh and Raghunandan (1994) related that 65% of the interviewed companies had meetings with the audit committee. Strawser et al. (1995) and the Treadway Commission (1987) argued that the quality of the internal audit function (as a component of the structure of internal control of the company) was enhanced when the internal audit department reported directly to the audit committee. That is to say, if there is a robust working relationship between the audit committee and internal auditors then they could fulfil their duties.

Some authors have tried to relate audit committee members with the internal audit function. For example, Raghunandan et al. (2001), in a survey carried out of 114 chief internal auditors, showed that audit committees with only independent directors, and at least one director with accounting knowledge, were more likely to have more meetings with the head of the internal audit department. Scarbrough et al.

(1998), in a study carried out in Canada of 72 heads of internal auditors, showed that audit committees exclusively comprised of independent directors were more likely to meet with internal auditors and review their work. In accordance with Cooper (1993), the head of internal audit departments should report directly to the audit committee and have frequent meetings with this committee. Thus, DeZoort and Salterio (2001) showed, in a sample of 18 heads of internal audit departments, that good communication between internal auditors and audit committees could improve corporate governance quality.

In conclusion, the studies reviewed showed that for internal auditing to be effective it should have a relationship with the audit committee, which together could improve corporate governance issues. These lead to the following hypotheses:

$H_{2.1}$ The existence of an internal audit function is negatively related to Earnings Management.

$H_{2.2}$ Meetings between the internal audit function and the audit committee is negatively related to Earnings Management.

Finally, we have studied the interaction between an effective audit committee and the presence of the internal audit function. An effective audit committee, following the Blue Ribbon Committee Report (1999), is one which has an independent audit committee, at least four meetings per year and has a minimum of three members. For this reason, we want to test the following hypothesis:

H_3 Companies that have an effective audit committee and the presence of the internal audit function are negatively related to Earnings Management.

3 Research design

3.1 Sample

The total population is 127 companies but our study sample consists of 108 Spanish firms that have traded on the Madrid Stock Exchange. We have excluded financial companies (11 companies) because these companies present a different format of annual accounts and they have to meet more regulations. In addition, we have excluded non-Spanish companies (8 companies) because they did not present a corporate governance report. The period of time included in the study is between 2003 and 2006. Thus, our final data has 432 observations. We started our study in 2003 because of Law 44/22, November 2002 which forced all firms that traded on the Stock Exchange to have an audit committee. Moreover, from 2003, it was compulsory for Spanish companies that traded on the Madrid Stock Exchange to present a corporate governance report. This report includes data on the audit committee and internal audit function, as well as other information. So, we have collected data about audit committees and internal auditing in corporate governance reports. Sometimes, the data about internal audit functions was collected from company′s website.

3.2 Measurement of variables

3.2.1 Earnings management

This paper focuses on how corporate governance mechanisms could help firms from earnings manipulation. Following previous research (DeFond and Jiambalvo 1994; Chaney et al. 1998; Dechow et al. 1995; Peasnell et al. 1999, 2000; Gill de Albornoz 2003), we focus on accruals as the control mechanism used by managers to manipulate earnings. Accruals are not entirely discretionary and there are factors that are out of managers' control (Healy 1985). Jones (1991) proposed a model to estimate normal accruals that controls changes in firms. The model is as follows:

$$\mathrm{TACC_t}/\mathrm{A_{t-1}} = \beta_0(1/\mathrm{A_{t-1}}) + \beta_1(\Delta\mathrm{REV_t}/\mathrm{A_{t-1}}) + \beta_2(\mathrm{PPE_t}/\mathrm{A_{t-1}}) + \varepsilon_t \quad (1)$$

The discretionary accruals proxy (DACC) for this study is obtained by fitting the modified Jones accruals model as follows:

$$\mathrm{DACC_t}/\mathrm{A_{t-1}} = \mathrm{TACC_t}/\mathrm{A_{t-1}} - [\beta_0(1/\mathrm{A_{t-1}}) + \beta_1(\Delta\mathrm{REV_t}/\mathrm{A_{t-1}}) + \beta_2(\mathrm{PPE_t}/\mathrm{A_{t-1}})] \quad (2)$$

where TACC is total accruals measured as income before extraordinary items less cash flows from operations, *A* is total assets, Δ REV is the change in operating revenue; PPE is gross property, plant and equipment. We divide both variables and the intercept by lagged total assets in order to avoid problems of heteroskedasticity. Non-discretionary accruals (NDACC) are the predictions from the OLS estimation of model Eq. 1, while discretionary accruals (DACC) are the residuals. So, the dependent variable will be an absolute value of discretional accruals (Table 1).

The results are shown in Tables 2 and 3. In our sample, no evidence of systematic income increasing or decreasing accounting manipulation is detected, since we are able to reject the null hypothesis that the mean signed discretionary accruals estimated with the Jones (1991) are different from zero. Consequently, similar to previous studies (e.g. Becker et al. 1998; Bartov et al. 2000; Klein 2002a), to proxy for the combined effect of upward and downward earnings manipulation, we use the absolute value of discretionary accruals as EM measure (Table 4).

3.2.2 Corporate Governance variables

In our model, we include audit committee variables such as: **MEMBERSAC**, the number of members forming the audit committee, and **INDPAC,** a dummy variable that is 1 where companies have an independent audit committee, and 0 otherwise. We have measured this variable as follows: an audit committee is independent when it is formed exclusively by external and independent members. **MEETINGSAC** is a variable that measures the number of meetings of audit committees. Additionally, we study internal audit function variables such as: **IA,** a dummy variable that is 1 if firms have an internal audit function, and 0 otherwise; and **MEETINGSACIA,** a dummy variable that is 1 if the internal auditor meets with the audit committee, and 0 otherwise. Furthermore, we test the interaction between audit committees and internal auditing: **ACIA** is a dummy variable that is 1 if a firm-year observation has

Table 1 Overview of the Spanish Corporate System: own source

	Olivencia report	Aldama report	Conthe report
Board of directors			
Number of meetings	At least once per month	Once per month	Once per month
Size	Between 5 and 15	"Reasonable" number	No fewer than 5 and no more than 15
Type of member	Executive directors	Executive directors	Majority of external and independent directors
	Grey directors	Grey directors	Executive directors should be reduced to a minimum
	External and independent directors	External and independent directors	Other external directors, the company should disclose this circumstance and the links with the company
		Others	
Types of commissions	Executive	Executive	Executive
	Audit	Audit and Control	Audit
	Nomination	Appointment and Remuneration	Nomination
	Remuneration	Strategy and Investment	Remuneration
	Compliance		
One-tier vs. two-tier	No reference is made to the advisability or otherwise of separating the two positions	No reference is made to the advisability or otherwise of separating the two positions	No reference is made to the advisability or otherwise of separating the two positions
Audit committee			
Members	Only outside director	No executive director	Majority of external and independent directors. Commissions should be chaired by an independent director
Number of meetings	N/A	N/A	N/A
Size	N/A	N/A	N/A
Internal audit			
Presence of this function	N/A	Access to this function	Should have this function under the supervision of the audit committees

N/A not applicable

an internal audit function and an effective audit committee, and 0 otherwise. An effective audit committee is one which has an independent audit committee, four meetings per year and at least three members (See Blue Ribbon report 1999).

3.2.3 Control variables

We control for the effect of possible factors (Bartov et al. 2000) by including variables in our models that previous studies have found to be associated with

Table 2 Jones (1991)

Coef.	2003		2004		2005		2006	
	Estimation	t	Estimation	t	Estimation	t	Estimation	t
β_0	−168747125.53	−2.015	−110067028.52	−1.811	−10813176.62	−0.2214	−10912190.43	−1.6213
β_1	−0.59069	−1.256	0.44357	0.7594	0.26962	0.4286	0.68342	0.6594
β_2	0.3936	67.081	−0.00467	−10.630	−0.00306	−8.7920	−0.00452	−9.9934
R^2 Adj.	99.8%		50.9%		41.3%		46.8%	

Table 3 Descriptive statistic Jones (1991)

	Mean	Median	SD
Year 2003			
EM relatives	1.1807	0.4015	1.8309
Year 2004			
EM relatives	0.7909	0.2636	1.2426
Year 2005			
EM relatives	0.1549	0.0813	0.2408
Year 2006			
EM relatives	0.6869	0.2386	1.1578

SD Standard Deviation

Table 4 Variables

	Measurement
Dependent variable	
Earnings management (EM)	Absolute value of discretional accruals measured with Joneś model (1991) and with the Modified Jones model
Independent variables	
Audit committee	
INDPAC	It is a dummy variable that takes the value 1 if audit committee is independent and 0 otherwise
MEMBERSAC	Number of members forming the audit committee
MEETINGSAC	Number of meetings of audit committees per year
Internal audit	
IA	It is a dummy variable that takes the value 1 if firms have an internal audit function and 0 otherwise
MEETINGSACIA	It is a dummy variable that takes the value 1 if the internal auditor meets with the audit committee and 0 otherwise
ACIA	It is a variable to measure the interaction of the dummies IA_{it} and AC_{it}. Takes the value 1 if a firm-year observation has an internal audit function and an effective audit committee, 0 otherwise
Control variables	
TOTAL ASSETS	Total Assets
LEVERAGE	Total Debt divided by Total Assets
LOSS	It is a dummy variable that takes the value 1 if firms have losses in two consecutive years and 0 otherwise
ZMIJEWSKI FINANCIAL SCORE (1984)	ZFS = −4.336–4.513 (ROA) + 5.679 (leverage) + 0.004 (Liquidity)
%SHARESBD	Percentage of shares held by members of the board of directors in the audit committee

earnings management or governance variables. First of all, to monitor the effect of financial position we have included five variables. Leverage (***LEVERAGE***), is a proxy that is measured by the ratio of total debt divided by total assets, captures the

incentives to practice earnings management when close to debt covenant violations (Beasley and Salterio 2001; Klein 2002a). This is expected to be positively associated with more aggressive earnings management because managers of firms approaching their accounting based debt covenants are more likely to adopt aggressive earnings management techniques to prevent violation of these debt covenants (Watts and Zimmerman 1986). Furthermore, Watts and Zimmerman (1978) argued that large firms are more likely to manage earnings to increase credibility. As a result, there is a positive prediction on the association between firm size and discretionary accruals. This study uses the total assets as a proxy for firm size (***TOTAL ASSETS***) to control for the effect of size (Bartov et al. 2000; Klein 2002a; Goodwin and Kent 2006). We also include, the variable ***LOSS*** because a bad situation could increase agency cost, or, in other words, that managers could manipulate financial statements. We measure with a dummy variable that is 1 if companies have losses in the last 2 years, and 0 otherwise. We measure financial distress using ***ZMIJEWSKI's financial score*** (ZFS 1984). We use this score based on: return on assets, leverage and liquidity (Carcello and Neal 2003). A higher ZFS indicates greater financial distress. Positive values of the index show a worsening financial situation of the company, while negative values show an improvement. Thus, we predict a positive relationship between ZFS and earnings management.

Secondly, since an audit committee is a subset of the board of directors, it is likely that audit committee composition is related to board composition to control the dominance of that committee in the audit commission, we think that the greater the board of directors dominance over the audit committee, the greater the power of the board to manipulate earnings (Ruiz Barbadillo and Biedma López 2008) (***%SHARESBD***, percentage of shares held by the board of directors in the audit committee).

3.3 Regression model

To examine the simultaneous effect of the explanatory variables on earnings management, a lineal regression analysis is performed. We have utilised an OLS model to examine their relationship. The model is described as follows:

$$\begin{aligned} EM_{it} = {} & ß_0 + ß_1\ \text{MEMBERSAC} + ß_2\ \text{INDPAC} + ß_3\ \text{MEETINGSAC} \\ & + ß_4\ \text{IA} + ß_5\ \text{MEETINGSIAAC} + ß_6\ \text{ACIA} \\ & + ß_7\ \text{CONTROL VARIABLES} + \varepsilon_{it} \end{aligned}$$

where EM_{it} = Absolute value of discretional accruals; $ß_0 \ldots ß_7$ = Regression coefficients; ε_{it} = Error term.

3.4 Empirical results

3.4.1 Descriptive analysis

Tables 5 and 6 show the descriptive statistics of dichotomy and continuous variables. The average number of directors in audit committees in 2003 is 2.88;

Table 5 Descriptive Statistics Continuous Variables

Variables	Mean	Median	SD
Panel A: 2003			
MEMBERSAC	2.8333	3.00	1.5377
MEETINGSAC	3.6296	4.00	2.8989
TA	2.113.863.413	333.239.884	5.907.959.989
LEV	0.5076	0.5205	0.2387
ZMIJEWSKI FINANCIAL SCORE	−1.7995	−1.9069	1.9190
%SHARESBD	26.32	44.70	26.81
Panel B: 2004			
MEMBERSAC	3.2870	3.00	1.0682
MEETINGSAC	5.2778	5.00	3.1736
TA	2.342.331.788	385.500.000	6.192.995.034
LEV	0.4925	0.5159	0.2435
ZMIJEWSKI FINANCIAL SCORE	−1.0493	−1.8329	1.6657
%SHARESBD	37.59	38.14	27.61
Panel C: 2005			
MEMBERSAC	3.5741	3.00	1.1617
MEETINGSAC	5.4074	5.00	2.7413
TA	2.478.328.856	386.172.500	6.383.943.017
LEV	0.6103	0.5219	0.8940
ZMIJEWSKI FINANCIAL SCORE	−1.4994	−2,0138	5.3505
%SHARESBD	38.72	32.11	29.16
Panel D: 2006			
MEMBERSAC	3.7641	3.00	1.2834
MEETINGSAC	5.7544	5.00	3.1343
TA	2.139.382.165	426.633.000	9.141.801.690
LEV	0.634	0.4810	0.7890
ZMIJEWSKI FINANCIAL SCORE	−1.7269	−2.062	4.5978
%SHARESBD	38.24	33.44	30.11
Panel E: Total sample			
MEMBERSAC	3.2129	3.00	1.169
MEETINGSAC	4.8611	5.00	3.0343
TA	2.426.896.959	429.924.000	6.886.854.570
LEV	0.5123	0.4639	0.5083
ZMIJEWSKI FINANCIAL SCORE	−1.7783	−2.2435	5.2535
%SHARESBD	36.20	37.07	28.46

whereas, in 2006, it increases to 3.76. With regard to the independence of audit committees, in 2003, 38.88% of companies had an independent audit committee increasing to 55.81% in 2006. We observed that the companies of the sample tended to create independent committees; we think this is in response to the different recommendations of codes or laws. With regard to the last of the variables studied, we observed that the average number of meetings of audit committees per year

Table 6 Descriptive statistics dichotomy variables

Variables	*N*	Percentage of dummy (1%)
Panel A: 2003		
INDPAC	108	38.89
IA	108	63.88
MEETINGSACIA	108	34.26
ACIA	108	31.45
LOSS	108	6.21
Panel B: 2004		
INDPAC	108	48.15
IA	108	72.22
MEETINGSACIA	108	41.66
ACIA	108	35.44
LOSS	108	5.58
Panel C: 2005		
INDPAC	108	50.91
IA	108	67.59
MEETINGSACIA	108	61.11
ACIA	108	42.11
LOSS	108	12.04
Panel D: 2006		
INDPAC	108	55.81
IA	108	79.44
MEETINGSACIA	108	68.02
ACIA	108	45.98
LOSS	108	9.26
Panel E: Total sample		
INDPAC	432	46.30
IA	432	63.66
MEETINGSACIA	432	42.82
ACIA	432	35.20
LOSS	432	8.33

varied from 3.62 in 2003 to 5.75 in 2006. Therefore, companies tended to meet more regularly year on year.

With regard to internal audit functions, it can be observed that the presence of internal audit functions in companies of the sample is increasing year on year. In 2003 the presence of this function in companies was 63.88%, increasing to 72.22% in 2004, and increasing again in the last year to 79.44% (See Table 6). With regard to meetings of the audit committee with an internal audit function we can affirm that they have increased over the years. In 2003, 34.26% of companies held meetings between the audit committee and the internal audit function, increasing to 68.02% in 2006.

As for the interaction variable, companies tend to have more effective audit committees and the presence of an internal audit function at the same time. In 2003, 31% of companies have effective audit committees and an internal audit department while in 2006, this variable increases by 14% (See Table 6).

In relation to control variables, the variable LOSS is 1 if companies have losses in the last 2 years, and 0 otherwise. In 2005 the percentage of this variable is twice the previous year. This means that in 2003 and 2004, Spanish firms have more negative results than in 2001 and 2002. With regard to ZMIJEWSKI's FINANCIAL SCORE (ZFS), we observed that the mean ZFS is not stable over the period studied. This index shows that the higher the value, the higher the level of financial distress of the company. Thus, our companies show a higher index over the years but with negative results. In other words, Spanish companies showed an improvement in their financial situation.

3.4.2 Multivariate analysis

We have analysed the impact of a firm with an effective audit committee (measured through the number of members, committee independence and the number of times it met per year) and an internal audit function on the likelihood of constraining earnings management. We have performed an OLS regression model to examine the relationship between corporate governance characteristics and earnings management, where the dependent variable is abnormal accruals measured with the Jones (1991). The independent variables are those indicated in the last section.

To assess whether our sample suffered from multicolinearity, we have calculated the Pearson correlation coefficients of independent variables. Table 7 shows the results of the correlation. From the matrix, we can say that the correlations between independent variables are significant at 1 and 5%. These results are similar to other authors' findings, such as Archambeault and DeZoort (2001), Menon and Williams (1994) and Turpin and DeZoort (1998). On the other hand, the correlation between six pairs is not significant. Furthermore, none of the correlation coefficients is so high (>0.85) as to present significant multicolinearity problems (Archambeault and DeZoort 2001).

The results for the total sample are shown in Table 8. This table indicates that the model is significant with an adjusted R^2 of 0.557. This result is consistent with other

Table 7 Pearson correlation

	INDPAC	MEMBERSAC	MEETINGSAC	IA	MEETINGSACIA	ACIA
INDPAC	1	–	–	–	–	–
MEMBERSAC	0.237*	1	–	–	–	–
MEETINGSAC	0.336	0.265*	1	–	–	–
IA	0.684	0.333*	0.239**	1	–	–
MEETINGSACIA	0.248	0.390*	0.432*	0.623*	1	–
ACIA	0.321**	0.125	0.224	0.451*	0.585	1

* Significant coefficient at 1%. ** Significant coefficient at 5%

Table 8 Results of the OLS regression (total sample)

	Expected sign	Coefficient	*t*-value	Significance
$EM_{it} = ß_0 + ß_1$ MEMBERSAC $+ ß_2$ INDPAC $+ ß_3$ MEETINGSAC $+ ß_4$ IA $+ ß_5$ MEETINGSIAAC $+ ß_6$ ACIA $+ ß_7$ CONTROL VARIABLES $+ \varepsilon_{it}$				
Variables				
(Constant)	?	3.412	6.508	0.000*
Audit committee				
MEMBERSAC	?	−5.898	−5.491	0.001*
INDPAC	–	3.098	2.781	0.965
MEETINGSAC	–	−0.125	−2.474	0.000*
Internal audit function				
IA	–	−2.577	−4.159	0.000*
MEETINGSACIA	–	0.458	2.287	0.001*
Interaction variable				
ACIA	–	−3.122	−2.038	0.005*
Control variables				
TA	+	−0.127	−1.189	0.455
LEVERAGE	?	0.088	1.981	0.749
LOSS	+	−0.887	3.258	0.211
ZFS	+	0.366	2.887	0.001*
%SHARESBD	+	0.964	3.741	0.141

$R^2 = 0.557$; $Chi^2 = 67.99$ (0.000 significance)

*Significant coefficient at 1%. We performed one-tailed tests when direction is as predicted, otherwise two-tailed

Variable definitions: *EM* (*Earnings* Management) = Abnormal Accruals measured with Jones (1991). *INDPAC* (audit committee independence) = a dummy variable that takes the value 1 whether companies have an independent audit committee and 0 otherwise. *MEMBERSAC* (audit committee size) = the number of directors assigned to the audit committee. *MEETINGSAC* (audit committee meetings) = the number of committee meetings held during the year. IA (internal audit function) = a dummy variable with a value of 1 if the firm has an internal audit function operating during the financial year, and 0 otherwise. *MEETINGSACIA* (Meeting between internal audit and audit committees per year) = a dummy variable that takes the value 1 if the internal auditor meets with the audit committee and 0 otherwise. *ACIA* = It is a variable to measure the interaction of the dummies IA_{it} and AC_{it} and takes the value 1 if a firm-year observation has an internal audit function and an effective audit committee, 0 otherwise. *LEVERAGE* (financial leverage) = total liabilities divided by total assets. *TOTAL ASSETS* (firm size) = Total assets. *LOSS* = It is a dummy variable that takes the value 1 if firms have losses in two consecutive years and 0 otherwise. *ZMIJEWSKI FINANCIAL SCORE* (1984) ZFS = −4.336−4.513 (ROA) + 5.679 (leverage) + 0.004 (Liquidity). *%SHARESBD* = Percentage of shares held by members of the board of directors in the audit committee

research in similar fields, such as Yang and Krishnan (2005) and Pucheta-Martínez et al. (2005). Moreover, according to Cohen and Cohen (1983) the minimum R^2 to be considered statistically significant with six independent variables and a sample of more than 400 observations would be 0.5. For the audit committee variables, the coefficient on the two measurements (MEETINGSAC and MEMBERSAC) is negative and significant at $\rho = 0.001$ and $\rho = 0.000$, respectively. This provides support for hypotheses 1.2 and 1.3 that the number of meetings and the number of

members of audit committees are negatively related to earnings management. We consider, based on our results if audit committees have more members, that companies will have more opportunity to check for possible errors in financial statements. In addition, if companies have more meetings, audit committees are more likely to oversee the annual accounts. However, we did not find any association between the level of discretional accruals and the independence of audit committees. So, hypothesis 1.1 is not supported, as there is no evidence of a relationship. In other Spanish studies, such as Pucheta-Martínez et al. (2005), the same results were obtained. Perhaps it is possible because Spanish companies have tended to have more independent committees in recent years.

Secondly, with regard to the internal audit function, the variable IA is negative and significant ($\rho = 0.000$). This provides support for hypothesis 2.1. Thus, this suggests that the level of earnings management decreases when companies have an internal audit function. So, we consider that, if companies have an internal audit department, they could detect possible manipulation because the internal auditor evaluates financial procedures (among others) for the adequacy of internal controls. However, in relation to meetings with the audit committee, this is not significant.

Finally, the interaction variable (ACIA) that measures the interaction between an effective audit committee and the internal audit is negative and significant ($\rho = 0.005$). This supports hypothesis 3. We could reach the conclusion that companies with an effective audit committee and with the presence of an internal audit function will be less likely to manipulate earnings.

With regard to control variables, there is one significant variable: ZMIJEWSKI's FINANCIAL SCORE. Thus, our results indicate that the index and the dependent variable are positive and significant. This index shows that the higher the value, the higher the level of financial distress of the company. However, our results support the view that the size of the companies, the leverage and the percentage of shares held by the board of directors in the audit committee do not have an effect on earnings management. This is contrary to most of the studies that have found a positive association between the size of the company and earnings management.

3.4.3 Sensitive analysis

We performed additional analyses. To test the robustness of our results we carried out the following: (1) The use of a model other than the Jones Model (a modified Jones Model) (1991) to calculate earnings management and (2) a multivariate analysis year by year.

3.4.3.1 The modified Jones Model Related to the dependent variable and in order to test the sensitivity of our results to the abnormal accruals, we repeat our analysis using the modified Jones model (Dechow et al. 1995). Previous literature has examined abnormal accruals using many different models. Dechow et al. (1995) conduct studies to determine which model is most effective at separating abnormal accruals from "normal" accruals. They conclude that the Modified Jones Model is one of the best at identifying abnormal accruals. Based on these findings we have

employed the Modified Jones Model to estimate abnormal accruals for each sample company. The modification is designed to eliminate the conjectured tendency of the Jones Model to measure discretionary accruals with error when discretion is exercised over revenues. The model is as follows:

$$\mathrm{DACC_t/A_{t-1}} = \mathrm{TACC_t/A_{t-1}} - \left[\beta_0(1/\mathrm{A_{t-1}}) + \beta_1\left(\Delta\mathrm{REV_t/A_{t-1}} - \Delta\mathrm{REC_{t/}A_{t-1}}\right) + \beta_2(\mathrm{PPE_t/A_{t-1}})\right] \quad (3)$$

Where: $\Delta\mathrm{REC_t}$: net receivables in $\mathrm{year_t}$ less net receivables in year t−1 scaled by total assets $\mathrm{At_{t-1}}$.

The adjustment relative to the Jones (1991) is that the change in revenues is adjusted for the change in receivables in the event period. The modified Jones Model assumes that all changes on credit sales in the event period result from earnings management. As Dechow et al. (1995) argued, this is based on the fact that it is easier to manipulate discretion over the recognition of revenues on credit sales than on cash sales (See Tables 9, 10).

Table 11 contains the results of the regression model used to test the relationship between abnormal accruals (measured with the Modified Jones Model) and the characteristics of corporate governance. The overall model is significant ($\rho = 0.00$), and the model's R^2 is around 58%.

Consistent with our expectation in hypothesis 1.1¸ the coefficient on MEMBERSAC is significantly negative, indicating that firms with more members in the audit committee have lower levels of abnormal accruals than firms with fewer members in the committee. So, both models support this hypothesis. However, MEETINGSAC is not significant if we measure the abnormal accruals with the Modified Jones Model. Furthermore, we have to take into account that the independence of the audit committee is not significant for both models. With regard to the internal audit, our results are consistent with our hypothesis ($H_{2.1}$). The coefficient for IA is significant and negative. So, companies with an internal audit function have less opportunity to manipulate earnings. With regard to the interaction variable (ACIA), it is negative and significant. So, the results with both models support this hypothesis (H_3). The TA (Total Assets) is negative and significant. So, the firm size influences the presence of earnings management.

3.4.3.2 A multivariate analysis year by year In this part, we have tested whether there may be a change in the variables of the study year on year. In relation to audit committees (See Table 12–in this table we only include significant variables) we have found a negative and significant association between MEETINGSAC and earnings management (in every year). In other words, if companies have more audit committee meetings, management has less opportunity to make up financial statements. Furthermore, with regard to audit committees, in 2006 only, we found a significant and positive relationship between MEMBERSAC and the dependent variable. Thus, if companies have more meetings they have more opportunities to manipulate earnings.

Table 9 Modified Jones Model (Dechow et al. 1995)

Coef	2003		2004		2005		2006	
	Estimation	*t*	Estimation	*t*	Estimation	*t*	Estimation	*t*
β_0	−187847577.53	−1.187	−195321554.27	−1.654	−12914658.44	−0.4478	−11333241.83	−1.7989
β_1	−2.77485	−0.0065	−0.06166	−0.95094	−0.41363	−0.67998	0.00283	0.99774
β_2	0.29932	0.7652	0.21660	0.99998	0.54742	0.58524	−0.08276	−0.93421
R^2 adj.	98.7%		61.5%		55.2%		75.6%	

Table 10 Descriptive statistic modified Jones Model (Dechow et al. 1995)

	Mean	Median	SD
Year 2003			
EM relatives	7.126976809	7.7412646	70.08802655
Year 2004			
EM relatives	0.071784132	0.069248111	0.373735957
Year 2005			
EM relatives	0.056978359	0.053262238	0.959921921
Year 2006			
EM relatives	0.318404241	0.288737611	2.412415176

SD standard deviation

With regard to the internal audit function we have found a negative and significant association between IA and earnings management in 2003, 2004 and 2006 (See Table 12, panel A, B and D). However, we did not find any relationship between this variable and earnings management in 2005. Whether an audit committee meets with an internal audit function or not, did not affect earnings management.

Concerning the interaction variable, we only found a negative relationship in 2006 (See Table 12, panel D). Such a result indicates that where firms have an effective audit committee and the presence of an internal audit they will be less likely to manipulate earnings.

In relation to control variables, in 2004, the variable LEVERAGE is negative and significant, related to the dependent variable (See Table 12, panel B). In other words, those companies with higher (lower) leverage are associated with higher (lower) earnings management. In addition, we found a positive and significant association between TOTAL ASSETS and earnings management from 2006 (See Table 12, panel D). With regard to the %SHARESBD variable, it is only significant in 2005 (See Table 12, panel C). The ZFS variable is significant and positive in 2004 and 2006 (See Table 12, panel B and D)

4 Summary and conclusions

The objective of this study was focused on the relationship between certain corporate governance characteristics and earnings management. In particular, we have studied two important mechanisms to protect financial information from earnings manipulation: the audit committee and the internal audit function. In general, we can say that these mechanisms are related to earnings manipulation. So, we believe that companies must have good corporate governance controls to detect possible manipulation from management. Since 2003, it has been mandatory for companies listed on the Spanish Stock Exchange to have an audit committee. In addition, it is compulsory for these companies (Spanish listed companies) to present a corporate governance report.

With regard to audit committee meetings, and based on our results, we believe that the more audit committees meet, the better the opportunity to detect possible

Table 11 Results of the OLS regression with the Modified Jones Model (Full sample)

Variables	Expected sign	Beta	*t*-value	Significance
$EM_{it} = ß_0 + ß_1$ MEMBERSAC $+ ß_2$ INDPAC $+ ß_3$ MEETINGSAC $+ ß_4$IA $+ ß_5$ MEETINGSIAAC $+ ß_6$ ACIA $+ ß_7$ CONTROLVARIABLES $+ \varepsilon_{it}$				
(Constant)	?	3.411	5.510	0.000*
Audit committee				
MEMBERSAC	?	−0.021	−1.215	0.001*
INDPAC	–	0.027	0.087	0.985
MEETINGSAC	–	−0.012	−1.266	0.220
Internal audit function				
IA	–	−0.036	−0.711	0.000*
MEETINGSACIA	–	0.054	0.120	0.332
Interaction variable				
ACIA	–	−0.709	−2.087	0.002*
Control variables				
TA	+	−0.045	−0.971	0.005*
LEVERAGE	?	0.990	0.153	0.812
ZFS	+	0.965	2.012	0.125
%SHARESBD	+	0.896	1.566	0.236

$R^2 = 0.585$; $Chi^2 = 71.80$ (0.000 significance)

*Significant coefficient at 1%. We performed one-tailed tests when direction is as predicted, otherwise two-tailed

Variables: *EM* (*Earnings* Management) = Abnormal Accruals measured with the Modified Jones Model (Dechow et al. 1995). *INDPAC* (audit committee independence) = a dummy variable that takes the value 1 whether companies have an independent audit committee and 0 otherwise. *MEMBERSAC* (audit committee size) = the number of directors assigned to the audit committee. *MEETINGSAC* (audit committee meetings) = the number of committee meetings held during the year. IA (internal audit function) = a dummy variable with a value of 1 if the firm has an internal audit function operating during the financial year, and 0 otherwise. *MEETINGSACIA* (Meeting between internal audit and audit committees per year) = a dummy variable that takes the value 1 if the internal auditor meets with the audit committee and 0 otherwise. *ACIA* = It is a variable to measure the interaction of the dummies IA_{it} and AC_{it} and takes the value 1 if a firm-year observation has an internal audit function and an effective audit committee, 0 otherwise. *TOTAL ASSETS* (firm size) = Total assets. *LEVERAGE* (financial leverage) = total liabilities divided by total assets. *LOSS* = It is a dummy variable that takes the value 1 if firms have losses in two consecutive years and 0 otherwise. *ZMIJEWSKI FINANCIAL SCORE* (1984) ZFS = −4.336−4.513 (ROA) + 5.679 (leverage) + 0.004 (Liquidity). *%SHARESBD* = Percentage of shares held by members of the board of directors in the audit committee

errors in financial statements. Our results support this hypothesis (if we measure earnings management with the Jones' model) because we found a negative relationship between the number of meetings of the audit committee and abnormal accruals. In addition, our result is broadly consistent with the findings in other studies (See McMullen and Raghunandam 1996; Kalbers and Fogarty 1998; Abbott and Parker 2000; Goodwin and Kent 2006). However, Spanish corporate governance reports do not specify a minimum number of meetings. The descriptive analysis shows that firms have increased the number of meeting year on year. Thus, we believe that companies have taken this fact into account.

Concerning audit committee size, our result showed that this variable is negatively associated with earnings management. This could be due to the fact that a greater number of directors in audit committees means it is more likely to detect any manipulation in the financial statements. However, in the sensitive analysis this variable is not significant. Empirical studies provide mixed evidence of the impact of audit committee size on the quality of financial reporting. The discussion about the size of audit committees is mixed. We could say that a larger number of

Table 12 Results of the OLS model

	Expected sign	Beta	*t*-value	Significance
$EM_{it} = ß_0 + ß_1$ MEMBERSAC $+ ß_2$ INDPAC $+ ß_3$ MEETINGSAC $+ ß_4$IA $+ ß_5$ MEETINGSIAAC $+ ß_6$ ACIA $+ ß_7$ CONTROLVARIABLES $+ \varepsilon_{it}$				
Panel A: Sample for 2003				
Variables				
(Constant)	?	1.085	5.541	0.000*
Audit committee				
MEETINGSAC	–	−0.253	−1.992	0.000*
Internal audit function				
IA	–	−0.715	−3.127	0.001*
Panel B: Sample for 2004				
Variables				
(Constant)	?	3.503	8.441	0.000*
Audit committee				
MEETINGSAC	–	−0.089	−2.236	0.001*
Internal audit function				
IA	–	−0.678	−2.321	0.005*
Control variables				
LEVERAGE	?	−1.174	−1.903	0.000*
%SHARESBD	+	1.037	2.874	0.005*
ZFS	+	1.258	1.002	0.002*
Panel C: Sample for 2005				
Variables				
(Constant)	?	0.995	4.231	0.000*
Audit committee				
MEETINGSAC	–	−0.178	−2.662	0.000*
Panel D: Sample for 2006				
Variables				
(Constant)	?	0.402	5.175	0.000*
Audit committee				
MEMBERSAC	?	5.872	6.199	0.001*
MEETINGSAC	–	−0.631	−3.171	0.000*
Internal audit function				
IA	–	−1.113	−5.747	0.005*

Table 12 continued

	Expected sign	Beta	*t*-value	Significance
Control variables				
ZFS	+	0.785	2.265	0.001*

Notes: *Panel A*: $R^2 = 0.792$; *Panel B*: $R^2 = 0.412$; *Panel C* : $R^2 = 0.675$; *Panel D*: $R^2 = 0.695$

'*' for Panel A, B, C = Significant coefficient at 1%. We performed one-tailed tests when direction is as predicted, otherwise two-tailed

'*' for Panel D = Significant coefficient at 1%. We performed one-tailed tests

Variables: *EM* (*Earnings* Management) = Abnormal Accruals measured with the Modified Jones Model (Dechow et al. 1995). *INDPAC* (audit committee independence) = a dummy variable that takes the value 1 whether companies have an independent audit committee and 0 otherwise. *MEMBERSAC* (audit committee size) = the number of directors assigned to the audit committee. *MEETINGSAC* (audit committee meetings) = the number of committee meetings held during the year. IA (internal audit function) = a dummy variable with a value of 1 if the firm has an internal audit function operating during the financial year, and 0 otherwise. *MEETINGSACIA* (Meeting between internal audit and audit committees per year) = a dummy variable that takes the value 1 if the internal auditor meets with the audit committee and 0 otherwise. *ACIA* = It is a variable to measure the interaction of the dummies IA_{it} and AC_{it} and takes the value 1 if a firm-year observation has an internal audit function and an effective audit committee, 0 otherwise. *TOTAL ASSETS* (firm size) = Total assets. *LEVERAGE* (financial leverage) = total liabilities divided by total assets. *LOSS* = It is a dummy variable that takes the value 1 if firms have losses in two consecutive years and 0 otherwise. *ZMIJEWSKI FINANCIAL SCORE* (1984) ZFS = −4.336−4.513 (ROA) + 5.679 (leverage) + 0.004 (Liquidity). *%SHARESBD* = Percentage of shares held by members of the board of directors in the audit committee

members increases the opportunity to discuss relevant issues, but if there are too many members, it may result in a biased opinion.

Finally, we found no significant association between the independent audit committee and earnings management from our sample. We have considered an independent audit committee which has only independent and external members. However, we observed (descriptive analysis) that companies of the sample tended to create independent committees; we believe this is as a consequence of different recommendations in Spanish codes. Our results are consistent with the study of Pucheta-Martínez et al. (2005) in Spanish companies. However, the majority of empirical studies provide positive evidence between the independence of audit committees and the quality of financial reporting.

In relation to the presence of the internal audit function, we think that this function is an important mechanism to safeguard the accountability of annual accounts. Thus, we found a negative association with the level of earnings management in our sample. However, in Spain, there have been no studies carried out on the relationship between the presence of internal auditing and earnings manipulation. This result is not consistent with other studies such as Davidson et al. (2005). With regard to the second variable, if an internal audit function meets with an audit committee, they will be less likely to manipulate earnings. From our results, this variable is not significant in explaining earnings management. We believe that if an audit committee meets an internal audit function there is an increased possibility of discussing any problem in the financial statement. However, this premise is not in accordance with other studies (See Rezaee and Lander 1993; Scarbrough et al. 1998; Raghunandan et al. 2001;

Goodwin and Yeo 2001), although other empirical studies such as Kalbers (1992), Oliverio and Newman (1993) found the same results as our investigation.

This study has several implications. These results are important for corporate governance policy-makers in Spain whose responsibility it is to prescribe appropriate corporate governance structures to ensure that shareholders and other stakeholders are protected. Companies have to take into account that audit committees need to have meetings to discuss financial reporting. Maybe corporate governance codes have to recommend these important issues. In addition, companies may consider that the presence of an internal audit function is a good mechanism to detect earnings manipulation. Furthermore, companies have to consider if the fact that audit committee members hold a percentage of shares could affect the annual accounts because members of this committee could control judgements.

The results of the study are subject to several limitations, most of which suggest the need for further research. First of all, we have to say that there may be some problems with the use of discretionary accruals because we do not have enough data. To try to solve this problem we have used to model to measure earnings management. A second limitation relates to the measurement employed to test corporate governance mechanisms. The proxies adopted in the present study, particularly audit committee effectiveness, could use other variables but we have focused on the literature review about corporate governance and the data that we could assess. The internal audit function measured also has limitations as we focused only on whether a company had internal auditing or not, and not how this function works as we could not obtain this information.

References

Abbott, L. J., & Parker, S. (2000). Auditor selection and audit committee characteristics. *Auditing: A Journal of Practice and Theory, 19*(2), 47–66.

Abbott, L. J., Parker, S., & Peters, G. F. (2004). Audit committee characteristics and restatements. *Auditing: A Journal of Practice and Theory, 23*(1), 69–87.

Abbott, L. J., Parker, S., Peters, G. F., & Raghunandan, K. (2003). The association between audit committee characteristics and audit fees. *Auditing: A Journal of Practice and Theory, 22*(2), 17–32.

Anderson, D. (2004). Strengthening internal audit effectiveness. *Corporate Governance, 10*, 45–60.

Archambeault, D., & DeZoort, F. T. (2001). Auditor opinion shopping and the audit committee: An analysis of suspicious auditor switches. *International Journal of Auditing, 5*, 33–45.

Bartov, E., Gul, F., & Tsui, J. (2000). Discretionary accruals models and audit qualifications. *Journal of Accounting and Economics, 30*(3), 421–452.

Beasley, M. S., & Salterio, S. E. (2001). The relationship between board characteristics and voluntary improvements in audit committees composition and experience. *Contemporary Accounting Research, 18*(4), 539–570.

Becker, C. L., Defond, M. L., Jiambalvo, J., & Subramanyam, K. R. (1998). The effect of audit quality on earnings management. *Contemporary Accounting Research, 15*(1), 1–21.

Blue Ribbon Report (1999). Committee on Improving the effectiveness of corporate audit. Report. New York: New York Stock Exchange and the National Association of Securities Dealers.

Bradbury, M. E., Mak, Y. T. & Tan, S. M. (2004). Board characteristics, audit committee characteristics and abnormal accruals. Available at SSRN: http://ssrn.com/abstract=535764. Accessed September 28, 2007.

Buchalter, S. D., & Yokomoto, K. L. (2003). Audit committees' responsibilities and liability. *The CPA Journal, 73*(3), 18–23.

Cadbury Report. (1992). *Report of the Committee on the Financial Aspects of Corporate Governance*. London: Gee.

Carcello, J. V., & Neal, T. L. (2003). Audit Committee characteristics and Auditor dismissal following "New" going- Concern Reports. *The Accounting Review, 78*(1), 95–117.

Chaney, P. K., Jeter, D. C., & Lewis, C. M. (1998). The use of accruals in income smoothing: A permanent earnings hypothesis. *Advances in Quantitative Analysis of Finance and Accounting, 6*, 103–135.

Cohen, J., & Cohen, F. (1983). *Applied Multiple Regression/correlation Analysis for the behavioural sciences* (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum.

Collier, P., & Gregory, A. (1999). Audit Committee activity and agency costs. *Journal of Accounting and Public Policy, 18*(4), 311–332.

Cooper, B. J. (1993). The audit committee and internal audit. *Managerial Auditing Journal, 8*(3), 45–57.

Cooper, B. J., & Craig, J. R. (1984). A profile of internal audit in Australia. *Royal Melbourne Institute of Technology*, *3*.

Cooper, B. J., Leung, P. & Chau, G. (1989). A survey of internal auditing in Hong Kong. *Hong Kong Polytechnic*, *4*.

Davidson, R. A., Goodwin-Stewart, J., & Kent, P. (2005). Internal governance structures and earnings management. *Accounting and Finance, 45*, 241–267.

Dechow, P. M., Sloan, R. G., & Sweeney, A. P. (1995). Detecting earnings management. *The Accounting Review, 70*(2), 193–225.

DeFond, M. L., & Jiambalvo, J. (1994). Debt covenant violation and manipulation of accruals. *Journal of Accounting and Economics, 17*, 145–176.

DeZoort, F. T., Hermanson, D. R., Archambeault, D. S., & Reed, S. A. (2002). Audit committee effectiveness: A synthesis of the empirical audit committee literature. *Journal of Accounting Literature, 21*, 38–75.

DeZoort, F. T., & Salterio, S. (2001). The effects of corporate governance experience and audit knowledge on audit committee members′ judgements. *Auditing: A Journal of Practice and Theory, 20*, 31–47.

Gill de Albornoz, B. (2003). *Alisamiento del beneficio y manipulación desajustes por devengo: Análisis empírico en el contexto español*. Instituto de Contabilidad y Auditoría de Cuentas, Madrid: Ministerio de Economía y Hacienda.

Goodwin, J. (2003). The relationship between the audit committee and the internal audit function: Evidence from Australia and New Zealand. *International Journal of Auditing, 7*, 263–278.

Goodwin, J., & Kent, P. (2006). Relation between external audit fees, audit committee characteristics and internal audit. *Accounting and Finance, 46*, 387–404.

Goodwin, J., & Yeo, T. Y. (2001). Two factors affecting internal audit independence and objectivity: Evidence from Singapore. *International Journal of Auditing, 5*, 107–125.

Gramling, A. A., Maletta, M. J., Schneider, A., & Church, B. K. (2004). The role of the internal audit function in corporate governance: A synthesis of the extant internal auditing literature and directions for future research. *Journal of Accounting Literature, 23*, 194–244.

Harrington, C. (2004). Internal audit's new role. *Journal of Accountancy, 198*(3), 65–70.

Healy, P. M. (1985). The effect of bonus schemes on accounting decisions. *Journal of Accounting and Economics, 7*, 85–107.

Healy, P. M., & Palepu, K. G. (2001). Information asymmetry, corporate disclosure, and the capital markets: A review of the empirical disclosure literature. *Journal of Accounting and Economics, 31*(1–3), 405–440.

James, K. L. (2003). The effects of internal audit structure on perceived financial statement fraud prevention. *Accounting Horizons, 17*(4), 315–327.

Jensen, M. C. (1993). The modern industrial revolution, exit and the failure of internal. Control systems. *The Journal of Finance, 48*(3), 831–880.

Jones, J. (1991). Earnings management during import relief investigations. *Journal of Accounting Research, 29*, 193–228.

Kalbers, L. P. (1992). Audit committees and internal auditors. *Internal Auditor, 49*(6), 37–44.

Kalbers, L. P., & Fogarty, T. J. (1998). Organization and economic explanations of audit committee oversight. *Journal of Managerial Issues, 10*(2), 129–150.

Klein, A. (1998). Firm performance and board committee structure. *Journal of Law and Economics, 41*(1), 275–303.
Klein, A. (2002a). Economic determinants of audit committee independence. *Accounting Review, 77*, 35–52.
Klein, A. (2002b). Audit committee, board of director characteristic, and earnings management. *Journal of Accounting and Economics, 33*, 375–400.
Lightle, S., & Bushong, G. J. (2000). The role of internal audit in the effort to improve audit committee effectiveness. *Ohio CPA Journal, 59*(4), 24–35.
Lin, J. W., Li, J. F., & Yang, J. S. (2006). The effect of audit committee performance on earnings quality. *Managerial Auditing Journal, 21*(9), 921–933.
Lipton, M., & Lorsch, J. (1992). A modest proposal for improve corporate governance. *Business Lawyer, 48*, 59–77.
Mangena, M., & Pike, R. (2005). The effect of audit committee shareholding, financial expertise and size on interim financial disclosures. *Accounting and Business Research, 35*(4), 327–349.
McHugh, J., & Raghunandan, K. (1994). Hiring & firing the chief internal auditor. *The Internal Auditor, 51*(4), 34–39.
McMullen, D. A., & Raghunandam, K. (1996). "Enhancing audit committee effectiveness. *Journal of Accountancy, 182*(2), 79–81.
Menon, K., & Williams, J. D. (1994). The use of audit committee for monitoring. *Journal of Accounting and Public Policy*, *13*(2), 121–139.
Nagy, A. L. & Cenker, W. J. (2002). An assessment of the newly defined internal audit functions. *Managerial Auditing Journal*, *17*(3), 130–137.
National Association of Corporate Directors (NACD). (2000). *Report of the NACD Blue Ribbon Commission on Audit Committees: A practical guide*. Washington, DC: NACD.
Oliverio, M. E., & Newman, B. H. (1993). Optimizing the internal audit function: The audit committee's contribution. *Internal Auditing, 9*(1), 67–72.
Peasnell, K. V., Pope, P. F. & Young, S. E. (1999). *Board composition and earnings management: Do outside directors constrain abnormal accruals*. Working Paper, Lancaster University.
Peasnell, K. V., Pope, P. F. & Young, S. E. (2000). Detecting earnings management using cross-sectional abnormal accruals models. *Journal of Accounting and Business Research, 30*, 313–326.
Pucheta-Martínez, M. C., & De Fuentes, C. (2007). The impact of audit committee characteristics on the enhancement of the quality of financial reporting: An empirical study in the Spanish Context. *Corporate Governance: An International Review, 15*(6), 1394–1412.
Pucheta-Martínez, M. C., Fuentes-Barberá, C., & García-Benau, M. A. (2005). *Auditor reporting and audit committee characteristics*. Amsterdam: The Third Symposium European Auditing Research Network.
Raghunandan, K., Read, W. J. & Rama, D. V. (2001). Audit committee composition, "Gray directors," and interaction with internal auditing. *Accounting Horizons*, *15*(2), 105–118.
Rahman, R. A., & Ali, H. M. (2006). Board, audit committee, culture and earnings management: Malaysian evidence. *Managerial Auditing Journal, 21*(7), 783–804.
Rezaee, Z. & Lander, G. H. (1993). The internal auditor's relationship with the audit committee. *Managerial Auditing Journal*, *8*(3).
Rittenberg, L. E., & Fair, R. D. (1993). *Improving the effectiveness of Audit Committees*. Montvale, NJ: Institute of Management Accountants.
Ruiz Barbadillo, E., & Biedma López, E. (2008). La formación voluntaria de comités de auditoría en España. *Observatorio contable y financiero, 22*, 54–66.
Sarbanes-Oxley Act (2002). One Hundred Seventh Congress of the United States of America. Available from http://www.sec.gov/rules/final/33-8220.htm. Accessed June 20, 2006.
Scarbrough, D. P., Rama, D. V. & Raghunandan, K. (1998). Audit committee composition and interaction with internal auditing: Canadian evidence. *Accounting Horizons*, *12*(1), 51–62.
Schadewitz, H. J., Kanto, A. J., Kahra, H., & Blevins, D. R. (2002). Analysis of the impact of varying levels of interim disclosure on Finnish share prices with five days of the announcement. *American Business Review, 20*(2), 33–45.
Steiner, I. D. (1972). *Group process and productivity*. New York: Academic Press.
Strawser, J., O'Shaughnessy, J., & Siegel, P. (1995). Reducing the incidence of fraudulent financial reporting: Evaluating the Treadway Commission recommendations and potential legislation. *Research in Accounting Regulation, 9*, 83–104.

Turpin, R., & DeZoort, F. T. (1998). Characteristics of firms that include an audit committee report in their annual report. *International Journal of Auditing, 2*(1), 35–48.
Vafeas, N. (2001). On audit committee appointments. *Auditing: Journal of Practice & Theory, 20*, 197–207.
Verschoor, C. C. (1993). Benchmarking the Audit Committee. *Journal of Accountancy, 4*, 59–64.
Vicknair, D., Hickman, K., & Carnes, K. C. (1993). A note on Audit Committee independence: Evidence from the NYSE on grey area directors. *Accounting Horizons, 7*, 53–57.
Watts, R. L., & Zimmerman, J. L. (1978). Towards a positive theory of the determination of accounting standards. *The Accounting Review, 53*, 112–134.
Watts, R. L., & Zimmerman, J. L. (1986). *Positive accounting theory*. Upper Saddle River, NJ: Prentice Hall.
Yang, J. S., & Krishnan, J. (2005). Audit committees and quarterly earnings management. *International Journal of Auditing, 9*, 201–219.
Yermack, D. (1996). Higher market evaluation of companies with small board of directors. *Journal of Financial Economics, 40*, 185–212.

Author Biographies

Laura Sierra García graduated in Business Administration from the University Of Seville, in Spain, in 2002. She got an MSc degree in Auditing and Consultant at the University of Birmingham, in The U.K., in 2004. She received the Ph.D. degree in Accounting and Auditing in 2007. Since 2008, she has been an Associate Professor in the Pablo de Olavide University of Seville, in Spain. Her research activities are focused on Internal Auditing and Corporate Governance.

Emiliano Ruiz Barbadillo is a professor of accounting at University of Cádiz (Spain). His research interest includes auditor independence and auditing and corporate governance. His publication has appeared in The Accounting History, The European Accounting Review, International Journal of Auditing, Accounting Forum, Journal of Management and Governance, Accounting, Auditing and Accountability Journal, Auditing: a Journal of Practice and Theory and Journal of Business Ethics.

Manuel Orta Pérez graduated in Business Administration from the University Of Seville, in Spain, 1987. He received the Ph.D. degree in Accounting and Auditing in 1996. Since 1996, he has been an Associate Professor at the University of Seville. His research interests are focused on Auditing and Corporate Governance. His publication has appeared in relevant journals.