"Evaluating the impact of compliance with governance recommendations on firm performance: the case of Spain"

Abstract

In this paper, we empirically examine whether higher levels of compliance with the recommendations included in the Spanish Unified Good Governance Code (UGGC) have an impact on firm performance using a unique hand-collected panel data set of 145 listed companies for the research period between 2007 and 2012. We find that, in spite of the increasing compliance trend, there is no conclusive evidence that adherence to the UGGC guidelines is a performance relevant factor. This result seems to be robust, as it holds in the main analysis as well as in all the additional analyses conducted. Therefore, our findings would further support the lack of consensus in this line of research regarding the true impact of compliance with the globally disseminated codes of best corporate governance practices on firm performance.

Keywords: corporate governance; compliance with governance codes; firm performance.

1. Introduction

Following the publication of the influential 1992 Cadbury Committee's Code of Best Governance Practices in the UK, many countries have followed suit. The shocking corporate governance failures at the beginning of this century reinforced the need for effective mechanisms that will protect investors over the potential autocratic power exerted by managers of public companies. These government actions have taken place either through a "hard approach" by the enactment of regulations, as in the case of the US with the 2002 Sarbanes-Oxley Act, or a "soft approach" related to a voluntary implementation of a series of corporate governance guidelines. This latter approach has been favored by most countries in adjusting to modern governance standards, as it provides firms with a higher degree of flexibility (Seidl *et al.*, 2013).

According to information from the European Corporate Governance Institute (ECGI),[1] currently more than 110 countries and international organizations have issued one or several codes of governance. These codes have symbolized a legitimization process while attempting to synthesize best business practices (Aguilera and Cuervo-Cazurra, 2009). Through adherence to this soft legislation, governments have sought to level the ground for governance practices as a way to overcome the weaknesses of the legal and institutional environment, as argued by López and Pereira (2006) in their study of governance codes across 29 countries. This global governance reform movement is pursuing to restore confidence and make companies more attractive for investors, particularly in those nations where investors have weaker legal protection (Klapper and Love, 2004).

The first Spanish code of corporate governance (known as the Olivencia Code) was issued in 1998, inspired by the Cadbury code's pioneering "comply or explain" approach. It was followed by the Aldama Code in 2002 (Aldama, 2002) and the 2006 Unified Good Governance Code (UGGC), also known as the Conthe Code (CNMV, 2013). The UGGC has 58 main recommendations and initial company reports started in 2007. The recommendations are grouped into five areas. The area 1 recommendations belong to Statutes and General Meeting (guidelines 1-6). The area 2 is associated to the Board of Directors (guidelines 7-26). The area 3 refers to recommendations on the Directors (guidelines 27-34). The area 4 (guidelines 35-41) relates to Remuneration practices, and lastly the area 5 gathers information related to the Committees (guidelines 42-58).

These codes are a set of critical governance guidelines or recommendations that should be followed by all Spanish listed companies regardless of their size and market capitalization (Fernández-Fernández, 1999). While compliance is not mandatory, in contrast to the US "rules-based" approach, listed Spanish companies must disclose in their annual governance reports the degree of adherence to these recommendations, or explain the reasons for noncompliance. Overall, repeated changes and updates in the UGGC (June 2013 and February 2015), have contributed to align Spanish companies' governance practices with OECD and European standards (García-Castro *et al*., 2012; Gutierrez and Surroca, 2014).

This article studies the effects on firm performance from compliance to such a set of non-binding governance standards. We build upon the investigation carried out by Rose (2016) for Danish firms and evaluate whether the results are maintained in the Spanish context. We hypothesize that an effective implementation of the UGGC enhances firm performance. To test this hypothesis, we use return on assets (ROA) and return on equity (ROE) as proxies of performance, following Rose's (2016) study for Denmark. Additionally, we use Tobin´s Q as an alternative measure of performance, which is customary for empirical corporate governance research.[2] Moreover, as Rose (2016), we do not only focus on the overall compliance with the governance code, but also study the relationship between compliance with recommendations in each governance area and performance.

The motivation of this study is justified by the practical importance of the subject: to improve corporate governance structures and practices. The growing use of different governance measures as proxies for quality of governance and the extended belief that such advantage will prove effective in enhancing firm performance has emerged as a meaningful line of research. So far, the study of this relationship has generated considerable interest through two predominant lines of research relying either on the use of academic governance indices (Gompers *et al.*, 2003; Bebchuk *et al.*, 2009) or on commercial governance indices (Brown and Caylor, 2006; Aggarwal *et al.*, 2007; Renders *et al.*, 2010; Núñez and Garcia-Blandon, 2017). Overall, these studies have yielded non-conclusive results about a systematic relation between the indices and performance. Conversely, there is rather limited empirical literature on this topic's third line of research that examines the impact on firm performance from compliance with a complete set of official governance guidelines (Padgett and Shabbir, 2005). As pointed out by Aguilera and Cuervo-Cazurra (2009, pg. 377), "the current state of knowledge appears to be at an impasse as there is some conflicting evidence on the effectiveness of codes of good governance". This paper is intended to help fill this gap by shedding light on the very usefulness of codes of good governance to enable companies to improve their governance and performance.

This investigation intends to contribute to this area of research by analyzing the impact on performance from compliance with the Spanish governance code, following Rose's (2016) approach. As pointed out by Rose (2016), further country studies are needed to validate conclusions about this important issue. Hence, our study constitutes a natural extension of his research. There are strong reasons that suggest that results of country studies should not be generalized as they will likely depend on the country-specific legal regime (Jensen and Meckling, 1976; La Porta *et al*., 1998). Furthermore, the level of trustworthiness embedded in the self-evaluations provided by the companies regarding the level of compliance with recommendations might also be country dependent. Hence, country-specific issues such as culture and business ethics, as well as the level of disclosure and outsiders' difficulty to verify the information, could constitute a distinguishing factor and help to explain differences across countries. In this regard, Demirgüç-Kunt and Maksimovic (1998) rank Spain at the bottom of European countries in terms of its legal efficiency index. Overall, we believe that the Spanish market provides an interesting setting in which to conduct such a study.

It should also be noticed that, unlike Rose (2016) who conducts a cross-sectional estimation of the model for year 2013, we employ a unique hand-collected panel data set of 145 Spanish listed companies for the period between 2007 and 2012. The use of dynamic panel data model reduces the sources of endogeneity that can lead to purely spurious results (Schultz *et al*., 2010), as our sample includes the same firms in different situations of compliance and performance across the years. Supporting this view, in all models the coefficients of the lagged dependent variable are positive and significant, indicating that dynamics play a relevant role in this relationship.

The results of this study might have some practical implications, as they provide some indications of the ability of compliance with a governance code to predict performance for Spanish firms. From a more general point of view, it also contributes to the debate about the very usefulness of these governance codes.

In anticipation of our results, we do not observe a significant relationship between compliance with the UGGC and firm performance. This result seems robust as it holds in the main analysis as well as in all the additional checks. Even for those companies with the highest level of compliance with the UGGC, we observe the same pattern of mixed results. Therefore, our findings cast some doubts about the real effectiveness of compliance with the codes of good governance as a suitable tool to boost performance. The comparison of our findings for Spain with Rose's (2016) for Denmark highlights the importance of the national context in corporate governance issues and, therefore, the difficulties of generalizing results.

We structure the work as follows. First, we analyze previous literature on the relationship between compliance with governance codes and performance. Then, the paper continues with the description of hypotheses and develops the methodological proposal. Finally, we comment on the results of the empirical analysis and conclude with the main remarks and implications derived from these results.

2. Background and hypothesis development

Based on agency theory (Jensen and Meckling, 1976), the relation between quality of governance and firm performance is quite straightforward. Well-governed firms exhibit higher investors' confidence reflecting enhanced management's monitoring and disciplining. As a result, these firms should exhibit lower risk and enjoy a reduced cost of capital, which should translate into higher valuation and performance.

We find a limited number of studies evaluating whether compliance with governance codes has an effect on firm performance. In addition, it should be noted that these prior studies at the international level offer heterogeneous results. In one of the first studies on this subject, Weir and Laing (2000) investigated the relationship between compliance with UK Cadbury governance recommendations and performance for a sample of local listed companies in 1992 and 1995, finding no conclusive evidence of a significant relationship at the aggregate level. Conversely, in a later study for a sample of FTSE 350 companies between 2000 and 2003, Padgett and Shabbir (2005) showed a clear positive relationship between the level of compliance with the UK "Combined Code" and performance.

For continental European firms, the available empirical evidence is also mixed. In a multiple jurisdiction investigation using a large sample of European companies in 2000 and 2001, Bauer et al. (2004) reported the surprising result that firm performance (ROE and Net Profit Margin) is negatively related with accomplishment of governance standards. Moreover, in a study of German companies listed at the Frankfurt Stock Market, Stiglbauer and Velte (2014) found that compliance with the local governance code is not a value driver. Conversely, Goncharov *et al.*, (2006), on another country study for Germany, found a positive significant relationship between their measure of compliance with a local governance code and stock market performance for large companies listed in DAX30 and MDAX.

In another single jurisdiction study, Alves and Mendez (2004), using a sample of Portuguese listed firms, reported a positive stock market performance effect connected to compliance with some of the corporate governance recommendations issued by the Portuguese Securities Market Commission (mainly with recommendations about structure and functioning of the board of directors). However, De Jong *et al*. (2005) found no relation between implementation of the governance guidelines embedded in the Peter Committee's self-regulations initiative and firm value for a sample of Dutch firms.

Lastly, regarding country studies in Europe, Rose (2016), in one of the few investigations on this subject identified in scientific journals for the last years (Michelberger, 2016), documented a positive statistically significant relationship between the level of compliance with local governance code and firm performance (ROA/ROE) for a sample of large Danish firms in 2010. However, this result was not too robust as significance for the model with ROE was only reported at marginal levels (*p-value* < 0.1). Moreover, the partial analyses conducted by Rose for each area of compliance showed mixed results: while a positive relationship between compliance and performance is reported for recommendations on board composition and remuneration policies, there is no impact on performance from increasing compliance with risk management and internal controls' guidelines.

In the developing world, Benavides-Franco and Mongrut-Montalván (2010) investigated this relationship in Colombia for a period of five years after the local governance code was first introduced in 2001. Results confirmed a positive relationship between compliance with governance guidelines and performance. Tariq and Abbas (2013) evaluated the efficacy of Pakistan's governance code using eight years of panel data and found a positive link between compliance with the code and performance.

As far as empirical research conducted within Spain, which is the focus of this paper, Del Brio *et al*. (2006), using a limited sample of local firms in 1999-2001, reported a positive relationship between some corporate governance related variables (i.e., the quality of audit reports and the magnitude of director remuneration) and the value of the firm. There are also some interesting investigations exploring the impact of reported governance compliance and market reaction. Fernández-Rodríguez *et al*. (2004), using event study methodology for a limited sample of firms in 1998-2000, reported that compliance with the Olivencia Code in case of major restructuring of the board of directors caused a positive market reaction. No effect was reported in relation to announcements related to isolated recommendations. In a related study looking at the reaction of investors to the publication of corporate governance reports, Martinez-Blasco *et al.* (2017) reported a lack of significant market reaction to the release of corporate governance reports.

As discussed in the review of the literature, compliance with corporate governance codes is becoming an important tool for measuring the quality of governance. Since compliance with such codes involves significant implementation costs, companies and investors expect that such efforts will translate into better economic results (Aguilera *et al*., 2008). We address the significance of compliance with the Spanish UGGC by answering the question of whether differences in these compliance ratios can help to explain variations in performance that have not been captured by other relevant characteristics of the firm. Although the available evidence is rather mixed, we expect a positive relationship between compliance with the UGGC and performance. Therefore, the first hypothesis states:

Hypothesis 1. Compliance with the UGGC (*CompUGGC)*, is positively and significantly associated with performance.

Given that our UGGC is an aggregate set of rules based on five main corporate governance areas, the fact that Hypothesis 1 holds for the overall UGGC does not necessarily mean that it will hold true for each of these five areas and vice versa. We agree with the criteria for grouping all the code governance recommendations into these five main groups, as they represent the most critical areas in relation to successful corporate governance. Next, we develop specific hypotheses for each area within the UGGC.

The role of bylaws and the powers of shareholders' meeting for the future of the company is central to corporate governance. We rely on the compliance with this set of recommendations gathered in area 1 of the UGGC (*CompUGGC1*) as a broad representation of the quality of bylaws and shareholders' meeting, and as such, we study its impact on performance. Accordingly, we hypothesize:

Hypothesis 1.1. Compliance with area 1 of UGGC, referred to as bylaws and shareholders meeting' recommendations (*CompUGGC1*), is positively and significantly associated with performance.

In light of the prominent role and important transformations experienced by the board of directors within past decades, numerous studies have focused on the relation between several attributes of the board (competences, size, composition, practices) and firm performance (Yermack, 1996; Bhagat and Bolton, 2008). As areas 2 and 3 of the UGGC include the most relevant recommendations for board structure and directors covered in prior research, we believe that they should reveal the expected relationship between these governance areas and performance. Accordingly, we hypothesize:

Hypothesis 1.2. Compliance with area 2 of UGGC, referred to as board structure recommendations (*CompUGGC2*), is positively and significantly associated with performance.

Hypothesis 1.3. Compliance with area 3 of UGGC, referred to as director recommendations (*CompUGGC3*), is positively and significantly associated with performance.

An important insight shared by most researchers is that board decisions appear to be largely influenced by remuneration. Jensen and Murphy (1990) and Mehran (1995), among others, have provided evidence supporting a strong impact of remuneration practices on performance. Compliance with this area should constitute a valid proxy to examine the relationship between this important area of governance and performance. Accordingly, we hypothesize:

Hypothesis 1.4. Compliance with area 4 of UGGC, referred to as remuneration practices (*CompUGGC4*), is positively and significantly associated with performance.

Regarding the last category, prior studies have documented an increasing importance of board of directors' committees on performance, even though no conclusive evidence has been found. We highlight the works of Brown and Caylor (2009) and Bowen *et al.* (2008) on this subject. As this area of the UGGC code covers the most important attributes of board committees stressed in the literature, we use it as a proxy to analyze the relationship between this governance area and performance. Accordingly, we hypothesize:

Hypothesis 1.5. Compliance with area 5 of UGGC, referred to as committee practices (*CompUGGC5*), is positively and significantly associated with performance.

3. Research design

In our analysis, we have followed Rose's (2016) approach, investigating the relevance of compliance with corporate governance recommendations in explaining firm performance. To provide a basis for comparison, we first estimate cross-sectional regressions for each of the six years in our dataset given by Equation (1).

$$ROA/ROE_{\,i} = \alpha + \beta(CompUGGC)_{\,i} + \gamma Z_{\,i} + \varepsilon_{\,i} \qquad (1)$$

Our main independent variable is the firm-level degree of compliance with UGGC (*CompUGGC*). We also test the five partial compliance areas (*CompUGGC1, CompUGGC2, CompUGGC3, CompUGGC4, CompUGGC5*) as independent variables. To test the robustness of this relationship we add the control variables (Zi) used by Rose (2016), while ε_i is the error term associated with exogenous noise and unobservable features.

We then perform dynamic panel data estimations for the whole research period to minimize possible endogeneity, a common limitation in static models as the one used by Rose (2016). As happens in practice, implementation of good governance recommendations may have some delayed effect on the performance of the company. In addition, the dynamic dimension of a panel data distinguishes how observance to governance guidelines affects performance across time. However, including the lagged dependent variable as an explanatory variable will make fixed effect estimators biased and inconsistent (Nickell, 1981), particularly in the context of a short period. We overcome this limitation by using the Dynamic Panel Data (DPD) estimator developed by Arellano and Bond (1991) and implemented in Stata by Roodman (2009). All our models are estimated with the two-step system Generalised Method of Moments (GMM) estimator, which combines equations in differences of the variables with equations in levels of the variables (see Baum *et al.*, 2007).

Finally, to further increase the robustness of our analysis, we add a third proxy for performance (*TOBINQ*). We also use a new set of control variables (Z_i) commonly identified in prior research (Yermack, 1996; Klapper and Love, 2004), including the lagged dependent variable as an explanatory variable. Our baseline model takes the following form:

$$TOBINQ_i/ROA_i/ROE_i = \alpha + \beta(CompUGGC)_i + \gamma Z_i + T_j + \varepsilon_i \qquad (2)$$

3.1 Compliance variables

We have assembled a complete hand-collected dataset that contains answers to the governance recommendations from annual corporate governance reports for the 145 Spanish listed firms analyzed. In general, we score the companies' compliance with the UGGC's guidelines as either 1) a full compliance with a recommendation (1.0 points) or 2) non-compliance or partial compliance with a recommendation (0 points). In order to quantify the level of compliance for a company we first sum up all the followed recommendations, then divide it by the total amount of recommendations that pertain to the company. Hence, we subtract those guidelines that are not applicable to a company from the total 58 recommendations. The maximum score a company can receive is therefore 1.0, equivalent to 100 percent of compliance with all considered recommendations. We also calculate partial compliance for each of five areas defined before using the same algorithm.

3.2. Proxies for performance

As Rose (2016), we use ROA and ROE as proxies for performance. In addition, we use Tobin´s Q as an alternative proxy, following the mainstream practice in corporate governance research, in our DPD estimations.

ROA

Return on Assets is a measure of operating performance, reflecting the level of profitability that the company obtains from its assets. Similar to prior research (see Larcker *et al.*, 2007; Bhagat and Bolton, 2008), we calculate *ROA* as operating income divided by total assets at book value at the end of fiscal year. We use EBIT as our proxy for the companies' operating income.

ROE

Return on Equity is another measure of operating performance, which reflects the level of profitability that the company obtains from funds invested by common shareholders. For the current study, we use the definition of *ROE* followed by most researchers in this area (see Brown and Caylor, 2009). We calculate *ROE* as the ratio of the company´s net income divided by the book value of common equity.

TOBINQ

A pure Tobin's Q measures the quotient of the market value of assets divided by the replacement value of the same assets. We follow a simplification of this measure commonly used in the finance literature (e.g. Kaplan and Zingales, 1997; La Porta *et al*., 2002), to ensure data availability for most of our sample. Hence, we measure Tobin´s Q as the sum of the book value of total assets plus the market value of common equity minus the sum of book value of common equity and deferred taxes, over book value of total assets. The market value of equity is the product of the company´s share price and the total common shares outstanding (or market capitalization) and the replacement value of assets is represented by the book value of the total assets. All book values for fiscal year *t* are matched with the market values of common equity at the end of year *t*.

3.3. Control variables

As in Rose (2016), control variables included in Equation *(1)* are firm size (*SIZE*), measured by the natural logarithm of the firm's market capitalization, a dummy variable (*OneShare*) to highlight proportionality between ownership and control ("one share – one vote") and industry dummies.

Control variables for our DPD models

Both corporate governance and performance are likely to be correlated with other critical firm metrics. Thus, to add robustness to our reported results and to mitigate the problem of possible endogeneity we add an appropriate set of control variables consistent with prior studies (Aggarwal *et al*., 2007; Klapper and Love, 2004; Yermack, 1996). We use the following set of control variables for the estimation of our dynamic models in Equation *(2)*.

Firm size (*SIZE*) is measured by the natural logarithm of total assets, as suggested by Brown and Caylor (2006). According to Jensen and Meckling (1976), large firms are more prone to deal with greater agency problems on the back of larger free cash flows. In addition, they tend to be in matured industries with low returns and potential, so we expect a negative relationship with performance. Furthermore, there is considerable literature emphasizing the positive effects of growth opportunities, as companies with solid growth prospects (*GROWTH*) usually hire better management teams and show higher performance (Core *et al.*, 1999). We follow Klapper and Love (2004) and use the average annual sales growth over the past three years. The interaction between size and growth (*SIZE x GROWTH*) is also included. We define firm age (*AGE*) as the number of years passed since the year of incorporation (natural logarithmic values). Consistent with Fama and French (2004), performance is likely to deteriorate at the margin in older firms, presumably due to a worsening of corporate governance features, among other factors. We also include the financial leverage (*LEVER*), defined as the firm's book value of long-term debt divided by the sum of market value of equity and book value of long term debt. We expect a positive relationship with performance. According to Jensen and Meckling (1976), debt service commitment should impose higher accountability for management teams, and also create value, deterring managers from making poor investment decisions. Finally, we include the dependent variable one-year and two-year lagged as control variables to reduce potential endogeneity between our governance variables and performance measures. According to Daines et al. (2010), current performance significantly affects a firm´s future level of profitability. Similar to prior work, we winsorize extreme (1st and 99th) percentiles of the pooled distribution of all control variables to neutralize the impact of possible spurious outliers.[3]

3.4. Dataset

Our sample consists of 149 listed companies on the *Mercado Continuo* at the Madrid Stock Exchange during the period between 2007 and 2012, for which data was available. We have selected 2007 as our starting year since it marks the beginning of compliance with the Spanish UGGC's public disclosures. We decided to end our research period in 2012 taking into consideration the changes made to the Spanish UGGC beginning in 2013. Table 1 presents a summary of variable names, codes, brief descriptions, and sources of data.

Insert Table 1 around here

Four companies were dropped due to the lack of financial data. Thus, our initial sample was reduced to 145 companies, and given the six-year research period, a potential 870 observations. However, for some years, information for at least one of our variables could not be obtained. Consequently, 766 firm-year observations[4] are used.

We analyze companies by industry, using the Industry Classification Benchmark prepared by FTSE that comprises 10 major industries. These firms operate in a variety of industries: Basic Materials (8), Consumer Goods (18), Consumer Services (18), Financials (37), Health Care (10), Industrials (31), Oil and Gas (9), Technology (4), Telecommunications (4), and Utilities (6), as shown in Table 2.

Insert Table 2 around here

Table 3 summarizes the descriptive statistics for the overall dataset. In general, the overall compliance with the UGGC during the period is remarkably high (a mean of 8.0 points out of 10) for the 145 large Spanish listed companies analyzed and even the 10th percentile reaches a value of 0.6. Companies do best in area 1 guidelines, referred to the statutes, with a mean of

0.88 for the overall dataset, while we report the weakest compliance (a mean of 0.71) for area 4 recommendations, referred to the remuneration practices. The average firm size is $7.16 billion, and the average leverage ratio is 34.7%. Furthermore, the average ROA is 3.57%, the ROE is 6.22% and the average Tobin's Q is 1.19. We also document an improving trend in the level of compliance during the period in Table 4, moving from a mean of 0.77 in 2007 to 0.84 in 2012, and with all 5 areas of compliance showing progresses. We have obtained the financial data from Standard and Poor's Capital IQ database.

Insert Tables 3 and 4 around here

Table 5 depicts the Pearson correlation matrix between the main variables used in our models for the entire sample of 766 initial observations. As expected, the *CompUGGC* index variable is correlated with the five major compliance areas. We also analyze the correlation between the five areas to rule out any potential substitution effects between governance main features. No significant negative correlation is found, suggesting that the areas are not substitutes or redundant. More importantly, the overall *CompUGGC* and most compliance areas are uncorrelated with the performance variables, except for area 3 recommendations, which reflects a negative significant correlation with *ROA*. This means that higher compliance with recommendations on directors should translate into lower firm performance. Also, the compliance with area 2 guidelines reflect a positive significant correlation with *TOBINQ*, indicating that higher compliance with recommendations on board structure would be consistent with higher firm performance measured by *TOBINQ*. The data also hint that, not surprisingly, performance metrics are highly intercorrelated.

Regarding the control variables, the aggregate *CompUGGC,* as well as most partial compliance ratios, show a significant relationship with size, age, and leverage. Overall, these results are meant to be descriptive and should be used as a guidance for the models' specification, which are covered in the next section. Overall, the correlations between the independent variables are relatively low, which suggests the absence of serious multicollinearity in the data.

Insert Table 5 around here

4. Empirical results

Following the proposed methodology, in this section we address the effects of the compliance with the UGGC on the selected performance metrics.

4.1. Contrast with the model of Rose (2016)

Our model can be considered an extension of that developed by Rose (2016) to estimate the impact on performance caused by the level of governance compliance controlling for firm size and vote control. In his model, performance is proxied by ROA and ROE. Hence, our first model (Model 1) studies the primary relationship between compliance with the UGGC and ROA/ROE in a cross-sectional regression for each of the six years in our dataset given by Equation (1). Tables 6 and 7 display the results of our estimations with *ROA/ROE* as proxies for performance.

Contrary to Rose (2016), we do not find a positive significant relation between compliance with the Spanish UGGC code and *ROA/ROE*. On the contrary, our regression results mostly reflect a negative relationship that turns significant during some years of our time series.[5] This contradicts our Hypothesis 1, as it indicates that firms with a higher compliance with governance recommendations (*CompUGGC*) are associated with weaker performance.

As for control variables, we find a significantly positive relationship between *SIZE* and performance in all models, similar to Rose (2016). This indicates that larger firms exhibit higher performance as measured by *ROA/ROE*, contradicting our expectation. Finally, contrary to Rose (2016), we do not report any significant relationship with the one share – one vote (*OneShare*) control variable in any year. As for the partial ratings, we report similar results in almost all years.[6]

Insert Table 6 and Table 7 around here

4.2. Results of our baseline GMM model

We continue our investigation by implementing a dynamic model where we explore the influence of the compliance with the UGGC recommendations on firm performance metrics, controlling for firm's prior performance. As in the former model, our premise is that compliance with the local governance recommendations should have a positive and significant impact on future performance.

Estimations are conducted using dynamic panel data (DPD) models given by Equation *(2)*, to take advantage of the time dimension of each observation. The reliability of our econometric methodology depends crucially on the validity of the instruments, which can be evaluated with the Hansen J test of overidentifying restrictions. We also present AR(2) statistics for second-order serial correlation in the error process. In each of our GMM models, the Hansen J statistic and the Arellano-Bond AR(2) tests show that our instruments are appropriate and no second order serial correlation is detected, respectively.

In Tables 8 through 10, we summarize the results of the estimation of our proposed six models. Our first model (Model 1) studies the primary relationship between compliance with the UGGC and our tested firm performance metrics. To evaluate the separate impact of each of the five UGGC guideline areas, we replace the aggregate compliance metric with each of the five UGGC areas (*CompUGGC1* through *CompUGGC5*) compliance metrics (Models 2-6).

Table 8 displays the results of the estimation of Equation *(2)* using *TOBINQ* as the performance measure. Contrary to Hypothesis 1, the main result is the lack of a significant relationship between the level of aggregate compliance with the UGGC *(CompUGGC*) and *TOBINQ*, as reflected in Model 1. This relationship remains non-significant when we analyze each of the five UGGC areas in Models 2-6.

In terms of the influence of the control variables, we observe the expected significant direct relationship with the first lagged performance (*TOBINQ*$_{(t-1)}$) in all six models. This positive relationship remains significant (*p-value* < 0.10) for second lagged variable (*TOBINQ*$_{(t-2)}$). We also find a significantly inverse relationship between *SIZE* and performance in all models. This indicates that larger firms exhibit weaker performance measured by *TOBINQ*, consistent with our prediction. There is also a significant negative relationship with *GROWTH*, signaling that firms with stronger growth opportunities exhibit weaker performance measured by *TOBINQ*, which contradicts our prediction. Our results also show that the interaction between *SIZE* and *GROWTH* (*SIZE x GROWTH*) is significant, highlighting how the effect of growth is moderated by size, leading to bias in models that only consider these factors separately. We also find a direct relationship between *LEVER* and performance in all models. This indicates that firms with high level of financial leverage exhibit greater performance as measured by *TOBINQ*, confirming our expectation.

Insert Table 8 around here

Table 9 depicts the results of the estimation of Equation (2) with *ROA* as the dependent variable. The main result is the existence of a negative significant relationship between *CompUGGC* and *ROA*, as reflected in Model 1. This contradicts our Hypothesis 1, as it shows that firms with a higher level of compliance with UGGC exhibit weaker future performance. As for the partial compliance ratios, we report significant negative results in Models 3 (*p-value < 0.10*), 4, and 6. This contradicts our Hypotheses 1.2, 1.3 and 1.5, indicating that firms with high level of compliance with the UGGC recommendations on the board, the directors, and committees (area 2, area 3, and area 5) exhibit weaker performance as measured by *ROA*. These results are very similar to the ones reported for the static model using Rose's (2016) approach.

As for control variables, we only find a significant influence of lagged performance *ROA*$_{(t-1)}$ and *ROA*$_{(t-2)}$ with the predicted positive sign in all models.

Insert Table 9 around here

Table 10 displays the results of the estimation of Equation *(2)* with *ROE* as the dependent variable. Model 1 shows a non-significant positive relationship between the level of aggregate compliance (*CompUGGC*) and *ROE*. Similar results are observed for partial compliance ratios except for Model 2 referred to area 1 (*CompUGGC1*). This supports our Hypothesis 1.1, as it indicates that firms with a higher level of compliance with bylaws and shareholders meeting' recommendations should exhibit stronger future performance.

As for control variables, we confirm the significant direct influence of lagged performance $ROA_{(t-1)}$ and $ROA_{(t-2)}$ in all six models. We also find a direct relationship when we examine the interaction effects of size and growth (*SIZE x GROWTH*) on performance. This indicates that whatever the impact from growth it should be moderated by size.

Insert Table 10 around here

We run several additional tests (results untabulated) to check the robustness of our findings. Firstly, we conduct additional analyses for a subsample of firms excluding financials and utilities due to their distinctive corporate governance structures and accounting practices. In general, the subsample results excluding this set of companies are qualitatively similar to those presented for the entire set of firms.

Secondly, we define a new variable for compliance with UGGC taking into account those recommendations with reported partial compliance (*CompUGGC_P*). Then, we score compliance with the UGGC's guidelines into the following three categories: 1) a full compliance with a recommendation (1.0 points), 2) a partial compliance with a recommendation (0.5 points) or 3) a breach of a recommendation (0 points). We then sum up all the recommendations that are fully or partially followed and then divide it by the total amount of recommendations that pertain to the company. As in the case of our main analysis, we run six models for our overall level of compliance and then for each of the five main areas the UGGC recommendations. In general, the estimation of the models with these new metrics for *CompUGGC_P* for the overall and five areas of partial compliance show similar results as the original model for the three performance measures analyzed.

Finally, we conduct a robustness check to rule out the notion that conditions necessary for a significant governance-performance relationship are subject to achieve a level of governance quality beyond a certain threshold. Consistent with the portfolio approach proposed by Gompers *et al.* (2003), we split the original sample into two groups: “good” quality of governance, consistent with the higher level of compliance, and “weaker” quality of governance, reflecting the lower half of companies according to *CompUGGC*.

We then conduct sequential estimations of Equation *(2)* for these “good” and “weaker” qualities of governance clusters. Contrary to our expectations, we do not find that higher compliant firms reflect a greater performance compared to lower compliant firms. All the estimations fail to establish a significant relationship between *CompUGGC* and performance. Similarly, we do not observe any significant relationship between any of the partial compliance ratings and performance. The only two exceptions occur in the estimations conducted with the sample of “weaker” governed firms for the models with *ROA and ROE* as the dependent variable, and in both cases, the sign of the relationship is negative, contradicting our expectations. Overall, these robustness tests provide support to the results reported in the main analysis regarding a lack of a significant relationship between compliance with corporate governance codes and firm performance. All the results of the robustness tests for the baseline model are presented in the Appendix.

Summing up, both our cross-sectional estimations following Rose’s (2016) model and the estimations from panel data models using an expanded set of control variables, report the lack of a positively significant relationship between compliance with UGGC recommendations and performance, regardless of how we measure it. We do find a significant relationship for ROA but with a negative sign, contradicting our expectations. We report a few significant relationships for some of the areas of compliance. However, in most cases, the sign of the relationship is contrary to our predictions.

Our results contradict the main outcome in Rose's (2016) of a positive and significant relationship between compliance and performance. It should be noted, however, that Rose's finding was not too robust, as significance at the usual statistical levels (*p-value* < 0.05) was observed in the model with ROA as the proxy for performance, but not in the model using ROE.

On the other hand, our results support some prior related studies, which have put into question the very usefulness not only of codes of good practices but also of the "comply-or-explain" approach behind these codes. Hence, Martinez-Blasco *et al*. (2017) did not observe a significant impact on short-term stock returns associated with the presentation of declarations of compliance with the UGGC. Bianchi *et al*. (2011) proposed a possible explanation for the lack of significant relationship between compliance and performance by questioning the very validity of the self-evaluation approach behind the "comply-or-explain" philosophy associated with codes of good practices. According to the authors, the companies' level of effective compliance with the Italian governance code's recommendations is considerably lower than their reported levels of formal compliance. In the same line, Van del Poel and Vanstraelen (2011) and Shrives and Brennan (2017), argued that companies release generic explanations for noncompliance or give no explanation at all, questioning the very effectiveness of the "comply-or-explain" philosophy.

5. Concluding remarks

In this paper, we empirically examine the association between compliance with Spanish UGGC and firm performance, as we believe it is important for investors to assess if such hypothesized positive economic impact does materialize. To carry out our investigation, we use UGGC compliance indices over the period 2007-2012, a period of positive evolution in Spanish corporate governance. We first followed Rose's (2016) approach conducting cross-sectional estimations. We then implemented a dynamic framework to allow the adjustment of the firm's performance to changes in corporate governance as well as to incorporate the influence of past performance.

Overall, our GMM models strongly reject the static model. Hence, a lesson to be learned from this paper is that the effects of corporate governance on performance seem to be weak without considering the dynamics from lagged performance. We show that when these lagged dependent metrics and a set of significant control variables are included in the model, each has an important role to play, as do their interactions.

To summarize, there is no evidence from our models that compliance with the UGGC has any significant impact on performance. Neither the static models following Rose's (2016) approach, nor the DPD models, confirm such a positive significant relationship. We consider the results of this investigation to be strong, as all robustness checks have yielded steady results, increasing our confidence in the absence of a UGGC compliance and performance relation. Overall, our findings are in line with some prior evidence questioning the impact of compliance with UGGC on firm performance, and, in particular, with the recent study of Martinez-Blasco *et al.* (2017) for Spain that showed that the publications of declarations of compliance with the same UGGC do not have a significant impact on short-term stocks returns.

We believe that our study might have interesting implications at various levels. On the one hand, since our main conclusion somehow contradicts Rose's (2016), it clearly encourages further research on this issue. It also stresses the importance of country-specific issues (i.e., culture and business ethics, as well as the level of disclosure and outsiders' difficulty to verify the information) to understand the compliance with the governance code-performance relationship and thus, the difficulties of generalizing country-specific evidence. On the other hand, our results suggest that in order to strengthen investor confidence, local regulators should be more active in penalizing poor explanations and make sure that the mandatory corporate governance reports do not become a mechanical tick-the-box exercise, jeopardizing the effectiveness of the "comply or explain" approach.

The limitations of the current study lay in the nature of our sample data, represented by major companies in terms of market capitalization for the Spanish corporate landscape, which tend to be relatively homogenous in terms of size, age, and to a certain extent the generally high degree of compliance with local governance code. On this regard, expanding the sample data beyond the very large (and usually older) corporations included in this dataset should be welcomed in future research.

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Notes

1. See ECGI, http://www.ecgi.org/codes/all_codes.php (last visited September 30, 2017).
2. Within this paper, we refer to *TOBINQ, ROA and ROE* as firm-level performance indicators.
3. We test the DPD models for interaction with industries for our aggregate measure as well as each area of compliance and found that compliance effects do not vary over industry.
4. In Tables 6 and 7, for our contrast Rose (2016) models, our dataset is reduced to 755 firm-year observations.
5. As a general rule, for the usual significant levels (0.01 or 0.05) we do not provide the specific mark.
6. For the sake of simplicity, results for this set of robustness checks are not reported in tables. However, they are available upon request from the authors.

References

Aggarwal, R., Erel I., Stulz, R. and Williamson, R. (2007), "Do US firms have the best corporate governance? A cross-country examination of the relation between corporate governance and shareholder wealth", *NBER Working Paper 12819*, Cambridge MA.

Aguilera, R. V., Filatotchev, I., Gospel, H. and Jackson, G. (2008). "An organizational approach to comparative corporate governance: costs, contingencies, and complementarities." *Organization Science*, 19, 475-492.

Aguilera, R. V., and Cuervo-Cazurra, A. (2009), "Codes of good governance", *Corporate Governance: An International Review*, 17, 376-387.

Aldama, C. (2002), "Informe de la comisión especial para el fomento de la transparencia y seguridad en los mercados financieros y en las sociedades cotizadas", *Ministerio de Economía y Hacienda.*

Alves, C. and Mendes, V. (2004), "Corporate Governance Policy and Company Performance: the Portuguese Case", *Corporate Governance: An International Review*, 12, 290-301.

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

Bauer, R., Günster, N. and Otten, R. (2004), "Empirical Evidence on Corporate Governance in Europe: the effect on stock returns, firm value and performance", *Journal of Asset Management*, 5, 91-104.

Baum, C., Schaffer, M., and Stillman, S. (2007), "Enhanced routines for instrumental variables/generalized method of moments estimation and testing". *The Stata Journal*, 7, 465-506.

Bebchuk, L.A., Cohen, A. and Ferrell, A. (2009), "What matters in corporate governance?", *Review of Financial Studies*, 22, 783-827.

Benavides-Franco, J., and Mongrut-Montalván, S. (2010), "Governance codes: Facts or fictions? A study of governance codes in Colombia", *Estudios Gerenciales*, 26, 85-102.

Bhagat, S. & Bolton, B. (2008), "Corporate Governance and Firm Performance". *Journal of Corporate Finance*, 14, 257-273.

Bianchi, M., Ciavarella, A., Novembre, V., Signoretti, R. (2011), "Comply or explain: Investor protection through the Italian corporate governance code", *Journal of Applied Corporate Finance*, 23, 107-121.

Bowen, R., Rajgopal, S., and Venkatachalam, M. (2008), "Accounting Discretion, Corporate Governance, and Firm Performance", *Contemporary Accounting Research*, 25, 351-405.

Brown, L.D. and Caylor, M.L. (2006), "Corporate governance and firm valuation", *Journal of Accounting and Public Policy*, 25, 409-434.

Brown, L.D. and Caylor, M.L. (2009), "Corporate governance and firm operating performance", *Review of Quantitative Finance and Accounting*, 32, 129-144.

CNMV. (2013). Código Unificado de buen gobierno de las sociedades cotizadas. *Comisión Nacional de Mercados de Valores*, Madrid.

Core, J., Holthausen, R. and Larcker, D. (1999), “Corporate governance, chief executive officer compensation, and firm performance”, *Journal of Financial Economics*, 51, 371-406.

Daines, R.M., Gow, I.D. and Larcker, D.F. (2010), “Rating the ratings: How good are commercial governance ratings?”, *Journal of Financial Economics*, 98, 439-461.

De Jong, A., De Jong, D., Mertens, G., & Wasley, C. (2005), “The role of self-regulation in corporate governance: Evidence and implications from The Netherlands”, Journal of Corporate Finance, 11, 473–503.

Del Brio, E. B., Maia-Ramires, E. and Perote, J. (2006), “Corporate governance mechanisms and their impact on firm value”, *Corporate Ownership and Control*, 4, 25–36.

Fama, E. F. and French, K. R. (2004), “New lists: Fundamentals and survival rates”, *Journal of Financial Economics*, 73 , 229-269.

Fernández-Fernández, J-L. (1999), “Ethics and the Board of Directors in Spain: The Olivencia Code of Good Governance”, *Journal of Business Ethics*, 22, 233-47.

Fernández-Rodríguez, E., Gómez-Ansón, S. and Cuervo-García, Á. (2004), “The stock market reaction to the introduction of best practices codes by Spanish firms”, *Corporate Governance: An International Review*, 12, 29-46.

García-Castro, R. and Aguilera, R. (2012), “A Decade of Corporate Governance Reforms in Spain (2000-2010)”, *In: Rasheed A, Yoshikawa T (Eds.), The convergence of corporate governance: Promise and prospects.* New York, Palgrave Macmillan, 187-211.

Gompers, P., Ishii, J. and Metrick, A. (2003), “Corporate governance and equity prices”, *The Quarterly Journal of Economics*, 118, 107-155.

Goncharov, I., Werner, J. R., and Zimmermann, J. (2006), “Does compliance with the German corporate governance code have an impact on stock valuation? An empirical analysis”, *Corporate Governance*, 14, 432-445

Gutierrez, I. and Surroca, J. (2014), “Revisiting corporate governance through the lens of the Spanish evidence”, *Journal of Management and Governance*, 18, 989-1017.

Jensen, C. and Meckling, H. (1976), “Theory of the Firm : Managerial Behavior, Agency Costs and Ownership Structure”, *Journal of Financial Economics*, 3, 305-360.

Jensen, C. and Murphy, K. (1990), “CEO incentives: It’s not how much you pay, but how”, *Journal of Applied Corporate Finance,* 3, 36-49.

Kaplan, S.N. and Zingales, L. (1997), “Do Investment-Cash Flow Sensitivities Provide Useful Measures of Financing Constraints?”, *Quarterly Journal of Economics*, 112, 169-215.

Klapper, L.F. and Love, I. (2004), “Corporate Governance, Investor Protection, and Firm Performance in Emerging Markets”, *Journal of Corporate Finance*, 10, 703-728.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A. and Vishny, R. (1998), “Law and finance”, *Journal of Political Economy*, 106, 1113-1155.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A. and Vishny, R. (2002), “Investor Protection and Corporate Valuation”, *The Journal of Finance*, 57, 1147-1170.

Larcker, D.F. and Richardson, S.A. (2007), “Corporate Governance, Accounting Outcomes, and Organizational Performance”, *The Accounting Review*, 82, 963-1008.

López, F. J., and Pereira, M. L. (2006), “Análisis internacional de los códigos de buen gobierno”, *Universia Business Review*, 11, 10-21.

Martinez-Blasco, M., Garcia-Blandon, J. and Castillo-Merino, D. (2017). “Are Investors Concerned by Annual Corporate Governance Reports? Some Evidence from the Spanish Stock Market”, *European Management Review,* 14, 391–407.

Mehran, H. (1995), “Executive Compensation Structure, Ownership, and Firm Performance”, *Journal of Financial Economics,* 38, 163-84.

Michelberger, K. J. (2016). Corporate Governance Effects on Firm Performance: A Literature Review. *Journal of Regional Formation and Development Studies*, 3, 84–95.

Nickell, S. (1981),”Biases in dynamic models with fixed effects”, *Econometrica*, 49, 1417-1426.

Núñez Izquierdo, M. and Garcia-Blandon, J. (2017). “Evaluating the link between commercial governance ratings and firm performance in a cross-European setting”, *Management Decision*, 55, 2089-2110.

Padgett, C. and Shabbir, A. (2005), “The UK code of corporate governance: link between compliance and firm performance”, *ICMA Centre Discussion Papers in Finance DP2005-17,* Reading.

Renders, A., Gaeremynck, A. and Sercu, P. (2010), “Corporate-governance ratings and company performance: A cross-European study”, *Corporate Governance: an International Review*, 18, 87-106.

Roodman, D. (2009), “How to do xtabond2: An introduction to difference and system GMM in Stata”, *The Stata Journal*, 9, 86–136.

Rose, C. (2016), “Firm performance and comply or explain disclosure in corporate governance”, *European Management Journal*, 34, 202–222.

Schultz, E. L., Tan, D. T., and Walsh, K. D. (2010), “Endogeneity and the corporate governance - performance relation. *Australian Journal of Management*, 35, 145-163.

Seidl, D., Sanderson, P. and Roberts, J. (2013), “Applying the ‘comply-or-explain’ principle: discursive legitimacy tactics with regard to codes of corporate governance”, *Journal of Management and Governance*, 17, 791-826.

Shrives, P. and Brennan, N. (2017), “Explanations for corporate governance non-compliance: A rhetorical analysis”, *Critical Perspectives on Accounting*, 49, 31-56.

Stiglbauer, M. and Velte, P. (2014), “Impact of soft law regulation by corporate governance codes on firm valuation: the case of Germany”, *Corporate Governance*, 14, 395-406.

Tariq, Y.B., Abbas, Z. (2013), “Compliance and multidimensional firm performance: evaluating the efficacy of rule-based code of corporate governance”, *Economic Modelling*, 35, 565-575.

Van de Poel, K., Vanstraelen, A. (2011), “Management reporting on internal control and accruals quality: insights from a “comply-or-explain” internal control regime” *Auditing: A Journal of Practice & Theory*, 30, 181-209.

Weir, C. and Laing, D. (2000), “The performance-governance relationship: The effects of Cadbury compliance on UK quoted companies”, *Journal of Management and Governance*, 4, 265-81.

Yermack, D. (1996), “Higher market valuation of companies with a small board of directors”, Journal of Financial Economics, 40, 185-211.

Table 1. Description of variables

Variable	Code	Definition	Data Source
Corporate Governance Variables			
Compliance UGGC	*CompUGGC*	Level of compliance with overall UGGC 58 recommendations for 2007-12	CNMV reports
Compliance UGGC1	*CompUGGC1*	Level of compliance with UGGC Area 1 recommendations for 2007-12	CNMV reports
Compliance UGGC2	*CompUGGC2*	Level of compliance with UGGC Area 2 recommendations for 2007-12	CNMV reports
Compliance UGGC3	*CompUGGC3*	Level of compliance with UGGC Area 3 recommendations for 2007-12	CNMV reports
Compliance UGGC4	*CompUGGC4*	Level of compliance with UGGC Area 4 recommendations for 2007-12	CNMV reports
Compliance UGGC5	*CompUGGC5*	Level of compliance with UGGC Area 5 recommendations for 2007-12	CNMV reports
Variables for Company Performance			
Return on Assets	*ROA*	Ratio of company´s operating income over total assets at book value.	S&P Capital IQ
Return on Equity	*ROE*	Ratio of company´s income before extraordinary items available for common equity over book value of common equity.	S&P Capital IQ
Tobin´s Q	*TOBINQ*	Quotient of market value of assets (measured as the sum of book value of total assets plus the market value of common equity minus the sum of book value of common equity and deferred taxes) and the replacement value of assets (book value of total assets).	S&P Capital IQ
Control Variables			
One Share One Vote	*OneShare*	Dichotomous variable that takes the value of 1 if the company does not have dual class voting shares and 0 otherwise	CNMV reports
Firm Size	*SIZE*	Measured by natural logarithm of market capitalization (Rose, 2016) or natural logarithm of total assets (our DPD models)	S&P Capital IQ
Growth Opportunity	*GROWTH*	Average Sales Growth in the last 3 years	S&P Capital IQ
Firm Age	*AGE*	Defined as number of years passed since the firm´s founding year	S&P Capital IQ
Level of Leverage	*LEVER*	[Long Term Debt / Market Value of Equity plus Long Term Debt]	S&P Capital IQ
$ROA_{(t-1)}$	$ROA_{(t-1)}$	1-year lagged ROA	S&P Capital IQ
$ROA_{(t-2)}$	$ROA_{(t-2)}$	2-year lagged ROA	S&P Capital IQ
$ROE_{(t-1)}$	$ROE_{(t-1)}$	1-year lagged ROE	S&P Capital IQ
$ROE_{(t-2)}$	$ROE_{(t-2)}$	2-year lagged ROE	S&P Capital IQ
Tobin´s $Q_{(t-1)}$	$TOBINQ_{(t-1)}$	1-year lagged Tobin´s Q	S&P Capital IQ
Tobin´s $Q_{(t-2)}$	$TOBINQ_{(t-2)}$	2-year lagged Tobin´s Q	S&P Capital IQ

Table 2. Dataset breakdown by sectors

Sectors	Firms	Firm-years	Percent
Basic Materials	8	44	5.74
Consumer Goods	18	96	12.53
Consumer Services	18	88	11.49
Financials	37	186	24.28
Health Care	10	58	7.57
Industrials	31	173	22.58
Oil and Gas	9	51	6.66
Technology	4	21	2.74
Telecommunications	4	19	2.48
Utilities	6	30	3.92
Total	**145**	**766**	**100.00**

Table 3. Descriptive statistics

Variables	N	Mean	Median	St. Dev.	Min	Max	p10	p90
Corporate Governance Variables								
CompUGGC	766	0.80	0.84	0.14	0.34	1.00	0.60	0.95
CompUGGC1	766	0.88	1.00	0.16	0.20	1.00	0.67	1.00
CompUGGC2	766	0.79	0.80	0.15	0.33	1.00	0.58	0.95
CompUGGC3	766	0.81	0.86	0.21	0.00	1.00	0.50	1.00
CompUGGC4	766	0.71	0.71	0.25	0.00	1.00	0.33	1.00
CompUGGC5	766	0.83	0.87	0.15	0.18	1.00	0.63	1.00
Company Performance Variables								
ROA	766	3.57	3.60	4.99	-5.36	11.40	-5.15	11.40
ROE	766	6.22	8.37	19.10	-33.20	35.40	-31.40	33.50
TOBINQ	766	1.19	1.07	0.36	0.78	1.94	0.78	1.88
Control Variables								
SIZE	766	7.16	6.96	1.97	4.37	10.60	4.45	10.60
GROWTH	766	5.36	4.19	14.70	-18.50	29.60	-17.90	29.60
AGE	766	3.89	3.99	0.73	2.48	4.88	2.64	4.88
LEVER	766	34.70	33.70	18.90	6.05	66.30	7.00	65.40

Table 4. Variables' means over the sample period

	2007	2008	2009	2010	2011	2012
	N = 121	N = 127	N = 132	N = 129	N = 130	N = 127
Variables	**Mean**	**Mean**	**Mean**	**Mean**	**Mean**	**Mean**
Corporate Governance Variables						
CompUGGC	0.77	0.78	0.79	0.80	0.82	0.84
CompUGGC1	0.84	0.87	0.88	0.88	0.89	0.90
CompUGGC2	0.76	0.77	0.78	0.79	0.80	0.81
CompUGGC3	0.76	0.79	0.80	0.80	0.83	0.85
CompUGGC4	0.67	0.65	0.65	0.68	0.78	0.81
CompUGGC5	0.79	0.81	0.83	0.84	0.85	0.85
Company Performance Variables						
ROA	5.53	3.93	2.92	3.27	3.26	2.61
ROE	13.23	7.76	3.84	6.26	4.11	2.62
TOBINQ	1.40	1.16	1.18	1.17	1.12	1.12
Control Variables						
SIZE	7.25	7.21	7.18	7.17	7.12	7.05
GROWTH	15.90	12.66	4.21	-0.73	-0.37	1.27
AGE	3.87	3.88	3.89	3.89	3.89	3.90
LEVER	31.32	33.28	35.81	36.01	35.91	35.73

Table 5. Pearson correlation coefficients

	CompUGGC	*CompUGGC1*	*CompUGGC2*	*CompUGGC3*	*CompUGGC4*	*CompUGGC5*	*ROA*	*ROE*	*TOBINQ*	*SIZE*	*AGE*	*GROWTH*
CompUGGC1	0.50*	1.00										
	0.00											
CompUGGC2	0.90*	0.32*										
	0.00	0.00										
CompUGGC3	0.79*	0.43*	0.63*	1.00								
	0.00	0.00	0.00									
CompUGGC4	0.76*	0.34*	0.59*	0.59*	1.00							
	0.00	0.00	0.00	0.00								
CompUGGC5	0.81*	0.30*	0.66*	0.48*	0.48*	1.00						
	0.00	0.00	0.00	0.00	0.00							
ROA	(0.04)	(0.05)	(0.03)	(0.11)*	0.01	(0.01)	1.00					
	0.20	0.16	0.39	0.00	0.80	0.71						
ROE	0.00	(0.04)	0.02	(0.06)	0.05	0.01	0.52*	1.00				
	0.90	0.26	0.63	0.11	0.14	0.82	0.00					
TOBINQ	(0.04)	(0.06)	(0.07)*	(0.01)	0.06	(0.06)	0.39*	0.40*	1.00			
	0.25	0.11	0.04	0.80	0.08	0.11	0.00	0.00				
SIZE	0.36*	0.06	0.33*	0.28*	0.36*	0.28*	0.11*	0.22*	(0.08)*	1.00		
	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.02			
AGE	(0.15)*	(0.12)*	(0.12)*	(0.16)*	(0.09)*	(0.11)*	0.08*	0.01	(0.05)	0.13*	1.00	
	0.00	0.00	0.00	0.00	0.01	0.00	0.02	0.86	0.10	0.00		
GROWTH	0.04	0.10*	0.07*	0.03	(0.03)	(0.00)	0.28*	0.17*	0.08*	0.10*	(0.08)*	1.00
	0.30	0.01	0.05	0.34	0.40	0.91	0.00	0.00	0.02	0.00	0.02	
LEVER	0.07*	(0.07)*	0.00	0.11*	0.11*	0.09*	(0.32)*	(0.20)*	(0.05)	(0.08)*	(0.09)*	(0.19)*
	0.05	0.05	0.91	0.00	0.00	0.01	0.00	0.00	0.17	0.02	0.01	0.00

**** p<0.05***

Table 6. Model 1' results on the influence of Compliance with UGGC on ROA

VARIABLES	2007	2008	2009	2010	2011	2012
CompUGGC	-0.881	-0.737	-6.894	-6.995**	-7.472***	-4.720*
	(-0.269)	(-0.205)	(-1.509)	(-2.386)	(-2.671)	(-1.729)
SIZE	0.597**	1.032***	1.215***	1.455***	1.272***	1.299***
	(2.206)	(3.744)	(4.491)	(7.128)	(5.995)	(6.624)
OneShare	-1.057	-0.505	-0.673	0.093	-2.664	-0.243
	(-0.917)	(-0.637)	(-0.432)	(0.117)	(-0.945)	(-0.171)
Industry-control	Yes	Yes	Yes	Yes	Yes	Yes
Constant	8.393**	4.473	6.937	0.492	5.027	1.521
	(2.361)	(1.367)	(1.270)	(0.183)	(1.107)	(0.511)
Observations (N)	115	123	127	130	132	128
Adjusted R-2	0.209	0.252	0.239	0.390	0.336	0.372
F-Statistic	18.16***	15.01***	9.69***	12.45***	10.44***	8.95***

Robust t-statistics in parentheses *** p<0.01, ** p<0.05, * p<0.1

Table 7. Model 1' results on the influence of Compliance with UGGC on ROE

VARIABLES	2007	2008	2009	2010	2011	2012
CompUGGC	3.754	9.358	-14.669	-22.131**	-6.199	-4.726
	(0.312)	(0.702)	(-0.879)	(-1.982)	(-0.409)	(-0.290)
SIZE	4.004***	4.561***	5.605***	5.350***	4.766***	2.927**
	(4.768)	(4.787)	(5.202)	(5.599)	(4.423)	(2.523)
OneShare	0.432	0.397	-8.642	-1.205	-6.766	-2.068
	(0.191)	(0.111)	(-1.387)	(-0.374)	(-1.225)	(-0.330)
Industry-control	Yes	Yes	Yes	Yes	Yes	Yes
Constant	-1.585	-8.073	0.625	-10.824	-23.151	7.436
	(-0.135)	(-0.606)	(0.032)	(-1.077)	(-1.526)	(0.436)
Observations (N)	115	123	127	130	132	128
Adjusted R-2	0.252	0.282	0.262	0.200	0.158	0.037
F-Statistic	19.43***	9.255***	7.438***	4.045***	3.418***	1.985**

Robust t-statistics in parentheses *** p<0.01, ** p<0.05, * p<0.1

Table 8: Robust two-step GMM estimates on the influence of Compliance with UGGC on performance as measured by Tobins' Q

	Model 1	Model2	Model3	Model4	Model5	Model6
CompUGGC(t-1)	-0.00383					
	(-0.057)					
CompUGGC1(t-1)		-0.0390				
		(-0.72)				
CompUGGC2(t-1)			-0.00155			
			(-0.023)			
CompUGGC3(t-1)				-0.0145		
				(-0.35)		
CompUGGC4(t-1)					0.0233	
					(0.58)	
CompUGGC5(t-1)						0.0117
						(0.20)
TOBINQ(t-1)	0.780***	0.782***	0.781***	0.781***	0.781***	0.782***
	(12.7)	(12.6)	(12.6)	(12.7)	(12.5)	(12.8)
TOBINQ(t-2)	0.109*	0.108*	0.109*	0.109*	0.106*	0.108*
	(1.77)	(1.75)	(1.77)	(1.77)	(1.72)	(1.75)
SIZE	-0.0112**	-0.0110**	-0.0113**	-0.0108**	-0.0123***	-0.0114**
	(-2.40)	(-2.51)	(-2.41)	(-2.39)	(-2.72)	(-2.45)
GROWTH	-0.00540**	-0.00531**	-0.00548**	-0.00533**	-0.00525**	-0.00537**
	(-2.19)	(-2.14)	(-2.22)	(-2.14)	(-2.13)	(-2.16)
SIZE x GROWTH	0.000697**	0.000691**	0.000709**	0.000689**	0.000680**	0.000694**
	(2.26)	(2.22)	(2.30)	(2.21)	(2.21)	(2.23)
AGE	-0.0205	-0.0216*	-0.0202	-0.0213*	-0.0195	-0.0202
	(-1.55)	(-1.73)	(-1.54)	(-1.68)	(-1.48)	(-1.56)
LEVER	0.00126**	0.00123**	0.00127**	0.00127**	0.00123**	0.00124**
	(2.46)	(2.41)	(2.48)	(2.47)	(2.40)	(2.43)
_cons	0.386***	0.420***	0.382***	0.394***	0.370***	0.373***
	(3.50)	(4.19)	(3.48)	(4.30)	(4.05)	(3.68)
Firm-years	602	602	602	602	602	602
Hansen J	23.15	23.05	23.12	23.09	23.23	23.21
J df	18	18	18	18	18	18
J pvalue	0.185	0.189	0.186	0.187	0.182	0.183
AR(2) pvalue	0.211	0.210	0.211	0.210	0.217	0.212

Notes: Time fixed effects and a constant term are included in all specifications. Two-step GMM-SYS estimates of CompUGGC are reported with robust t-statistics in parentheses.
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table 9: Robust two-step GMM estimates on the influence of Compliance with UGGC on performance as measured by ROA

	Model 1	Model2	Model3	Model4	Model5	Model6
CompUGGC(t-1)	-2.858***					
	(-2.59)					
CompUGGC1(t-1)		0.180				
		(0.17)				
CompUGGC2(t-1)			-1.534*			
			(-1.67)			
CompUGGC3(t-1)				-1.961***		
				(-2.78)		
CompUGGC4(t-1)					-0.568	
					(-0.97)	
CompUGGC5(t-1)						-2.799***
						(-2.87)
ROA(t-1)	0.669***	0.679***	0.675***	0.664***	0.671***	0.666***
	(8.98)	(9.21)	(9.02)	(8.90)	(9.14)	(9.08)
ROA(t-2)	0.173***	0.171***	0.171***	0.171***	0.176***	0.179***
	(2.69)	(2.64)	(2.61)	(2.64)	(2.71)	(2.81)
SIZE	0.127*	0.0423	0.0837	0.111	0.0695	0.112
	(1.78)	(0.70)	(1.25)	(1.61)	(1.04)	(1.60)
GROWTH	-0.0248	-0.0169	-0.0224	-0.0282	-0.0201	-0.0169
	(-0.58)	(-0.37)	(-0.49)	(-0.67)	(-0.46)	(-0.38)
SIZE x GROWTH	0.00689	0.00574	0.00663	0.00730	0.00626	0.00586
	(1.37)	(1.08)	(1.26)	(1.44)	(1.23)	(1.14)
AGE	0.0216	0.127	0.0777	0.00178	0.102	0.0634
	(0.12)	(0.76)	(0.46)	(0.0098)	(0.60)	(0.35)
LEVER	-0.00890	-0.00842	-0.00900	-0.00776	-0.00823	-0.00800
	(-1.12)	(-1.04)	(-1.11)	(-1.00)	(-1.04)	(-0.97)
_cons	2.127*	-0.291	1.076	1.571	0.268	2.006*
	(1.79)	(-0.21)	(1.10)	(1.54)	(0.30)	(1.72)
Firm-years	602	602	602	602	602	602
Hansen J	21.44	22.36	22.50	21.16	21.75	22.00
J df	18	18	18	18	18	18
J pvalue	0.258	0.216	0.211	0.271	0.243	0.232
AR(2) pvalue	0.184	0.197	0.198	0.186	0.182	0.180

Notes: Time fixed effects and a constant term are included in all specifications. Two-step GMM-SYS estimates of CompUGGC are reported with robust t-statistics in parentheses.

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table 10: Robust two-step GMM estimates on the influence of Compliance with UGGC on performance as measured by ROE

	Model 1	Model2	Model3	Model4	Model5	Model6
CompUGGC(t-1)	4.227					
	(0.71)					
CompUGGC1(t-1)		13.55^{***}				
		(3.29)				
CompUGGC2(t-1)			2.728			
			(0.55)			
CompUGGC3(t-1)				-3.425		
				(-1.01)		
CompUGGC4(t-1)					3.665	
					(1.11)	
CompUGGC5(t-1)						2.182
						(0.39)
ROE(t-1)	0.564^{***}	0.568^{***}	0.563^{***}	0.558^{***}	0.565^{***}	0.561^{***}
	(9.30)	(9.42)	(9.30)	(9.13)	(9.29)	(9.21)
ROE(t-2)	0.134^{*}	0.141^{**}	0.135^{*}	0.129^{*}	0.127^{*}	0.134^{**}
	(1.95)	(2.18)	(1.95)	(1.87)	(1.87)	(1.97)
SIZE	0.238	0.177	0.288	0.540	0.169	0.307
	(0.52)	(0.46)	(0.65)	(1.19)	(0.40)	(0.71)
GROWTH	-0.485	-0.484	-0.486	-0.493	-0.482	-0.497^{*}
	(-1.60)	(-1.55)	(-1.61)	(-1.64)	(-1.58)	(-1.65)
SIZE x GROWTH	0.0835^{**}	0.0819^{*}	0.0832^{**}	0.0841^{**}	0.0828^{*}	0.0857^{**}
	(1.98)	(1.92)	(1.99)	(1.99)	(1.96)	(2.02)
AGE	-1.504	-1.103	-1.595	-1.948^{*}	-1.448	-1.563
	(-1.40)	(-1.07)	(-1.53)	(-1.90)	(-1.39)	(-1.44)
LEVER	-0.0157	-0.00743	-0.0133	-0.0145	-0.0186	-0.0162
	(-0.38)	(-0.17)	(-0.32)	(-0.35)	(-0.44)	(-0.39)
_cons	3.206	-7.009	4.484	9.266^{*}	4.185	4.649
	(0.49)	(-1.25)	(0.78)	(1.94)	(0.85)	(0.69)
Firm-years	602	602	602	602	602	602
Hansen J	20.24	21.40	20.25	20.53	20.29	20.39
J df	18	18	18	18	18	18
J pvalue	0.319	0.260	0.319	0.304	0.317	0.311
AR(2) pvalue	0.615	0.617	0.611	0.615	0.619	0.610

Notes: Time fixed effects and a constant term are included in all specifications. Two-step GMM-SYS estimates of CompUGGC are reported with robust t-statistics in parentheses.
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$