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The association between voluntary disclosure and corporate governance in the presence of severe agency conflicts

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The association between voluntary disclosure and corporate governance in the presence of severe agency conflicts

Abstract

Agency conflicts between investors are particularly severe in the presence of high family and block-holder ownership. By focusing on a setting characterised by high ownership concentration, we study the role of independent directors in promoting transparency through increased disclosure. In our tests, we use a sample of Spanish firms and, consistent with prior work, we show that the presence of these directors is strongly associated with increased voluntary disclosure. Additionally, we find that when an executive director takes on chair responsibilities the level of voluntary information is reduced, creating potential conflicts with the role of independent directors. We conclude that the regulatory environment can create sufficient incentives to bring together the interests of minority and majority shareholders and guarantee an efficient monitoring role of independent directors. However, results suggest that other mechanisms should be reinforced in order to improve the role of governance control on agency relationships, particularly in the case of the concentration of chair and executive responsibilities.

Keywords: *Board composition, Independent directors, Agency conflicts, Ownership concentration, Voluntary disclosure*

1. Introduction

There is a wide and ongoing debate on the joint role of financial information and corporate governance in reducing information asymmetries and ameliorating agency conflicts. Recent work puts forward arguments suggesting that these mechanisms are both substitutes (Bushman et al. 2004) and complements (Ahmed and Duellman, 2007). In our paper, we contribute to this literature studying the relationship between corporate governance and disclosure decisions from a broad perspective, by focusing on voluntary disclosures. We specifically study the effectiveness of independent directors in promoting voluntary disclosure in a setting typified with high ownership concentration and consequently, serious agency conflicts between controlling and minority shareholders (Shleifer and Vishny, 1997; Dyck and Zingales, 2004) that may affect the role of independent directors within the Board. Additionally, we focus on a time period setting characterised for the adoption of a new accounting regime (IAS/IFRS) that steered all the previous ingrained reporting philosophy towards a new system characterised by higher levels of transparency.

Fama (1980) and Fama and Jensen (1983) identify outside independent directors as being essential to the effective monitoring and advising role of corporate boards. This monitoring role can be exercised in multiple ways. One method is by enhancing corporate transparency and accountability through alternative reporting devices¹ (i.e. management forecasts, press releases or additional disclosures in the annual report).

¹ These alternative reporting mechanisms allow to overcome the perceived limitations in the current business model that have led professional accounting organizations and regulators to increase voluntarily disclosed information in annual reports (Beattie et al, 2004).

However, the role of independent directors within the Board may be either enhanced or compromised by certain institutional and firm-specific characteristics. Majority shareholder can prevent independent directors from performing their control role properly due to, among other reasons, the risk of collusion between the majority shareholder and the independent directors (Patelli and Prencipe, 2007). Similarly, the appointment of independent directors in family-controlled firms may be influenced by personal ties that affect their independence and in turn, their ability to improve disclosure and effective monitoring (Cheng and Jaggi, 2000). Under this context, the institutional framework is essential in enforcing the role of directors, defining the *independent* qualification and placing safeguards to improve transparency in tightly controlled firms.

We analyse the complementarities between voluntary disclosure and independent directors using a set of listed Spanish firms. Spain provides an interesting setting to study this relationship for a number of reasons. On the one hand, it represents an institutional setting characterized by the presence of high ownership concentration levels across most of listed firms. Majority shareholders control an average of 30% of the share capital. This high ownership concentration ratio places Spain in a setting where independence may be significantly curtailed, constraining independent directors in their role of promoting transparency and greater levels of accountability. In fact, prior evidence on the effectiveness of independent directors suggests that independent boards may have fallen short in their monitoring role (García and Gill-de-Albornoz 2007).

On the other hand, the Spanish pre-IAS ingrained reporting philosophy has been traditionally characterised by low levels of disclosure, presumably related to the high level

of sensitiveness to the potential proprietary costs of disclosure (Gisbert et al, 2012). The adoption of IAS/IFRS from 2005 onwards, offers a particularly interesting setting to test the role of independent directors in a context of a simultaneous change in the reporting regulation and reporting philosophy, characterised by higher levels of transparency.

Spain is therefore in a good position to contribute to the debate on whether independent directors are able to promote transparency through voluntary disclosure in the context of high ownership concentration (Patelli and Prencipe, 2007). Previous empirical literature in this area has been mainly focused both on Anglo-Saxon and Asian countries, while very little research has been done on continental European countries (Allegrini and Greco, 2012; Patelli and Prencipe, 2007; Babio and Muiño, 2005; Lakhal, 2005). In fact, empirical evidence on this topic is mixed. As García-Meca and Sánchez-Ballesta (2010) explain, differences across the Anglo-Saxon, Continental-European² and Asian systems³, significantly intervene in the relationship between governance and voluntary disclosure and explain the lack of consistency between the empirical results of the literature. In fact, the García-Meca and Sánchez-Ballesta (2010) meta-analysis results, reveal that independent directors appear to be more effective in continental countries, or those institutional settings with more investor rights and high legal enforcement framework. Based on this two intervening variables (García-Meca and Sánchez-Ballesta, 2010), Asian countries present a different scenario compared to Continental countries. As Claessens and Fan (2002) and

² García-Meca and Sánchez-Ballesta (2010) refer to “Communitarian”.

³ Differences arise in terms of legal and regulatory environment, national culture, business-government relationships, the role of financial institutions and the shareholder structure.

Millar et al. (2005) explain, the foundations of the business system in Europe, compared to Asian emerging economies, significantly differ. Asian emerging economies are characterised by the influence of families and the government, lower levels of corporate transparency and weaker state enforcement mechanisms. Therefore, Spain offers the opportunity to extent the evidence on the complementarities between independent directors and voluntary disclosure, within a continental institutional setting where in spite of the ownership concentration ratio, changes in the regulatory and governance framework from 1998 onwards (see section 2.3.) have focused on protecting the interest of minority shareholders and have coupled with a significant change in the reporting philosophy. The adoption of IAS/IFRS standards, has offered the opportunity to improve transparency within an ingrained reporting tradition with less incentives for transparent and frequent disclosures than their Anglo-American counterparts (Lakhal, 2005).

We therefore test the hypothesis that the presence of independent directors increases voluntary disclosure of information, within an institutional context with high ownership concentration. Additionally, we look at whether the presence of a significant block-holder affects the role of independent directors. We expect that the presence of independent directors will play an accountability role increasing the levels of voluntary disclosure.

Based on a sample of 62 listed Spanish firms, we create an unweighted hand-collected voluntary disclosure index based on 76 items related to the information disclosed in the 2005 annual reports. The reduced size of the Spanish capital market allows us to create a self-constructed index, thus avoiding sample selection bias related to analysts' disclosure indexes. In addition, detailed information on the firm's ownership and governance

structures can be manually collected through the companies' filed Corporate Governance Reports, which offer a clear identification of non-executive directors in two separate categories: Gray⁴ and Independent directors.

Following prior work, together with the proportion of independent directors we control for other governance variables: the size of the board of directors, the doubling up of executive and chair responsibilities, the degree of ownership concentration and the existence of a significant block-ownership. We also look into other relevant firm-specific determinants of voluntary disclosure.

Studying governance structures and their impact on transparency allows regulatory authorities to assess the effectiveness of the governance mechanisms in place, in order to keep a continuous improvement of the institutional framework. Previous studies show that the decision of introducing corporate governance requirements by law brings an alignment of managers' and shareholders' interests (Chalevas, 2011). The results from the empirical analysis reveal that independent directors affect the quantity of voluntary information disclosed among listed firms, even in a context of high ownership concentration with a relatively significant presence of blockholder share capital and therefore, where agency problems between minority and majority shareholders are severe.

The results contribute to the literature and debate on the complementarities between information and governance mechanisms across Continental countries, and suggest (a) the

⁴ Rosenstein and Wyatt (1997, p. 235) define gray as outside directors "*family members of insiders, attorneys whose firms represent the firm, investment or commercial bankers whose firms have relationships with the firm, consultants to the firm and directors who personally or through their employers have substantial business dealings with the firm*". Gray directors are the non-executive directors representing majority shareholders while independent directors represent small investors' interests.

need to develop strong legal and enforcement safeguards to guarantee the appointment of genuinely independent directors within a context where minority shareholders have increasingly reached capital markets and, (b) the need for a regularly assessment the effectiveness of the governance mechanisms in place and the interaction of the governance characteristics in different institutional settings.

The remainder of this paper is organised as follows. Section 2 reviews the prior literature on corporate governance and voluntary disclosure and formulates the research hypotheses. Section 3 describes the data collection, sample selection procedure and introduces the information requirements for corporate boards. Finally, sections 4 and 5 describe the research method and results. Section 6 concludes.

2. Corporate governance and voluntary disclosure: developing the hypotheses

2.1. Independent directors and disclosure

A good corporate governance system is a key element in optimising the performance of a business in the best interests of shareholders, limiting agency costs and favouring the survival of corporations (Fama and Jensen, 1983). The board of directors is one of the most important internal controls where external independent directors play a key role in shareholders' interests, "*carrying out tasks that involve serious agency problems*" between managers and shareholders (Fama, 1980; Fama and Jensen, 1983). Previous literature has generally presumed that compared to inside directors, the manager monitoring role is more

effectively played by outside directors, who better serve in the interest of shareholders (Robinson et al, 2012).

From this premise, since the beginning of the 90s⁵, an increasing number of countries have started to work on the development of Corporate Governance Codes –CGCs- to promote confidence in financial reporting and governance mechanisms in a context of increasing globalization of capital markets, where small investors have been gaining importance. Following academic and professional recommendations, CGCs refer to two main categories of directors: executive and independent non-executive directors. While the former have the knowledge and expertise on how the firm is run, the latter play an advising and monitoring role. Non-executive directors are determinant in reducing the costs of the agency relationship. However, due to the relevance of ownership participation on corporate boards, many CGC's include two separate categories of non-executive directors: Gray and independent.

High ownership concentration translates the traditional agency conflict to the large vs. minority shareholders relationship. Large shareholders dominate the “*decision control*” role in the company and their interests may not always be the same as those of minority shareholders which leads to an additional agency problem within the firm. Under these circumstances where majority shareholders may be incentivized to expropriate wealth from

⁵ Following the publication of the Cadbury Report in the UK in 1992, the majority of the developed economics published similar Codes of Conduct related to the structure that boards of directors. 1994: Canada; 1995: Australia, France and the European Union; 1996: The Netherlands; 1997: Japan and EE.UU. ; 1998: Spain, Belgium Germany and Italy; 1999: Greece, Ireland and Portugal. 2000: Denmark. 2001: Sweden; 2002: Austria; 2003: Finland and New Zealand; 2004: Norway. The European Corporate Governance Institute offers an overview and free access to all the Corporate Governance Codes around the world. http://www.ecgi.org/codes/all_codes.php

minority shareholders⁶, independent directors play a twofold control role; they can prevent this expropriation not only from large shareholders but also from managers.

The institutional environment plays an important part in safeguarding independence on corporate boards together with other “good” governance mechanisms (Shleifer and Vishny, 1997). It is for this reason, following theoretical academic recommendations, that most CGCs require a majority of non-executive independent directors so that they can fulfil their controlling role without interference from insiders or majority shareholders.

There is extensive empirical evidence on how independent directors use their control role in varying institutional settings⁷. A recent stream of research looks at the complementarities of both corporate governance and disclosure, focusing on the role of independent directors as a mechanism to enhance transparency and disclosure. As Lim et al. (2007) explain, one outcome of effective governance is greater accountability, and implicitly, more voluntary disclosure of information. A significant number of the empirical studies corroborate this assertion, finding positive complementarities between independent directors and disclosure. (Chen and Jaggi, 2000; Bujaki and McConomy, 2002; Babío and Muiño, 2005; Cheng and Courtenay, 2006; Patelli and Prencipe, 2007; Lim et al. 2007, Donnelly and Mulcahy, 2008; Allegrini and Greco, 2012).

⁶ Shleifer and Vishny (1997) offer detailed explanation of the different ways in which wealth is expropriated from the different types of claim holders within the firm.

⁷ A number of empirical papers corroborate that outside independent directors represent minority shareholder interests well (Lim et al., 2007). Prior literature also corroborates a positive impact of independent directors on a firm’s performance (Rosestein and Wyatt, 1990; Erhardt et al. 2003); controlling earnings management practices (Klein, 2000; Peasnell et al. 2000, 2005; Xie et al, 2000); limiting financial fraud (Beasley, 1996) or on certain company transactions where serious agency problems may arise (Agrawal and Knoeber, 1996; Brickley et al., 1994; Weisbach, 1988; Brickley and James, 1987).

However, these positive complementarities might not be applicable to all institutional settings. Authors as Ho and Wong (2001) do not find a significant relationship between independent non-executive directors and voluntary disclosure, questioning the independence of directors on Hong Kong corporate boards. Garcia-Meca and Sánchez-Ballesta (2010) results provide a strong support to the argument that differences in the measurement of variables may explain the differences in the results in this research field⁸. In addition, as Brown et al. explain (2011), Corporate Governance mechanisms might be substitute to each other, not only because different shareholder protection systems affect the development of GCC's (Aguilera and Cuervo-Cazurra, 2004) but also because different firms may have different ways of mitigating certain agency problems⁹. These arguments corroborate that the effectiveness of independent directors on voluntary disclosure depends on the enforcement and institutional background where the company is settled in.

2.2. *Independence among directors and the role of the institutional setting.*

Independent directors belong to an “*intensive monitoring package*” (Ho and Wong, 2001) promoted at the institutional level that persuades companies not to withhold value relevant

⁸ Certain authors as Eng and Mak (2003) or Gul and Leung (2004) observe a negative relationship. However, this is/may be due to /attributed to their definition of external directors. As Cheng and Courtenay (2006) explain, these authors do not divide between gray and independent directors.

⁹ The “legitimacy theory”, offers the opportunity to understand corporate disclosures. Based on this theory corporate disclosures are related to the need of corporations to legitimate their activities with stakeholders. As Deegan (2002) explains, companies are not considered to have a natural right to obtain resources and therefore, they need to legitimate their activities upon society. That is, society must confer the organization the state of legitimacy. Under this context, disclosures turn into a significant strategic tool. Corporate Social Responsibility disclosures are highly associated to the need of firms to legitimate their activities, particularly in certain industries. Since our disclosure index measures a general level of disclosure, incorporating financial and non-financial topics, we do not control for the potential impact of different levels of legitimization across our sample firms.

information. Independent and qualified professionals are expected to reinforce transparency and perform their monitoring role efficiently to uphold their reputation in the labour market. In a strict regulatory environment focused on strengthening transparency, firms will want to increase their reputation for transparency (Patelli and Prencipe, 2007) and appoint independent directors who will perform their advising and monitoring role efficiently.

However, in a context of serious agency conflicts brought about by high ownership concentration, independence can be significantly curtailed, limiting independent directors' ability to perform their role efficiently. The presence of majority shareholders is claimed to be among the main constraints due to the risk of complicity between themselves and the appointed independent director (Patelli and Precipe, 2007). Appointing new directors is a board decision, however, large shareholders have the power to influence in this decision and, thus impair the Board's independence. In addition, they may favour the appointment of independent directors based on their personal relationships rather than on professional expertise. The absence of real independence, together with a gap in financial expertise, are claimed to be the explanation for independent directors' lack of effectiveness when majority, insider or family owners appoint directors¹⁰ (Park and Shin, 2004).

The institutional and governance framework is therefore a key player improving the effectiveness of the monitoring role of independent directors, enhancing independence, placing safeguards to improve information transparency in tightly controlled firms and

¹⁰ Other authors have claimed that independent directors have limited involvement and knowledge of the firm's daily operations and can therefore be easily misled by inside executive directors (Lim et al, 2007). However, to counter this argument is the stance that because of their concern about receiving misleading information they request additional voluntary information to protect their professional reputation and avoid litigation from minority shareholders (Lim et al., 2007; Fama and Jensen, 1983).

potentially creating positive complementarities between voluntary disclosure and governance mechanisms.

As previously stated, Spain provides an interesting setting to study the complementarities between voluntary disclosure and the role of independent directors. A high ownership ratio places Spain within a setting where independence may be significantly curtailed. However, for the last decade, Spain has made great strides towards the establishment of a legal solid governance framework across listed firms.

2.3. The Spanish governance framework.

Following the tendency of other EU countries, Spain issues the first Corporate Governance Code in 1998. At that time, the so called Olivencia Report (1998) proposed a set of guidelines and recommendations regarding the governance of companies. Particularly, the Report urges companies to incorporate a reasonable number of independent directors with good professional reputation, standing apart from the management team or majority shareholders. At the time, reporting about the compliance with the recommendations was not compulsory across listed firms. However, the issuance of the Olivencia Report represented the first step towards the reinforcement of the legal requirements regarding the quality of the Governance structures across firms.

The Olivencia Report (1998) was superseded by the Aldama Report in 2003 (CNMV, 2003). This new CGC is one step forward in the ongoing process of improving governance across listed Spanish firms. Among other changes, it clarifies the “independent”

qualification, refers to the need to create specific commissions¹¹ within the Board in order to increase the effectiveness in the performance of its duties, and includes a set of duties of loyalty and diligence across directors. Together with the issuance of this new CGC, the enactment of other legal requirements, revealed a significant institutional commitment with Corporate Governance¹². The main outcome of these legal advances, particularly, the enactment of the 26/2003 law on transparency¹³, is the requirement for listed firms to prepare and file an Annual Corporate Governance Report where companies must provide detailed information on their governance structure, clarifying any deviation from the compliance with the CG recommendations contained in the Aldama Report. Even though the Spanish legal regulation leaves companies a certain degree of discretion to decide whether to follow governance recommendations, all listed firms must report and explain any deviation from these recommendations¹⁴. These legal requirements follow the Aldama Report philosophy to guarantee disclosure quality, based on the “*comply or explain*” principle.

¹¹ Additionally, the Aldama Report requires independent directors to be selected by an Appointment Commission that aims to guarantee independence and across directors and in turn, the efficient performance of the board itself. Executive directors are excluded from this Commission. Only external directors can be part of it. The commission must be in line with proportion of independent vs. gray directors of the Board itself.

¹² 26/2003 Act, requires listed firms from 2003 onwards, to file an Annual Corporate Governance Report; Orden ECO/3722/2003 details the characteristics and contents of the mandatory Annual Report on Corporate Governance for listed companies; CNMV Circular 1/2004, issues an standard Annual Report on Corporate Governance, mandatory for listed companies ; CNMV Circular 2/2005 requires the creation of a website and certain Corporate Governance for listed companies.

¹³ The cited law additionally promotes transparency and accountability policies requiring listed firms to operate a website in order to provide investors with updated news and value relevant information. Directors are responsible for keeping this information updated.

¹⁴ Even though listed companies can chose whether to comply with the CGC recommendations, their report must refer to the concepts used in the official CGC – i.e. firms must adhere to the Code’s definition of “independent” director when explaining the composition of the Board. If the director does not meet the minimum CGC requirements, they cannot be considered independent and the company must offer detailed explanation on why a non-independent director has been appointed.

After the Aldama Report, the Spanish regulatory authorities have done further improvements in the governance requirements across listed firms. The last Governance recommendations were updated in 2006, with the issuance of the Unified Governance Code (UCGC). This new code makes further clarifications on the concept of independent director and the limitations to be appointed as independent (CNMV, 2006). However, these changes have occurred after the time period of our empirical analysis.

As Chavelas (2011) explain, the introduction of changes in the governance requirements of firms seems to improve the degree of alignment between managers and shareholders. Similarly, we can assume that Spain is settled in a governance environment that in spite of the risk of collusion between minority and majority shareholder due to the presence of significant blockownership, offers an increasingly strong governance environment that has aimed to align the interests of not only of managers and shareholders, but also differences between majority and minority shareholders. In addition, De Miguel, et al., (2004) results suggests that the conflict of interests between minority and majority shareholders occurs at a much higher level of ownership¹⁵ concentration when compared to Anglo-Saxon countries. We therefore expect higher levels of voluntary disclosure in companies with a higher proportion of independent directors.

We formulate the following hypotheses:

Hypothesis 1: Ceteris paribus: There is a positive complementary relationship between independent directors and the extent of voluntary disclosure.

¹⁵ De Miguel, et al. (2004) reveal that the value of Spanish firms rises until ownership concentration reaches 87%.

2.4. The role of additional corporate governance characteristics on corporate disclosure

As Gul and Leung (2004) argue, the role of corporate governance on the agency relationship between managers and shareholders is best examined by looking at several corporate governance mechanisms. We therefore look at three additional governance characteristics in the empirical model: the doubling up of executive and chair responsibilities, the ownership structure and board size.

Separating the position of CEO and Chairman of the board avoids a conflict of interests and helps to improve the monitoring function of the board (Jensen, 1983). Therefore, when the chairman and the CEO functions fall onto the same person -CEO duality-, the concentration of too much power in one person may compromise the monitoring role of the board (Forker, 1992) and affect the quality and amount of information disclosed. Authors like Donnelly and Mulcahy (2008), Ho and Wong (2001) and Gul and Leung (2004) document a negative relationship between CEO duality and voluntary disclosure.

A detailed analysis of Spanish governance characteristics reveals that in listed firms there is a significant proportion of CEOs with chair responsibilities and to a lesser extent, executive directors doubling up as chairman¹⁶. As we will observe later, this situation affects 71% of the sample firms which means that only 29% appoint either a gray or independent director

¹⁶ The Aldama Report and the latest UCGC do not make any recommendation on the advisability of either separating or concentrating the two positions. The UCGC refers to the lack of empirical evidence and the international practice divergence as the main arguments to avoid proposing a recommendation on this point (CNMV, 2006, p. 18). However, under a context of Chairman/CEO duality the Code proposes the appointment of a “*lead independent director to request the calling of board meetings or the inclusion of new business on the agenda; to coordinate and give voice to the concerns of external directors; and to lead the board’s evaluation of the Chairman*” (CNMV, 2006, p. 19, 48). In the empirical analysis we do not control for the appointment of a lead independent director in companies with duality.

as chairman. Given this context, we consider both the concentration of the CEO/Chair or Executive/Chair responsibilities as Duality. We assume that in both cases there is an overconcentration of responsibilities and therefore, a potential risk of compromising the oversight role of the board. Based on the theory postulates and previous empirical evidence we expect to find a negative relationship between the degree of voluntary disclosure and the concentration of the CEO/executive and Chair responsibilities in the same person (Duality).

The firm's ownership structure is associated with different levels of disclosure (Gelb, 2000). More specifically, information disclosure is expected to increase where ownership is more spread out (Raffournier, 1995) and where minority shareholders require greater transparency and information. However, majority shareholders may also want disclosure increased due to capital market pressures or for other reasons (Salter, 1998). When strong regulatory mechanisms are in place, firms are interested in achieving a reputation for being highly transparent (Patelli and Prencipe, 2007) to avoid losing investors. In this light, the presence of these shareholders can imply greater disclosure and this can also be said for large blockholders, those major shareholders controlling a significant portion of the company shares. However, most of the empirical evidence reports a negative¹⁷ relationship between ownership concentration and voluntary disclosure (Patelli and Prencipe, 2007; Babio and Muiño, 2005; Chau and Gray, 2002; Cheng and Courtenay, 2006; Chen and Jaggi, 2000). Based on previous results in the Spanish context, we would expect a negative relationship between voluntary disclosure and this governance control variable. However, as previously stated, De Miguel et al. (2004), results reveal that the risk of collusion

¹⁷ Other authors like Donnelly and Mulcahy (2007), Haniffa and Cooke (2007) or Eng and Mak (2003) do not find evidence of a significant relationship between ownership and voluntary disclosure.

between minority and majority shareholders, occurs at a significant proportion of ownership concentration and therefore, a negative impact of ownership concentration on disclosure, may only be observed in specific circumstances.

The Spanish Aldama Reports suggests “*a reasonable number of members to ensure its viability and the work of each director.*” (CNMV, 2003). Size is perceived to be a determinant factor of the effectiveness of the Board. While we expect larger boards to increase board monitoring capabilities, this benefit may be reduced by poorer communication and decision-making associated to larger groups (John and Senbet, 1998). As Jensen (1983) argues, small boards are more effective in monitoring the CEO, limiting the possibility of taking opportunistic decisions. In fact, previous empirical results reveal a negative relationship between board size and firm value (Yermack, 1996). Cheng and Courtenay (2006) document the absence of a significant relationship between board size and voluntary disclosure for a sample of Singapore firms. However, the relationship between firm and board size (Denis and Sarin, 1999) together with the tendency for big firms to be under greater pressure from stakeholders to provide information suggest that larger boards are inclined to disclose more.

3. Sample selection and data collection

3.1. Sample selection and measurement of voluntary disclosure.

The final sample consists of 62 non-financial Spanish companies listed on the Madrid Stock Exchange in 2005. We decided to use exclude financial, banking and insurance firms

due to differences in the regulatory framework¹⁸ and therefore, their specific disclosure requirements. The quantity of voluntary disclosure is measured using an unweighted¹⁹ disclosure index, computed using a binary coding scheme that identifies the presence or absence of the different information items considered. The voluntary disclosure index has been computed based on hand-collected data from the fiscal year 2005 annual reports. Focusing on the 2005, allow us to focus on a time setting with a simultaneous change in the reporting regulation and the reporting philosophy. Spanish firms have traditionally acted in a reporting setting with low levels of voluntary disclosure. Firms were reluctant to regularly offer information beyond the regulatory accounting requirements. In addition, the national regulatory framework has always given a strong priority to the avoidance of potential proprietary costs. The compulsory introduction of the IAS in 2005, introduced the traditional Anglo-Saxon reporting philosophy, reinforcing the relevance of Annual Reports as an additional information source for users, complementing the compulsory financial information.

Even though companies have alternative ways to report additional voluntary information²⁰, studies like Botosan (1997) or Lang and Lundholm (1993) see a direct link between annual report disclosure and alternative ways of presenting corporate information. The annual

¹⁸ The information requirements are detailed in the Circular 4/2004 de 22 de Diciembre. The Spanish regulatory and supervisory authority is the Central Bank of Spain (Banco de España).

¹⁹ We do not weight the related importance of the selected items to avoid subjectivity in the index computation.

²⁰ Corporate websites, press releases, intellectual capital reports, corporate social responsibility reports, meetings with the financial analysts, and management forecast announcements

report is one of the main sources of corporate information and the main source of data²¹ in the voluntary disclosure empirical literature.

With an initial sample of 124 non-financial companies listed on the Madrid Stock Exchange (IBEX-35 and IGBM), we exclude companies with non-consolidated financial statements, unavailable annual reports and firms with missing information on the corporate governance structure. Finally, we exclude those companies with missing data for the control variables. Our final sample consists of 62 listed companies. Table 1 shows the final sample selection procedure (Panel A), as well as the composition of the final sample (Panel B).

Insert table 1 about here

Our measure of voluntary disclosure is a self-constructed index based on a checklist of 76 identified information items related to seven areas of information²²: The checklist has been created based on the following: the framework of the Steering Committee Report of the Business Reporting Research Project of the Financial Accounting Standards Board in 2001, the recommendations of the Enhanced Business Reporting Consortium (EBR) report published in 2005 and the disclosure checklists included in previous studies such as Botosan (1997), Cheng and Courtenay (2006) and Lim et al. (2007).

²¹ Previously, literature in the US context used the AIMR (*Association for Investment and Management Research*) disclosure rankings to measure the disclosure level. However, it has been claimed that these rankings are biased towards larger firms.

²² Historical information, corporate social responsibility, intangible and intellectual capital, projected information, general information about the firm, non-financial statistics, management analysis and IAS/IFRS adoption. Due to the lack of a specific regulatory requirement, information on the transition to IAS/IFRS is considered as a voluntary category. Appendix 1 reports the number of items included in each of the seven information areas, as well as a detailed list of the 76 items.

A dichotomous variable (1/0) has been used to identify each information item that can appear in the firm's annual report and is then used as a base from which the disclosure index is computed. The dummy variable for each item on the checklist takes the value of 1 if the company discloses information related to that item in the annual report; and 0 otherwise. Similar to previous studies, to avoid subjectivity in index computation, all the checklist items are considered to have the same relevance for the external users of information. The voluntary disclosure index (D_INDEX) is computed as the sum of all the dichotomous variable values for each company, divided by the total number of items included in the information checklist (76). Since no particular regulation has been considered all the items are expected to be disclosed by each company.

Table 2 panel A shows descriptive statistics for the total voluntary disclosure index and sub-indexes for the 62 companies in the final sample. The mean voluntary disclosure index is 0.25, revealing that sample companies disclose about 25% of the 76 items comprising the general index. This value is higher than those reported in similar studies for other countries: Lim et al. (2007) reported an average index of 0.18 for Australian companies, Patelli and Prencipe (2007) 0.14 for Italian companies, Cheng and Courtenay (2006) 0.29 for Hong Kong firms, and Allegrini and Grecco (2011) 0.35 for Italian firms. The D_INDEX score ranges from 0.07 to 0.48, suggesting a large variation in voluntary disclosure practices across Spanish firms²³.

²³ The content of Annual Reports is not standardized and therefore, information content and format varies significantly across firms and years. Certain firms may score zero for certain items, meaning that on that specific year the company has not mentioned or covered on a specific section the corresponding item incorporated in the checklist. Evidence on low voluntary reporting scores across Spanish firms are additionally reported for forward looking information (Bravo et al, 2010) and segment disclosure (Gisbert et al, 2011).

Table 2 reveals that firms are more likely to disclose information on corporate social responsibility ($I_CSR = 0.33$), non-financial information ($I_NFI = 0.34$) and historical information ($I_H = 0.27$). The I_IAS index is significantly high due to the analysis of the 2005 annual reports, where most firms in the sample reported information on the impact of adopting IAS/IFRS standards.

Insert Table 2 about here

One of the main caveats of designing a voluntary disclosure index is that it implies a certain degree of subjectivity in administering the disclosure checklist (Cheng and Courtenay, 2006). Following Botosan (1997) and Cheng and Courtenay (2006) we assess the validity of the index for capturing disclosure levels. One of the basic validity analyses of its internal consistency is a correlation analysis of each one of the index components. As Cheng and Courtenay (2006) explain, “*disclosure strategies for a firm are expected to be similar along all avenues*”, which is to say that a firm with high levels of voluntary information as reported in the general voluntary disclosure index (D_INDEX) is expected to have a high disclosure level in most of the information areas. Non-reported results of the Pearson and Spearman correlation analysis of all the sub-indexes of information reveal, not only a significant correlation with each other, but also with D_INDEX . In addition, The Standardized Cronbach’s Coefficient Alpha scores 0.69²⁴, corroborating the internal consistency of the dependent variable.

²⁴ The Cronbach’s Coefficient Alpha scores 0.64 in Botosan (1997) and 0.51 in Gul and Leung (2004).

3.2. Corporate governance and control variables

As previously explained, since the enactment of the 26/2003 Law on transparency, listed Spanish firms are required to prepare an annual corporate governance report, in keeping with the statutory information requirements of the National Securities and Exchange Commission (CNMV), clarifying any deviation from the compliance with the CG recommendations. All corporate governance variables have been collected from the 2005 Annual Corporate Governance Report filed by each company and publicly available at the CNMV website. In particular, we collect detailed information on board composition and ownership structure. Regarding board composition we measure board size and the proportion of independent, gray, and executive directors comprising the board. The analysis of the ownership structure focuses on the degree of ownership concentration and the presence of a significant blockowner. The former is measured as the percentage of share capital owned by shareholders who possess more than 3% of the share capital while the latter is identified when one or a maximum of two shareholders own more than 30% of share capital.

Table 3 reports detailed information on the characteristics of corporate boards among sample firms. The board of directors (panel B) has a mean size of 12 members, ranging from a minimum of 5 to a maximum of 20 members. The board is composed of a majority of gray directors (42%), followed by independent (35%) and executives (20%)²⁵. Gray²⁶

²⁵ One sample company refers to the category of “*other directors*”: This is an extraordinary category that includes directors that do not strictly comply with the definition of independent, gray or executive. Even though they do not represent majority shareholders, directors in this category can be neither considered as independent.

directors are the non-executive directors representing majority shareholders while independent directors are the representatives of small investors' interests.

In addition, 71% of the companies from our sample double up on the Chair and CEO/executive responsibilities. The average capital owned by majority shareholders amounts to 51.68%, with 97% as a maximum percentage of concentration. As stated in section 1, ownership of Spanish companies is highly concentrated among a small number of shareholders. The mean number of majority shareholders is four and the principal shareholder controls an average of 30% of company shares.

The characteristics of the ownership structure are consistent with the higher presence of gray directors on the board of directors. 40.3% of the companies (25 companies) have a majority²⁷ of gray directors while 25.8% of the total companies (16 companies) have a board with a majority of independent directors. Executive directors are in the minority and in only two firms are they the majority.

Insert table 3 about here

Financial control variables used in the empirical analysis were collected from WorldScope. Following previous literature on the determinants of voluntary disclosure (Ahmed and Courtis, 1999) we collect data related to the firm's size, leverage and profitability. Table 4 reports the descriptive statistics for the control variables which shape the main

²⁶ Rosenstein and Wyatt (1997, p. 235) define as gray outside directors “*family members of insiders, attorneys whose firms represent the firm, investment or commercial bankers whose firms have relationships with the firm, consultants to the firm and directors who personally or through their employers have substantial business dealings with the firm*”

²⁷ We have defined “Majority” when at least 50% of the members of the Board belong to the corresponding category.

characteristics of the companies in the sample. The descriptive evidence for these variables is consistent with prior work and reveals a wide cross-sectional variation across the sample firms.

Insert table 4 about here

4. Methodology

We study the association between corporate governance characteristics and the extent of voluntary disclosure. For the empirical analysis we estimate the following model:

$$D_INDEX_{it} = \alpha + \sum_{j=1}^4 \beta_j BOARD_{jit} + \sum_{q=1}^5 \gamma_q VAR_CONTROLS_{jit} \quad (1)$$

Where D_INDEX_{it} is the value of the voluntary disclosure index for each company in 2005, $BOARD$ corresponds to the vector of corporate governance variables including: the proportion of independent directors on the board ($\%_IND$), board size ($BOARD$), the doubling up of Chair and CEO responsibilities ($DUALITY$), and ownership concentration ($CCAP$), measured with a dummy variable (1-0) that takes the value one when the main shareholders own more than 51.68%²⁸ of the firm. An extension of the basic vector of corporate governance variables controls for the impact of blockholder ownerships on disclosure. The variable $BLOCK$ takes the value 1 if one (maximum two) significant shareholders control over 30% of the company shares. Otherwise, the $BLOCK$ variable

²⁸ This value corresponds to the mean value of the “capital concentration” variable for the sample firms. See table 3.

takes the value 0. This variable controls for the impact of blockholder ownerships on voluntary disclosure and allows us to test the role of independent directors in enhancing information transparency even in the presence of a significant blockowner. As previously argued, the ownership structure is an important determinant of voluntary disclosure. Ownership concentration implies a lower proportion of free floating capital and therefore, reduces the need and shareholder pressures to enhance voluntary disclosure. This argument also holds good for the Blockholder ownership variable.

VAR_CONTROLS corresponds to the vector of control variables. Previous empirical literature documents that corporate attributes such as size, leverage, profitability and growth opportunities are some of the main cross-sectional determinants²⁹ of voluntary disclosure (Ahmed and Courtis, 1999). To avoid multicollinearity problems among the control variables, due to the significant relationship between board size and company size³⁰ (Table 7), we do not control for company size using the total assets variable. Instead, it is indirectly controlled in the regression model both through the use of the board size variable

²⁹ Empirical literature has looked at additional determinants of disclosure such as: (a) the audit firm size (Wallace et al., 1994); (b) the internationalization of the firm, not only in commercial terms but also by their presence in international capital markets (Khanna et al., 2004), (c) the use of stock options plans as a manager remuneration mechanism (Aboody and Kasznick, 2000), (d) media visibility (Cormier and Magnan, 2003). These additional explanatory factors have not been included in the vector of control variables as they are not significantly different across the sample firms.

³⁰ Size has been identified in numerous studies as the main determinant for voluntary disclosure. Authors like Meek et al. (1995) or Hossain et al. (1995) find that big companies are more likely to disclose information not only due to lower information production costs but also because of lower potential competitive disadvantages (proprietary costs). Disclosing more information can also be the result of pressure from external users. Agency costs are higher for companies with more outside capital (Jensen and Meckling, 1976) and the proportion of that capital tends to be higher for big firms (Leftwich et al., 1981). Therefore, larger firms are expected to disclose more information. However, this may significantly increase potential political, legal or competition costs (Watts and Zimmerman, 1986), particularly for big firms which tend to have greater visibility in the market, increasing the collateral effects of greater transparency.

in the BOARD vector and the market-to-book ratio in the CONTROL vector. Leverage (LEV) is measured as the total debt to equity ratio. ROA is measured as the Return on Assets ratio and MB is measured as the market capitalization to book value of equity ratio.

Highly leveraged firms bear more agency costs due to the potential wealth transfers from debtholders to shareholders (Jensen and Mecklin, 1976), creating a need to disclose more information to improve transparency and communication with their creditors (Meek et al. 1995). However, the empirical evidence relating to the impact of leverage on voluntary disclosure is inconclusive (Ahmed and Courtis, 1999) as are the results of the impact of profitability on voluntary disclosure (Ahmed and Courtis, 1999). Authors like Meek et al. (1995) argue that highly profitable companies disclose more information to show their superior performance. However, other authors find either a non-significant or negative relationship between disclosure and performance (Hossain et al., 1995; Raffournier, 1995; Cheng and Courtenay, 2006, Gul and Leung, 2004). A more detailed view of the relationship between performance and disclosure is offered by Land and Lundholm (1993) who suggest that the relationship between profitability and greater disclosure is only positive for companies with greater information asymmetries between managers and investors. A similar argument applies for the market-to-book ratio (MB), representing the firm's growth expectations. Authors such as Gul and Leung (2004) or Lim et al. (1997) argue that companies with higher growth potential need to disclose more information in order to signal to the market that the stock value is not "overvalued" and reduce uncertainty about future financial performance.

Industry is an additional documented explanatory factor of voluntary disclosure. Companies acting in the same sector are inclined to adopt similar informative practices and topics which affect disclosure. Because our sample is broadly spread over 21 economic sectors³¹, with no concentration of companies in any particular sector, we have not included any control variable in the econometric analysis to identify potential industry differences in disclosure.

As Brown et al. (2011) explains, one of the ways to deal with the endogeneity problems in the governance studies, is to use a two stage least square econometric approach. Similar to previous empirical literature (Gul and Leung, 2004; Lim et al., 2007 and Cheng and Courtenay, 2006), we estimate first the values of the main corporate governance variable (% _IND) and use the estimated value (% _IND_est) in the second stage regression as an independent variable of the model.

The following model has been used for the estimation of the proportion of independent directors (% _IND):

$$\%_IND_{it} = \alpha + \beta_1 BOARD_{it} + \beta_2 CAP_{it} + \beta_3 LASSET_{it} + \beta_4 LEV_{it} + \beta_5 ROA_{it} + \beta_6 MB_{it} + \varepsilon_{it} \quad (2)$$

BOARD is the size of the board of directors; CAP represents the total stake of the firm's capital owned by majority shareholders³²; LASSET represents the size of each company measured as the logarithm of total assets; LEV is the leverage ratio measured as total debt

³¹ We use the CNMV (Comisión Nacional del Mercado de Valores) industry classification.

³² We consider as majority shareholder a capital share over 3%.

over total equity; ROA is the economic profitability of the company and finally, the market-to-book ratio (MB) measures the potential for company growth.

Based on the theoretical postulates and empirical results in previous studies (see Linck et al. (2008) for references to the main literature on the determinants of the board structure) we expect a positive and significant relationship between the dependent variable (%_IND) and all the explanatory variables except for CAP and BOARD. Based on previous evidence, higher ownership concentration implies the presence of a higher proportion of gray and executive directors on the board, representing the interests of the dominant shareholders. Additionally, the definition of the dependent variable as the proportion of independent directors on the total board implies a negative relationship with the size of the board (BOARD). The expected relationship between LASSET, LEV, ROA, MB and the dependent variable (% _IND) is positive. Big companies tend to have higher ownership dispersion (Leftwich et al., 1981) and greater cash flows, making it necessary to recruit a larger number of independent non-executive directors to effectively oversee managers (Boone et al., 2007). Similarly, highly profitable companies or those with high growth expectations are not only more attractive to independent directors (Lim et al., 1997) but they also suffer from higher information asymmetries that require the presence of independent directors to promote transparency between dominant and minority shareholders. Finally, highly leveraged firms are expected to have a significant presence of independent directors to promote transparency and strengthen creditors' confidence.

Table 5 shows the summary of statistics for the first stage regression results. All the estimated coefficients are statistically significant except the profitability variable (ROA).

Size (LASSET), leverage (LEV) and the MB ratio are positively related to the proportion of independent directors on the board. Conversely, higher capital concentration (CAP) and the size of board (BOARD) have a negative impact on the dependent variable. The adjusted R^2 coefficient reaches a value of 0.425 which is slightly higher than those reported in other studies like Lim et al. (2007).

Insert Table 5 about here

5. Analysis and discussion of results

5.1. Descriptive and Univariate Analysis

Table 6 reports a descriptive analysis and the results of the T-test of the disclosure differences according to corporate governance and firm-specific characteristics. The 62 sample companies have been divided in two groups based on the average value of each explanatory variable. To assess the role of independent directors (% _IND), sample firms have been divided in two groups. The first group comprises companies with a proportion of independent directors below the average reported value in Table 3, while the second group is composed of those firms with a proportion of independent directors above the average reported value. Results show a significantly higher value of the voluntary disclosure index for the second group of companies, indicating that companies with a higher proportion of independent directors score higher in the disclosure index. Conversely, companies with higher proportion of executive directors present a lower value of the voluntary disclosure index. However, results for the Gray and Executive directors' variables are no statistically significant.

Insert Table 6 about here

When using total assets as a discriminating variable, results are consistent with previous findings. Bigger companies disclose considerably more information. Similar results are reported for board size. Furthermore, results for capital concentration are consistent with the idea that ownership concentration implies higher managerial and majority shareholder control, reducing information disclosure and transparency. Results reveal a statistically significant lower value of the D_INDEX variable for companies with high capital concentration (CAP). However, there is no longer a statistical significance if we look at the differences in disclosure based on the presence of a blockholder ownership (BLOCK) as discriminating variable. Finally, we found that doubling up of CEO and Chair responsibilities does significantly affect the level of disclosure.

The correlation analysis of the D_INDEX and the control variables reported in table 7 corroborate the results from the descriptive analysis. The correlation matrix shows Pearson (upper half) and Spearman (bottom half) correlation coefficients for all test variables.

Insert Table 7 about here

Correlation coefficients of the D_INDEX variable with the control variables show a statistically significant correlation with BOARD, CAP, DUALITY, %_IND and %_EJE. These results are consistent with the descriptive analysis in table 6, supporting the relationship between voluntary disclosure, board composition and ownership structure. The Pearson and Spearman correlation coefficients of D_Index with Board size (BOARD) are significantly positive, indicative of a higher degree of voluntary disclosure for companies with a greater number of directors on their boards. Capital concentration (CAP) has significant negative Spearman and Pearson correlation coefficients suggesting less

disclosure as ownership concentration increases. Furthermore, the DUALITY variable has a significant negative (Spearman) correlation with D_INDEX.

The correlation of the percentage of independent directors (%_IND) with D_INDEX is only statistically significant for the Pearson correlation coefficient, although in both cases it is positive, indicative of higher levels of voluntary disclosure in the presence of independent directors.

The variable %_IND is negatively correlated with CAP. These variables have a negative and statistically significant correlation coefficient which point to a negative relationship between ownership concentration and the proportion of independent directors. %_IND is also highly negatively correlated with BOARD and %_DOM. These results ratify the presence of endogeneity across the board composition variables, confirming the need for a two-stage least square regression econometric procedure.

The control variables (LEV, MB and ROA) also significantly correlate with each other, suggesting potential multi-collinearity problems. However, as reported in table 8, the Variance Inflation Factor is not higher than 2.5 for any of the variables in the model.

5.2. Regression Results

The second stage regression uses the estimated dependent variable (%_IND_est) as one of the explanatory variables of the model. As a sensitivity analysis, the consistency of the results is tested using an alternative dependent variable, RD_INDEX. This variable represents the transformation of the D_INDEX variable in deciles, measuring relative levels

of disclosure, using a procedure similar to those in Cheng and Courtenay (2006) and Botosan (1997).

Table 8 summarizes the multiple regression results. Panel A reports the results of D_INDEX as a dependent variable. Panel B reports the results of RD_INDEX as the dependent variable. Four different regression models have been run based on the following equation:

$$\frac{D_INDEX_{it}}{RD_INDEX_{it}} = \alpha + \beta_1 BOARD_{it} + \beta_2 \%_IND_est + \beta_3 DUALITY_{it} + \beta_4 CCAP_{it} + \beta_5 Block_{it} + \beta_6 LEV_{it} + \beta_7 ROA_{it} + \beta_8 MB_{it} + \epsilon_{it} \quad (3)$$

The coefficient of determination (adjusted-R²) ranges between 15-17%, indicating that a moderate percentage of the variation in Y can be explained by variations in the set of independent variables. In addition, the results on the F-statistic allow us to reject the hypothesis that all the explanatory variables coefficients are simultaneously equal to zero.

Four out of the eight explanatory variables are statistically significant across the eight regression models: Board size (BOARD), DUALITY, market-to-book ratio (MB) and the estimated variable %IND_EST, representing the estimated value of the percentage of independent directors on the board. The signs of the regression are consistent with expectations in all cases.

The results on the main governance variable, %IND_EST, reveals that the presence of independent directors is positively associated with the decision to disclose voluntary

information. As reported in Table 8 (Panel A), the regression coefficients are significant at the 5% level in models 3 and 4 (10% in models 1 and 2). Additionally, these results are consistent not only when controlling for the impact of ownership concentration, but also when the CEO duality or the blockholder capital ownerships are considered. Conversely, the Duality variable is negative and statistically significant in all cases, indicating that the concentration of the Chair and executive responsibilities significantly deter managers from increasing voluntary information.

Results for the BOARD variable are consistent with previous empirical studies revealing that firms with larger boards disclose more voluntary information. Conversely, results on the ownership concentration and blockownership variables do not affect the level of disclosure. The CCap and Block regression coefficients are significant in none of the models where these variables are included. The lack of significance for these two explanatory variables on the regression analysis, contrasts with the descriptive analysis and does not support previous empirical evidence in the Spanish context, corroborating the negative impact of capital concentration or blockholder ownership on disclosure, particularly on segment disclosure (Gisbert et al., 2012). This lack of significance on the regression analysis may be interpreted as indicating a certain decrease in the influence of the ownership structure on the level of disclosure due to the introduction of IAS/IFRS in 2005, where all listed firms were required higher levels of disclosures.

Coefficients on the control variables LEV and ROA do not support the previously stated arguments regarding the impact of these variables on the disclosure decision. The only

exception is the MB variable where the results suggest that companies with higher growth potential avoid voluntary disclosure in order to keep strategic data from competitors.

Insert Table 8 about here

These results document positive complementarities between governance and information mechanisms even in the presence of high ownership concentration and blockholder ownerships. These findings suggests that the governance mechanisms in place, particularly, the presence of independent directors promotes transparency and more accountability, in spite of the potential incentives of majority shareholders to withhold relevant information to minority shareholders. However, results also suggest that other governance mechanisms should be reinforced to improve control over the agency relationship. In particular, doubling up the responsibilities of chairman and executive director is seen to significantly reduce the level of voluntary information, creating potential conflicts with the role of independent directors and compromising the oversight role of the Board. Finally, the econometric analysis does not support the evidence of the descriptive analysis about the impact of majority shareholders affects the level of disclosure. As previously explained, the adoption of IAS/IFRS in the year of analysis, may have affected this relationship.

5. Summary and conclusions

We have exploited a specific national context to understand the role of independent directors on the disclosure decision. Particular, this article looks at the degree of voluntary disclosure across the 2005 Annual Reports of Spanish listed firms, in an attempt to ratify

the role of independent directors within a context with high ownership concentration, where independence can be significantly curtailed. Under this context, the governance framework in place, may guarantee the appointment of genuinely independent directors,

We find that the role of independent directors is not impaired and their presence affects the level of voluntary disclosure. Our results highlight the role independent directors in order to steer the interests of minority and majority shareholders towards more accountability and transparency so as to reduce the information asymmetries that arise in an open corporation. However, regression results for the DUALITY variable suggest the need to revise the current recommendations. An overconcentration of the CEO and Chairman responsibilities not only affects transparency but may also interfere with the other responsibilities of independent directors. As previously stated, the current Spanish CGC makes no requirement for separating these two positions. The Report's committee justifies their decision on the lack of empirical evidence on the benefits and drawbacks of the Chair/CEO duality.

Additionally, conversely to the posited arguments, the degree of ownership concentration or the presence of a significant blockowner, does not affect the level of disclosure. As previously stated, the absence of a significant influence of the ownership structure on disclosure, contrasts with previous empirical evidence in Spain (Gisbert et al., 2012). However, these results may be affected by the adoption of IAS/IFRS in 2005, where companies were significantly required to increase the level of information provided to users.

Studying the impact of governance structures on transparency, allow the regulatory

authorities to assess the effectiveness of the governance mechanisms in place. This is particularly of interests in institutional settings with a significant level of ownership concentration where transparency could be significantly curtailed due to the potential conflict of interests between majority and minority shareholders. At the same time, assessing the effectiveness of the governance mechanisms on disclosure, allows standard setters to discern whether there is a need to impose greater mandatory disclosures in order to fulfill users' needs of information.

There are several limitations to this study. First, we have not focussed on disclosure quality but quantity. Although some previous studies have concentrated on both (Cheng and Courtenay, 2006), we have not assessed quality in order to minimise subjectivity in the index computation. In addition, sample size is limited, since the empirical results are based on a single country and in one single year. However, due to the laborious nature of the data collection to build the disclosure index, and the fact that firms Annual Reports are not standardized across years, could impair the consistency of the disclosure measure. Most previous literature is also characterised by a small sample sizes.

This line of research offers new opportunities for research. Our future research aims to focusing on the professional expertise of the Board members, measuring the degree of "real" independence, in order to define the best profiles to guarantee independence across Board members, particularly in settings with a high degree of ownership concentration. However, other research opportunities could be focused on understanding the impact of changes in the regulatory framework on the level of corporate disclosures.

Appendix 1
Information items

Panel A: Information categories

Category	N° items
Historical information	10
Corporate social responsibility	3
Intangibles and intellectual capital	14
Projected information	15
Background information	17
Non-financial information	7
Management analysis	5
NIC/NIIF adoption	3
Total	76

Panel B: checklist of the 76 information items related to seven areas of information

Category
Historical information
ROE - figure or growth percentage (YES/NO)
ROE - figure or growth percentage (additional information)
ROA - figure or growth percentage (YES/NO)
ROA - figure or growth percentage (additional information)
EPS - figure or growth percentage (YES/NO)
EPS - figure or growth percentage (additional information)
Sales - figure or growth percentage (YES/NO)
Sales - figure or growth percentage (additional information)
Price per share (PPS) figure or growth percentage (YES/NO)
Price per share (PPS) - figure or growth percentage (additional information)
Corporate social responsibility
GRI Indicators (YES/NO)
Description of social programs and strategy (YES/NO)
Quantitative information on social investment (YES/NO)
Intangibles / Intellectual capital
Intellectual capital report (YES/NO)
Human capital: training programs (YES/NO)
Human capital: training programs (total investment)
Human capital: training programs (number of programmes)
Human capital: training programs (number or percentage of employees attending the training programmes)
Human capital: employee turnover (YES/NO)
Relational capital: customer loyalty index (YES/NO)
Relational capital: customer satisfaction index (YES/NO)
Structural Capital: quality certifications (YES/NO)
Structural Capital: quality certifications (number)
Structural Capital: Investment on Research (YES/NO)
Structural Capital: Investment on Research (figure)
Structural Capital: Investment on Development (YES/NO)
Structural Capital: Investment on Development (figure)

Category
Projected information
Descriptive information on projected sales (YES/NO)
Quantitative information on projected sales (YES/NO)
Quantitative information on projected sales (additional information)
Descriptive information on projected earnings (YES /NO)
Quantitative information on projected earnings (YES /NO)
Quantitative information on projected earnings (additional information)
Descriptive information on projected R&D expenditures (YES /NO)
Quantitative information on projected R&D expenditures (YES /NO)
Quantitative information on projected R&D expenditures (additional information)
Descriptive information on projected market share (YES /NO)
Quantitative information on projected market share (YES /NO)
Quantitative information on projected market share (additional information)
Descriptive information on projected cash flows (YES /NO)
Quantitative information on projected cash flows (YES /NO)
Quantitative information on projected cash flows (additional information)
Background information
Objectives – descriptive information (YES /NO)
Objectives - quantitative information (YES /NO)
Macroeconomic environment - descriptive information (YES /NO)
Macroeconomic environment - quantitative information (YES /NO)
Legal and political environment - descriptive information (YES /NO)
Legal and political environment - quantitative information (YES /NO)
Competitive environment - descriptive information (YES /NO)
Competitive environment - quantitative information (YES /NO)
Financial markets - descriptive information on the capital markets' general trend (YES/NO)
Financial markets- quantitative information on the capital markets' general trend (YES/NO)
Descriptive information on the company stock evolution on financial markets (YES/NO)
Quantitative information on the company stock evolution on financial markets (YES/NO)
Detailed information on ownership structure (YES/NO)
Information about the management stock ownership (YES/NO)
Detailed information on management remuneration (YES/NO)
Information on good corporate governance practices (YES/NO)
Information about meetings with financial analysts (YES/NO)
Non-financial information
Number of employees
Information on the company contracting policy (YES /NO)
Information on the distribution of employees by gender (YES /NO)
Information on the distribution of employees by age (YES /NO)
Information on average compensation per employee (YES/NO)
Information on number of units sold (figure or growth percentage) (YES/NO)
Information on market share (YES/NO)
Management analysis
Management analysis of changes in net sales (YES /NO)
Management analysis of changes in the level of expenditures (YES /NO)
Management analysis of changes in earnings (YES /NO)
Management analysis of changes in market share (YES /NO)
Management analysis of changes in R&D expenses (YES /NO)
NIC/NIIF adoption
Descriptive information on the main effects of the adoption of NIC/NIIF (YES/NO)

Quantitative information - reconciliation - main effects of NIC/NIIF adoption on shareholders' equity
(YES/NO)

Quantitative information - reconciliation - main effects of NIC/NIIF adoption on earnings (YES/NO)

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Table 1
Sample selection procedure and list of firms comprising the sample

Panel A: Sample selection procedure

	n°
Non-financial firms listed in the Madrid Stock Exchange in 2005	124
Not required to report consolidated financial statements	12
Reporting period different from 31st December 2005	5
Missing observations for corporate governance variables	9
Missing observations for financial control variables	36
Final sample	62

Panel B: List of firms comprising the sample

Company name	Company name
Logista S.A.	Amper S.A.
NH Hoteles S.A.	Befesa Medio Ambiente S.A.
Prosegur S.A.	Indra Sistemas S.A.
Service Point Solutions S.A.	Adolfo Domínguez S.A.
Sol Meliá S.A.	Altadis S.A.
Acciona S.A.	Baron de Ley S.A.
ACS Actividades Construcción y Servicios	Campofrío Alimentación
Fomento Construcciones y Contratas S.A.	Dogi International Fabrics S.A.
Obrascon Huarte Lain S.A.	Ebro Puleva S.A.
Aguas de Barcelona S.A.	Gamesa
Enagas S.A.	Grupo Empresarial Ence
Gas Natural SDG S.A.	Iberpapel Gestión S.A.
Hullas del Coto Cortes	Indo Internacional S.A.
Iberdrola S.A.	Miquel y Costas S.A.
Petroleos (Cepsa)	Papeles y Cartones de S.A.
Red Eléctrica de España	Pescanova S.A.
Repsol YPF S.A.	SOS Cuétara S.A.
Unión Fenosa S.A.	Tableros de Fibras S.A.
Fadesa Inmobiliaria S.A.	Tavex Algodonera S.A.
Inbesos S.A.	Tele Pizza S.A.
Inmobiliaria Colonial S.A.	Viscofan S.A.
Metrovacesa S.A.	Ercros S.A.
Cementos Portland Valderrivas S.A.	Construcciones y Auxiliar de Ferrocarriles, S.A.
Uralita S.A.	Duro Felguera S.A.
Antena 3 S.A.	Elecnor S.A.
Sogecable S.A.	Tubacex S.A.
Telecinco S.A.	Abertis S.A.
Acerinox S.A.	Cintra
Lingotes Especiales S.A.	CLH
Tubos Reunidos S.A.	Iberia S.A.
Abengoa S.A.	Telefónica S.A.

Table 2
Descriptive statistics on the voluntary disclosure index and sub-indexes

Variables	n	mean	median	std.dev.	max	min
D_Index	62	0.2501	0.253	0.0866	0.480	0.067
I_H	62	0.2726	0.200	0.1757	0.800	0
I_CSR	62	0.3306	0.375	0.3320	1.000	0
I_IC	62	0.2247	0.214	0.1754	0.571	0
I_PRI	62	0.0355	0.000	0.0624	0.267	0
I_BCK	62	0.0327	0.294	0.1501	0.706	0
I_NF	62	0.3364	0.286	0.1937	0.857	0
I_MA	62	0.1419	0.100	0.1751	0.600	0
I_IAS	62	0.8011	1.000	0.3694	1.000	0

D_Index = General voluntary disclosure index; I_H = Historical information disclosure index; I_CSR = corporate social responsibility disclosure index; I_IC = intangible and intellectual capital disclosure index; I_PRI = projected information disclosure index; I_BCK = background and general information disclosure index; I_NF = non-financial statistics disclosure index; I_MA = management analysis disclosure index; I_IAS = IAS/IFRS adoption disclosure index.

Table 3
Descriptive statistics on corporate governance variables

Variables	n	mean	median	std.dev.	max	min	n° (%)
Board size	62	11.95	11	4.01	20	5	
N° executive directors	62	2.24	2	1.13	5	0	
N° gray directors	62	5.40	5	3.96	19	0	
N° independent directors	62	3.97	4	2.47	13	0	
N° other directors	61	0.36	0	0.84	4	0	
% executive directors	62	0.20	0.19	0.12	0.63	0	
% gray directors	62	0.42	0.44	0.24	1	0	
% independent directors	62	0.35	0.33	0.19	0.82	0	
% other external directors	62	0.03	0	0.077	0,4	0	
Ownership Concentration	62	51.68	56.23	22.67	97.29	0	
Main shareholder ownership	62	30.16	24.50	21.21	91.16	0	
N° majority shareholders	62	3.69	3.5	2.084987	9	0	
Majority independent directors							16 (25.80)
Majority gray directors							25 (40.3%)
Majority executive directors							2 (0.09)
Majority external directors							60 (96.7%)
Chairman/CEO (yes/no)							44 (70.97%)
Big four	62						56 (92.32 %)

Table 4
Descriptive statistics on control variables

Variables	n	mean	median	std.dev.	max	min
Total assets	62	6,327,031	1,304,084	10,694,174	64,789,100	60,170
Market capitalization	62	4,239,967	1,547,609	8,948,129	60,810,783	37,573
Shareholders' equity	62	1,436,375	393,310	2,874,395	15,262,000	29,560
Leverage (LEV)	62	1.403	0.884	1.551	7.585	0.0012
Market-to-book (MB)	62	3.340	2.30	2.815	14.876	0.835
Return on Assets (ROA)	62	0.056	0.047	0.052	0.33	-0.001
Number of analysts	54	9.79	8.77	6.92	31.25	1

Table 5

Summary statistics from the Ordinary Least Squares regression. Stage 1 regression- relationship between the proportion of independent directors and firm specific characteristics.

$$\%_IND_{it} = \alpha + \beta_1 BOARD_{it} + \beta_2 CAP_{it} + \beta_3 LASSET_{it} + \beta_4 LEV_{it} + \beta_5 ROA_{it} + \beta_6 MB_{it} + \varepsilon_{it}$$

Dependent variable = %_IND				
Variables	Expected sign	Coef.	T-stat	Pr > t
Intercept		0.04983	0.25	0.8057
BOARD	-	-0.02619	-3.83***	0.0003
CAP	-	-0.46397	-5.4***	<.0001
LASSET	+	0.05819	3.33***	0.0016
LEV	+	-0.02429	-1.3 [#]	0.1993
ROA	+	-0.17295	-0.36	0.72
MB	+	0.01939	2.1**	0.0405
Adj R- Sq	0.4254			
F-stat (p value)	<.0001			

%_IND = Proportion of independent directors in the board of directors. BOARD = board size. CAP = Ownership concentration measured as the proportion of the firm's capital owned by significant shareholders. We consider as significant a capital share over 30%. LASSET = logarithm of total assets. LEV = total debt to equity ratio. ROA = Return on assets. MB = *market-to-book* ratio.

10% significant – one-tailed T-test

5% significant – one-tailed T-test

1% significant – one-tailed T-test

* 10% significant - two-tailed T-test

** 5% significant - two-tailed T-test.

*** 1% significant - two-tailed T-test

Table 6

T-test of differences in means on D_Index, based on corporate governance and firm-specific characteristics. Wilcoxon non-parametric statistic has been used to test for the differences in the discrete Duality and Block variables

Variables		n	D_Index	t-stat	Pr > t
%_independent directors	< mean	38	0.2375	-1.45 [#]	0.1522
	> mean	24	0.27		
%_gray directors	< mean	30	0.2458	-0,38	0.7064
	> mean	32	0.2542		
%_executive directors	< mean	36	0.2593	0.98	0.3316
	> mean	26	0.2374		
Total Assets	< mean	48	0.2333	-3.00***	0.0039
	> mean	14	0.3076		
Ownership concentration	< mean	26	0.2723	1.74*	0.0863
	> mean	36	0.2341		
Board size	< mean	32	0.2308	-1.85*	0.0699
	> mean	30	0.2707		
LEV	< mean	42	0.2441	-0.79	0.4352
	> mean	20	0.2627		
ROA	< mean	40	0.243	-0.87	0.388
	> mean	22	0.263		
Duality	1	44	0.2396	1.77*	0.0764
	0	18	0.2755		
Block	0	51	0.2507	-0.03	0.9705
	1	11	0.246		

LEV = total debt to equity ratio. ROA = Return on assets. BLOCK = dummy variable that takes value one if one (maximum two) significant shareholders control over 30% of the company shares. Otherwise, the Block variable takes value 0. DUALITY = dummy variable that takes value 1 when the Chairman and CEO responsibilities lie with the same person. Otherwise, this variable takes value 0.

10% significant – one-tailed T-test
5% significant – one-tailed T-test
1% significant – one-tailed T-test

* 10% significant - two-tailed T-test
** 5% significant - two-tailed T-test.
*** 1% significant - two-tailed T-test

Table 7
Pearson and Spearman correlation matrix of D_INDEX, corporate governance and control variables

		Pearson correlation Coefficients											
		D_Index	MB	SIZE	LEV	ROA	BOARD	% IND	% DOM	% EJE	CAP	BLOCK	DUALITY
Spearman Correlation Coefficients	D_Index	1	-0.0165	0.3627**	0.1123	0.0192	0.2526**	0.2117*	-0.0574	-0.2157*	-0.2419*	-0.0153	-0.1895
			<i>0.8986</i>	<i>0.0038</i>	<i>0.3848</i>	<i>0.8821</i>	<i>0.0476</i>	<i>0.0986</i>	<i>0.6576</i>	<i>0.0923</i>	<i>0.0582</i>	<i>0.9059</i>	<i>0.1402</i>
	MB	0.1454	1	0.1333	0.4209***	0.3097**	0.1980	0.0229	0.0218	0.0009	0.2234	0.1480	-0.2542**
		<i>0.2596</i>		<i>0.3017</i>	<i>0.0007</i>	<i>0.0143</i>	<i>0.1229</i>	<i>0.8600</i>	<i>0.8665</i>	<i>0.9944</i>	<i>0.0809</i>	<i>0.2510</i>	<i>0.0462</i>
	SIZE	0.3068**	0.3107**	1	0.3585**	-0.0597	0.6698***	0.0861	0.0640	-0.1985	0.0318	0.0055	-0.0150
		<i>0.0153</i>	<i>0.0140</i>		<i>0.0042</i>	<i>0.6450</i>	<i><.0001</i>	<i>0.5058</i>	<i>0.6212</i>	<i>0.1219</i>	<i>0.8063</i>	<i>0.9661</i>	<i>0.9079</i>
	LEV	0.1963	0.3451***	0.4832***	1	-0.3901***	0.0666	0.0026	-0.0732	0.1779	0.1495	0.2618**	-0.2323*
		<i>0.1263</i>	<i>0.0060</i>	<i><.0001</i>		<i>0.0017</i>	<i>0.6071</i>	<i>0.9838</i>	<i>0.5717</i>	<i>0.1664</i>	<i>0.2462</i>	<i>0.0398</i>	<i>0.0693</i>
	ROA	0.1244	0.1535	0.0257	-0.5193***	1	0.1400	-0.0381	0.1315	-0.1354	0.0904	0.0430	-0.1334
		<i>0.3353</i>	<i>0.2336</i>	<i>0.8428</i>	<i><.0001</i>		<i>0.2779</i>	<i>0.7689</i>	<i>0.3084</i>	<i>0.2939</i>	<i>0.4846</i>	<i>0.7399</i>	<i>0.3012</i>
	BOARD	0.2423*	0.3045**	0.6668***	0.1748	0.2994**	1	-0.2344*	0.3793***	-0.3675***	0.1110	-0.1748	-0.0435
		<i>0.0578</i>	<i>0.0161</i>	<i><.0001</i>	<i>0.1742</i>	<i>0.0181</i>		<i>0.0667</i>	<i>0.0024</i>	<i>0.0033</i>	<i>0.3904</i>	<i>0.1742</i>	<i>0.7370</i>
	%_IND	0.1973	0.0470	0.0434	-0.0799	-0.0017	-0.2598**	1	-0.8404***	0.0071	-0.5590***	0.0056	0.0716
		<i>0.1243</i>	<i>0.7167</i>	<i>0.7378</i>	<i>0.5371</i>	<i>0.9894</i>	<i>0.0415</i>		<i><.0001</i>	<i>0.9561</i>	<i><.0001</i>	<i>0.9657</i>	<i>0.5804</i>
	%_DOM	-0.0146	-0.0112	0.1097	0.0064	0.1542	0.3935***	-0.8284***	1	-0.4366***	0.4183***	-0.1853	-0.1330
		<i>0.9103</i>	<i>0.9314</i>	<i>0.3962</i>	<i>0.9606</i>	<i>0.2315</i>	<i>0.0016</i>	<i><.0001</i>		<i>0.0004</i>	<i>0.0007</i>	<i>0.1493</i>	<i>0.3028</i>
	%_EJE	-0.2077	-0.0313	-0.2225*	-0.0416	-0.2471*	-0.3808***	0.0694	-0.4306***	1	0.1021	0.1614	0.1983
		<i>0.1053</i>	<i>0.8092</i>	<i>0.0822</i>	<i>0.7482</i>	<i>0.0529</i>	<i>0.0023</i>	<i>0.5920</i>	<i>0.0005</i>		<i>0.4299</i>	<i>0.2100</i>	<i>0.1223</i>
	CAP	-0.2272*	0.1966	0.0056	0.0137	-0.1007	0.0378	-0.4473***	0.3332***	0.0585	1	0.3294***	-0.1186
		<i>0.0758</i>	<i>0.1257</i>	<i>0.9654</i>	<i>0.9157</i>	<i>0.4360</i>	<i>0.7708</i>	<i>0.0003</i>	<i>0.0081</i>	<i>0.6517</i>		<i>0.0089</i>	<i>0.3584</i>
	BLOCK	-0.0059	0.1309	0.0318	0.0766	-0.1828	-0.1528	0.0626	-0.1841	0.1830	0.3362***	1	-0.2092
		<i>0.9636</i>	<i>0.3104</i>	<i>0.8059</i>	<i>0.5536</i>	<i>0.1549</i>	<i>0.2355</i>	<i>0.6286</i>	<i>0.1519</i>	<i>0.1544</i>	<i>0.0075</i>		<i>0.1028</i>
	DUALITY	-0.2278*	-0.1628	-0.0516	-0.0794	-0.1172	-0.0419	0.0607	-0.1610	0.2535**	-0.0834	-0.2403*	1
		<i>0.0749</i>	<i>0.2061</i>	<i>0.6903</i>	<i>0.5395</i>	<i>0.3645</i>	<i>0.7465</i>	<i>0.6394</i>	<i>0.2114</i>	<i>0.0468</i>	<i>0.5193</i>	<i>0.0600</i>	

D_Index = General voluntary disclosure index. MB = *market-to-book* ratio. SIZE = logarithm of total assets. LEV = total debt to equity ratio. ROA = Return on assets. BOARD = Board of Directors' size. %_IND = proportion of independent directors in the board. %_DOM = proportion of gray directors on the board. %_EJE = proportion of executive directors in the board. CAP = Ownership concentration measured as the proportion of the firm's capital owned by the main shareholders. BLOCK = dummy variable that takes value one if one (maximum two) significant shareholders control over 30% of the company shares. Otherwise, the Block variable takes value 0. DUALITY = dummy variable that takes value 1 when the Chair and CEO responsibilities lie with the same person. Otherwise, this variable takes value 0.

* 10% significant - two-tailed T-test
** 5% significant - two-tailed T-test
*** 1% significant - two-tailed T-test

Table 8

Summary statistics from the Two Stage Least Squares regression. Stage 2 regression - relationship between the voluntary disclosure variable and the vectors of BOARD and CONTROL variables, using the fitted value of %_IND (%_IND_est)

$$D_INDEX_{it}/RD_INDEX_{it} = \alpha + \beta_1 BOARD_{it} + \beta_2 \%_IND_est + \beta_3 DUALITY_{it} + \beta_4 CCAP_{it} + \beta_5 LEV_{it} + \beta_6 ROA_{it} + \beta_7 MB_{it} + \varepsilon_{it}$$

Panel A: Dependent variable = D_INDEX

		Modelo 1		Modelo 2		Modelo 3		Modelo 4	
		D index		D index		D index		D index	
		Coefficient	t-stat	Coefficient	t-stat	Coefficient	t-stat	Coefficient	t-stat
Intercept		0.1178	1.60	0.1138	1.5	0.0940	1.25	0.0922	1.19
BOARD	+	0.0076***	2.69	0.0078***	2.67	0.0086***	2.86	0.0087***	2.79
%_IND_EST	+	0.2100*	1.95	0.2100*	1.97	0.2441**	2.15	0.2448**	2.14
DUALITY	-	-0.0391*	-1.74	-0.0368#	-1.52	-0.0405*	-1.7	-0.0396#	-1.58
CCAP	-	-0.0067	-0.24	-0.0084	-0.3	-0.0044	-0.02	-0.0011	-0.04
Block	+			0.0084	0.27			0.0041	0.13
LEV						0.0114	1.2	0.0111	1.14
ROA	+					0.2058	0.78	0.2014	0.75
MB	+					-0.0088*	-1.76	-0.0888	-1.74
Adj R- Sq		15.01%		17.15%		15.45%		16.99%	
Max. VIF		1.99		1.99		2.23		2.23	
F-stat		3.69		2.92		2.59		2.23	
(p value)		(0.0096)		(0.0206)		(0.0222)		(0.0395)	

Panel B: Dependent variable = RD_INDEX

		Modelo 1		Modelo 2		Modelo 3		Modelo 4	
		RD index		RD index		RD index		RD index	
		Coefficient	t-stat	Coefficient	t-stat	Coefficient	t-stat	Coefficient	t-stat
Intercept		0.0395	1.00	0.0401	0.99	0.0256	0.64	0.0270	0.65
BOARD	+	0.0034	2.25**	0.0034	2.18**	0.0040	2.49**	0.0039	2.37**
%_IND_EST	+	0.0806	1.41 [#]	0.0806	1.39 [#]	0.1031	1.70*	0.1026	1.68*
DUALITY	-	-0.0244	-2.03**	-0.0247	-	-0.0259	-	-0.0266	-
					1.91*		2.04**		1.99**
CCAP	-	-0.0042	-0.29	-0.0040	-0.26	0.0004	0.03	0.0009	0.05
Block	+			-0.0013	-0.08			-0.0030	-0.18
LEV	+					0.0051	1.01	0.0053	1.01
ROA	+					0.1183	0.84	0.1216	0.85
MB	-/+					-0.0048	-1.81*	-0.0049	-1.80*
Adj R- Sq		11.21		13.69		11.69		10.08	
Max VIF		1.99		1.99		2.23		2.23	
F-stat		2.92		2.30		2.15		1.85	
(p value)		(0.286)		(0.0569)		(0.0532)		(0.0872)	

BOARD = board size. %_IND_EST = proportion of independent directors on the board as estimated in the 1st stage regression. DUALITY = dummy variable (1-0) that takes value one when the Chair and CEO responsibilities double up. CCAP = Ownership concentration measured with a dummy variable (1-0) that takes value one when the main shareholders own more than 30% of the firm. BLOCK = Dummy variable that takes value one if one (maximum two) significant shareholders control over 30% of the company shares. Otherwise, the Block variable takes value 0. LEV = total debt to equity ratio. ROA = Return on assets. MB = *market-to-book* ratio. D_INDEX General voluntary disclosure index. RD_Index corresponds to the transformation of the D_INDEX variable in deciles. RD_Index takes values from 1 to 10.

10% significant – one-tailed T-test
 ## 5% significant – one-tailed T-test
 ### 1% significant – one-tailed T-test

* 10% significant - two-tailed T-test
 ** 5% significant - two-tailed T-test.
 *** 1% significant - two-tailed T-t