

SHAREHOLDER COMPOSITION, CORPORATE GOVERNANCE AND THEIR MONITORING EFFECTS ON FIRM PERFORMANCE

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Abstract

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The main goal of the paper is to understand if the shareholder composition must be considered as a part of the corporate governance framework or as a monitoring factor, only. A related goal of the paper is to investigate if the shareholder composition is part of the loop connecting corporate governance and corporate performance. We analyze a sample made of 10,520 firms over the years 2006-2015, in 8 European countries having very differentiated governance frameworks, shareholder composition and corporate performance. The paper gives new insights to the current debate on the relations between governance and performance as well as the one on the components of the corporate governance framework. According to our evidence, governance contributes to corporate value by reducing agency in funding, rather than having an impact over returns. Moreover, we give evidence that corporate governance should be considered as a tool contributing to the efficacy of monitoring capabilities of the shareholder composition of equity, but no clear evidence is about the composition of equity to be considered as part of the corporate governance framework.

Keywords: Corporate Governance, Capital Structure, Agency Monitoring

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1. INTRODUCTION

Corporate governance (CG) is more and more perceived as a key qualitative element of firms. The adoption of superior standards in CG leads to

expectations of higher competitive advantage of the firm. Furthermore, it is typically assumed that sound CG makes business ideas more sustainable in the long run. Accordingly, corporations adopting wise practices in CG are expected to generate superior

performance, because of both increased returns and controlled volatilities.

If the above statements are acceptable, why are CG solutions so differentiated (among countries and firms) and so sticky to move toward a unique “optimal” model? Huge cultural debates are on the go concerning the fairness of the adopted CG. Indeed, the cultural and economic backgrounds may lead to referring to different optimal CG models proposed by the theory of the firm. Clear evidence of the above concerns is the distinguished CG solutions adopted by the regulators in the Anglo-Saxon countries as compared to the Continental Europe and the Asian ones. On the same perspective, one finds empirical evidences about the superior capability of non-standard CG solutions to make more attractive entrepreneurial businesses for investors (Mantovani & Guidone, 2017).

It is still unclear if the CG framework contributes to the firm-specific or to the systematic component of the business risk. In fact, this might influence the cost of capital, and therefore the true capability of the firm to create value and attract funding. Such uncertainty about the true contribution of corporate governance to business economics arises from the difficulties to have sound measurement tools of the governance adopted by firms, therefore their ranking and scoring. In fact, the analysis of CG requires a comprehensive approach (Cremers et al., 2016) which considers the corporate governance as a framework of different elements, each characterized by specific ease of measurement, as a direct consequence of their qualitative nature. It is still unclear which elements must be included into the CG nexus and their actual contribution to the efficacy of the CG model.

There are high possibilities to have biased perceptions about the actual contribution of the CG nexus on the overall business performance. Those biases can be a direct consequence either of the incomplete depiction of the components to be included into the CG nexus or of the unclear nature of the relationship (direct or indirect) of one specific component with the firm performance. This is the case for the contribution of the funders of the company and, particularly, the shareholders. In fact, it is uninvestigated whether the shareholder composition and its monitoring activity can be viewed as an element of the CG nexus with direct/indirect contribution or a separate item contributing per se to the business performance.

This is, indeed, the inner focus of this paper. We investigate if the nature of the equity capital and the shareholder composition of the firm (quantitative and qualitative) are components of a well-established mechanism of governance, or if they contribute independently, although through the CG solutions, to have persistent returns over time and improve the return-to-risk ratio of companies.

The paper is arranged as follows. Section 2 tunes up our research question by referring to the literature on distinctions among corporate governance and monitoring effects, as far as their impact on the performance of the firms. Three indexes are proposed to describe the inner characteristics of equity capital (both qualitative and quantitative), while the research questions are based on the investigation of their true nature: governance or monitoring? Section 3 illustrates the sampling

process adopted to run the investigation along with some methodological details concerning the indicators used to proxy both corporate governance and monitoring effects. Some descriptive statistics of the sample (10,520 firms over 8 European countries) are also shown. Section 4 gives a step-by-step illustration of the empirical analysis, along with the discussion of the key results on the research questions as obtained through regressions. Finally, Section 5 concludes.

2. LITERATURE REVIEW AND RESEARCH QUESTIONS DEVELOPMENT

Efforts to improve the best practices for CG seem to be inefficient. Empirical evidence of inconsistency in CG models adopted in several countries is shown in Castellan and Mantovani, (2015). By t-testing the differences of a set of seven CG indicators, the hypothesis of the existence of substantial differences in corporate governance characteristics among the countries included in the sample is found. In fact, very few similarities are found among the possible ones under investigation among the investigated countries.

The authors cannot find the same strength in the empirical evidence when the regressions are run to test the relationships between corporate performance and the proxies depicting the CG nexus. The specific CG models adopted by the firms seem unable to explain their corporate performance, although some trends can be found when considering aggregated data at a country level. This could either suggest that CG solutions are the source of systematic risk, only, or that some firm-specific elements contributing to the comprehensive CG nexus are to be discovered, yet. Indeed, this latter intuition is our starting point: we claim that tuning up the CG framework with financing drivers is a managerial decision affecting the firm performance. In fact, the capability of corporate financial strategies to solve the monitoring and agency puzzles can boost the CG efficacy, therefore may have a direct impact on performance.

As far as the relationship between corporate governance and firm's performance is concerned, the existence of a positive relationship between the two has been established, particularly, through several studies in business literature (Weisbach, 1988; Rosenstein & Wyatt, 1990; Byrd & Hickman, 1992; Brickley, Coles, & Terry, 1994; Rajan & Zingales, 1998; Williams, 2000; Drobertz, Schillhofer, & Zimmerman, 2003; Hossain, Prevost, & Rao, 2001; Gemmill & Thomas, 2004). Since the main aim of the paper is to understand the depth of the relationship between equity and corporate governance, we must separate from the above relationship the monitoring contribution of the equity capital to the corporate performance, if any.

In order to explore how monitoring may act as a catalyst to strong corporate governance, it is first necessary to explore the motivations investors may have to monitor the governance. Shleifer and Vishny (1997) have argued that institutional shareholders have strong incentives to monitor the firms they invest in. Their large investment justifies the costs involved in monitoring and they can hope to benefit from such monitoring activities. Grier and Zychowicz (1994) also suggested that institutional

ownership played an important monitoring role and could have a strong impact on a firm's leverage. And while the case of the benefit for a large investor to monitor is formally made by Maug (1998), in practice some large institutional investors may not always engage in monitoring. In particular, passive investors and diversified funds may mitigate the risk of not monitoring through deep diversification. Obviously, such institutions have little incentive to influence the corporate governance of the firms they own in their portfolio. If Black (1992) suggests that large institutions do in fact little monitoring, Callen and Fang (2013) on the other hand point out that specific types of long-term institutional investors such as pension funds, tend to monitor actively the company they invest in.

Various studies on the impact of monitoring on corporate governance reach very different conclusions. Burkart, Gromb, and Panunzi (1997) suggest that monitoring and ownership concentration may not always result in better governance and may even hinder performance by restricting management actions and incentives. Renneboog (2000), looking at the Belgium stock market, does not find supporting evidence of the impact of institutional investors' monitoring. Gillan and Starks (2003) provide a more moderated view of the relationship between institutional investors, their monitoring and their impact on corporate governance. They suggest that the difficulty to provide strong evidence across markets may be linked to the differences of corporate governance structures, characteristics and regulatory framework between these markets leading to a contrasted picture of the potential impact of monitoring, affecting the motivations of institutional investors. Still, some empirical studies provide evidence of the impact of institutional investors on corporate governance. Hartzel and Starks (2003) link the monitoring of institutional investors to executive pay and suggest that the larger the stake an institutional investor has, the larger the influence it has on some corporate governance dimensions. Similarly, Aggarwal, Erel, Ferreira, and Matos (2011) provide evidence of the impact of institutional investors on corporate governance outside the US. Through their analysis of international portfolios, they present strong evidence of the relationship between institutional ownership and Corporate Governance indices. However, when the authors move away from corporate governance indices and focus on the potential impact of institutional investors on individual corporate governance attributes, they obtain less conclusive results. The authors mainly provide evidence that institutional investors can effectively affect some corporate governance outcomes, such as the dismissal of CEOs with poor performance.

The case that monitoring may affect individual corporate governance characteristics is therefore still to be made and our study provides some new evidence supporting that hypothesis, by considering three variables for the analysis of the goodness of corporate governance:

1) *Equity ratio*. It is computed as a ratio between total shareholders' funds and total assets. This is the most quantitative of the three variables we are introducing. It is considered as critical in this analysis since we believe that higher equity

contribution to corporate financing changes the agency relationship framework in the corporation, therefore the strength of the decisions sourced from the equity owners. Governance mechanisms, in fact, may affect the level of indebtedness of a firm, because managers may prefer less leverage than is optimal, as debt limits managerial flexibility (Jensen, 1986). A firm's level of debt, therefore, can be considered as an effective corporate governance mechanism, not only because creditors' monitoring may discourage managers from accepting excessive debt financing for highly risky investments. In fact, there are three different ways through which the level of leverage adopted by a firm may reduce the expected benefits of control (Harris & Helfat, 1998): 1) debt increases the probability of bankruptcy; 2) debt often imposes restrictive covenants that will inevitably limit the benefits of control; 3) debt implies a commitment to a fixed stream of future repayments, which prevents managers from undertaking risky projects that benefit themselves personally but impact shareholders unfavorably. Nevertheless, the disciplining role of debt within a firm is effective only in the context of agency problems that arise in corporations with a clear separation of ownership and control (i.e., between shareholders and managers) (McConnel & Servaes, 1995). This means that, when ownership is highly concentrated, as it is the case of Continental Europe, the role of debt as an effective control mechanism can be considerably reduced. In this case, agency problems may still arise, but they involve the controlling and the minority shareholders, instead of shareholders and managers. The controlling shareholders, in fact, could increase the debt ratio as a mechanism of expropriation of minority shareholders, because the choice of debt allows the controlling shareholder to control more financial resources without diluting his control stake (Faccio, Lang, & Young, 2001). In both cases, whether ownership is highly concentrated, as it is in the case of companies in Continental Europe, or it is sufficiently diffuse, as in the case of companies in the United States and the United Kingdom, the choice of the level of leverage within a firm (and so of the level of equity) depends on corporate governance characteristics, especially those related to the structure of corporate ownership.

2) *C-3 index* is a measure of the ownership concentration of a firm. It is computed by adding the percentage of the direct control of the three largest shareholders of the company. In particular, the ownership of a firm is said to be highly concentrated when a large amount of stock is owned by few shareholders, whether they are members of the founding family or institutional investors such as mutual or pension funds. In business literature, the existence of a relationship between the goodness of a firm's corporate governance mechanisms has been largely debated by academics, with no clear understanding on what constitutes a positive impact on the firm. As a matter of facts, while some authors suggest that a greater ownership dispersion inevitably leads to the separation of ownership and control, which in turn causes the aggravation of agency problems and therefore the deterioration of corporate governance (Berle & Means, 1932; Jensen & Meckling, 1976; Fama & Jensen, 1983); other authors claim that when ownership is concentrated, agency

problems simply shift from those between ownership and management to those between controlling shareholders and minority shareholders, where the existence of complex pyramid structures may increase the risk of expropriation at the expenses of non-controlling shareholders (La Porta, Lopez-de-Silanes, & Shleifer, 1999; Faccio, Lang, & Young, 2001). Therefore, while a higher ownership concentration can be beneficial to firm performance, as it is suggested by the monitoring hypothesis, once concentration levels are too high, the firm's performance gets worse, as it is suggested by the expropriation hypothesis. The result is that the effect of ownership concentration on the goodness of a firm's corporate governance and performance remains unclear.

3) *Percentage of institutional investors in the ownership structure.* This variable depicts the composition of companies' ownership. According to OECD, institutional ownership of publicly listed companies has dramatically increased during the last decade. In the United Kingdom, for example, only 10% of all public equity is today held by physical persons, and new institutions are gaining importance alongside the more traditional institutional investors, such as pension and mutual funds (OECD, 2011). Because institutional investors are expected to be highly skilled and well-resourced professionals, the hope is that their presence in the boards of underperforming companies will promote best-practices implementation, especially with regard to board structure and composition. At the same time, institutional investors are expected to play an important role in preventing management from adopting decisions that could be detrimental to shareholders, because institutional investors provide active monitoring that is difficult for smaller, more passive or less-informed investors (Kahn & Winton, 1998; Del Guercio & Hawkins, 1999; Gillan & Starks, 2000; Woidtke, 2002; Almazan & Suarez, 2003; Hartzell & Starks, 2003; Cremers & Nair, 2005). Nevertheless, because most institutional investors are remunerated on the basis of assets under management, there is no incentive for them in monitoring a large number of companies in which they invest. Moreover, the costs of monitoring are significant, while the benefits are shared with all the other shareholders, which leads to the existence of a free-riding problem and to the subsequent suboptimal monitoring by institutional investors (OECD, 2011).

We are interested to investigate if the above three indicators must be considered either as real components of the CG nexus or as catalysts, only, of the efficacy of the adopted CG models through their monitoring contribution. Therefore, we firstly investigate the relationships existing among each indicator composing the CG nexus and the three equity indicators.

RQ1: Is there any relationship among the 3 equity indicators and the CG nexus?

Accordingly, we will challenge to detect any significant contribution of these three indicators to the relationship existing between the CG nexus and the operating and the financial performances of the firms as well as their capability to attract capital and credit standing. This will help us to the (direct or indirect) contribution of the equity indicators to the relation governance-performance.

RQ2: Are the 3 equity indicators contributing (directly or indirectly) to the corporate performance?

We will investigate RQ2 according to the impacting contribution of the above mix of 3 + 7 indicators over: 1) the firm performances; 2) the banks' allowances; and 3) the creditworthiness at a corporate level. Moreover, by comparing our empirical results with those from previous studies, we will contribute to the real economic nature of those three proxies (either as components of the CG nexus or as monitoring indicators). Provided the discussed literature on the monitoring effects over the agency relationship, particularly on the safer leverage when the monitoring is efficient, we will complete the results from RQ1 and RQ2 by testing the following research question:

RQ3: Is there any relationship among the nexus of CG indicators, the two indicators describing the quality of equity and the capital structure of the firm (i.e., the quantity of equity)?

The empirical evidence concerning RQ3 will help to understand if the 3 equity indicators must be considered as efficiency-boosters of the CG nexus or direct influencers of the capital structure policy.

3. SAMPLE AND DESCRIPTIVE STATISTICS

Our sample is made of data extracted from ORBIS database (edited by Bureau van Dijk,¹ BvD) for eight European countries: the Czech Republic, France, Germany, Hungary, Italy, Slovakia, Spain and the United Kingdom. ORBIS database is particularly fruitful for the aim and purposes of this paper. In fact, it provides a large set of data at a corporate level including both financial and legal information for each firm profile, including corporate governance. Secondly, the international coverage of the database is one of the most extended, while data can be extracted according to homogenous standards among the different countries. This facilitates any comparison and limits the potential bias arising from the manipulation of the bulk of data from different countries. Thirdly, it provides several sets of independent indicators, including some relating to the corporate governance profile of the specific company. Finally, ORBIS data can be tracked over a long period of time, permitting to investigate their persistence and running time comparisons

The sampling process for this paper was built upon Castellan and Mantovani (2015), to have comparable results to compare and discuss. Therefore, it includes both manufacturing and services companies which respond to the following these three requirements: 1) availability of the full set of financial reports from 2006 to 2015, to compute the operating and financial performance of each firm included into the sample; 2) availability of full set of details of financial data to compute the integrated rating score (2006 to 2015)²; 3) availability of full set of BvD data on corporate governance indicators. No specific constrained were posed, instead, in the sampling process for the equity indicators.

¹ Bureau van Dijk provides complete balance sheet data in the global standard format for global companies.

² This was the basis to calculate the 25 indexes required for estimating T(ROI), the long-term threshold ROI according to integrated rating methodology, therefore the basis to estimate the IR-indicator for each firm in the sample.

We used these proxies of the equity indicators discussed above, while sourcing data from the very same database:

- *the equity ratio* was computed as the ratio between shareholder's funds and total assets. This ratio is a good indicator of the relative quantity of equity capital used by a company;
- *the C-3 index* is the sum of the direct control percentage of the three largest company's shareholders, as reported in the company profile. The higher C-3 index the more concentrated the ownership is, with significant impact over the efficacy of monitoring and governance;
- *the percentage of institutional investors* on total investors is the ratio between the total number of institutional investors (i.e., investors that according to the ORBIS database fall into one of these categories: banks; financial companies; public authority, state and government; mutual & pension funds/nominees/trusts/trustees; insurance companies; trade & industry organizations foundations/research institutes; private equity firms; venture capital and hedge funds) and the number of total shareholders. The higher this ratio, the better the governance is.

Provided that the first equity indicator refers chiefly to the *quantity* of equity capital, its computation could be easily done through data from the financial reports. As per last twos, instead, they mainly depict the *quality* of equity shareholders, particularly the related monitoring capabilities. Their computation was made by using information sourced from the corporate profiles as given by BvD.

The following proxies of the corporate performance are then considered for each firm into the sample:

- 1) the operating performance is proxied by corporate ROI, computed according to equation (1):

$$ROI_t = \frac{EBIT_t}{FIAS_t + WKCA_t + FIAS_{t-1} + WKCA_{t-1}/2} \quad (1)$$

We computed ROI for each of the 8 years. The focus on ROI instead of other performance indicators like ROA is two-fold. On one hand, we wanted to assume a financial investor's perspective, thus considering the capital investment contingent to the corporate securities and financial contracts (e.g., commercial debts are deducted from assets to insulate the financially invested capital, only). On the other hand, by focusing on ROI, we insulate corporate results based chiefly on the managerial capability without considering any possible bias due to financial decisions and financial markets diseases (i.e., the two-funds separation theorem is considered). Moreover, focusing on ROI, we also computed the persistent ROI [P(ROI)] according to the integrated rating methodology, to have stronger evidence of the persistence of the operating results, therefore of the managerial capability of the firm.

- 2) the financial performance is represented through the intensity of debt, computed as in equation (2):

$$Intensity\ of\ debt = \frac{DEB}{OPRE_t} = \frac{[(NFP_t + NFP_{t-1})/2]}{OPRE_t} \quad (2)$$

where *EBIT* = earnings before interest and taxes; *FIAS* = fixed assets; *WKCA* = working capital; *NFP* = net financial position = total debts - cash and cash equivalents; *OPRE* = operating revenue.

Debt intensity is a twice-fold indicator. In fact, debt-intensity indicates the actual contribution of debt capital to the overall financing of the company meaningless its overall capital intensity and actual corporate size. On the other side, the larger the debt-intensity, the lower are the agency costs contrasting the traditional Modigliani and Miller prescriptions on leverage.

3) the long-term credit standing is computed according to the integrated rating methodology, i.e., the spread between the persistent ROI, P(ROI), and the threshold ROI, T(ROI). Following Mantovani, Mestroni, and Basilio (2014), the estimation of T(ROI) is based on a specific panel regression for each country under analysis, leading to the minimum level of ROI according to a confidence level based on the investor's risk aversion. If the spread between P(ROI) and T(ROI) is positive, the risk embedded into the forthcoming business performance is compliant with the risk tolerance, hence the company is creditworthy.

Finally, to depict the CG nexus we sourced from ORBIS database the basics for computing the following 7 governance variables³ for each company included into the sample:

1. *BvD independence index*. To permit its statistical treatment, we transformed the indicator into a figure (the ownership concentration index) where the smaller this numeric variable, the lower the ownership concentration. A low value of this variable suggests better governance.

2. *Presence of a manager in the ownership structure* is a variable constructed as the percentage of managers in the ownership structure on the total of managers. This indicator was computed by overlapping of the list of owners and the one of the managers as reported into the ORBIS corporate profile. Accordingly, any overlaps among people into the key bodies of the governance (board of directors, executive managers and legal auditors, when this applies) were considered. We hypothesize that, in terms of good governance practices, the presence of a manager in the ownership structure suggest a better governance quality.

3. *Team size* counts the number of people in the BvD board of directors, in the BvD board of advisors and in the BvD management team. The final figure is adjusted according to the firm size. We hypothesize that the higher the adjusted team size, the better is the governance practice.

4. *One manager* variable is constructed as a dummy, where the value equals 1 if the company is managed by one person, only. We think that it's important for good governance that the firms are managed by a team and not by a single person (i.e., the value of the variables equals zero).

5. *CEO duality* is a binary variable that equals 1 if the chairman of the board of directors is also the CEO. For good governance it is important that the roles of CEO and chairman of the board of directors are performed by two different persons (i.e., the value of the variable equals zero).

6. *Board of directors independence* is a binary variable that equals 1 if two or more managers are

³ In October 2016, we extracted from the above database the following variables for each country: BVD independence indicator, DMC full name, DMC title, DMC board, committee or department, DMC level of responsibility, DMC also a shareholder, number of DMC, number of current DMC, shareholder name, number of recorded shareholders, shareholder type, shareholder direct (%), shareholder total (%), shareholder also a manager, ADV name, ADV type, total shareholder's funds, total assets. These data were used for the calculus of the ten corporate governance indicators.

also present in the board of directors. If the value equals to 0, the governance is better.

7. *Board of directors size*, same as team size but instead of counting all the people, it only counts how many people are present in the board of directors. Then, the same division by firm size is performed. We hypothesize that the higher the adjusted board of directors size, the better the governance.

It is important to notice that punctual governance data were considered, along with times series of financial statements. This is a direct consequence of the stability over time of that CG characteristics. The final sample is made up of 10,520 firms. More specifically, the number of firms for each country is as follows: 1,466 in the Czech Republic, 455 in France, 245 in Germany, 188 in Hungary, 2914 in Italy, 2869 Slovakia, 2011 in Spain, 372 in the United Kingdom. The sample width and composition are a direct consequence of the imposed selecting conditions, which remove any company without data for accurate computing of the corporate governance indicators and the integrated rating. Such sample characteristics are not biasing our results provided the inner focus of this paper. For each company, a panel of 8 years' data (i.e., including the flows which you may compute using the 10 years of financial reports and the ratios computed on average stocks) is considered (the period of analysis was chosen in order to implement

the rating methodology that identifies risk-returns relations in a through-the-cycle perspective (at least seven years of rating). Therefore, we analyzed 84,160 strings of data (8 years for each of the 10,520 firms). Each string jointly contains: 1) 7 CG indicators as sourced from BvD database; 2) 3 indicators on the equity contribute to the firm that we are specifically considering for this paper; 3) 2 indicators of the corporate performance (at operating and financial level); 4) 25 indicators as required to compute the integrated rating score. Overall, the final dataset is made of 3,113,920 figures.

There are huge differences in equity indicators among the countries included into our sample. Some descriptive statistics concerning the 3 proxies we adopted are now illustrated, including a t-test of differences to describe the inner gaps. As general evidence, few similarities are found for the 3 equity indicators (24 over 84, i.e., 28.57%), as data in the following table put in evidence.

Table 1 exploits descriptive statistics for the equity ratio. We observe that the highest mean is found in Spain (0.4794), while the lowest is found in Italy (0.3513), but also Slovakia shows a similar value (0.3545). Looking at the results of the t-test of differences, we find the stronger similarities between the Czech Republic and France, as well as Italy and Slovakia.

Table 1. Sample statistics for the equity ratio

Equity ratio	Czech Republic	Germany	Spain	France	Hungary	Italy	Slovakia	United Kingdom
Mean	0.3886	0.3668	0.4794	0.3959	0.4593	0.3513	0.3545	0.4339
Variance	0.5770	0.0370	0.0421	0.0473	0.0285	0.0405	0.0841	0.0476
n.a. (%)	0%	0%	0%	0%	0%	0%	0%	0%

Equity ratio	Czech Republic	Germany	Spain	France	Hungary	Italy	Slovakia	United Kingdom
Czech Republic		0.3489	0.0088	0.7445	0.0025	0.06626	0.09675	0.0473
Germany			0.0000	0.0687	0.0002	0.2371	0.3607	0.0660
Spain				0.0000	0.1278	0.0000	0.0000	0.0002
France					0.0860	0.0615	0.0003	0.0127
Hungary						0.0000	0.0000	0.1301
Italy							0.6509	0.0000
Slovakia								0.0000
United Kingdom								

Note: The upper side of the table reports the means and the standard deviations computed for sub-samples made of the companies of the specific country. An evidence of firms without the required data is also reported, country by country. The lower side of the table indicates the results of a t-test of difference among the distribution of the same indicator among a couple of countries. The null-hypothesis "there is the difference among the distribution" is accepted when the reported p-values are below 10%. Larger figures (bolded) are evidence of similarities among the countries.

Table 2 analyses the variable C-3 index. We observe that the country with the highest mean is Slovakia (97.3660), closely followed by the Czech Republic (97.2069), while the country with the lowest mean is the United Kingdom (73.0720). As for

similar indicators from BvD, we find that ownership is more concentrated in Continental Europe than in the United Kingdom. Moreover, the t-test of differences shows that there are similarities between the Czech Republic and Slovakia.

Table 2. C-3 index sample statistics (t-test of differences) (Part 1)

C-3 index	Czech Republic	Germany	Spain	France	Hungary	Italy	Slovakia	United Kingdom
Mean	97.2069	88.5504	85.0137	88.5681	83.4326	86.9438	97.3660	73.0720
Variance	120.165	453.904	597.058	386.793	616.934	402.107	85.9208	1070.15
n.a. (%)	23.87%	12.24%	13.12%	13.66%	87.77%	16.71%	29.52%	14.21%

Table 2. C-3 index sample statistics (t-test of differences) (Part 2)

C-3 index	Czech Republic	Germany	Spain	France	Hungary	Italy	Slovakia	United Kingdom
Czech Republic		0.0000	0.0000	0.0000	0.0144	0.0000	0.6815	0.0000
Germany			0.0247	0.9920	0.3503	0.2880	0.0000	0.0000
Spain				0.0021	0.7644	0.0068	0.0000	0.0000
France					0.3400	0.1309	0.0000	0.0000
Hungary						0.5061	0.0134	0.0697
Italy							0.0000	0.0000
Slovakia								0.0000
United Kingdom								

Note: The upper side of the table reports the means and the standard deviations computed for sub-samples made of the companies of the specific country. An evidence of firms without the required data is also reported, country by country. The lower side of the table indicates the results of a t-test of difference among the distribution of the same indicator among a couple of countries. The null-hypothesis "there is the difference among the distribution" is accepted when the reported p-values are below 10%. Larger figures (bolded) are evidence of similarities among the countries.

Finally, Table 3 states out descriptive statistics regarding the percentage of institutional investors. Unexpectedly, we find out that the country with the highest value is Germany (0.2957), whilst the country with the lowest mean is Slovakia (0.0617).

There are similarities between the Czech Republic, Spain, France, Hungary, Italy; between Germany and the United Kingdom; between France and Hungary; and between Slovakia and the United Kingdom.

Table 3. Sample statistics for the percentage of institutional investors in the ownership structure

Institutional investors/Total investors	Czech Republic	Germany	Spain	France	Hungary	Italy	Slovakia	United Kingdom
Mean	0.0921	0.2952	0.1010	0.1425	0.1012	0.0737	0.0617	0.2365
Variance	0.0741	0.1486	0.0684	0.0958	0.0686	0.0444	0.0471	0.1149
n.a. (%)	22.10%	11.02%	3.49%	11.23%	3.19%	14.69%	25.37%	2.14%

Institutional investors/Total investors	Czech Republic	Germany	Spain	France	Hungary	Italy	Slovakia	United Kingdom
Czech Republic		0.0004	0.1014	0.1297	0.2490	0.2161	0.0090	0.0000
Germany			0.0037	0.0583	0.0008	0.0000	0.0000	0.8745
Spain				0.5740	0.5950	0.0011	0.0000	0.0000
France					0.8766	0.03011	0.0019	0.0000
Hungary						0.1302	0.0373	0.0735
Italy							0.0120	0.0000
Slovakia								0.0000
United Kingdom								

Note: The upper side of the table reports the means and the standard deviations computed for sub-samples made of the companies of the specific country. An evidence of firms without the required data is also reported, country by country. The lower side of the table indicates the results of a t-test of difference among the distribution of the same indicator among a couple of countries. The null-hypothesis "there is the difference among the distribution" is accepted when the reported p-values are below 10%. Larger figures (bolded) are evidence of similarities among the countries.

The same descriptive statistics and t-test of differences used for the 3 equity indicators were used for the 7 BvD-ORBIS indicators. Detailed data are illustrated in the Appendix A. There are huge differences among countries in the corporate governance characteristics, as well. By observing the figures in the appendix, few similarities in ownership and governance characteristics between the countries are found: indeed, 41 similarities over the overall 196 comparisons, i.e., 20.92%. The inner similarities are found in the presence of institutional investors (9 over 28 comparisons, i.e., 32.14%) and in the board independence variable (9 over 28, i.e., 31.14%). Such a difference supports the challenge to test the research questions of this paper as you might understand by looking at the appendix.

Table A.1 analyses ownership concentration. We observe that the country with the highest mean in ownership concentration is Hungary (4.7515), even if we must consider that this evidence is mainly direct consequence that, for most of the companies in this group, you cannot attach an independence indicator, due to a lack of sufficient information. If we exclude Hungary, therefore, the country with the

highest mean becomes the Czech Republic (3.773261), even if France and Slovakia, too, show similar values (respectively 3.7663 and 3.7444). On the other hand, the country with the lowest mean is the United Kingdom (2.6907). This confirms the different approaches in Anglo-Saxon countries with respect to other European countries. While performing the t-test of differences we also observe that, within this variable, there are some similarities between the Czech Republic, France and Slovakia; between Spain and Poland.

Table A.2 analyses the presence of one or more managers in the ownership structure. In our sample, we observe that Slovakia is the country with the highest mean (0.4468), but we also observe a similar value for Italy (0.4374). The country with the lowest mean is Germany (0.0696), unexpectedly lower than the UK data, i.e., the unique Anglo-Saxon country. As far as similarities are concerned, no specific evidences are reported besides the relationship between Italy and Slovakia.

As per the team size, Table A.3 shows that the country with the highest mean is Italy (5.9166), but the United Kingdom (5.7275) also show similar values, whereas the country with the lowest mean is

Slovakia (1.2360). Moreover, when the t-test of differences is performed, we find that there are similarities between the Czech Republic and France; and between Italy and the United Kingdom.

Table A.4 analyses the variable one manager. The country with the highest mean for this variable is Italy (0.3075), while the country with the lowest mean is the Czech Republic (0.0013). Similarities are found between Hungary and the Czech Republic or Germany or Slovakia.

As far as CEO duality concerns, Table A.5 indicates that the highest mean is found in Italy (0.2671), while the lowest is found in Hungary (0). Looking at the t-test of differences, we found similarities between the Czech Republic and the United Kingdom; between Germany and any country out of Italy and France; Slovakia and both Spain and the UK.

In terms of board size (Table A.6), the highest mean is observed in Italy (3.1863) while the lowest is observed in Hungary (0.3930). There are similarities between the Czech Republic and France; between Germany and Spain; between France and Hungary or Slovakia, and between Hungary and Slovakia.

In terms of board independence (Table A.7), the country with the highest mean is Italy (0.3075), whereas the country with the lowest mean is the Czech Republic (0.0013). The t-test of differences analysis shows that there are similarities between the Czech Republic and Germany, Spain and Hungary; between Germany and France, Hungary and Slovakia; between Spain and France and Hungary.

4. EMPIRICAL RESULTS AND DISCUSSION

Descriptive statistics give wide evidence on the very few similarities among the corporate governance practices as adopted by the investigated European countries: dissimilar CG nexus is the standard. Some congruencies emerge among the three equity indicators, although differences are still the natural mode. Our first step of analysis is to investigate if such differences are related (*RQ1*) and if they are reflected in the corporate performances (*RQ2*). In fact, should those differences exist, the economic background of the differences among countries could be found.

4.1. Investigating *RQ1*

To test *RQ1*, we firstly investigate whether the structural characteristics of equity (i.e., equity ratio, presence of institutional investors, and C-3 index) have an impact on the seven BvD indicators on the corporate governance by (indirectly) boosting their monitoring effects on corporate performance. Appendix B includes the tables with data for each indicator.

Table B.1 investigates the relationship between BvD "ownership concentration" and the shareholder characteristics as measured by the 3 equity indexes. We find a strong and statistically significant relationship for most of the countries included in our sample. To be more specific, the presence of institutional investors in the ownership structure is the variable that mostly influences the ownership concentration variable, with the exception of Germany and Hungary. The relationship between the

C-3 index and the ownership concentration variable is also statistically significant for the majority of the countries, except the Czech Republic and the United Kingdom. Finally, the equity ratio appears to be strongly significant for Italy and weakly significant for France and Hungary. The sign of the relationship is interesting as well. The effect of the percentage of the presence of institutional investors on ownership concentration is positive for all the countries for which this relationship is significant, with the unique exception of the United Kingdom. Therefore, the higher the percentage of institutional investors is, the more concentrated the ownership. In the UK, instead, when the presence of institutional investors among shareholders is stronger, ownership concentration is more diffuse. The C-3 index coefficient is also positive for all the countries included in our sample. The opposite true for equity ratio: when this variable takes higher values ownership is more diffuse.

Table B.2 investigates the impact of ownership characteristics on the variable "presence of manager in the ownership structure". Again, for most of the countries included in our sample, there is a strongly significant relationship between the independent and the percentage of institutional investors. The C-3 index is also highly statistically significant for all the countries of our sample, apart from the Czech Republic and Germany. Finally, the equity ratio is strongly statistically significant for Spain and weakly statistically significant for France and Italy. The sign of the impact of the presence of institutional investors in the ownership structure is negative for all the countries for which this relationship is statistically significant, with the exception of the United Kingdom. This means that, for this country, the higher the presence of institutional investors in the ownership structure the lower the presence of a manager in the ownership structure. As far as concerns the C-3 index, this variable has a positive impact for all the countries of our sample. Therefore, when ownership is more concentrated, the presence of a manager in the ownership structure is lower, which is detrimental to the governance of a firm. Finally, the equity ratio has a positive effect on the presence of a manager for Spain and France, whilst the effect is negative for Italy.

Table B.3 shows the results of the regression for the "team size" on the variables describing ownership characteristics. The variable which is statistically significant for most of the countries included into the sample is still the presence of Institutional Investors (except the case for Italy). C-3 index, instead, is strongly statistically significant only for France, Hungary, and Slovakia but weakly statistically significant for the United Kingdom. Finally, the equity ratio variable is strongly relevant only for Slovakia, and weakly relevant for France. In particular, the sign of the impact of the presence of institutional investors among shareholders is positive for all the countries for which this variable is statistically significant except for Spain. Thus, the stronger the presence of institutional investors among shareholders, the better the governance of the firm, because a bigger team improves the way a company is managed. As for the C-3 index, ownership concentration has a negative impact on

team size for France, and Hungary, while it has a positive impact on Slovakia and the United Kingdom.

Finally, equity ratio has a positive impact on team size, because the higher its value, the higher the number of people involved in the management of the firm, thus the better the corporate governance.

Table B.4 shows the results of the regression of the variable “board size” and ownership characteristics. The presence of institutional investors in the ownership structure is relevant for all the countries of the sample, apart from Slovakia. As far as concerns the other variables, instead, the C-3 index is strongly significant for Spain and Italy and weakly significant for Hungary, whereas equity ratio is statistically significant for Spain only. The sign of the effect of the presence of institutional investors on board size is positive for all the countries for which this relationship is statistically significant. This means that the stronger the presence of institutional investors, the higher the number of people involved in the decision-making of the firm, which has a positive impact on corporate governance. The C-3 index, instead, has a positive impact for Spain and Italy, thus contributing to improving the governance of the firm when ownership is more concentrated. The impact is negative for Hungary, which means that when ownership is more diffuse, corporate governance (measured through board size) improves. Finally, the sign of the relationship between the equity ratio and board size is positive. Therefore, the higher the equity ratio, the bigger the size of the board of directors, the better the governance of the firm.

Table B.5 investigates the relationship between ownership characteristics and board independence. There is a highly statistically significant relationship for the variable “percentage of institutional investors” the relationship with the dependent variable is strongly significant in the United Kingdom and fairly strong for Italy and Hungary. The C-3 index, instead, is weakly relevant for Hungary only.

With respect to the percentage of institutional investors in the ownership structure, the sign of this relationship is positive for Hungary and the United Kingdom, meaning that the stronger the presence of institutional investors, the stronger the presence of managers in the board of directors (i.e., the board independence takes a value next to 1). On the contrary, for Italy the relationship is positive, thus the higher the percentage of institutional investors in the ownership structure, the better the governance, because the board of directors is more independent (i.e., the board independence variable takes a value next to zero). As far as concerns the “one manager”, Table B.6 shows that the relationship with is strongly significant for the independent variable “percentage of institutional investors in the ownership structure” for the United Kingdom and fairly strong for Italy and Hungary, while the relationship between the C-3 index and the dependent variable is statistically significant for Hungary only.

In particular, the effect of the percentage of institutional investors in the ownership structure is positive for Hungary and the United Kingdom. Therefore, the higher this variable, the more it is

likely that the dependent variable takes a value of 1, meaning that the company is managed by one person only. For Italy, instead, the higher the percentage of institutional investors in the ownership structure the better the governance, because the company is managed by more than one person (i.e., the value of the one manager variable is next to zero). As for the C-3 index, the effect of this variable is negative, thus the higher the value of the C-3 index, the lower the value of board independence, the better the governance.

Finally, Table B.7 examines the relationship between the three equity indicators and “CEO duality”. We find that the only variable that is relevant is the percentage of institutional investors in the ownership structure. More specifically, the variable is highly statistically significant for the United Kingdom and fairly significant for Italy and Hungary. The sign of this relationship is positive, meaning that a higher percentage of institutional investors in the ownership structure implies that, on average, the chairman of the board of directors is also the CEO of the firm. This means that the presence of institutional investors does not promote the separation of these two roles, which instead would be beneficial to corporate governance. At the same time, we find that, in Italy, equity ratio also impacts on CEO duality. More precisely, the effect of this variable on CEO duality is negative in Italy (a higher equity ratio implies that the roles of directors of the board and CEO are played by two different people) and positive in the United States (a higher equity ratio does not imply a separation of the two roles). Finally, in Hungary and Slovakia, the C-3 index positively influences CEO duality.

Given the above results, we can say that the two qualitative indicators of the ownership structure influence the CG nexus. The presence of institutional investors is the most impacting indicator although the ownership concentration (as measured by the C-3 index) is significant, particularly in the countries with a superior presence of small and medium enterprises (e.g., Italy). The unique quantitative indicator (i.e., the equity ratio) does not show any significant relationship. This leads us to investigate RQ2.

4.2. Investigating RQ2

Investigating RQ2 helps to understand if the above findings have an impact on the performance of the firms, therefore an economic advantage. Therefore, we run three multivariate regressions for the companies of each country included in our sample. Our regressions focus on the three indicators of the firm’s performances (ROI, DEBT/OPRE and the spread $[P(ROI) - T(ROI)]$) versus the set of the indicators of the CG nexus and the three equity indicators, as controlling elements.

Table 4 shows the results obtained by regressing the firm’s operating performance (i.e., ROI as of the year 2015) with the “7 + 3” indicators set. The outcomes identify no statistically significant relationship between historical performance and the extended CG set for all the countries included in the sample.

Table 4. Regression statistics – dependent variable ROI

Independent variables	Czech Republic		Germany		Spain		France		Hungary		Italy		Slovakia		United Kingdom	
Const	0.1602 (0.0861)		-0.1379 (0.1340)		0.0592 (0.0711)		0.8344 (0.2444)	***	0.1934 (0.4358)		-0.2267 (0.0887)	*	0.0292 (0.2413)		0.1043 (0.2001)	
Ownership concentration	-0.0024 (0.0126)		0.0015 (0.0225)		0.0015 (0.0043)		-0.121 (0.049)	*	-0.0283 (0.0941)		0.0247 (0.0123)		0.0023 (0.0247)		-0.0215 (0.0361)	
Presence of a manager among shareholders	0.0024 (0.0017)		-0.3054 (0.1882)		0.0004 (0.0003)		0.336 (0.1625)	*	0.004 (0.1167)		0.0018 (0.0008)	*	0.0075 (0.0044)		-0.1463 (0.2165)	
Team size	-0.0019 (0.0032)		0.0204 (0.0521)		0 (0.0005)		-0.1548 (0.1142)		-0.0548 (0.1163)		0.0012 (0.0008)		0.0123 (0.0072)		-0.0004 (0.0026)	
Only one manager	0.0349 (0.0962)		-0.0910 (0.3444)		0.0393 (0.018)	*	0.0377 (0.3178)		0.1759 (0.7773)		0.0302 (0.0431)		-0.1754 (0.2576)		-0.0333 (0.1255)	
CEO duality	-0.0096 (0.0659)		n.a. (n.a.)		-0.0454 (0.0672)		0.1209 (0.1531)		n.a. (n.a.)		-0.0295 (0.0356)		0.0983 (0.1975)		0.0962 (0.2139)	
Board independence	n.a. (n.a.)		n.a. (n.a.)		n.a. (n.a.)		n.a. (n.a.)		n.a. (n.a.)		n.a. (n.a.)		n.a. (n.a.)		n.a. (n.a.)	
Board size	-0.0048 (0.0038)		-0.0066 (0.0560)		-0.0003 (0.0006)		0.1317 (0.1370)		0.0457 (0.1332)		0 (0.0011)		-0.0083 (0.0093)		-0.0043 (0.0065)	
Equity ratio	-0.0013 (0.0146)		0.4487 (0.1399)	**	-0.0149 (0.0264)		-0.1426 (0.1886)		-0.0327 (0.2782)		0.1685 (0.0799)	*	0.1306 (0.0834)		0.3210 (0.1810)	
Institutional investor	0.0008 (0.0045)		-0.0084 (0.0019)		0.0007 (0.0003)		-0.0013 (0.0047)		-0.0118 (0.0139)		0 (0.0007)		0.0088 (0.0130)		0.0002 (0.0017)	
C-3 index	0.0001 (0.0004)		-0.0013 (0.0008)		0 (0)		0.0003 (0.0009)		0.0226 (0.0215)		0 (0)		-0.0013 (0.0007)		0.0003 (0.0006)	
Adjusted R-squared	0.0076		0.0522		0.0008		0.0312		-0.0288		0.0009		0.0024		-0.0116	
F-stat (p-value)	0.0173		0.0078		0.297		0.0058		0.9467		0.2302		0.0637		0.8561	

Table 5 investigates whether there is a relationship between banks' financing decisions (i.e., DEBT/OPRE for rear 2015) and the corporate governance indicators. Again, the outcomes of the regression identify a weak statistically significant relationship between historical data of credit allocation and corporate governance characteristics for most of the countries included in our sample. Exceptions emerge only for three countries: the Czech Republic, Germany and the United Kingdom.

More specifically, banks' financing decisions in the Czech Republic are positively influenced by team size and board size, and negatively influenced by the one manager variable and CEO duality. In Germany, instead, credit allocation is positively influenced by the percentage of institutional investors present in the ownership structure and negatively influenced by team size and equity ratio. Finally, in the United Kingdom, banks' financing decisions depend positively on the board size.

Table 5. Regression statistics – dependent variable: DEBT/OPRE

Independent variables	Czech Republic		Germany		Spain		France		Hungary		Italy		Slovakia		United Kingdom	
Const	1.6029 (0.3650)	***	2.0374 (0.4038)	***	10.8759 (17.5793)		1.2545 (0.9301)		0.0560 (0.1297)		24.7193 (16.1995)		1.5810 (1.9070)		0.1143 (0.1675)	
Ownership concentration	0.0259 (0.0535)		-0.1462 (0.0680)	*	-1.0394 (1.0735)		-0.3231 (0.1865)		-0.0005 (0.0280)		-0.3899 (2.4280)		-0.0802 (0.1955)		0.0200 (0.0302)	
Presence of a manager among shareholders	0.0171 (0.0072)	*	-0.9236 (0.5706)		0.0642 (0.0651)		-1.0160 (0.6182)		0.0607 (0.0347)		-0.0939 (0.1608)		-0.0107 (0.0348)		0.0199 (0.1812)	
Team size	0.0813 (0.0135)	***	-0.5167 (0.1563)	**	-0.0699 (0.1356)		-0.0098 (0.4346)		0.0559 (0.0346)		-0.3058 (0.1470)	*	-0.0332 (0.0567)		-0.0016 (0.0022)	
Only one manager	-1.5425 (0.4077)	***	1.2414 (1.0427)		11.4732 (4.4654)	*	-0.5922 (1.2091)		-0.3337 (0.2313)		-2.1566 (7.8787)		0.2380 (2.0358)		-0.1585 (0.1051)	
CEO duality	-0.8190 (0.2793)	**	n.a. (n.a.)		-16.6141 (16.6264)		0.7808 (0.5826)		n.a. (n.a.)		-1.0706 (6.5122)		-0.7011 (1.5611)		-0.1190 (0.1790)	
Board independence	n.a. (n.a.)		n.a. (n.a.)		n.a. (n.a.)		n.a. (n.a.)		n.a. (n.a.)		n.a. (n.a.)		n.a. (n.a.)		n.a. (n.a.)	
Board size	0.0798 (0.0161)	***	0.3944 (0.1684)	*	0.1792 (0.1425)		0.0663 (0.5211)		-0.0095 (0.0396)		0.4384 (0.1965)	*	0.0474 (0.0733)		0.0194 (0.0054)	***
Equity ratio	-0.0167 (0.0620)		-1.3737 (0.4244)	**	-3.5261 (6.5358)		1.4202 (0.7178)		-0.1150 (0.0828)		-10.1553 (14.5903)		1.2543 (0.6589)		0.0255 (0.1515)	
Institutional investor	0.0182 (0.0192)		0.0410 (0.0058)	***	-0.0156 (0.0865)		0.0008 (0.0179)		0.0050 (0.0041)		0.1351 (-0.1439)		0.129 (-0.1025)		-0.0004 (0.0014)	
C-3 index	-0.0026 (0.0016)		0.0058 (0.0025)	*	-0.0036 (0.0080)		0.0007 (0.0033)		0.0082 (0.0064)		-0.0238 (0.0113)	*	0.0016 (0.0057)		0.0001 (0.0005)	
Adjusted R-squared	0.1485		0.2862		0.0023		0.0054		0.0482		0.0009		0.0015		0.0154	
F-stat (p-value)	0.0000		0.0000		0.1352		0.2499		0.0305		0.2302		0.1524		0.1010	

Finally, Table 6 examines the relationship between the integrated rating [P(ROI) - T(ROI)] and the ten governance indicators. The table shows no

statistically significant relationship apart from Germany, where the equity ratio negatively influences the integrated rating.

Table 6. Regression statistics – dependent variable: integrated rating indicator [P(ROI) - T(ROI)]

<i>Independent variables</i>	<i>Czech Republic</i>	<i>Germany</i>	<i>Spain</i>	<i>France</i>	<i>Hungary</i>	<i>Italy</i>	<i>Slovakia</i>	<i>United Kingdom</i>
Const	-0.1937 (0.0184) ***	0.1176 (0.1200)	-0.0400 (0.1047)	-0.0377 (0.4401)	0.3292 (0.3934)	0.0180 (0.0562)	-0.3686 (0.7577)	-0.0914 (0.1338)
Ownership concentration	0.0052 (0.0027)	-0.0006 (0.0201)	-0.0001 (0.0064)	-0.0635 (0.0882)	0.0177 (0.0850)	-0.01352 (0.0084)	0.0192 (0.0777)	0.0150 (0.0242)
Presence of a manager among shareholders	0.0000 (0.0004)	0.2841 (0.1686)	-0.0002 (0.0004)	-0.0636 (0.2926)	-0.0506 (0.1053)	-0.0005 (0.0006)	0.0027 (0.0138)	0.1189 (0.1448)
Team size	0.0013 (0.0007)	-0.0130 (0.0467)	0.0005 (0.0008)	0.0177 (0.2057)	0.0813 (0.1050)	-0.0005 (0.0005)	0.0087 (0.0225)	0.0006 (0.0017)
Only one manager	-0.0029 (0.0205)	0.0555 (0.3084)	0.0195 (0.0266)	-0.0390 (0.5722)	0.0055 (0.7017)	0.0052 (0.0273)	0.2028 (0.8089)	0.0131 (0.0840)
CEO duality	-0.0118 (0.02056)	n.a. (n.a)	-0.03962 (0.0905)	0.2157 (0.2757)	n.a. (n.a)	0.0096 (0.0225)	-0.1566 (0.6203)	-0.0520 (0.1431)
Board independence	n.a. (n.a)	n.a. (n.a)	n.a. (n.a)	n.a. (n.a)	n.a. (n.a)	n.a. (n.a)	n.a. (n.a)	n.a. (n.a)
Board size	-0.0002 (0.0008)	0.0020 (0.0502)	-0.0003 (0.0008)	-0.0065 (0.2466)	0.0131 (0.1202)	0.0000 (0.0007)	0.0004 (0.0291)	0.0030 (0.0043)
Equity ratio	0.0003 (0.0031)	-0.4332 (0.1253) ***	0.03717 (0.0389)	-0.0909 (0.3397)	-0.1703 (0.2511)	-0.0411 (0.0506)	0.2471 (0.2618)	-0.1935 (0.1211)
Institutional investor	0.0014 (0.0031)	-0.0007 (0.0017)	-0.0001 (0.0005)	0.0047 (0.0085)	0.0023 (0.0125)	0.0002 (0.0005)	-0.0550 (0.0407)	-0.0001 (0.0011)
C-3 index	0.0001 (0.0001)	0.0011 (0.0007)	0.0000 (0.0000)	0.0008 (0.0015)	-0.0366 (0.0194)	0 (0.0000)	0.0002 (0.0023)	-0.0002 (0.0004)
Adjusted R-squared	0,0134	0.0134	-0.0019	-0.0150	0.0462	-0.0014	-0.0010	0.0154
F-stat (<i>p</i> -value)	0,0007	0.0007	0.8244	0.9850	0.0350	0.8460	0.7297	0.1010

Results of previous regressions confirm that corporate governance is not strong enough to influence the firms' operating performance, the ability to attract financial resources and their long-term creditworthiness. Even more, our results demonstrate that the three equity indicators do not contribute to strengthening the relationships since very few significant coefficients are found. As a general conclusion, we must keep in mind that according to the literature review and empirical evidences in the Appendix, the corporate governance is very country-specific, it is generally weak, and it doesn't have a significant impact on any proxy of the firm performance.

Matching these results for *RQ2* with those for *RQ1*, we may conclude that the three equity indicators cannot be intended as direct components of the CG nexus but as influencers, only, of the nexus. Moreover, they have neither direct (*RQ2*) nor indirect (*RQ1* + *RQ2*) relations with any of the corporate performance indicators; therefore, the economic return from their tune-up to the corporate governance elements is very poor and very difficult to detect.

4.3. Investigating *RQ3*

To verify any possible role of the three equity indicators along with the CG nexus, we need to test their monitoring capability and discuss any possible boosting effect that such a monitoring capability may ignite. This means to change the focus (dependent variable of regression) according to the monitoring literature. In fact, monitoring is no more related to the corporate performance but to the control of the agency costs which may arise among different stakeholders, chiefly among debt and equity capital. This leads to test *RQ3*.

We regress the firm's debt-to-equity versus the 7 CG indicators and the 2 qualitative indicators on equity as controlling factors (indeed, the most significant according to *RQ1*). In fact, if significant relationships are found, we can conclude that monitoring matters on the firm's level of indebtedness using the CG nexus as a gateway for monitoring. The results of the regression for equity ratio with the corporate governance variables are shown in Table 7. It demonstrates that the capital structure (i.e., the equity ratio) depends on two governance indicators: the presence of a manager in the ownership structure (in Spain, France, Hungary, and Italy) and board size (in the Czech Republic, Spain and Slovakia). Equity ratio also depends, but less prominently, on ownership concentration (in Italy and Slovakia), on team size (in the Czech Republic and Spain) and on the one manager variable (in Italy and Slovakia). As far as the impact of the presence of a manager in the ownership structure on equity ratio is concerned, the sign of the coefficients is positive for all the countries for which this relationship is statistically significant, meaning that the higher the presence of a manager in the ownership structure, the higher the equity ratio. The opposite is true for Italy, where the equity ratio depends negatively on the presence of a manager in the ownership structure. As for the board size, instead, in all the countries where this variable is statistically significant, the sign of this relationship is positive. Therefore, the higher the number of people in the board of directors, the higher the equity ratio. Finally, with respect to the other less prominent variables, team size and ownership concentration, they both have a negative impact on the equity ratio, while the one manager variable has a positive impact in Italy and a negative impact in Slovakia.

Table 7. Regression statistics – dependent variable: equity ratio

Independent variables	Czech Republic	Germany	Spain	France	Hungary	Italy	Slovakia	United Kingdom
Const	0.6073 (0.1533) ***	0.3850 (0.0565) ***	0.4437 (0.0599) ***	0.4361 (0.0578) ***	0.5709 (0.1087) ***	0.4757 (0.0186) ***	0.5156 (0.0532) ***	0.398 (0.0541) ***
Ownership concentration	-0.0348 (0.0226)	-0.0036 (0.0104)	0.0020 (0.0037)	-0.0131 (0.0123)	-0.0575 (0.0249) *	-0.02273 (0.0031) ***	-0.0122 (0.0055) *	-0.0059 (0.0105)
Presence of a manager among shareholders	-0.0017 (0.0030)	-0.1503 (0.0868)	0.0009 (0.0002) ***	0.0947 (0.0406) *	0.0726 (0.0308) *	-0.0008 (0.0002) ***	0.0001 (0.0010)	0.0708 (0.0627)
Team size	-0.02 (0.0057) ***	-0.0008 (0.0239)	-0.0010 (0.0005) *	-0.0271 (0.0287)	-0.02 (0.0311)	0.0000 (0.0002)	-0.0009 (0.0016)	0.0002 (0.0008)
Only one manager	-0.1139 (0.1722)	-0.1912 (0.1591)	-0.0123 (0.0153)	-0.0696 (0.0798)	0.3438 (0.2066)	0.0006 (0.0100)	-0.1696 (0.0577) **	-0.0378 (0.0363)
CEO duality	0.0541 (0.1180)	n.a. (n.a)	0.0074 (0.0565)	-0.0023 (0.0385)	n.a. (n.a)	-0.0194 (0.0083) *	-0.0241 (0.0443)	-0.0499 (0.0620)
Board independence	n.a. (n.a)	n.a. (n.a)	n.a. (n.a)	n.a. (n.a)	n.a. (n.a)	n.a. (n.a)	n.a. (n.a)	n.a. (n.a)
Board size	0.0270 (0.0068) ***	0.0017 (0.0258)	0.0032 (0.0005) ***	0.0455 (0.0343)	0.0479 (0.0355)	0.0002 (0.0002)	0.0153 (0.0021) ***	0.0013 (0.0019)
% institut. investors	0.0095 (0.0081)	0.0004 (0.0009)	0.0003 (0.0003)	-0.001 (0.0012)	0.0041 (0.0037)	-0.0004 (0.0002) *	0.0019 (0.0029)	0.0001 (0.0005)
C-3 index	0.0005 (0.0007)	0.0000 (0.0004)	0.0000 (0.0000)	0.0005 (0.0002) *	0.0141 (0.0057) *	0.0000 (0.0000)	0.0001 (0.0002)	0.0002 (0.0002)
Adjusted R-squared	0.0138	-0.0047	0.0270	0.0244	0.0672	0.0278	0.06808	0.0039
F-stat (p-value)	0.0004	0.5574	0.0000	0.0147	0.0064	0.0000	0.0000	0.3085

We can conclude that such added three indicators must be considered as monitoring indicators, indeed, which use the CG nexus as a gateway to their efficacy. This being the case, the CG nexus should be considered as an indirect element contributing to the monitoring effect, while no evidence gives proof to include the shareholders composition as a component of the CG nexus.

5. CONCLUSION

When the research efforts leading to this paper began, we intended to verify if the relationship between corporate governance and corporate performance (operating, financial and long-term capital attractivity) could be reinforced by some elements related to the equity capital characteristics and its monitoring effects. Running the “trial & error” loops of the empirical investigation, we acknowledge that our starting point was biased by this prejudice: “(fair) corporate governance is the source of (sound) corporate performance so that any element increasing the efficacy of CG nexus will have an economic incentive through improved performance”. The paper demonstrates that the opposite is true: corporate governance is a booster of the monitoring effect, not vice-versa!

Such a result was achieved through an empirical analysis of over 10,520 firms with headquarters into 8 European countries, with very differentiated characteristics of the CG nexus as depicted through 7 independent indicators on corporate governance sourced from Bureaux Van Dijck ORBIS database. In fact, we found out that the two most qualitative indicators among the three used to describe the shareholder composition of equity had a significant impact on the CG nexus, although such strong links are unable to reinforce the relationship between the corporate governance and the corporate performance considered in the literature reviewed.

A key driver of the above relationships is “the presence of institutional investors”, suggesting

that the monitoring effects of equity is relevant. Monitoring activity from controlling shareholders (and minority shareholders, as well) may contribute to increasing the overall quality of corporate governance. The main impact of such improvement of the CG framework is found in the superior control of the agency costs. In fact, our empirical analysis demonstrated that the CG nexus (powered by the monitoring capability of the indicators on shareholders composition) is influencing the capital structure of the company.

Readers must consider that our results may be limited by the affordability of the CG indicators we adopted in the empirical analysis. In fact, there is a wide literature discussing the efficacy of the CG ratings as diffused in the business practice. A deep review of their limits is reported in Schnyder (2012), who strike out the pitfalls arising from the inclusion of too wide ranges of variables. Indeed, the effort in this paper is to use a set of indicators being among the most significant ones (according to the accredited literature) and being sourced from an independent provider permitting international comparisons (both for governance and accounting data).

One further limit to our research may arise from the adopted timeline of the data. In fact, it includes the effects of the great financial crisis we suffered after 2008. This may impact the computation of ROI (including the persistent one) as well as the levels of debt intensity. Comparing evidences over different timelines could improve the reliability of our results; this is a forthcoming goal that we aim to achieve in forthcoming papers on this topic. Finally, by recurring to some more controlling variables for CG might improve the analysis (e.g., gender composition of the boards or CSR policies).

While the above limits may particularly affecting results on RQ2, they contributed to focus our research efforts on RQ3, i.e., on the control of agency effects which may arise from the different CG frameworks. As a paradox, this leads us to the

core result of our paper: the economic advantage of improving the CG framework through the equity monitoring is not measured by the improved performance of the firms but by the reduced agency costs spilling over the cost of capital and its boosting effects on the corporate value. Indeed, the

CG nexus is the gateway used by the monitoring effects of equity to influence the management policies of the firms. Therefore, fixing rules on the CG nexus (e.g., the European Directives efforts) is no guarantee of improved economic results if the use of the nexus, as a tool, is not sound.

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APPENDIX A

Table A.1. Sample statistics for ownership concentration

	<i>Czech Republic</i>	<i>Germany</i>	<i>Spain</i>	<i>France</i>	<i>Hungary</i>	<i>Italy</i>	<i>Slovakia</i>	<i>United Kingdom</i>
Mean	3.7732	3.4514	3.2739	3.7662	4.7515	3.0259	3.7444	2.6907
Variance	1.3187	1.7029	1.8505	0.9527	0.4691	2.2604	1.5695	2.3009
n.a. (%)	0%	0%	0%	0%	0%	0%	0%	0%

	<i>Czech Republic</i>	<i>Germany</i>	<i>Spain</i>	<i>France</i>	<i>Hungary</i>	<i>Italy</i>	<i>Slovakia</i>	<i>United Kingdom</i>
Czech Republic		0.0003	0.0000	0.8989	0.0000	0.0000	0.4489	0.0000
Germany			0.0463	0.0010	0.0000	0.0020	0.0008	0.0000
Spain				0.0000	0.0000	0.0000	0.0000	0.0000
France					0.0000	0.0000	0.6712	0.0000
Hungary						0.0000	0.0000	0.0000
Italy							0.0000	0.0683
Slovakia								0.0000
United Kingdom								

Note: The upper side of the table reports the means and the standard deviations computed for sub-samples made of the companies of the specific country. An evidence of firms without the required data is also reported, country by country. The lower side of the table indicates the results of a t-test of difference among the distribution of the same indicator among a couple of countries. The null-hypothesis "there is the difference among the distribution" is accepted when the reported p-values are below 10%. Larger figures (bolded) are evidence of similarities among the countries.

Table A.2. Sample statistics for presence of a manager in the ownership structure

	<i>Czech Republic</i>	<i>Germany</i>	<i>Spain</i>	<i>France</i>	<i>Hungary</i>	<i>Italy</i>	<i>Slovakia</i>	<i>United Kingdom</i>
Mean	0.3723	0.0696	0.3079	0.1393	0.3871	0.4374	0.4468	0.1834
Variance	0.1995	0.0243	0.1177	0.0789	0.1939	0.1469	0.2195	0.0557
n.a. (%)	0%	0%	0.15%	0%	0%	1.37%	0.24%	0%

	<i>Czech Republic</i>	<i>Germany</i>	<i>Spain</i>	<i>France</i>	<i>Hungary</i>	<i>Italy</i>	<i>Slovakia</i>	<i>United Kingdom</i>
Czech Republic		0.0000	0.0042	0.0000	0.6699	0.0025	0.0004	0.0000
Germany			0.0000	0.0321	0.0000	0.0000	0.0000	0.0000
Spain				0.0000	0.0175	0.0000	0.0000	0.0000
France					0.0000	0.0000	0.0000	0.0169
Hungary						0.1286	0.0731	0.0000
Italy							0.3887	0.0000
Slovakia								0.0000
United Kingdom								

Note: The upper side of the table reports the means and the standard deviations computed for sub-samples made of the companies of the specific country. An evidence of firms without the required data is also reported, country by country. The lower side of the table indicates the results of a t-test of difference among the distribution of the same indicator among a couple of countries. The null-hypothesis "there is the difference among the distribution" is accepted when the reported p-values are below 10%. Larger figures (bolded) are evidence of similarities among the countries.

Table A.3. Sample statistics for team size

	<i>Czech Republic</i>	<i>Germany</i>	<i>Spain</i>	<i>France</i>	<i>Hungary</i>	<i>Italy</i>	<i>Slovakia</i>	<i>United Kingdom</i>
Mean	1.4042	2.7975	4.2775	1.4949	1.7660	5.9166	1.2360	5.7275
Variance	0.8333	5.9374	4.5222	1.7747	1.2665	11.557	0.6967	32.462
n.a. (%)	0.82%	0%	0.15%	0%	0%	1.37%	0.24%	0%

	<i>Czech Republic</i>	<i>Germany</i>	<i>Spain</i>	<i>France</i>	<i>Hungary</i>	<i>Italy</i>	<i>Slovakia</i>	<i>United Kingdom</i>
Czech Republic		0.0000	0.0000	0.1752	0.0341	0.0000	0.0000	0.0000
Germany			0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Spain				0.0000	0.0000	0.0000	0.0000	0.0024
France					0.0090	0.0000	0.0700	0.0000
Hungary						0.0000	0.0000	0.0000
Italy							0.0000	0.5274
Slovakia								0.0000
United Kingdom								

Note: The upper side of the table reports the means and the standard deviations computed for sub-samples made of the companies of the specific country. An evidence of firms without the required data is also reported, country by country. The lower side of the table indicates the results of a t-test of difference among the distribution of the same indicator among a couple of countries. The null-hypothesis "there is the difference among the distribution" is accepted when the reported p-values are below 10%. Larger figures (bolded) are evidence of similarities among the countries.

Table A.4. Sample statistics for only one manager

	<i>Czech Republic</i>	<i>Germany</i>	<i>Spain</i>	<i>France</i>	<i>Hungary</i>	<i>Italy</i>	<i>Slovakia</i>	<i>United Kingdom</i>
Mean	0.0013	0.0082	0.1024	0.0200	0.0053	0.3075	0.0042	0.1436
Variance	0.0014	0.0081	0.0924	0.0195	0.0053	0.2133	0.0042	0.1244
n.a. (%)	0.82%	0%	0.15%	0%	0%	1.37%	0.24%	0%

	<i>Czech Republic</i>	<i>Germany</i>	<i>Spain</i>	<i>France</i>	<i>Hungary</i>	<i>Italy</i>	<i>Slovakia</i>	<i>United Kingdom</i>
Czech Republic		0.2464	0.0000	0.0055	0.4682	0.0000	0.0671	0.0000
Germany			0.0000	0.1803	0.7118	0.0000	0.5052	0.0000
Spain				0.0000	0.0000	0.0000	0.0000	0.0355
France					0.0834	0.0000	0.0195	0.0000
Hungary						0.0000	0.8476	0.0000
Italy							0.0000	0.0000
Slovakia								0.0000
United Kingdom								

Note: The upper side of the table reports the means and the standard deviations computed for sub-samples made of the companies of the specific country. An evidence of firms without the required data is also reported, country by country. The lower side of the table indicates the results of a t-test of difference among the distribution of the same indicator among a couple of countries. The null-hypothesis "there is the difference among the distribution" is accepted when the reported p-values are below 10%. Larger figures (bolded) are evidence of similarities among the countries.

Table A.5. Sample statistics for CEO duality

	<i>Czech Republic</i>	<i>Germany</i>	<i>Spain</i>	<i>France</i>	<i>Hungary</i>	<i>Italy</i>	<i>Slovakia</i>	<i>United Kingdom</i>
Mean	0.0298	0.0082	0.0010	0.0890	0	0.2671	0.0131	0.0271
Variance	0.0287	0.0081	0.0010	0.0823	0	0.1987	0.0128	0.0370
n.a. (%)	0%	0%	0.15%	0%	0%	1.37%	0.24%	0%

	<i>Czech Republic</i>	<i>Germany</i>	<i>Spain</i>	<i>France</i>	<i>Hungary</i>	<i>Italy</i>	<i>Slovakia</i>	<i>United Kingdom</i>
Czech Republic		0.0033	0.0000	0.0344	0.0000	0.0000	0.0008	0.8035
Germany			0.2187	0.0000	0.1577	0.0000	0.4264	0.1047
Spain				0.0000	0.1574	0.0000	0.0000	0.0100
France					0.0000	0.0000	0.0000	0.0002
Hungary						0.0000	0.0000	0.0073
Italy							0.0000	0.0000
Slovakia								0.1760
United Kingdom								

Note: The upper side of the table reports the means and the standard deviations computed for sub-samples made of the companies of the specific country. An evidence of firms without the required data is also reported, country by country. The lower side of the table indicates the results of a t-test of difference among the distribution of the same indicator among a couple of countries. The null-hypothesis "there is the difference among the distribution" is accepted when the reported p-values are below 10%. Larger figures (bolded) are evidence of similarities among the countries.

Table A.6. Sample statistics for board size

	<i>Czech Republic</i>	<i>Germany</i>	<i>Spain</i>	<i>France</i>	<i>Hungary</i>	<i>Italy</i>	<i>Slovakia</i>	<i>United Kingdom</i>
Mean	0.5513	1.4297	1.6030	0.4720	0.3930	3.1863	0.4840	2.4820
Variance	0.8818	5.0173	2.3618	1.1968	0.9819	7.3304	0.8005	2.1499
n.a. (%)	0.82%	0%	0.15%	0%	0%	1.37%	0.24%	0%

	<i>Czech Republic</i>	<i>Germany</i>	<i>Spain</i>	<i>France</i>	<i>Hungary</i>	<i>Italy</i>	<i>Slovakia</i>	<i>United Kingdom</i>
Czech Republic		0.0000	0.0000	0.1700	0.0403	0.0000	0.0252	0.0000
Germany			0.2452	0.0000	0.0000	0.0000	0.0000	0.0000
Spain				0.0000	0.0000	0.0000	0.0000	0.0000
France					0.3774	0.0000	0.8257	0.0000
Hungary						0.0000	0.2234	0.0000
Italy							0.0000	0.0000
Slovakia								0.0000
United Kingdom								

Note: The upper side of the table reports the means and the standard deviations computed for sub-samples made of the companies of the specific country. An evidence of firms without the required data is also reported, country by country. The lower side of the table indicates the results of a t-test of difference among the distribution of the same indicator among a couple of countries. The null-hypothesis "there is the difference among the distribution" is accepted when the reported p-values are below 10%. Larger figures (bolded) are evidence of similarities among the countries.

Table A.7. Sample statistics for board independence

	<i>Czech Republic</i>	<i>Germany</i>	<i>Spain</i>	<i>France</i>	<i>Hungary</i>	<i>Italy</i>	<i>Slovakia</i>	<i>United Kingdom</i>
Mean	0.0013	0.0082	0.1024	0.0200	0.0053	0.3075	0.0042	0.1436
Variance	0.0014	0.0081	0.0924	0.0195	0.0053	0.2133	0.0042	0.1244
n.a. (%)	0.82%	0%	0.15%	0%	0%	1.37%	0.24%	0%

	<i>Czech Republic</i>	<i>Germany</i>	<i>Spain</i>	<i>France</i>	<i>Hungary</i>	<i>Italy</i>	<i>Slovakia</i>	<i>United Kingdom</i>
Czech Republic		0.2464	0.2464	0.0055	0.4682	0.0000	0.0671	0.0000
Germany			0.0161	0.1803	0.7118	0.0000	0.5052	0.0000
Spain				0.1803	0.7118	0.0000	0.5052	0.0000
France					0.0834	0.0000	0.0195	0.0000
Hungary						0.0000	0.8476	0.0000
Italy							0.0000	0.0000
Slovakia								0.0000
United Kingdom								

Note: The upper side of the table reports the means and the standard deviations computed for sub-samples made of the companies of the specific country. An evidence of firms without the required data is also reported, country by country. The lower side of the table indicates the results of a t-test of difference among the distribution of the same indicator among a couple of countries. The null-hypothesis "there is the difference among the distribution" is accepted when the reported p-values are below 10%. Larger figures (bolded) are evidence of similarities among the countries.

APPENDIX B

Table B.1. Regression statistics – dependent variable: ownership concentration

<i>Independent variables</i>	<i>Czech Republic</i>	<i>Germany</i>	<i>Spain</i>	<i>France</i>	<i>Hungary</i>	<i>Italy</i>	<i>Slovakia</i>	<i>United Kingdom</i>
Const	3.2074 (0.0410) ***	3.0704 (0.1943) ***	3.0991 (0.0801) ***	3.5664 (0.0951) ***	3.4664 (0.1640) ***	2.7380 (0.0561) ***	3.0842 (0.0334) ***	3.4210 (0.1786) ***
Equity ratio	-0.0168 (0.0332)	0.0317 (0.4227)	-0.2359 (0.1456)	-0.4400 (0.1943) *	-0.5700 (0.2279) *	-0.7533 (0.1199) ***	-0.1011 (0.0676)	-0.4999 (0.3338)
% institut. investors	0.1786 (0.0072) ***	0.0088 (0.0053)	0.0078 (0.0018) ***	0.0205 (0.0046) ***	-0.0172 (0.0102)	0.0250 (0.0010) ***	0.1834 (0.0081) ***	-0.0189 (0.0024) ***
C-3 index	-0.0009 (0.0008)	0.0074 (0.0023) **	0.0013 (0.0002) ***	0.0049 (0.0009) ***	0.1590 (0.0135) ***	0.0003 (0.0000) ***	0.0018 (0.0006) **	-0.0013 (0.0011)
Adjusted R-squared	0.2966	0.0546	-0.0019	0.1592	0.4258	0.2555	0.3274	0.1537
F-stat (p-value)	0.0000	0.0009	0.8244	0.0000	0.0000	0.0000	0.0000	0.0000

Table B.2. Regression statistics – dependent variable: presence of a manager in the ownership structure

<i>Independent variables</i>	<i>Czech Republic</i>	<i>Germany</i>	<i>Spain</i>	<i>France</i>	<i>Hungary</i>	<i>Italy</i>	<i>Slovakia</i>	<i>United Kingdom</i>
Const	13.1857 (0.3082) ***	0.1243 (0.0227) ***	22.3939 (1.3001) ***	0.1074 (0.0289) ***	-0.0063 (0.1257)	39.6458 (0.8618) ***	12.8352 (0.1862) ***	0.0807 (0.0295) **
Equity ratio	-0.0168 (0.2500)	-0.0854 (0.0494)	8.1438 (2.3642) ***	0.1829 (0.0590) *	0.3220 (0.1747)	-3.9736 (1.8417) *	-0.0394 (0.3765)	0.1006 (0.0550)
% institut. investors	-1.3887 (0.0542) ***	-0.0030 (0.0006) ***	-0.5161 (0.0288) ***	-0.0061 (0.0013) ***	-0.0429 (0.0078) ***	-0.4812 (0.0149) ***	-1.4810 (0.0453) ***	0.0014 (0.0004) ***
C-3 index	0.0053 (0.0064)	0.0005 (0.0003)	0.0191 (0.0028) ***	0.0000 (0.0002) ***	0.0358 (0.0104) ***	0.0042 (0.0014) **	0.0144 (0.0032) ***	0.0004 (0.0002) *
Adjusted R-squared	0.3112	0.0939	0.1528	0.0635	0.1843	0.2863	0.4088	0.0501
F-stat (p-value)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Table B.3. Regression statistics – dependent variable: team size

<i>Independent variables</i>	<i>Czech Republic</i>	<i>Germany</i>	<i>Spain</i>	<i>France</i>	<i>Hungary</i>	<i>Italy</i>	<i>Slovakia</i>	<i>United Kingdom</i>
Const	6.9110 (0.2294) ***	2.1644 (0.3601) ***	35.5884 (0.6841) ***	1.2480 (0.1378) ***	6.9119 (0.2294) ***	52.7892 (0.9285) ***	6.1773 (0.1461) ***	34.2693 (1.9845) **
Equity ratio	-0.1629 (0.1861)	-0.1350 (0.7834)	1.3160 (1.2440)	0.1921 (0.2817) *	-0.1629 (0.1861)	-0.7094 (1.9841)	1.4987 (0.2956)	1.2156 (3.7081)
% institut. investors	0.5898 (0.0403) ***	0.0393 (0.0098) ***	-0.0382 (0.0151) *	0.0335 (0.0066) ***	0.5898 (0.0403) ***	0.0088 (0.0161)	0.2619 (0.0355) ***	0.1699 (0.0265) ***
C-3 index	-0.0013 (0.0047)	0.0043 (0.0043)	0.0003 (0.0015)	-0.0011 (0.0012) ***	-0.0013 (0.0047) ***	0.0013 (0.0015)	0.0204 (0.0025) ***	0.0149 (0.0124) *
Adjusted R-squared	0.1262	0.0688	0.0022	0.0512	0.1262	-0.0004	0.1610	0.1016
F-stat (p-value)	0.0000	0.0002	0.0608	0.0000	0.0000	0.5889	0.0000	0.0000

Table B.4. Regression statistics – dependent variable: board size

Independent variables	Czech Republic		Germany		Spain		France		Hungary		Italy		Slovakia		United Kingdom	
Const	1.4142 (0.1991)	***	0.6404 (0.3227)	*	8.1436 (0.6666)	***	0.1865 (0.1120)		0.3889 (0.2783)		20.4055 (0.6912)	***	6.1773 (0.1461)		11.1515 (0.8477)	***
Equity ratio	0.2993 (0.1616)		-0.0707 (0.7020)		6.7549 (1.2121)	***	0.2811 (0.2289)		0.5400 (0.3868)		0.8830 (1.4771)		1.4987 (0.2956)		1.1898 (1.5840)	
% institut. investors	0.8724 (0.0350)	***	0.0432 (0.0088)	***	0.1009 (0.0147)	***	0.03120 (0.0054)	***	0.1152 (0.0173)	***	0.1280 (0.0120)	***	0.2619 (0.0355)		0.1554 (0.0113)	***
C-3 index	-0.0010 (0.0041)		0.0067 (0.0038)		0.0059 (0.0014)	***	-0.0007 (0.0010)		-0.0544 (0.0230)	*	0.0126 (0.0011)	***	0.0204 (0.1236)		-0.0008 (0.0053)	
Adjusted R-squared	0.3023		0.1152		0.0485		0.0709		0.2098		0.1229		0.0902		0.3378	
F-stat (p-value)	0.0000		0.0000		0.0000		0.0000		0.0000		0.5889		0.2656		0.0000	

Table B.5. Regression statistics – dependent variable: board independence

Independent variables	Czech Republic		Germany		Spain		France		Hungary		Italy		Slovakia		United Kingdom	
Const	2.415 (0.0078)	***	0.01647 (0.0138)		1.0900 (0.0188)	***	0.0242 (0.0149)		0.0399 (0.0225)		1.3880 (0.0215)	***	1.0040 (0.0038)	***	0.0749 (0.0428)	
Equity ratio	0.0008 (0.0063)		-0.0380 (0.0301)		0.0187 (0.0341)		-0.0255 (0.0303)		-0.0082 (0.0313)		-0.0760 (0.0460)		-0.0096 (0.0077)		-0.0526 (0.0799)	
% institut. investors	-0.0014 (0.0014)		0.0003 (0.0004)		0.0003 (0.005)		0.0003 (0.0007)		0.0037 (0.0014)	**	-0.0011 (0.0004)	**	0.0014 (0.0009)		0.0038 (0.0006)	***
C-3 index	-0.0002 (0.0002)		0.0000 (0.0002)		0.0003 (0.0004)		0.000 (0.0001)		-0.0040 (0.0019)	*	0.0000 (0.0000)		0.0000 (0.0000)		0.0001 (0.0003)	
Adjusted R-squared	-0.0005		-0.0026		-0.0008		-0.0034		0.0441		0.0044		0.0041		0.1034	
F-stat (p-value)	0.5188		0.5030		0.7113		0.6881		0.0102		0.0013		0.0021		0.0000	

Table B.6. Regression statistics – dependent variable: one manager

Independent variables	Czech Republic		Germany		Spain		France		Hungary		Italy		Slovakia		United Kingdom	
Const	1.0260 (0.0078)	***	0.01647 (0.0138)		1.0900 (0.0188)	***	0.0242 (0.0149)		0.0399 (0.0225)		1.3880 (0.0215)	***	1.0040 (0.0038)	***	0.0749 (0.0428)	
Equity ratio	0.0008 (0.0063)		-0.0380 (0.0301)		0.0187 (0.0341)		-0.0255 (0.0303)		-0.0082 (0.0313)		-0.0760 (0.0460)		-0.0096 (0.0077)		-0.0526 (0.0799)	
% institut. investors	-0.0014 (0.0014)		0.0003 (0.0004)		0.0003 (0.005)		0.0003 (0.0007)		0.0037 (0.0014)	**	-0.0011 (0.0004)	**	0.0014 (0.0009)		0.0038 (0.0006)	***
C-3 index	-0.0002 (0.0002)		0.0000 (0.0002)		0.0003 (0.0004)		0.000 (0.0001)		-0.0040 (0.0019)	*	0.0000 (0.0000)		0.0000 (0.0000)		0.0001 (0.0003)	
Adjusted R-squared	-0.0005		-0.0026		-0.0008		-0.0034		0.0441		0.0044		0.0041		0.1034	
F-stat (p-value)	0.5188		0.5030		0.7113		0.6881		0.0102		0.0013		0.0021		0.0000	

Table B.7. Regression statistics – dependent variable: CEO duality

Independent variables	Czech Republic		Germany		Spain		France		Hungary		Italy		Slovakia		United Kingdom	
Const	1.0330 (0.0104)	***	0.0164 (0.0383)		1.0330 (0.0104)	***	0.0581 (0.0304)		0.0000 (0.0000)		1.3810 (0.0267)	***	1.0010 (0.0048)	***	0.0126 (0.0238)	
Equity ratio	0.0031 (0.0085)		-0.0380 (0.0300)		0.0031 (0.0084)		0.0025 (0.0621)		0.0000 (0.0000)		-0.2029 (0.0572)	***	-0.0101 (0.0097)		-0.0255 (0.0445)	
% institut. investors	0.0037 (0.0018)	*	0.0003 (0.0004)		0.0037 (0.0018)	*	0.0012 (0.0015)		0.0000 (0.0000)	**	0.0010 (0.0005)	*	0.0038 (0.0012)	**	0.0017 (0.0003)	***
C-3 index	0.0000 (0.0002)		0.0000 (0.0002)		0.0000 (0.0002)		0.0005 (0.0003)		0.0000 (0.0000)	*	0.0000 (0.0000)		0.0002 (0.0000)	*	-0.0002 (0.0001)	
Adjusted R-squared	0.0011		-0.0026		0.0011		0.0058		n.a.		0.0052		0.0178		0.0642	
F-stat (p-value)	0.2063		0.5030		0.2063		0.1307		n.a.		0.0004		0.0000		0.0476	