The role of institutional shareholders as owners and directors and the financial distress likelihood. Evidence from a concentrated ownership context☆

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A B S T R A C T

Previous studies of corporate governance and the likelihood of business failure have focused on the role of large shareholders as owners; especially on the role that institutional shareholders play in management control. However, scant attention has been paid to the role of institutional shareholders as board members. To contribute towards an understanding of this issue, our study examines experimentally the role of institutional shareholders in business financial distress likelihood within the contexts of ownership concentration. We study not only the different roles of institutional shareholders as owners and board members, but also consider the diverse set of institutional shareholders' interests, categorised into pressure-resistant and pressure-sensitive. We find that directors appointed by pressure-resistant institutional shareholders, such as investment funds, pension funds, venture capital and holding firms, have a negative impact on the likelihood of business failure. This result indicates that institutional owners insist on directorships when the firm is important to them or when they judge they can keep a firm from going into distress, particularly in the context of concentrated ownership. In particular, the risk of failure acts as a catalyst to trigger reactions from the pressure-resistant institutional shareholders in the form of organizational changes in the firm. In contrast, directors appointed by pressure-sensitive shareholders have no impact on the likelihood of business failure.

This finding supports the debate on the diversity of corporate governance structures, and particularly the role of pressure-resistant shareholders in the avoidance of the firm's financial distress.

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1. Introduction

In the context of the economic crisis of recent years, the

literature and declarations by international organizations have highlighted the influence of firms' governance structure on financial distress. This question is important because differences in corporate governance appear to have important implications for business decisions (Judge & Zeithaml, 1992), especially when the business has a high risk of failure (Dowell, Shackell, & Stuart, 2011). In fact, previous researchers have shown that corporate governance attributes, such as ownership and board structures, have a different impact on financially distressed firms compared with firms that are not in financial distress (Chaganti, Mahajan, & Sharma, 1985; Chang, 2009; Daily & Dalton, 1994a, 1994b; Deng & Wang, 2006; Donker, Santen, & Zahir, 2009; Fich & Slezak, 2008; Lajili & Zéghal, 2010; Manzaneque, Priego, & Merino, 2015). Within this line of research, the existing literature to date shows prolific analysis of the relationship between the structure of the board of directors and the likelihood of business failure. However, a study of the ownership influence on financial distress likelihood is limited

and inconclusive (see Daily & Dalton, 1994a; Deng & Wang, 2006; Donker et al., 2009; Lajili & Zéghal, 2010; Mangena & Chamisa, 2008).

Specifically, the literature of corporate governance shows two different arguments about the role of the blockholders and ownership concentration in the business failure process. On the one hand, some authors argue that blockholders could play an important role as an internal control mechanism to monitor management and prevent business failure (Elloumi & Gueyie, 2001; Wang & Deng, 2006) and reduce opportunistic behaviour of owners (Fama & Jensen, 1983). On the other hand, arguments also exist in the literature that excessive ownership concentration has a harmful effect. So, blockholders could use their power to transfer assets of the firm to finance other businesses (Dahya, Dimitrov, & McConnell, 2008), reducing the firm's value.

Additionally, special interest has arisen in previous literature about the role played by institutional blockholders in management control (Daily & Dalton, 1994a; Donker et al., 2009; Lee & Yeh, 2004; Lehmann & Weigand, 2000; Mangena & Chamisa, 2008; Morck, Shleifer, & Vishny, 1988). The implication is that more institutional blockholders could enhance the ability of firms to overcome financial distress situations (Daily & Dalton, 1994a).

With respect to this role of institutional blockholders, although the existing literature related to this underlines their role as investors, scant attention has been paid to the influence they might have on the decisions within the boards of directors. In this sense, the role of the boards of directors is different in concentrated and dispersed contexts. For instance, in contexts with dispersed ownership, where the predominant problem is principal–agent conflicts of interest (Jensen & Meckling, 1976) - such as the US and UK - board members could have more intense incentives to turn a distressed firm around because they face a high risk of losing their jobs (Fich & Slezak, 2008). Conversely, in contexts with concentrated ownership, such as most continental European countries, including Spain, and Asian countries like Japan, the problem known as principal–principal (large against minority shareholders) is more frequent and the role of the composition of the board of directors in controlling large shareholders' actions may be essential to avoid removal of wealth from minority shareholders and, consequently, failure of the business. In these contexts, the presence of institutional blockholders on the board in the figure of proprietary directors[1] could influence positively on corporate governance decisions related with business failure, because they are supposed to act actively in monitoring managerial behaviour and align the interests of minority and large shareholders (Bethel & Liebeskind, 1993; Pound, 1992).

Following this argument, we complement previous studies by exploring the role of institutional shareholders when they may influence board decisions through the appointment of directors as representatives of their interests. We argue that, according to the growing literature on corporate governance underlining the activism of the board of directors - time dedication and board meeting frequency - as an indicator of their effort and ability to exert effective governance (see Adams & Ferreira, 2008; Andreas, Rapp, & Wolff, 2012; Davila & Penalva, 2006, among others), institutional directors' ownership could align their interests with other shareholders making them more active in avoiding business failure, especially in contexts of concentrated ownership.

According to above arguments, this paper analyses the impact of institutional shareholders as owners and board members (through the aforementioned figure of the proprietary director) on the likelihood of financial distress in a context where ownership is concentrated.

To address this issue we have chosen the Spanish context to carry out this study because it provides an interesting scenario for analysis of certain issues which still need addressing concerning the effect of corporate governance on the likelihood of financial distress. Unlike the US and UK, where most studies have been carried out, blockholders in the Spanish context have an important role in management control through their participation on the board.

So, based on the characteristics of the Spanish context, this study provides empirical evidence of how the role of institutional shareholders as owners and directors affects business failure likelihood. Although we found that institutional shareholders as owners do not influence financial distress likelihood, the results of this study show the negative influence of pressure-resistant[2] institutional shareholders on financial distress likelihood, when they can appoint directors to the board. This finding points to the risk of failure as a catalyst for triggering the reactions of pressure-resistant institutional shareholders in the form of organizational changes in the firm. This finding is consistent with previous research showing that institutional shareholders are a diverse set of organizations and, in particular, the long-term orientation of pressure-resistant shareholders may have the means to influence managers' decisions in order to avoid financial distress. We may think that pressure-resistant institutional shareholders insist on appointing directors to the Board when the firm is important to them or when they judge they are able to avoid the distress of the firm.

This result contributes to corporate governance and business failure literature. On the one hand, with respect to corporate governance literature, this result contributes to the debate about the role of pressure-resistant institutional shareholders in exerting control over the firm (Almazán, Hartzell, & Starks, 2005), helping in the strategic decision-making process (Hoskisson, Hitt, Johnson, & Grossman, 2002) and monitoring the firm's policies or putting pressure on managers to operate efficiently (Pound, 1992). On the other hand, this paper also attempts to help business failure literature by predicting that some firms' corporate governance structures − with the presence of pressure-resistant institutional shareholders on the board − could improve their situation in order to avoid failure under financial and economic difficulties.

The rest of the article is organised as follows. First, the review of the literature is given and the hypotheses studied are explained. The study design and methodology are then presented and the main findings discussed. The final section contains the conclusions.

2. Background and hypothesis development

The literature dealing with the study of financial distress likelihood has found support for different hypotheses concerning the relationship between the role of institutional shareholders' as owners and directors and the financial distress likelihood (see Table 1).

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[1] That is directors who own an equity stake above or equal to 3% of the stock capital (significant holdings), or otherwise appointed due to their status as shareholders and those representing these kinds of shareholders (CNMV. Spanish Securities Markets Commission, 2006 p. 35. English version).

[2] Institutional shareholders are usually split into pressure-sensitive and pressure-resistant institutional shareholders. Pressure-sensitive shareholders are those institutions, such as financial institutions, which have commercial relationship with the firm where they are shareholders. The pressure-resistant shareholders term refers to those institutions such as investment and pension funds, with no potential business links with the firms in which they invest. See Background and Hypothesis Development for details.

Table 1
Formulation of hypotheses about the relationship between the role of institutional shareholders and financial distress likelihood.

		Expected relationship between institutional shareholders' influence and financial distress likelihood	Hypothesis about institutional shareholders role	Results
Institutional shareholders as owners	Efficient monitoring hypothesis	−	H1a	Not supported
	Expropriation hypothesis	+	H1b	Not supported
Institutional shareholders as directors	Convergence of interests hypothesis	−	H2a	Supported
	Entrenchment hypothesis	+	H2b	Not supported

Source: Authors' own.

2.1. Institutional shareholders as owners and business failure likelihood

Prior research on corporate governance and financial distress in concentrated ownership contexts has noted that ownership structure in these contexts − in particular, ownership concentration level and type of blockholder (institutional versus non-institutional) − is directly related to business failure likelihood (e.g. Deng & Wang, 2006; Donker et al., 2009; Lajili & Zéghal, 2010; Mangena & Chamisa, 2008). Although there has been less interest in this topic in the Anglo-American context, where the dominant ownership structure is dispersed, in other countries in Europe and Asia, this topic has assumed relevance due to their being characterised by ownership concentration in which blockholders can play an important part in management of firms.

The literature dealing with the study of ownership concentration and financial distress likelihood has found support for two divergence hypotheses concerning the role of blockholders in the business failure processes: *efficient monitoring* and *expropriation hypotheses*. According to the arguments that support the *efficient monitoring hypothesis*, the presence of blockholders is viewed as an internal control mechanism that leads to effective, active oversight of managers' decisions and actions, contributing to prevention of managerial opportunism and free riding problems and, ultimately, enabling company recovery (e.g. Berle & Means, 1932; Elloumi & Gueyie, 2001; Parker, Gary, & Howard, 2002; Wang & Deng, 2006, among others). Several empirical studies support this argument with results that show a negative relationship between ownership concentration and the likelihood of business failure (e.g. Elloumi & Gueyie, 2001; Parker et al., 2002; Wang & Deng, 2006). However, ownership concentration into blockholders generates other problems among controlling and minority shareholders (principal–principal conflicts of interest or *expropriation hypothesis*) (e.g. Jensen, 1993; Shleifer & Vishny, 1997), i.e., blockholders may influence management and, therefore, guide it for their own benefit, ignoring the interests of minority shareholders (La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 2000) who could suffer expropriation of their wealth (Lee & Yeh, 2004). For example, according to this expropriation hypothesis, blockholders could use their power to transfer firm assets to finance other businesses (Dahya et al., 2008), reducing the firm's value. This would mean that the probability of firms' financial distress increases with ownership concentration (e.g. Donker et al., 2009; Lee & Yeh, 2004; Mangena & Chamisa, 2008; Parker et al., 2002). So the evidence is mixed and inconclusive with regard to the role of blockholders in the business failure process.

One explanation for these mixed results could be the different degree of activism of the different types of shareholders. For this reason the literature distinguishes institutional shareholders (banks, insurance firms, pension funds, mutual or trust funds) from non-institutional shareholders (individuals, families and other firms, among others). Along these lines, some authors (e.g. Bethel & Liebeskind, 1993; Pound, 1992) argue that institutional shareholders have both the incentives and the power to make management operate efficiently. In dispersed ownership contexts, existing research shows that institutional shareholders lead to effective monitoring of managers and consequently their presence is inversely related to business failure (Daily & Dalton, 1994a). Conversely, in concentrated ownership contexts, the large blocks of shares owned by institutional shareholders do not seem to have a significant influence on business failure likelihood (Fich & Slezak, 2008; Mangena & Chamisa, 2008). In fact, there are different arguments explaining the lack of institutional shareholders' influence on management decisions in concentrated ownership contexts. For example, dominant non-institutional shareholders may limit institutional shareholders' voting influence in order to discipline corporate insiders (Hamdani & Yafeh, 2010), or institutional shareholders may not be proactive in governance of firms because their strategy is to obtain short-term gains (Fich & Slezak, 2008) and they are not concerned about the future of the business. In particular, when family or non-institutional shareholders are prevalent in the ownership structure, institutional shareholders act as minority shareholders and their power to discipline corporate insiders is limited (Hamdani & Yafeh, 2010). So non-institutional shareholders as controlling shareholders could contribute to the generation of another set of problems among the different types of owner, which is the principal–principal problem between non-institutional and other institutional shareholders (La Porta, Lopez-de-Silanes, & Shleifer, 1999).

In addition to this issue, the literature on corporate governance suggests that the role of institutional shareholders depends on their investment strategy and their incentives and ability to involve themselves in the firm's governance and the process of business decision making (Bennett, Sias, & Starks, 2003). In accordance with these arguments, some authors categorize institutional shareholders into two subgroups (Brickley, Coles, & Terry, 1994; Brickley, Lease, & Smith, 1988; Kochhar & David, 1996): pressure-resistant and pressure-sensitive. Pressure-resistant institutional shareholders are those less subject to influence from management because they are investors without a commercial relationship with the firm (investment funds, pension funds, venture capital and holding companies), while pressure-sensitive institutional shareholders are sensitive to management because they may obtain benefits from the business activities of the firm in which they are owners (mainly financial institutions).

That is to say, our question is whether institutional shareholders have the power and interest to reduce the risk of business failure according to their particular interests in the firm.

Given the different arguments set forth above and in order to test the role of institutional shareholders in the business failure

process in the context of ownership concentration, different hypotheses have been proposed (see Table 1).

> Hypothesis 1a (Efficient monitoring hypothesis): There is a negative relationship between institutional shareholders ownership and financial distress likelihood.

> Hypothesis 1b (Expropriation hypothesis): There is a positive relationship between institutional shareholders ownership and financial distress likelihood.

2.2. Institutional shareholders as directors and business failure likelihood

While the attention of the studies mentioned above has mainly been focused on the role of institutional shareholders as owners, they have paid scant attention to the participation of institutional shareholders in firm management. Unlike the USA and UK, where most studies have been carried out, in ownership concentrated contexts like Spain, Japan or Korea, among others, blockholders have an important role not only as owners but also as board members and consequently play an important role in management control through their participation on the board.

In fact, the Spanish context offers a special study framework because, unlike other corporate governance systems, it allows blockholders to appoint board representatives, called proprietary directors, as outsiders. This scenario gives institutional shareholders the possibility of exerting influence on the firm through their participation as board members. For example, controlling shareholders' representatives/proprietary directors on boards of directors represents 40% of their total members (unlike other countries where this proportion is significantly lower − United Kingdom (2%), Germany (8%), Italy (13%), France (22%) among others (Heidrick and Struggles, 2011)) and they control, on average, around 20−23% of equity (CNMV, 2012).

Specifically, the main problem to be overcome by the corporate governance model in this kind of context is the conflict of interest between shareholders − *principal–principal conflicts of interest* − (Acero & Alcalde, 2013; La Porta et al., 1999). Here the role of the board of directors is crucial in protecting the interests of all of them and avoiding shareholder wealth enhancing decisions. Following the arguments of Jensen and Meckling (1976) about the problems linked to separation of ownership and control, it is expected that greater directors' ownership will increase their incentive to monitor managers (Mehran, 1995) and make them respond effectively to difficult situations that could endanger the survival of the firm (*convergence of interests hypothesis*). In fact, Jensen (1993) argues that many business problems occur because members of the board typically do not have large shareholdings in the firm where they work. Empirically, Fich and Slezak (2008) report a negative relationship between shares held by the board and the probability of incurring in a business failure situation.

But contradictorily, evidence has also been found showing that high levels of directors' ownership confers enough power for them to satisfy their own objectives rather than maximising the firm's value, the *entrenchment hypothesis* (Demsetz, 1983; Fama & Jensen, 1983; Stulz, 1988, among others). These effects also increase the likelihood of business failure. For example, directors could obtain private benefits from improvement in their employment and salary conditions (Rose, 2005) or using funds to finance personal unprofitable projects (Lemmon & Lins, 2003).

However, recent studies provide evidence that board composition reflects the ownership structure of the firm (Whidbee, 1997). In this sense, institutional shareholders' ownership could also affect the composition of the board and, indirectly, the results of negotiations between the CEO and the board. Previous research suggests that institutional directors develop control tasks and facilitate coordination and cooperation between different stakeholders (Cuevas-Rodríguez, Gómez-Mejía, & Wiseman, 2012; Pugliese et al., 2009). In addition, institutional shareholders may complement the abilities and capabilities of other directors (Castaldi & Wortman, 1984), improving management performance and reducing the likelihood of financial distress. Thus, more ownership by institutional directors will reduce the risk of business failure.

Additionally, we argue that directors appointed by pressure-resistant and pressure-sensitive institutional shareholders differ in their type of strategic actions because they have different incentives. Proprietary directors with contractual ownership incentives and proprietary directors with ownership and other types of relationship with the firm may have different views on the firms' strategies, stemming from different types of interest in the firm. In this vein, pressure-resistant institutional shareholders, mainly pension funds, have longer time horizons and they have the responsibility to safeguard principals' or pensioners' interests (Bethel & Liebeskind, 1993). They have incentives consistent with the interests of shareholders, so their participation as members of the board could be important to avoid business failure. Moreover, from a theoretical point of view, pressure-resistant institutional shareholders could be more effective than pressure-sensitive institutional shareholders in influencing managers, due to the conflicts of interest that may arise from the dual role exercised by **the latter** (David, Kochhar, & Levitas, 1998; Delgado-García, De Quevedo-Puente, & De la Fuente-Sabaté, 2010). In fact, some empirical studies found that pressure-resistant institutional shareholders exert a more active role and a positive influence on voting on antitakeover amendments (Brickley et al., 1988), on firm innovation strategies (Kochhar & David, 1996) or over the control of the CEO compensation (David et al., 1998). Taking these arguments into consideration, we expect that pressure-resistant institutional shareholders as board members have a longer-term orientation and incentive to actively monitor management decisions, reducing the financial distress likelihood of firms.

To test whether institutional shareholders as directors are effective monitors, or not, we hypothesize (see Table 1):

> Hypothesis 2a (Convergence of interests hypothesis): There is a negative relationship between institutional shareholders as directors and financial distress likelihood.

> Hypothesis 2b (Entrenchment hypothesis): There is a positive relationship between institutional shareholders as directors and financial distress likelihood.

3. Study design and methodology

The initial sample included the study of 70 non-financial Spanish listed firms for a continuous period from 2007 to 2012, resulting in a balanced panel of 420 observations (70 firms × 6 years). The data used in the analysis were drafted from the annual reports, specifically Annual Accounts and Corporate Governance Annual Reports, published by the Spanish National Stock Market Commission (CNMV). All observations were classified into two groups. So, following the conceptual approach of "*financial distress*" meaning a firm's lack of capacity to meet its financial obligations (see, for example, Grice & Dugan, 2001; Grice & Ingram, 2001; Pindado, Rodrigues & De la Torre, 2008), an observation was classified as "distressed firm" if it met the following conditions: *(1) the*

firm's earnings before interest and taxes, depreciation and amortization (EBITDA) are lower than its financial expenses for two consecutive years; (2) a fall in its market value occurs between two consecutive periods (Pindado et al., 2008, 997). According to those criteria, 154 observations (number of failed firms along the period 2007−2012) were identified as distressed firms.

To construct the final sample, a matched-pair research design was used in order to control the potential effect of specific firms' characteristics (Peasnell, Pope, & Young, 2001), such as firms' size, industry and time period (Chen, 2008), on financial distress probability. Matching samples were chosen on a one-to-one basis. Drawing from prior literature (Elloumi & Gueyie, 2001; Hosmer & Lemeshow, 1989; Mangena & Chamisa, 2008; Peasnell et al., 2001), each of the "distressed firms" was matched with a control firm (non-distressed firm) of comparable size (total asset), in the same industry and for the same accounting period. After the matching procedure we obtained a final sample of 308 matched observations of which 154 were distressed and 154 (control) non-distressed firms[3] (112 observations were removed due to no matching firms being found). As shown in Table 2, panel A, the sample is representative of the population under study. Moreover, we have tested the maximum allowable error[4] for a finite population. The maximum error is 4.26% with a level of confidence of 95%. So this test also corroborates that our sample is representative of the population. Table 2, panel B, shows the distribution of the financially distressed firms sample and the final matched sample.

In order to compare hypotheses and analyse ownership structure in Spanish firms, shareholder ownership has been classified as institutional and non-institutional (Brickley et al., 1988; Kochhar & David, 1996). We have also divided institutional shareholders into pressure-resistant institutional shareholders and pressure-sensitive institutional shareholders. Pressure-sensitive institutional shareholders, mainly financial institutions, assume a double role as creditors and shareholders. According to the theory, this double role could be seen as a conflict of interest that negatively affects their monitoring function due to attempts to satisfy their own commercial interests, as opposed to the interests of other shareholders. And conversely, pressure-resistant institutional shareholders are seen as efficient monitors (Delgado-García et al., 2010). This group includes investment funds, pension funds, venture capital and holding companies.

The special characteristics of corporate governance in Spain, such as concentrated ownership and control, widespread ownership by outside directors (specifically, proprietary or nominee directors), and a corporate governance system based on a unitary board structure with a board of directors strongly dominated by the controlling shareholders (see Acero & Alcalde, 2013; De Miguel, Pindado, & De la Torre, 2003; Manzaneque, Merino, & Banegas, 2011a, 2011b, 2014; Merino, Manzaneque, & Banegas, 2012), make it likely that conflicts of interest between different types of shareholders − principal−principal conflicts of interest − (Acero & Alcalde, 2013; La Porta et al., 1999) will arise, the role of the board of directors and ownership structure being crucial to protect the interests of all of them. Specifically, the ownership structure of Spanish firms is characterized by high ownership concentration divided between non-institutional shareholders and institutional shareholders. In fact, the data of the sample reveal that the mean (median) of dominant non-institutional shareholders ownership is about 24% (14.9%), while the mean (median) of institutional shareholders is 20% (pressure-resistant institutional shareholder ownership is 14.9% (7.5%) and pressure-sensitive institutional shareholder ownership is 5.1% (0.1%)) (see Table 3). Regarding the implication of the institutional investors into the governance of the firm, we observe that the mean of proprietary directors' ownership as representatives of non-institutional shareholders is 6.9% compared to 7.6% of institutional shareholders (6.4% of pressure-resistant institutional shareholders and 1.2% of pressure-sensitive institutional shareholders).

3.1. Variables

3.1.1. Dependent variable: financial distress

The "*financial distress*" measurement (called "FD") was adapted from the financial distress likelihood model of Pindado et al. (2008) (defined by two conditions: earnings before interest and taxes, depreciation and amortization (EBITDA) are lower than the firm's financial expenses for two consecutive years, and a fall in its market value occurs between two consecutive periods) to reflect a financial criterion in defining a firm's crisis. Following this approach, we have constructed a binary dependent variable that takes the value 1 if the company meets one of the above criteria and 0 if not. The main advantage of this ex-ante approach is that it allows other crisis situations than bankruptcy to be considered, overcoming some problems of the ex-post business failure approach (Grice & Dugan, 2001; Grice & Ingram, 2001). Additionally, this measure introduces dynamicity in the financial distress criterion because it considers financially distressed firms just a year after the two defining phenomena occur (Pindado et al., 2008).

3.1.2. Independent variables: ownership structure and ownership of directors

To analyse the effect of ownership structure and institutional participation on board decisions, the variables in Table 4 have been used.

3.1.3. Control variables

To control firms' economic and financial situations and other corporate governance variables which influence business failure, we used the following control variables:

Profitability (PROF): Earnings before interest and taxes to replacement value of total assets of the period t-1 ($EBIT_t/RTA_{t-1}$).
Financial expenses (FE): Financial expenses to replacement value of total assets of the period t-1 (FE_t/RTA_{t-1}).
Retained earnings (RE): Retained earnings to replacement value of total assets of the period t-1 (RE_{t-1}/RTA_{t-1})
CEO Duality (CEOD): Duality occurs when the CEO also holds the Chair of the board of directors, for which reason we have constructed a dummy variable which takes the value 1 when there is duality and 0, if not.
Board independence (BI): Calculated as the proportion of independent directors out of the total members of the board. As "independent" we take those directors who are in a position to perform their duties without being influenced by any connection with the firm, its shareholders or its management.
Board size (BS): Number of members on the board of directors.

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[3] Following Mangena and Chamisa (2008) and Kaplan and Reishus (1990), distressed and non-distressed firms have been matched using a cut-off of ±50% for firms' size (total assets); however, industry (sub-sector level of Spanish National Classification of Economic Activities, 2009) and time period coincide in both components of the matching. A paired t-test did not show significant differences in total assets between distressed and non-distressed firms matched (t = 1.2596, p-value = 0.2088).

[4] Maximum allowable error: $\varepsilon = Z \frac{1-\alpha}{2} \sqrt{\frac{N-n}{N-1}} \frac{pq}{n}$. Where: $Z \frac{1-\alpha}{2}$ is the value associated with the degree of confidence 1−α; N is size of the population; n is the size of the sample; p is a proportion; and q is (1−p).

Table 2
Sample description.

Panel A: Full panel (period 2007–2012)

	Listed and sample firms by year						
	2007	2008	2009	2010	2011	2012	Total
Total listed firms in the continuous market	127	129	106	124	122	125	734
Total firms on the sample	58	38	54	56	40	62	308
Distressed	29	19	27	28	20	31	154
Non-distressed	29	19	27	28	20	31	154

	Listed and sample firms by industrial sector			
	Listed firms on the Spanish computerized trading system (2012)		Sample	
	N	%	N	%
(1)	20	16.00	8	11.43
(2)	40	32.00	21	30.00
(3)	36	28.80	18	25.71
(4)	20	16.00	12	17.14
(5)	9	7.20	11	15.71
Total	125	100.00	70	100.00

Panel B: Matched sample (154 distressed firms/154 non-distressed firms)
Financial distressed firms sample by year and industrial sector

	Industrial sector										Total financial distressed firms	
	(1)		(2)		(3)		(4)		(5)			
	N	%	N	%	N	%	N	%	N	%	N	%
2007	3	17.65	8	16.67	9	20.00	6	25.00	3	15.00	29	18.83
2008	3	17.65	5	10.42	6	13.33	2	8.33	3	15.00	19	12.34
2009	3	17.65	9	18.75	7	15.56	4	16.67	4	20.00	27	17.53
2010	3	17.65	8	16.67	9	20.00	4	16.67	4	20.00	28	18.18
2011	1	5.88	9	18.75	5	11.11	3	12.50	2	10.00	20	12.99
2012	4	23.53	9	18.75	9	20.00	5	20.83	4	20.00	31	20.13
Total	17	100.00	48	100.00	45	100.00	24	100.00	20	100.00	154	100.00

	Financial and non-financial distressed sample by industry sector	
	Sample (financial distressed and non-financial distressed firms) (2007–2012)	
	N	%
(1)	34	9.06
(2)	96	31.17
(3)	90	29.22
(4)	48	15.59
(5)	40	12.99
Total	**308**	**100.00**

The table summarizes the frequency and percentage of each industrial sector (1. Oil and energy; 2. Basic materials, manufacturing and construction; 3. Consumer goods; 4. Consumer services; 5. Technology and telecommunications) on the sample.
Source: Authors' own.

Table 3
Sample statistics summary.

Variable		Mean	Median	Standard deviation	Minimum	Maximum
Ownership structure						
% Equity owned by main *pressure-sensitive institutional* shareholders		5.1	1.0	0.087	0	38.2
% Equity owned by main *pressure-resistant institutional* shareholders		14.9	7.5	0.187	0	88.7
% Equity owned by main *non-institutional* shareholders		23.6	14.9	0.244	0	92.0
% Total equity owned by main shareholders		*43.8*	*42.1*	*0.257*	*0*	*98.0*
Ownership of directors						
% Equity owned by executive directors		8.3	0.1	0.172	0	70.6
% Equity owned by independent directors		0.2	0.1	0.005	0	3.9
% Equity owned by proprietary directors		14.5	7.0	0.185	0	80.1
% Total equity owned by directors		*23.0*	*13.0*	*0.241*	*0*	*95.3*
% Equity owned by proprietary directors	As representative of pressure-resistant institutional shareholders	6.4	0	0.122	0	74.8
	As representative of pressure-sensitive institutional shareholders	1.2	0	0.035	0	22.1
	As representative of non-institutional shareholders	6.9	0	0.157	0	71.8
% Total equity owned by proprietary directors		*14.5*	*0*	*0.185*	*0*	*80.1*

Table 4
Definition of independent variables and expected signs with respect to financial distress likelihood.

Variable	Definition	Abbreviation	Expected signs
Ownership structure			
Ownership concentration	Proportion of shares owned by large shareholders (large shareholders are those that owns three percent or more of shares)	OWNERSIG	−
Ownership concentration by pressure-sensitive institutional shareholders	Proportion of shares owned by pressure-sensitive institutional large shareholders (large shareholders are those that owns three percent or more of shares)	OWNERSIG_P	+
Ownership concentration by pressure-resistant institutional shareholders	Proportion of shares owned by pressure-resistant institutional large shareholders (large shareholders are those that owns three percent or more of shares)	OWNERSIG_A	−
Ownership concentration by non-institutional shareholders	Percentage of shares owned by non-institutional large shareholders (large shareholders are those that owns three percent or more of shares)	OWNERSIG_NI	−/+
Ownership of directors			
Directors' ownership	Proportion of shares owned by directors	OWNERD	−
Executive directors' ownership	Proportion of shares owned by executive directors	OWNERD_E	−
Independent directors' ownership	Proportion of shares owned by independent directors	OWNERD_I	−
Proprietary directors' ownership	Proportion of shares owned by proprietary directors	OWNERD_P	−
Ownership of proprietary directors			
Ownership of directors representatives of pressure-resistant institutional shareholders	Proportion of shares owned by pressure-resistant institutional proprietary directors	OWNERD_Ppr	−
Ownership of directors representatives of pressure-sensitive institutional shareholders	Proportion of shares owned by pressure-sensitive institutional proprietary directors	OWNERD_Pps	+
Non-institutional proprietary directors' ownership	Proportion of shares owned by non-institutional proprietary directors	OWNERD_Pnoninst	−/+

3.2. Empirical models

To analyse the relationship between the role of institutional shareholders as owners and directors and the financial distress likelihood, conditional logistic regression analysis has been applied. Following Mangena and Chamisa (2008), we applied this methodology for two main reasons: (a) conditional logistic regression overcomes the limitations of ordinary least squares (OLS) to estimate parameters when the dependent variable is dichotomous, as is the study case (Hosmer & Lemeshow, 1989; Tabachnick & Fidell, 1996); and, (b) this methodology preserves the matched character of the sample (Hosmer & Lemeshow, 1989). Following this methodology, we defined the following main model:

$$FD_{it} = \beta_0 + \beta_1 OWNERSIG_{it} + \beta_2 OWNERD_{it} + \sum_{K=1}^{n} \lambda_k CV_{kit} + d_t$$
$$+ \eta_i + \mu_{it}$$

$$(1)$$

where all variables are indexed by i for the firms ($i = 1, …, N$) and t for the time period ($t = 1, …, T$). The dependent variable is named FD, financial distress, and it is measured as a dummy variable coded one if the firm was considered distressed and zero otherwise. The explanatory variables in the conditional logistic regression are ownership concentration (OWNERSIG) and board members' ownership (OWNERD), and other control variables are related to characteristics of the board of directors (CEO duality, board independence and board size) and the economic and financial situations of the firm (profitability, financial expenses and retained earnings). Finally, d_t is the time effect, η_i denotes the individual effect, and μ_{it} is the random disturbance (see Model 1, Table 7). Additionally, considering the three sub-categories of significant owners (pressure-sensitive institutional shareholders, pressure-resistant institutional shareholders and non-institutional shareholders), Model 2 (see Table 7) has been developed. The same process has been carried out regarding board members' ownership (Model 3, Table 7), distinguishing between executive, independent and proprietary directors' ownership (Model 4, Table 7), and also between proprietary directors representing institutional (pressure-resistant versus pressure-sensitive institutional shareholders) and

non-institutional shareholders (Model 5, Table 7).

4. Empirical results

4.1. Descriptive analysis

The following table (Table 5) shows descriptive statistics for the studied variables for both distressed and non-distressed firms. The t-tests indicate that there are systematic differences between the distressed and non-distressed firms with respect to independent directors' ownership (OWNERD_I), a variable that tends to be greater in non-distressed companies, with a mean of 10.5% compared to 6.2%. Also, the executive directors' ownership (OWNERD_E) shows significant differences between distressed and non-distressed firms. By contrast, the non-institutional directors' ownership (OWNERD_Pnoinst) is greater for distressed firms with a mean of 10% from 7.8% for non-distressed firms.

Additionally, we examine the multicollinearity between the independent variables through Spearman's rho correlations (see Table 6). The results allow us to rule out the possible existence of multicollinearity between the variables in the studied model, and its consequences on the regression analysis, because although some significant correlations exist, all are below 0.7 (Tabachnick & Fidell, 1996).

4.2. Conditional logistic regression analysis

Table 7 presents the results of the conditional logistic regression analysis. These results show that the level of ownership concentration does not have an impact on business failure likelihood in the analysed context. This result contrasts with previous studies carried out for concentrated ownership countries that found a significant effect (e.g. Deng & Wang, 2006 or Mangena & Chamisa, 2008). We argue that large shareholders are not involved or are not able to monitor management's decisions in an environment where there is higher ownership concentration. This aspect is consistent with the study of Lajili and Zéghal (2010) which did not find a significant relationship between ownership concentration and bankruptcy in a concentrated ownership context.

Similarly, the effect of different types of investors as significant shareholders (pressure-resistant institutional, pressure-sensitive

Table 5
Descriptive statistics. Differences between distressed and non-distressed firms.

Ownership variables											
Variables	Distressed firm					Non distressed firm					Mann−Whitney U test
	Mean	Median	25th	75th	Std. dev.	Mean	Median	25th	75th	Std. dev.	
OWNERSIG	0.455	0.492	0.254	0.644	0.249	0.422	0.417	0.199	0.619	0.265	−1.436
OWNERSIG_P	0.043	0.000	0.000	0.050	0.081	0.054	0.000	0.000	0.055	0.092	0.871
OWNERSIG_A	0.180	0.107	0.000	0.277	0.207	0.173	0.093	0.000	0.263	0.196	0.047
OWNERSIG_NI	0.254	0.157	0.033	0.451	0.262	0.206	0.133	0.000	0.332	0.219	−1.381
OWNERD	0.221	0.124	0.009	0.375	0.244	0.258	0.152	0.008	0.460	0.276	0.794
OWNERD_E	0.002	0.000	0.000	0.002	0.005	0.003	0.000	0.000	0.003	0.006	**0.057***
OWNERD_I	0.062	0.002	0.000	0.016	0.146	0.105	0.002	0.000	0.134	0.192	**1.619****
OWNERD_P	0.157	0.089	0.000	0.253	0.191	0.151	0.058	0.000	0.247	0.188	−0.617
OWNERD_Ppr	0.048	0.000	0.000	0.062	0.097	0.075	0.000	0.000	0.088	0.141	1.111
OWNERD_Pps	0.015	0.000	0.000	0.000	0.035	0.013	0.000	0.000	0.000	0.038	−0.811
OWNERD_Pnoninst	0.100	0.005	0.000	0.126	0.170	0.078	0.000	0.000	0.076	0.146	**−2.153***

Control variables				
Categorical variables				
		Distressed companies	Non distressed companies	Chi-square value
CEOD	CEO duality	92	99	0.820
	No CEO duality	62	55	

Continuous variables											
	Distressed firm					Non Distressed firm					Mann−Whitney U test
	Mean	Median	25th	75th	Std. dev.	Mean	Median	25th	75th	Std. dev.	
PROF	0.0213	0.008	−0.012	0.052	0.104	0.081	0.057	0.011	0.100	0.113	**5.652***
FE	0.022	0.017	0.006	0.031	0.024	0.016	0.010	0.003	0.025	0.016	**−2.534***
RE	0.342	0.210	0.079	0.585	0.377	0.399	0.276	0.132	0.603	0.425	**1.696***
BI	0.324	0.333	0.222	0.444	0.161	0.362	0.333	0.250	0.500	0.198	1.011
BS	11.34	11	9	14	3.262	11.66	11	9	17	3.478	0.418

*,**,*** respectively indicate significance levels at 10%, 5% and 1%.

institutional and non-institutional) has been tested. The results again indicate that ownership concentration in the hands of different types of shareholders is not significant in explaining the likelihood of financial distress (see Model 2, Table 7). So hypotheses H1a and H1b are not supported. These findings are consistent with the arguments supporting the idea that institutional shareholders as owners are not involved in decisions about the future of the business, because it is possible that they do not have enough power or incentives to deter financial distress (Bennett et al., 2003; Fich & Slezak, 2008; Hamdani & Yafeh, 2010) in a concentrated ownership context where they do not hold the share majority.

However, the effect of directors' ownership is consistent with the convergence of interests hypothesis (see Model 1, Table 7, $\beta = -1.171$, $p < 0.05$), suggesting that, following an agency perspective, director ownership aligns the interests of the board of directors with other shareholders (Shleifer & Vishny, 1997), reducing the likelihood of business failure. In other words, the greater the number of shares in the hands of directors, the greater their incentive to maximize the business wealth through long-term strategies (Hansen & Hill, 1991), since they bear a large share of the benefits from these activities (Jensen & Meckling, 1976).

In order to adopt a management perspective through consideration of the different types of directors' ownership, we have developed models 3, 4 and 5. Like previous ones, Model 3 (Table 7) confirms a negative effect of directors' ownership on the risk of business failure ($\beta = -1.196$, $p < 0.05$). These results are in line with the convergence of interests hypothesis and corroborate hypothesis H2a. Conversely, the results do not confirm hypothesis H2b. In other words, the entrenchment problem seems not to be important in a concentrated ownership context.

Next, Model 4 (Table 7) is estimated distinguishing between three types of directors, according to the shareholders they

represent (executive, independent and proprietary). In this case, only the ownership of executive directors has a negative impact on the risk of business failure ($\beta = -2.128$, $p < 0.05$). This result is consistent with the hypothesis of convergence of interests because the participation of members of the board who have power in the firm's management is significant in reducing the likelihood of failure.

Additionally, in Model 5 (Table 7), we distinguish between proprietary directors who represent pressure-resistant institutional, pressure-sensitive institutional or non-institutional shareholders. The results show that greater ownership of proprietary directors who represent pressure-resistant institutional shareholders reduces the likelihood of business failure. These results partially confirm hypothesis H2a. To sum up, executive directors ($\beta = -2.645$, $p < 0.05$) and those representing pressure-resistant institutional shareholders ($\beta = -2.827$, $p < 0.05$) exert a control function to prevent firms' failure, but independent and other proprietary directors do not.

Finally, different tests were carried out to evaluate the conditional logistic regression goodness. Firstly, the models' χ^2 statistics indicate that the conditional logistic regression models are significant, at the 0.05 level or better, in explaining incidences of financial distress. Secondly, McFadden and Nagelkerke R-squareds indicate an acceptable overall fit, being higher for models that include the corporate governance variables.

5. Further analysis

In addition to the foregoing analyses, several dependence models were developed to find out the effect of non-institutional shareholders' ownership and board characteristics on ownership of directors representing pressure-resistant institutional

Table 6
Correlation matrix.

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1.FD	1																	
2.OWNERSIG	0.065	1																
3.OWNERSIG_P	−0.063	0.127**	1															
4.OWNERSIG_A	0.020	0.389***	−0.112**	1														
5.OWNERSIG_NI	0.101*	0.385***	−0.130**	−0.145**	1													
6.OWNERD	−0.070	−0.141**	−0.161***	−0.077	−0.130**	1												
7.OWNERD_E	−0.020	−0.030	−0.037	0.043	−0.051	0.002	1											
8.OWNERD_I	−0.124**	0.028	−0.087	0.015	−0.046	0.388***	−0.042	1										
9.OWNERD_P	0.016	−0.220***	−0.141**	−0.122*	−0.137***	0.453***	0.011	0.041	1									
10.OWNERD_Ppr	−0.113*	−0.296***	−0.034	−0.149***	−0.204***	0.369***	0.019***	−0.102*	0.302***	1								
11.OWNERD_Pps	0.032	−0.030	0.154***	−0.047	−0.092	0.079	0.030	−0.081	0.181***	0.065	1							
12.OWNERD_Pnoninst	0.072	−0.004	−0.105*	0.006	−0.012	0.312***	−0.028	0.249***	0.319***	−0.095*	−0.082	1						
13.PROF	−0.264***	−0.070	−0.037	−0.024	−0.076	0.016	−0.023	0.022	0.002	0.048	−0.103*	−0.020	1					
14.FE	0.141**	0.088	0.018	0.145**	−0.009	0.057	−0.041	0.028	0.053	0.131**	−0.004	−0.091	−0.116**	1				
15.RE	−0.070	−0.045	−0.062	−0.029	−0.052	−0.109*	0.134**	−0.095*	−0.068	−0.197***	−0.034	0.059	0.112	−0.177***	1			
16.BS	−0.046	0.110*	0.339***	0.089	−0.021	−0.091	0.080	−0.244***	0.094***	0.173***	0.025	−0.054	−0.015	0.164***	−0.010	1		
17.BI	−0.103*	−0.220***	−0.007	−0.172***	−0.146***	−0.140**	0.098***	0.047	−0.238***	−0.209***	−0.216***	−0.044	0.001	−0.136**	0.093	−0.130**	1	
18.CEOD	−0.046	−0.154***	−0.027	−0.095*	−0.179***	0.063	0.145***	0.126**	−0.031	−0.094*	0.022	0.037	0.127***	−0.185***	0.256	0.067	0.182***	1

*, **, *** respectively indicate significance levels at 10%, 5% and 1%.

shareholders. So, in accordance with the convergence of interests hypothesis, we argue that pressure-resistant institutional shareholders put their representatives on the board when non-institutional shareholders own a greater proportion of shares. Conversely, ownership of directors representing pressure-resistant institutional shareholders should be smaller if they believe that board independence could guarantee representation of their interests (*substitution effect*). According to previous studies (Andreas et al., 2012; Cheng & Firth, 2005; Conyon & He, 2008; Merino et al., 2012), the keys to independence in corporate governance are: the CEO and board chairperson being different people, a higher number of independent board members and a greater board size.[5]

So, based on linear panel-data regression, a complete sample of 420 observations (70 firms × 6 years) was taken, as a short (T = 6), lineal and strongly balanced panel. Multivariate analysis was used to examine the effects non-institutional ownership and board characteristics might have upon the level of the shares owned by pressure-resistant institutional directors. OLS and fixed and random effects were selected as techniques to test our hypotheses. To evaluate their importance we used different tests. In addition, the model has been re-estimated considering the correction of panel data proposed by Arellano and Bond (1991) and Blundell and Bond (1998) in order to overcome the problems of heterogeneity and endogeneity in our model. Therefore, the two-step GMM system, was applied so that the estimators of these models were efficient and asymptotically robust in the presence of heteroscedasticity.

In accordance with what has been put forward, different variants of the following model of panel data have been estimated:

$$OWNERD\_Ppr_{it} = \alpha + \beta_1 OWNWERSIG\_NI_{it} + \beta_2 CEOD_{it} + \beta_3 BS_{it}$$
$$+ \beta_4 BI_{it} + \theta D_{it} + \eta_{it} + \varepsilon_{it}, t$$
$$= 2007, 2008, 2009, 2010, 2011, 2012$$

(2)

where D_{it} includes industry and year dummies. The instruments used in the two-step GMM system estimation are: differenced equations: $OWNERD\_Ppr_{it-1}$, $OWNERD\_Ppr_{it-2}$, $OWNERD\_Ppr_{it-3}$, $OWNERD\_Ppr_{it-4}$; and level equations: $\Delta OWNERD\_Ppr_{it-1}$, D_{it}. Year and industry dummies are treated as exogenous variables (see Table 8).

The results show that the level of pressure-resistant directors' ownership is positively related to the concentration level in the hands of non-institutional shareholders. But our findings do not confirm the substitution effect pressure-resistant institutional shareholders may exert in supervision of their interests when the board's independence might be in doubt.

From the conceptual point of view, these findings support the hypothesis of "convergence of interests" through proprietary directors' ownership representing pressure-resistant institutional shareholders, especially when non-institutional shareholders have a greater proportion of shares.

6. Conclusions

This paper extends previous empirical research on financial distress and corporate governance mechanisms to a specific scenario, where overall analysis of this issue is still lacking.

Table 7
Conditional logistic regression models.

Variables	Predicted sign	Model 1	Model 2	Model 3	Model 4	Model 5
OWNERSIG	-	0.1033				
		(0.840)				
OWNERSIG_P			−2.039			
			(0.209)			
OWNERSIG_A			−0.260			
			(0.723)			
OWNERSIG_NI			0.451			
			(0.433)			
OWNERD	-	−1.171***	−1.239**	−1.196***		
		(0.041)	(0.037)	(0.033)		
OWNERD_E					−2.128***	−2.645***
					(0.009)	(0.002)
OWNERD_I					−0.427	0.604
					(0.558)	(0.978)
OWNERD_P					−2.253	
					(0.916)	
OWNERD_Ppr						−2.827***
						(0.014)
OWNERD_Pps						−1.492
						(0.695)
OWNERD_Pnoninst						1.167
						(0.193)
CEOD	+	0.367	0.397	0.361	0.417	0.445
		(0.192)	(0.161)	(0.197)	(0.146)	(0.128)
BI	−	−1.542**	−1.547**	−1.567**	−1.321**	−1.688**
		(0.035)	(0.036)	(0.029)	(0.072)	(0.027)
BS	−/+	−0.069*	−0.049*	−0.068*	−0.084*	−0.084*
		(0.075)	(0.235)	(0.076)	(0.035)	(0.040)
PROF	-	−5.79***	−5.861***	−5.809***	−5.731***	−5.399***
		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
FE	+	14.99**	15.77**	14.993**	15.871***	18.623***
		(0.042)	(0.033)	(0.042)	(0.033)	(0.018)
RE	-	−0.176	−0.183	−0.179	−0.233	−0.410
		(0.594)	(0.579)	(0.585)	(0.481)	(0.233)
Observations		308	308	308	308	308
Model χ^2		38.03***	40.92***	37.99***	40.74***	50.55***
Pseudo R^2		0.111	0.120	0.111	0.119	0.148
Log-Lik Full Model		−151.953	−150.508	−151.973	−150.595	−144.999
Log-Lik intercep Only		−170.966	−170.966	−170.966	−170.966	−170.273
LR test		38.026***	40.915***	37.985***	40.742***	50.55***
Nagelkerke R^2		0.707	0.733	0.706	0.731	0.804
Count R^2		67.7%	80.6%	67.7%	74.2%	77.4%

In this table, we report results from conditional logistic regression analysis of the mode: $FD_{it} = \beta_0 + \beta_1 OWNERSIG_{it} + \beta_2 OWNERD_{it} + \sum_{K=1}^{n} \lambda_k CV_{kit} + d_t + \eta_i + \mu_{it}$.
The results are based on a sample of 308 paired firms and the covered period is 2007–2012. Standard error is reported in parentheses. *,**,*** respectively indicate significance levels at 10%, 5% and 1%. In bold, significant coefficients.
Variables are defined in Table 5.

Particularly, Spanish firms' ownership distribution and corporate governance system provided us with a unique opportunity to study the research behind this paper's question. In fact, the principal problem to be overcome is principal—principal conflicts of interest, due to the Spanish firms' corporate governance characteristics (ownership concentration, a unitary board structure, large directors' ownership, and part of the board being made up of proprietary directors representing large shareholders). These characteristics made the Spanish context appropriate to address some outstanding issues concerning the role of institutional shareholders as owners and, also, their influence on the board of directors. So, in this context, we investigated the effect of institutional shareholders, as owners and directors, on the likelihood of financial distress, in a context of a high level of ownership concentration.

The findings of this research indicate that the role of institutional shareholders as owners is not associated with a lower likelihood of business failure. We argue that due to the high concentration of shares in the Spanish context, institutional shareholders do not have strong incentives to carefully monitor firms' strategies because their voting influence is limited as a consequence of the distribution of shareholdings between institutional and non-institutional shareholders.

Additionally, we also explored whether institutional shareholders could influence financial distress likelihood through the appointment of directors to the board, who are representatives of their interests. Consistent with the viewpoint that institutional investors are a diverse set of organizations, and not all institutional investor may have the means or the inclination to influence the managers' decision in order to actively influence firm outcomes (Brickley et al., 1988), we split the institutional investor influence into pressure-sensitive and pressure-resistant.

The results show that the role of pressure-resistant institutional shareholders as directors is associated with a lower likelihood of business failure. In fact, our results suggest that ownership of directors who represent pressure-resistant institutional shareholders is directly related to a lower likelihood of failure. Indeed, the further analysis confirms that when non-institutional shareholder ownership is greater, the ownership of directors representing pressure-resistant institutional shareholders is greater too and, therefore, business failure likelihood is lower, confirming the "convergence of interest hypothesis", that is director's ownership reduces agency

Table 8
Ownership of pressure-resistant institutional directors. Estimation OLS, fixed and random effects, Dynamic Panel-Data Estimation with Two-Step System GMM

Variables	Predicted sign	Model 6	Model 7	Model 8	Model 9
		OLS	Random effects	Fixed effects	Two-step system GMM
OWNERSIG_NI	+	0.764***	0.407***	0.325***	0.711***
		(0.032)	(0.030)	(0.031)	(0.189)
CEOD	+	−0.032**	−0.027**	−0.023	0.148
		(0.013)	(0.015)	(0.016)	(0.182)
BI	−	−0.091**	−0.059	−0.044	−0.151
		(0.038)	(0.037)	(0.039)	(0.872)
BS	+/−	−0.002	0.002	0.001	−0.037
		(0.002)	(0.003)	(0.003)	(0.039)
Intercept		0.096***	0.110***	0.128***	−
		(0.027)	(0.038)	(0.044)	
Industry effects		Yes	Yes	Yes	Yes
Hausman test			169.88***		
F test		156.21***		29.26***	
		[4, 415]		[4, 346]	
Wald Chi^2			197.39***		
			(4)		
R2		0.60			
Within			0.2527	0.2528	
Between			0.6820	0.6846	
Overall			0.5913	0.5927	
Hansen test of overidentification (p-value)					(0.892)
AR1(p-value)					(0.028)
AR2(p-value)					(0.184)
Diff-in Hansen test of exogeneity (p-value)					
Number of firms		70	70	70	70
Number of observations		350	350	350	350
No. Instruments		15	15	15	15

In this table, we report results from OLS, Random and Fixed effects and dynamic panel-data estimation with two-step system GMM of the model: $OWNERD\_Ppr_{it} = \alpha + \beta_1 OWNWERSIG\_NI_{it} + \beta_2 CEOD_{it} + \beta_3 BS_{it} + \beta_4 BI_{it} + \theta D_{it} + \eta_{it} + \varepsilon_{it}$, $t = 2007, 2008, 2009, 2010, 2011, 2012$.
The results are based on a sample of 70 listed firms and the covered period is 2007—2012. Standard error is reported in parentheses. *,**,*** respectively indicate significance levels at 10%, 5% and 1%. In bold, significant coefficients. AR(1) and AR(2) are tests for first-order and second-order serial correlation in the first-differenced residuals (under the null of no serial correlation). The Hansen test of over-identification is under the null hypothesis of zero correlation between the instruments and the error term. That is rejection of the null casts doubt on the validity of the instruments. The instrument used in the two-step system GMM estimation are: differenced equations: $OWNERD\_Ppr_{it-1}$, $OWNERD\_Ppr_{it-2}$, $OWNERD\_Ppr_{it-3}$, $OWNERD\_Ppr_{it-4}$,; level equations: Δ $OWNERD\_Ppr_{it-1}$, D_{it}.
The diff-in-Hansen test of exogeneity is under the null that instruments used for equations in levels are exogenous. Year and industry dummies are treated as exogenous variables. Industry (IND) variable has been categorized into five groups, following the approach established for the companies listed on any Spanish Stock Exchange (Oil and energy; basic materials; manufacturing and construction; consumer goods; consumer services and technology and telecommunications). Variables are defined in Table 4.

problems between management and shareholders. So, in the context of ownership concentration, the presence of pressure-resistant institutional shareholders on the board of directors is an important issue that a firm could consider, especially in situations of financial distress.

Our results have several implications for financial distress and corporate governance literature. To evaluate and avoid business failure process, on the base of efficient corporate governance structures, is important for managers, investors, debt holders, employees and public administration. Results from this study show that board structure is associated with financial distress likelihood. Specifically, the findings of our test provide support concerning the appointment of directors by pressure-resistant institutional shareholders to the board of directors as an important factor to prevent business failure. These results could be interpreted as institutional owners insisting on directorships when the firm is important to them or when they judge they can keep a firm from going into financial distress. Especially, the risk of failure performs as a catalyst to cause reactions from pressure-resistant institutional shareholders in the form of organizational changes in the firm. These results give reason to regulators and shareholders within a concentrated ownership context to be aware of the importance of the board's characteristics as corporate control mechanisms to avoid financial distress. This argument raises the question of whether it is necessary to emphasize the pressure-resistant institutional shareholders presence on the board in corporate governance codes at national or international level, perhaps in the context of the "*diversity*" of the board currently under discussion in the literature on corporate governance (see among others, García-Meca, García-Sánchez, & Martínez-Ferrero, 2015; Perrault, 2015; Walker, Machold, & Ahmed, 2015).

Despite these implications, there are some limitations and unobservable issues. First of all, due to the focus of our study, we have overlooked some internal and external control mechanisms such as annual general meetings of shareholders, shareholders' activism, board members' training and professional experience, the board's diversity, the design of compensation contracts for directors or other measures of ownership concentration reflecting effective shareholder control over the firm. Some of these mechanisms could exert a "substitution effect" for institutional shareholders' role as directors in order to align the interests of the majority and minority shareholders. Secondly, we should go into detail about the reasons that lead pressure-sensitive institutional shareholders to take a passive role in management control and monitoring to overcome financial distress. In this sense, future research could analyse these issues to better understand the complexity of the financial distress process and their causes.

References

Acero, I., & Alcalde, N. (2013). Ownership structure and board composition in a high ownership concentration context. *European Management Journal, 32*(4), 646—657.
Adams, R. B., & Ferreira, D. (2008). Do directors perform for pay? *Journal of Accounting and Economics, 46*(1), 154—171.

Almazán, A., Hartzell, J., & Starks, L. (2005). Active institutional shareholders and costs of monitoring: evidence from executive compensation. *Financial Management, 34*(4), 5–34.

Andreas, J., Rapp, M., & Wolff, M. (2012). Determinants of director compensation in two-tier systems: evidence from german panel data. *Review of Managerial Science, 6*(1), 33–79.

Arellano, M., & Bond, S. (1991). Some tests of specification for panel data: Monte Carlo evidence and an application to employment equations. *Review of Economic Studies, 58*(2), 277–297.

Bennett, J. A., Sias, R. W., & Starks, L. T. (2003). Greener pastures and the impact of dynamic institutional preferences. *The Review of Financial Studies, 16*(4), 1203–1238.

Berle, A., & Means, G. (1932). *The modern corporation and private property*. New York: Macmillan.

Bethel, J. E., & Liebeskind, J. (1993). The effects of ownership structure on corporate restructuring. *Strategic Management Journal, 14*(S1), 15–31.

Blundell, R., & Bond, S. (1998). Initial conditions and moment restrictions in dynamic panel data models. *Journal of Econometrics, 87*(1), 115–143.

Brickley, J., Coles, J., & Terry, R. (1994). Outside directors and the adoption of poison pills. *Journal of Financial Economics, 35*(3), 371–390.

Brickley, J. A., Lease, R. C., & Smith, C. W. (1988). Ownership structure and voting on antitakeover amendments. *Journal of Financial Economics, 20*, 267–291. January–March.

Castaldi, R., & Wortman, M. S. J. (1984). Boards of directors in small corporations: an untapped resource. *American Journal of Small Business, 9*(2), 1–10.

Chaganti, R., Mahajan, V., & Sharma, S. (1985). Corporate board size, composition, and corporate failures in retailing industry. *Journal of Managment Studies, 22*(4), 400–417.

Chang, C. (2009). The corporate governance characteristics of financially distressed firms; Evidence from Taiwan. *Journal of American Academy of business, 15*(1), 125–132.

Chen, H. (2008). The timescale effects of corporate governance measure on predicting financial distress. *Review of Pacific Basin Financial Markets and Policies, 11*(1), 35–46.

Cheng, S., & Firth, M. (2005). Ownership, corporate governance and top management pay in Hon Kong. *Corporate Governance, 13*(2), 291–302.

Comisión Nacional del Mercado de Valores. (2006). *Unified good governance code*. Retrieved from http://www.cnmv.es/Portal/~/verDoc.axd?t={2060afed-1c4c-4618-a013-4f488ea23914} Accessed 16.02.13.

Comisión Nacional del Mercado de Valores. (2012). *Corporate governance report of entities with securities admitted to trading on regulated markets*. Retrieved from https://www.cnmv.es/DocPortal/Publicaciones/Informes/IAGC_2012_ENen.pdf Accessed 16.02.13.

Conyon, M. J., & He, L. (2008). *Executive compensation and CEO equity incentives in China's listed firms*. Retrieved from http://ssrn.com/abstract=1261911 Accessed 20.01.12.

Cuevas-Rodríguez, G., Gómez-Mejia, L., & Wiseman, R. (2012). Has agency theory run its course? Making the theory more flexible to inform the management of reward systems. *Corporate Governance: An International Review, 20*(6), 526–546.

Dahya, J., Dimitrov, O., & McConnell, J. (2008). Dominant shareholders, corporate boards, and corporate value: a cross-country analysis. *Journal of Financial Economics, 1*(87), 73–100.

Daily, C., & Dalton, D. (1994a). Bankruptcy and corporate governance: the impact of board composition and structure. *Academy of Mangement Journal, 37*(6), 1603–1617.

Daily, C., & Dalton, D. (1994b). Corporate governance and the bankruptcy firm: an empirical assessment. *Strategic Management Journal, 15*(8), 643–654.

David, P., Kochhar, R., & Levitas, E. (1998). The effect of institutional investors on the level and mix of CEO compensation. *Academy of Management Journal, 41*(2), 200–208.

Davila, A., & Penalva, F. (2006). Governance structure and the weighting of performance measures in CEO compensation. *Review of Accounting Studies, 11*(4), 463–493.

De Miguel, A., Pindado, J., & De la Torre, Ch. (2003). Ownership structure and firm value: new evidence from the Spanish. *Strategic Management Journal, 25*(12), 1199–1207.

Delgado-García, J. B., De Quevedo-Puente, E., & De la Fuente-Sabaté. (2010). The impact of ownership structure on corporation reputation: evidence from Spain. *Corporate Governance: An International Review, 18*(6), 540–556.

Demsetz, H. (1983). The structure of ownership and the Theory of the Firm. *Journal of Law and Economics, 26*, 375–390.

Deng, X., & Wang, Z. (2006). Ownership structure and financial distress: evidence from public-listed companies in China. *International Journal of Management, 23*(3), 486–502.

Donker, H., Santen, B., & Zahir, S. (2009). Ownership structure and the likelihood of financial distress in the Netherlands. *Applied Financial Economics, 19*(21), 1687–1696.

Dowell, G., Shackell, M., & Stuart, N. (2011). Boards, CEOs, and surviving a financial crisis: evidence from the Internet shakeout. *Strategic Management Journal, 32*(10), 1025–1045.

Elloumi, F., & Gueyie, J. (2001). Financial distress and corporate governance: an empirical analysis. *Corporate Governance: The International Journal of Business in Society, 1*(1), 15–23.

Fama, E., & Jensen, M. (1983). Separation of ownership and control. *Journal of Law and Economics, 26*(2), 301–325.

Fich, E., & Slezak, S. (2008). Can corporate governance save distressed firms from bankruptcy? An empírical analysis? *Review of Quantitative Finance and Accounting, 30*(2), 225–251.

García-Meca, E., García-Sánchez, I., & Martínez-Ferrero, J. (2015). Board diversity and its effects on bank performance: an international analysis. *Journal of Banking & Finance, 53*(April), 202–2014.

Grice, J., & Dugan, M. (2001). The limitations of bankruptcy prediction models: some cautions for the researcher. *Review of Quantitative Finance and Accounting, 17*(2), 151–166.

Grice, J., & Ingram, R. (2001). Tests of the generalizability of Altman's bankruptcy prediction model. *Journal of Business Research, 54*(1), 53–61.

Hamdani, A., & Yafeh Y. (2010). Institutional investors as minority shareholders. Retrieved from: http://ssrn.com/abstract=1641138 or http://dx.doi.org/10.2139/ssrn.1641138 Accessed 10.10.11.

Hansen, G. S., & Hill, C. W. S. (1991). Are institutional investors myopic? A time-series study of four technology-driven industries. *Strategic Management Journal, 12*(1), 1–16.

Heidrick, & Struggles. (2011). *European corporate governance report 2011. Challenging board performance*. Retrieved from http://www.heidrick.com/~/media/Publications%20and%20Reports/HS_EuropeanCorpGovRpt2011.pdf Accessed 02.10.12.

Hoskisson, R. E., Hitt, M. A., Johnson, R. A., & Grossman, W. (2002). Conflicting voices: the effects of institutional ownership heterogeneity and internal governance on corporate innovation strategies. *Academy of Management Journal, 45*(4), 697–716.

Hosmer, D. W., & Lemeshow, S. (1989). *Applied logistic regression*. New York: John Wiley & Sons.

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

Jensen, M., & Meckling, W. (1976). Theory of the Firm: managerial behavior, agency cost and ownership structure. *Journal of Financial Economics, 3*(4), 305–360.

Judge, W., & Zeithaml, C. (1992). Institutional and strategic choice perspectives on board involvement in the strategic. *Journal of Financial Economics, 35*(4), 766–794.

Kaplan, S. N., & Reishus, D. (1990). Outside directorship and corporate performance. *Journal of Financial Economics, 27*(2), 389–410.

Kochhar, R., & David, P. (1996). Institutional investors and firm innovation: a test of competing hypotheses. *Strategic Management Journal, 17*(1), 73–84.

La Porta, R., Lopez-de-Silanes, F., & Shleifer, A. (1999). Corporate ownership around the world. *Journal of Finance, 54*(2), 471–517.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. (2000). Investor protection and corporate governance. *Journal of Financial Economics, 58*(1–2), 3–27.

Lajili, K., & Zéghal, D. (2010). Corporate governance and bankruptcy filing decisions. *Journal of General Management, 35*(4), 3–26.

Lee, T., & Yeh, Y. (2004). Corporate governance and financial distress. Evidence from Taiwan. *Corporate Governance, 12*(3), 378–388.

Lehmann, E., & Weigand, J. (2000). Does the governed corporation perform better? Governance structures and corporate performance in Germany. *European Finance Review, 4*(2), 157–195.

Lemmon, M. L., & Lins, K. V. (2003). Ownership structure, corporate governance and firm value: evidence from the East Asian financial crisis. *The Journal of Finance, 58*(4), 1445–1469.

Mangena, M., & Chamisa, E. (2008). Corporate governance and incidence of listing suspension by the JSE Securities Exchange of South Africa: an empirical analysis. *The International Journal of Accounting, 43*(1), 28–44.

Manzaneque, M., Merino, E., & Banegas, R. (2011a). Corporate governance issues and director compensation structure in Spanish Companies. *African Journal of Business Management, 5*(22), 9164–9179.

Manzaneque, M., Merino, E., & Banegas, R. (2011b). Los Niveles Retributivos del Personal Directivo en España: Influencia de las Características del Consejo de Administración y de la Concentración Accionarial. *Revista Innovar, 21*(40), 107–125.

Manzaneque, M., Merino, E., & Banegas, R. (2014). The role of transparency and voluntary disclosure on the control of directors' compensation. In A. Davila, M. Epstein, & J. Manzoni (Eds.), *Performance measurement and management control: Behavioral implications and human actions* (pp. 257–285). United Kingdom: Emerald.

Manzaneque, M., Priego, A. M., & Merino, E. (2015). Corporate governance effect on financial distress likelihood: evidence from Spain. *Spanish Accounting Review, 19*(1), 111–121. http://dx.doi.org/10.1016/j.rcsar.2015.04.001.

Mehran, H. (1995). Executive compensation structure, ownership and firm performance. *Journal of Financial Economics, 38*(2), 163–175.

Merino, E., Manzaneque, M., & Banegas, R. (2012). Control of directors' compensation in Spanish companies, corporate governance and firm performance. In A. Davila, M. Epstein, & J. Manzoni (Eds.), *Performance measurement and management control: Global issues* (pp. 391–426). United Kingdom: Emerald.

Morck, R., Shleifer, A., & Vishny, R. (1988). Management ownership and market valuation: an empirical analysis. *Journal of Financial Economics, 20*, 293–315 (January–March).

Parker, S., Gary, F., & Howard, F. (2002). Corporate governance and corporate failure: a survival analysis. *Corporate Governance: The International Journal of Business in Society, 2*(2), 4–12.

Pearce, J., & Zahra, S. (1992). Board compensation from a strategic contingency perspective. *Journal of Management Studies, 29*(4), 411–438.

Peasnell, K. V., Pope, P. F., & Young, S. (2001). The characteristics of firms subject to

adverse rulings by the financial reporting review panel. *Accounting and Business Research, 31*(4), 291—311.

Perrault, E. (2015). Why does board gender diversity matter and how do we get there? The role of shareholder activism in deinstitutionalizing old boys' networks. *Journal of Business Ethics, 128*(1), 149—165.

Pfeffer, J. (1973). Size, composition, and function of hospital boards of directors: a study of organization-environment linkage. *Administrative Science Quarterly, 18*(3), 349—364.

Pindado, J., Rodrigues, L., & De la Torre, C. (2008). Estimating financial distress likelihood. *Journal of Business Research, 61*(9), 995—1003.

Pound, J. (1992). Beyond takeovers: politics comes to corporate control. *Harvard Business Review, 70*(2), 83—93.

Pugliese, A., Bezemer, P. J., Zattoni, A., Huse, M., Van Den Bosch, F. A. J., & Volberda, H. W. (2009). Boards of directors' contribution to strategy: a literature review and research agenda. *Corporate Governance: An International Review, 17*(3), 292—306.

Rose, C. (2005). Managerial ownership and firm performance in listed Danish firms. In search of the missing link. *European Management Journal, 23*(5), 542—553.

Shleifer, A., & Vishny, R. (1997). A survey of corporate governance. *Journal of Finance, 52*(2), 737—783.

Stulz, R. (1988). Managerial control of voting rights: financing policies and market for corporate control. *Journal of Financial Economics, 20*, 25—59 (January—March).

Tabachnick, B. G., & Fidell, L. S. (1996). *Using multivariate statistics*. New York: Harper Collins.

Walker, A., Machold, S., & Ahmed, P. K. (2015). Diversity and conflict in boards of directors. *International Studies of Management & Organization, 45*(1), 25—42.

Wang, Z., & Deng, X. (2006). Corporate governance and financial distress. *The Chinese Economy, 39*(5), 5—27.

Whidbee, D. (1997). Board composition and control of shareholder voting rights in the banking industry. *Financial Management, 26*(4), 27—41.