The dynamics of CEO-COB roles: Internal and external governance mechanisms influencing duality or separation

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Abstract

This study investigates the persistence of CEO–Chair duality in listed firms despite regulatory recommendations. Using an international sample of 4,600 firms across 37 countries over the period 2012–2021, we estimate the determinants of CEO–Chair separation. The results show that ownership concentration, independent directors, executive compensation policies, market performance, and regulatory quality positively influence separation. Sales growth exhibits an inverted U-shaped effect. Conversely, efficiency, financial performance, firm age, and firm size negatively predict separation. At the country level, common law systems, GDP per capita, and power distance are associated with a higher likelihood of duality. Finally, efficiency also shows an inverted U-shaped relationship, whereby higher levels of efficiency increase the likelihood of separation.

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1. Introduction[4]

The field of corporate governance has expanded significantly over the past three decades, particularly in law and economics research on investor protection and shareholders' rights. A key focus has been how corporate governance changes affect firm value and prevent rent diversion by controlling shareholders. Studies show that ownership structures, such as blockholders and institutional investors, help reduce agency costs and enhance firm value through direct monitoring (Barroso Casado et al., 2016; Laeven & Levine, 2008; Lin & Fu, 2017) . Additionally, the adoption of governance codes has improved firms' operational and market efficiencies by optimizing capital spending, earnings management, and debt policies.

Research has also explored the impact of corporate governance practices on profitability and market value through single- and multi-country studies, often finding that higher governance scores correlate with better market performance and operational efficiency (Black et al., 2017; Aggarwal et al., 2019). These improvements are linked to factors like increased disclosure, board diversity, and independent directors.

Outside the US, studies have highlighted the importance of independent directors in enhancing market performance, reducing agency costs, and overseeing management decisions. Empirical evidence shows that firms with independent boards achieve higher market premiums, improved Tobin's Q (Choi et al., 2007), better risk management, and reduced agency costs and related party transactions (Marchini et al., 2018). Despite these benefits and the recommendations from the Cadbury Report (1992) and OECD governance principles (2015), many public companies still combine the roles of Chairman (COB) and CEO. Legal reforms worldwide have pushed for more

[4] The paper's introduction needs to be rewritten and edited by including the revised and extended analytical framework and the new regression baseline regression results.

independent boards, yet many firms still combine the roles of CEO and Chairman of the Board (COB). In 2023, 41% of S&P 500 firms had CEO-COB duality, down from 55% a decade earlier (Stuart-Spencer, 2023). Globally, this structure is common, with our dataset showing a 40% duality ratio across 5,000 listed firms from 2012 to 2021.[5]

This study explores the determinants of the CEO-COB structure, addressing the gap in understanding why firms maintain dual roles despite regulatory incentives to separate them. While governance codes recommend separation, they often follow a "comply or explain" approach, leaving the decision largely to the firms. The study examines the choice between a dual structure—where one individual hold both roles—and a separate structure, in which the COB is typically an independent director. The analysis incorporates financial, risk, governance, institutional, cultural, and macroeconomic factors, with country-specific variables such as institutional quality, legal systems, and market development enhancing the robustness of the results. As shown by Lu et al. (2022) in the existent literature there are scarce studies on the antecedents of corporate governance practices, few of them are cross-country studies, and there has been little focus on institutional and individual level characteristics. We incorporate a wide set of explanatory variables in different levels such as institutional, macroeconomic, cultural, governance, firm performance and efficiency.

Focusing on financial, governance, and country-specific variables, this study finds that a 1% increase in equity held by the top three block holders raises the likelihood of separating the CEO and COB roles by 2.1-2.3%, likely to address minority shareholders' concerns. While control contestability shows a negative but insignificant effect, board independence increases the likelihood of separation by 17%. An executive compensation policy boosts the probability by 4-

[5] Table A1 in the appendix list the main corporate governance reforms and their recommendations on regards of CEO/CEO separating structures in 37 countries.

5%, while a board compensation committee and diversity policy reduce it by 3-4% and 1-2%, respectively.

Regarding growth opportunities, it positively predicts CEO-COB separation by 2-5%. However, an inverted U-shaped relationship emerges, suggesting that in firms with very high growth opportunities, the preference may shift back to dual roles for CEOs. Conversely, efficiency is negatively associated with the separation of CEO and COB roles, indicating that efficient firms are more likely to retain a dual structure, reducing the likelihood of separation by 6-10%. However, by incorporating a squared term reveals a U-shaped relationship, where highly efficient firms may eventually favor separation.

We also examine how institutional factors and financial market development influence CEO-COB duality. Regression results show a negative correlation between common-law systems and separate structures, implying that civil law systems positively impact this decision. This is moderated by regulatory quality, which enhances the likelihood of adopting CEO-COB separation. The common law effect is mainly driven by the U.S. sample, where factors like corporate culture and shareholder activism hinder further gains from separating roles. Market development has a more significant positive impact on emerging markets than on developed ones regarding CEO-COB duality. Lastly, the study indicates that firm idiosyncratic risk is positively related to the separation of CEO-COB roles by about 2-5%.

The remaining of this paper is organized as follows: Section 2 provides the theoretical framework, the regulatory setting, and the development of the working hypothesis. Section 3 describes the data and methodology. Section 4 presents the baseline econometric results, analysis, and the robustness analysis. Section 5 reports the conclusions.

2. Theoretical framework and hypotheses

The two primary leadership roles in firms are the Chief Executive Officer (CEO) and the Chairperson of the Board of Directors (COB). The CEO is responsible for managing the firm and maximizing shareholder value, while the board is tasked with monitoring and guiding management to counterbalance excessive managerial power (Jensen & Meckling, 1976). The COB plays a key role in ensuring that the board fulfills its oversight responsibilities effectively and serves as a check on the CEO.

Conflicts may arise between the CEO and COB roles, prompting many countries to adopt governance mechanisms that clearly separate these responsibilities (Zattoni & Cuomo, 2008). Nonetheless, the dual structure—where a single individual holds both roles—remains widespread, raising concerns about the feasibility and effectiveness of managing potentially conflicting duties. Despite formal distinctions between the roles, in practice, it is common for one person to serve simultaneously as both CEO and COB. This situation, known as CEO duality, presents a core governance dilemma: can one individual adequately fulfill both oversight and executive functions at the same time?

By contrast, some firms have implemented a separate leadership structure in alignment with regulatory recommendations, promoting the division of roles as a best practice to reduce agency conflicts and strengthen CEO oversight. From a managerial standpoint, however, dual structures can offer certain advantages, such as "unitary leadership," "clarity of responsibilities," or "unity of command" (Lorsch & Zelleke, 2005), which may enhance stakeholder relationship management. Nevertheless, excessive board involvement in executive matters can impair CEO effectiveness (D'Aveni & Finkelstein, 1994; Freire, 2019). These managerial considerations often underpin a firm's decision to retain a dual structure.

The next part of this section will develop the hypotheses mainly from the perspective of agency view in the literature of corporate governance.

2.1 The legal regime and agency costs

The agency view in the corporate governance literature that gained global attention began with a series of breakthrough papers in the late 1990s (1997, 1998, 1999, 2000) in the field of law and finance, focusing on investor rights. These studies, led by La Porta, Lopez-de-Silanes, Shleifer, and Vishny (LLSV), analyze the role of legal protections and enforcement mechanisms in fostering financial market development and protecting shareholders—especially minority shareholders—and creditors.

Together, these papers provide strong evidence that the legal regime and its enforcement mechanisms help explain internal governance structures such as firms' ownership concentration. However, these legal factors do not necessarily correlate with firm market performance. The studies show that common-law countries generally offer the strongest legal protections to investors, in contrast to civil-law countries—particularly those with French legal origins. Better investor rights are associated with more developed capital markets, less financially constrained firms, and lower ownership concentration.

Agency costs are present in stakeholder relationships due to informational rents. LLSV's findings suggest that in countries with weak investor protection, there are adaptation mechanisms that mitigate rent diversion through related-party transactions, generous managerial compensation packages, or the absence of dividend payments. One such mechanism is higher ownership concentration, which requires large shareholders to increase their equity holdings in order to exert direct monitoring and control over firm management. Other adaptation mechanisms include mandatory dividend payout decrees and restrictions on the issuance of new equity instruments that

deviate from the one-share-one-vote rule (e.g., dual-class shares, stock warrants, preferred shares, or founders' shares).

2.2 CEO duality and firm performance

This study focuses on a key corporate governance best practice: *the separation of roles between the CEO and the Chairman of the Board (COB)*. This voluntary guideline, adopted in most countries, traces back to the Cadbury Report (1992), which strongly recommended such a separation to enhance management independence and strengthen the board's supervisory role. Three decades later, we find that CEO–COB duality still persists among large corporations in several markets, with this persistence being particularly evident in the United States.

Studies in corporate governance that address dynamic endogeneity have commonly included **CEO duality** as a dichotomous variable to control for governance effects in regressions explaining either firm operational or market performance. CEO duality reflects a key governance practice that may influence a firm's **information transparency**, **disclosure** quality, and the fiduciary duties performed by board directors.

Most of these studies, based on samples of publicly listed companies, consistently report a **valuation discount** associated with CEO duality in relation to firm operating performance or market capitalization. For instance, Duru et al. (2016), using a U.S. sample of 950 firms over the 1997–2011 period, find that CEO duality is associated with firm values approximately **27% lower** than the sample mean (10.4%). Nonetheless, this effect is partially reversed in the presence of higher **board independence**, suggesting that outside directors help deter managerial rent extraction and strengthen the board's monitoring function.

Tang (2017) evaluates a sample from the U.S. computer industry to examine the moderating effects of two factors on the relationship between CEO duality and firm performance: (i) the

presence of directors representing outside blockholders, and (ii) the relative power of the CEO compared to other top executives within the management team. The main finding is that CEO duality is associated with a 40% discount in firm stock returns. This negative effect is amplified when the CEO holds greater power relative to other executives and when a blockholding outside director is present.

Similarly, Hsu et al. (2021), using data from all non-financial firms listed on the Taiwan Stock Exchange between 2000 and 2012, report that firms with higher information costs and CEO duality leadership tend to experience lower firm performance—measured by ROA and Tobin's Q—compared to their non-duality peers. Information costs are proxied by analyst forecast errors on firms' earnings-per-share relative to stock price.

Notably, this literature, from the agency view, has not deeply explored the persistence of the CEO duality/separation decision, nor its key drivers and transmission mechanisms. A natural question arises: what factors explain the persistence of CEO-COB duality in common law versus civil law countries? One explanatory channel lies in the ownership structure—specifically, the presence of multiple blockholders (BHLs) who may either contest or collude in the exercise of corporate control. The presence and number of blockholding shareholders, as well as the existence of controlling owners, are likely to play a central role.

2.3 Multiple blockholders and control contestability

Corporate ownership concentration is a well-established feature of public firms worldwide. Notable exceptions—though extremely important in terms of size and corporate capitalization—are the United States, the United Kingdom, and, to a lesser extent, Ireland. However, the classical view of widely held corporations in the U.S. has been increasingly challenged by the growing equity holdings of institutional investors (Holderness, 2007).

In large emerging markets and continental Europe, corporations often exhibit either absolute control by a dominant blockholder—holding 50% or more of total voting rights—or the presence of multiple blockholders, where no single one has sufficient voting power to control the company. Ownership statistics indicate that around 50% of public corporations in the EU have multiple blockholder (BHL) ownership structures (Laeven & Levine, 2008), as is also the case in many large emerging markets (Alvarez et al., 2018), Latin America (Pombo & Taborda, 2017), and privately controlled firms in China (Li et al., 2015).

A significant proportion of these companies are affiliated with business groups that have identifiable controlling shareholders, typically organized through complex structures such as pyramids, cross-shareholdings, rings, or networks. These arrangements further decouple control rights from cash flow rights, allowing controlling shareholders to potentially exploit their voting power to tunnel resources and covertly expropriate minority shareholders.

Leading research strands in corporate finance during the last two decades have highlighted the role of multiple blockholders and their identity in explaining the mediating and moderating effects that blockholder ownership structure has on firm choices such as corporate investment and risk taking, or its marginal effects on firm market value.

Corporate governance studies on the relationship between ownership and firm value has framed the issue as a tradeoff between two opposing effects: incentive alignment and entrenchment. These tradeoffs have highlighted the potential internal control between large shareholders/BHLs in a world with high ownership concentration, the existence of controlling owners, and shareholders' separation between ownership and control (i.e., the separation between cash flow rights and voting rights). This internal control is known as blockholder contestability.

Multiple shareholder ownership structures are prevalent in continental Europe and emerging markets like Latin America and East Asia. Studies on blockholder contestability, beginning with Maury and Pajuste (2005), have examined the incentive effects (monitoring) versus tunneling effects (related transactions) that create agency conflicts between large shareholders and minority investors.

The conceptual framework involving control contestability and multiple blockholders (BHLs) suggests that: i) contesting the largest shareholder prevents rent extraction (tunneling), and ii) forming coalitions can enhance control over a firm's cash flows. Therefore, contestability acts as an internal market mechanism that can improve firm value if tunneling is effectively managed. Research indicates that voice intervention is significant in firms with multiple ownership structures.

Empirical evidence supports the monitoring role of multiple blockholders (BHLs) and their effect in fostering firm capitalization and growth opportunities by enhancing Tobin's Q (Attig et al., 2009; Laeven & Levine, 2008; Pombo & Taborda, 2017). Multiple BHLs also help curb corporate risk-taking by improving investment efficiency and restraining the propensity of controlling owners to undertake low-risk investments—often a result of maintaining under-diversified portfolios (Boubaker et al., 2016; Dyck & Zingales, 2004; Paligorova, 2010; Faccio et al., 2011)—which makes them less willing to assume additional risks. These studies all show that there are non-linear relations in the estimating regressions. For instance, when the largest shareholder is a family and holds a high ownership stake, the contestability effect of the second non-family blockholder becomes stronger in promoting firm investment and corporate risk-taking.

Studies also show that the presence of multiple blockholders (BHLs) has moderating effects on corporate investment. These effects include reducing financial constraints at the firm level—

evidenced by lower investment–cash flow sensitivity ratios (Alvarez et al., 2018)—increasing firm-level R&D spending (García-García et al., 2020), enhancing external borrowing by using bank debt as a disciplinary device to control managerial inefficiency (Ben-Nasr et al., 2015; Tsai et al., 2015), and promoting value-enhancing M&A deals (Pombo et al., 2024).

This body of evidence suggests that similar effects—and underlying causal mechanisms—may result from the voice, contestability, and activism of multiple blockholders (BHLs) in influencing a firm's choice regarding CEO duality. The risk of rent diversion by controlling owners—through the exploitation of the separation between ownership and control, particularly within business group structures and self-dealing transactions—is further exacerbated when the CEO also serves as the board chair, concentrating decision-making power.

Corporate ownership statistics from our dataset encompass information on the top six shareholders in an unbalanced panel of approximately 4,600 firms across 37 countries, covering the years 2012–2021. The raw data show an average of 2.8 blockholders (BHLs) per firm, regardless of the legal regime. Approximately 75% of the firms in our sample have two or more blockholders.

The above analytical review of legal regimes, shareholder rights, and blockholder contestability—along with the widespread presence of multiple BHLs in the selected dataset—supports the following hypotheses:

> ***H1a:*** *Higher contestability (i.e., lower dispersion of equity rights) among top blockholders, along with a greater number of them, increases the probability of adopting a CEO-COB separation structure.*

> ***H1b****: The overall marginal effect of blockholder ownership and blockholder contestability on the likelihood of CEO-COB separation may exhibit non-linear realtionships. patterns.*

Blockholder ownership structure and contestability are expected to be statistically significant predictors of CEO-chair separation in firms with multiple blockholders and without absolute control by the largest shareholder, particularly in companies headquartered in civil law countries. In contrast, in common law countries, ownership is typically less concentrated—especially at the level of the largest shareholder—and widely held firms are more prevalent.

2.4 Blockholder heterogeneity

Empirical research on corporate governance suggests that the type of controlling shareholder present in a company is essential for understanding the link between ownership structure, agency costs, and firm value. Claessens, Djankov, Fan, and Lang (2002) find that the expropriation of minority shareholders is more likely when the largest controlling shareholder is a family or the state. The underlying assumption is that different types of blockholders have distinct incentives and abilities to monitor the controlling shareholder.

Controlling shareholder types have the power to shape financial decisions according to their risk preferences. For instance, Faccio et al. (2011) find that firms controlled by non-diversified large shareholders invest more conservatively than those controlled by well-diversified large shareholders.

Studies on institutional ownership highlight the advantages associated with the presence of institutional investors in a firm's ownership. These include improvements in firm performance and value, lower cost of equity, greater demand for information disclosure, and stronger firm-specific corporate governance standards (Ferreira & Matos, 2008; Elyasiani et al., 2010; Bird & Karolyi, 2016).

The heterogeneity in the roles of large institutional investors—particularly in terms of their monitoring involvement (i.e., independent [active] vs. grey [passive] investors)—affects firm

investment and performance. Studies show that mutual funds, hedge funds, and independent advisors are positively associated with higher firm market values, typically measured by Tobin's Q levels or their changes. In contrast, grey investors (such as insurance companies, pension funds, and banks/trusts) do not significantly explain these valuation premia (Katan & Nor, 2015; De-la-Hoz & Pombo, 2016).

Regarding corporate investment, Álvarez et al. (2018), using a sample of 16 large emerging markets, report that independent, long-term, and local institutional blockholders boost investment ratios and reduce firms' financial constraints.

The literature has also focused on the role of families and government institutions as large shareholders. Studies on corporate risk provide evidence that families and the state are under-diversified investors who forgo timely investment opportunities, invest more conservatively, and do not react promptly to market shocks. For instance, family-controlled firms tend to pursue low-risk investments (Boubaker et al., 2016) and exhibit lower R&D investment ratios when family blockholders own more than 50% of voting rights (García-García et al., 2020). In such firms, legacy, family reputation, and succession planning—core elements of socioemotional wealth (Gómez-Mejía et al., 2011)—often drive suboptimal debt and long-term investment decisions.

Similarly, government-controlled firms may pursue political objectives that distort capital expenditure decisions (Vo, 2018).

Complementing the evidence on the type of controlling blockholder, studies on control contestability have shown that the presence of competing blockholders can moderate the negative effects associated with state or family control, particularly in terms of limiting investment in growth opportunities and maintaining under-diversified portfolios (Sacristán-Navarro et al., 2015; Cid-Aranda & López-Iturriaga, 2025).

Based on the above arguments, we expect that both the type of controlling shareholder and the identity of a contesting blockholder influence the likelihood of adopting a CEO–COB separation structure, which reduces the discretionary power of management. Hence, we propose the following hypotheses:

***H2a**: Firms controlled by institutional investors and corporations are more likely to adopt a CEO–COB separation structure.*

***H2b**: Firms owned by families or the government are less likely to adopt a CEO–COB separation structure.*

We further expect that the identity of blockholders beyond the largest shareholder may have moderating effects, either increasing or decreasing the likelihood of CEO duality. In particular, in family- and government-controlled firms, the presence of a second blockholder—such as an independent institutional investor or a corporation—capable of exerting voice or intervention may offset the marginal effect of the controlling owner, moderating the direction of the relationship in the opposite way.

2.5 External governance mechanisms

External governance mechanisms that influence corporate governance practices are associated with market- or institution-driven forces that discipline corporate behavior from outside the firm. The literature highlights several such mechanisms, including product market competition (Giroud & Mueller, 2011), the market for corporate control—i.e., the threat of takeover (Netter et al., 2009), stock price performance as a monitoring tool (Bhagat & Bolton, 2008), media and analyst coverage (Dick et al., 2008; Borochin & Cu, 2018), and the legal and regulatory environment (La Porta et al., 1997, 2006).

In this study, we focus on regulatory recommendations regarding the CEO as an external mechanism that influences firms' CEO duality choices. As mentioned in a previous section, the

Cadbury Report in the UK (1992) strongly recommended separating the roles of the Chairman of the Board (COB) and the Chief Executive Officer (CEO) to prevent excessive concentration of power. It stated: *"There should be a clearly accepted division of responsibilities... such that no one individual has unfettered powers of decision"* (Cadbury Report, 1992).

Subsequent national and international securities regulations reinforced this recommendation, although compliance remains voluntary under the **"comply or explain"** principle. The approach to CEO structure varies between **unitary** and **dual** corporate governance systems.

In **unitary systems**, a single board of directors performs both advisory and monitoring roles, comprising executive and independent directors. In these systems, the separation of roles is encouraged through regulation.

Conversely, dual systems feature separate management and supervisory boards. The management board is composed of executives, while the supervisory board consists primarily of independent members. In these systems, the separation of roles is structurally embedded.

Among OECD countries, 20 out of 37 member nations recommend the separation of CEO and COB roles. In the nine countries with dual board systems, managerial and supervisory responsibilities are assigned to different individuals. The independence of the COB is also emphasized, often requiring no prior relationships with senior management.

The OECD's **Principles of Corporate Governance** (1999, 2004, 2015) advocate for such separation. The 2015 version states that it "*can help to achieve an appropriate balance of power, increase accountability, and improve the board's capacity for decision-making independent of management*" (p. 51).

Despite these recommendations, adherence to CEO duality guidelines varies by country, influenced by differences in legal systems. In common law countries, motivations are often

intrinsic, while civil law countries typically rely on formal codes and rules to promote adoption (Zattoni & Cuomo, 2008). In some cases, civil law jurisdictions may issue codes primarily for legitimacy purposes, rather than from a genuine commitment to best practices (Pejovic, 2001).

Although regulatory quality and compliance levels differ between the two legal traditions, the incentives for implementation are shaped by both the regulatory framework and prevailing market conditions. Based on these arguments, the following hypothesis is proposed:

H3: *Regulatory quality in a country positively predicts the adoption of a separate CEO structure in companies headquartered in civil law countries.*

Empirical evidence suggests that outcomes such as improved market performance and firm value are associated with the implementation of sound governance practices, including the presence of independent directors, board committees, and transparent compensation policies (Ararat et al., 2017; Black & Kim, 2012; Black et al., 2014, 2015). Conversely, firms that neglect good governance practices tend to experience adverse consequences (Duru et al., 2016; Freire, 2019).

Recognizing the positive influence of corporate governance on firm value, we formulate the following hypothesis:

H4: *Implementing good corporate governance practices increases the likelihood of adopting a separate CEO structure and moderates the effect of blockholder structure and ownership control on that choice.*

The regulatory environment, as an external governance mechanism, is further shaped by macroeconomic conditions, such as per-capita income and inflation, which influence the overall quality of governance. Doidge et al. (2007) found that country-level characteristics have a greater impact on corporate governance ratings than firm-specific factors, highlighting a positive association between macro-level variables and governance quality. Based on this, we expect that

country-specific and macroeconomic factors may enhance or weaken the marginal effect of legal and regulatory provisions on a firm's choice of CEO structure.

3. Data and methodology

The original sample for this study includes data from publicly listed firms worldwide. The dataset excludes firm-year observations for companies subject to specific regulations in the healthcare sector, utilities and financial institutions. It also omits observations from countries with dual corporate governance systems, such as Germany and Austria, where the legal structure inherently separates the roles of CEO and Chair of the Board, and China due to its unique political and legal context.

The final dataset is an unbalanced panel comprising over 4,600 firms across 37 countries, including 15 emerging markets, covering the period from 2012 to 2021. Information on CEO and COB roles, as well as shareholder equity holdings, was retrieved from Refinitiv's DataStream platform. Firm-specific financial and market data were also primarily sourced from DataStream, with stock price information obtained to a lesser extent from Bloomberg. For firms with missing information, we complemented the dataset with hand-collected data from various sources, including company annual reports and corporate governance disclosures, as well as documents from national securities regulators—such as the U.S. Securities and Exchange Commission (SEC), the Canadian Securities Administrators (CSA), the European Securities and Markets Authority (ESMA), Brazil's Comissão de Valores Mobiliários (CVM), and South Korea's Financial Services Commission (FSC), among others.

Country-specific variables include external governance mechanisms defined by a country's regulatory quality, rule of law, and control of corruption. This data is sourced from the World Bank Governance Indicators (WBGI). The dataset also includes macroeconomic variables such

as a country's inflation rate, GDP per capita, and financial deepening, obtained from the World Bank Development Indicators. Hofstede's organizational cultural dimensions—i.e., power distance, masculinity, individualism, and uncertainty avoidance—complement the set of country-specific variables in the working database.[6]

3.1 The dependent, hypotheses and control variables

The dependent variable is a dichotomous variable that takes the value of one when the firm has a separation between the CEO and Chair of the Board (COB) roles, and zero otherwise. The frequency distribution across firm-year observations shows that around 60% of companies have separated these roles, while 40% still maintain CEO duality.

The set of independent variables is grouped at both the firm and country levels, categorized by the type of corporate governance mechanism (e.g., internal vs. external). At the firm level, the dataset includes the set of shareholder ownership variables by type of legal investor (corporation, institutional, family, government, research firms) and by their size discriminating by blockholder and minorities. A blockholder is defined as a shareholder that owns at least 5 % of a firm's outstanding shares according to the Security Exchange Commission (SEC) in the US and the European Security and Market Authority (ESMA) in the EU. Total recorded ownership for this study, by firm-year, is the sum of shareholdings by the largest six shareholders that on average represent 43% of firm equity and 34% is in hands of blockholders.

External corporate governance mechanisms at the country level include time-varying factors such as regulatory quality and macroeconomic variables like the inflation rate and GDP per capita. They also encompass time-invariant institutional attributes, including the legal system

[6] Cultural dimension indices are available on Hofstede's website: www.geerthofstede.com

and cultural dimensions based on Hofstede's rankings, such as power distance, masculinity, individualism, and uncertainty avoidance.

The control variables included in the estimating equations comprise a set of market performance and valuation indicators, proxied by the firm's Tobin's Q and stock price volatility. They also include measures of operational efficiency, such as sales growth, free cash flow to assets, asset tangibility, debt-to-equity ratio, and revenue-to-assets ratio. Additional firm-level controls include attributes such as firm size and age. All control variables are standard in empirical corporate governance and finance studies. **Table A1** in the appendix provides definitions of all variables along with references to key studies in the field.

3.2 Empirical design and estimating equations.

The estimation of the likelihood regarding the CEO separation structure follows probit panel random effects model. The general specification is as follows:

$$\Pr(y_{it} \neq 0 | x_{it}) = \Phi(x_{it}\beta + v_i) \qquad (1)$$

Where: $i = 1, 2, \dots, n\ firm\ clusters; t = 1,2, \dots T$, fiscal years; $v_i\ are\ i.i.d \sim N(0, \sigma_v^2)$ and Φ is the standard normal cumulative distribution function. The underlying assumption for these models is $y_{it} \neq 0 \Leftrightarrow x_{it}\beta + v_i + \epsilon_{it} > 0$; where the residuals ϵ_{it} are i.i.d, normal distributed with mean zero and variance $\sigma_\epsilon^2 = 1$, independently of v_i. Probit data panel models fit via maximum likelihood random-effects models.

We estimate the following probit panel regression specifications to test Hypotheses 1 to 3, which examine the impact of blockholder ownership type and blockholder contestability on the likelihood that firms adopt a structure separating the CEO and chairman roles. In particular:

$$Prob_{it}\,(y = 1\,|X) = \beta_0 + \beta_1 \mathbf{OWN}_{iwt} + \beta_3 \mathbf{CONT_{it}} + \beta_3 \mathbf{COUNTRY_{jt}} + \beta_z \mathbf{X} + v_i + e_{it} \quad \textbf{(2)}$$

To account for potential moderating effects by the type of controlling or largest blockholder (BHL), we extend the estimation with the following specification:

$$Prob_{it}(1\,|X) = \beta_0 + \beta_k \mathbf{OWN}_{i,w,t} + \beta_2 \mathbf{CONT_{it}} + \beta_3(\mathbf{CONT_{it}} \times \mathbf{TYPE1_{it}}) + B_4 \mathbf{TYPE1_{it}} + \\ + \beta_5 \mathbf{COUNTRY}_{jt} + \beta_z \mathbf{X}_{it} + v_i + e_{it} \quad (3)$$

Similarly, to account for potential non-linearities in blockholder ownership or contestability, we estimate the following equation:

$$Prob_{it}(1\,|X) = \beta_0 + \beta_k \mathbf{OWN}_{i,w,t} - \beta_h \mathbf{OWN^2_{i,w,t}} + \beta_j \mathbf{COUNTRY}_{jt} + \beta_z \mathbf{X}_{it} + v_i + e_{it} \quad (4)$$

In these equations, the subscript *i* refers to the firm, *j* to the country, *w* to the investor type, and *t* to the year. The dependent variable equals 1 if the firm has a separation between the CEO and chairman (COB) roles.

The key explanatory variables are grouped as follows: **OWN** is a vector of blockholder direct ownership by legal type (i.e., institutional investors, corporations, government, and others). **CONT** captures blockholder contestability, measured by the Herfindahl-based differences in equity rights among the top three voting blocks and the ratio of direct ownership of the second-largest to the largest blockholder.

The regressions also include the number of blockholders per firm-year (**NBHL**), which proxies for blockholder coordination challenges in decisions to contest or form a controlling coalition. As Pombo et al. (2024) argue, blockholder agreements become less credible as more players enter the coalition game.

COUNTRY is a vector of country-specific variables, including time-varying governance and macroeconomic indicators, as well as time-invariant cultural indices from Hofstede. **TYPE1** identifies the legal nature of the largest shareholder in each firm *i* at time *t*. **X** includes all control variables: firm efficiency and financial performance measures, as well as firm-specific attributes

such as size (by assets), age, and board-related variables, including board size and the fraction of independent directors. The panel probit regression in equations (2) through (4) control for unobservable firm-fixed effects (v_i).

The next section presents a summary of the statistical analysis, the results of the baseline regressions, and extensions.

4. Econometric results

4.1. Descriptive statistics

Table 1 presents the descriptive statistics for the full sample. Given that the dataset covers public firms from a wide range of countries, the figures reflect a considerable degree of heterogeneity across firms. To organize the analysis, variables are grouped into six categories. The first category refers to total ownership by type of investor (TOT_OWN_TI). On average, institutional investors hold about 25% of outstanding shares. Within this group, independent institutions represent the dominant category, with an average of 23% ownership, while grey institutional investors account for around 5%. Family investors also play a significant role, with average ownership of 10%.

The second category centers on blockholder (BHL) ownership, which is particularly relevant for understanding governance outcomes. On average, blockholders own 34% of equity. This level is noteworthy given the inclusion of US and UK firms in the sample, where blockholder presence is traditionally weaker. Among blockholders, institutional investors are the most prominent, holding 17% of shares. Within this subgroup, independent institutions account for 16%, leaving only 1% for grey institutions. Corporations and families also emerge as important blockholder categories, holding 9% and 7% of shares, respectively. These figures emphasize the central role of blockholder identity and composition in shaping governance structures and, ultimately, the separation between CEO and COB roles.

The third category includes indicators of ownership concentration, contestability, and governance quality (OWN_C_CG). The largest three shareholders together hold an average of 33%, which is consistent with the total blockholder share. Independent directors constitute 61% of boards, a figure that may reflect the heavy presence of US and UK companies in the dataset. To capture contestability, the sum of the first three Herfindahl differences yields a mean of 0.04, with a right-skewed distribution driven by firms in continental Europe and emerging markets, where ownership tends to be more concentrated.

The fourth category incorporates firm-specific attributes used as controls in the analysis. Market-driven indicators include Tobin's Q, with an average of 1.73, reflecting relatively high market valuations during the observation period, and annualized volatility of stock returns, with a mean of 39%. Financial and operating performance are proxied by leverage, asset turnover, and real sales growth, while more conventional controls include firm age and size.

The fifth category accounts for cross-country differences. Instead of country dummies, which are unsuitable for the chosen probit panel framework, continuous indicators are used. These include the World Bank's regulatory quality index, macroeconomic variables such as inflation and GDP per capita, and cultural dimensions derived from Hofstede (1980). The latter are fixed by country and capture long-term institutional and cultural factors that may condition the separation of CEO and COB functions.

The sixth category introduces categorical variables designed to capture structural institutional characteristics. A majority of firms (61%) are located in common-law systems, while the remaining 39% are situated in civil-law or other legal environments. Furthermore, 87% of the firms in the sample are based in developed markets. Both legal origin and market development are time-invariant characteristics that frame the institutional context of corporate governance.

[Table 1 around here]

Table 2 extends the descriptive analysis by presenting the frequency distribution of key firm-specific variables across six MSCI-based regional classifications. This regional comparison provides further insights into how blockholder structures and ownership patterns vary geographically and how they might condition CEO/COB separation.

In the Americas Developed region (United States and Canada), CEO/COB separation is the lowest, with a mean of 45%. Ownership concentration is also relatively low, averaging 29%. At the same time, firms exhibit the highest levels of control contestability, board independence, stock volatility, market valuation, real sales growth, and GDP per capita. Importantly, this region displays the highest levels of institutional ownership, particularly independent institutional investors, who also dominate blockholder positions (24% on average).

Western Europe, composed of developed EU markets, shows a much higher rate of CEO/COB separation, close to 75%, alongside lower ownership concentration relative to the Americas. Firms in this region are characterized by high market valuations (Tobin's Q above 1.7), superior asset turnover efficiency, older firm age, and the second-highest GDP per capita in the sample.

The Asia-Pacific developed markets also exhibit substantial CEO/COB separation, at around 68%, but their governance structures differ. Independent directors are far less prevalent, at only 29%, and market valuations are lower (Tobin's Q below 1.2). Blockholder ownership in this region is the lowest across all regions, averaging just 26.8%. Nevertheless, firms in Asia-Pacific developed economies are the largest in terms of assets and maintain the lowest leverage levels.

Latin America shows similarly high CEO/COB separation (68%) but combines this with the highest levels of ownership concentration, averaging 48% among the top three shareholders.

Board independence is relatively modest at 37%, yet higher than in Asia-Pacific and Africa. Blockholder composition is distinct in this region, with families holding 15.3% of ownership overall and 14.8% in blockholder positions. Latin American firms also face macroeconomic pressures, including inflation above 7%, negative real sales growth (–6%), and the highest leverage levels (log D/E = 0.62). However, they are the only group to show positive free cash flow to assets, averaging 3%.

Emerging markets in Eastern Europe, the Middle East, and Africa report the highest CEO/COB separation rates, above 80%, and strong board independence, exceeding 55%. Firms are smaller in size, with mean log assets of 7.41, and have high levels of asset tangibility. Regulatory quality is lowest in this region, inflation is high, and blockholder ownership includes a notably large presence of grey institutional investors (13.7%), the highest of any region.

Finally, Asian emerging markets show separation rates above 70% combined with the highest ownership concentration (over 48%), apart from Africa. Independent directors represent about 50% of boards, while Tobin's Q exceeds 1.6, approaching the levels of Western Europe. Firms in this region are characterized by the highest tangibility of assets (57%) and the strongest power distance scores in the sample, indicating entrenched hierarchical structures. GDP per capita is the highest among emerging economies, further distinguishing the region.

Taken together, these descriptive statistics highlight the importance of blockholder composition and regional ownership patterns in shaping CEO/COB separation. While institutional investors dominate blockholder structures in developed markets, families and grey institutions play a stronger role in emerging markets, suggesting that the identity of blockholders may be a central determinant of governance outcomes.

[Table 2 around here]

4.2 Baseline regressions

To test the working hypotheses regarding the determinants of the CEO/COB separation choice, we followed specification in Eq (3) that model the probability of CEO/CEB separating structure dummy by shareholder/blockholder ownership concentration and legal person types, as well individual investors.

We group investor types as: institutional ownership (independent and grey investors) family ownership , government ownership , total corporate and incorporate firm ownership, and research firm ownership.

Table 3 presents the base results from the panel-probit model of CEO/COB separation across firms, as specified in equation. The reliability of these findings is based on i) data quality; ii) appropriate model selection; and iii) result consistency across models. Several key outcomes are noteworthy. Regarding the impact of total ownership by type of investor there are some considerations to remark. The stronger positive effect was observed on the total independent institutional investor ownership with and $(\beta_6 = 0.43)$, it means as so that the ownership of the independent institutional investor increases the willingness to implement a separate structure increase. On the other hand, the variable that has the most negative impact on separation is related to total blockholder ownership with an average marginal effect across equation of $(\beta_1 = -0.22)$ it means as blockholders are powerful, they could press for powerful CEOs.

The previous results contrast with the case of first three top shareholders' holdings, where a positive effect is observed. Thus, a higher ownership concentration at the top could be related to a separate structure. An explanation could be related to the number of blockholders, where the relationship is negative, so as a firm has more blockholdersthey could select a dual structure to strength CEO's leadership and power. Here, the impact of the number of blockholders helps to explain our results in these models. Corporate ownership also has a positive impact; however,

this relationship is weaker than in the prior types. Moreover, we observed a strong positive effect of independent directors on the CEO separation decision. On the other hand, the single effect of contestability in these specifications is not significant as expected, however it is noticeable that results in other models explained below show additional insights.

The incorporation of categories provides significant results regarding the legal system. Not so in the case of the market development level. Common legal system is strongly associated with a dual structure, as observed in models 4 and 5. The relevance of the US in the sample is analyzed in the following section, because there the rate of CEO separation is the lowest. However, the US is not the only common-law country in our sample, there are other relevant cases like the UK where the separated structure rises high levels.

Among the firm-level controls, we found a significant impact of Tobin's Q, revenue to total assets, sales growth, and size. Firm characteristics impact on the internal decision to follow a separate structure or not. The positive drivers of separation are related to growth opportunities and market performance, sales growth and Tobin's Q. The implications are that good corporate governance is viewed as a good attribute in the market, so firms prefer to follow separate structures where their valuations are high. In the case of performance, it shows firms with higher growth opportunities could have more probability to separate roles. However, efficiency in the use of assets negatively impacts on the willingness to separate roles, as the strong negative effect of Revenue to total assets shows.

Among country level controls, cultural characteristics also show relevant prediction power related to CEO structure. Interestingly, cultural dimensions predict a dual instead of a separate structure. Dimensions such as individualism, power distance and uncertainty avoidance negatively predict separation. Individualism is the extent to which people feel independent, so in

these cultures people try to be less interdependent. For firms in more individualistic cultures, it is natural to not split roles, guaranteeing a certain level of CEO independence. The margins for individualism are on average $(\beta_{24} = -.0.90)$.

The power distance index shows a negative effect in explaining CEO/COB separating structures . On average the regression coefficients are $\beta_{20} = -1.35$. Considering PD represents the extent to which the less powerful members of organizations and institutions accept and expect that power is distributed unequally it is expected that the relationship was inverse, because this cultural attribute shows the acceptance of power concentration as a normal condition, not questioning duality as a problem. The relationship is similar to the case of uncertainty avoidance, where less tolerance to risk is related to countries where roles tend to be separated and so on, in countries where levels of avoidance are high, stronger leadership models are preferred. The marginal effects for uncertainty avoidance index are for the full models in Eq.4 and Eq.5 are around $\beta_{22} = 0.74$. As it is related to anxiety and distrust in the face of the unknown, and conversely, with a wish to have fixed habits and rituals, and to know the truth.

Conversely, masculinity has a positive relationship with separation $(\beta_{23} = 0.27)$, meaning in societies where competing and winning are important for both genders, roles tend to be separated and in societies where competition is not well perceived, duality is predominant.

[Table 3 around here]

Table 4 presents models that include the individual effects of ownership by each type of shareholder. Our findings indicate a positive impact of institutional ownership on CEO separation ($\beta_1 = 0.198$), which is stronger in the case of independent institutional investors ($\beta_3 = 0.217$). Other shareholder types display a positive but non-significant impact on separation. Conversely, family ownership shows the strongest negative effect, as expected ($\beta_4 = -0.269$).

In the case of institutional investors, the evidence suggests they push for stronger adherence to corporate governance codes; as their voting power increases, they may drive the adoption of a separate CEO/COB structure. The effect is even more pronounced for independent institutional investors. By contrast, in firms where family influence is dominant, there is a greater tendency to combine roles in a powerful dual CEO.

Other variables remain significant and retain their relationships in the second set of models. Finally, in line with prior literature, grey investors do not exhibit a significant impact on corporate governance decisions.

[Table 4 around here]

Table 5 analyzes the effects of different types of blockholder ownership on the CEO separation decision. The results are consistent and more robust compared to the prior scenario. In this set of models, the largest (in absolute value) and strongest effect is observed for family blockholders ($\beta_3 = -0.289$), where the impact remains negative, as in the case of family ownership overall. Conversely, blockholder ownership by institutional investors shows a strong positive association with CEO/COB separation, as reflected in the positive marginal coefficients for institutional investors ($\beta_7 = 0.087$) and independent institutional investors ($\beta_2 = 0.094$).

[Table 5 around here]

5 Additional regression estimates

This section complements the baseline regression analysis with three additional estimates. The first focuses on the moderating effect of the largest shareholder type on the contestability behavior among top blockholders, which may either amplify or weaken the marginal effect that internal power contestation among blockholders has on the probability of observing a separated CEO/COB structure. The second exercise examines potential non-linear ownership relationships in the presence of CEO/COB duality. This analysis may shed light on whether low or high levels

of ownership concentration deter further decisions to adopt a separation of roles between the CEO and the COB. The third exercise conducts a robustness analysis through cross-sample tests, assessing the conditions under which the baseline results hold. In particular, we split the sample between the United States and the rest of the countries included in the study.

5.1. Moderating effect by investor type

We extend the baseline estimates by assessing the moderating role of the first type of shareholder and the level of contestability, measured through Herfindahl differences. Since the Herfindahl difference increases when top shareholders hold a higher proportion of ownership, it reflects lower levels of contestability.

The marginal effects are estimated using the following linear equation:

$$\frac{\partial CEO\ Sep}{\partial Type\ Sh} = \beta_1 + \beta_2 \times Herfindahl\_Diff$$

Margins are evaluated at different percentiles of the distribution of *Herfindahl* voting power differences (HHD) among the top three blockholders. In particular, we report the marginal effects at the 10th, 50th, and 90th percentiles of the HHD variable.

Table 6 presents the main results, which provide valuable insights into the CEO structure decision.

… Continue here …

5.2. Non-linear relationships

5.3 Cross-sample test analysis

6. Conclusions

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Table 1: Descriptive statistics of the full sample

	N	Mean	StD	Min	perc 50	Max
CEO/COB Separation indicator	29,089	0.59	0.49	0.00	1.00	1.00
Total Ownership by type of investor (TOT_OWN_TI)						
Total institutional ownership	28,237	0.25	0.17	0.00	0.24	0.98
Total grey institutional investor ownership	28,237	0.05	0.05	0.00	0.04	0.98
Total independent institutional investor ownership	28,237	0.23	0.17	0.00	0.21	0.98
Total family ownership	28,237	0.10	0.19	0.00	0.00	0.98
Research firm ownership	28,237	0.00	0.01	0.00	0.00	0.79
Government ownership	28,237	0.01	0.06	0.00	0.00	0.84
Incorporate firm ownership	28,237	0.07	0.17	0.00	0.00	1.00
Corporate ownership	28,237	0.10	0.20	0.00	0.00	1.00
Total Ownership by type of blockholder (TOT_OWN_BHL)						
Total BHL ownership	28,237	0.34	0.21	0.00	0.32	1.00
BHL institutional grey investor ownership	28,237	0.01	0.05	0.00	0.00	0.93
BHL institutional independent investor ownership	28,237	0.16	0.17	0.00	0.12	0.98
BHL family ownership	28,237	0.07	0.16	0.00	0.00	0.98
BHL corporate ownership	28,237	0.09	0.19	0.00	0.00	0.99
BHL research firm ownership	28,237	0.00	0.01	0.00	0.00	0.79
BHL government ownership	28,237	0.01	0.05	0.00	0.00	0.83
BHL institutional ownership	28,237	0.17	0.17	0.00	0.13	0.98
Ownership concentration, contestability and Corporate Governance (OWN_CONT_CG)						
Ownership top 3 shareholders	29,089	0.33	0.18	0.00	0.28	0.99
First three Herfindahl Diff	29,089	0.04	0.10	0.00	0.00	0.95
Percentage of independent directors n.m.	29,089	0.61	0.26	0.00	0.67	1.00
Firm-level controls (FIRM_CTRLS)						
Size (log Assets)	29,089	8.06	1.62	2.47	8.11	11.79
Debt to Assets	29,089	0.27	0.18	0.00	0.26	0.84
Tobin's Q	29,089	1.73	1.73	0.25	1.18	17.60
Volatility of stock returns	29,089	0.39	0.26	0.04	0.32	16.33
Revenue to Total Assets	29,089	0.79	0.60	0.00	0.68	3.70
Sales growth	29,089	0.04	0.27	-0.78	0.01	2.13
Firm's age (log)	29,089	3.33	0.84	1.12	3.36	4.82

Table 1: Descriptive statistics of the full sample (Cont.)

	N	Mean	StD	Min	perc 50	Max	Freq.
Country-level controls (CTRY_CTRLS)							
Country Regulatory Quality Index	29,089	1.35	0.47	-0.48	1.42	2.26	
GDP per capita c/y	29,089	10.68	0.61	7.91	10.85	11.74	
Year inflation from Headquarters Country	29,089	1.89	2.65	-1.74	1.62	53.55	
Power Distance	29,089	0.47	0.13	0.31	0.40	1.00	
Masculinity	29,089	0.59	0.18	0.05	0.62	0.95	
Individualism	29,089	0.72	0.24	0.16	0.89	0.91	
Uncertainty avoidance	29,089	0.54	0.21	0.08	0.46	1.00	
Categorical variables							
Legal system (Civil-Law=1)	29,089	0.39	0.49	0.00	0.00	1.00	11,253
Legal system (Common-Law=1)	29,089	0.61	0.49	0.00	1.00	1.00	17,836
Market development level (Non-classified=1)	29,089	0.00	0.07	0.00	0.00	1.00	143
Market development level (Emerging Market=1)	29,089	0.13	0.34	0.00	0.00	1.00	3,766
Market development level (Developed Market=1)	29,089	0.87	0.34	0.00	1.00	1.00	25,180
CEO/COB Separation indicator=0							11,913
CEO/COB Separation indicator=1							17,176

Notes: This table depicts the summary of statistics of the dependent and independent variables included in the baseline regressions and extensions.

Table 2: Mean values Statistics by Market Region

Region	US/Canada	West Europe	Asia-Pacific	Latam	East-Eur/Africa	Asia Emerg	Africa Front	Total
Number Observations (Fraction)	13,958 (48.0%)	6,845 (23.5%)	4,377 (15.0%)	1,091 (3.8%)	921 (3.2%)	1,754 (6.0%)	10 (0.0%)	29,089 (100.0%)
CEO/COB Separation indicator	0.45	0.748	0.679	0.675	0.822	0.709	0.9	0.59
Total Ownership by type of investor								
Total BHL ownership	0.315	0.357	0.268	0.477	0.487	0.485	0.812	0.341
Total institutional ownership	0.33	0.209	0.14	0.137	0.305	0.142	0.015	0.252
Total grey institutional investor own.	0.049	0.042	0.056	0.047	0.137	0.072	0.009	0.052
Total indep. institutional investor own.	0.324	0.196	0.097	0.107	0.202	0.083	0.009	0.231
Total family ownership	0.047	0.129	0.184	0.153	0.213	0.163	0.064	0.104
Research firm ownership	0.001	0	0.002	0	0	0	0	0.001
Government ownership	0	0.018	0.004	0.002	0.006	0.017	0.58	0.006
Incorporate firm ownership	0.031	0.096	0.049	0.249	0.024	0.231	0.173	0.07
Corporate ownership	0.034	0.097	0.185	0.249	0.144	0.306	0.173	0.102
Family ownership	0.044	0.128	0.048	0.153	0.093	0.089	0.064	0.073
Total Ownership by type of blockholder								
BHL institutional grey investor own.	0.004	0.008	0.009	0.024	0.099	0.052	0	0.013
BHL institutional indep. investor own.	0.24	0.123	0.048	0.064	0.155	0.051	0	0.161
BHL family ownership	0.041	0.121	0.043	0.148	0.09	0.078	0.064	0.068
BHL corporate ownership	0.032	0.09	0.165	0.239	0.138	0.292	0.171	0.095
BHL research firm ownership	0.001	0	0	0	0	0	0	0
BHL government ownership	0	0.017	0.004	0.002	0.006	0.015	0.577	0.006
BHL institutional ownership	0.244	0.131	0.057	0.089	0.254	0.103	0	0.174
Ownership concentration, contestability and Corporate Governance								
Ownership top 3 shareholders	0.291	0.354	0.314	0.469	0.43	0.481	0.82	0.332
First three Herfindahl Diff	0.019	0.056	0.065	0.13	0.049	0.092	0.158	0.045
Percentage of independent directors n.m	0.784	0.56	0.288	0.371	0.555	0.492	0.008	0.615

Table 2: Mean values Statistics by Market Region (Cont.)

Region	US/Canada	West Europe	Asia-Pacific	Latam	East-Eur/Africa	Asia Emerg	Africa Front	Total
Firm-level controls								
Size (log Assets)	7.835	7.938	8.911	8.258	7.415	8.482	8.629	8.065
Debt to Assets	0.293	0.259	0.222	0.312	0.252	0.275	0.232	0.272
Tobin's Q	2.001	1.701	1.167	1.283	1.224	1.629	1.997	1.729
Volatility of stock returns	0.431	0.351	0.321	0.409	0.407	0.349	0.188	0.389
Revenue to Total Assets	0.797	0.807	0.743	0.669	1.004	0.766	0.534	0.791
Sales growth	0.07	0.019	0.01	-0.064	-0.04	0.025	-0.074	0.038
Firm's age (log)	3.183	3.276	3.808	3.425	3.606	3.411	3.036	3.331
Country-level controls								
Country Regulatory Quality Index	1.458	1.54	1.508	0.202	0.175	0.699	-0.106	1.351
GDP per capita c/y	10.995	10.772	10.664	9.235	8.926	9.609	8.133	10.679
Inflation rate from Headquarters Country	1.954	1.265	1.028	7.39	4.422	1.314	1.102	1.893
Power Distance	0.399	0.415	0.588	0.692	0.502	0.727	0.7	0.465
Masculinity	0.606	0.476	0.827	0.514	0.623	0.425	0.53	0.594
Individualism	0.895	0.763	0.392	0.328	0.616	0.213	0.46	0.715
Uncertainty avoidance	0.463	0.523	0.71	0.807	0.547	0.664	0.68	0.543
Categorical variables								
Legal system (Common-law=1)								
Civil-Law	0	0.626	0.699	1	1	1	1	0.387
Common-Law	1	0.374	0.301	0	0	0	0	0.613
Market development level								
Non-classified	0	0	0	0	0	0	1	0.005
Emerging Market	0	0	0	1	1	1	0	0.129
Developed Market	1	1	1	0	0	0	0	0.866

Notes: Mean values of variables by market region. Codes for regions: (0) Other non-classified countries; (1) USA and Canada; (2) Western Europe, (developed); (3) Asia-Pacific (developed); (4) Latin America, (emerging); (5) East Europe and Africa (emerging); (6) Asia (emerging) & (7) Africa (frontier). Regions follow the MSCI financial region classifications.

Table 3: Determinants of CEO/COB separating structure – baseline models

Probit panel data regressions (marginal effects)

Dependent variable: CEO-COB separation dummy

		Eq1.	Eq2	Eq3	Eq4	Eq5
Ownership concentration and contestability						
Total BHL ownership	B_1	-0.183 ***	-0.238 ***	-0.245 ***	-0.219 ***	-0.228 ***
		(0.050)	(0.060)	(0.059)	(0.060)	(0.060)
Concentration ratio CR3	B_2	0.284 ***	0.393 ***	0.391 ***	0.400 ***	0.400 ***
		(0.074)	(0.089)	(0.089)	(0.090)	(0.089)
First three Herfindahl Diff	B_3	0.047	-0.016	-0.020	-0.006	-0.021
		(0.057)	(0.068)	(0.067)	(0.067)	(0.067)
Investor ownership type						
Total institutional ownership	B_4	-0.217	-0.085	-0.118	-0.181	-0.200
		(0.167)	(0.203)	(0.202)	(0.206)	(0.205)
Total grey institutional investor own	B_5	0.213 *	0.209	0.221	0.231	0.245 *
		(0.117)	(0.141)	(0.140)	(0.143)	(0.142)
Total indep institutional investor own	B_6	0.477 ***	0.347 **	0.410 ***	0.422 ***	0.478 ***
		(0.128)	(0.152)	(0.150)	(0.153)	(0.152)
Total family ownership	B_7	-0.097	-0.094	-0.081	-0.148	-0.120
		(0.091)	(0.111)	(0.111)	(0.113)	(0.112)
Research firm ownership	B_8	0.433 *	0.471	0.460	0.444	0.437
		(0.251)	(0.290)	(0.286)	(0.290)	(0.288)
Government ownership	B_9	0.196 *	0.319 **	0.330 **	0.216	0.232
		(0.117)	(0.149)	(0.151)	(0.148)	(0.146)
Incorporate firm ownership	B_{10}	-0.093	0.036	0.054	-0.077	-0.051
		(0.105)	(0.124)	(0.124)	(0.127)	(0.126)
Corporate ownership	B_{11}	0.169 ***	0.085	0.079	0.151 **	0.147 **
		(0.055)	(0.061)	(0.063)	(0.066)	(0.065)
Corporate governance attributtes						
Fraction of indep directors n.m.	B_{12}	0.172 ***	0.139 ***	0.151 ***	0.166 ***	0.179 ***
		(0.020)	(0.021)	(0.021)	(0.021)	(0.021)
Market performance, financial, other firm specific controls						
Tobin's Q	B_{13}	0.005 ***	0.008 ***	0.007 ***	0.007 ***	0.007 ***
		-0.002	-0.002	-0.002	-0.002	-0.002
Volatility of stock returns	B_{14}	0.003	0.015	(0.009)	0.019	(0.005)
		(0.010)	(0.012)	(0.012)	(0.012)	(0.012)
Revenue to Total Assets	B_{13}	-0.053 ***	-0.065 ***	-0.066 ***	-0.066 ***	-0.066 ***
		(0.008)	(0.008)	(0.009)	(0.009)	(0.008)
Sales growth	B_{14}	0.026 ***	0.021 **	0.032 ***	0.022 **	0.033 ***
		(0.007)	(0.009)	(0.009)	(0.009)	(0.009)
Size (log Assets)	B_{15}	-0.032 ***	-0.029 ***	-0.031 ***	-0.030 ***	-0.032 ***
		(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
Debt to Assets	B_{16}	-0.008	-0.011	-0.007	-0.005	-0.002
		(0.018)	(0.022)	(0.022)	(0.023)	(0.022)

Table 3: Determinants of CEO/COB separating structure – baseline models
Probit panel data regressions (marginal effects) (Cont.)
Dependent variable: CEO-COB separation dummy

		Eq1.	Eq2	Eq3	Eq4	Eq5
Regulatiory, macroeconomic and institutional quality						
Country Regulatory Quality Index	B_{17}	...	**0.131** ***	...	**0.132** ***	...
		...	(0.014)		(0.015)	...
GDP per capita c/y	B_{18}	...	**-0.225** ***	**-0.193** ***	**-0.208** ***	**-0.188** ***
		...	(0.014)	(0.014)	(0.018)	(0.018)
Inflation rate Headquarters Country	B_{19}	...	**0.005** ***	**0.006** ***	**0.006** ***	**0.008** ***
		...	(0.001)	(0.002)	(0.001)	(0.002)
Power Distance	B_{20}	...	**-1.458** ***	**-1.617** ***	**-1.127** ***	**-1.168** ***
		...	(0.122)	(0.108)	(0.128)	(0.122)
Uncertainty avoidance	B_{21}	...	**-0.260** ***	**-0.339** ***	**-0.732** ***	**-0.762** ***
		...	(0.055)	(0.048)	(0.064)	(0.062)
Regulatory quality (diff w.r.t. US)	B_{22}	...		**0.063** ***		**0.062** ***
		...				
Country legal system, market development and cultural characteristics						
Masculinity	B_{23}	...	0.022	0.065	0.279 ***	0.262 ***
		...	(0.050)	(0.044)	(0.059)	(0.057)
Individualism	B_{24}	...	-1.009 ***	-1.118 ***	-0.687 ***	-0.771 ***
		...	(0.081)	(0.070)	(0.085)	(0.081)
Common-Law dummy	B_{25}	...	...	...	-0.282 ***	-0.279 ***
		...	...	...	(0.013)	(0.013)
Emerging Market dummy	B_{26}	...	...	...	0.014	-0.026
		...	...	...	(0.080)	(0.075)
Developed Market dummy	B_{27}	...	...	...	0.081	0.088
		...	...	...	(0.077)	(0.074)
Regression statistics		...				
Number of observations		27,752	27,756	27,756	27,756	27,756
Log likelihood		-8,657	-8,855	-8,897	-8,790	-8,819
Log variance random effects residuals		**2.505**	**2.874**	**2.905**	**2.772**	**2.782**
		(0.052)	(0.052)	(0.052)	(0.052)	(0.052)
Panel-level std		**3.499**	**4.209**	**4.273**	**4.000**	**4.020**
		(0.091)	(0.109)	(0.111)	(0.105)	(0.105)
rho		**0.924**	**0.947**	**0.948**	**0.941**	**0.942**
		(0.004)	(0.003)	(0.003)	(0.003)	(0.003)
Specification tests						
Akaike information criteria		17,411	17,764	17,848	17,639	17,698
Bayesian information criteria		17,815	17,987	18,070	17,886	17,945
Chi Sq		1,527	812	642	756	757
Model test p-value		[0.000]	[0.000]	[0.000]	[0.000]	[0.000]

Notes: This table depicts the baseline regression model for CEO/COB role separation (non-duality). The regressions control for firm-specific ownership types and structures, as well as firm-specific market performance and financial variables. The regression equations also control for country-specific characteristics, including legal origin, market development, macroeconomic, institutional, and cultural variables. Definitions of all variables are provided in Appendix Table A2. Significance levels: *** p < 0.01, ** p < 0.05, * p < 0.1. Standard errors in parenthesis. P-values in brackets.

Table 4: Determinants of CEO/COB separating structure by investor type ownership

Probit panel data regressions (marginal effects) - Dependent variable: CEO-COB separation dummy

Independent Variables		Eq1.	Eq2	Eq3	Eq4	Eq5	Eq6	Eq7	Eq8
Investor ownership type									
Total institutional ownership	B_1	**0.198** ***	...	...	...	...	...	...	...
		(0.031)	...	...	...	...	...	...	...
Total grey institutional investor own.	B_2	...	**0.005**	...	...	...	...	...	...
		...	(0.064)	...	...	...	...	...	...
Total indep. institutional investor own.	B_3	...	...	**0.217** ***	...	...	...	...	...
		...	...	(0.031)	...	...	...	...	...
Total family ownership	B_4	...	...	...	**-0.269** ***	...	...	...	...
		...	...	...	(0.034)	...	...	...	...
Research firm ownership	B_5	...	...	...	...	**0.278**	...	...	...
		...	...	...	...	(0.276)	...	...	...
Government ownership	B_6	...	...	...	...	...	**0.181** *	...	...
		...	...	...	...	...	(0.093)	...	...
Incorporate firm ownership	B_7	...	...	...	...	...	...	**0.004**	...
		...	...	...	...	...	...	(0.032)	...
Corporate ownership	B_8	...	...	...	...	...	...	...	**-0.007**
		...	...	...	...	...	...	...	(0.031)
Ownership concentration and contestability									
Ownership top 3 shareholders	B_9	**0.137** ***	**0.228** ***	**0.133** ***	**0.305** ***	**0.228** ***	**0.227** ***	**0.227** ***	**0.231** ***
		(0.036)	(0.034)	(0.036)	(0.036)	(0.034)	(0.034)	(0.035)	(0.036)
First three Herfindahl Diff	B_{10}	**0.081**	**-0.036**	**0.078**	**-0.011**	**-0.036**	**-0.052**	**-0.037**	**-0.034**
		(0.063)	(0.060)	(0.062)	(0.063)	(0.059)	(0.060)	(0.060)	(0.060)
Corporate governance attributtes									
Fraction of independent directors n.m.	B_{11}	**0.170** ***	**0.185** ***	**0.166** ***	**0.175** ***	**0.185** ***	**0.186** ***	**0.185** ***	**0.185** ***
		(0.021)	(0.021)	(0.021)	(0.021)	(0.021)	(0.021)	(0.021)	(0.021)
Market performance, financial, other firm specific controls									
Tobin's Q	B_{12}	**0.008** ***	**0.008** ***	**0.008** ***	**0.008** ***	**0.008** ***	**0.008** ***	**0.008** ***	**0.008** ***
		(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Volatility of stock returns	B_{13}	**0.022** *	**0.022** *	**0.021** *	**0.021** *	**0.021** *	**0.022** *	**0.022** *	**0.022** *
		(0.012)	(0.012)	(0.012)	(0.012)	(0.012)	(0.012)	(0.012)	(0.012)
Revenue to Total Assets	B_{14}	**-0.068** ***	**-0.069** ***	**-0.067** ***	**-0.067** ***	**-0.069** ***	**-0.069** ***	**-0.069** ***	**-0.069** ***
		(0.008)	(0.008)	(0.008)	(0.009)	(0.008)	(0.008)	(0.008)	(0.008)
Sales growth	B_{15}	**0.022** **	**0.022** **	**0.022** **	**0.021** **	**0.022** **	**0.022** **	**0.022** **	**0.022** **
		(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)
Size (log Assets)	B_{16}	**-0.026** ***	**-0.026** ***	**-0.026** ***	**-0.028** ***	**-0.026** ***	**-0.026** ***	**-0.026** ***	**-0.026** ***
		(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
Debt to Assets	B_{17}	**-0.010**	**-0.007**	**-0.008**	**-0.009**	**-0.007**	**-0.007**	**-0.007**	**-0.007**
		(0.022)	(0.022)	(0.022)	(0.022)	(0.022)	(0.022)	(0.022)	(0.022)

Table 4: Determinants of CEO/COB separating structure by investor type ownership (Cont.)

Probit panel data regressions (marginal effects) - Dependent variable: CEO-COB separation dummy

Independent Variables		Eq1.	Eq2	Eq3	Eq4	Eq5	Eq6	Eq7	Eq8
Regulatiory, macroeconomic and institutional quality									
Country Regulatory Quality Index	B_{18}	**0.142** ***	**0.143** ***	**0.137** ***	**0.145** ***	**0.143** ***	**0.143** ***	**0.143** ***	**0.143** ***
		(0.014)	(0.014)	(0.014)	(0.014)	(0.014)	(0.014)	(0.014)	(0.014)
GDP per capita c/y	B_{19}	**-0.195** ***	**-0.196** ***	**-0.193** ***	**-0.193** ***	**-0.196** ***	**-0.196** ***	**-0.196** ***	**-0.196** ***
		(0.015)	(0.015)	(0.015)	(0.015)	(0.015)	(0.015)	(0.015)	(0.015)
Inflation rate Headquarters Country	B_{20}	**0.005** ***	**0.006** ***	**0.005** ***	**0.005** ***	**0.006** ***	**0.006** ***	**0.006** ***	**0.006** ***
		(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Power Distance	B_{21}	**-1.098** ***	**-1.084** ***	**-1.112** ***	**-1.130** ***	**-1.083** ***	**-1.081** ***	**-1.084** ***	**-1.084** ***
		(0.105)	(0.096)	(0.105)	(0.117)	(0.096)	(0.096)	(0.096)	(0.096)
Masculinity	B_{22}	**0.311** ***	**0.331** ***	**0.316** ***	**0.330** ***	**0.330** ***	**0.334** ***	**0.331** ***	**0.331** ***
		(0.051)	(0.049)	(0.051)	(0.053)	(0.049)	(0.049)	(0.049)	(0.049)
Individualism	B_{23}	**-0.635** ***	**-0.583** ***	**-0.653** ***	**-0.657** ***	**-0.583** ***	**-0.584** ***	**-0.583** ***	**-0.585** ***
		(0.073)	(0.067)	(0.073)	(0.080)	(0.067)	(0.067)	(0.067)	(0.067)
Uncertainty avoidance	B_{24}	**-0.744** ***	**-0.760** ***	**-0.751** ***	**-0.759** ***	**-0.761** ***	**-0.760** ***	**-0.761** ***	**-0.761** ***
		(0.061)	(0.058)	(0.060)	(0.062)	(0.058)	(0.058)	(0.058)	(0.058)
Common-Law Dummy	B_{25}	**-0.278** ***	**-0.275** ***	**-0.281** ***	**-0.274** ***	**-0.275** ***	**-0.274** ***	**-0.275** ***	**-0.275** ***
		(0.012)	(0.012)	(0.012)	(0.013)	(0.012)	(0.012)	(0.012)	(0.012)
Regression statistics									
Number of observations		27,756	27,756	27,756	27,756	27,756	27,756	27,756	27,756
Log likelihood		-8,825	-8,843	-8,822	-8,814	-8,842	-8,841	-8,843	-8,843
Log variance random effects residuals		**2.808**	**2.841**	**2.811**	**2.795**	**2.842**	**2.837**	**2.842**	**2.842**
		(0.052)	(0.052)	(0.052)	(0.052)	(0.052)	(0.052)	(0.052)	(0.052)
Panel-level std		**4.072**	**4.140**	**4.078**	**4.045**	**4.141**	**4.130**	**4.141**	**4.140**
		(0.106)	(0.107)	(0.106)	(0.105)	(0.107)	(0.107)	(0.107)	(0.107)
rho		**0.943**	**0.945**	**0.943**	**0.942**	**0.945**	**0.945**	**0.945**	**0.945**
		(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Specification tests									
Akaike information criteria		17,690	17,726	17,684	17,669	17,725	17,723	17,726	17,726
Bayesian information criteria		17,855	17,890	17,849	17,834	17,889	17,887	17,890	17,890
Chi sq		816	919	831	766	919	922	920	919
Model test p-value		[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]

Notes: This table presents the baseline regression model for CEO/COB role separation (non-duality), with a focus on ownership types, including institutional, family, total corporate, incorporated, government, and research firm ownership. The regressions control for firm-specific market performance and financial variables. In addition, the regression equations account for country-specific characteristics, such as legal origin, market development, and macroeconomic, institutional, and cultural factors. Definitions of all variables are provided in Appendix Table A2. Significance levels: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Standard errors in parenthesis. P-values in brackets

Table 5: Determinants of CEO/COB separating structure by blockholder type

Probit panel data regressions (marginal effects) - Dependent variable: CEO-COB separation dummy

Independent Variables		Eq1.	Eq2	Eq3	Eq4	Eq5	Eq6	Eq6
BHL institutional grey investor own.	B_1	**-0.024**	...	...	...	...	...	...
		(0.078)	...	...	...	...	...	...
BHL institutional indep. investor own.	B_2	...	**0.094** ***	...	...	...	...	...
		...	(0.027)	...	...	...	...	...
BHL family ownership	B_3	...	...	**-0.289** ***	...	...	...	...
		...	...	(0.038)	...	...	...	...
BHL corporate ownership	B_4	...	...	...	**0.019**	...	...	...
		...	...	...	(0.031)	...	...	...
BHL research firm ownership	B_5	...	...	...	...	**-0.093**	...	...
		...	...	...	...	(0.326)	...	...
BHL government ownership	B_6	...	...	...	...	...	**0.184** *	...
		...	...	...	...	...	(0.095)	...
BHL institutional ownership	B_7	...	...	...	...	...	...	**0.087** ***
		...	...	...	...	...	...	(0.027)
Ownership concentration and contestability								
Ownership top 3 shareholders	B_8	**0.229** ***	**0.176** ***	**0.296** ***	**0.221** ***	**0.229** ***	**0.227** ***	**0.176** ***
		(0.034)	(0.037)	(0.036)	(0.036)	(0.034)	(0.034)	(0.037)
First three Herfindahl Diff	B_9	**-0.038**	**0.021**	**-0.035**	**-0.042**	**-0.037**	**-0.053**	**0.023**
		(0.060)	(0.062)	(0.063)	(0.060)	(0.059)	(0.060)	(0.062)
Corporate governance attributtes								
Percentage of independent directors n.n	B_{10}	**0.185** ***	**0.181** ***	**0.177** ***	**0.186** ***	**0.185** ***	**0.186** ***	**0.180** ***
		(0.021)	(0.021)	(0.021)	(0.021)	(0.021)	(0.021)	(0.021)
Market performance, financial, other firm specific controls								
Tobin's Q		**0.008** ***	**0.008** ***	**0.008** ***	**0.008** ***	**0.008** ***	**0.008** ***	**0.008** ***
		(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Volatility of stock returns	B_{12}	**0.022** *	**0.021** *	**0.021** *	**0.022** *	**0.022** *	**0.022** *	**0.022** *
		(0.012)	(0.012)	(0.012)	(0.012)	(0.012)	(0.012)	(0.012)
Revenue to Total Assets	B_{13}	**-0.069** ***	**-0.069** ***	**-0.068** ***	**-0.069** ***	**-0.069** ***	**-0.069** ***	**-0.069** ***
		(0.008)	(0.008)	(0.009)	(0.008)	(0.008)	(0.008)	(0.008)
Sales growth	B_{14}	**0.022** **	**0.022** **	**0.021** **	**0.022** **	**0.022** **	**0.022** **	**0.023** **
		(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)
Size (log Assets)	B_{15}	**-0.026** ***	**-0.025** ***	**-0.028** ***	**-0.026** ***	**-0.026** ***	**-0.026** ***	**-0.025** ***
		(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
Debt to Assets	B_{16}	**-0.007**	**-0.009**	**-0.008**	**-0.006**	**-0.007**	**-0.007**	**-0.009**
		(0.022)	(0.022)	(0.022)	(0.022)	(0.022)	(0.022)	(0.022)

Table 5: Determinants of CEO/COB separating structure by blockholder type

Probit panel data regressions (marginal effects) - Dependent variable: CEO-COB separation dummy

Independent Variables		Eq1.	Eq2	Eq3	Eq4	Eq5	Eq6	Eq6
Regulatory, macroeconomic and institutional quality								
Country Regulatory Quality Index	B_{17}	**0.143** ***	**0.143** ***	**0.145** ***	**0.143** ***	**0.143** ***	**0.143** ***	**0.143** ***
		(0.014)	(0.014)	(0.014)	(0.014)	(0.014)	(0.014)	(0.014)
GDP per capita c/y	B_{18}	**-0.196** ***	**-0.196** ***	**-0.196** ***	**-0.196** ***	**-0.196** ***	**-0.196** ***	**-0.196** ***
		(0.015)	(0.015)	(0.015)	(0.015)	(0.015)	(0.015)	(0.015)
Year inflation from Headquarters Countr	B_{19}	**0.006** ***	**0.006** ***	**0.005** ***	**0.006** ***	**0.006** ***	**0.006** ***	**0.006** ***
		(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Power Distance	B_{20}	**-1.085** ***	**-1.093** ***	**-1.096** ***	**-1.083** ***	**-1.084** ***	**-1.081** ***	**-1.087** ***
		(0.096)	(0.097)	(0.112)	(0.096)	(0.096)	(0.096)	(0.097)
Masculinity	B_{21}	**0.331** ***	**0.323** ***	**0.311** ***	**0.331** ***	**0.331** ***	**0.334** ***	**0.323** ***
		(0.049)	(0.049)	(0.053)	(0.049)	(0.049)	(0.049)	(0.049)
Individualism	B_{22}	**-0.583** ***	**-0.605** ***	**-0.564** ***	**-0.577** ***	**-0.583** ***	**-0.584** ***	**-0.600** ***
		(0.067)	(0.068)	(0.076)	(0.067)	(0.067)	(0.067)	(0.068)
Uncertainty avoidance	B_{23}	**-0.762** ***	**-0.756** ***	**-0.733** ***	**-0.760** ***	**-0.761** ***	**-0.761** ***	**-0.754** ***
		(0.058)	(0.058)	(0.062)	(0.058)	(0.058)	(0.058)	(0.058)
Common-Law dummy	B_{24}	**-0.275** ***	**-0.277** ***	**-0.281** ***	**-0.275** ***	**-0.275** ***	**-0.274** ***	**-0.276** ***
		(0.012)	(0.012)	(0.012)	(0.012)	(0.012)	(0.012)	(0.012)
Regression statistics								
Number of observations		27,756	27,756	27,756	27,756	27,756	27,756	27,756
Log likelihood		-8,843	-8,838	-8,814	-8,843	-8,843	-8,841	-8,838
Log variance random effects residuals		**2.842**	**2.832**	**2.792**	**2.841**	**2.842**	**2.837**	**2.832**
		(0.052)	(0.052)	(0.052)	(0.052)	(0.052)	(0.052)	(0.052)
Panel-level std		**4.140**	**4.121**	**4.038**	**4.139**	**4.140**	**4.131**	**4.120**
		(0.107)	(0.107)	(0.105)	(0.107)	(0.107)	(0.107)	(0.107)
rho		**0.945**	**0.944**	**0.942**	**0.945**	**0.945**	**0.945**	**0.944**
		(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Specification tests								
Akaike information criteria		17,726	17,715	17,669	17,725	17,726	17,723	17,716
Bayesian information criteria		17,890	17,880	17,833	17,890	17,890	17,887	17,881
Chi sq		919	912	759	918	919	921	910
Model test p-value		[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]

Notes:. This table presents the baseline regression model for CEO/COB role separation (non-duality), with a focus on blockholder ownership types, including institutional, family, total corporate, incorporated, government, and research firm ownership. The regressions control for firm-specific market performance and financial variables. In addition, the regression equations account for country-specific characteristics, such as legal origin, market development, and macroeconomic, institutional, and cultural factors. Definitions of all variables are provided in Appendix Table A2. Significance levels: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Standard errors in parenthesis. P-values in brackets

Section 5 - tables

Table 6: Moderating Effects of Blockholder Contestability by the Largest Shareholder Type (Marginal Effects)

Table 7: Determinants of CEO/COB separating structure – Non-linear relationship by investor type ownership

Under construction

Table 8: Determinants of CEO/COB separating structure – Cross subsample estimates by regions.

Under construction

Table 6: Moderating Effects of Blockholder Contestability by the Largest Shareholder Type (Marginal Effects)

Dependent variable: CEO-COB separation dummy

	Bank and trust	Corporation	Family office	Foundation	Gov. agency	Hedge fund	Holding company
Marginal effects type of first shareholder at different levels of contestability (Herfindahl differences)							
Herfindahl diff = 0.1	**-0.064**	**0.007**	**0.338** ***	**-0.278**	**0.082** **	**0.078** **	**-0.031** *
	(0.072)	(0.007)	(0.069)	(0.509)	(0.032)	(0.036)	(0.016)
Herfindahl diff = 0.5	**-0.230**	**0.057** **	**0.381** ***	**-0.585**	**0.123** **	**0.258** ***	**-0.139** *
	(0.446)	(0.026)	(0.017)	(0.465)	(0.055)	(0.086)	(0.071)
Herfindahl diff = 0.9	**-0.379**	**0.106** **	**0.392** ***	**-0.610** ***	**0.163** *	**0.359** ***	**-0.266** *
	(0.514)	(0.049)	(0.031)	(0.039)	(0.094)	(0.068)	(0.137)
Regressions Independent variables							
Ownership concentration, contestability and corporate govenance							
First three Herfindahl Diff	**-0.049**	**-0.107**	**-0.008**	**-0.041**	**-0.058**	**-0.024**	**-0.031**
	(0.061)	(0.065)	(0.061)	(0.059)	(0.058)	(0.058)	(0.057)
Ownership top 3 shareholders	**0.200** ***	**0.213** ***	**0.203** ***	**0.205** ***	**0.205** ***	**0.204** ***	**0.208** ***
	(0.032)	(0.032)	(0.032)	(0.032)	(0.032)	(0.032)	(0.032)
Fraction of independent directors	**0.192** ***	**0.194** ***	**0.199** ***	**0.197** ***	**0.197** ***	**0.197** ***	**0.198** ***
	(0.020)	(0.020)	(0.020)	(0.020)	(0.020)	(0.020)	(0.020)
Market performance, financial, other firm specific controls							
Tobin's Q	**0.007** ***	**0.007** ***	**0.007** ***	**0.007** ***	**0.007** ***	**0.007** ***	**0.007** ***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Volatility of stock returns	**0.020** *	**0.020** *	**0.021** *	**0.020** *	**0.020** *	**0.020** *	**0.021** *
	(0.011)	(0.011)	(0.011)	(0.011)	(0.011)	(0.011)	(0.011)
Revenue to Total Assets	**-0.066** ***	**-0.066** ***	**-0.066** ***	**-0.066** ***	**-0.067** ***	**-0.067** ***	**-0.066** ***
	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)
Sales growth	**0.018** **	**0.018** **	**0.018** **	**0.018** **	**0.018** **	**0.018** **	**0.018** **
	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)
Size (log Assets)	**-0.026** ***	**-0.026** ***	**-0.026** ***	**-0.026** ***	**-0.027** ***	**-0.026** ***	**-0.026** ***
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
Debt to Assets	**-0.007**	**-0.008**	**-0.009**	**-0.008**	**-0.008**	**-0.009**	**-0.008**
	(0.021)	(0.021)	(0.021)	(0.021)	(0.021)	(0.021)	(0.021)

Table 6: Moderating Effects of Blockholder Contestability by the Largest Shareholder Type (Marginal Effects) (Cont.)
Dependent variable: CEO-COB separation dummy

	Bank and trust	Corporation	Family office	Foundation	Gov. agency	Hedge fund	Holding company
Regulatiory, macroeconomic and institutional quality							
Country Regulatory Quality Index	**0.128** ***	**0.131** ***	**0.132** ***	**0.131** ***	**0.132** ***	**0.132** ***	**0.131** ***
	(0.013)	(0.013)	(0.013)	(0.014)	(0.013)	(0.013)	(0.013)
GDP per capita c/y	**-0.182** ***	**-0.184** ***	**-0.186** ***	**-0.185** ***	**-0.185** ***	**-0.185** ***	**-0.185** ***
	(0.014)	(0.014)	(0.014)	(0.014)	(0.014)	(0.014)	(0.014)
Inflation - Headquarters Country	**0.006** ***	**0.006** ***	**0.006** ***	**0.006** ***	**0.006** ***	**0.006** ***	**0.006** ***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Power Distance	**-1.064** ***	**-1.058** ***	**-1.067** ***	**-1.061** ***	**-1.061** ***	**-1.065** ***	**-1.067** ***
	(0.095)	(0.095)	(0.096)	(0.099)	(0.095)	(0.095)	(0.095)
Masculinity	**0.328** ***	**0.322** ***	**0.326** ***	**0.320** ***	**0.331** ***	**0.326** ***	**0.325** ***
	(0.048)	(0.048)	(0.048)	(0.051)	(0.048)	(0.048)	(0.048)
Individualism	**-0.608** ***	**-0.597** ***	**-0.607** ***	**-0.604** ***	**-0.608** ***	**-0.608** ***	**-0.605** ***
	(0.065)	(0.066)	(0.065)	(0.068)	(0.065)	(0.065)	(0.065)
Uncertainty avoidance	**-0.769** ***	**-0.764** ***	**-0.772** ***	**-0.771** ***	**-0.770** ***	**-0.773** ***	**-0.769** ***
	(0.057)	(0.057)	(0.057)	(0.059)	(0.057)	(0.057)	(0.057)
Common-Law dummy	**-0.271** ***	**-0.272** ***	**-0.270** ***	**-0.273** ***	**-0.269** ***	**-0.271** ***	**-0.270** ***
	(0.012)	(0.012)	(0.012)	(0.012)	(0.012)	(0.012)	(0.012)
Regression Statistics							
Number of observations	29,089	29,089	29,089	29,089	29,089	29,089	29,089
Log likelihood	-9,341	-9,343	-9,341	-9,343	-9,342	-9,343	-9,343
Log VAR random effects residuals	**2.837**	**2.839**	**2.841**	**2.837**	**2.835**	**2.839**	**2.840**
	(0.050)	(0.050)	(0.050)	(0.051)	(0.050)	(0.050)	(0.050)
Panel-level std	**4.131**	**4.136**	**4.138**	**4.131**	**4.126**	**4.136**	**4.137**
	(0.104)	(0.104)	(0.104)	(0.104)	(0.104)	(0.104)	(0.104)
rho	**0.945**	**0.945**	**0.945**	**0.945**	**0.945**	**0.945**	**0.945**
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Specification tests							
Akaike information criteria	18,723	18,728	18,724	18,728	18,726	18,728	18,728
Bayesian information criteria	18,897	18,902	18,898	18,902	18,900	18,901	18,902
Chi sq	948.731	937.911	932.878	927.325	942.506	935.448	944.667
Model test p-value	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]

Table 6: Moderating Effects of Blockholder Contestability by the Largest Shareholder Type (Marginal Effects) (Cont.)
Dependent variable: CEO-COB separation dummy

	Individual investor	Insurance company	Investment advisor	Hedge Fund	Other insider investor	Pension fund	Private Equity	Research firm	Sovereign Wealth Fund	Venture Capital
Marginal effects type of first shareholder at different levels of contestability (Herfindahl differences)										
Herfindahl diff = 0.1	**-0.051** ***	**-0.550** **	**-0.029**	**-0.053**	**0.035**	**0.198** *	**0.035** *	**0.370** ***	**0.001**	**-0.052**
	(0.011)	(0.252)	(0.019)	(0.058)	(0.026)	(0.106)	(0.018)	(0.006)	(0.027)	(0.062)
Herfindahl diff = 0.5	**-0.105** **	**-0.621** ***	**-0.182**	**-0.334**	**0.072**	**0.380** ***	**0.159** **	**0.380** ***	**0.148**	**-0.343**
	(0.045)	(0.017)	(0.112)	(0.281)	(0.055)	(0.018)	(0.067)	(0.017)	(0.116)	(0.302)
Herfindahl diff = 0.9	**-0.165** *	**-0.611** ***	**-0.343** **	**-0.512** *	**0.109**	**0.390** ***	**0.247** ***	**0.391** ***	**0.250** **	**-0.523** *
	(0.091)	(0.031)	(0.150)	(0.275)	(0.102)	(0.031)	(0.079)	(0.031)	(0.123)	(0.283)
Regressions Independent variables										
Ownership concentration, contestability and corporate govenance										
First three Herfindahl Diff	**-0.041**	**-0.148**	**-0.163** *	**-0.268**	**-0.046**	**0.039**	**-0.041**	**0.007**	**-0.036**	**-0.047**
	(0.058)	(0.123)	(0.087)	(0.220)	(0.057)	(0.086)	(0.057)	(0.076)	(0.057)	(0.058)
Ownership top 3 shareholders	**0.206** ***	**0.199** ***	**0.204** ***	**0.212** ***	**0.204** ***	**0.204** ***	**0.198** ***	**0.207** ***	**0.204** ***	**0.205** ***
	(0.032)	(0.032)	(0.032)	(0.032)	(0.032)	(0.032)	(0.032)	(0.032)	(0.032)	(0.032)
Fraction of independent directors	**0.195** ***	**0.194** ***	**0.193** ***	**0.193** ***	**0.198** ***	**0.198** ***	**0.199** ***	**0.197** ***	**0.198** ***	**0.197** ***
	(0.020)	(0.020)	(0.020)	(0.020)	(0.020)	(0.020)	(0.020)	(0.020)	(0.020)	(0.020)
Market performance, financial, other firm specific controls										
Tobin's Q	**0.007** ***	**0.007** ***	**0.007** ***	**0.007** ***	**0.007** ***	**0.007** ***	**0.007** ***	**0.007** ***	**0.007** ***	**0.007** ***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Volatility of stock returns	**0.020** *	**0.020** *	**0.020** *	**0.020** *	**0.020** *	**0.021** *	**0.020** *	**0.020** *	**0.020** *	**0.020** *
	(0.011)	(0.011)	(0.011)	(0.011)	(0.011)	(0.011)	(0.011)	(0.011)	(0.011)	(0.011)
Revenue to Total Assets	**-0.066** ***	**-0.066** ***	**-0.066** ***	**-0.065** ***	**-0.067** ***	**-0.067** ***	**-0.066** ***	**-0.067** ***	**-0.066** ***	**-0.066** ***
	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)
Sales growth	**0.017** **	**0.018** **	**0.018** **	**0.018** **	**0.018** **	**0.018** **	**0.018** **	**0.018** **	**0.018** **	**0.018** **
	(0.009)	(0.009)	(0.009)	(0.008)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)
Size (log Assets)	**-0.028** ***	**-0.026** ***	**-0.026** ***	**-0.026** ***	**-0.026** ***	**-0.026** ***	**-0.026** ***	**-0.026** ***	**-0.026** ***	**-0.026** ***
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
Debt to Assets	**-0.009**	**-0.009**	**-0.007**	**-0.008**	**-0.008**	**-0.009**	**-0.010**	**-0.008**	**-0.008**	**-0.009**
	(0.021)	(0.021)	(0.021)	(0.021)	(0.021)	(0.021)	(0.021)	(0.021)	(0.021)	(0.021)

Table 6: Moderating Effects of Blockholder Contestability by the Largest Shareholder Type (Marginal Effects) (Cont.)

Dependent variable: CEO-COB separation dummy

	Individual investor	Insurance company	Investment advisor	Hedge Fund	Other insider investor	Pension fund	Private Equity	Research firm	Sovereign Wealth Fund	Venture Capital
Regulatiory, macroeconomic and institutional quality										
Country Regulatory Quality Index	**0.133** ***	**0.130** ***	**0.130** ***	**0.129** ***	**0.131** ***	**0.133** ***	**0.132** ***	**0.132** ***	**0.132** ***	**0.132** ***
	(0.013)	(0.013)	(0.013)	(0.014)	(0.013)	(0.014)	(0.013)	(0.013)	(0.013)	(0.013)
GDP per capita c/y	**-0.187** ***	**-0.183** ***	**-0.182** ***	**-0.183** ***	**-0.186** ***	**-0.185** ***	**-0.185** ***	**-0.186** ***	**-0.186** ***	**-0.185** ***
	(0.014)	(0.014)	(0.014)	(0.014)	(0.014)	(0.014)	(0.014)	(0.014)	(0.014)	(0.014)
Inflation - Headquarters Country	**0.006** ***	**0.006** ***	**0.006** ***	**0.006** ***	**0.006** ***	**0.006** ***	**0.006** ***	**0.006** ***	**0.006** ***	**0.006** ***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Power Distance	**-1.085** ***	**-1.057** ***	**-1.052** ***	**-1.053** ***	**-1.085** ***	**-1.063** ***	**-1.059** ***	**-1.068** ***	**-1.067** ***	**-1.065** ***
	(0.101)	(0.095)	(0.094)	(0.096)	(0.095)	(0.096)	(0.095)	(0.096)	(0.095)	(0.095)
Masculinity	**0.322** ***	**0.326** ***	**0.320** ***	**0.320** ***	**0.333** ***	**0.327** ***	**0.326** ***	**0.326** ***	**0.323** ***	**0.325** ***
	(0.050)	(0.048)	(0.048)	(0.048)	(0.048)	(0.048)	(0.048)	(0.048)	(0.048)	(0.048)
Individualism	**-0.616** ***	**-0.604** ***	**-0.599** ***	**-0.599** ***	**-0.620** ***	**-0.606** ***	**-0.607** ***	**-0.606** ***	**-0.602** ***	**-0.604** ***
	(0.069)	(0.065)	(0.064)	(0.065)	(0.065)	(0.065)	(0.065)	(0.065)	(0.065)	(0.065)
Uncertainty avoidance	**-0.757** ***	**-0.764** ***	**-0.763** ***	**-0.754** ***	**-0.775** ***	**-0.772** ***	**-0.771** ***	**-0.771** ***	**-0.763** ***	**-0.769** ***
	(0.058)	(0.057)	(0.056)	(0.058)	(0.057)	(0.057)	(0.057)	(0.057)	(0.058)	(0.057)
Common-Law dummy	**-0.269** ***	**-0.271** ***	**-0.272** ***	**-0.271** ***	**-0.269** ***	**-0.270** ***	**-0.271** ***	**-0.270** ***	**-0.270** ***	**-0.270** ***
	(0.013)	(0.012)	(0.012)	(0.012)	(0.012)	(0.012)	(0.012)	(0.012)	(0.012)	(0.012)
Regression Statistics										
Number of observations	29,089	29,089	29,089	29,089	29,089	29,089	29,089	29,089	29,089	29,089
Log likelihood	-9,335	-9,341	-9,342	-9,341	-9,344	-9,344	-9,344	-9,345	-9,344	-9,345
Log VAR random effects residuals	**2.802**	**2.839**	**2.840**	**2.839**	**2.841**	**2.838**	**2.838**	**2.839**	**2.841**	**2.839**
	(0.051)	(0.050)	(0.050)	(0.050)	(0.050)	(0.050)	(0.050)	(0.050)	(0.050)	(0.050)
Panel-level std	**4.060**	**4.136**	**4.138**	**4.136**	**4.139**	**4.134**	**4.132**	**4.135**	**4.140**	**4.135**
	(0.103)	(0.104)	(0.104)	(0.104)	(0.104)	(0.104)	(0.104)	(0.104)	(0.104)	(0.104)
rho	**0.943**	**0.945**	**0.945**	**0.945**	**0.945**	**0.945**	**0.945**	**0.945**	**0.945**	**0.945**
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Specification tests										
Akaike information criteria	18,711	18,724	18,727	18,725	18,731	18,730	18,730	18,731	18,729	18,732
Bayesian information criteria	18,885	18,898	18,901	18,899	18,905	18,904	18,904	18,905	18,903	18,906
Chi sq	828.778	944.386	945.516	940.175	941.759	937.037	932.039	938.207	951.177	938.495
Model test p-value	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]

Notes: This table depicts the moderating effect of the largest shareholder type on blockholder contestability. We identify 15 types of legal persons and two categories of individual investors as natural persons. Blockholder contestability is proxied by the top-three shareholders Herfindal differences. The regressions control for firm-specific market performance and financial variables. In addition, the regression equations account for country-specific characteristics, such as legal origin, market development, and macroeconomic, institutional, and cultural factors. Definitions of all variables are provided in Appendix Table A2. Significance levels: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Standard errors in parenthesis. P-values in brackets

APPENDIX A

Table A1: Corporate Governance regulation in the OECD countries

Num	Country	Recommendation		Model/Code	Year of last regulation	Observations	Common Law System
		Separate structure as best practice	Both structures allowed				
1	Australia	X		CG Principles and Recommendations	2019 (4th Ed)		X
2	Austria					Dual system	
3	Belgium	X		The 2020 Belgian Code on C.G.	2020	Companies also can have a dual system	
4	Canada	X		Corporate Governance Guideline	2018		X
5	Chile					No specific recommendations	
6	Colombia	X		Código de Mejores Prácticas Corporativas – Código País	2014		
7	Czech Republic					Dual system	
8	Denmark	X		Recommendations on Corporate Governance	2017		
9	Estonia					Dual system	
10	Finland	X		Finnish Corporate Governance Code 2020			
11	France		X	CG Code of Listed Corporations afep-MEDEF	2018 (amended)		
12	Germany					Dual system	
13	Greece		X	Hellenic Corporate Governance Code	2013		
14	Hungary					Dual system	
15	Iceland	X		CG guidelines	2015 (5th Ed)		
16	Ireland	X		CG Code for Fund Service Providers	2014		X
17	Israel					No specific recommendat	X
18	Italy		X	CG Code of the Comitato Corporate Governance	2020		
19	Japan						
20	Korea (South K.)	X		Code of Best Practices for Corporate Governance	2016 (amended)		
21	Latvia					Dual system	
22	Lithuania	X		The C.G. Code for the companies listed on the National Stock Exchange of Lithuania	2004	A dual system is also allowed	
23	Luxembourg	X		The X Principles of C.G. of the Luxembourg Stock Exchange	2013	Dual system	

Table A1: Corporate Governance regulation in the OECD countries (Cont.)

Num	Country	Recommendation		Model/Code	Year of last regulation	Observations	Common Law System
		Separate structure as best practice	Both structures allowed				
24	Mexico	X		Código de principios y mejores prácticas de gobierno corporativo	2018		
25	Netherlands	X		The Dutch Corporate Governance Code	2016	A dual system allowed, with the independence of chairperson from management in both models.	
26	New Zealand	X		NZX Corporate Governance Code	2017		X
27	Norway	X		The Norwegian Code of Practice for Corporate Governance	2007 (amended)		
28	Poland					Dual system	
29	Portugal					Dual system	
30	Slovakia	X		Corporate Governance Code for Slovakia	2008	Dual system	
31	Slovenia	X		Slovenian Corporate Governance Code for Listed Companies	2018 (Amended)	Dual system	
32	Spain		X	Código Unificado de buen gobierno de las sociedades cotizadas	2013		
33	Sweden	X		The Swedish Code of Corporate Governance	2008		
34	Switzerland		X	Swiss Code of Best Practice for Corporate Governance	2014		
35	Turkey	X		Corporate Governance Principles: Capital Markets Board of Turkey	2005 (Amended)		
36	United Kingdom	X		The U.K. Corporate Governance Code	2018 (Amended)		X
37	United States		X				X

Table A2: Variable definitions

Variable	Calculation	Log transf. (Y/N)
CEO/COB Separation	Equal to 1 if the firm has separation between CEO and COB roles and 0 otherwise.	No
Ownership top 3 shareholders	Sum of stock shares of top three shareholders	No
Herfindahl Differences	$Herfndahl\ Differences_t = (Sh1_t - Sh2_t)^2 + (Sh2_t - Sh3_t)^2 + (Sh3_t - Sh4_t)^2$ $0 \leq ShN_t \leq 1$ is the percentage of shares owned by each shareholder at the end of year t.	No
Percentage of independent directors n.m.	$Perc\ Ind\ Dir = \frac{Number\ of\ independent\ directors_{it}}{Board\ size_{it}}$	No
Board compensation committee	Equal to 1 if the firm has board compensation committee for year and 0 otherwise.	No
Executive compensation policy	Equal to 1 if the firm has executive compensation policy for year and 0 otherwise.	No
Board diversity policy	Equal to 1 if the firm has board diversity policy for year and 0 otherwise.	No
Tobin's Q	$Tobin's\ Q_{it} = \frac{Total\ Debt_t + Total\ Market\ Value\ of\ Equity_t}{Total\ Assets_t}$	No
Volatility of stock returns	$\sigma_{it} = \left(\frac{1}{252}\sum_{i=1}^{252}(r_i - \bar{r})^2\right)^{\frac{1}{2}}$	No
FCF to total Assets	$FCF\ total\ Assets_{it} = \frac{FCF_{it}}{Average\ Total\ Assets_{it}}$	
Total Revenue to Total Assets	$Total\ Revenue\ to\ Total\ Assets_{it} = \frac{Total\ Revenue_{it}}{Total\ Assets_{it}}$	No
Assets Tangibility	$Asset\ Tangibility_{it} = \frac{Total\ Fixed\ Assets_{it}}{Total\ Assets_{it}}$	No
Sales growth	$Sales\ growth_{it} = \frac{1 + \left(\frac{Sales_{it}}{Sales_{i,t-1}}\right)}{1 + inflation\ rate} - 1$	No
Debt to Equity	$Debt\ to\ equity_{it} = \frac{Debt_{it}}{Equity_{it}}$	Yes: Ln $(1 + Debt\ to\ Equity_t)$
Firm's age	Age of firm in years	Yes: Ln $(1 + Age_{it})$
Country Regulatory Quality Index	Country regulatory index from Worldbank for country/year	No
Differences in Regulatory Quality	Country regulatory index from Worldbank for country/year minus US regulatory quality index for the same year.	No
Power distance	Hoftsede Power Distance country scale	Yes Ln $(1 + PD\ Scale)$
GDP per capita	GDP per capita for each country/year (thousands of of US Dollars)	Yes Ln $(1 + GDP\ per\ capita_t)$
Year inflation for headquarters country	Annual rate of inflation for each country.	No
Common Law	Equal to 1 if the headquarters country has a common-law legal system.	No
Market development	Categorical variable: 0 – Non-classified, frontier and stand-alone markets. 1- Emerging markets. 2- Developed markets.	No

Notes: i.) Variables of the baseline model were calculated as it was explained in column 2. Column 3 indicates if a log transformation was performed to include variables in models.

Table A3: Correlation Matrix

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]
[1]	CEO separation	1.0000	0.0734	0.0668	-0.1196	0.0706	0.0399	-0.0412	0.0006	-0.0471	-0.0412	-0.0085	0.0406
[2]	Ownership top 3 shareholders	0.0734	1.0000	0.7533	-0.2325	-0.0369	0.1104	-0.0636	0.0352	-0.0432	-0.0138	0.0158	0.0663
[3]	First 3 Herfindahl differences	0.0668	0.7533	1.0000	-0.2633	0.0221	0.1472	-0.0840	-0.0247	-0.0539	-0.0237	0.0380	0.0745
[4]	Percentage of indep. Directors	-0.1196	-0.2325	-0.2633	1.0000	-0.0991	-0.3405	0.2062	0.0732	0.1289	-0.0119	-0.0428	-0.0543
[5]	Board's compensation committee	0.0706	-0.0369	0.0221	-0.0991	1.0000	0.2490	-0.0370	0.0074	-0.0417	-0.0403	0.0285	0.0456
[6]	Executive compensation policy	0.0399	0.1104	0.1472	-0.3405	0.2490	1.0000	-0.0048	-0.0744	-0.0858	-0.0575	0.0206	-0.0057
[7]	Board diversity policy	-0.0412	-0.0636	-0.0840	0.2062	-0.0370	-0.0048	1.0000	-0.0760	0.0299	0.0409	0.0134	-0.0668
[8]	Volatility of stock returns	0.0006	0.0352	-0.0247	0.0732	0.0074	-0.0744	-0.0760	1.0000	0.0748	-0.0563	-0.1720	-0.0629
[9]	Tobin's Q	-0.0471	-0.0432	-0.0539	0.1289	-0.0417	-0.0858	0.0299	0.0748	1.0000	0.0437	-0.0943	-0.2551
[10]	Revenue to total Assets	-0.0412	-0.0138	-0.0237	-0.0119	-0.0403	-0.0575	0.0409	-0.0563	0.0437	1.0000	0.2447	-0.3660
[11]	FCF to total assets	-0.0085	0.0158	0.0380	-0.0428	0.0285	0.0206	0.0134	-0.1720	-0.0943	0.2447	1.0000	0.0322
[12]	Asset tangibility	0.0406	0.0663	0.0745	-0.0543	0.0456	-0.0057	-0.0668	-0.0629	-0.2551	-0.3660	0.0322	1.0000
[13]	Firm size	-0.0888	-0.1088	0.0423	-0.0580	0.0221	0.1872	-0.0153	-0.3203	-0.3254	-0.1126	0.1519	0.2453
[14]	Debt to Equity	-0.0535	0.0121	-0.0047	0.0594	-0.0080	-0.0118	0.0275	0.0446	-0.1298	-0.0796	0.0142	0.1862
[15]	Firm age	-0.0585	-0.1439	-0.0296	-0.1538	0.0224	0.1310	-0.0480	-0.1558	-0.1375	0.1063	0.1434	-0.0229
[16]	Regulatory quality	-0.0013	-0.1690	-0.1316	0.2335	0.0315	-0.1260	0.1403	-0.0372	0.0531	-0.0106	-0.0560	-0.0516
[17]	Difference of RQ wrt US	-0.0013	-0.1749	-0.1317	0.2189	0.0352	-0.1150	0.0911	-0.0019	0.0528	-0.0125	-0.0491	-0.0444
[18]	Power distance	0.0122	0.2978	0.3009	-0.4455	-0.0340	0.4403	-0.2049	-0.0929	-0.1368	-0.0898	0.0345	0.1130
[19]	GDP per capita	-0.1510	-0.2544	-0.1992	0.3504	-0.0341	-0.2246	0.1356	0.0567	0.1158	0.0084	-0.1037	-0.1210
[20]	Inflation rate	0.0235	0.0865	0.1163	-0.0214	-0.0501	-0.0019	-0.0976	0.0316	-0.0095	-0.0137	-0.0071	0.0148
[21]	Common law	-0.1599	-0.1460	-0.1805	0.5542	-0.2787	-0.4404	0.1979	0.1213	0.1211	-0.0109	-0.0867	-0.0199

Table A3: Correlation Matrix (Cont.)

		[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]
[1]	CEO separation	-0.0888	-0.0535	-0.0585	-0.0013	-0.0013	0.0122	-0.1510	0.0235	-0.1599
[2]	Ownership top 3 shareholders	-0.1088	0.0121	-0.1439	-0.1690	-0.1749	0.2978	-0.2544	0.0865	-0.1460
[3]	First 3 Herfindahl differences	0.0423	-0.0047	-0.0296	-0.1316	-0.1317	0.3009	-0.1992	0.1163	-0.1805
[4]	Percentage of indep. Directors	-0.0580	0.0594	-0.1538	0.2335	0.2189	-0.4455	0.3504	-0.0214	0.5542
[5]	Board's compensation committee	0.0221	-0.0080	0.0224	0.0315	0.0352	-0.0340	-0.0341	-0.0501	-0.2787
[6]	Executive compensation policy	0.1872	-0.0118	0.1310	-0.1260	-0.1150	0.4403	-0.2246	-0.0019	-0.4404
[7]	Board diversity policy	-0.0153	0.0275	-0.0480	0.1403	0.0911	-0.2049	0.1356	-0.0976	0.1979
[8]	Volatility of stock returns	-0.3203	0.0446	-0.1558	-0.0372	-0.0019	-0.0929	0.0567	0.0316	0.1213
[9]	Tobin's Q	-0.3254	-0.1298	-0.1375	0.0531	0.0528	-0.1368	0.1158	-0.0095	0.1211
[10]	Revenue to total Assets	-0.1126	-0.0796	0.1063	-0.0106	-0.0125	-0.0898	0.0084	-0.0137	-0.0109
[11]	FCF to total assets	0.1519	0.0142	0.1434	-0.0560	-0.0491	0.0345	-0.1037	-0.0071	-0.0867
[12]	Asset tangibility	0.2453	0.1862	-0.0229	-0.0516	-0.0444	0.1130	-0.1210	0.0148	-0.0199
[13]	Firm size	1.0000	0.2496	0.2590	-0.0403	-0.0221	0.2275	-0.0565	-0.0824	-0.1501
[14]	Debt to Equity	0.2496	1.0000	-0.0678	-0.0560	-0.0508	0.0055	-0.0097	0.0073	0.0345
[15]	Firm age	0.2590	-0.0678	1.0000	-0.0963	-0.0866	0.1414	-0.1126	-0.0132	-0.2102
[16]	Regulatory quality	-0.0403	-0.0560	-0.0963	1.0000	0.9558	-0.5008	0.8112	-0.3441	0.4699
[17]	Difference of RQ wrt US	-0.0221	-0.0508	-0.0866	0.9558	1.0000	-0.4935	0.7968	-0.3839	0.4542
[18]	Power distance	0.2275	0.0055	0.1414	-0.5008	-0.4935	1.0000	-0.6115	0.0410	-0.4789
[19]	GDP per capita	-0.0565	-0.0097	-0.1126	0.8112	0.7968	-0.6115	1.0000	-0.2763	0.5261
[20]	Inflation rate	-0.0824	0.0073	-0.0132	-0.3441	-0.3839	0.0410	-0.2763	1.0000	-0.0078
[21]	Common law	-0.1501	0.0345	-0.2102	0.4699	0.4542	-0.4789	0.5261	-0.0078	1.0000

Note(s). This table displays the Pearson partial correlations across the explanatory variables included in the regression models.

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