CORPORATE GOVERNANCE MECHANISMS AND THEIR IMPACT ON FIRM VALUE

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Abstract

Previous studies have cast doubts on the effectiveness of corporate governance codes in Continental-European countries, due to their Anglo-Saxon orientation. We chose a Continental-European country with an Anglo-Saxon orientated code, such as Spain, and analyse the effects of the recommendations proposed in the Spanish Olivencia Code on the value of the firm. By using panel data estimation, we analyse the impact on firm's value of some corporate governance related variables, such as the quality of audit reports, the magnitude of director remuneration, the reporting on director remuneration or the firm size. Results suggest a positive relationship between good corporate governance practices and the value of the company. Moreover, the more transparent the company is and the more favourable audit reports they obtain, the better the firm's value. We also conclude that it is the degree of compliance with the codes, rather than the mere reporting of whether firms comply or not with them, which increases firm's value.

Keywords: corporate governance code, compliance, director remuneration, panel data

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1. Introduction

There seems to be a large consensus among both academics and professionals to demand from public firms new efforts to improve their corporate governance practices. The collapses of Enron, Parmalat, Royal Ahold and Polly Peck made it clear that firms should undergo further modifications to protect their shareholders' interests, to increase the firm's transparency and to guarantee shareholders' reliance on directors' management. Among the proposed modifications, Matos and Coelho (2003) highlight new patterns of ownership structure and portfolio diversification, improvement in the flexibility of adaptation to global markets and an increase in institutional investment in international markets as well as the investments on new technologies which enable a faster dissemination of innovation. In this scenario, Mallin, Mullineux and Wihlborg (2005) consider that only through codes of good practice is it possible to increase confidence in managers, which, in conjunction with a favourable economic panorama, creates a very attractive atmosphere for shareholders.

Actually, some of the mentioned modifications are contained in the spirit of most of the corporate governance codes (hereafter, CGC) which are to encourage public firms to provide more information on the ethics of the business and the transparency of the management.

In fact, previous research has focused on the analysis of whether the fulfilment of the CGC recommendations effectively enhances both shareholder value and social utility, finding in most cases positive results. However, since the CGC are mostly Anglo-Saxon orientated codes, they are not always suitable for Continental-European firms, which is something that has cast doubts on the effectiveness of the application of CGC in several European countries. Furthermore, the fact that the application of CGC is voluntary has not helped to improve good governance practices in many countries. The current paper makes some progress in this field, by investigating how the CGC recommendations and several firm characteristics related to corporate governance affect a firm's value. For this purpose, we chose a Continental-European country with a Anglo-Saxon orientated CGC, such as Spain, and analyse which of the recommendations proposed in the Spanish CGC, the Olivencia Code, have positive effects on the value of the firm.

For this purpose, we use the panel data methodology to measure the relationship between a firm's value (as measured by the Tobin's q ratio) and the degree of compliance with the 23 Olivencia Code recommendations as well as other corporate governance related variables and some control mechanisms. Among them, we chose those control

mechanisms which better reflect the effectiveness of corporate governance policies for the Spanish context. Following the Olivencia Code recommendations, we scanned the different potential mechanisms, avoiding those which, for the Spanish case, make difficult to work with panel data estimation. In this sense, variables such as insiders ownership and ownership concentration were skipped from the study, since these variables do not vary significantly across firms.

To proxy the degree of compliance with the Olivencia Code, we analyse the good governance reports submitted by Spanish firms to the Spanish supervisory stock exchange commission (CNMV) from 1999 to 2001. Furthermore, we provide new empirical evidence for a European stock market where the existing literature is still scarce.

The results suggest a positive relation between the variables of execution of good corporate governance practices and the value of the company. There is also evidence that the more transparent the company is and the more favourable audit reports they obtain, the better the managerial performance and the firm's value. Among the recommendations, it is found that the most relevant aspects are that the information is verified by the Audit Committee before release, and higher quality information is reported, such as information on transactions with own shares and shareholders structure. It is also important for corporate governance matters that the secretary of the board is given more independence and that the offices of chairman and CEO are not undertaken by the same person. Despite its Anglo-Saxon orientation, some of the Olivencia Code recommendations are surely improving a firms' value, reason why their application should be encouraged within Spanish firms. We also support previous authors which demand corporate governance codes to be compulsory, rather than voluntary. This paper goes further than previous studies which focus on the market reaction to the announcement of compliance. In fact, we conclude that it is the degree of compliance, rather than the mere reporting of whether firms comply or not with them, which increases firm's value.

The current paper is structured as follows. Section 2 presents the state of the art, focusing specifically on the Spanish context. Section 3 describes the data and methodology and Section 4 empirically analyses the suitability of the Olivencia code for Spanish firms. Section 5 presents the model estimation the results of which are shown in Section 6. Finally, Section 7 concludes.

2. Review of Previous Research

Since Berle and Means (1932), Jensen and Meckling (1976) and Jensen (1993) brought to light the problem of separation between ownership and control as well as the need of creating control mechanisms, the efforts to understand and solve this problem have been constant. First, by using every control mechanism, either external or internal, and more recently by using CGC as a way of supervising and enhancing managerial behaviour. This was, in fact, the purpose of the Cadbury Report issued in 1992 which highlighted the need for reducing managers discretionality and for turning back to those times and firm structures where the protection of the shareholders was assured. The Cadbury Report represented the first CGC, and from this pioneer experience, many other initiatives followed: France, Holland, Germany, Australia, Belgium, Canada, Portugal, Brazil and the United States are examples of countries that already possess corporate governance codes for listed companies. Most codes were intended to enforce auditors' and analysts' independence, as well as to control both corporate officers and institutional investors behaviour so as to protect minority shareholders. Furthermore, they worked on the improvement of transparency, focusing on aspects such as directors' remuneration and protection against takeovers, thus increasing the confidence of shareholders in the managerial group.

The first attempt to produce a CGC in Spain generated the Olivencia code, issued in February 1998 as an initiative of the CNMV (National Supervisory Securities Exchange Commission). It basically contained 23 recommendations ranging from the regulation of the board structure to the behaviour of their members, which tried to ensure the shareholders' confidence in the firm's management and its transparency. An English version of these recommendations is shown in Appendix, which is also available in the CNMV website. However, the lack of enforcement of the code as well as some weaknesses detected by practitioners in its redaction provoked the creation in September 2002 of a new commission. As a result, a tighter report, the Aldama Code (the current Spanish CGC), was released after January 2003. Seven years have passed since February 1998 and yet neither CGC seems to be broadly fulfilled by Spanish firms. The CNMV itself and its former presidents have remarked that only about 21% of firms fulfil this requirement. Therefore, new voices have arisen demanding the use of CGC as a way of promoting responsibility and transparency in corporate governance. Otherwise, it would be difficult to ensure investors' confidence in the stock markets. In fact, the main advantage of the Olivencia Code which has been highlighted by practitioners is that it offers a proper measure of a firm's good corporate governance. In fact, most experts on corporate governance have labelled it as a well-balanced and reasonable group of recommendations which may ensure the protection of shareholders. Moreover, its successor, the Aldama Code, was only an explanatory document, not containing any recommendations and firms were not required to

either comply with the rule or to explain the incompliance, as the Olivencia Code requires. On the contrary, the fact that the Olivencia code is not compulsory has been considered as its main disadvantage. The position of other European countries, which support firm's auto-regulation, is missing in a country such as Spain where only compulsory laws are really effective.

Apart from the efforts on the regulation side, during the last decades new attempts have been made worldwide to define proper corporate governance mechanisms whose effects would noticeably affect firms' value. To better identify these mechanisms, many authors have analysed the effects on a firm's value of a long list of factors related to control/agency factors, and managerial behaviour. Among these studies we perceive a great diversity in the way the relationships are analysed, since research into corporate governance has identified a variety of mechanisms that assure that managers act in the shareholders' best interest. Among those mechanisms, the traditional distinction between internal and external mechanisms applies. As internal mechanisms we may quote ownership concentration and managers' ownership (Chaganti and Damanpour, 1991; Barnhart and Rosenstein, 1998; Dahya, Lonie and Power, 1998), board composition (Bhagat and Black, 2002; Evans, Evans and Loh, 2002; Matos and Coelho, 2003), executive remuneration (Mehran, 1995 and Evans, Evans and Loh, 2002). Among the external ones, we may highlight the level of debt financing (Kim and Stulz, 1988; Safieddine and Titman, 1999; González, 1997) and dividend distribution (Jensen, 1986).

According to Evans, Evans and Loh (2002), although corporate governance has for years been considered an important aspect of corporate control, it has only been in recent years that the study has focused on organizational structures and their management (Drobetz, Schillhofer and Zimmermann, 2003; Lehmann and Weigand, 2000; Fernández, Gómez-Ansón and Cuervo, 2004). In this sense, Shleifer and Vishny (1997) and Jonhnson, Boone, Breach and Friedman (2000) focus on the protection of minority shareholder, and Chaganti and Damanpour (1991) and Barnhart, Marr and Rosenstein (1994) analyse the increasing participation of institutional shareholders (who are able to protect their rights more efficiently than individual shareholders). In fact, the demands for good corporate governance practices are increasing as new aspects of the organization of the firm become more relevant: capital sustainability, corporate social responsibility, increase in manpower skill and high technology (Rodríguez, 2003).

Regarding the different mechanisms proposed, since Vance's (1964) embryonic paper, the composition of the board of directors seems to positively affect firm's results when the proportion of internal directors is high. In fact, Klein (1998) provides evidence on the positive relationship between a firm's value and the representation of internal directors on the investment committee, while in his paper of 2000, he detects a significant negative correlation between a firm's value and the proportion of independent directors. With respect to external directors, Rosenstein and Wyatt (1990) confirm the hypothesis that external directors are chosen according to the shareholders' best interests. In turn, Baysinger and Butler (1985), Hermalin and Weisbach (1991) do not find any significant relationship between the composition of the board of directors and several measures of corporate governance. And, finally, Agrawal and Knoeber (1996) find a negative correlation between the proportion of external directors and the value of the company, measured by Tobin's q.

According to Mayer (1992) or Dahya, Lonie and Power (1998), it is the localization of the control rights rather than ownership concentration which determines the degree of intervention exercised by a firm's owners. In fact, Pound (1995) describes some of the situations discouraging small shareholders from exercising their rights, enabling managers to persist in their mistakes and negatively affect the firm's value. Therefore, many of the abovementioned studies have attempted to identify where the effective control is located, trying, as we do, to clarify how all these variables affect a firm's value.

The variety of papers increases when analysing corporate governance mechanisms around the world. In this study we have selected Spain, but many other places, apart from the USA and the UK, have also been analysed such as Australia (Evans, Evans and Loh, 2002), Germany (Lehann and Weigand, 2000) and some emerging markets (Gibson, 2003). For the Spanish case, we should first consider which mechanism is a priori deemed the most efficient. For instance, prior to Enron's collapse and the re-birthing of corporate governance codes, Shleifer and Vishny (1997) stated that German, Japanese and US firms would rather have bank control and institutional investors than artificial mechanisms, combining the presence of institutional investors with a regulatory system that better protects shareholders' rights. Continental European had not yet developed a proper corporate governance system, although they were mainly based on internal mechanisms such as ownership concentration, which are less effective since they lack the necessary legal protection.

As stated above, another important topic to be discussed in the current paper is the need to determine which is the most appropriate CGC for Spanish firms. Although there is a lack of empirical studies providing conclusive results so far, however, there is a long list of descriptive studies that have analysed different aspects of corporate governance. Navarro-Rubio (1998) analyses different corporate governance systems (distinguishing between a

market based system and an internal mechanisms based system) and the factors that motivate higher requirements of effective control, while Fernández and Gómez–Ansón (1999) analyse the differences between internal and external corporate governance systems. Also Recalde (2003) focuses on the differences detected between the Anglo-Saxon pattern and that required by Spanish firms. He concludes that the corporate governance requirements for European public firms should be completely different from those of the US, and that the model of CGC should be adapted to each country's specifications. However, there is a constant in every code, regardless of other differences among countries, since the control mechanisms used in the majority of the countries are the same. Fernández, Gomez-Ansón and Fernández (1998) focus on these common aspects, analysing the influence on a firm's value of the composition and size of the board of directors, and the directors' ownership participation.

Other aspects of corporate governance which have been also analysed for the Spanish context are the role of directors' remuneration (Ortín and Salas, 1997), the ownership structure (Galve and Salas, 1993; Galve and Salas, 1996), and the positive aspects of the improvement in transparency and the fulfilling of good governance practices in Spanish firms (Olcese, Gascó, Martínez-Pardo, Bonet and Gómez-Ansón, 2004). Despite the fact that not many Spanish firms comply with these practices, Fernández, Gómez-Ansón and Cuervo (2004) detected a positive market reaction to firms' announcements of their compliance with the Olivencia code when they involve a re-structuring of the board of directors. Fernández and Gómez-Ansón (2003) attempts to construct a ratio of good corporate performance among which items the compliance with the Olivencia code is included, but non conclusive results have been obtained so far.

3. Data and methodology

The main objective of this paper is to explain how firm´s value is affected by a group of variables which capture the effect of good governance practices in the Spanish company nowadays. However, the paper goes further in the study of the effects of the Olivencia code and its suitability for monitoring Spanish firms, in the light of previous criticisms based on the fact that corporate governance requirements for Continental European public firms are extremely different from those of the Anglo-Saxon countries. In this sense, we first analysed the recommendations contained in the Olivencia code, which has been classified as an Anglo-Saxon oriented code, and determine which of its 22 recommendations are more useful or more suitable to help Spanish firms' shareholders to protect their interests and therefore improve corporate governance. Data on compliance with the Olivencia code[1] by all Spanish firms quoting in the Spanish Continuous Market were obtained from the CNMV, which from 1999 to 2001 sent a questionnaire to all Spanish quoted firms demanding information of their compliance with each of the 23 recommendations contained in the Olivencia code. The answers to this questionnaire were obtained from the CNMV website. The number of firms answering the questionnaire, however, was not high. In fact, for the 3 years only 191 questionnaires were obtained: 64 firms answered the questionnaire in 1999, 69 firms in 2000 and 58 companies in 2001. To determine which of these recommendations affect a firm's value discriminant analysis technique was applied.

Our second objective consisted of gauging whether the compliance with corporate governance mechanisms has been positive for Spanish firms. For this purpose, we estimated the joint effects on a firm's value of both the Olivencia Code's recommendations and a group of other firm control-related factors. The period of study, thus, comprised two sub-periods: a control period where the Olivencia code had not yet been issued (from 1996 to 1998), and a second period, from 1999 to 2001, years for which there are data available on the application of the Olivencia code and the degree of compliance with its recommendations. For this second analysis, we constructed a complete and balanced panel, which reduced the sample size to only 50 Spanish firms ranging from 1996 to 2001, since firms with incomplete or unreliable data were dropped from the sample. Financial data were obtained from the COMPUSTAT database. A distribution of firms by sectors is shown in Table 1 whilst Table 2 discloses some descriptive statistics.

The panel data structure is captured by the econometric model given in equation 1, where y_{it}, X_{it} and ε_{it} stand for the Tobin's q, the vector of explanatory variables (assumed to be either exogenous or predetermined) and a white noise random variable for firm *i* and time *t*, respectively.

$$y_{it} = X_{it}'\beta + \eta_i + \varepsilon_{it}$$
$$\forall i = 1,...,N \text{ y } \forall t = 1,...,T \qquad (1)$$

The unobserved cross-sectional heterogeneity, captured by η_i, is analysed by both the *Fixed Effects* and the *Random Effects* models (hereafter FE and RE models, respectively). If all the explanatory variables are strictly exogenous the so-called Within-Group (WG) estimator provides consistent estimates for the parameters of the FE model (vector β). Moreover, if the regressors and the specific firm component are uncorrelated, estimating the RE model by (Feasible) Generalised Least Squares (GLS) yields to more

[1] The Olivencia Code was selected for the study, rather than the Aldama Code, since the available data series of compliance are longer (1999-2001), whilst for the Aldama Code only one year was available.

efficient estimates, since it accounts for the variance and covariance matrix of $\eta_i + \varepsilon_{it}$. This assumption (i.e. $E[x_{it}\eta_i] = 0 \quad \forall i = 1,...,N$) is traditionally tested by the Hausman's (1978) specification test or, alternatively, the RE the Breusch and Pagan's (1979) LR statistic can be used.

The discussion on FE and RE models, however, is only valid in static models where all regressors are strictly exogenous. Nevertheless in many cases the specification of dynamic structures strongly recommended (e.g. to avoid possible autocorrelation or endogeneity problems), not even the WG is consistent. Moreover, calculating first differences to remove η_i component creates a negative correlation between the lagged dependent variable and the errors in the transformed equation. In that case, the first differenced equation could be estimated by instrumental variables (IV) or two-step-least squares (2SLS), since the lagged levels of the dependent variable, dated t–*s* for *s* larger than the maximum lag of the dynamic structure of the model, are valid instruments. Arellano and Bond (1991) derived a Generalized Method of Moments (GMM) by optimally exploiting the moment conditions. This methodology assumes that there is no autocorrelation in ε_{it}, which must also be tested (m1 and m2 statistics for first and second order autocorrelation in the first difference residuals). Moreover the Sargan test of over-identifying restrictions for the dynamic panel data model must also be implemented to check the validity of the instruments.[2]

4. The suitability of the olivencia code for Spanish firms

To determine the suitability of the Olivencia code, we analyse the degree of compliance with each recommendation in the Olivencia code and its explanatory power with regard to a firm's value. With this purpose we performed a discriminant analysis in order to determine the effects on a firm's value of each individual recommendation as well as their clustering. The dependent variable is a firm's value, proxied through the Tobin's Q which we defined, following Agrawal and Knoeber (1996), as shown in equation (2). As usually, Q values higher than one will be associated with higher firm values, and vice versa.

$$Tobin's\ q = \frac{market\ value + debt}{book\ value\ of\ assets} \qquad (2)$$

As independent variables, we use each of the first 22 recommendations of the Olivencia code[3]. To construct these variables, for each company answering the CNMV's questionnaire in the years 1999, 2000 and 2001, we assigned a value of 0, 1 or 2 to each recommendation, considering whether the firm has total compliance (2), partial compliance (1) or non compliance (0) with each recommendation. The sum of the weights obtained by each recommendation for the whole group of firms are shown in Table 3, which also displays a hierarchical list of the most observed recommendations.

Results are shown in Table 4, which also provides the summary of the discriminant canonical functions, with a value of the canonical correlation of 0.522. We also display the Wilks' Lambda test, which measures the statistical significance of the discriminatory capacity of the function and which is significant in our study. These results give evidence of a significant relationship between a firm's value and recommendations 19, 20, 6, 5 and 16. Specifically, the significant recommendations are related to further information requirements (recommendation 19), further auditing requirements (recommendation 20) and internal company regulations related to (i) the need to give more independence to the Secretary of the Board (recommendation 6), (ii) the need to adopt the necessary safeguards when the roles of chairman and CEO are combined in the same person (recommendation 5) and (iii) the need to guarantee the directors' general duties of diligence, confidentiality and loyalty (recommendation 16). It is noteworthy that the last two recommendations (5 and 16) are not among the most observed by Spanish firms (as was shown in Table 3), despite their high impact on firm's value. For this reason, we consider that their compliance by Spanish firms should be encouraged in order to increase a firm's value. We thus recall Recalde (2003) when he indicates that European CGC need to become more normative if they want to be more efficient. From our point of view, Spanish companies still need to improve in the adoption of good corporate governance practices. Moreover since the recommendations 5 and 16 affect to two basic aspects of corporate governance: Del Brio, Miguel and Perote (2002) have brought to light the problems caused on the efficiency of Spanish stock markets due to the use of confidential information by firm directors and Gómez-Ansón (2005) concludes that in almost the 77% of the firms that answered the questionnaire, the roles of chairman and CEO are combined in the same person.

5. Explaining the effects of the application of the olivencia code on a firm's value

This section summarises the hypotheses tested and the variables used for that purpose. Although the

[2] See Arellano (2003) or Baltagi (2005) for further details about the panel data methodology.

[3] We do not include recommendation 23 into the analysis since it refers to the obligation of the firm to report its compliance with the CGC to the CNMV. All the firms in our sample have so reported to the CNMV at least one year in our sample period.

main objective of the paper consists on measuring the impact of corporate governance mechanisms on managerial value, other interesting hypotheses, such as the effects of audit reports, a firm's transparency policy, directors' remuneration or a firm' size are also analysed.

HYPOTHESIS ONE: The greater the compliance with the CGC recommendations, the higher a firm's value.

According to Drobetz, Schillhofer and Zimmermann (2003), a direct relationship is expected between the compliance with the CGC and a firm's value. The justification lies in the fact that investors do appreciate the reporting of information on compliance with a code that is requiring further corporate social responsibility. For this reason, we created a binary variable, GOV, which takes the value of 1 for firms that have answered the aforementioned questionnaire, and 0 otherwise. Since the execution of CGC recommendations is not possible prior to 1999 (the code did not even exist), GOV also controls for the period of application (taking the value of 0 for years prior to 1999).

Authors such as Fernández, Gómez-Ansón and Cuervo (2004) have already analysed the market reaction to the announcement of compliance, finding positive results. However, we go further and analyse not only whether firms comply or not with the code, but also to what degree a firm is complying with the code. For this purpose, a qualitative variable, APLI was constructed as the sum of the weights attributed to each of the 22 recommendations for each firm and for each year in the sample. Since the attached weights range from 0 (for non-compliance) to 2 (for total compliance), the value which the variable APLI may take ranges from 0 to 44. That is, a firm that totally complies with the 22 recommendations would obtain a maximum value of 44; while a firm which does not comply at all with any recommendation will take the value of 0. We then constructed the interactive variable APLICGC (APLI*GOV) to better control for any possible change either in the intercept or the slope of the function.

HYPOTHESIS TWO: The more favourable the audit report, the higher a firm's value.

Dewing and Russel (2004) analyse the relationship of the audit report with the corporate governance regulation, pointing out that bad governance behaviour seem to be related to unfavourable audit reports and lack of reliability of financial statements. Therefore, a *clean* audit report is expected to denote a higher firm value. To proxy the quality of the audit report, we followed the COMPUSTAT classification that distinguishes 5 categories of audit reports: (0) unaudited, (1) unqualified, (2) qualified, (3) no opinion and (4) unqualified opinion but explanatory language has been added to the standard report. We thus construct a binary variable AUDI that takes value 1 for categories 1 and 4, and 0 otherwise.

HYPOTHESIS THREE: The greater the transparency, the higher a firm's value.

Following Drobetz, Schillhofer and Zimmermann (2003), a positive relationship is expected between transparency and a firm's value, since shareholders' confidence in managers increases along with the volume and quality of the available corporate information. The reason lies in the fact that managers' discretionality diminishes when they are controlled by adequately informed investors. Since the recommendation 15 of the CGC reinforced the improvement of transparency by recommending firms to report directors' remuneration on an individual basis, we used the publication of director's remuneration as a proxy of the degree of a firm's transparency. Thus, the dummy variable TRANS was constructed, that takes value 1 for the firms that disclose directors' remuneration in individual basis and 0 otherwise.

HYPOTHESIS FOUR: The higher the directors' compensation, the higher a firm's value.

Despite the big controversy regarding the agency theory and the quite common opportunistic behaviours on the part of firms' directors (Evans, Evans and Loh, 2002), there exists evidence on the positive relationship between total shareholder returns and directors' goodwill, as denoted by Conyon, Peck and Sadler (2000). Therefore, we intend to test whether managers' compensation is not only a mechanism to ensure a firm's performance but also to ensure the effectiveness of managers behaviour by means of a good remuneration.

In this sense, a higher compensation will bring better governance and consequently better results for a firm's shareholders (Ooghe and De Langhe, 2002). To proxy directors' compensation we considered the magnitude of their remuneration standardised by the volume of the firm's income. We thus constructed the variable REMDIR, which stands for the ratio of directors' emoluments to pre-tax income, where directors' emoluments comprise all fixed and variable remunerations paid to and on behalf of directors, as measured by COMPUSTAT item G419, and pre-tax income represents net operating and non-operating income reported before appropriations to untaxed reserves, income taxes, minority interest and net and extraordinary items (COMPUSTAT item G635).

HYPOTHESIS FIVE: The bigger the firm, the smaller a firm's value.

A negative relationship is expected between firm size and its value due to the fact that directors of big firms not only pursue increasing the firm's value but also preserving their status and stability within the firm. According to Drobetz, Schillhofer and Zimmermann (2003) and Lehmann and Weigand (2000), the negative relationship between firm size and Tobin's q corroborates that, among the biggest firms, the smallest ones are those which care most for the shareholder and thus obtain better results than

those firms whose directors' targets go beyond shareholders' satisfaction. To measure firm size we used the natural logarithm of total assets (COMPUSTAT item G107).

In order to test the hypotheses above, we proposed two different specifications (Eqs. 3 and 4) of the panel data model described in Eq. 1. The first model represents a static relationship while the second one incorporates a simple dynamic structure to avoid for possible autocorrelation in the error term.

$$Q_{it} = \beta_0 + \beta_1 GOV_{it} + \beta_2 APLICGC_{it} + \beta_3 AUDI_{it} + \beta_4 TRANS_{it} + \beta_5 REMDIR_{it} + \beta_6 LSIZE_{it} + \eta_i + u_{it} \quad (3)$$

$$Q_{it} = \beta_0 + \beta_1 Q_{it-1} + \beta_2 GOV_{it} + \beta_3 APLICGC_{it} + \beta_4 AUDI_{it} + \beta_5 TRANS_{it} + \beta_6 REMDIR + \beta_7 LSIZE_{it} + \eta_i + u_{it} \quad (4)$$

where Q_{it} is a proxy for a firm's value, as shown in Eq. 2 above, and the independent variables follow the description shown in Table 5.

6. Results

Table 6 displays the estimates and their corresponding t-statistics for the different panel data models. The linear restrictions test ($F_{49,292}$) confirms the need of exploiting the panel data structure to avoid cross-sectional heterogeneity biases. The first and second columns correspond to the static FE and RE models. According to the Hausman specification test and the Breusch-Pagan LM test both estimates are consistent but the RE model involves more efficient estimates. However, other panel data studies involving Tobin's q recommended the use of dynamic models – see Hayashi and Inoue (1991) or Blundell, Bond, Devereux and Schiantarelli (1992) – and, consequently, we also provide estimates for the model including the first lag of Tobin's q as an additional explanatory variable (column 3). The Arellano-Bond tests of first and second order autocorrelation in the differenced residuals (m1 and m2, respectively) give evidence in favour of the absence of misspecification when using the simplest dynamic structure. Such a model is estimated by the GMM-2SLS Arellano-Bond dynamic panel data estimator and for this specification the Sargan test of over-identifying restrictions was also computed confirming the validity of the instruments. Regarding the parameter estimates, the results of both the static and dynamic specifications are quite similar, but the significance of the parameters obtained by the GMM-2SLS seems to increase due to the incorporation of a dynamic structure, which eliminates possible autocorrelation in the disturbances. All these results support the need to observe new corporate governance practices in order to increase firm's value. Firms complying with the Olivencia code requirements (APLICGC), reporting unqualified audit reports (AUDI), providing a high director's remuneration (REMDIR), and smaller size (LSIZE) have had their value increased in the last few years. Reporting a firm's directors' remuneration (TRANS) is expected to be welcome by the stock market, although this effect is not clearly significant. One of the most significant variables in the study is APLICGC, which is positive and highly significantly related to firm's value. Nevertheless the dummy variable capturing whether the firm complied with the Olivencia code or not (GOV) reflects a negative and significant relation to firm's (non-detected by Olcese, Gascó, Martínez-Pardo, Bonet and Gómez-Ansón, 2004). This finding implies a change in both the slope and the constant when describing the relationship between Tobin's q and the degree of compliance with the code. The impact of the variable on Tobin's q is captured by the APLICGC's slope and the negative value for GOV's parameter is required to improve data fit quality. In other words, it is the degree of compliance, rather than the mere publication of whether firms comply with the code, which increases firm's value. And it happens despite the fact that the CNMV has not yet been able to control for the veracity of the communications about Olivencia code compliance. It seems that for the Spanish case, results do not corroborate Weir and Lang's (2001) results when they conclude that a strict compliance with CGC does not lead to improvements in firm's performance. With respect to the other 4 hypotheses considered, the hypotheses two, four and five are confirmed by our results. In particular, AUDI is clearly positive and significant, which agrees with the results obtained by Drobetz, Shilfhofer and Zimmermann (2003) for the German market and represents very hopeful news after results obtained by Del Brio (1998) or Cabal (2000), concluding that the Spanish market reacts similarly to both qualified and unqualified audit reports. On the other hand, Tobin's q reacts negatively to LSIZE, but taking into account that among the 50 firms in our sample we find most of the biggest Spanish firms, this negative relationship indicates that the firms whose value has especially increased in the last years are the smallest among the biggest ones. The positive and significant effect of director's compensation on a firm's value is detected on the dynamic GMM regression because this estimation seem to be more adequate, as stated above. Finally, the dummy variable TRANS, that is, whether a firm reports or not its directors' remuneration is the least significant variable in the model with a p-value of 0.133 in the dynamic model.

7. Conclusions

Previous studies have cast doubts on the effectiveness of the application of good corporate governance codes in European countries, since sometimes they provoke new inefficiencies owing to the lack of suitability of Anglo-Saxon orientated codes to Continental-European firms. For this reason, the current paper analyses the degree of compliance of Spanish firms with the Olivencia code (Spain being a Continental-European country with an

Anglo-Saxon orientated CGC) and analyse which of its recommendations have positive effects on a firm's value. We concluded that the most relevant recommendations are those that imply that the firm goes beyond legal information requirements, reporting better information on internal issues and verifying the information also by an Audit Committee. Also recommendations affecting the company's internal regulation are welcome. It is also noteworthy that despite their significance level some of them are not usually observed by Spanish firms, reason why their compliance in Spanish firms should be encouraged in order to increase a firm's value. We may then conclude that CGC should be compulsory, rather than voluntary, in order to improve firms' performance. Furthermore, we contribute to the investigation on corporate governance by using the panel data methodology to measure the relationship between a firm's value and the degree of compliance with 22 Olivencia Code recommendations as well as other corporate governance related variables (auditing, directors remuneration, transparency and firm' size). The results suggest a positive relationship between the variables of execution of good corporate governance practices and the value of the firm. They also provide evidence on the fact that a firm's value increases as long as the audit reports receive favourable opinions, the higher the managers' compensation, the smaller the firm size and the more transparent the firm is.

We go further than previous Spanish authors which focus the analysis on the market reaction to the announcement of compliance. In fact, we conclude that it is the degree of compliance, rather than the mere reporting of whether firms comply, which increases firm's value. The results of this research support the capability of the good corporate governance practices proposed by the CNMV to ensure better managerial results for the Spanish companies, despite their Anglo-Saxon orientation. From our point of view, Spanish companies should go further on the adoption of practices that guarantee shareholders' protection, since it may bring not only more wealth to shareholders but also greater security and stability for financial markets.

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Appendices

Olivencia code recommendations

The companies to which this report is addressed are recommended to consider the following measures:

1. The Board of Directors should expressly assume the general supervisory function as its core mission, exercise the corresponding responsibilities exclusively and indelegably and establish a catalogue of the matters which are its exclusive competence.
2. The Board of Directors should include a reasonable number of independent directors who are prestigious professionals with no links to the management team or the significant shareholders.
3. In the composition of the Board of Directors, the non-executive directors (both domanial directors and independent directors) should have an ample majority over executive directors, and the proportion between domanial directors and independent directors should take account of the ratio between the significant holdings in capital and the other shareholders.
4. The Board of Directors should adjust its size to achieve more efficiency and participation. In principle, the size could range from five to fifteen members.
5. If the Board chooses to combine the offices of Chairman and CEO in the same person, it should adopt the necessary safeguards to mitigate the risks of concentrating power in a single person.
6. The figure of Secretary of the Board should be made more important and given more independence and stability, and his function of ensuring the formal and material legality of the Board's actions should be highlighted.
7. The composition of the Executive Committee, if there is one, should reflect the same balance as in the Board between the various classes of director, and the relations between the two bodies should be inspired by the principle of transparency so that the Board of Directors has full knowledge of the matters discussed and the decisions made in the Executive Committee.
8. The Board of Directors should create sub-Committees for control purposes, composed exclusively of non-executive directors, to deal with matters of accounting information and control (Audit Committee), the selection of directors and senior executives (Nomination Committee), the determination and review of remuneration policies (Remuneration Committee) and the evaluation of the governance system (Compliance Committee).
9. The necessary measures should be adopted to ensure that directors have sufficient specifically-prepared and oriented information sufficiently in advance to prepare for Board meetings, and the importance or confidentiality of the information may not justify breaches of this recommendation except in exceptional circumstances.
10. To ensure the good working of the Board, it should meet as often as necessary to fulfil its mission; the Chairman should encourage all directors to participate and take positions; particular care should be taken in drafting the minutes; and the quality and efficiency of the Board's work should be evaluated at least once per year.
11. The Board's participation in the selection and re-election of its members should conform to a formal, transparent procedure based on reasoned proposals from the Nomination Committee.
12. Companies should establish in their regulations the obligation for directors to resign where they may have a detrimental impact on the working of the Board of Directors or on the company's prestige and reputation.
13. An age limit should be established for the position of director, which could be sixty-five to seventy for executive directors and the Chairman and somewhat more flexible for other members.
14. The right of every director to request and obtain the necessary information and advice to enable him to fulfil his supervisory functions should be formally recognised, and the appropriate channels for exercising this right should be established, including the possibility of engaging external experts in special circumstances.
15. The director remuneration policy, whose proposal, evaluation and review should be assigned to the Remuneration Committee, should conform to criteria of moderation, be commensurate with the company's performance and be disclosed in detail on an individual basis.
16. The company's internal regulations should detail the obligations arising from the directors' general duties of diligence and loyalty, with particular attention being given to conflicts of interest, the duty of confidentiality, and the use of the company's business opportunities and assets.
17. The Board of Directors should foster the adoption of appropriate measures to extend the duties of loyalty to the significant shareholders and, in particular, establish safeguards covering transactions between significant shareholders and the company.
18. Measures should be taken to provide greater transparency in the mechanism of proxies and to promote communication between the company and its shareholders, particularly institutional investors.
19. The Board of Directors should go beyond the reporting requirements of the current legislation and undertake to provide the markets with fast, accurate and reliable information, particularly with regard to the shareholder structure, substantial modifications in the rules of governance, related-party transactions of particular importance and transactions with own shares.

20. All the periodical financial information, in addition to the annual report, which is released to the markets should be drafted under the same professional principles and practices as the annual accounts and should be verified by the Audit Committee before release.
21. The Board of Directors and the Audit Committee should monitor situations which might jeopardise the independence of the company's external auditors and, specifically, they should verify the percentage of the audit firm's total revenues represented by the fees paid to it under all headings, and professional services other than auditing should be publicly disclosed.
22. The Board of Directors should endeavour to ensure that the accounts drafted by it and submitted to the Shareholders' Meeting should be free of audit qualifications and, where this is not possible, both the Board and the auditors should explain clearly the content and scope of the discrepancies to the shareholders and the markets.
23. The Board of Directors should include information about its rules of governance in the annual report, and justify any departures from the recommendations of this Code.

Table 1. Number of firms by sector

Classification by sectors of the 50 firms composing our sample for the period 1996-2001

	NUMBER OF FIRMS	*PERCENTAGE*
TRADE AND OTHER SERVICES	10	20.0
CONSTRUCTION	8	16.0
CAPITAL ASSETS	9	18.0
INDUSTRIES OF TRANSFORMATION	10	20.0
TRANSPORTS AND COMMUNICATIONS	3	6.0
ENERGY	3	6.0
FINANCIAL SERVICES	7	14.0
TOTAL	**50**	**100**

Table 2: Statistics descriptive

VARIABLE	*N*	*MINIMUM*	*MAXIMUM*	*MEAN*	*STAND. VAR.*
Tobin's Q	350	0.05	11.48	1.16	1.05
GOV	350	0.00	1	0.57	0.49
APLICGC	350	0.00	44	6.68	14.74
AUDI	350	0.00	1	0.80	0.39
TRANS	350	0.00	1	0.13	0.34
REMDIR	350	106.70	754.37	4.69	50.38
LSIZE	350	1.36	5.53	2.80	0.80

Table 3: Olivencia code recommendations compliance

Data on compliance of each recommendation for 187 revised questionnaires. Column 1 shows the number of the recommendation ordered by its hierarchical position; Column 2 displays the sum of the weights attached to each recommendation: we assigned a value of 0, 1 or 2 to each recommendation, considering whether the firm has total compliance (2), partial compliance (1) or non-compliance (0). The maximum value that a recommendation can obtain is 374 (187 firms multiplied by 2- total compliance value-).

Recommendation		**Punctuation**
REC. 22		371
REC. 10		366
REC. 19	*	366
REC. 6	*	358
REC. 9		353
REC. 1		348
REC. 18		344
REC. 14		340
REC. 4		339
REC. 2		338
REC. 20	*	336
REC. 16	*	334
REC. 3		332
REC. 21		324
REC. 17		323
REC. 12		303
REC. 5	*	298
REC. 15		288
REC. 11		282
REC. 8		250
REC. 13		219
REC. 7		200

* Stars mean that the recommendation was found significant at the discriminant analysis.

Table 4. Discriminant analysis results. Included/dropped variables [A,B,C]

STEP	VARIABLEINCLUDED	WILKS' LAMBDA							
						F			
		T-STAT.	D.F. 1	D.F. 2	D.F. 3	T-STAT.	D.F. 1	D.F. 2	D.F. 3
1	REC 19	0.942	1	1	113.000	6.943	1	113.000	0.010
2	REC 20	0.876	2	1	113.000	7.922	2	112.000	0.001
3	REC 6	0.802	3	1	113.000	9.160	3	111.000	0.000
4	REC 5	0.766	4	1	113.000	8.328	4	110.000	0.000
5	REC 16	0.728	5	1	113.000	8.145	5	109.000	0.000

FunctionTest	WILKS' LAMBDA	CHI-squared	d.f.	p-value
1	0.728	35.080	5	0.000

At each step, the variable minimising the global Wilks' Lamba is included. [A] Maximum number of steps is 44. [B] Minimum partial F to enter is 3.84 . [C] Maximum partial F to drop is 2.71. REC stands for recommendation; D.F. stands for degrees of freedom.

Table 5: Description of variables in model (1)

VARIABLE	PROXY	MEASUREMENT	EXPECTED RELATIONSHIP
A firm's value	Q: Tobin's q.	Ratio of market value of outstanding shares plus debt to book value of assets.	Dependent variable.
Olivencia Code's Compliance	GOV: Measures if a firm accomplish or not the Olivencia's Code	Dummy variable that takes the value of 1 for the companies that fulfil the Olivencia Code and 0 otherwise.	Constant of two sub samples
Degree of compliance with the Olivencia Code.	APLICGC: Measures whether a firm complies with each of the 22 recommendations.	For each firm we cumulate the weights associated to each recommendation, considering the value of 0 for firms which do not apply the recommendation, 1 for partial application and 2 for total application.	Positive
Unqualified audit report.	AUDI: stands for the quality of a firm's audit report.	Dummy variable that takes the value of 1 for unqualified firms and 0 otherwise.	Positive.
Transparency policy.	TRANS: voluntary reporting of directors' emoluments.	Dummy variable that takes the value of 1 for firms reporting on managers' remuneration and 0 otherwise.	Positive
Directors' compensation.	REMDIR: percentage of income perceived by directors as emoluments.	Ratio of directors' emoluments to pre-tax income.	Positive.
Directors' own interests.	LSIZE: Firm'size	Logarithm of total assets	Negative

Table 6: Panel data estimate

	F.E. MODEL (WG)	R.E. MODEL (GLS)	DYNAMIC MODEL (GMM/2SLS)
Q (-1)			0.5685092 (23.72)
GOV	-0.1527422 (-1.52)	-0.1814212 (-1.97)	-0.4948696 (-6.89)
APLICGC	0.0056227 (1.71)	0.00583 (1.81)	0.0031394 (4.15)
AUDI	0.256263 (1.94)	0.2926235 (2.33)	0.1011337 (2.67)
TRANS	-0.2190779 (-1.49)	-0.1988961 (-1.40)	0.0543459 (1.50)
REMDIR	0.0028248 (0.41)	0.0016752 (0.24)	0.0018929 (3.20)
LSIZE	-0.4288099 (-1.74)	-0.3154186 (-2.53)	-0.8947121 (-4.62)
INTERCEPT	2.237325 (3.32)	1.98229 (5.14)	0.078064 (3.99)
F (49,294)	8.17 [0.0000]		
HAUSMAN TEST		3.67 [0.7215]	
BREUSCH AND PAGAN LAGRANGIAN MULTIPLIER TEST		258.58 [0.0000]	
m1			-1.52 [0.1273]
m2			0.62 [0.5371]
SARGAN			10.81(14) [0.7012]

(T- Statistics in parentheses and P-values in brackets)