CFR Working Paper NO. 18-06

On the Choice of CEO Duality: Evidence from a Mandatory Disclosure Rule

M. Goergen • P. Limbach • M. Scholz-Daneshgari

centre for financial research
cologne

On the Choice of CEO Duality: Evidence from a Mandatory Disclosure Rule*

Marc Goergen[a], Peter Limbach[b], and Meik Scholz-Daneshgari[c]

This draft: December 27, 2018

Abstract

We adopt a novel approach to explain why firms opt for or against CEO duality and the value implications of this choice. Exploiting the 2009 amendments to Regulation S-K, we provide unique evidence on the first-time disclosure of the reasons firms state for combining (separating) the roles of CEO and chairman. The stated reasons support both agency theory and organization theory. They are more numerous and comprise more words, including more positive words, for firms with duality. Examining the announcement returns to firms' disclosures, we find that investors evaluate the main reasons for CEO duality by considering the firm's characteristics.

JEL classification: G14, G34, G38

Keywords: CEO Duality, Board of Directors, Firm Valuation, Regulation S-K, Textual Analysis

* The authors would like to thank Martin Ruckes as well as participants at the 25th annual meeting of the German Finance Association 2018, a CFR research seminar at the University of Cologne, 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.

[a] Marc Goergen, IE Business School, Calle María de Molina 12, 28006 Madrid, Spain, and European Corporate Governance Institute (ECGI), Brussels, Belgium. E-mail address: Marc.Goergen@ie.edu.

[b] Peter Limbach, University of Cologne and Centre for Financial Research (CFR), Albertus-Magnus-Platz, 50923 Cologne, Germany. E-mail address: plimbach@wiso.uni-koeln.de.

[c] Corresponding author: Meik Scholz-Daneshgari, Karlsruhe Institute of Technology (KIT), Department for Finance and Banking, Kaiserstr. 12, 76131 Karlsruhe, Germany. E-mail address: meik.scholz-daneshgari@kit.edu.

1. Introduction

The decision to combine the roles of CEO and chairman of the board (i.e., CEO duality) has been the topic 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, a majority of S&P 500 firms combine the two roles (Spencer Stuart, 2017). 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, and Dalton et al., 1998), as well as the lack of reliability of extant studies likely suffering from the nonrandom choice of board structures (see, e.g., Hermalin and Weisbach, 1998; Adams, Hermalin, and Weisbach, 2010). The above discussion highlights the need of both practitioners and scholars to better understand why corporate boards choose to combine or separate the CEO and chairman roles.

This paper exploits a 2009 amendment to Regulation S-K, which requires public firms to disclose the reasons for combining or separating the roles of CEO and chairman. We provide unique evidence on the first-time disclosure by S&P 500 companies of the reasons behind their board leadership structure. Thereby, we propose a novel approach to understanding firms' decisions to opt for or against CEO duality. Examining the stock market reaction to firms' disclosures, we also assess the value implications and informativeness of the stated reasons.

[1] Larcker and Tayan (2016) provide examples of investors arguing that CEO duality undermines effective oversight. For instance, a CalPERS representative at an ExxonMobil shareholder meeting is quoted stating that having a dual CEO-chairman is "like grading your own exam papers". Another example is the campaign of Norway's sovereign wealth fund, which publicly warned 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)).

Concerning the choice of CEO duality and its value implications, competing theories exist according to which combining the CEO and chairman positions 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 (e.g., greater consumption of perks), particularly for larger and more complex firms that are more difficult to monitor and have more resources to waste (e.g., 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 decision making and adaptability (Boyd, 1995; Jensen and Meckling, 1995; Li, Lu, and Phillips, 2017), which is crucial for firms operating in competitive and dynamic environments. Further, 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 particularly beneficial for opaque firms.

The main reasons firms state for combining (separating) the CEO and chairman positions 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 positions. Regarding the decision to combine the two positions, 56% of the firms name "Unified leadership" as a reason for CEO duality, arguing that having a CEO-chairman promotes clear and consistent leadership, directional clarity, and effective decision making. Forty-six percent state that combining the two positions 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, supporting organization theories and the theory of friendly boards by Adams and Ferreira (2007). Turning to non-duality firms, the main reasons such firms state for separating the CEO and chairman positions are based on the importance of agency costs, consistent with agency theory. Specifically, such firms report that they separate the two positions i) to account for the inherent differences between the tasks and roles of CEO and chairman ("Differences between tasks/roles" (33%)), ii) to facilitate managerial oversight ("Facilitates monitoring" (30%)), and iii) to allow the CEO to focus on managing the firm's day-to-day operations ("CEO focus on management" (22%)).

Not only are the reasons that firms state informative, but also how they are stated. Hence, we conduct a textual analysis of the stated reasons. We find that the sections of firms with CEO duality contain significantly more words and more distinct reasons (2.1 vs. 1.7) as well as having a more positive (and also a slightly more negative) tone. 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.

A potential concern with our data is that firms do not report the true reasons for their choice of board leadership structure. We conduct several tests, which do not support this concern. For example, we find that firms' sections on board leadership show only a low textual similarity (13% on average), implying great individuality. We also find no evidence of window dressing, i.e., firm performance is not related to the reasons firms state or how they state them. Furthermore, comparing the sections on board leadership structure in firms' 2010 and 2011 proxy statements, we document a median textual similarity per firm of at least 88%. Firms with CEO duality are less likely to change their sections over the two years. Importantly, we find that firms adjust their sections on board leadership structure when they change their CEO, which implies that the stated reasons are CEO-firm-specific. Overall, our tests indicate that firms, especially those with CEO duality, likely truthfully report the reasons for their choice of board leadership structure.

To examine whether investors consider the reasons for combining (separating) the CEO and chairman positions to be informative, and how they assess them, we study the stock market reaction to firms' first-time disclosure of the most frequent reasons. Our results imply that the reasons differ with respect to their informativeness for investors and that CEO duality has implications for shareholder value. Specifically, investors' reactions are consistent with the theories predicting a firm-specific trade-off between the costs and benefits of CEO duality. While we find that the average abnormal stock return to the disclosure of most reasons is statistically insignificant, stock returns to the most important reason for the controversial practice of CEO duality, i.e., "Unified leadership", become significant once the characteristics of the firm are taken into account. That is, stock returns are significantly negative for large and complex firms, which have more resources to waste and are more difficult to monitor. On the contrary, stock returns are significantly positive for small and less complex firms and for firms in more competitive and dynamic environments. For these firms, having unified leadership via a CEO-chairman who can make decisions more effectively and foster adaptability is likely to be more valuable, while monitoring is less valuable. We find little evidence of significant stock returns to the disclosure of reasons for the less contentious choice to separate the CEO and chairman roles.[2] This finding is in line with the potentially lower informativeness of these

[2] Nevertheless, we find some evidence that investors evaluate the reasons for separating the roles of CEO and chairman depending on the characteristics of the two individuals.

reasons and less need for investors to obtain information about why firms separate the two positions.

This paper makes important contributions to three 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 analysis of covariates of CEO duality choices (i.e., CEO, firm, and governance characteristics) and, hence, have typically been unable to identify the reasons underlying the selection process of the leadership structure of the board. In contrast, our study is the first to present evidence on the reasons that firms state for opting for or against duality. By providing new insights into the reasons for opting for CEO duality and by showing that investors take into account firm characteristics when evaluating the reasons a firm states for CEO, our paper also contributes to the related literature that demonstrates the endogeneity of board structure (e.g., Hermalin and Weisbach, 1998 and 2003; Adams, Hermalin, and Weisbach, 2010; Wintoki, Linck, and Netter, 2012).

Second, our paper contributes 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 CEO duality on firm performance (e.g., Krause, Semadeni, and Cannella, 2014), which supports the theory predicting a heterogeneous cost-benefit relation of duality. However, to date only few studies examine whether the performance consequences of CEO duality depend on firm circumstances. The existing evidence suggests that a firm's size (Palmon and Wald, 2002) and product market (Yang and Zhao, 2014; Li, Lu, and Phillips, 2017) 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 main reasons for combining the CEO and chairman positions, particularly unified leadership, depends on various firm characteristics, including a firm's complexity and size as well as the competitiveness and dynamism of its business environment. In this regard, the results of our study indicate that the stock market considers a "one-size-fits-all" approach to CEO duality inappropriate.

Third, our paper contributes to the literature on the investor informativeness and firm value consequences of reforms of SEC rules on the disclosure of internal corporate governance. This literature includes studies on the consequences of reforms of the disclosure of 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). The evidence provided in our paper is consistent with earlier studies indicating that SEC disclosure reforms are informative for investors. Particularly, our paper suggests that the reasons firms state for opting for or against duality provide valuable insights to investors, which help them assess the appropriateness of firms' choice.

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 positions, including analyses of the textual characteristics and the informativeness of these reasons. Section 4 presents the stock market reaction to the disclosed reasons. Conclusions follow.

2. Regulatory Framework, Sample, and Data

2.1. 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 positions.[3] 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."*

The aforementioned SEC disclosure regulations 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 why they have chosen to combine or to separate the CEO and chairman positions in their proxy statement. Appendices A.1 and A.2 contain examples of two company statements detailing the reasons for duality and separating the two

[3] 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.

roles, respectively.

2.2. Sample and Data

Our initial sample includes all S&P 500 companies as of calendar year-end 2009 that 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 that 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's 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, five companies because they are led by two Co-CEOs, three companies with interim CEOs, four companies do not to have a chairman position (e.g., Apple Inc.), and one company with insufficient historic stock price information. After excluding an additional three firms for which we identify related prior voluntary disclosure,[4] our final sample consists of 447 companies, 282 companies with CEO duality and 165 without.

To identify the stated reasons for combining or separating the CEO and chairman positions, 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 different wording to describe the same reason, we identify the reasons manually rather than via algorithms. We

[4] We check each sample firm's previous year, i.e., 2009, proxy statement and prior published 8-K filings for voluntary disclosure of related information. Specifically, we check each 8-K filing that contains 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 duality or combining the CEO and chairman positions.

acknowledge that the use of a manual procedure to identify and classify the disclosed reasons may give rise to concerns about subjective judgement and limited replicability.[5] 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. In case of disagreement between the two, we discussed the specific case and made a majority decision as a group. Appendix B provides detailed descriptions and textual examples of our classification for the four most frequently stated reasons for CEO duality and non-duality.

We obtain accounting data for the previous fiscal year from Compustat, while we hand-collect data on CEOs, chairmen, boards of directors, and management and shareholder proposals from the 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 1 reports summary statistics for our sample firms. Overall, the firms with duality and those without duality do not differ significantly in terms of leverage, sales growth, book value of total assets (*Total assets*), firm value (*Tobin's Q*), and stock performance (*Prior year BHR*). However, the firms with duality have on average a larger market capitalization ($24 bn vs. $15.5 bn), have been stock listed for longer (37 years vs. 29 years), and are less likely to be high-tech companies (11% vs. 22%).[6] In terms of corporate governance, the firms with duality have significantly greater average board independence (86% vs. 81%), but are otherwise similar to the other 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,

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

[6] The companies with firm age equal to zero are CareFusion Corp (CEO duality) and Mead Johnson Nutrition Company (no duality), which were both created in 2009 as corporate spin-offs of CardinalHealth and Bristol-Myers Squibb, respectively. The eleven-fold increase in sales growth is observed for American International Group (AIG) after recovering from the 2008 financial crisis.

1997), CEOs who also act as the chairman are older (56.9 years vs. 53.3 years), have longer tenures (7.1 years vs. 3.3 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.

3. Reasons for combining or separating the CEO and chairman positions

3.1. 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 positions. We identify 24 (22) distinct reasons for combining (separating) the two positions. Figures 1a and 1b provide an overview of the ten most frequent reasons stated by firms with and without duality, respectively. For completeness, Appendices C.1 and C.2 provide an overview of all stated reasons.

Figure 1a shows that the most frequent reason for combining the CEO and chairman positions, stated by 56% of all duality firms, is "Unified leadership". Firms stating this reason argue that duality ensures clear and consistent leadership, directional clarity, and effective decision making. Forty-six percent of the firms with duality state that the latter 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 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., resource dependence theory (e.g., Pfeffer, 1972; Pfeffer and

Salancik, 1987) and stewardship theory (e.g., Donaldson, 1990; Donaldson and Davis, 1991). These theories argue that unified leadership via duality promotes effective decision making, adaptability, and communication with external parties. The reasons firms state also support the theory by Adams and Ferreira (2007) according to which CEOs, particularly those with more power, play a crucial role for providing the board of directors with inside information about the firm.[7]

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"). Another 19% state the CEO's experience, i.e., the CEO's experience with the firm (9%), the CEO's founder status (5%), and the CEO's industry expertise as well as other qualifications (5%), as reasons for duality. Furthermore, only relatively few firms state business and company circumstances (9%), as well as the avoidance of costs and duplication of effort (5%) as reasons for duality.

Turning to the non-duality firms, Figure 1b suggests that the main reasons for separating the CEO and chairman positions 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). In particular, the two most frequent reasons for separating the CEO and chairman positions 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, another 22% of the firms state that a CEO who does not chair the board is better able

[7] 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 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.

to focus on managing the firm's day-to-day operations ("CEO focus on management").

As to the other reasons firms state for separating the CEO and chairman positions, 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 resigning CEO the role of board chairman (e.g., Quigley and Hambrick, 2012). However, only 12% of the firms directly state the chair's ability to provide advice and mentoring as a reason for the separation of the two roles. Finally, 13% of non-duality firms do not state a reason for their choice of separating the CEO and chair positions (the equivalent percentage for firms with duality is only 5.7%), which suggests that this practice is much less contentious, reducing the pressure on firms to provide investors with detailed reasons.

In sum, the above analysis reveals the following. First, the reasons firms state for their chosen board leadership structure are consistent with various theories. Second, the reasons for combining or separating the CEO and chairman positions are multifaceted, which makes it difficult to understand by considering only the observable covariates of CEO duality, such as CEO, governance, and other firm characteristics.

3.2. 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 they state and how they are stated. Therefore, we analyze the textual characteristics of the sections in firms' proxy statements, which report the reasons for separating or combining the CEO and chairman positions. 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.[8] 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").

Panel A of Table 2 presents summary statistics for the textual characteristics for both firms with and without duality. On average, the sections of firms with duality contain significantly more words (263 vs. 223) and more distinct reasons (2.1 vs. 1.7). They also have a more positive tone as well as a slightly more negative tone, which indicates that firms with duality use a more extreme language. However, the variable *Words per reason* is not significantly different between firms with and those without duality, which indicates that the former do not elaborate more on the reasons they state.

Panel B of Table 2 presents results from ordinary least squares (OLS) regressions explaining the variable *ln(Number of reasons)* and the textual characteristics *ln(Words)*, *Positive tone*, and *Negative tone* by the indicator variable *CEO duality*, which equals one for firms that combine the CEO and chairman positions, and zero otherwise, as well as three sets of controls for CEO, firm, and governance characteristics. The regression results suggest that the differences between firms with and without duality shown in Panel A remain statistically significant in a multivariate setting. That is, firms with 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 both more positive and (slightly) more negative (columns (3) and (4)). Overall, these results suggest that firms with duality are

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

aware of the controversy about this practice and therefore provide more information about why they combine the CEO and chairman roles.

With regard to the control variables, we find that older and larger firms, firms with a higher E-index and a founder CEO, as well as those operating in regulated industries tend to report more distinct reasons and use more words, while firms with a higher independence ratio and sales growth use less words. This evidence suggests that firms with a greater potential for agency problems provide more information about their choice of board leadership structure.

3.3. Are the disclosed reasons the true ones?

A major concern about our study is that the reasons firms state for their choice of combining or separating the CEO and chairman positions might not be informative because firms may not report the true reasons for their choice. Specifically, firms might state alternative (omit the true) reasons that are perceived more positively (negatively), which implies that the reported reasons are less informative. Still, Adams, Akyol, and Verwijmeren (2018) provide evidence that firms truthfully report the skills of their directors under the 2009 amendments to Regulation S-K, and that they do not strategically postpone their proxy filings. In the following we conduct four different empirical tests to examine whether the reasons firms state for their choice of board leadership structure are likely to be truthful.

The first test investigates whether there is window dressing, i.e., whether firms report more reasons and/or specific reasons for their choice of board leadership structure if they have poor performance. The regression results shown in Panel B of Table 2 suggest that neither the number of reasons nor the textual characteristics of the section on board leadership structure is related to past stock market performance (*Prior year BHR*) and firm value (*Tobin's Q*). In additional untabulated analyses, we also fail to find any significant relation between financial performance and any of the top 4 reasons stated by either duality or non-duality firms.

The second test analyzes whether the stated reasons differ over the proxy season. If firms adopt (omit) specific reasons strategically, we expect firms reporting later in the proxy season, which can learn from the stock market reaction to earlier disclosures, to state some reasons more (less) frequently.[9] We compare the relative frequencies of the reported reasons for those firms that filed their proxy statement shortly after the new disclosure regulation became effective, i.e., in March and April 2010 (early disclosures), and those that reported their reasons later in the proxy season, i.e., between May 2010 to February 2011 (later disclosures). Table 3 presents our results. Panel A shows no statistically significant differences as to the top 4 reasons for duality between firms reporting in March or April 2010 and those reporting later. This finding suggests that firms that report later in the proxy season do not adjust their reasons after observing the stock market reaction to earlier disclosures. In contrast, for firms without duality, Panel B shows that those firms reporting later in the proxy season name the two reasons "Differences between tasks and roles" and "CEO focus on management" significantly more frequently. This finding is consistent with the general expectation that the reasons stated by non-duality firms will be less controversial and that may be why firms are more likely to state the same reasons for their board leadership structure.

The third test compares the textual similarity of the sections on board leadership structure over the proxy season. If later disclosers adopt the rationales of earlier disclosers, one would expect to find a high textual similarity between earlier and later disclosers. For firms with and without duality, we calculate the textual similarity using the Ratcliff and Obershelp algorithm for pattern recognition and textual similarity (see Ratcliff and Metzener, 1988). The algorithm

[9] Difference-in-means tests between early and later disclosers (for duality as well as non-duality firms) show that the two groups are very similar in terms of their fundamentals, governance, and CEO (and chairman) characteristics.

generates similarity scores (*Text similarity*) between zero and one, where larger values indicate greater similarity of two text strings.[10] In particular, for each firm we first calculate the textual similarity of its section with each section previously disclosed by another (duality or non-duality) firm. We then determine the maximum textual similarity with any previously disclosed section. Figures 2a and 2b provide graphical illustrations of the results for the firms with and without CEO duality, respectively. Each dot in Figures 2a and 2b depicts the maximum textual similarity (y axis) and the number of days between the effective date of the new disclosure regulation and the firm's proxy filing date (x axis). The figures and descriptive statistics indicate a low average textual similarity of the sections among both duality firms (12.8%) and non-duality firms (13.1%). Despite a few outliers, the vast majority of the data is located below the 25% threshold of textual similarity, which implies great individuality of firms' sections. The lack of textual similarity suggests that later disclosers do not adopt word for word the rationales of earlier disclosers.

The fourth test examines the textual similarity of the section on board leadership structure for the same firm over time. If the stated reasons are truthful, we expect the section to remain textually similar over time unless the CEO and/or chairman or the circumstances of the firm change. Hence, we compare the section on board leadership structure from the 2010 proxy season with the same section from the 2011 proxy statement.[11] To calculate the textual similarity between the 2010 and 2011 sections we use again the Ratcliff and Obershelp (1988) algorithm. Table 4 presents our results. Panel A, which provides summary statistics, shows a median textual similarity of 89% (88%) for firms with (without) CEO duality. The mean value

[10] 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".

[11] We are able to obtain the 2011 section on board leadership structure for 276 of the 282 duality firms and for 162 of the 165 non-duality firms.

is lower but nevertheless amounts to 75% (74%). This high textual similarity of the sections over time implies that firms generally make only minor changes to their sections, which suggests that the reasons they report in their 2010 proxy statements are likely to be truthful. Panel B shows the results from an additional multivariate analysis of the determinants of textual similarity. The results give rise to two conclusions. First, firms with duality make fewer changes to their sections than firms without duality. Second, firms mostly adjust their text sections in reaction to changes in leadership and business circumstances. Most importantly, firms adjust their sections significantly more strongly when there is a new CEO ($New\ CEO_{2011}$), i.e., suggesting that the reasons they report for their board leadership structure are CEO-specific. They also adjust their sections significantly if the firm has experienced greater stock volatility over the past year ($Stock\ volatility_{2011}$) and in case the tone of the previous year's section has been more negative ($Negative\ tone_{2010}$).

To sum up, the above tests indicate that the reasons firms state for combining or separating the CEO and chairman positions as well as their wording are likely truthful, at least for firms with CEO duality.

4. 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 way we are able to examine whether investors consider the disclosed reasons to be informative and, if they do, how they assess these reasons.

Theory proposes at least three reasons why abnormal stock returns to the disclosure of firms' reasons may be equal to zero. First, the disclosed reasons are not informative, either because investors do not expect firms to report truthfully or because investors anticipate the reasons firms will state. Second, combining or separating the CEO and chairman positions may not affect shareholder value. Third, duality has an effect on shareholder value, but the value implications are 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 as 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 positions while taking into account the firm 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 that stock market reaction varies with firm characteristics.

To determine the stock market reaction to the disclosure of firms' reasons, we apply standard event study methodology. We calculate the two-day cumulative abnormal returns (denoted *CAR[0,1]*) for the filing day of the 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.[12] 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, while in 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. Appendix E provides an overview of the event dates by month for our 447 sample firms. Similar to Wei and Yermack (2011),

[12] Our results remain qualitatively similar when we use the market model or the Carhart (1997) model.

most sample firms (79%) file their proxy statement within the first two months, i.e., in March and April 2010.

To analyze the cross-section of abnormal stock returns, we use the following regression model (see equation (1)):

$$CAR[0,1] = \alpha + \sum_{i=1}^{4} \beta_i * Top\ 4\ reason_i + \beta_5 * Other\ reason \qquad (1)$$

$$+ \sum_{i=6}^{10} \beta_i * Firm\ control_i + \sum_{i=11}^{19} \beta_i * Proxy\ statement\ control_i + \varepsilon$$

We estimate the regressions based on the above regression model separately for firms with and without CEO duality.[13] For both types of firms, we create an indicator variable for each of the top 4 reasons, which 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(Market cap)*); the size of a firm's section on board leadership structure, using the natural logarithm of the section's total number of words (*ln(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)) and *Tech firm* (set to one for firms operating in high-tech industries according to Loughran and Ritter (2004)). In terms of the proxy statement controls, we use the following nine variables: an indicator for

[13] For both duality and non-duality firms, we also estimate equation (1) separately for firms disclosing early (i.e., March and April 2010) and late (i.e., May 2010 to February 2011) to address the concern that only early disclosures might be informative for investors. Furthermore, for robustness purposes, we re-estimate equation (1) in the form of a logit regression with the indicator variable *CAR [0,1] negative*, which equals one if *CAR [0,1]* is negative, and zero otherwise, as the dependent variable. In the following, we do not mention the respective results in detail.

firms nominating new independent directors to be elected to the board; an indicator for firms nominating new non-independent outside directors who likely have a material interest in the firm; three indicators that measure whether the firm's management proposals are shareholder-friendly (i.e., the repeal of super-majority voting requirements, the introduction of majority voting in director elections, and the declassification of the board); an indicator for shareholder resolutions on executive compensation; an indicator for other corporate governance issues; an indicator for social or environmental issues; and an indicator for any other shareholder proposal.

Table 5 presents the results for the regressions based on equation (1). The results for duality and non-duality firms are presented in Panel A and Panel B, respectively. Both panels suggest that the average stock market reaction to the disclosure of the top 4 reason for both combining and separating the CEO and chairman positions is statistically insignificant. An exception is the reason "Leadership structure has served well", which is associated with significantly lower and negative abnormal stock returns. The negative reaction to this reason for duality is consistent with investors punishing firms for a lack of future orientation or investors disagreeing that the structure has served the firm well. However, we do not find that such firms have had significantly worse past performance.

Again, the reason why the top 4 reasons may not be informative may be that most firms use them, the market anticipated exactly those reasons or that CEO duality may not have consequences for shareholder value. Conversely, agency theory and organization theory predict that the stock market reaction to the disclosure of firms' reasons for combining (separating) the CEO and chairman positions depend on the firm's circumstances, which in turn determine the cost-benefit relation of CEO duality. Hence, we now examine whether and how stock returns to the disclosure of the top 4 reasons vary with firm characteristics. To do so, we re-estimate equation (1) by including the interactions of each top 4 reason with six different variables, which we denote, for example, *Unified leadership * Interaction measure (0/1)* (in case of the reason "Unified leadership"). All interaction measures are indicator variables based on firm characteristics. Three indicator variables capture differences in firm size and complexity: (1) *Market cap* equals one for firms with a market capitalization above the sample median, (2) *Business segments* equals one for firms with above-median number of business segments, and (3) *Firm age* equals one for firms with above-median firm age since IPO. Another three indicator variables capture the competitiveness and dynamism of firms' business environments: (4) *Tech firm* equals one for firms operating in high-tech industries according to the definition of Loughran and Ritter (2004), (5) *Stock volatility* equals one for firms with above-median volatility of stock returns, and (6) *Fluidity* equals one for firms with above-median product market fluidity (Hoberg, Phillips, and Prabhala, 2014).[14]

To improve our understanding of how investors react to the disclosure of firms' reasons and to test the validity of the relevant theories, we re-estimate equation (1) with the above interactions. The results for firms with and without CEO duality are presented in Table 6 and Table 7, respectively.

As can be seen from Panel A of Table 6, the stock market reaction to the disclosure of the reason "Unified leadership" clearly depends on firm circumstances. In particular, we find that stock returns are significantly negative for large and complex firms (i.e., older firms and those with more business segments), which have more resources to waste and are also more difficult to monitor. For such firms, the costs of having a unified leadership structure – with a dual CEO-chairman who has considerable decision making power and power over the board – are likely to outweigh the benefits. On the contrary, the market reaction is significantly positive

[14] Product market fluidity measures the degree of competitive threat and product market change surrounding a firm. For more information, we refer the reader to Hoberg, Phillips, and Prabhala (2014).

for smaller and less complex firms and for firms operating in more competitive and dynamic business environments. For these firms, the benefits of having a unified board 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. The results support both agency theory and organization theory as well as suggesting that investors deem a "one-size-fits-all" approach to duality to be inappropriate.

The results for the other two most frequently stated reasons for CEO duality, i.e., "Knowledge as CEO" and "Bridge between management and board", are shown in Panel B and Panel C of Table 6, respectively. We find no evidence that investors evaluate these two reasons by taking into account firm characteristics.

As can be inferred from Table 7, we find no evidence that investors' evaluation of the main reasons for separating the CEO and chairman positions depends on firm characteristics. However, because the separation of the two roles may depend on chairman and CEO characteristics, we also consider the interactions of the main reasons with variables that capture important characteristics of the two individuals. The results shown in columns (7) and (8) of Panel B of Table 7 provide some weak evidence that investors evaluate the reason "Facilitates monitoring" positively for CEOs with longer tenures who are likely to be more entrenched. Furthermore, the results shown in columns (9) to (12) of Panel C indicate that investors assess the reason "CEO focus on management" positively (negatively) if the chairman of the board has (no) considerable firm experience. Particularly, the announcement returns to the disclosure of this reason are significantly positive for chairmen who are the founder or the former CEO of the firm (see columns (9) and (10)), while they are significantly negative for independent chairmen and high board independence (see columns (11) and (12)). These results are 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 (separate) chairman has in-depth understanding of the company, which allows him to both monitor and mentor the CEO. The results, especially those in column (12), also support the theory of Adams and Ferreira (2007). Specifically, they suggest that investors consider a CEO who focuses on management, and hence does not act as the chairman, as value creating (destroying) for the firm if the board is less (more) independent. This result points to the importance of information asymmetries for board composition and leadership.

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 positions 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 positions taking into account the characteristics of firms, they nevertheless consider chairman and CEO characteristics when they assess the CEO-board chair separation. 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.

5. Conclusion

There has been a long-lasting debate among governance experts, investors, and regulators regarding CEO-chairman duality. 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 duality and non-duality, and how the stock market assesses these reasons. We exploit the 2009 amendment to Regulation S-K, which now requires 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 are in line with both agency theory and organization theory. In particular, firms state unified leadership and effective decision making as well as the CEO's knowledge of the firm as the main reasons for combining the CEO and chairman positions, while the main reasons for separating the two positions are the differences between the roles of the CEO and board chair as well as enhanced oversight of management. Consistent with the controversy surrounding duality, we find that firms with duality provide more reasons for their choice of board leadership structure and also use more words, as well as 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 firms having opted for duality. 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 are important to 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 need to be seen within the specific context of each firm. Finally, our study suggests that the amendment to SEC Regulation S-K requiring firms to disclose the reasons why they combine or separate the roles of CEO and chairman is in the interest of investors and other stakeholders.

References

Adams, R.B., Akyol, A.C., and Verwijmeren, P., 2018. Director skill sets. *Journal of Financial Economics*, Forthcoming.

Adams, R.B., Almeida, H., and Ferreira, D., 2005. Powerful CEOs and their impact on corporate performance. *Review of Financial Studies* 18, p. 1403-1432.

Adams, R.B., Hermalin, B.E., and Weisbach, M.S., 2010. The role of board of directors in corporate governance: A conceptual framework and survey. *Journal of Economic Literature* 48, p. 58-107.

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

Belot, F., Ginglinger, E., Slovin, M.B., Sushka, M.E., 2014. Freedom of choice between unitary and two-tier boards: An empirical analysis. *Journal of Financial Economics* 112, 364-385.

Boyd, B.K., 1995. CEO duality and firm performance: A contingency model. *Strategic Management Journal* 16, 301-312.

Brickley, J.A., Coles, J.L., and Linck, J.S., 1999. What happens to CEOs after they retire? New evidence on career concerns, horizon problems, and CEO incentives. *Journal of Financial Economics* 52, 341-377.

Brickley, J.A., Coles, J.L., and Jarrell, G., 1997. Leadership structure: Separating the CEO and chairman of the board. *Journal of Corporate Finance* 3, 189-220.

Carhart, M.M., 1997. On persistence in mutual fund performance. *Journal of Finance* 52, 57-82.

Dalton, D.R., Daily, C.M., Ellstrand, A.E., and Johnson, J.L., 1998. Meta-analytic reviews of board composition, leadership structure, and financial performance. *Strategic Management Journal* 19. 269-290.

Dey, A., Engel, E., and Liu, X., 2011. CEO and board chair roles: To split or not to split? *Journal of Corporate Finance* 17, 1695-1618.

Donaldson L., and Davis, J.H., 1991. Stewardship theory or agency theory: CEO governance and shareholder returns. *Australian Journal of Management* 16, 49-64.

Fama, E., and French, K.R., 1993. Common risk factors in the returns on stocks and bonds. *Journal of Financial Economics* 33, 3-56.

Fama, E.F., and Jensen, M.C., 1983. Separation of ownership and control. *Journal of Law and Economics* 26, 301-325.

Finkelstein, S., and D'Aveni, R.A., 1994. CEO duality as a double-edged sword: How boards of directors balance entrenchment avoidance and unity of command. *Academy of Management Journal* 37, 1079-1108.

Finkelstein, S., Hambrick, D.C., and Cannella, A.A. 2009. Strategic leadership: Theory and research on executives, top management teams, and boards. New York, Oxford University Press.

Grinstein, Y. Weinbaum, D., and Yehuda, N., 2017. The economic consequences of perk disclosure. *Contemporary Accounting Research* 34, 1812-1842.

Hermalin, B.E., and Weisbach, M.S., 1998. Endogenously chosen boards of directors and their monitoring of the CEO. *American Economic Review* 88, 96-118.

Hermalin, B.E., and Weisbach, M.S., 2003. Boards of directors as an endogenously determined institution: A survey of the economic literature. *Economic Policy Review* April 2003, 7-26.

Hoberg, G., Phillips, G., and Prabhala, N., 2014. Product market threats, payouts, and financial flexibility. *Journal of Finance* 69, 293-324.

Jensen, M.C., 1993. The modern industrial revolution, exit, and the failure of internal control systems. *Journal of Finance* 48, 831-880.

Jensen, M.C., and Meckling, W.H., 1976. Theory of the firm: Managerial behavior, agency costs, and ownership structure. *Journal of Financial Economics* 3, 305-360.

Jensen, M.C., and Meckling, W.H., 1995. Specific and general knowledge, and organizational structure. *Journal of Applied Corporate Finance* 8, 4-48.

Krause, R., Semadeni, M., and Cannella, A.A., 2014. CEO duality: A review and research agenda. *Journal of Management* 40, 256-286.

Li, M., Lu, Y., and Phillips, G.M., 2017. CEOs and the product market: When are powerful CEOs beneficial? Working paper, University of Southern California.

Linck, J.S., Netter, J.M., and Yang, T., 2008. The determinants of board structure. *Journal of Financial Economics* 87, 308-328.

Loughran, T., and McDonald, B., 2011. When is a liability not a liability? Textual analysis, dictionaries, and 10-Ks. *Journal of Finance* 66, 35-65.

Loughran, T., and Ritter, J., 2004. Why has IPO underpricing changed over time? *Financial Management* 33, 5-37.

Palmon, O. and Wald, J.K., 2002. Are two heads better than one? The impact of changes in management structure on performance by firm size. *Journal of Corporate Finance* 8, 213-226.

Pfeffer, J. and Salancik, G.R., 1978. The External Control of Organizations: A Resource Dependence Perspective. Harper & Row, New York.

Quigley, T.J., and Hambrick, D.C., 2012. When the former CEO stays on as board chair: Effects on successor discretion, strategic change, and performance. *Strategic Management Journal* 33, 834-859.

Ratcliff, J. W., and Metzener, D., 1988. Pattern matching: The Gestalt approach. *Dr. Dobb's Journal* 141, 46-51.

Spencer Stuart. 2017. Spencer Stuart US Board Index 2017. Chicago.

Wei, C., and Yermack, D., 2011. Investor reactions to CEOs' inside debt incentives. *Review of Financial Studies* 24, 3813-3840.

Wintoki, M.B., Linck, J.S., and Netter, J.M., 2012. Endogeneity and the dynamics of internal corporate governance. *Journal of Financial Economics* 105, 581-606.

Yang T., and Zhao, S., 2014. CEO duality and firm performance: Evidence from an exogenous shock to the competitive environment. *Journal of Banking and Finance* 49, 534-552.

Yermack, D., 2006. Flights of fancy: Corporate jets, CEO perquisites, and inferior shareholder returns. *Journal of Financial Economics* 80, 211-242.

Figure 1a
Reasons stated by S&P 500 companies for combining the CEO and chairman positions
This graph depicts the 10 most frequently disclosed reasons for combining the CEO and chairman positions stated by S&P 500 companies with CEO duality. The reasons are listed in descending order of their frequency of use.

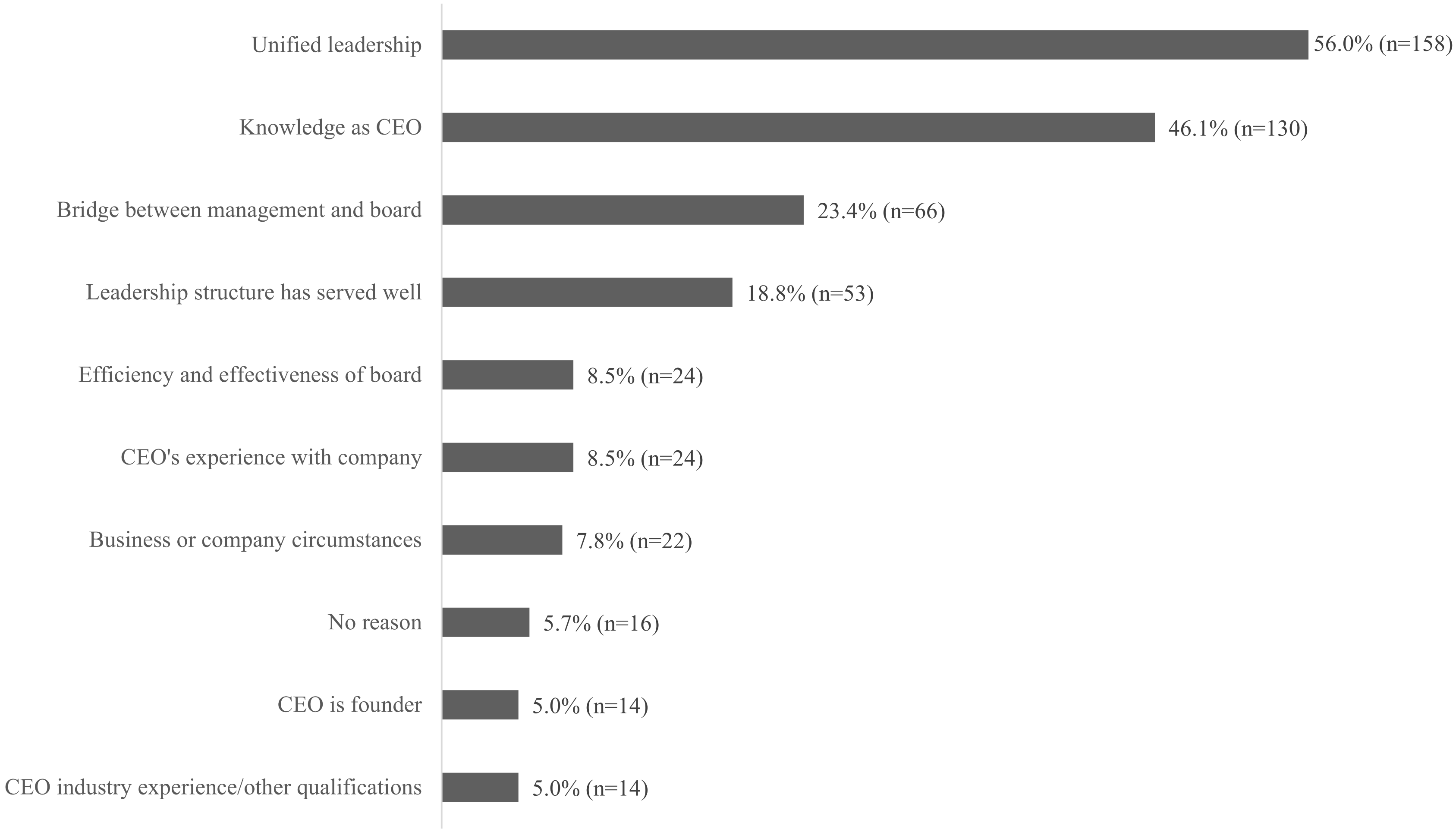


Figure 1b

Reasons stated by S&P 500 companies for separating the CEO and chairman positions

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

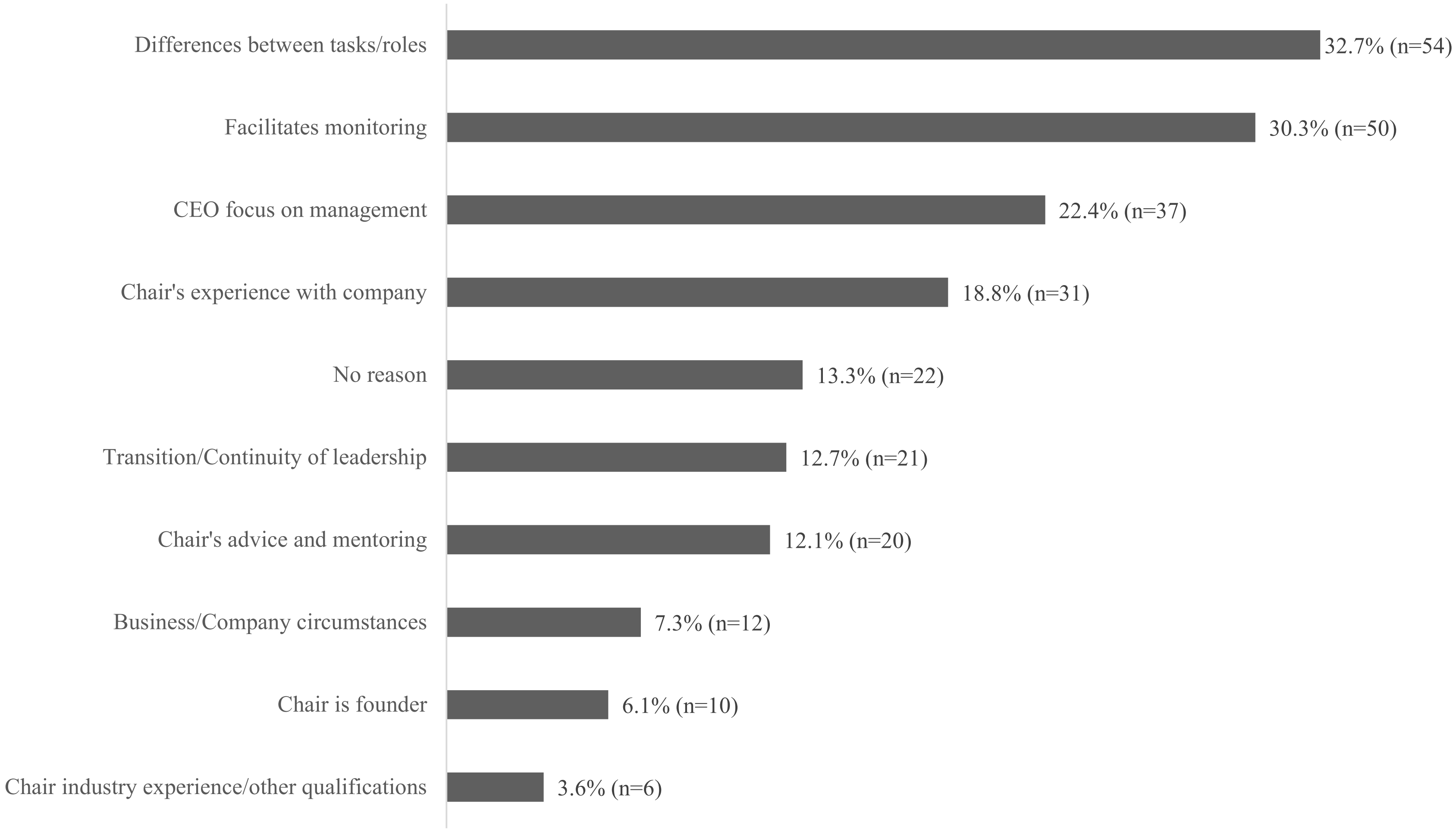


Figure 2a

Firms with CEO duality: Maximum textual similarity with a previously disclosed section of another duality firm

This figure illustrates for each firm the maximum textual similarity of the firm's disclosed section on board leadership structure with the section disclosed earlier by a different firm of the subsample of the 282 firms with CEO duality. *Text similarity* is calculated using the Ratcliff and Obershelp algorithm for pattern recognition and pattern 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. *Days* is the number of days between the firm's filing date of the 2010 proxy statement with the SEC and the date the 2009 amendments to Regulation S-K became effective, i.e., February 28, 2010. A linear regression of *Text similarity* on the number of days (*Days*) and an intercept yields the regression equation y = 0.03*Days + 11.15. Both coefficients are significant at the 1% level. The R-squared of the linear regression equals 11.4%.

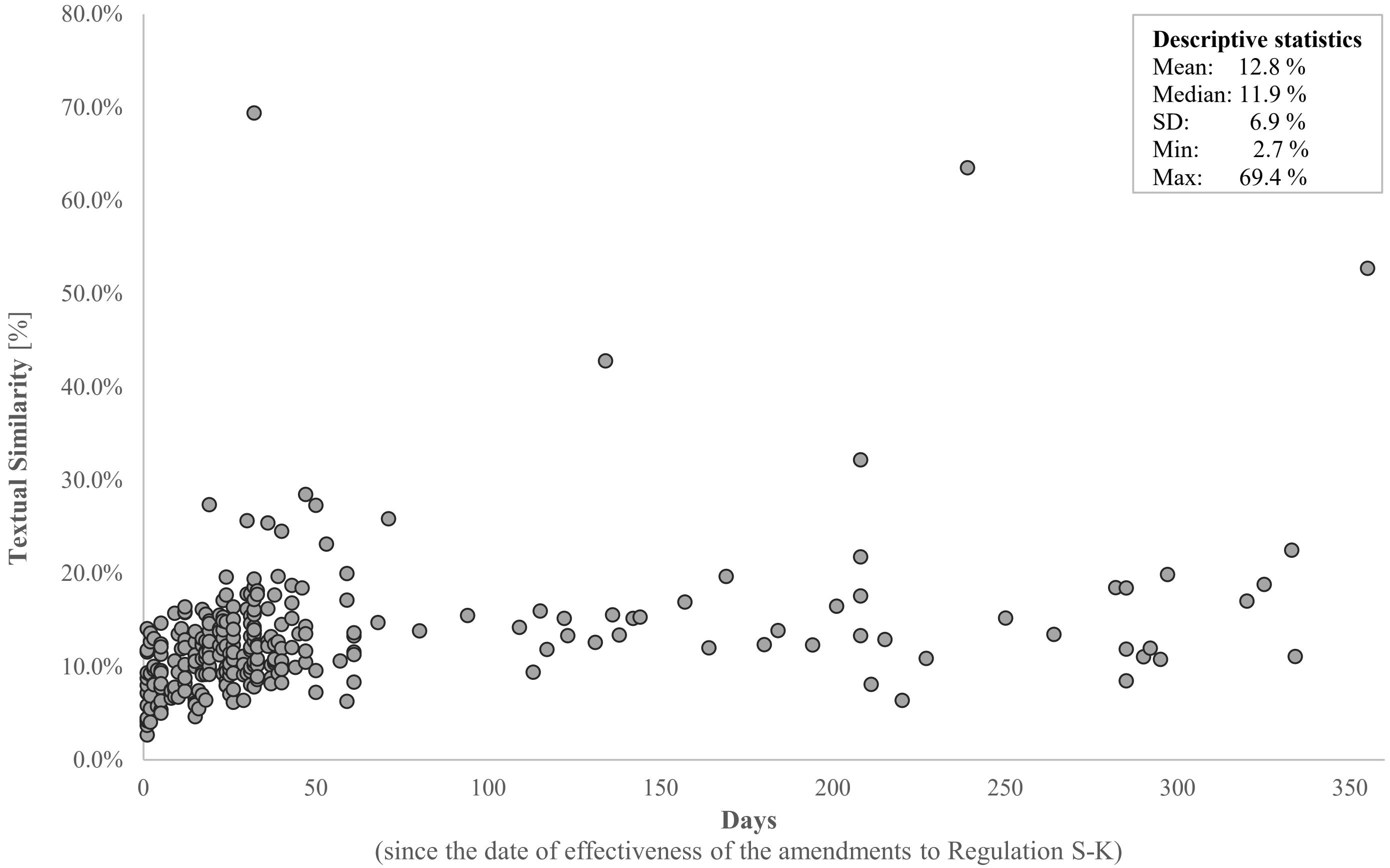


Figure 2b

Firms without CEO duality: Maximum textual similarity with a previously disclosed section of another no duality firm

This figure illustrates for each firm the maximum textual similarity of the firm's disclosed section on board leadership structure with another section disclosed earlier by a different firm of the subsample of the 165 firms that separate the CEO and chairman positions. *Text similarity* is calculated using the Ratcliff and Obershelp algorithm for pattern recognition and pattern 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. *Days* is the number of days between the firm's filing date of the 2010 proxy statement with the SEC and the date the 2009 amendments to Regulation S-K became effective, i.e., February 28, 2010. A linear regression of *Text similarity* on the number of days (*Days*) and an intercept yields the regression equation y = 0.01*Days + 12.07. Both coefficients are significant at the 1% level. The R-squared of the linear regression equals 4.1%.

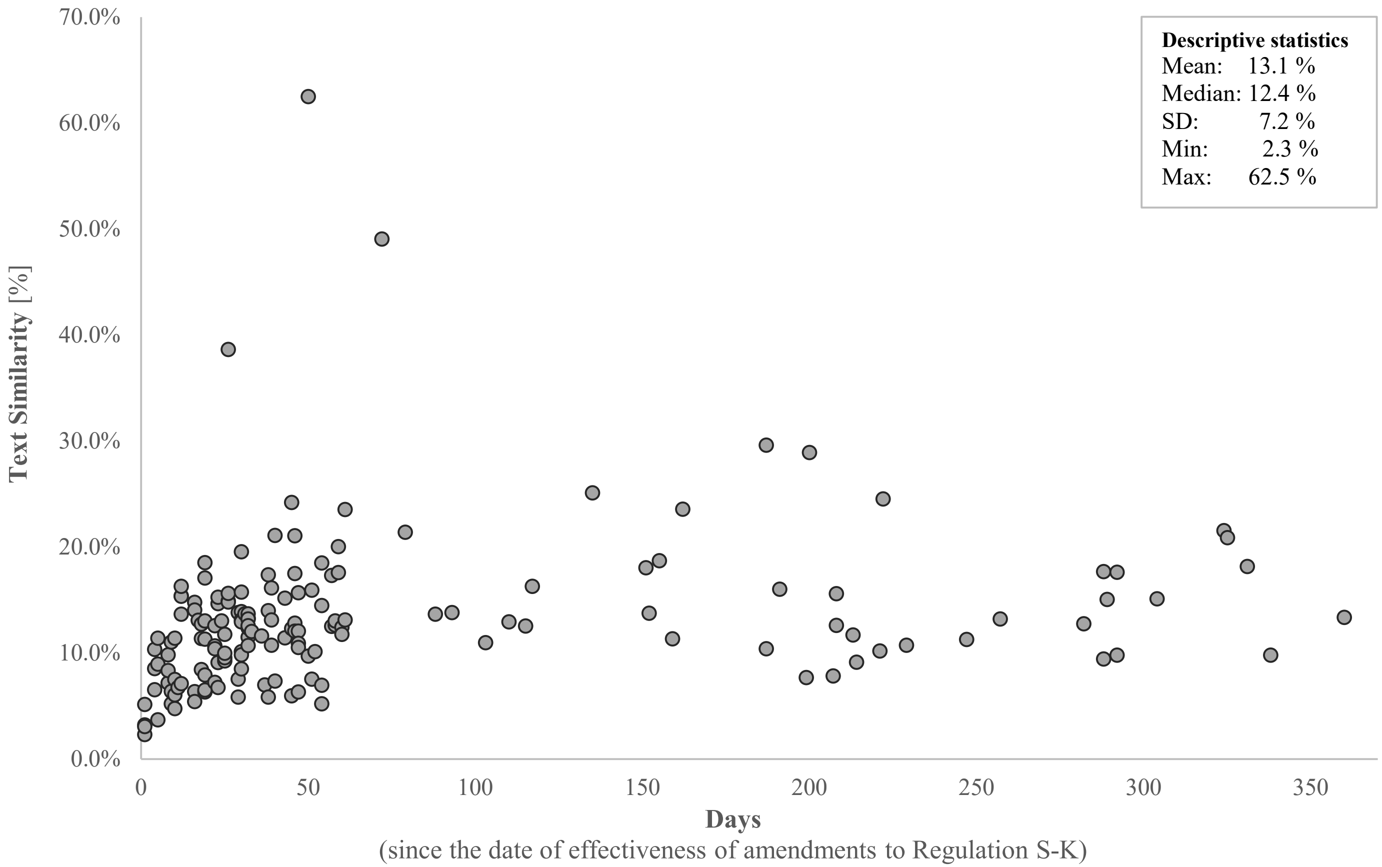


Table 1: Summary statistics for S&P 500 companies with and without CEO duality

This table presents summary statistics on CEO, chairman, firm and governance characteristics for the 282 firms with duality and the 165 firms without duality, which were members of the S&P 500 index at the end of calendar year 2009. The sample period is March 01, 2010 to February 28, 2011. CEO and chairman characteristics are manually collected from the firms' proxy filings. Company financial data for the end of fiscal year 2009 is obtained from Capital IQ. All dollar values are in millions. *CEO age* is the age of the company's CEO in years. *CEO tenure* is the number of years the CEO has been serving as the company's CEO. *Founder CEO* is an indicator variable that takes the value of one if the CEO 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. *Founder chair* is an indicator variable set to one if the chairman of the board is the founder of the company, and zero otherwise. *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. *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. *CAR [0,1]* is winsorized at the 1^{st} and 99^{th} percentiles. *Leverage* is total long-term debt divided by the book value of total assets. Market *capitalization* is the number of common shares outstanding times the stock price at the end of the previous fiscal year. *Firm age* is the number of years since the firm's first inclusion date in CRSP. *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. *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. *Sales growth* is the annual growth rate of the firm's total revenues. *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. *Board size* is the number of directors on the firm's board of directors. *Independence ratio* is the number of independent directors divided by the total number of directors. *E-Index* is the entrenchment index based on six anti-takeover protection devices as proposed by Bebchuk, Cohen, and Ferrell (2009). 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	Median	Std. dev.	Min	Max	Mean	Median	Std. dev.	Min	Max	Difference (t-stat)
CEO characteristics											
CEO age	56.88	56.50	6.21	43.00	82.00	53.27	53.00	6.44	39.00	72.00	3.61*** (5.79)
CEO tenure	7.12	6.00	6.30	0.00	46.00	3.32	2.00	4.08	0.00	32.00	3.80*** (7.74)
Founder CEO	0.08		0.27			0.02		0.15			0.06*** (2.83)
Chair characteristics											
Independent chair						0.50		0.50			
Founder chair						0.19		0.39			
Chair former company CEO						0.47		0.50			
Firm characteristics											
CAR [0,1] [%]	0.08	0.07	1.74	-0.53	0.56	-0.09	-0.09	2.08	-0.53	0.56	0.17 (0.92)
Firm age	37.29	37.00	24.86	0.00	85.00	28.78	24.00	19.19	0.00	84.00	8.51*** (4.04)
Leverage	0.22	0.20	0.14	0.00	0.72	0.20	0.17	0.17	0.00	0.77	0.02 (1.08)
Market capitalization	23,968	9,858	38,986	1,134	322,334	15,531	7,776	26,605	1,786	199,451	8,437*** (2.71)
Prior year BHR	0.25	0.07	0.80	-0.95	5.35	0.31	0.07	0.79	-0.75	4.61	-0.06 (-0.74)
Regulated industry	0.32		0.47			0.31		0.46			0.01 (0.30)
Sales growth	-0.05	-0.05	0.22	-0.53	1.22	0.04	-0.02	0.88	-0.42	11.06	-0.09 (-1.37)
Tech firm	0.11		0.32			0.22		0.41			-0.10*** (-2.80)
Tobin's Q	1.71	1.47	0.82	0.77	5.83	1.81	1.48	0.95	0.87	6.14	-0.10 (1.12)
Total assets	52,161	13,612	165,958	751	2,031,989	41,859	9,156	170,866	1,235	1,856,646	10,302 (0.62)
Governance characteristics											
Board size	10.83	11.00	2.15	5.00	18.00	10.77	11.00	2.75	6.00	32.00	0.06 (0.26)
E-Index	3.15	3.00	1.36	0.00	6.00	2.99	3.00	1.39	0.00	6.00	0.16 (1.18)
Independence ratio	0.86	0.89	0.07	0.45	0.94	0.81	0.82	0.10	0.50	0.94	0.05*** (5.88)

Table 2: Number and textual characteristics of reasons stated by firms for combining or separating the CEO and chairman positions

Panel A shows summary statistics for the number of distinct reasons for the chosen board leadership structure (*Number of reasons*) and the textual characteristics of the reasons disclosed by the 282 sample firms with CEO duality and the 165 sample firms without duality. *Number of reasons* is the number of distinct reasons for a chosen board leadership structure as reported in the firm's proxy statement. *Positive (negative) tone* is the number of positive (negative) words divided by the total number of words. 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's word lists page (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 *Number of reasons*. The last column of Panel A presents two-tailed difference-in-means tests allowing for unequal variances between the two subsamples. Panel B presents the results of ordinary least squares (OLS) regressions of the variables *Number of reasons*, *ln(Words)*, *Positive tone*, and *Negative tone* on sets of CEO, chair, governance, and firm characteristics for the sample of the S&P 500 companies. Each specification includes an indicator variable *Duality* to account for the difference in the applied board leadership structure across firms. *Duality* takes the value of one if the firm combines the CEO and chairman positions, zero otherwise. Column (1) of Panel B shows the regression results for the natural logarithm of the *Number of reasons* (*ln(Number of reasons)*) as the dependent variable. In Column (2) the dependent variable is *ln(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 (Negative) tone*, as the dependent variable. All other variables are as defined in Table 1. An intercept is included in all the regressions, but not reported. Robust t-statistics are reported in parentheses below. ***, **, * denotes significance at the 1%, 5%, and 10% level, respectively.

Panel A: Summary statistics

	CEO duality (N=282)					**No CEO duality** (N=165)					**Difference-in-means test**
	Mean	Median	Std. dev.	Min	Max	Mean	Median	Std. dev.	Min	Max	Difference (t-stat)
Number of reasons	2.09	2.00	1.19	0.00	6.00	1.70	2.00	1.17	0.00	5.00	0.40*** (3.42)
Negative tone [%]	0.68	0.54	0.66	0.00	4.07	0.55	0.37	0.63	0.00	2.94	0.13** (2.12)
Positive tone [%]	2.62	2.34	1.30	0.00	6.78	1.91	1.86	1.20	0.00	6.06	0.71*** (5.82)
Words	263.3	238.5	134.6	40.0	837.0	223.3	210.0	108.9	36.0	529.0	40.0*** (3.42)
Words per reason	144.3	120.0	85.8	31.0	563.0	147.5	124.0	108.9	36.0	514.0	-3.23 (-0.37)

Panel B: Multivariate regressions of textual characteristics on CEO duality and controls

	ln(Number of reasons)	ln(Words)	Positive tone	Negative tone
	(1)	(2)	(3)	(4)
CEO duality	**0.113****	**0.180*****	**0.006*****	**0.001***
	(2.28)	**(2.80)**	**(4.32)**	**(1.77)**
CEO characteristics				
CEO age	-0.000	0.002	-0.000	-0.000
	(-0.09)	(0.41)	(-0.20)	(-0.21)
CEO gender	0.019	-0.097	-0.001	-0.002
	(0.29)	(-0.78)	(-0.15)	(-1.05)
CEO tenure	0.006	-0.011**	0.000	0.000
	(1.19)	(-2.19)	(1.32)	(0.29)
Founder CEO	0.265***	0.187*	-0.001	-0.000
	(3.30)	(1.78)	(-0.26)	(-0.10)
New CEO	-0.020	-0.035	0.003	0.002*
	(-0.26)	(-0.36)	(1.49)	(1.75)
Governance characteristics				
E-Index	0.021	0.041**	-0.000	0.000
	(1.25)	(2.13)	(-0.30)	(0.31)
Independence ratio	0.002	-0.486*	0.009	0.004
	(0.01)	(-1.75)	(1.15)	(1.12)
ln(Board size)	0.016	-0.033	-0.003	0.001
	(0.15)	(-0.25)	(-0.95)	(0.48)
Firm characteristics				
Firm age	0.002*	0.002**	-0.000	0.000
	(1.81)	(1.99)	(-0.95)	(0.46)
Leverage	-0.088	0.087	0.003	0.003
	(-0.63)	(0.48)	(0.60)	(1.38)
ln(Market cap)	0.003	0.052*	0.001*	0.000
	(0.11)	(1.78)	(1.85)	(0.27)
Prior year BHR	0.023	0.010	0.000	-0.000
	(1.10)	(0.36)	(0.66)	(-0.24)
Regulated industry	0.109**	-0.022	-0.000	0.000
	(2.33)	(-0.38)	(-0.06)	(0.47)
Sales growth	-0.018	-0.104***	-0.001	-0.001**
	(-1.22)	(-5.34)	(-1.50)	(-2.33)
Tech firm	0.091*	0.039	-0.002	0.000
	(1.73)	(0.50)	(-0.94)	(0.05)
Tobin's Q	0.036	0.003	0.001	0.000
	(1.28)	(0.10)	(1.27)	(0.05)
Observations	447	447	447	447
R-squared	0.079	0.080	0.097	0.034

Table 3: Reasons for combining and separating the CEO and chairman positions across the sample period

This table present two-tailed difference-in-means tests between early and late disclosure events regarding the four most frequently stated (top 4) reasons. "*Other reasons*" is an indicator variable that is set to one if the company stated at least one reason for its board leadership structure choice other than one of the top-4 reasons stated by all firms combining or separating the CEO and chairman positions. Early disclosures are all observations corresponding to the proxy statement being filed within the first two months after the new SEC disclosure regulation became effective, i.e., March and April 2010. The remaining observations relate to filing dates between May 01, 2010 and February 28, 2011. Panel A shows difference-in-means tests for the 282 firms with duality, while Panel B contains the difference-in-means tests for the 165 non-duality sample firms. All difference-in-means tests allow for unequal variances across both subsamples. T-statistics are reported in parentheses after the difference in the subsample means. ***, **, * denotes significance at the 1%, 5%, and 10% level, respectively.

Panel A: CEO duality

	Early disclosures (N=230)	**Later disclosures** (N=52)	**Difference-in-means test**
	Mean	Mean	Difference (t-stat)
Unified leadership	0.56	0.56	0.00 (0.04)
Knowledge as CEO	0.44	0.56	-0.12 (-1.54)
Bridge between management and board	0.24	0.23	0.01 (0.06)
Leadership structure has served well	0.17	0.25	-0.08 (-1.16)
Other reasons	0.50	0.46	0.04 (0.44)

Panel B: No CEO duality

	Early disclosures (N=122)	**Later disclosures** (N=43)	**Difference-in-means**
	Mean	Mean	Difference (t-stat)
Differences between tasks/roles	0.28	0.47	-0.19** (2.14)
Facilitates monitoring	0.30	0.33	-0.03 (-0.37)
CEO focus on management	0.17	0.37	-0.20** (2.44)
Chair's experience with company	0.20	0.16	0.04 (0.05)
Other reasons	0.60	0.61	-0.01 (-0.07)

Table 4: Textual similarity between firms' 2010 and 2011 sections

Panel A presents summary statistics for the textual similarity of firms' sections on board leadership structure disclosed in their 2010 and 2011 proxy statements. *Text similarity* is the similarity of a firm's 2010 section on board leadership structure with the firm's 2011. The table is based on the 276 of the 282 sample firms with duality, and the 162 of the 165 firms withoutduality whose 2011 proxy statement is available. *Text similarity* is calculated using the Ratcliff and Obershelp algorithm for pattern recognition and pattern 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. Panel B shows the results of the OLS regressions of *Text similarity* on the indicator variable *Duality* and CEO, firm and governance controls for each type of board leadership structure. *New* CEO_{2011} is an indicator variable that equals one if the company's CEO has changed during the 2010 fiscal year and the company reports a different CEO in its 2011 proxy statement compared to its 2010 proxy statement, and zero otherwise. $BHAR_{2010\text{-}2011}$ 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. All other variables are defined in Table 1. 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

	CEO duality						**No CEO duality**						**Difference-in-means test**
	N	Mean	Med.	Std. dev.	Min	Max	N	Mean	Med.	Std. dev.	Min	Max	Difference (t-stat)
Text similarity	276	0.75	0.89	0.30	0.01	1.00	162	0.74	0.88	0.30	0.02	1.00	0.11 (0.36)
Text similarity (excl. firms that changed the CEO and/or the chairman from 2010 to 2011)	242	0.80	0.94	0.27	0.02	1.00	141	0.77	0.90	0.28	0.02	1.00	0.24 (0.82)

Panel B: Multivariate determinants of text similarity

CEO duality	**0.061***
	(1.70)
Negative tone$_{2010}$	-8.06***
	(-3.54)
Positive tone$_{2010}$	0.322
	(0.30)
CEO age$_{2010}$	-0.002
	(-0.72)
CEO gender$_{2010}$	-0.084
	(-0.85)
CEO tenure$_{2010}$	0.000
	(0.12)
Founder CEO$_{2010}$	-0.114*
	(-1.93)
New CEO$_{2011}$	-0.301***
	(-6.34)
E-Index$_{2010}$	0.006
	(0.59)
Independence ratio$_{2010}$	-0.138
	(-0.88)
ln(Board size)$_{2010}$	0.070
	(0.98)
BHAR$_{2010\text{-}2011}$	0.125**
	(1.98)
ln(Market cap)$_{2010}$	-0.017
	(-1.15)
Regulated industry	-0.031
	(-0.95)
Stock volatility$_{2011}$	-4.434*
	(-1.78)
Tech firm	0.013
	(0.34)
Observations	438
R-squared	0.146

Table 5: Abnormal stock returns to the disclosure of firms' reasons for combining or separating the CEO and chairman positions

This table contains the OLS regression results of the two-day cumulative abnormal stock returns on the four most frequently used reasons for board leadership structure by the 282 firms with duality (Panel A) and the 165 firms without (Panel B). For each panel, columns (1) and (3) report the ordinary least squares regression results. The dependent variable is the two-day cumulative abnormal return (*CAR [0,1]*). Columns (2) and (4) show the logit regression results where the dependent variable is the indicator variable *CAR [0,1] negative*, which takes the value of one if *CAR [0,1]* is below zero, and zero otherwise. The regression results in columns (1) and (2) are based on all the 282 firms with duality (Panel A) and all the 165 firms without duality (Panel B). The regression results in columns (3) and (5) 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 is set to one if the company stated at least one reason for the board leadership structure choice other than the four most frequently stated reasons. Following Yermack and Wei (2011), we include nine proxy statement control variables for certain corporate governance matters, for which investor reactions have previously been documented. Such matters include CEO compensation, changes in board composition, and shareholder proposals. We include the following indicator variables as proxy controls: (i) an indicator variable if the firm nominates new independent directors to be elected to the board; (ii) an indicator variable equal to one if the firm nominates new non-independent outside directors who likely have a material interest in the firm; (iii) three indicator variables measuring whether the firm's management proposes shareholder-friendly proposals, i.e., the repeal of the super-majority voting requirements, the introduction of majority voting in director elections, and the declassification of the board; and finally (iv) indicator variables for shareholder resolutions on executive compensation, other corporate governance issues, social or environmental issues, and any other shareholder proposal. All other variables are as defined in Table 1. An intercept is included in all the regressions, but not reported. Robust t-statistics are reported in parentheses below the regression coefficients. ***, **, * denotes significance at the 1%, 5%, and 10% level, respectively.

Panel A: CEO duality	**CAR [0,1]**	**CAR [0,1] negative**	**CAR [0,1]**	**CAR [0,1] negative**
	(1)	(2)	(3) March and April 2010	(4) March and April 2010
Unified leadership	**0.004**	**-0.089**	**0.002**	**-0.073**
	(1.45)	**(-0.33)**	**(0.82)**	**(-0.24)**
Knowledge as CEO	**-0.001**	**-0.076**	**0.001**	**-0.240**
	(-0.50)	**(-0.28)**	**(0.38)**	**(-0.79)**
Bridge between management and board	**-0.003**	**-0.083**	**-0.006***	**0.146**
	(-1.06)	**(-0.25)**	**(-1.83)**	**(0.39)**
Leadership structure has served well	**-0.005***	**0.698****	**-0.008*****	**0.935****
	(-1.89)	**(2.06)**	**(-2.79)**	**(2.33)**
Other reasons	-0.002	-0.089	-0.003	0.215
	(-0.71)	(-0.31)	(-0.95)	(0.67)
ln(Market cap)	-0.001	0.212	-0.002	0.157
	(-0.95)	(1.64)	(-1.52)	(1.05)
ln(Words)	-0.000	0.247	-0.001	0.203
	(-0.14)	(0.90)	(-0.44)	(0.67)
Regulated industry	-0.004	0.206	-0.004	0.215
	(-1.46)	(0.73)	(-1.57)	(0.72)
Tech firm	-0.004	0.146	0.011	-0.575
	(-0.44)	(0.35)	(1.24)	(-0.98)
Proxy statement controls (9)	Yes	Yes	Yes	Yes
Observations	282	281	230	229
R-squared/ Pseudo R-squared	0.048	0.058	0.115	0.072

Panel B: No CEO duality	**CAR [0,1]**	**CAR [0,1] negative**	**CAR [0,1]**	**CAR [0,1] negative**
	(1)	(2)	(3) March and April 2010	(4) March and April 2010
Differences between tasks/roles	**0.003**	**-0.514**	**0.006**	**-0.858***
	(0.64)	**(-1.35)**	**(1.20)**	**(-1.76)**
Facilitates monitoring	**0.000**	**0.044**	**0.000**	**0.045**
	(0.01)	**(0.11)**	**(0.09)**	**(0.08)**
CEO focus on management	**-0.001**	**-0.144**	**0.003**	**-0.627**
	(-0.20)	**(-0.33)**	**(0.48)**	**(-1.04)**
Chair's experience with company	**0.008**	**-0.554**	**0.009**	**-0.507**
	(1.46)	**(-1.20)**	**(1.25)**	**(-0.81)**
Other reasons	0.001	-0.166	0.004	-0.495
	(0.34)	(-0.45)	(0.90)	(-0.97)
ln(Market cap)	0.001	0.265	0.002	0.133
	(0.33)	(1.17)	(0.72)	(0.50)
ln(Words)	-0.005	0.118	-0.006	0.354
	(-1.55)	(0.38)	(-1.54)	(0.92)
Regulated industry	0.002	-0.256	0.001	-0.182
	(0.42)	(-0.65)	(0.25)	(-0.39)
Tech firm	0.004	-0.987**	0.009	-1.788***
	(0.76)	(-2.22)	(1.60)	(-2.80)
Proxy statement controls (9)	Yes	Yes	Yes	Yes
Observations	165	165	122	117
R-squared/ Pseudo R-squared	0.057	0.073	0.111	0.105

Table 6: 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 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). From stopped here Panel A through Panel C, we add an interaction to the baseline specification shown in column (1) in Panel A of Table 5. In particular, in columns (1) to (3), we add interaction terms of the respective board leadership reason with proxies for firm size and firm complexity (*Market cap, Business segments, or Firm age)*. Columns (4) to (6) contain interaction terms of the leadership reason with proxies for more dynamic and competitive business environments (*Tech firm*, *Stock volatility*, or *Fluidity*). *Market cap*, *Business segments*, *Firm age*, *Stock volatility* and *Fluidity* each are indicator variables that are set to one if the respective measure exceeds the sample median, zero otherwise. *Tech firm* is an indicator variable set to one if the firm operates in a high-tech industry following Loughran and Ritter (2004) high-tech definition. The number of observations in column (6) is lower due to data availability. All specifications contain the same sets of controls as shown in Table 5. The control for the respective interaction measure as well as an intercept is included in all the regressions, but 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)
Interaction measure:	*Market cap*	*Business segments*	*Firm age*	*Tech firm*	*Stock volatility*	*Fluidity*
Unified leadership	0.009***	0.006**	0.007*	0.001	-0.0013	-0.001
	(2.87)	(2.11)	(1.85)	(0.28)	(-0.59)	(-0.32)
Unified leadership * Interaction measure (0/1)	**-0.013*****	**-0.008***	**-0.008***	**0.016****	**0.008***	**0.0004***
	(2.97)	**(-1.76)**	**(-1.68)**	**(2.22)**	**(1.84)**	**(1.74)**
Observations	282	282	282	282	282	274
R-squared	0.112	0.092	0.090	0.098	0.091	0.091

Panel B: Knowledge as CEO	(1)	(2)	(3)	(4)	(5)	(6)
Knowledge as CEO	-0.002	0.000	0.001	-0.000	-0.001	-0.002
	(-0.52)	(0.04)	(0.14)	(-0.18)	(-0.34)	(-0.45)
Knowledge as CEO * Interaction measure (0/1)	**0.0012**	**-0.002**	**-0.003**	**-0.007**	**-0.001**	**0.000**
	(0.29)	**(-0.49)**	**(-0.62)**	**(-0.95)**	**(-0.16)**	**(0.25)**
Observations	282	282	282	282	282	274
R-squared	0.081	0.082	0.081	0.080	0.078	0.084

Panel C: Bridge between management and board	(1)	(2)	(3)	(4)	(5)	(6)
Bridge between management and board	-0.003	-0.005	0.004	-0.004	-0.001	-0.001
	(-0.87)	(-1.44)	(1.17)	(-1.51)	(-0.28)	(-0.10)
Bridge between management and board * Interaction measure (0/1)	**0.001**	**0.004**	**-0.013*****	**0.009**	**-0.004**	**-0.000**
	(0.11)	**(0.72)**	**(-2.76)**	**(1.31)**	**(-0.84)**	**(-0.65)**
Observations	282	282	282	282	282	274
R-squared	0.081	0.083	0.104	0.082	0.081	0.085

Table 7: Cross-sectional heterogeneity in the stock market reaction to reasons stated by firms without CEO duality

This table presents the OLS regression results of the two-day abnormal returns (*CAR [0,1]*) for the 165 firms with no duality on the three most frequently stated reasons for no duality. Panel A presents the results of the heterogeneity analysis for the board leadership reason "*Differences between tasks/roles*", Panel B contains the results for the board leadership reasons "*Facilitates monitoring*", while Panel C shows the results for the leadership reason "*CEO can focus on management*". In Panel A through Panel C, we add an interaction to the baseline specification shown in column (1) in Panel B of Table 5. In particular, columns (1) to (3) contain interaction terms of the respective board leadership reason with proxies for firm size and firm complexity (*Market cap, Business segments, or Firm age)*, while columns (4) to (6) include interaction terms of the leadership reason with proxies for more dynamic and competitive business environments (*Tech firm*, *Stock volatility*, or *Fluidity*). *Market cap*, *Business segments*, *Firm age*, *Stock volatility* and *Fluidity* each are indicator variables that are set to one if the respective measure exceeds the sample median, zero otherwise. In columns (7) to (12), we add interactions of the leadership reason with CEO characteristics (columns (7) and (8)), characteristics of the chairman (columns (9), (10), and (11)), and board independence (column (12)). *Tech firm* is an indicator variable set to one if the firm operates in a high-tech industry following Loughran and Ritter (2004) high-tech definition. The number of observations in column (6) is lower due to data availability. All specifications contain the same sets of controls as shown in Table 5. The control for the respective interaction measure as well as an intercept is included in all the regressions, but shown for brevity.

Panel A: Differences between tasks/roles	**CAR [0,1]**					
	(1)	(2)	(3)	(4)	(5)	(6)
Interaction measure:	*Market cap*	*Business segments*	*Firm age*	*Tech firm*	*Stock volatility*	*Fluidity*
Differences between tasks/roles	0.003	0.004	0.003	0.004	-0.004	-0.001
	(0.63)	(0.88)	(0.71)	(1.04)	(-1.01)	(-0.12)
Differences between tasks/roles * Interaction measure (0/1)	**0.001**	**-0.002**	**0.002**	**-0.003**	**0.015****	**0.001**
	(0.20)	**(-0.30)**	**(0.29)**	**(-0.36)**	**(2.31)**	**(0.62)**
Observations	165	165	165	165	165	161
R-squared	0.072	0.071	0.078	0.070	0.097	0.070
	(7)	(8)	(9)	(10)	(11)	(12)
Interaction measure:	*New CEO*	*CEO tenure*	*Founder chair*	*Chair former CEO*	*Independent chair*	*Independence ratio*
Differences between tasks/roles	0.002	0.004	0.002	0.002	0.004	-0.004
	(0.54)	(0.84)	(0.38)	(0.35)	(0.82)	(-0.13)
Differences between tasks/roles * Interaction measure	**0.015***	**-0.000**	**0.006**	**0.004**	**-0.001**	**0.010**
	(1.67)	**(-0.40)**	**(0.77)**	**(0.54)**	**(-0.07)**	**(0.23)**
Observations	165	165	165	165	165	165
R-squared	0.095	0.074	0.077	0.077	0.070	0.070

Panel B: Facilitates monitoring	(1)	(2)	(3)	(4)	(5)	(6)
Interaction measure:	*Market cap*	*Business segments*	*Firm age*	*Tech firm*	*Stock volatility*	*Fluidity*
Facilitates monitoring	-0.001	-0.001	-0.001	-0.002	0.003	-0.004
	(-0.15)	(-0.13)	(-0.10)	(-0.46)	(0.58)	(-0.64)
Facilitates monitoring * Interaction measure (0/1)	**0.001**	**0.001**	**-0.001**	**0.007**	**-0.006**	**0.000**
	(0.11)	**(0.13)**	**(-0.12)**	**(0.89)**	**(-0.81)**	**(0.71)**
Observations	165	165	165	165	165	161
R-squared	0.072	0.070	0.073	0.074	0.074	0.067
	(7)	(8)	(9)	(10)	(11)	(12)
Interaction measure:	*New CEO*	*CEO tenure*	*Founder chair*	*Chair former CEO*	*Independent chair*	*Independence ratio*
Facilitates monitoring	0.003	-0.007	0.001	-0.001	-0.000	-0.033
	(0.75)	(-1.41)	(0.15)	(-0.14)	(-0.06)	(-1.16)
Facilitates monitoring * Interaction measure	**-0.018***	**0.002***	**-0.006**	**-0.001**	**-0.000**	**0.040**
	(-1.83)	**(1.92)**	**(-0.82)**	**(-0.19)**	**(-0.02)**	**(1.16)**
Observations	165	165	165	165	165	165
R-squared	0.099	0.093	0.077	0.076	0.070	0.076

Panel C: CEO focus on management	(1)	(2)	(3)	(4)	(5)	(6)
Interaction measure:	*Market cap*	*Business segments*	*Firm age*	*Tech firm*	*Stock volatility*	*Fluidity*
CEO focus on management	-0.005	-0.001	-0.007	-0.000	0.000	0.005
	(-0.78)	(-0.19)	(-1.26)	(-0.03)	(0.07)	(0.59)
CEO focus on management * Interaction measure (0/1)	**0.011**	**0.004**	**0.022*****	**0.002**	**0.000**	**-0.001**
	(1.19)	**(0.43)**	**(3.01)**	**(0.21)**	**(0.02)**	**(-0.53)**
Observations	165	165	165	165	165	161
R-squared	0.082	0.071	0.119	0.070	0.070	0.068
	(7)	(8)	(9)	(10)	(11)	(12)
Interaction measure:	*New CEO*	*CEO tenure*	*Founder chair*	*Chair former CEO*	*Independent chair*	*Independence ratio*
CEO focus on management	-0.003	0.005	-0.005	-0.007	0.010	0.083**
	(-0.61)	(0.82)	(-0.99)	(-1.07)	(1.52)	(2.36)
CEO focus on management * Interaction measure	**0.017**	**-0.001**	**0.028*****	**0.018****	**-0.016***	**-0.101****
	(1.65)	**(-1.37)**	**(2.94)**	**(2.02)**	**(-1.75)**	**(-2.28)**
Observations	165	165	165	165	165	165
R-squared	0.099	0.083	0.118	0.103	0.090	0.107

Appendices

Appendix A.1: CEO duality – Example "Safeway Inc."

Board Leadership Structure

Currently, the roles of Chairman and Chief Executive Officer of the Company are combined and held by Mr. Burd. Mr. Burd has served as our Chairman since 1998 and as our Chief Executive Officer since 1993. The Guidelines provide that our independent directors will annually elect a Lead Independent Director to perform certain functions. The independent directors elected Paul Hazen to serve as the Lead Independent Director for 2010. In addition to the duties all Board members have, the specific responsibilities of the Lead Independent Director include: […]

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.

Source:

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

Appendix A.2: No CEO duality – Example "Plum Creek Timber Company Inc."

Board Leadership Structure

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.

In order to give a voice to our independent directors, the Corporate Governance Guidelines provide for at least four executive sessions of solely independent directors. The Corporate Governance Guidelines provide that the Chairman of the Board preside at, and set the agenda for, all executive sessions of independent directors. If the Board has not selected a Chairman, then the Corporate Governance Guidelines require that the chair of the Audit Committee, the Corporate Governance and Nominating Committee and the Compensation Committee each preside over the meetings of the independent directors in rotating order as decided by the other independent directors.

Another key component of Board leadership is the role of the Board committees. The Board has divided oversight functions among three committees, each of which is comprised entirely of independent directors and covers an extensive agenda. These committees regularly report back to the full Board with specific findings and recommendations in their areas of oversight and also coordinate with the President and Chief Executive Officer and other members of management.

The Company believes that the foregoing structure, policies, and practices, when combined with the Company's other governance policies and procedures, function extremely well in strengthening Board leadership, fostering cohesive decision-making at the Board level, solidifying director collegiality, improving problem solving and enhancing strategy formulation and implementation.

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

Appendix B: Descriptions of the four most frequently stated board leadership structure reasons

CEO duality
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. <u>Examples:</u> The leadership structure… - *"[…] 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."*
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. <u>Examples</u>: - *"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."* - *"[…] allowing the senior-most executive who possesses significant business and industry knowledge to set Board meeting agendas and to lead the related discussions."*
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". <u>Examples:</u> - *"[…] acting as both enables our CEO to be an efficient bridge between the Board and the Company management."* - *"[…] promotes a more enhanced information flow between management and the Board."* - *"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."*
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. <u>Examples:</u> - *"The structure has served the Company and its shareholders well in the past, as evidenced by the Company's success."* - *"[…] a structure that has proven effective for the Company in the past."* - *"[…] has proven extremely effective for the Company historically in the area of company performance."*

No CEO duality
Differences between tasks/roles The company chose to separate the positions of the CEO and the chairman of the board in recognition of the differences between the tasks and roles associated with the two positions. <ins>Examples</ins>: - *"We separate the roles of CEO and Chairman of the Board in recognition of the differences between the two roles."* - *"[…] the structure creates a better balance in leadership and accountability, as the functions of the CEO and the Board Chairman are significantly different."* - *"[…] because it separates the leadership of the Board from the duties of day-to-day leadership of the Company."*
Facilitates monitoring The company states to separate the positions of CEO and chairman of the board because it facilitates the independent monitoring and oversight of the CEO and the management. <ins>Examples</ins>: - *"Splitting the roles allows the chairman to ensure that the Board is focused on its oversight responsibilities, including independent oversight of management."* - *"[…] the leadership structure was and continues to be appropriate and beneficial, as this delineation creates increased oversight."*
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. <ins>Examples</ins>: - *"[…] 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."* - *"In particular, it permits our CEO to focus his full time and attention of the business […]"*
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. <ins>Examples</ins>: - *"[…] 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 […] "* - *"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."*

Appendix C.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 C.2: Frequency of reasons for separating the CEO and chairman positions
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 positions	0.6%	1

Appendix D: Pairwise correlations of the top 4 reasons stated by duality and non-duality firms

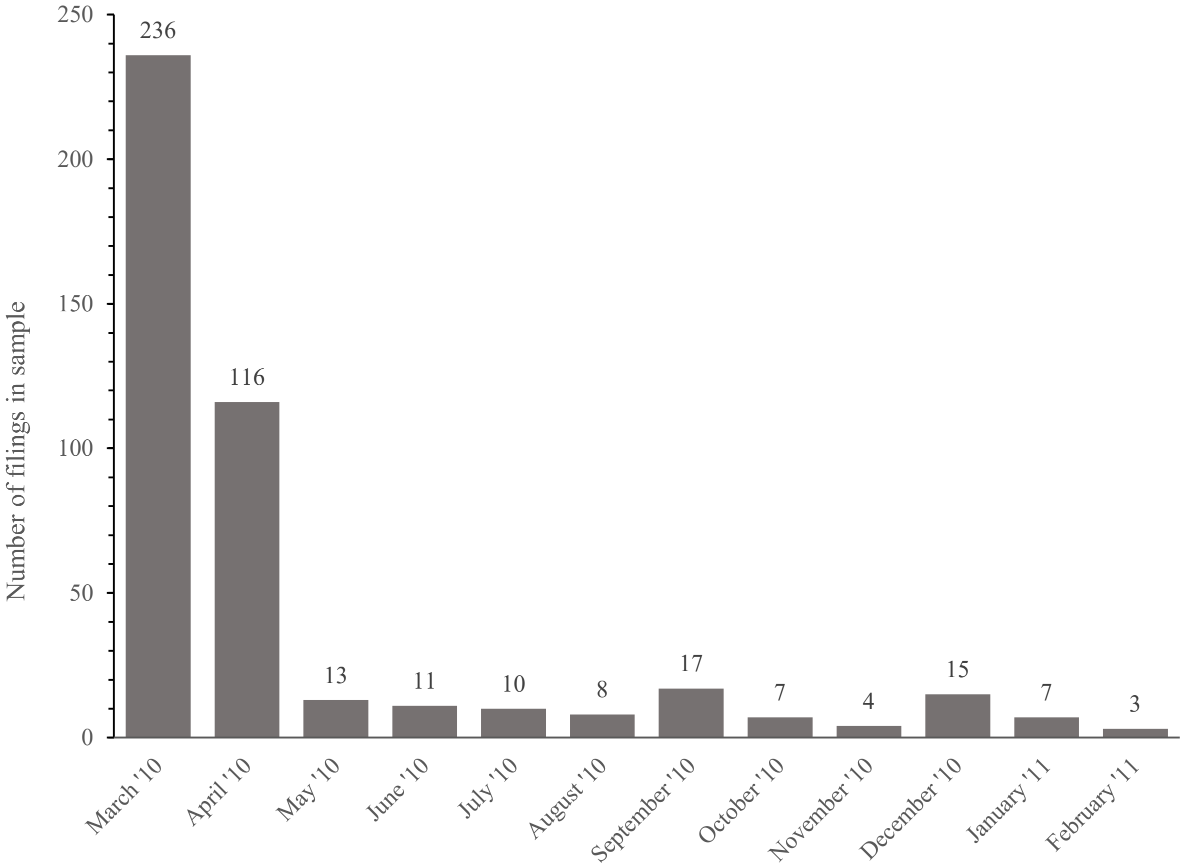
Panel A (B) presents pairwise correlations among the four most frequently stated (top 4) reasons for combining (separating) the CEO and chairman positions. ***, **, * denote significance at the 1%, 5%, and 10% level, respectively.

Panel A: 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

Panel B: 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

Appendix E: 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.



cfr working paper series

centre for financial research
cologne

cfr working papers are available for download from www.cfr-cologne.de.

2018

No.	Author(s)	Title
18-06	M. Goergen, P. Limbach, M. Scholz-Daneshgari	On the Choice of CEO Duality: Evidence from a Mandatory Disclosure Rule
18-05	F. Brochet, P. Limbach, D. Bazhutov, A. Betzer, M. Doumet	Where do Investor Relations Matter the Most?
18-04	G. Cici, A. Kempf, C. Peitzmeier	Knowledge Spillovers in the Mutual Fund Industry through Labor Mobility
18-03	T. Rischen, E. Theissen	Underpricing in the Euro Area Corporate Bond Market: New Evidence from Post-Crisis Regulation and Quantitative Easing
18-02	S. Lesmeister, P. Limbach, M. Goergen	Trust and Shareholder Voting
18-01	G. Cici, M. Hendriock, A. Kempf	The Impact of Labor Mobility Restrictions on Managerial Actions: Evidence from the Mutual Fund Industry

2017

No.	Author(s)	Title
17-04	G. Cici, P.B. Shane, Y. S. Yang	Do Connections with Buy-Side Analysts Inform Sell-Side Analyst Research?
17-03	G. Cici, S. Gibson, R. Moussawi	Explaining and Benchmarking Corporate Bond Returns
17-02	S. Jaspersen, P. Limbach	Knowing Me, Knowing You? Similarity to the CEO and Fund Managers' Investment Decisions
17-01	J. Grammig, E.-M. Küchlin	A two-step indirect inference approach to estimate the long-run risk asset pricing model

2016

No.	Author(s)	Title
16-12	A. Betzer, H.S. Lee, P. Limbach, J.M. Salas	Are Generalists Beneficial to Corporate Shareholders? Evidence from Exogenous Executive Turnovers
16-11	F. Brochet, P. Limbach, M. Schmid, M. Scholz-Daneshgari	CEO-firm match quality, entrenchment, and the relation between CEO tenure and firm value
16-10	V. Agarwal, R. Vashishtha, M. Venkatachalam	Mutual fund transparency and corporate myopia

16-09	M.-A. Göricke	Do Generalists Profit from the Fund Families' Specialists? Evidence from Mutual Fund Families Offering Sector Funds
16-08	S. Kanne, O. Korn, M.Uhrig-Homburg	Stock Illiquidity, Option Prices and Option Returns
16-07	S. Jaspersen	Market Power in the Portfolio: Product Market Competition and Mutual Fund Performance
16-06	O. Korn, M.-O. Rieger	Hedging With Regret
16-05	E. Theissen, C. Westheide	Call of Duty: Designated Market Maker Participation in Call Auctions
16-04	P. Gomber, S. Sagade, E. Theissen, M.C. Weber, C. Westheide	Spoilt for Choice: Order Routing Decisions in Fragmented Equity Markets
16-03	T.Martin, F. Sonnenburg	Managerial Ownership Changes and Mutual Fund Performance
16-02	A.Gargano, A. G. Rossi, R. Wermers	The Freedom of Information Act and the Race Towards Information Acquisition
16-01	G. Cici, S. Gibson, C. Rosenfeld	Cross-Company Effects of Common Ownership: Dealings Between Borrowers and Lenders With a Common Blockholder

This document only covers the most recent cfr working papers. A full list can be found at www.cfr-cologne.de.

centre for financial research
cfr/university of cologne
Albertus-Magnus-Platz
D-50923 cologne
fon +49(0)221-470-6995
fax +49(0)221-470-3992
kempf@cfr-cologne.de
www.cfr-cologne.de