

Firms' Rationales for CEO Duality: Evidence from a Mandatory Disclosure Regulation

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*Final version published in **Journal of Corporate Finance** 2020, Vol. 65,
<https://doi.org/10.1016/j.jcorpfin.2020.101770>*

Abstract

Exploiting the 2009 amendments to Regulation S-K, we provide unique evidence on the first-time disclosure of the reasons firms state for combining or separating the roles of CEO and chairman. The stated reasons support both agency theory and organization theory. They are more numerous, comprise more words, and have a more positive tone for firms with duality. Examining the announcement returns to firms' disclosures, we find that investors evaluate the most frequently cited reasons for CEO duality by considering the firm's characteristics. Our evidence enhances the understanding of firms' endogenous decision to opt for CEO duality and its value consequences.

JEL classification: G14, G34, G38

Keywords: Board leadership; CEO duality; Corporate governance; Regulation S-K; Stock returns; Textual analysis

Acknowledgments: The authors would like to thank Alexander Kempf and Martin Ruckes as well as participants at the 25th annual meetings of the German Finance Association 2018, a CFR research seminar at the University of Cologne, the 2019 CGEUI workshop in Barcelona, and a research seminar at the University of Wuppertal for helpful comments and suggestions. We are also very grateful to Stephan Balz and Markus Gengenbach for excellent research assistance.

Introduction

CEO duality, i.e., combining the roles of CEO and chairman of the board, has been the subject of one of the longest debates in corporate governance (see, e.g., Larcker and Tayan, 2016; Finkelstein, Hambrick, and Cannella, 2009). On the one side, almost half of S&P 500 firms combine the two roles (Spencer Stuart, 2019). On the other side, investors and governance experts – via shareholder proposals and public campaigns – frequently pressure firms to separate the two roles, emphasizing a lack of effective managerial oversight under CEO duality.¹ Nevertheless, most such proposals do not receive majority support, which suggests disagreement among shareholders about the value of CEO duality. Such disagreement is consistent with the inconclusive literature on the relation between CEO duality and firm performance (for a review, see Krause, Semadeni, and Cannella, 2014), as well as the lack of reliability of extant studies likely suffering from the nonrandom choice of board structures (e.g., Hermalin and Weisbach, 1998; Adams, Hermalin, and Weisbach, 2010). The preceding discussion highlights the need for practitioners and scholars to better understand the reasons why corporate boards combine or separate the CEO and chairman roles.

This paper exploits a 2009 amendment to Regulation S-K, which requires public firms to disclose their reasons for combining or separating the roles of CEO and chairman. With the help of hand-collected information on S&P 500 companies, we contribute to the literature by providing unique evidence on the first-time disclosure of the reasons behind their board leadership structure. Thereby, we propose a novel approach to understanding why firms have opted for or against CEO duality. We study whether the main reasons firms state for combining or separating the CEO and

¹ One example of such a campaign is the public warning by Norway’s sovereign wealth fund to the largest U.S. banks “that time is running out [...] to end the highly contentious practice of combining the roles of chief executive and chairman” (see “Norway’s oil fund urges US banks to split CEO-chairman role” in *The Financial Times*, February 07, 2016). Larcker and Tayan (2016) also provide several examples of investors arguing that CEO duality undermines effective oversight. This point of view is supported by Goyal and Park (2002) who provide evidence that boards of directors find it difficult to remove poorly performing CEOs who also hold the chairman position.

chairman roles and the determinants of these reasons are consistent with prevailing theories of CEO duality. In addition, we conduct a textual analysis to test the validity of the hypothesis that firms following the contentious practice of CEO duality provide more information with a more positive sentiment. Examining the stock market reaction to firms' disclosures of the reasons for CEO duality, we also assess the value implications and informativeness of the stated reasons.

Concerning the choice of CEO duality and its value implications, competing theories predict that combining the CEO and chairman roles has either net costs or net benefits (see, e.g., Finkelstein and D'Aveni, 1994; Brickley, Coles, and Jarrell, 1997). On the one hand, agency theory suggests that CEO duality increases the CEO's entrenchment and power over the board, which leads to higher agency costs, particularly for larger and more complex firms that are more difficult to monitor and have more resources to waste (Jensen and Meckling, 1976; Fama and Jensen, 1983; Jensen, 1993). On the other hand, according to the theories of resource dependence (Pfeffer, 1972; Pfeffer and Salancik, 1978) and stewardship (Donaldson, 1990; Donaldson and Davis, 1991), CEOs act in the interest of shareholders by making use of the stronger and unified leadership that comes with duality. Unified leadership mitigates coordination and information acquisition costs and facilitates effective, fast decision making and adaptability (Boyd, 1995; Jensen and Meckling, 1995; Yang and Zhao, 2014; Li, Lu, and Phillips, 2019), which is crucial for firms operating in more competitive and dynamic business environments. Furthermore, Adams and Ferreira's (2007) model predicts that powerful CEOs are willing to share more information with other directors on the board, which can be beneficial for young and opaque firms.

The main reasons firms state for combining or separating the CEO and chairman roles are consistent with the theories mentioned above. Based on the proxy statements filed with the Securities and Exchange Commission (SEC) over the one-year period ("the proxy season") after

the amendment to Regulation S-K became effective, we identify 24 (22) distinct reasons for combining (separating) the two roles.

Regarding the decision to combine the two roles, the majority of the firms (56%) name “Unified leadership” as a reason for CEO duality, arguing that having a CEO-chairman promotes clear and consistent leadership, directional clarity, and effective and fast decision making. Forty-six percent state that combining the two roles allows them to lever the CEO’s in-depth knowledge of the firm and its operations (“Knowledge as CEO”), while 23% state that it enables the CEO to act as a bridge between management and the board, promoting information flows between the two (“Bridge between management and board”). The frequency of firms stating the aforementioned reasons highlights the importance of effective decision making and asymmetric information when opting for CEO duality, which supports both organization theory and Adams and Ferreira’s (2007) theory of friendly boards. However, 19% of duality firms state the reason “Leadership structure has served well”, which we find to reflect potential agency problems.

Turning to non-duality firms, the main reasons such firms state for separating the CEO and chairman roles are based on the importance of agency costs, consistent with agency theory. Specifically, such firms report that they separate the two roles to i) account for the inherent differences between the tasks and roles of the CEO and chairman (“Differences between tasks/roles” (33%)), ii) facilitate managerial oversight (“Facilitates monitoring” (30%)), and iii) allow the CEO to focus on managing the firm’s day-to-day operations (“CEO focus on management” (22%)).

Our data also enables us to contribute to the literature by studying the main reasons – as proposed by agency theory and resource dependence theory – for combining or separating the CEO

and chairman roles. We find that the main reasons are associated with CEO, firm, and governance characteristics in a way consistent with both agency theory and organization theory, particularly for “Unified leadership”, the most frequent reason for the contentious practice of CEO duality.

As academics and other commentators on corporate governance typically treat the separation of the CEO and chairman roles as best practice, we expect the market to be less concerned about the reasons for following this best practice. In contrast, we hypothesize and find that firms with CEO duality provide investors with more information about their board leadership structure and present this information with a more positive sentiment. Specifically, we find that the sections of firms with CEO duality contain significantly more words and more distinct reasons (2.1 vs. 1.7) and have a more positive tone. Furthermore, we find the textual similarity between the sections on board leadership in the same firms’ 2010 and 2011 proxy statements to be significantly lower when firms change their CEOs, indicating that the reasons firms name tend to be CEO-firm specific. These patterns suggest that firms are aware of the controversy surrounding CEO duality and, hence, cater to investors’ needs for more information regarding the firm-specific reasons for having duality.

To examine whether investors indeed consider the reasons for combining or separating the CEO and chairman roles to be informative, and how they assess them, we study the stock market reaction to firms’ first-time disclosure of the most frequently stated reasons. We build on an established literature that studies the stock market reaction to disclosures of governance-related information in firms’ proxy statements (e.g., DeAngelo and Rice, 1983; Brickley, Bhagat, and Lease, 1985; Yermack, 2006; Yermack and Wei, 2011). Importantly, we follow Yermack and Wei (2011) and account for a large set of confounding disclosures, such as director nominations and

qualifications, executive compensation, and voting issues.² Our results suggest that some of the reasons have implications for shareholder value and that investors' reactions are consistent with the theories predicting a firm-specific trade-off between the costs and benefits of CEO duality. In particular, we find that the market reaction to the fourth most frequently cited reason for CEO duality, i.e., "Leadership structure has served well", is significantly lower and negative on average. Consistently, we also find that firms naming this reason exhibit significantly poorer long-term performance. The market reaction to the most frequently stated reason for CEO duality, "Unified leadership", becomes significant once the characteristics of the firm are taken into account. That is, stock returns are significantly lower for large and complex firms, which have more resources to waste and are more difficult to monitor. On the contrary, stock returns are significantly higher for small and less complex firms and for firms in more competitive and dynamic business environments. For these firms, having unified leadership via a combined CEO-chairman who can make decisions more effectively and enhance the firm's adaptability is likely to be more valuable, whereas monitoring is less valuable. As per our expectations, we find little evidence of significant stock returns to the disclosure of the reasons for the less contentious choice to separate the CEO and chairman roles.³ This finding is in line with the potentially lower informativeness of these reasons and less need for investors to obtain information about why firms separate the two roles.

This paper contributes to several strands of the literature. First, we contribute to the literature on the determinants of CEO duality (e.g., Linck, Netter, and Yang, 2008; Belot et al., 2014; for an overview, see Krause, Semadeni, and Cannella, 2014). Existing studies have been limited to the

² We use a total of sixteen proxy statement controls to mitigate concerns of potential simultaneous disclosures that might contaminate our event study. We also note that 10-K reports are issued before the DEF-14 filings we rely on, which makes a systematic disclosure of simultaneous financial information unlikely. Nevertheless, we cannot fully rule out that an unobserved contaminating factor might explain part of our results.

³ Nevertheless, we still find some evidence that investors evaluate the reasons for the separation of the roles of the CEO and chairman depending on CEO and board characteristics.

analysis of covariates of CEO duality choices (i.e., CEO and firm characteristics) and have not been able to investigate within an agency-based and resource-dependence framework. As a result, these studies have typically been unable to identify the reasons behind the selection of the board leadership structure. In contrast, relying on unique hand-collected data, our study is the first to present evidence on the reasons that firms state for opting for or against CEO duality as well as the determinants of these reasons. Our study suggests that firms name various reasons for combining or separating the CEO and chairman roles, that firms differ systematically in terms of the reasons they name, and that they do so in ways consistent with both agency theory and organization theory. Thereby, our paper also extends the literature on the endogeneity of board structures (e.g., Hermalin and Weisbach, 1998 and 2003; Adams, Hermalin, and Weisbach, 2010; Wintoki, Linck, and Netter, 2012).

Second, our study finds that investors take into account firm characteristics when evaluating firms' reasons for CEO duality, implying that the stock market considers a "one-size-fits-all" approach to CEO duality to be inappropriate. Thereby, we contribute to the literature on the performance consequences of CEO duality (e.g., Brickley, Coles, and Jarrell, 1997; Adams, Almeida, and Ferreira, 2005; Dey, Engel, and Liu, 2011; Jayaraman, Nanda, and Ryan, 2015). This literature is inconclusive as to the effect of duality on firm performance and value (e.g., Faleye, 2007; Krause, Semadeni, and Cannella, 2014), which supports theory that predicts a heterogeneous cost-benefit trade-off for CEO duality. However, to date only few studies examine whether the consequences of CEO duality on firm performance depend on firm circumstances. Extant evidence suggests that firm size (Palmon and Wald, 2002) and product market (Yang and Zhao, 2014; Li, Lu, and Phillips, 2019) are significant determinants of the performance effect of CEO duality. Our paper expands this limited literature. Specifically, we provide evidence that the

stock market reaction to the disclosure of the most frequently stated reason for CEO duality, “Unified leadership”, depends on firms’ complexity and size as well as the competitiveness and dynamism of their business environment. Thus, our results indicate that the benefits of CEO duality for small firms and those subject to high competition documented in extant studies reflect the benefits of unified leadership.

Finally, our paper speaks to the investor informativeness and firm value consequences of reforms of SEC rules on the disclosure of internal corporate governance. Earlier studies have been concerned with the consequences of reforms of the disclosure rules for perquisites granted to executives (Yermack, 2006; Grinstein, Weinbaum, and Yehuda, 2017), CEO inside debt (Yermack and Wei, 2011), and the skills of corporate directors (Adams, Akyol, and Verwijmeren, 2018). Consistent with these studies, our paper supports the notion that reforms of SEC disclosure rules are informative for investors. Particularly, the evidence we provide suggests that the reasons firms state for opting for CEO duality provide valuable insights to investors, which help them assess the appropriateness of combining the CEO and chairman positions.

This paper proceeds as follows. Section 2 outlines the regulatory framework for our study and provides information about the sample and data. Section 3 presents the reasons firms state for combining or separating the CEO and chairman roles, the determinants of the reasons, and a textual analysis of firms’ sections on board leadership structure. Section 4 presents the stock market reaction to the disclosed reasons. Conclusions follow.

1. Regulatory Framework, Sample, and Data

1.1. Regulatory Framework

Under the U.S. Securities Act of 1933, Regulation S-K lays out the reporting requirements for SEC filings applying to public companies in the United States. The December 16, 2009 amendments to Regulation S-K include requirements for companies to disclose their reasons for combining or separating the CEO and chairman roles.⁴ The new disclosure requirement for Item 407(h) of Regulation S-K and the amendment to Item 7 of Schedule 14A states the following (pp. 42-43):

“We [the SEC] believe that, in making voting and investment decisions, investors should be provided with meaningful information about the corporate governance practices of companies. As we noted in the Proposing Release, one important aspect of a company’s corporate governance practices is its board’s leadership structure. Disclosure of a company’s board leadership structure and the reasons the company believes that its board leadership structure is appropriate will increase the transparency for investors as to how the board functions. [...]

Under the amendments, a company is required to disclose whether and why it has chosen to combine or separate the principal executive officer and board chairman positions, and the reasons why the company believes that this board leadership structure is the most appropriate structure for the company at the time of the filing.”

⁴ Additional amendments to Regulation S-K further lay out reporting requirements related to (i) the companies’ compensation policies and practices for all employees that create material risks for the company (“A. Enhanced Compensation Disclosure”); (ii) the qualifications of directors and nominees, as well as their past directorships and the time period for reporting legal proceedings involving directors, nominees and executives (“B. Enhanced Director and Nominee Disclosure”); (iii) the fees paid to compensation consultants, their involvement in the design and determination of company compensation practices and additional services provided by compensation consultants (“D. Compensation Consultants”); and the transfer of the disclosure of shareholder voting results from Forms 10-Q and 10-K to Item 5.07 of Form 8-K (“E. Reporting of Voting Results on Form 8-K”). The full document is available at: <https://www.sec.gov/rules/final/2009/33-9089.pdf>.

The aforementioned SEC disclosure regulation became effective as of February 28, 2010 for fiscal years ending on or after December 20, 2009. It was signed into law shortly after its effectiveness as part of the Dodd-Frank Act on July 21, 2010. According to the new regulation, firms are required to disclose the reasons for combining or to separating the CEO and chairman roles in their proxy statement. In the following, we provide two examples of company statements detailing the reasons for combining and separating the two roles, respectively:

Example for CEO duality – Safeway Inc.:

“Our Board believes that, at the present time, the interests of the Company and our stockholders are best served by the leadership and direction provided by a single Chairman and Chief Executive Officer. Our Board believes that a single person, acting in the capacities of Chairman and CEO, serves as a bridge between the Board and management, helping both to act with a common purpose, and provides critical leadership for carrying out the Company’s strategy and confronting its challenges. Our Board also believes the combined role of Chairman and CEO promotes unified leadership and direction for the Company, which allows for a single, clear focus for management to execute our strategic initiatives and business plans to maximize stockholder value, with centralized leadership in one person so that there is no ambiguity about accountability. The Board’s current leadership structure is consistent with the practice at many large U.S. companies, which have historically followed a model in which the chief executive officer also serves as chairman of the board; this is particularly true for larger companies, where the complexities of the issues often warrant a combined position to ensure effective and efficient board meetings, information flow, crisis management and long-term planning.”⁵

Example for CEO-chairman separation – Plum Creek Timber Company Inc.:

⁵ Safeway Inc. 2010 preliminary proxy statement (March 15, 2010) available from the SEC’s EDGAR database at: https://www.sec.gov/Archives/edgar/data/86144/000119312510074435/ddef14a.htm#toc78956_11.

“The Company separates the positions of Chief Executive Officer and Chairman of the Board in recognition of the differences between the two roles. The Chief Executive Officer is responsible for the strategic direction of the Company and the day-to-day leadership and performance of the Company, while the Chairman of the Board, in consultation with the Chief Executive Officer, sets the agenda for the Board meetings and presides over meetings of the Board. In addition, the Company believes that the separation provides a more effective monitoring and objective evaluation of the Chief Executive Officer’s performance. The separation also allows the Chairman of the Board to strengthen the Board’s independent oversight of the Company’s performance and governance standards.”⁶

1.2. Sample and Data

Our initial sample includes all S&P 500 companies as of calendar year-end 2009, which filed their final proxy statement with the SEC within the first year after the new regulation became effective, i.e., the sample period is from March 1, 2010, to February 28, 2011. We exclude all companies, which filed their proxy statement either before the effective date of the new disclosure rule (5 companies) or more than a year later (15 companies), as this corresponds to a different proxy season. For the remaining 480 companies, we retrieve the 2010 proxy statement from the SEC EDGAR database and identify the respective section on board leadership structure. We exclude 16 companies because their proxy statements do not contain a section on their board leadership structure, as well as one company (XTO Energy Inc.) for which the 2010 proxy filing is not available. We further exclude five companies because they are led by two Co-CEOs; three companies with interim CEOs; four companies, which do not have a chairman position (e.g.,

⁶ Plum Creek Timber Company Inc. 2010 proxy statement (March 15, 2010) available from the SEC’s EDGAR database at: <https://www.sec.gov/Archives/edgar/data/849213/000119312510071469/ddef14a.htm>.

Apple Inc.); and one company with insufficient historic stock price information.

For each sample firm we check the proxy statement from the previous year (i.e., 2009) as well as prior published 8-K filings for voluntary disclosure of related information. Specifically, we check each 8-K filing's item 5.02 "Departure of Directors or Principal Officers; Election of Directors; Appointment of Principal Officers" under which changes in major corporate positions, including changes in the corporate leadership structure, have to be disclosed. This item may contain voluntary disclosure of the reasons for combining or separating the CEO and chairman positions. After excluding an additional three companies for which we identify such prior voluntary disclosure, our final sample consists of 447 companies, i.e., 282 companies with CEO duality and 165 without.

To identify the stated reasons for combining or separating the CEO and chairman roles, we extract the sections on board leadership structure from our sample firms' 2010 proxy statements. As these sections are not standardized, i.e., firms may use a considerably different wording to describe the same reason, we identify the reasons manually rather than via algorithms. We acknowledge that the use of a manual procedure may be subject to subjective judgement and limited replicability.⁷ To mitigate such concerns, we employ two research assistants to carefully read each firm's section on board leadership structure and to identify the individual reasons independently. All cases subject to discrepancies are reviewed and a decision is made by the research team. Table 1 provides detailed descriptions and textual examples for the four most frequently stated reasons for CEO duality as well as for CEO-chairman separation.

We obtain accounting data for the previous fiscal year from Capital IQ and complement it

⁷ To allow replication of our results, we provide the data on the stated reasons on request.

with data on CEOs, chairmen, boards of directors, and management and shareholder proposals, which we hand-collect from firms' 2010 proxy statements. Bebchuk, Cohen, and Ferrell's (2009) entrenchment index is obtained from the ISS Governance database and stock price data is from the Center for Research in Security Prices (CRSP).

Table 2 reports summary statistics for our sample firms. We define all variables in the notes to this table. Overall, the firms with CEO duality and those without duality do not differ significantly in terms of business segments, abnormal returns to DEF-14 filings (i.e., $CAR[0,1]$), stock performance (i.e., *Prior year BHR*), product market fluidity (as per Hoberg, Phillips, and Prabhala, 2014), stock return volatility, Tobin's Q, and total assets. However, on average, the firms with CEO duality have been stock listed for longer (37 vs. 29 years), have a larger market capitalization (\$24 bn vs. \$15.5 bn), spend less on R&D (2.5% vs. 3.8% of sales), and are less likely to be high-tech companies (11% vs. 22%).⁸ In terms of corporate governance, firms with CEO duality have greater board independence (86% vs. 81%), but are otherwise similar to non-duality firms with regard to median board size and the entrenchment index (*E-Index*). Finally, consistent with prior studies on duality (e.g., Brickley, Coles, and Jarrell, 1997), CEOs who also act as the chairman are older (57 vs. 53 years), have longer tenures (7 vs. 3 years), and are more often the firm's founder (8% vs. 2%). In line with Brickley, Coles, and Linck (1999), a considerable percentage of chairman positions at non-duality firms are held by former CEOs (47%) or founders of the company (19%), while half of the chairmen are considered independent.

⁸ Two companies, i.e., CareFusion Corp (CEO duality) and Mead Johnson Nutrition Company (no duality), have a firm age equal to zero as they were both created in 2009 as corporate spin-offs of CardinalHealth and Bristol-Myers Squibb, respectively.

2. Reasons for combining or separating the CEO and chairman roles

2.1. Which reasons do firms state for their choice of board leadership structure?

In the following, we present the reasons firms state in their 2010 proxy statements for combining or separating the CEO and chairman roles. We identify 24 (22) distinct reasons for combining (separating) the two roles. Figures 1a and 1b provide an overview of the ten most frequent reasons stated by firms with and without CEO duality, respectively. For completeness, Appendices A.1 and A.2 provide an overview of all stated reasons. The reasons not included in Figures 1a and 1b are rare, with less than 5% of the sample firms stating them.

First, Figure 1a shows that the most frequent reason for combining the CEO and chairman roles, stated by 56% of all duality firms, is “Unified leadership”. Firms stating this reason argue that duality ensures unequivocal and consistent leadership, directional clarity as well as effective and fast decision making. Second, 46% of the firms state that duality allows them to make the best possible use of the CEO’s in-depth knowledge of the firm and its day-to-day operations (“Knowledge as CEO”). Another 23% state that it enables the CEO to act as a bridge between the management and the board of directors, which promotes the flow of information between the two (“Bridge between management and board”). The aforementioned reasons highlight the importance of effective decision making and asymmetric information. This evidence provides empirical support for the arguments in favor of CEO duality made by organization theories, i.e., the resource dependence theory (e.g., Pfeffer, 1972; Pfeffer and Salancik, 1987) and the stewardship theory (e.g., Donaldson, 1990; Donaldson and Davis, 1991). These theories argue that unified leadership via CEO duality promotes effective decision making and adaptability, while reducing information costs, and facilitating communication with external parties. The reasons firms state also support

the theory by Adams and Ferreira (2007) according to which CEOs, particularly those with greater power, play a crucial role in providing the board of directors with inside information about the firm.⁹

Regarding the other reasons, 19% of the firms with duality justify the latter by their past performance under their current leadership structure (“Leadership structure has served well”). Further, 9% of the firms state that CEO duality fosters the efficiency and effectiveness of the board and that they chose CEO duality due to the CEO’s experience with the firm. Relatively few firms (8%) state business and company circumstances or the avoidance of costs and duplication of effort (5%) as reasons for duality. Finally, 5% of the firms state that they chose duality because of the CEO’s founder status due to his or her industry experience or other qualifications.

Turning to the non-duality firms, Figure 1b suggests that the most frequently stated reasons for separating the CEO and chairman roles reflect the importance of agency costs and a clear delineation between the CEO and chairman roles, consistent with agency theory (e.g., Jensen and Meckling, 1976; Jensen, 1993) as well as commonly accepted best practice in corporate governance. In particular, the two most frequently stated reasons for separating the CEO and chairman roles are the inherent differences between the tasks and roles of the CEO and the chairman (“Differences between tasks/roles”), stated by 33% of the firms, and improved managerial oversight (“Facilitates monitoring”), stated by 30% of the firms. In addition, 22% of the firms state that a CEO who does not chair the board is better able to focus on managing the firm’s day-to-day operations (“CEO focus on management”).

⁹ Adams and Ferreira (2007) conclude that CEOs are willing to share more information with boards that have a more management-friendly structure when they trade off the costs of monitoring and the benefits of advice. Consequently, CEOs with more power over the board, such as CEOs who also hold the position of board chair, will contribute more to reducing informational frictions between management and directors.

As to the other reasons firms state for separating the CEO and chairman roles, a total of 25% emphasize the chairman's experience with the firm, i.e., they either state the reason "Chair's experience with company" (19%) or "Chair is founder" (6%). "Transition and continuity of leadership" is stated by 13% of the firms, in line with the practice by many firms of assigning their retiring CEO the role of board chairman (e.g., Quigley and Hambrick, 2012). However, only 12% of the firms state the chair's ability to provide advice and mentoring as a reason for separating the two roles. In general, firms only rarely refer to the chairman's role of advising the CEO. Finally, 13% of non-duality firms do not state a reason for their choice of separating the CEO and chairman roles (the equivalent percentage for firms with duality is only 6%), suggesting that this practice is much less contentious, which reduces the pressure on firms to provide investors with specific reasons.

In sum, the above analysis reveals the following. First, the reasons firms state for their chosen board leadership structure are consistent with theory. Second, the reasons for CEO duality are multifaceted, which makes it difficult to obtain a sound understanding of these reasons by considering only the observable covariates of CEO duality, such as CEO and firm characteristics.

2.2. Which firms state which reasons?

Prior literature on the determinants of CEO duality does not investigate these determinants within the context of agency theory and resource-dependence theory. Our unique, hand-collected data enables us to do so in order to further our understanding of the CEO, firm, and governance characteristics associated with the main reasons firms state for combining or separating the CEO

and chairman roles.¹⁰

Table 3 presents results from Probit regressions explaining the likelihood of each of the four most frequently stated reasons for CEO duality and CEO-chairman separation by CEO and governance characteristics (i.e., the CEO's age, founder status, and tenure, board independence and size, and the E-index) as well as firm characteristics (i.e., business segments, firm age and size, prior stock performance and volatility, product market fluidity, and R&D spend).

The results for duality firms, shown in Panel A, suggest the following. First, the reason "Unified leadership" is significantly more likely to be stated by firms managed by their founder and those with a high E-index, an indication that managers and directors are more entrenched. This result is consistent with an agency-based perspective under which entrenched and powerful CEOs demand unified leadership. However, in case of founder CEOs it may also reflect efficient decision making by the arguably most experienced manager in the firm. This interpretation is in line with the resource-dependence perspective and with empirical evidence on shareholder value creation by founders (e.g., Fahlenbrach, 2009). Also consistent with this perspective is the finding that firms with a high R&D spend, which often operate in more competitive and dynamic business environments, are more likely to name "Unified leadership" as a reason for CEO duality. Hence, overall, the determinants of this reason are consistent with both agency and organization theory.

Second, we find virtually no determinants of the reasons "Knowledge as CEO" and, particularly, "Bridge between management and board". Regarding the former, firms are less likely to emphasize the CEO's knowledge as CEO if they are headed by their founders, perhaps because

¹⁰ We thank an anonymous referee for suggesting this analysis. Our results remain qualitatively similar when we omit the variable *Product market fluidity*, for which data is not available for some firms, from the regression model.

it is obvious that the firm's founder has knowledge as CEO. Third, older firms, those with fewer segments, and those with high-tenure CEOs are significantly more likely to state the reason "Leadership structure has served well", while past stock performance (*Prior year BHR*) does not matter. In untabulated regressions, we similarly fail to find a relation between accounting performance and this reason. This evidence suggests that the reason "Leadership structure has served well" may reflect the presence of agency problems.

Turning to the results for non-duality firms, shown in Panel B, we find that CEO and governance characteristics have only little explanatory power for each of the main reasons firms state for CEO-chairman separation. This finding is not surprising given that firms separating the CEO and chairman roles already do what academics and other commentators on corporate governance tend to consider as best practice. Nevertheless, firms with more independent boards are more likely to name the reason "Facilitates monitoring". Furthermore, firms whose CEOs are older, and thus arguably more experienced, are less likely to name the reason "Chair's experience with company".

In terms of firm characteristics, we find that firms operating in a more competitive and dynamic environment, as indicated by a higher product market fluidity and stock volatility, are less likely to name the reason "Facilitates monitoring", consistent with the CEOs of such firms needing relatively more advice than monitoring. We also find that the more complex firms are, as indicated by their number of business segments, the less likely they are to state the reasons "Differences between tasks/roles" and "CEO focus on management". This result supports the view that in complex firms CEOs also need decision making power to make fast and efficient decisions. Finally, while older firms are more likely to state the reason "Chair's experience with company", tech firms and those with a higher stock volatility are less likely to do so. This evidence is

consistent with the greater value of experience in older and more stable firms compared to evolving and more volatile firms.

2.3. How do firms state the reasons for their board leadership structure?

Not only may the reasons firms state be informative, but so may be the number of reasons firms state and how they state them. Therefore, we analyze the textual characteristics of the sections in firms' proxy statements, which report the reasons for combining or separating the CEO and chairman roles. This textual analysis allows us to test the hypothesis that firms following the contentious practice of CEO duality provide investors with more information about their board leadership structure and present that information in a more positive way.

To test this hypothesis, we compute i) the number of distinct reasons a firm states; ii) the length of the section, measured by the number of words (*Words*); and iii) the ratio of the number of words relative to the number of distinct reasons stated (*Words per reason*). We also compute measures for positive and negative text sentiment using Bill McDonald's lists of positive and negative words.¹¹ The variables *Positive tone* and *Negative tone* measure the tone of a section, calculated as the number of positive and the number of negative words relative to the total number of words, respectively. Following Loughran and McDonald (2011), we treat a positive word only as positive if the three words preceding the word do not contain a form of simple negation (i.e., "no", "not", "none", "neither", "never", "nobody"). Given our hypothesis, we expect firms with CEO duality to provide more reasons for and have longer sections on their chosen board leadership

¹¹ The lists of positive and negative words are available from Bill McDonald's website: <https://sraf.nd.edu/textual-analysis/>.

structure. We also expect a more positive tone.

Panel A of Table 4 presents summary statistics for the textual characteristics of the sections for both firms with and without CEO duality. On average, the sections of firms with duality contain more distinct reasons (2.1 vs. 1.7) and more words (263 vs. 223). Yet, the variable *Words per reason* is not significantly different between firms with and those without duality, indicating that the former do not elaborate more on the reasons they state. Firms with CEO duality also have a more positive tone as well as a more negative tone, which indicates that these firms use a more extreme language.

In Panel B of Table 4, we conduct multivariate regressions to test whether the above differences remain significant when we control for other variables. We use a Poisson regression to explain the dependent variable *# Reasons* and OLS regressions for the dependent variables *ln(Words)*, *Positive tone* and *Negative tone*. The independent variables include the indicator variable *CEO duality*, which equals one for firms that combine the CEO and chairman roles (and zero otherwise), and several controls for CEO, firm, and governance characteristics. The regression results suggest that the differences between firms with and without duality shown in Panel A, except for the variable *Negative tone*, remain statistically significant in a multivariate setting. That is, firms with CEO duality state significantly more distinct reasons for their choice of board leadership structure (see column (1)), their sections contain more words (column (2)), and the tone of their sections is significantly more positive (column (3)). Overall, these results suggest that firms with CEO duality react to the controversy about this practice by providing more as well as more positive information about why they combine the CEO and chairman roles.

With regard to the control variables, we find that older and larger firms as well as those with

a higher E-index and a lower board independence ratio use more words. The same is true for firms that are run by their founder, which also provide more distinct reasons. This evidence suggests that firms with a greater potential for agency problems provide more information about their choice of board leadership structure, consistent with the result for CEO duality.

Next, we conduct a textual analysis across two years to provide some insights on whether firms' stated reasons tend to be a boilerplate or rather CEO-firm specific, and thus informative. To this end, we examine the textual similarity between the section on board leadership structure from the 2010 proxy season and the equivalent section from the 2011 proxy statement for the *same* firm. If firms state CEO-firm specific reasons for their board leadership structure, we expect them to change their sections when new CEO takes office, accounting for the endogenous choice of combining the CEO and chairman roles via the variable *CEO duality*. This variable also tests whether firms with CEO duality are more or possibly less likely to change their sections in general. We are able to obtain the 2011 section on board leadership structure for a total of 439 firms, i.e., 276 of the 282 duality firms and 162 of the 165 non-duality firms. For 44 firms, a new CEO takes office in 2011, which corresponds to a turnover rate of 10% (comparable to Jenter and Kanaan, 2015). Further, 21 of the 44 firms with a new CEO also change their leadership structure. The indicator variable *New CEO₂₀₁₁* equals one if a firm has a new CEO in 2011. We compute the dependent variable, *Text similarity*, which measures the similarity between the 2010 and 2011 proxy statement sections using the Ratcliff and Obershelp algorithm for pattern recognition and textual similarity (see Ratcliff and Metzener, 1988). The algorithm generates similarity scores

between zero and one, with larger values indicating greater similarity of two text strings.¹²

Table 5 presents the results from regressing *Text similarity* on the indicator variables *New CEO₂₀₁₁* and *CEO duality* along with the controls for CEO, firm, and governance characteristics. Column (1) shows the results for the full sample, while column (2) shows the results for the restricted sample, which excludes all firms that change their board leadership structure (either from CEO duality to non-duality or vice versa) between 2010 and 2011. The results, which are similar for both columns (1) and (2), give rise to two conclusions. First, firms with duality neither change their sections significantly more nor less than firms without duality. Second, and most importantly, firms adjust their sections significantly more if there is a CEO change, as indicated by the significantly negative coefficient on *New CEO₂₀₁₁* dummy. This result suggests that the reasons firms report for their board leadership structure are unlikely to be simply a boilerplate but rather tend to be CEO-firm specific and hence likely to be informative for investors.¹³

3. Investors' reactions to the disclosed reasons

In what follows, we study the stock market reaction to the firms' first-time disclosures of the reasons for their board leadership structure. This approach builds on an established literature that provides robust evidence that the stock market reacts to disclosures of specific governance-related information in firms' proxy statements (e.g., DeAngelo and Rice, 1983; Brickley, Bhagat, and Lease, 1985; Yermack, 2006; Yermack and Wei, 2011). We adopt this approach to examine

¹² The similarity of two text strings is computed as the number of matching characters divided by the total number of characters in the two strings. Matching characters are those in the longest common subsequence plus, recursively, matching characters in the unmatched region on either side of the longest common subsequence. The algorithm is available as the "ratio()" function of the Python class "SequenceMatcher" of the Python Standard Library Module "difflib". For our sample, mean textual similarity equals 75% (74%) for firms with (without) CEO duality.

¹³ Furthermore, Appendix B shows that, except for the reasons "Differences between tasks/roles" and "CEO focus on management", we do not find any frequently occurring combinations of reasons for CEO duality and reasons for separating the CEO and chairman roles.

whether investors consider the disclosed reasons to be informative and, if they do so, how they assess them. Importantly, we account for a large set of confounding governance-related disclosures, such as director nominations and qualifications as well as executive compensation and voting issues. Furthermore, firms issue 10-K filings before the DEF-14 filings from which we draw information, which mitigates concerns about confounding disclosures of financial information.

Theory proposes several reasons why there may be no abnormal stock returns from the disclosure of firms' reasons. First, the disclosed reasons may not contain any value-relevant information and hence are not informative.¹⁴ Second, investors may anticipate the reasons firms state. Third, an omitted variable may bias our results towards zero. Fourth, combining or separating the CEO and chairman roles may not affect shareholder value. Finally, duality has an effect on shareholder value, but the value implications may be heterogeneous, i.e., they depend on the characteristics of the firm, and the positive and negative value consequences across different firms cancel out for the average firm. This last reason is in line with extant theory according to which CEO duality has both costs (according to agency theory; e.g., Jensen and Meckling, 1976; Jensen, 1993) and benefits (according to organization theory; e.g., Pfeffer, 1972; Donaldson, 1990). Hence, we expect investors to assess the reasons firms state for combining or separating the CEO and chairman roles while considering the firm's characteristics, which determine the cost-benefit relation of duality. Consequently, in this section we analyze the average stock market reaction to the disclosure of firms' reasons and how this stock market reaction varies with firm characteristics.

To determine the stock market reaction, we apply standard event study methodology. We calculate the two-day cumulative abnormal returns (denoted $CAR[0,1]$) for the filing day of the

¹⁴ We note that even if firms do not report truthfully, we can still expect to observe a stock market reaction.

proxy statement, i.e., the event date or day zero, and the following trading day. We use two-day cumulative abnormal returns because some proxy filings are published after regular trading hours. Expected and abnormal stock returns are calculated using the Fama and French (1993) three-factor model with a [-241,-21] estimation window.¹⁵ We winsorize abnormal returns at the 1st and 99th percentiles.

We identify 109 sample firms that filed a preliminary proxy statement (PRE DEF-14) prior to the filing of their final proxy statement. In 106 out of these 109 cases, the preliminary proxy statement contains a section on board leadership structure, which is identical to that in the final proxy statement. For the remaining three cases, the preliminary proxy statement does not contain such a section. Consequently, we set the event date equal to the filing date of the preliminary proxy statement for these 106 companies. Figure 2 reports the frequency of the event dates across the months (ranging from March 2010 to February 2011) for our 447 sample firms. Similar to Wei and Yermack (2011), most sample firms (79%) file their proxy statement within the first two months.

To analyze the cross-section of abnormal stock returns, we use a regression model based on equation (1), which we estimate separately for firms with and without CEO duality:

$$\begin{aligned}
 CAR[0,1] = & \alpha + \sum_{i=1}^4 \beta_i * Top\ 4\ reason_i + \beta_5 * Other\ reasons & (1) \\
 & + \sum_{i=6}^{10} \beta_i * Firm\ control_i + \sum_{i=11}^{19} \beta_i * Proxy\ statement\ control_i + \varepsilon
 \end{aligned}$$

For both types of firms, we create an indicator variable for each of the top 4 reasons, which

¹⁵ We obtain similar results when we use the Carhart (1997) model.

equals one if the firm states the reason in its section on board leadership structure, and zero otherwise. We also include an indicator variable *Other reasons* that takes the value of one if the firm states at least one non-top 4 reason, and zero otherwise. In line with Wei and Yermack (2011), we use two sets of control variables: firm controls and proxy statement controls.

Regarding the former, we control for firm size, using the natural logarithm of the firm's market capitalization ($\ln(\text{Market cap})$);¹⁶ the size of a firm's section on board leadership structure, using the natural logarithm of the section's total number of words ($\ln(\text{Words})$); and two industry indicator variables, i.e., *Regulated industry* (set to one for firms operating in the utilities or financial industry (SIC codes 40-49 or 60-69), zero otherwise) and *Tech firm* (set to one for firms operating in high-tech industries according to Loughran and Ritter (2004), zero otherwise).

In terms of the proxy statement controls, we use the following sixteen variables to control for the simultaneous disclosure of other governance-related information that might contaminate our results: an indicator variable for firms nominating new independent directors to be elected to the board; an indicator variable for firms nominating new non-independent outside directors who likely have a material interest in the firm; four indicator variables for shareholder proposals regarding (1) the disclosure of political activity expenditures, (2) the declassification of the board, (3) the introduction or change of rules permitting shareholders to call special meetings, and (4) the introduction of say-on-pay voting; six indicator variables for management proposals regarding (1) advisory votes for say-on-pay voting, (2) declassification of the board, (3) elimination of cumulative voting, (4) introduction of majority voting in director elections, (5) repeal of super-majority voting requirements, and (6) shareholders' permission to call special shareholder

¹⁶ We find comparable results when we use the natural logarithm of total assets as a measure of firm size.

meetings); an indicator variable for shareholder resolutions on executive compensation; an indicator for other corporate governance issues; an indicator variable for social or environmental issues; and an indicator for any other shareholder proposal.¹⁷

Additionally, we estimate the following two alternative specifications of equation (1). First, we use as the dependent variable $CAR[0,2]$, i.e., we prolong the event window by another trading day, as some information may be incorporated in the stock market with some delay. Yet, prolonging the event window potentially comes at the cost of adding noise, which is why we use $CAR[0,1]$ as our main dependent variable. Second, we estimate equation (1) only for firms that disclose early in the proxy seasons, i.e., in March and April 2010, to address the concern that only for these firms stock prices may react to the first-time disclosure of the reasons for combining (separating) the CEO and chairman roles assuming investors learn to anticipate new firm disclosures over time.

We do not tabulate the results for the regressions based on equation (1) for non-duality firms because the market reaction to the reasons for separating the CEO and chairman roles is largely insignificant. The insignificant results are in line with our expectations, suggesting that the disclosed reasons are less informativeness and/or that investors have less need to obtain information about the less contentious practice of separating the CEO and chairman roles.

Table 6 presents the results for the regressions based on equation (1) for duality firms. We find that the average stock market reaction to the disclosure of the reason “Leadership structure has served well” is associated with significantly lower abnormal stock returns as indicated by the

¹⁷ Again, given the inclusion of these various proxy statement controls, our results are unlikely to be driven by confounding events. Furthermore, in order to explain our results, any confounding information would have to cause a cross-sectional pattern similar to the one we identify in what follows. Nevertheless, we cannot fully rule out that an unobserved contaminating factor might drive some of our results.

negative coefficient on the respective indicator variable, which is significant at the 5% level (10% level) or better when used to explain the dependent variable $CAR[0,1]$ ($CAR[0,2]$). In an untabulated test of the sample mean differences, we find that the average stock market reaction to disclosing the reason “Leadership structure has served well” is significantly negative. This negative reaction is consistent with investors punishing firms for a lack of future orientation or with investors disagreeing that the structure has served the firm well. The former interpretation is consistent with Brochet et al. (2020) who show that some CEOs, even those who served their company well in the past, stay in office too long at the detriment of shareholders. In line with this interpretation, we find in Panel B of Table 6 that the reason “Leadership structure has served well” is associated with significantly lower 36-month buy-and-hold abnormal returns and a lower return on equity (ROE) in fiscal year $t+3$.¹⁸

The stock market reaction to the top 3 reasons, i.e., “Unified leadership”, “Knowledge as CEO”, and “Bridge between management and board”, is statistically indistinguishable from zero as indicated by the insignificant coefficients on the respective indicator variables. As mentioned above, one potential reason why the variables are insignificant is that – according to agency theory and organization theory – the stock market reaction to the disclosure of these reasons can be expected to depend on the firm’s circumstances, which determine the cost-benefit relation of CEO duality. Specifically, unified leadership by CEOs who also hold the chairman position can mitigate coordination and information costs and facilitate effective decision making and adaptability (Boyd, 1995; Jensen and Meckling, 1995; Yang and Zhao, 2014; Li, Lu, and Phillips, 2019), which is

¹⁸ The results shown in Panel B of Table 6 are based on regressions using standard errors that are clustered at the Fama-French 12) industry level as mid-term stock and accounting performance may be clustered at the industry level. In untabulated regressions, we find the results shown in Panel A of Table 6 to remain qualitatively similar when we cluster standard errors at the industry level or when we use (Fama-French 12) industry fixed effects.

crucial for firms operating in competitive and dynamic environments. Yet, such unified leadership by powerful dual-role CEOs also increases agency problems, which are particularly pronounced for larger and more complex firms that are more difficult to monitor and have more resources to waste (Jensen and Meckling, 1976; Fama and Jensen, 1983; Jensen, 1993). Hence, we examine whether and how stock returns to the disclosure of the reason “Unified Leadership” and the two other top 3 reasons vary with firms’ complexity and size as well as with the competitiveness and dynamism of their business environments.

To do so, we re-estimate equation (1) by including the interactions of each indicator variable for a top 3 reason with seven different variables. In case of the reason “Unified leadership”, we denote the interaction term *Unified leadership * Interaction measure*, and similarly so for the two other indicators for top 3 reasons. All interaction measures are continuous firm-specific variables, which vary across the table’s columns. The first three variables (in columns 1-3) capture differences in firm complexity and size: (1) *Market cap* (i.e., the natural logarithm of the firm’s market capitalization), (2) *Business segments* (i.e., the natural logarithm of the firm’s number business segments), and (3) *Firm age* (i.e., the natural logarithm of firm age since IPO). Another four variables capture the competitiveness and the dynamism of firms’ business environments: (4) *Tech firm* (i.e., an indicator that equals one for firms operating in high-tech industries according to the definition of Loughran and Ritter (2004), zero otherwise), (5) *Stock volatility* (i.e., the volatility of a firm’s stock returns), (6) *Fluidity* (i.e., product market fluidity measuring the firm’s degree of competitive threat and product market change (Hoberg, Phillips, and Prabhala, 2014)), and (7) *R&D/sales* (i.e., the firm’s research and development expenditures over its sales).

The regression results are presented in Table 7. As can be seen from Panel A, as expected stock returns to the disclosure of the reason “Unified leadership” depend on firm characteristics.

The stock market reaction is significantly lower for large and complex firms (with more business segments), which have more resources to waste and are more difficult to monitor. For such firms, the costs of having a unified leadership structure – with a dual CEO-chairman who has considerable discretion and power over the board – are likely to outweigh the benefits. In contrast, the market reaction is significantly higher for smaller and less complex firms and for firms operating in more competitive and dynamic business environments, i.e., those with high stock volatility, product market fluidity, and R&D spend as well as tech firms. For these firms, the benefits of having a unified leadership structure with a dual CEO-chairman – such as effective and fast decision making or speaking with one voice when communicating with external parties – are likely to outweigh the costs.¹⁹

The above results suggest that investors deem a “one-size-fits-all” approach to CEO duality to be inappropriate, thereby supporting both agency theory and organization theory. They are consistent with existing empirical evidence suggesting that the costs and benefits of CEO duality depend on firm characteristics. Specifically, Palmon and Wald (2002) find that separating the CEO and chairman roles is associated with a negative (positive) stock market reaction for small (large) firms. In turn, Yang and Zhao (2014) and Li, Lu, and Phillips (2019) provide evidence that CEO duality is associated with higher firm value for firms operating in more competitive business environments. While the aforementioned studies examine CEO duality in general, our results indicate that the benefits of CEO duality for small firms and those subject to high competition

¹⁹ When we interact the variable *Unified leadership* with indicator variables, which equal one if the seven interaction variables (each) are above the sample median, we find comparable results (for firm size and business segments as well as for tech firms and firms with high stock volatility) despite the reduction in the variables’ variation. Furthermore, when we use $CAR[0,2]$ as the dependent variable, the results are weaker while still revealing a similar picture, with positive (negative) stock returns for younger (older) firms, firms with fewer segments, tech firms, and firms with high R&D spend. Finally, when we consider long-term performance (i.e., ROE_{t+3} as in Panel B of Table 6), we find that unified leadership is associated with significantly higher (lower) performance for smaller and younger (larger and older) firms.

appear to reflect the benefits of unified leadership.

The results for the other two main reasons for CEO duality, i.e., “Knowledge as CEO”²⁰ and “Bridge between management and board”, are shown in Panel B and Panel C of Table 7, respectively. The market does not react to the reason “Knowledge as CEO” even after taking into account firm characteristics, possibly because CEO qualifications and tenure are already known, making this reason a less informative one. In contrast, we find some evidence that investors evaluate the reason “Bridge between management and board”, with the market reaction being lower for older as well as more volatile firms that cite this reason. Both types of firms apparently state a non-optimal reason: while older firms are more likely to need stricter monitoring and thus CEO-chairman separation, volatile firms typically need unified leadership that fosters effective and fast decision making (as suggested by the results in Panel A).

In untabulated tests, we examine whether investors’ evaluation of the main reasons for *separating* the CEO and chairman roles depends on firm characteristics but find no such evidence. However, we find some evidence suggesting that investors consider governance characteristics. Specifically, investors evaluate the reason “Facilitates monitoring” as positive for CEOs with longer tenures who are likely to be more entrenched such that monitoring via a separate chairman may indeed be valuable. We also find that the announcement returns to the disclosure of the reason “CEO focus on management” are significantly lower for firms with more independent boards. This result is consistent with the notion that CEOs who focus on managing the firm and do not act as the chairman of the board are value creating as long as the board of directors has an in-depth understanding of the company that allows it to advise and monitor the CEO.

²⁰ Please refer to Table 1 for examples and the definition for this reason.

In sum, the evidence presented in this section suggests the following. First, the top 4 reasons firms state for combining (and separating) the CEO and chairman roles vary with respect to their informativeness. Second, and more importantly, investors evaluate some of the reasons – particularly “Unified leadership”, which is the most frequently stated reason for the contentious practice of duality – according to the firm’s characteristics. Third, while investors do not assess the reasons for *separating* the CEO and chairman roles by taking into account the characteristics of firms, we find some evidence that they nevertheless consider governance aspects. Overall, investors’ evaluations of the reasons firms state for their choice of board leadership structure are consistent with theory, which predicts a trade-off between the costs and benefits of duality. We thus conclude that CEO duality has implications for shareholder value.

4. Conclusion

There has been a long-lasting debate among governance experts and investors about CEO-chairman duality and its performance consequences. With the help of hand-collected data, this paper contributes to this debate by providing novel evidence on the reasons firms state for their board leadership structure, i.e., their choice between CEO duality and non-duality, and how the stock market assesses these reasons. We exploit the 2009 amendments to Regulation S-K, which require the disclosure of the reasons why firms combine or separate the CEO and chairman roles.

We find that the reasons firms state for their choice of board leadership structure as well as the CEO- and firm-level determinants of these reasons are in line with both agency theory and organization theory. Consistent with the controversy surrounding CEO duality, we find that firms with duality provide more reasons for their choice of board leadership structure as well as using more words, including more positive words, to do so. Finally, examining the stock market reaction

to the reasons firms disclose, we provide evidence on the informativeness and value implications of these reasons, particularly for duality firms. Our results suggest that investors assess the stated reasons while taking firms' characteristics into account, which implies that they deem a "one-size-fits-all" approach to CEO duality to be inappropriate.

The results of our study inform governance experts, investors, and regulators. They highlight the difficulty of evaluating the reasons for CEO duality as well as its value implications. Our results also provide new insights into the performance consequences of CEO duality, suggesting that these performance consequences depend on the characteristics of each firm. Finally, our study suggests that the 2009 amendments to SEC Regulation S-K requiring firms to disclose the reasons why they combine or separate the roles of CEO and chairman are in the interest of investors.

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Figure 1a: Reasons stated by S&P 500 companies for combining the CEO and chairman roles

This graph depicts the 10 most frequently disclosed reasons for combining the CEO and chairman roles stated by S&P 500 companies with CEO duality. The reasons are listed in descending order of their frequency of use.

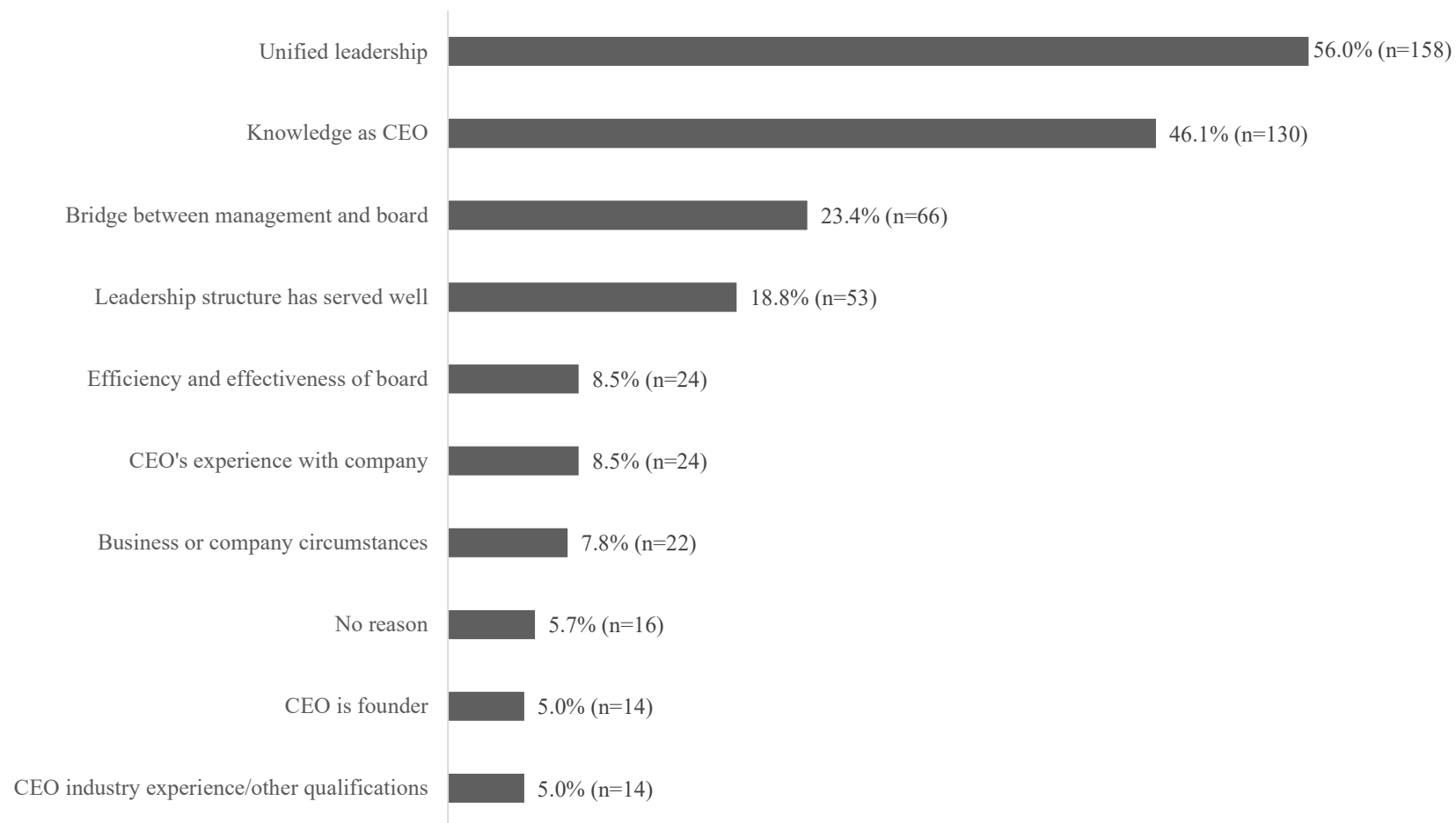


Figure 1b: Reasons stated by S&P 500 companies for separating the CEO and chairman roles

This graph depicts the 10 most frequently disclosed reasons for separating the CEO and chairman roles stated by S&P 500 companies without CEO duality. The reasons are listed in descending order of their frequency of use.

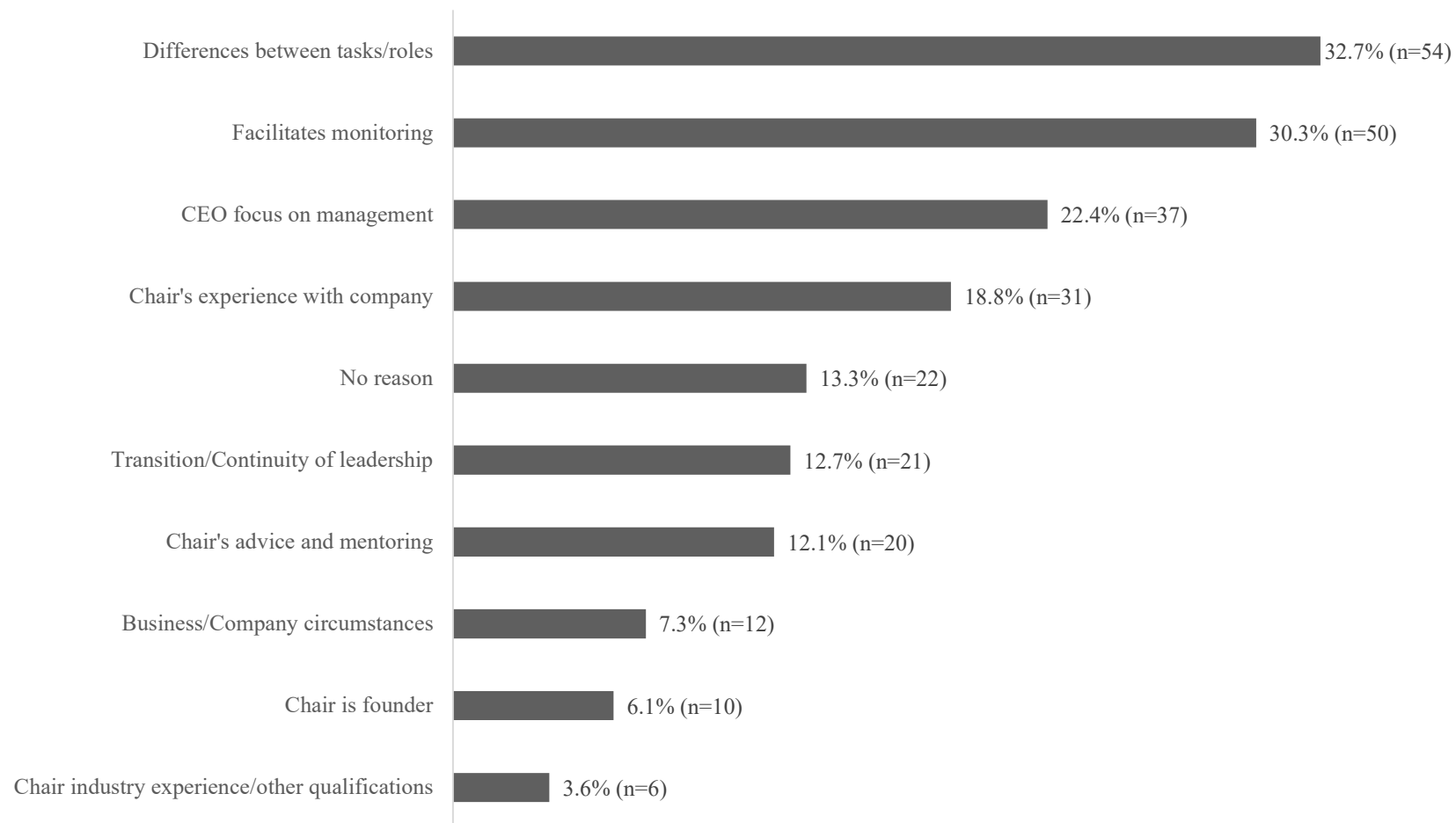


Figure 2: Sample company filings by month

This graph depicts the twelve consecutive months of the sample period during which the first proxy statements were filed with the Securities and Exchange Commission after the new disclosure regulation on board leadership structure became effective on February 28, 2010. The sample period is the first year after the disclosure regulation came into effect, i.e., March 01, 2010, to February 28, 2011. The sample covers 447 S&P 500 companies.

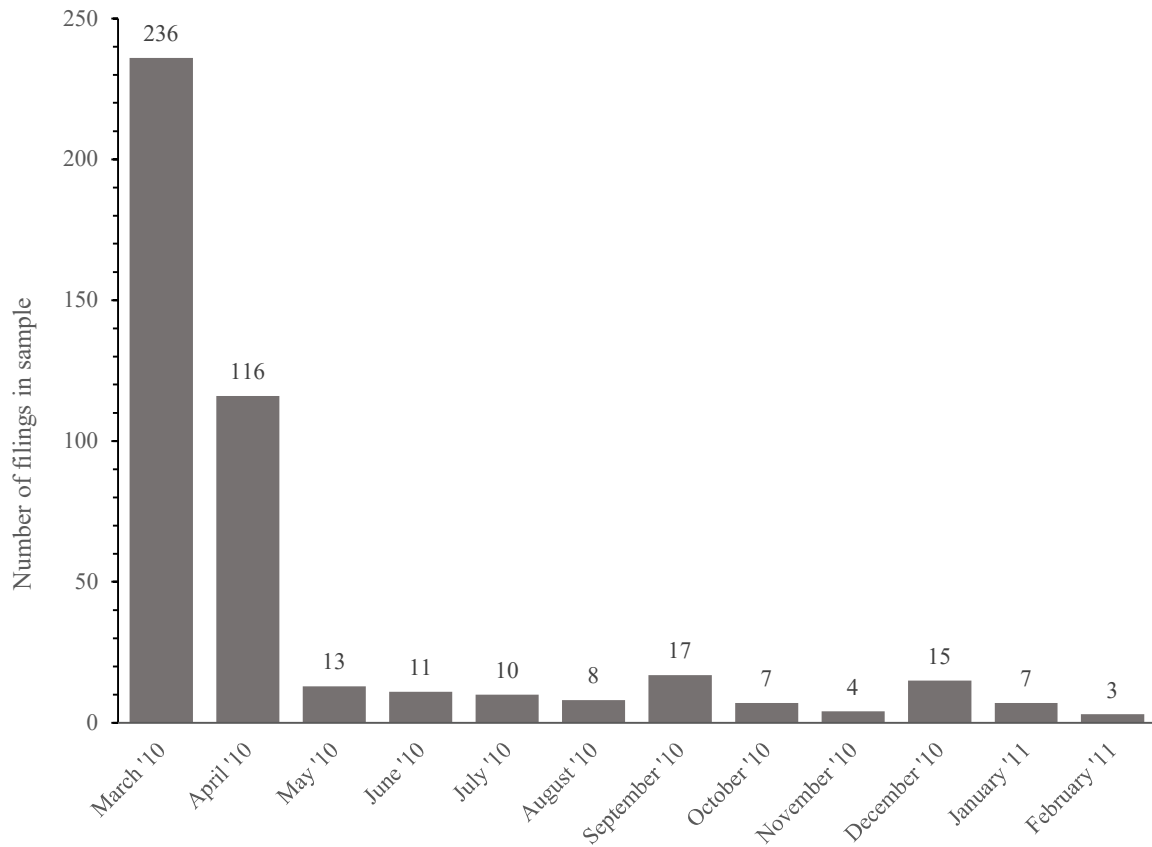


Table 1: Descriptions of the four most frequently stated board leadership structure reasons

CEO duality
<p>Unified leadership The company uses the key word “Unified leadership” or a similar description that emphasizes the full authority and leadership of the CEO provided by the current board leadership structure.</p> <p><u>Examples:</u> The leadership structure...</p> <ul style="list-style-type: none"> - “[...] promotes strong, clear, consistent leadership and directional clarity.” - “[...] fosters decisive leadership, clear accountability, and effective decision-making.” - “[...] ensures that the board acts with a common purpose and speaks with one voice.”
<p>Knowledge as CEO The company states that the CEO is best positioned to serve as the chairman of the board because she possesses significant knowledge and understanding from being responsible for the day-to-day operations as the company’s CEO.</p> <p><u>Examples:</u></p> <ul style="list-style-type: none"> - <i>“The CEO is responsible for the day-to-day operations, she possesses in-depth knowledge and understanding of the company, and is therefore best positioned to set the agenda and to chair board meetings.”</i> - <i>“[...] allowing the senior-most executive who possesses significant business and industry knowledge to set Board meeting agendas and to lead the related discussions.”</i>
<p>Bridge between management and board The company emphasizes that under the current board leadership structure the CEO is able to act as a “bridge between management and board” or “between the board and the other management”.</p> <p><u>Examples:</u></p> <ul style="list-style-type: none"> - <i>“[...] acting as both enables our CEO to be an efficient bridge between the Board and the Company management.”</i> - <i>“[...] promotes a more enhanced information flow between management and the Board.”</i> - <i>“Combining these roles facilitates efficient and effective board deliberation, since our CEO brings a leadership perspective that blends the outlook of both the board and management.”</i>
<p>Leadership structure has served well The company states that the current board leadership structure has served the company well over the past as indicated by the historic performance of the company.</p> <p><u>Examples:</u></p> <ul style="list-style-type: none"> - <i>“The structure has served the Company and its shareholders well in the past, as evidenced by the Company’s success.”</i> - <i>“[...] a structure that has proven effective for the Company in the past.”</i> - <i>“[...] has proven extremely effective for the Company historically in the area of company performance.”</i>

<p>No CEO duality</p> <p>Differences between tasks/roles The company chose to separate the roles of the CEO and the chairman of the board in recognition of the differences between the tasks and roles associated with the two roles.</p> <p><u>Examples:</u></p> <ul style="list-style-type: none"> - <i>“We separate the roles of CEO and Chairman of the Board in recognition of the differences between the two roles.”</i> - <i>“[...] the structure creates a better balance in leadership and accountability, as the functions of the CEO and the Board Chairman are significantly different.”</i> - <i>“[...] because it separates the leadership of the Board from the duties of day-to-day leadership of the Company.”</i>
<p>Facilitates monitoring The company states to separate the roles of CEO and chairman of the board because it facilitates the independent monitoring and oversight of the CEO and the management.</p> <p><u>Examples:</u></p> <ul style="list-style-type: none"> - <i>“Splitting the roles allows the chairman to ensure that the Board is focused on its oversight responsibilities, including independent oversight of management.”</i> - <i>“[...] the leadership structure was and continues to be appropriate and beneficial, as this delineation creates increased oversight.”</i>
<p>CEO focus on management The company emphasizes that the current board leadership structure allows the CEO to attribute her full focus and attention on managing the company’s day-to-day operations.</p> <p><u>Examples:</u></p> <ul style="list-style-type: none"> - <i>“[...] separating the roles allows our CEO to focus on our day-to-day business, while allowing the chairman of the board to lead the board in its fundamental role of providing advice to and independent oversight of management.”</i> - <i>“In particular, it permits our CEO to focus his full time and attention of the business [...]”</i>
<p>Chair’s experience with company The company states that it has separated the roles to be able to leverage the chairman’s in-depth knowledge and experience with the company.</p> <p><u>Examples:</u></p> <ul style="list-style-type: none"> - <i>“[...] the leadership structure allows to draw upon the skills and 37 years of Company experience of a Chairman who continues to provide strategic oversight and broad direction [...]”</i> - <i>“The Board determined that the Chairman’s knowledge and past experience would serve our Company well, and his insights have been and continue to be invaluable to the Board.”</i>

Table 2: Summary statistics for S&P 500 companies with and without CEO duality

This table presents summary statistics on CEO, chairman, firm, and governance characteristics for the 282 firms with CEO duality and the 165 firms without duality, which were members of the S&P 500 index at the end of calendar year 2009. Company financial data for the end of fiscal year 2009 is obtained from Capital IQ. All dollar values are in millions. CEO, chairman, and governance characteristics are from the firms' proxy filings. *Board size* is the number of directors on the firm's board of directors. *Business segments* is the firm's number of business segments. *CAR_[0,1]* is the two-day cumulative abnormal return based on the Fama-French three-factor model using a 220-day estimation window from 21 days to 241 days before the filing date. *CEO age* is the age of the company's CEO in years. *CEO founder* is an indicator variable that takes the value of one if the CEO is the founder of the company, and zero otherwise. *CEO tenure* is the number of years the CEO has been serving as the company's CEO. *Chair former company CEO* is an indicator variable that takes the value of one if the chairman has previously served as the CEO of the company, and zero otherwise. *E-Index* is the entrenchment index based on six anti-takeover protection devices as proposed by Bebchuk, Cohen, and Ferrell (2009). *Firm age* is the number of years since the firm's first inclusion date in CRSP. *Founder chair* is an indicator variable set to one if the chairman of the board is the founder of the company, and zero otherwise. *Independent chair* is an indicator variable set to one if the chairman of the board is an independent director, and zero otherwise. *Independence ratio* is the number of independent directors divided by the total number of directors. *Market capitalization* is the number of common shares outstanding times the stock price at the end of the previous fiscal year. *Prior year BHR* is calculated as the buy-and-hold return over the 250 trading days preceding the filing date of the firm's proxy statement. *Product market fluidity* measures the degree of competitive threat and product market change surrounding a firm as per Hoberg, Phillips, and Prabhala (2014). *R&D/sales* is the firm's ratio of its research and development (R&D) expenses to its sales. *Regulated industry* is an indicator variable that takes the value of one if the company operates in the utilities or financial industry (SIC codes: 4000 – 4999, 6000 – 6999), and zero otherwise. *Stock volatility* is the standard deviation of a firm's stock returns calculated over the past 250 trading days prior to the event date (i.e., the DEF-14 or Pre DEF-14 filing date). *Tech firm* is an indicator variable set to one if the firm operates in a high-tech industry following Loughran and Ritter's (2004) definition. *Tobin's Q* is the ratio of the sum of total assets plus market capitalization minus the book value of equity divided by the book value of total assets. *Total assets* is the firm's book value of total assets. Unless we use the natural logarithm of accounting or stock market variables, all accounting or stock market variables are winsorized at the 1st and 99th percentiles. The last column presents the results from two-tailed difference-in-means tests allowing for unequal variances between the two subsamples. ***, **, * denotes significance at the 1%, 5%, and 10% level, respectively.

	CEO duality (N=282)					No CEO duality (N=165)					Difference-in- means tests
	Mean	P25	P50	P75	Std. dev.	Mean	P25	P50	P75	Std. dev.	Difference (t-stat)
<i>CEO characteristics</i>											
CEO age	56.88		56.50		6.21	53.27		53.00		6.44	3.61*** (5.79)
CEO founder	0.08				0.27	0.02				0.15	0.06*** (2.83)
CEO tenure	7.12		6.00		6.30	3.32		2.00		4.08	3.80*** (7.74)
<i>Chair characteristics</i>											
Chair former company CEO						0.47				0.50	
Founder chair						0.19				0.39	
Independent chair						0.50				0.50	
<i>Firm characteristics</i>											
Business segments	7.81	3	6.5	12	6.84	7.39	3	6	12	6.18	0.42 (0.67)
CAR[0,1]	0.0008	-0.0097	0.0007	0.01	0.0174	-0.0009	-0.0135	-0.0009	0.01	0.0208	0.0018 (0.92)
Firm age	37.29	15	37	52	24.86	28.78	14	24	39	19.19	8.51*** (4.04)
Market capitalization	23,968	5,582	9,858	24,613	38,986	15,531	4,685	7,776	14,160	26,605	8,437*** (2.71)
Prior year BHR	0.24	-0.16	0.07	0.35	0.72	0.30	-0.14	0.07	0.48	0.76	-0.07 (-0.90)
Product market fluidity (435 obs)	9.02	5.00	6.89	12.43	5.78	8.99	5.42	7.67	10.72	5.36	0.03 (0.05)
R&D/sales	0.025	0	0	0.025	0.05	0.038	0	0	0.035	0.07	-0.013** (-2.04)
Regulated industry	0.32				0.47	0.31				0.46	0.01 (0.30)
Stock volatility	0.023	0.016	0.021	0.029	0.01	0.026	0.017	0.022	0.030	0.01	0.006 (1.64)
Tech firm	0.11				0.32	0.22				0.41	-0.10*** (-2.80)
Tobin's Q	1.71	1.14	1.47	2.03	0.82	1.80	1.15	1.48	2.09	0.94	-0.09 (-1.10)
Total assets	52,161	6,002	13,612	36,004	165,958	41,859	4,684	9,156	22,128	170,866	10,302 (0.62)
<i>Governance characteristics</i>											
Board size	10.83	9	11	12	2.15	10.77	9	11	12	2.75	0.06 (0.26)
E-index	3.15	2	3	4	1.36	2.99	2	3	4	1.39	0.16 (1.17)
Independence ratio	0.86	0.82	0.89	0.91	0.07	0.81	0.75	0.82	0.90	0.10	0.05*** (5.88)

Table 3: Determinants of firms' reasons for combining and separating the CEO and chairman roles

This table presents results from Probit regressions of indicator variables for the four most frequently stated reasons for combining (Panel A) or separating (Panel B) the CEO and chairman roles on sets of CEO, firm, and governance characteristics. All independent variables are defined in the caption to Table 2. An intercept is included in all the regressions, but not reported. Robust t-statistics are reported in parentheses below the regression coefficient. ***, **, * denotes significance at the 1%, 5%, and 10% level, respectively.

Panel A: CEO duality

	<i>Unified Leadership</i>	<i>Knowledge as CEO</i>	<i>Bridge between management and board</i>	<i>Leadership structure has served well</i>
	(1)	(2)	(3)	(4)
<i>CEO and governance characteristics</i>				
CEO age	-0.0072 (-0.510)	-0.0229 (-1.634)	-0.0017 (-0.107)	0.0010 (0.057)
CEO founder	0.7827** (2.345)	-0.6323* (-1.876)	-0.2911 (-0.796)	-0.5175 (-1.157)
CEO tenure	0.0048 (0.287)	0.0150 (0.985)	0.0106 (0.655)	0.0403** (2.333)
E-index	0.1038* (1.660)	0.0106 (0.169)	0.0284 (0.461)	0.1049 (1.502)
Independence ratio	-1.6407 (-1.333)	-0.0853 (-0.074)	1.3614 (1.037)	-1.0194 (-0.822)
ln(Board size)	0.3235 (0.684)	0.3928 (0.855)	0.1103 (0.204)	0.2601 (0.473)
<i>Firm characteristics</i>				
ln(Business segments)	-0.0567 (-0.761)	0.1172 (1.547)	0.0958 (1.080)	-0.1847** (-2.212)
ln(Firm age)	-0.0320 (-0.298)	-0.0886 (-0.826)	-0.0961 (-0.866)	0.2757** (2.090)
ln(Market cap)	0.0774 (0.913)	0.0391 (0.456)	-0.1162 (-1.201)	0.0253 (0.248)
Prior year BHR	0.0618 (0.394)	0.0581 (0.399)	-0.0044 (-0.025)	0.0220 (0.137)
Product market fluidity	0.0056 (0.330)	0.0323* (1.872)	0.0087 (0.467)	-0.0360* (-1.784)
R&D/sales	3.5341* (1.878)	0.1248 (0.066)	0.3279 (0.166)	0.0386 (0.020)
Regulated industry	0.0561 (0.255)	-0.3807* (-1.706)	0.1661 (0.718)	0.2093 (0.841)
Stock volatility	-0.9021 (-0.083)	-0.0379 (-0.004)	1.8998 (0.161)	4.4150 (0.361)
Tech firm	-0.2702 (-0.962)	0.4405 (1.514)	0.0264 (0.092)	0.1372 (0.419)
Observations	274	274	274	274
Pseudo R-squared	0.050	0.049	0.027	0.076

Panel B: No CEO duality

	<i>Differences between tasks/roles</i> (1)	<i>Facilitates monitoring</i> (2)	<i>CEO focus on management</i> (3)	<i>Chair's experience with company</i> (4)
<i>CEO and governance characteristics</i>				
CEO age	-0.0038 (-0.209)	-0.0070 (-0.387)	-0.0079 (-0.411)	-0.0403* (-1.783)
CEO founder	0.2324 (0.264)	0.6360 (0.665)	-	0.3305 (0.362)
CEO tenure	0.0110 (0.314)	0.0431 (1.257)	-0.0176 (-0.460)	0.0364 (0.812)
E-index	0.1344 (1.493)	0.0511 (0.547)	0.0428 (0.466)	0.1451 (1.552)
Independence ratio	-1.7993 (-1.640)	3.5592*** (2.717)	0.7425 (0.552)	-0.4877 (-0.382)
ln(Board size)	-0.7958 (-1.467)	-0.4608 (-0.818)	-0.2543 (-0.430)	0.5461 (0.754)
<i>Firm characteristics</i>				
ln(Business segments)	-0.2936*** (-2.630)	-0.0140 (-0.114)	-0.2771** (-2.429)	-0.1685 (-1.394)
ln(Firm age)	0.0156 (0.123)	0.0122 (0.082)	-0.1075 (-0.745)	0.4588*** (2.665)
ln(Market cap)	0.2316* (1.738)	-0.1242 (-0.777)	0.2359 (1.599)	0.0144 (0.085)
Prior year BHR	0.1570 (0.983)	-0.1608 (-0.846)	-0.0029 (-0.014)	0.3584 (1.545)
Product market fluidity	-0.0023 (-0.089)	-0.0848*** (-2.615)	-0.0224 (-0.802)	-0.0177 (-0.583)
RD/sales	2.3636 (1.255)	3.7454* (1.885)	2.1119 (1.099)	3.4391 (1.310)
Regulated industry	0.1390 (0.434)	1.1719*** (3.477)	-0.2002 (-0.531)	-0.2635 (-0.672)
Stock volatility	-4.0897 (-0.320)	-26.1831* (-1.777)	-4.6808 (-0.306)	-34.5242* (-1.795)
Tech firm	0.3338 (1.020)	0.0696 (0.196)	-0.0034 (-0.010)	-0.9380** (-1.981)
Observations	161	161	158	161
Pseudo R-squared	0.095	0.174	0.085	0.169

Table 4: Number and textual characteristics of firms' stated reasons for combining or separating the CEO and chairman roles

Panel A shows summary statistics for the number of distinct reasons for the chosen board leadership structure (*# Reasons*) and the textual characteristics of the reasons as reported in the proxy statement by the 282 sample firms with CEO duality and the 165 sample firms without duality. *Positive tone* and *Negative tone* are the number of positive and negative words, respectively, divided by the total number of words in the respective section on board leadership structure. A positive word is only considered as positive if there is no simple negation (no, not, none, neither, never, nobody) among the three words preceding the positive word. The lists for positive and negative words are obtained from Bill McDonald (<https://sraf.nd.edu/textual-analysis/resources/#LM%20Sentiment%20Word%20Lists>). *Words* is the total number of words in the proxy statement section on board leadership structure. *Words per reason* is the variable *Words* divided by the variable *# reasons*. The last column of Panel A presents two-tailed difference-in-means tests allowing for unequal variances between the two subsamples as well as an additional chi-square test for the count variables *# reasons* and *Words*. Panel B presents the results of regressions of the variables *# reasons*, $\ln(\text{Words})$, *Positive tone* and *Negative tone* on the indicator variable *CEO duality*, which equals one for firms whose CEO is also the chairman of the board of directors, along with controls for CEO, governance, and firm characteristics for the sample of the S&P 500 companies. Column (1) of Panel B shows the results from a Poisson regression with the count variable *# reasons* as the dependent variable. In Column (2) the dependent variable is $\ln(\text{Words})$, which is the natural logarithm of the number of words used in the firm's section on board leadership structure. Columns (3) and (4) use measures of text sentiment, i.e., *Positive tone* and *Negative tone* as the dependent variable. The results shown in Columns (2) to (4) are based on OLS regressions. All control variables are defined in the caption to Table 2. An intercept is included in all the regressions, but not reported. Robust t-statistics are reported in parentheses below the regression coefficient. ***, **, * denotes significance at the 1%, 5%, and 10% level, respectively.

Panel A: Summary statistics of number and textual characteristics of firms' stated reasons

	CEO duality (N=282)		No CEO duality (N=165)		Subsample difference Difference (t-test / chi-square test)
	Mean	P50	Mean	P50	
# Reasons	2.09	2	1.70	2	0.40 (3.42*** / 15.91***)
Negative tone [%]	0.68	0.54	0.55	0.37	0.13 (2.12**)
Positive tone [%]	2.62	2.34	1.91	1.86	0.71 (5.82***)
Words	263.3	238.5	223.3	210.0	39.97 (3.42*** / 273.30)
Words per reason	144.3	120.0	147.5	124.0	-3.23 (-0.36)

Panel B: Multivariate regressions

	<i># Reasons</i> (1)	<i>ln(Words)</i> (2)	<i>Positive tone</i> (3)	<i>Negative tone</i> (4)
CEO duality	0.1477** (2.537)	0.2172*** (3.495)	0.0058*** (4.167)	0.0012 (1.602)
<i>CEO and governance characteristics</i>				
CEO age	-0.0041 (-0.894)	-0.0000 (-0.007)	-0.0000 (-0.184)	0.0000 (0.207)
CEO founder	0.2826*** (2.579)	0.1769* (1.822)	0.0009 (0.291)	0.0001 (0.066)
CEO tenure	0.0070 (1.187)	-0.0107** (-2.093)	0.0001 (0.601)	-0.0000 (-0.340)
E-index	0.0255 (1.301)	0.0434** (2.291)	-0.0001 (-0.105)	0.0001 (0.506)
Independence ratio	-0.1982 (-0.701)	-0.6545** (-2.469)	0.0121* (1.673)	0.0023 (0.687)
ln(Board size)	0.0649 (0.480)	-0.0757 (-0.577)	-0.0049 (-1.407)	0.0010 (0.588)
<i>Firm characteristics</i>				
ln(Business segments)	-0.0485** (-1.995)	-0.0330 (-1.432)	0.0006 (1.073)	0.0001 (0.340)
ln(Firm age)	0.0227 (0.732)	0.0832*** (2.723)	-0.0012 (-1.353)	0.0003 (0.725)
ln(Market cap)	0.0209 (0.711)	0.0496* (1.722)	0.0012* (1.731)	-0.0000 (-0.102)
Prior year BHR	0.0294 (0.738)	0.0066 (0.149)	0.0016 (1.554)	-0.0003 (-0.555)
Product market fluidity	-0.0064 (-1.225)	0.0033 (0.599)	0.0001 (0.950)	-0.0000 (-0.236)
R&D/sales	0.2534 (0.516)	-0.3042 (-0.559)	0.0110 (0.777)	0.0073 (0.817)
Regulated industry	0.0854 (1.286)	-0.0612 (-0.919)	-0.0006 (-0.343)	0.0007 (0.730)
Stock volatility	-3.6311 (-1.181)	1.9253 (0.571)	-0.1611** (-2.017)	0.0374 (0.830)
Tech firm	0.0226 (0.300)	0.0749 (0.821)	-0.0034* (-1.767)	-0.0005 (-0.434)
Observations	435	435	435	435
(Pseudo) R-squared	0.014	0.079	0.112	0.021

Table 5: Textual similarity between firms' 2010 and 2011 sections

This table shows results from OLS regressions of *Text similarity* on *CEO duality*, *New CEO₂₀₁₁*, and controls for CEO, firm, and governance characteristics. *Text similarity* is the similarity of a firm's 2010 proxy statement section on board leadership structure with the same section in the same firm's 2011 proxy statement and is calculated via the Ratcliff and Obershelp algorithm for pattern recognition and matching (see Ratcliff and Metzener, 1988). The algorithm returns scores for the similarity of two text strings between zero and one, where larger values indicate greater textual similarity. The indicator variable *CEO duality* equals one for firms whose CEO is also the chairman of the board of directors. *New CEO₂₀₁₁* is an indicator variable that equals one if the company reports a different CEO in its 2011 proxy statement compared to its 2010 proxy statement, and zero otherwise. *BHAR₂₀₁₀₋₂₀₁₁* is the buy-and-hold abnormal return calculated over the 250 trading days after the company first published the section on board leadership structure in its 2010 proxy statement. Other variables are defined in the caption to Table 2. An intercept is included, but not reported. Specification (2) excludes firms that change their leadership structure, either from CEO duality to non-duality or vice versa, from 2010 to 2011. Robust t-statistics are reported in parentheses below the regression coefficient. ***, **, * denotes significance at the 1%, 5%, and 10% level, respectively.

	<i>Text similarity</i>	
	(1) Full sample	(2) W/o changes in leadership structure
CEO duality	0.0280 (1.233)	0.0167 (0.808)
New CEO₂₀₁₁	-0.2375*** (-5.875)	-0.1237** (-2.440)
<i>CEO and governance characteristics</i>		
CEO age	-0.0013 (-0.738)	-0.0019 (-1.030)
CEO founder	-0.0442 (-0.987)	-0.0236 (-0.523)
CEO tenure	0.0017 (0.928)	0.0020 (1.173)
E-index	0.0068 (0.904)	0.0059 (0.798)
Independence ratio	-0.0959 (-0.891)	-0.1057 (-1.050)
ln(Board size)	0.0211 (0.380)	0.0040 (0.078)
<i>Firm characteristics</i>		
BHAR ₂₀₁₀₋₂₀₁₁	0.0437 (0.890)	0.0491 (1.004)
ln(Business segments)	-0.0075 (-0.802)	-0.0102 (-1.145)
ln(Firm age)	0.0019 (0.123)	0.0119 (0.818)
ln(Market cap)	-0.0138 (-1.309)	-0.0111 (-1.073)
Product market fluidity	-0.0018 (-0.903)	-0.0014 (-0.676)
R&D/sales	0.4320*** (2.924)	0.3789*** (2.837)
Regulated industry	0.0306 (1.240)	0.0325 (1.413)
Stock vola	-2.9584*** (-2.713)	-2.7937** (-2.540)
Tech firm	0.0006 (0.023)	-0.0007 (-0.028)
Observations	427	394
R-squared	0.155	0.082

Table 6: Abnormal stock returns to the disclosure of firms' reasons for combining the CEO and chairman roles and long-term performance

Panel A of this table contains the OLS regression results of the two-day and three-day cumulative abnormal stock returns (i.e., $CAR[0,1]$ and $CAR[0,2]$) on the four most frequently stated reasons for board leadership structure by the 282 firms with CEO duality. The regression results in columns (1) and (3) are based on all the 282 firms with duality. The regression results in columns (2) and (4) are based on the subsample of firms that filed their proxy statement within the first two months after February 28, 2010 (March and April 2010), the date when the new SEC disclosure regulation became effective. *Other reasons* is an indicator variable that equals one if the company stated at least one reason for the board leadership structure choice other than the four most frequently stated reasons. $\ln(\text{Words})$ is the natural logarithm of the total number of words in the proxy statement section on board leadership structure. We include sixteen proxy statement control variables covering various corporate governance matters (including those proposed by Yermack and Wei, 2011), for which investor reactions have previously been documented. The proxy statement controls include: an indicator variable for firms nominating new independent directors to be elected to the board; an indicator variable for firms nominating new non-independent outside directors who likely have a material interest in the firm; four indicator variables for shareholder proposals regarding (1) the disclosure of political activity expenditures, (2) the declassification of the board, (3) the introduction or change of rules permitting shareholders to call special meetings, and (4) the introduction of say-on-pay voting; six indicator variables for management proposals regarding (1) advisory votes for say-on-pay voting, (2) declassification of the board, (3) elimination of cumulative voting, (4) introduction of majority voting in director elections, (5) repeal of super-majority voting requirements, and (6) shareholders' permission to call special shareholder meetings); an indicator variable for shareholder resolutions on executive compensation; an indicator for other corporate governance issues; an indicator variable for social or environmental issues; and an indicator for any other shareholder proposal. Panel B of this table reports OLS regression results for two dependent variables measuring firms' long-term performance, i.e., $36\text{-}m\text{ }BHAR$ (the 36-month buy-and-hold abnormal stock return) and $ROE\ t+3$ (the return on equity in fiscal year $t+3$). All other variables are as defined in the caption to Table 2. An intercept is included in all the regressions, but not reported. Robust t-statistics are reported in parentheses below the regression coefficients. Panel B reports results based on robust t-statistics clustered at the Fama-French 12 industry-level. ***, **, * denotes significance at the 1%, 5%, and 10% level, respectively.

Panel A: Abnormal stock returns

	<i>CAR[0,1]</i>		<i>CAR[0,2]</i>	
	(1)	(2) March and April 2010	(3)	(4) March and April 2010
Unified leadership	0.0023 (1.045)	0.0011 (0.456)	0.0023 (0.835)	0.0013 (0.426)
Knowledge as CEO	-0.0012 (-0.514)	-0.0007 (-0.243)	-0.0025 (-0.852)	-0.0027 (-0.831)
Bridge between management and board	-0.0032 (-1.294)	-0.0055* (-1.969)	-0.0008 (-0.237)	-0.0047 (-1.301)
Leadership structure has served well	-0.0050** (-1.980)	-0.0073*** (-2.612)	-0.0056* (-1.743)	-0.0088** (-2.558)
Other reasons	-0.0003 (-0.148)	-0.0019 (-0.802)	-0.0022 (-0.799)	-0.0038 (-1.301)
ln(Market cap)	-0.0021* (-1.878)	-0.0021* (-1.721)	-0.0015 (-1.166)	-0.0016 (-1.076)
ln(Words)	-0.0007 (-0.365)	-0.0003 (-0.120)	-0.0017 (-0.655)	-0.0014 (-0.468)
Regulated industry	-0.0040 (-1.638)	-0.0044 (-1.641)	-0.0057* (-1.961)	-0.0062* (-1.902)
Tech firm	-0.0018 (-0.463)	0.0062 (1.277)	-0.0027 (-0.537)	0.0093 (1.469)
Proxy statement controls (16)	Yes	Yes	Yes	Yes
Observations	282	230	282	230
R-squared	0.085	0.137	0.067	0.114

Panel B: Long-term performance

	<i>36m-BHAR</i> (1)	<i>ROE t+3</i> (2)
Unified leadership	0.0342 (0.721)	-0.0122 (-0.348)
Knowledge as CEO	-0.0611* (-2.028)	-0.0070 (-0.284)
Bridge between management and board	0.0079 (0.125)	0.0244 (0.710)
Leadership structure has served well	-0.1747*** (-3.107)	-0.0299** (-2.684)
Other reasons	-0.0205 (-0.287)	0.0322* (1.852)
ln(Market cap)	0.0512 (1.641)	0.0228** (2.506)
Regulated industry	0.1116 (1.706)	-0.0512 (-1.641)
Tech firm	-0.1811*** (-4.554)	-0.0665** (-2.342)
Tobin's Q	-0.0079 (-0.166)	0.0716** (2.567)
Observations	270	259
R-squared	0.065	0.144

Table 7: Cross-sectional heterogeneity in the stock market reaction to reasons stated by firms with CEO duality

This table presents the OLS regression results of differences in two-day abnormal returns ($CAR[0,1]$) for the 282 firms with CEO duality between the three most frequently stated reasons, i.e., “Unified Leadership” (Panel A), “*Knowledge as CEO*” (Panel B), and “*Bridge between management and board*” (Panel C). In all three panels, we add an interaction term to the baseline specification shown in column (1) in Panel A of Table 6. In particular, in columns (1) to (3), we add interaction terms of the respective board leadership reason with proxies for firm size and complexity (i.e., *Market cap*, *Business segments*, or *Firm age*). Columns (4) to (7) contain interaction terms of the leadership reason with proxies for dynamic and competitive business environments (*Tech firm*, *Stock volatility*, *Fluidity*, or *R&D/sales*). The number of observations in column (6) is lower due to data availability for the variable *Product market fluidity*. All specifications contain the same sets of controls as shown in Panel A of Table 6. All variables are defined in the caption to Table 2. The control for the respective interaction measure as well as an intercept is included in all the regressions, but not shown for brevity. Robust t-statistics are reported in parentheses. ***, **, * denote significance at the 1%, 5%, and 10% level, respectively.

Panel A: Unified Leadership	$CAR[0,1]$						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<i>Interaction measure:</i>	<i>Market cap</i>	<i>Business segments</i>	<i>Firm age</i>	<i>Tech firm</i>	<i>Stock volatility</i>	<i>Fluidity</i>	<i>R&D/sales</i>
Unified leadership * Interaction measure	-0.0035* (-1.880)	-0.0033* (-1.691)	-0.0036 (-1.395)	0.0157** (2.174)	0.4012** (1.989)	0.0007* (1.701)	0.1014** (1.984)
Unified leadership	0.0349* (1.954)	0.0077** (2.111)	0.0144 (1.532)	0.0005 (0.206)	-0.0072 (-1.583)	-0.0037 (-0.869)	0.0005 (0.195)
Observations	282	282	282	282	282	274	282
R-squared	0.095	0.096	0.092	0.105	0.098	0.106	0.120
Panel B: Knowledge as CEO	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Knowledge as CEO * Interaction measure	-0.0002 (-0.115)	-0.0006 (-0.300)	-0.0018 (-0.661)	-0.0073 (-1.067)	-0.3418 (-1.505)	0.0001 (0.175)	-0.0049 (-0.106)
Knowledge as CEO	0.0007 (0.040)	-0.0000 (-0.001)	0.0048 (0.489)	-0.0005 (-0.203)	0.0068 (1.368)	-0.0018 (-0.442)	-0.0010 (-0.381)
Observations	282	282	282	282	282	274	282
R-squared	0.085	0.088	0.087	0.089	0.096	0.096	0.103
Panel C: Bridge between management and board	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Bridge between management and board * Interaction measure	-0.0004 (-0.199)	0.0014 (0.573)	-0.0055* (-1.912)	0.0078 (1.079)	-0.4750** (-2.086)	-0.0004 (-0.860)	0.0570 (1.111)
Bridge between management and board	0.0006 (0.032)	-0.0055 (-1.237)	0.0153 (1.491)	-0.0041 (-1.528)	0.0083 (1.547)	-0.0004 (-0.088)	-0.0045 (-1.577)
Observations	282	282	282	282	282	274	282
R-squared	0.085	0.089	0.097	0.088	0.099	0.099	0.108

Appendices

Appendix A.1: Frequency of reasons for CEO duality

This table lists the 24 distinct reasons disclosed by S&P 500 companies with CEO duality. The reasons are listed in descending order of their frequency of use.

	Percentage	Number of firms
Unified leadership	56.0%	158
Knowledge as CEO	46.1%	130
Bridge between management and board	23.4%	66
Leadership structure has served well	18.8%	53
Board efficiency and effectiveness	8.5%	24
CEO experience/tenure with company	8.5%	24
Business/Company circumstances	7.8%	22
No reason	5.7%	16
CEO is founder	5.0%	14
CEO industry experience/other qualifications	5.0%	14
Avoid costs and duplication of effort	4.6%	13
Confidence/Trust in CEO	3.9%	11
Common US/industry leadership structure	3.5%	10
Company tradition	3.2%	9
Rejection of shareholder proposal	2.1%	6
Effective corporate governance structures	2.1%	6
Equality among directors	1.8%	5
Family ownership/large shareholder	1.1%	3
CEO ownership	1.1%	3
CEO employment contract	1.1%	3
Facilitates monitoring	0.7%	2
Necessary to attract and retain CEO	0.7%	2
CEO focus on management	0.4%	1
Inconclusive academic evidence	0.4%	1

Appendix A.2: Frequency of reasons for separating the CEO and chairman roles

This table lists the 22 distinct reasons disclosed by S&P 500 companies without CEO duality. The reasons are listed in descending order of their frequency of use.

	Percentage	Number of firms
Differences between tasks/roles	32.7%	54
Facilitates monitoring	30.3%	50
CEO focus on management	22.4%	37
Chair experience with company	18.8%	31
No reason	13.3%	22
Transition/Continuity of leadership	12.7%	21
Chair's advice and mentoring	12.1%	20
Business/Company circumstances	7.3%	12
Chair is founder	6.1%	10
Chair industry experience/other qualifications	3.6%	6
Chair ownership	3.6%	6
Bridge between management and board	3.0%	5
Leadership structure has served well	2.4%	4
Board efficiency and effectiveness	2.4%	4
CEO experience/tenure with company	2.4%	4
CEO is founder	1.8%	3
CEO industry experience/other qualifications	1.2%	2
Company tradition	1.2%	2
Family ownership/large shareholder	1.2%	2
Unified leadership	0.6%	1
CEO ownership	0.6%	1
Demanding nature of roles	0.6%	1

Appendix B: Pairwise correlations between the main reasons for combining or separating the CEO and chairman roles

CEO duality	(1)	(2)	(3)	(4)
(1) Unified leadership	1			
(2) Knowledge as CEO	-0.084	1		
(3) Bridge between management and board	0.034	0.010	1	
(4) Leadership structure has served well	0.024	-0.081	-0.073	1

No CEO duality	(1)	(2)	(3)	(4)
(1) Differences between tasks/roles	1			
(2) Facilitates monitoring	-0.010	1		
(3) CEO focus on management	0.275***	0.183	1	
(4) Chair experience with company	-0.071	-0.148	0.039	1