The Effect of Ownership Structure and Board Independence on Firm Value: Evidence from Controlled Companies

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Abstract: Controlled companies are public firms in which an individual, group or company holds more than 50 percent of the voting power. These firms are an economically significant part of the economy but are not directly examined by prior research. Importantly, they may opt out of independence requirements for the board and certain committees mandated by the major stock exchanges. Despite concerns about whether controlled companies act in shareholders' best interests, they exhibit a valuation premium. Exploring whether this premium is justified, controlled companies invest less efficiently, driven by firms with low board independence. Low board independence firms also engage in more earnings management, masked by higher levels of information asymmetry. Given these results, it is perhaps unsurprising that the valuation premium is concentrated in small firms with more individual investors. Overall, controlled companies are distinct ownership structures, and allowing them to opt out of independence requirements may have negative implications.

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1. Introduction

This study revisits how ownership structure and board independence affect firm value by exploring controlled companies—a unique corporate ownership structure. Controlled companies are public firms in which an individual, group or company holds over 50 percent of the voting power. These firms may opt out of the independence requirements that apply to all other public firms, as mandated by the major stock exchanges in Sarbanes-Oxley related reforms. Thus, they are not required to have a majority independent board or fully independent governance, nominating or compensation committees (NYSE 2013; NASDAQ 2015). Despite these major exemptions, this is the first study to examine the relation between the controlled company structure and firm value and how this relation varies with the board independence level.

Understanding the valuation implications of the controlled company structure is important for academic and policy reasons. Controlled companies are a significant subset of the economy, with a mean market capitalization of approximately $3 billion in 2012 (the final year of our sample), and include many prominent firms, such as Time Warner and Facebook. However, despite recent media attention about whether this structure is optimal for shareholders (e.g., McKenna 2012; Murphy 2013; Seave 2016), these firms are virtually unstudied.[1] While these firms are related to, and partially overlap with, dual-class and family firms, many controlled companies are distinct from both of these other ownership forms. Thus, it is important to study controlled companies to increase our understanding of widely used ownership structures in the capital markets and their implications for firm value. Moreover, because the independence reforms were instituted to restore investor confidence after several accounting scandals, it is important to examine the implications of exempting firms from these governance mandates.

[1] In the rare instances where prior research has defined "controlled companies" using various definitions, it is generally only to exclude them from the sample (e.g., Armstrong et al. 2014; Krishnan et al. 2011).

Numerous studies examine whether formal (e.g., staggered boards) or informal (e.g., family firms) governance structures lead to agency costs that affect firm value. In the same way, investor valuations and firm decisions for controlled companies may differ from those of other firms. Although controlled companies share many characteristics with both family and dual-class firms, it is unclear, *ex ante*, how controlled companies' unique combination of concentrated control *and* corporate governance exemptions will affect these firms. Because many controlled companies are also majority owned by the party controlling the firm, this may align the owners' economic incentives with those of shareholders, leading to fewer agency conflicts and greater value maximization (Demsetz and Lehn 1985; Morck et al. 1988). However, this ownership structure may also facilitate entrenchment and rent extraction at the expense of other shareholders, leading to lower firm value (Morck et al. 1988).

Strong governance mechanisms can mitigate agency conflicts that arise from one party controlling the majority of the voting power (Baran and Forst 2015), so higher levels of board independence may improve firm value for controlled companies. However, because these firms can opt out of the board reform rules or the controlling company could potentially reshape the board to its liking at any point (see Murphy 2013), it is unclear whether board independence will positively affect their firm value. Conversely, higher levels of board independence can harm firm value by reducing the advisory role of the board and specialized knowledge of insiders (Faleye et al. 2011). In fact, controlled company advocates argue their structure gives them "freedom from addressing short-term market pressure… to make long-term investments in areas such as research and development and capital projects" (IRRC Institute 2016, 24-25).

We hand-collect data on whether the firm is a controlled company and claims the governance exemption from firm proxy statements from 2006 through 2012. To examine

whether controlled companies exhibit an incremental valuation premium, we first test the relation between controlled companies and Tobin's *q* for our full sample after controlling for numerous firm characteristics, including whether the firm is also a family or dual-class firm. To triangulate our tests, we also examine the relation between controlled companies and stock returns. We then investigate potential mechanisms by which firm value may be affected by examining the relation between controlled companies and firm investment, information asymmetry and earnings management. To mitigate endogeneity concerns that controlled companies are different from non-controlled companies and these differences drive results, we use entropy balancing in our main tests to ensure that treatment and control firms are similar on observable dimensions (Hainmueller 2012). While we control for board independence in our initial tests, we then split our sample into high and low board independence subsamples to better disentangle the effect of board independence from other ownership structure features.

We find a positive and significant relation between controlled companies and Tobin's *q*, suggesting that controlled companies carry a valuation premium relative to other companies. This result is concentrated in the low board independence subsample. In contrast, we find no evidence of a relation between controlled companies and Tobin's *q* for the high board independence sample, and the difference in the effect across the two subsamples is statistically significant. Thus, inconsistent with concerns expressed by investors and the media (IRRC Institute 2016; Seave 2016), controlled companies and, particularly those with lower board independence, have higher firm value. To further examine and validate this result, we examine portfolio returns for controlled companies and non-controlled companies using a four-factor asset pricing model (Carhart 1997; Fama and French 1997). Consistent with the findings of our Tobin's *q* tests, we find that portfolios of controlled companies generate a positive and

significant alpha while we find no evidence of a similar result for non-controlled companies.

We then investigate whether controlled companies have different levels of investment and investment efficiency to justify the higher valuations. However, we find controlled companies make *less* efficient investments in R&D, capital and advertising for the full sample and both less efficient investments and less total investment in the low board independence sample. In contrast, we find no evidence that controlled companies are associated with either of these measures in the high board independence sample, although the difference between the two subsamples is not statistically significant. Thus, the higher valuation does not appear justified by controlled companies engaging in better investments.

We next investigate whether the higher valuation may be due in part to a combination of information asymmetry and earnings management, potentially artificially inflating firm value. That is, at least some of the positive valuation may be due to controlled companies managing earnings to maintain overvaluation (Jensen 2005). Higher levels of information asymmetry are required for such a strategy to be effective or investors would unwind the earnings management (Dye 1988; Richardson 2000; Cassell et al. 2015). We proxy for information asymmetry using the bid-ask spread and stock return volatility (Ali et al. 2007; Bushee and Noe 2000), and we proxy for earnings management using accrual quality and restatements.

In our full sample, controlled companies have greater bid-ask spreads but an insignificant relation to stock return volatility. However, controlled companies in the low board independence subsample have both greater bid-ask spreads and volatility, consistent with higher information asymmetry between these controlled companies and their shareholders. However, we find no evidence of greater bid-ask spreads or volatility in the high independence subsample, and the difference between the two subsamples is statistically significant. We then examine earnings

management and fail to find a relation between controlled companies and accrual quality or restatements in the full sample. However, consistent with information asymmetry facilitating earnings management, controlled companies in the low board independence sample have lower accrual quality and are more likely to restate. In contrast, we find no evidence of a higher restatement rate for controlled companies in the high independence sample and find they have *higher* accrual quality, consistent with greater monitoring mitigating earnings management (Klein 2002). While the difference in the restatement rates in the two subsamples is not statistically significant, the difference is significant for accrual quality.

Finally, given the prior results, we examine a potential behavioral-based reason for the controlled company valuation premium. That is, we examine whether the firm value result is driven by retail investors looking to get in on the ground floor of the next Facebook or Google, perhaps due to investor overconfidence (Barber and Odean 2000), wishful thinking leading to unjustified valuations in the market (Seybert and Bloomfield 2009) or because the attention-grabbing nature of these firms lead investors to form overly optimistic valuations (Barber and Odean 2007). Specifically, we first partition our sample based on a dependent sort by year of firm size and institutional ownership. We find a positive and significant relation between controlled companies and Tobin's *q* for small controlled companies with high or low institutional ownership. However, the effect is nearly twice as large for firms with more retail investors, and the difference is statistically significant. We do not find a significant relation in either of the partitions for large controlled companies. Thus, results indicate that the controlled company valuation premium may also be driven at least in part by retail investors targeting small controlled companies, as well as a small-firm effect (see Banz 1981).

Collectively, our findings suggest that controlled companies have higher valuations,

potentially due to controlled companies with lower board independence engaging in more earnings management and retail investors targeting smaller controlled companies. Moreover, our results for lower investment and higher earnings management in particular suggest that the combination of the unique ownership structure of controlled companies and governance exemptions exacerbates agency problems.

This study makes two primary contributions. First, this is the first large-scale study to our knowledge to explore controlled companies, a related but distinct ownership structure from the family firms or dual-class firms examined in prior accounting and finance research. Given that these firms may opt out of many of the major governance reforms that all other publicly traded firms are subject to, which were designed to protect investors, it is important to understand these firms and whether they are using these exemptions in a way that harms shareholder value.

Second, we contribute to the literature on the ability of boards to mitigate agency conflicts in firms with concentrated ownership or control (e.g., Li and Srinivasan 2011; Srinidhi et al. 2014; Baran and Forst 2015). In particular, our findings that results are concentrated in firms with low board independence suggest board independence constrains many types of managerial misbehavior even in firms where one may question if effective oversight is possible.

2. Background, Related Literature and Hypothesis Development

2.1 What are Controlled Companies and Are They Distinct from Other Ownership Structures?

For the purposes of this study, we define controlled companies consistent with the NYSE and NASDAQ as "a company in which any individual or group of shareholders control more than 50% of the shares of the company" (Moloney 2005).[2] We use this definition because our

[2] These definitions can be found in NYSE Rule 303A.00 and NASD Rule 4350(c)(5). NASDAQ adopts a slight variation of the NYSE definition that considers voting power with respect to voting for directors (see SEC 2009).

focus is on the governance exemptions afforded to firms that meet these exchange criteria.[3] These firms are not automatically granted exemptions from the independence requirements (that is, to have a majority independent board or a fully independent governance, nominating or compensation committees), but have the option to exempt themselves from any or all of these requirements. However, pursuant to Item 407(a) of Regulation S-K, a controlled company that takes any of these exemptions must disclose (1) that it is relying on the controlled company exemption, (2) the basis for the exemption and (3) the corporate governance standards with which the company does not comply (Teen 2017).

Given the lack of prior research on controlled companies, we first report on their prevalence and provide more information on their unique ownership structure. Table 1 presents a variety of descriptive information for the controlled companies in our entire sample before sample restrictions. As shown in Panel A, controlled companies are widely dispersed across industries, with 42 out of 48 Fama-French industry groups having some controlled company presence. Controlled companies are most common within the printing/publishing and textiles industries, accounting for approximately 45 and 37 percent, respectively, of all companies in those industries. Of industries with controlled companies, the machinery, steel and utilities industries have the smallest percentage of controlled companies, with each representing less than four percent of all firm-year observations in those industries.

Panel B of Table 1 presents the number and percent of controlled company firm-year

[3] Prior academic studies or industry publications that have defined the term "controlled company" generally use broader (or narrower) definitions than used here. For example, Armstrong et al. (2014, 389) define controlled companies as "those with dual class shares, or for which more than 50% of the company's voting power in electing directors is held by an individual, a group, or another company." The IRRC Institute (2016, 15) defines controlled companies for the purpose of their analysis as "1) multi-class capital structures with unequal voting rights… and 2) control through ownership of at least 30 percent of a class of single-vote stock by a person or group." Even more narrowly, Krishnan et al. (2011, 2107) define controlled companies as "public companies for which 50 percent or more of voting power is controlled by another entity."

observations by the type of controlling party. Founders or their relatives control approximately 52 percent of the controlled company observations in our sample. Executives or directors control about 29 percent of controlled companies. Other parties, such as institutional investors, control the remaining 19 percent of controlled companies.

Panels C and D of Table 1 provide the number and percent of firm-years within our sample in which the firm claims the controlled company exemption. Approximately 59 percent of all controlled companies in our sample claim the controlled company exemption for at least one governance provision while 41 percent forgo this exemption. While firms are required to disclose the reasons for taking the exemption, surprisingly nearly 58 percent of the controlled company observations claiming the exemption fail to do so. On the other hand, 15 percent of the controlled company exemption firm-years in our sample state they use the exemption at least in part to avoid having an independent board while 38 (14) percent do so for the compensation committee (nominating or governance committee) exceptions.

While many controlled companies are also family firms and/or dual-class firms, many controlled companies are distinct from these two ownership forms. Similarly, many family firms and dual-class firms are not controlled companies. Figure 1 presents a Venn diagram illustrating the degree of overlap between controlled companies, family firms and dual-class firms in our sample. As shown in this figure, there are 369 controlled companies, 1,507 family firms and 243 dual-class firms in our entire sample before sample restrictions. Within our 369 controlled companies, 33 percent (122) are neither family firms nor dual-class firms, 24 percent (89) are family firms but not dual-class firms, 13 percent (48) are dual-class but not family firms and 30 percent (110) are controlled companies, family firms and dual-class firms. In comparison, only eight percent (20) of the 243 dual-class firms in our sample are neither family firms nor

controlled companies and 82 percent (1,243) of the 1,507 family firms in our sample are neither controlled companies nor dual-class firms. Thus, while there is some overlap with family firms and dual-class firms, controlled companies appear to be a largely distinct ownership form.

2.2 Prior Literature

Agency problems exist due to conflicts of interest between shareholders and managers (Jensen and Meckling 1976). In Type I agency problems, which stem from the separation of ownership from management, managers may make decisions that are not in the best interest of shareholders. In contrast, Type II agency problems arise from conflicts between controlling and non-controlling shareholders, as controlling shareholders may use their power to expropriate rents from the firm at the expense of shareholders (Shleifer and Vishny 1997).

A long stream of research explores the relation between agency costs and governance structures. In this area, a number of studies examine two governance mechanisms in particular—ownership structures and boards of directors. While some studies explore broader ownership issues such as majority ownership (e.g., Denis and Denis 1994), much of this area focuses specifically on the effects of family (or founder) firm and dual-class ownership. In family firms, the founder or his relatives maintain an active role in the firm, whether as an executive or a director on the board or through equity ownership (Anderson and Reeb 2003; Chen et al. 2010). Because of their vested interest in the survival of their firm, specialized knowledge and reputational capital, family firms may make decisions that increase the long-term viability of the firm (James 1999). Consistent with this notion, prior studies find that family firm ownership is associated with greater firm value (Anderson and Reeb 2003), higher earnings quality (Ali et al. 2007; Wang 2006), a lower cost of debt (Anderson et al. 2003), less tax aggressiveness (Chen et al. 2010) and greater disclosure about impending bad news (Chen et al. 2008).

In contrast to family firms, dual-class firms exhibit a divergence of insider voting rights and cash flow rights. For example, Gompers et al. (2010) finds that the average dual-class firm has a superior class of voting shares with 10 votes per share and an inferior class of shares with only one vote per share. By providing insiders voting control without a pro-rata share in the cash flow consequences of their decisions, dual-class structures may entrench managers, enabling them to expropriate personal benefits from the firm at the expense of shareholders (Grossman and Hart 1988). Supporting this view, prior literature finds evidence that as the separation between control rights and cash-flow rights increases, dual-class firms experience lower firm value (Claessens et al. 2002; Gompers et al. 2010), lower post-IPO performance (Smart and Zutter 2003), more value-destroying acquisitions and lower values of cash holdings (Masulis et al. 2009), lower earnings quality (Francis et al. 2005a), less tax avoidance (McGuire et al. 2014) and a higher cost of debt financing (Lin et al. 2011).

Research on the effects of boards of directors on firm value, and board independence in particular, is more nuanced. For instance, Agrawal and Knoeber (1996) find that the percentage of outside directors on the board is negatively associated with Tobin's *q* while others (e.g., Hermalin and Weisbach 1991) fail to find evidence of a relation. Coles et al. (2008) find mixed evidence and show that board independence is positively associated with Tobin's *q* for firms where firm-specific knowledge of insiders is less important (e.g., those with lower R&D intensity). Similarly, Duchin et al. (2010) find a positive relation between Tobin's *q* and independent directors only in firms with strong information environments, suggesting that the effectiveness of outside directors is also function of the cost of acquiring information.[4]

[4] Born (2015) examines the effect of the governance exemption within a sample of 173 controlled firms and finds a marginally significant negative effect on firm value. However, among other limitations, he does not directly examine board independence or control for the overlap with dual-class firms.

2.3 Hypothesis Development

Prior studies on dual-class and family firms suggest competing hypotheses for the relation between firm value and ownership structure in controlled companies. On one hand, similar to family firms, the concentrated ownership status of many controlled companies may align managers' interests with the firm because large owners have economic incentives to maximize firm value and prolong the life of their business (Demsetz and Lehn 1985; Morck et al. 1988). For example, owners' vested interest in the long-term survival of their family firms incentivizes them to better monitor managers (Anderson and Reeb 2003). Thus, controlled companies may exhibit a valuation premium relative to non-controlled companies.

On the other hand, similar to dual-class firms, the disproportionate level of voting power versus cash flow rights in many controlled companies may lead to entrenchment, whereby managers expropriate personal benefits from the firm at the shareholders' expense, leading to lower firm value (Morck et al. 1988). The fact that controlled companies may be exempt from several key governance requirements compounds the potential entrenchment concerns. This tradeoff is summarized by Moody's Investor Service, who note that most institutional investors carefully consider the controlled company status of a potential investment as a factor on whether and how much to invest because they "present a unique analytical challenge. Controlling owners can operate with a long-term view, in alignment with creditors' interests. However, there can be several risks from controlling ownership, including potential for conflicts of interest and abusive related-party transactions" (NYSE 2016, 28). Thus, we state our first hypothesis in the null:

H1: Controlled company ownership is not associated with firm value.

Independent boards are self-bonding devices used to mitigate agency conflicts within a firm (Jensen and Meckling 1976). Given the agency conflicts inherent in the ownership structure

of controlled companies, less independent boards may further exacerbate these issues, resulting in negative valuation effects (Duchin et al. 2010). However, it is also possible that allowing controlled companies to have less independent directors may have beneficial effects on firm value. For instance, to the extent that inside directors have specialized knowledge to better advise the firm, having a less independent board may positively affect firm value (Fama and Jensen 1983; Faleye et al. 2011). Overall, whether and how board independence affects firm value is an empirical issue. We therefore state our second hypothesis in the null as follows:

> **H2: Board independence does not affect the relation between controlled company ownership and firm value.**

3. Research Design

3.1 Empirical Model for Primary Tests

To test whether controlled companies have differential firm value relative to non-controlled companies, we use Tobin's *q* (e.g., Anderson and Reeb 2003; Gompers et al. 2010; Villalonga and Amit 2006). Specifically, we estimate the following model:

$$\begin{aligned} Tobinsq_{it} = {} & \alpha_0 + \alpha_1 CC_{it} + \alpha_2 Family_{it} + \alpha_3 DC_{it} + \alpha_4 Instown_{it} + \alpha_5 StdCFO_{it} + \\ & \alpha_6 Stdsales_{it} + \alpha_7 CEOchair_{it} + \alpha_8 Bdindep_{it} + \alpha_9 Bdsize_{it} + \alpha_{10} Lnsegments_{it} + \\ & \alpha_{11} Exgrowth_{it} + \alpha_{12} Lossproportion_{it} + \alpha_{13} Restructuring_{it} + \alpha_{14} Size_{it} + \alpha_{15} BigN_{it} + \\ & \alpha_{16} Lev_{it} + \alpha_{17} ROA_{it} + \alpha_{18} Profitrank_{it} + \alpha_{19} Salesrank_{it} + \alpha_{20} DE_{it} + \\ & \alpha_{21} Pfirmsinregion_{it} + \alpha_{22} Psalesinregion_{it} + \alpha_{23} Localmktshare_{it} + \alpha_{24} Lnturnover_{it} + \\ & \alpha_{25} Equitycomp_{it} + \alpha_{26} MissingEquitycomp_{it} + Year\ FE + Industry\ FE + \varepsilon_{it}, \end{aligned} \quad (1)$$

where subscripts *i* and *t* represent firm and year, respectively. Tobin's *q* (*Tobinsq*) is calculated as the sum of the firm's market value of equity and book value of assets less the book value of equity, scaled by the book value of assets (Claessens et al. 2002; Lang and Maffett 2011). *CC* is an indicator variable equal to one if the firm is a controlled company, and zero otherwise. We cluster standard errors by firm.

As is common in corporate governance studies, the relation between firm value and

ownership structure is endogenous. We attempt to mitigate this issue in several ways. First, we include a robust vector of control variables for firm characteristics that may be correlated with both firm value and a firm's choice of ownership and governance structures. In particular, because of the partial overlap between controlled companies and family firms or dual-class firms and because prior literature finds that both of these ownership structures are associated with firm value (generally in different ways), we control for whether the firm is a family firm (*Family*) or has a dual-class (*DC*) ownership structure (Claessens et al. 2002; Gompers et al. 2010; Villalonga and Amit 2006). We classify a firm as a family firm if the founder or relative of the founder, either by marriage or by blood, is in executive management, on the board of directors or is a blockholder (Chen et al. 2010).[5] We classify firms as dual-class if their proxy statements indicate that they have more than one class of stock (Gompers et al. 2010; McGuire et al. 2014).

We also control for firms' financial characteristics that can affect firm value (Anderson and Reeb 2003; Fang et al. 2009; Mehran 1995; Yermack 1996). Specifically, we control for return on assets (*ROA*), firm size (*Size*), leverage (*Lev*), cash flow volatility (*StdCFO*), extreme growth (*Exgrowth*), the proportion of losses in the last five years (*Lossproportion*), restructuring (*Restructuring*), sales volatility (*Stdsales*) and share turnover (*Lnturnover*). We also include the log of the number of operating segments (*Lnsegments*) to control for business complexity.

Gompers et al. (2010) argue that the likelihood that a firm has a dual-class structure is a function of managers' private control benefits. As some controlled companies have dual-class structures, we follow Gompers et al. (2010) and control for these factors. Specifically, we include the percentile rankings of the firm's sales and profits in its IPO year relative to other

[5] Other studies define family firms as those in which the family's equity holdings are at least five percent (Anderson et al. 2012; Chen et al. 2010) or where the founder or descendant of the founder is on the board or an executive at the firm (Anderson and Reeb 2003; Wang 2006). Results are similar using either alternative definition (untabulated).

firms in the same IPO year (*Salesrank* and *Profitrank*, respectively), the percentages of all Compustat firms and all sales in the firm's MSA (*Pfirmsinregion* and *Psalesinregion*, respectively) the year before the firm's IPO and the firm's local market share (*Localmktshare*).

Additionally, we control for firms' other governance mechanisms because monitoring can affect both firm value and ownership structure (Anderson and Reeb 2003). Specifically, we include the percentage of independent directors on the board of directors (*Bdindep*), the size of the board of directors (*Bdsize*), an indicator variable for whether the CEO is also the chairman of the board of directors (*CEOchair*), institutional ownership (*Instown*) and an indicator variable for whether the firm's auditor is a Big N audit firm (*BigN*). We control for whether the firm is incorporated in Delaware (*DE*), which affects their corporate legal environment, and the CEO's percentage of equity compensation (*Equitycomp*), which affects managerial behavior, since both may result in a valuation premium (Daines 2001; Mehran 1995). Because of the limited coverage in Execucomp, we lack data to construct *Equitycomp* for a majority of our sample, so we follow Cassell et al. (2013) and Hanlon et al. (2003) and set missing values to zero with a separate indicator variable (*MissingEquitycomp*) set equal to one when data for *Equitycomp* is unavailable and zero otherwise. Finally, we also include year and Fama-French 48 industry fixed effects to mitigate the effect of trends within particular industries and cross-sectional economic factors over time. All variables are defined in detail in Appendix A.

Second, given that controlled firms may significantly differ from other firms, we also use entropy balancing when possible to mitigate the extent to which differences in observable characteristics between controlled companies and non-controlled companies influence our results.[6] Entropy balancing reweights observations at the mean of their distributions for the

[6] While entropy balancing is relatively new to accounting research, it has been used in a growing number of recent studies (e.g., Haislip et al. 2017; McMullin and Schonberger 2018; Wilde 2017; Baugh et al. 2018).

control variables such that treatment and control firms exhibit covariate balance jointly for all variables (Hainmueller 2012). While other matching methods, such as propensity score matching, also help control for endogeneity due to differences in observables, results obtained using this method can be sensitive to numerous design choices, such as caliper width and the number of matched control firms (Shipman et al. 2017; DeFond et al. 2016). In contrast, entropy balancing mitigates design choices that affect the composition of the control firms and allows us to retain all of our observations to ensure that we include as many controlled companies in our analyses as possible. Because we estimate many of our analyses for both the full sample and in subsamples, we re-balance each sample before running our analyses.

As discussed previously, the controlled company exemption may be claimed for reasons relating to the total board or compensation, nominating or governance committees. Because the majority of controlled companies do not disclose why they are claiming the exemption, we directly test the effect of board independence on moderating the relation between controlled companies and firm outcomes by estimating our tests separately for firm-years with board independence percentages below and above the median board independence percentage for that year. Thus, we also re-estimate Equation (1), excluding *Bdindep*, for each subsample.

3.2. Stock Returns

Following prior research (e.g., Bebchuk et al. 2008; Fahlenbrach 2009; Gompers et al. 2003), we triangulate our Tobin's *q* analyses by also testing the relation between controlled companies and stock returns. To the extent that the market perceives controlled company ownership in a firm as a value-enhancing (value-destroying) characteristic, controlled companies may earn a positive (negative) abnormal return relative to non-controlled companies, respectively. Specifically, we regress the equal-weighted and value-weighted average return for

portfolios of controlled companies and non-controlled companies for each calendar month on the four risk factors from Fama and French (1997) and Carhart (1997). We rebalance portfolios every May and use the firm's market capitalization at the end of the previous month to value weight the portfolios. We then estimate the following model:

$$(Ri - Rf)_t = \alpha + ß_1(Rm\text{-}Rf)_t + ß_2 SMB_t + ß_3 HML_t + ß_4 UMD_t + \varepsilon_t, \quad (2)$$

where subscript *t* represents calendar months. *Rm* is the monthly CRSP market return (either value-weighted or equal-weighted), *Rf* is the risk-free rate, *Ri – Rf* represents the portfolio return in excess of the risk-free rate, *SMB* is the difference in average returns for portfolios of small firm stocks less the big firm stocks, *HML* is the difference in average returns for portfolios of high and low book-to-market stocks and *UMD* is the difference in average returns for portfolios of recent winners and recent losers. The intercept (α) represents the mean monthly abnormal return from the calendar time portfolio. To the extent that controlled companies carry a valuation premium (penalty), alpha should be positive (negative) and statistically significant, respectively.

3.3 Possible Mechanisms to Affect Firm Value

While the prior analysis is focused on firm value, it is unclear *why* controlled companies may affect firm valuation. Thus, we modify Equation (1) to examine several additional dependent variables that may be possible channels from prior literature.

3.3.1 Investments

We first examine the relation between controlled companies and investment. Controlled companies have large, controlling shareholders, so they may be less likely to make myopic investments, instead focusing on those that maximize long-term value (Shleifer and Vishny 1986). On the other hand, if the controlling party engages in rent extraction, they may do so in part through underinvesting or inefficient investments. These results may also be expected to

differ based on board independence given the results in Faleye et al. (2011).

We examine two types of investment frequently studied in prior literature, total investment – that is, the sum of R&D, capital and advertising expenditures (*Totalinvest*) – and investment efficiency (*Inveff*) (Goodman et al. 2014). With regard to investment efficiency, we follow prior research in using a benchmark investment model to examine whether the firm's investment levels deviate from expected levels. Specifically, following Goodman et al. (2014), we obtain the residuals estimated by industry-year regressions of *Totalinvest* on prior year Tobin's *q*, asset growth and *Totalinvest* and contemporaneous cash flows from operations. We require a minimum of 20 observations in each industry-year. Given that this proxy is prone to measurement error (see Erickson and Whited 2006), we then create an indicator variable, *Inveff*, set equal to one if the absolute value of the firm's investment residual falls below the median absolute value of the distribution of the residuals, and zero otherwise.[7]

3.3.2 Information Asymmetry and Earnings Management

We next examine first whether there is greater information asymmetry between investors and these firms, which may allow controlled companies to mislead the market, or certain investors. For example, controlling parties in firms may exercise greater control over information, leading to greater information asymmetry about the value of these firms (Fan and Wong 2002). Similarly, like family firms, controlled companies may prefer less disclosure due to litigation and reputation concerns (Chen et al. 2008). This relation may also vary based on the level of board independence given that greater board independence decreases information asymmetry because independent directors demand greater transparency to effectively monitor

[7] Greene (2004) shows the use of a linear estimation model with a dichotomous dependent variable does not result in bias or inconsistency on the coefficients or standard errors, so we use a linear probability when estimating Equation (1) for *Inveff* (and other binary variables) for consistency, as well as to reduce bias when including fixed effects in nonlinear models (see Wooldridge 2002), but inferences are similar using logistic regression (untabulated).

and advise management (Armstrong et al. 2014).

Examining information asymmetry is important because while controlled companies may engage in earnings management to sustain overvaluation (Jensen 2005), such a strategy is effectively predicated on higher levels of information asymmetry. As shown analytically in Dye (1988), information asymmetry is a necessary condition to prevent the unraveling of earnings management by the market, so it is not surprising that it has been shown empirically that information asymmetry increases earnings management (Richardson 2000; Cassell et al. 2015). However, even with information asymmetry, it remains an empirical question whether controlled companies engage in more earnings manipulations. Controlled companies are related to both dual-class firms, which have lower financial reporting quality (e.g., Francis et al. 2005a), and family firms, which engage in less earnings management (e.g., Ali et al. 2007; Wang 2006). Prior research also generally finds that board independence is positively associated with less earnings management and fraud (e.g., Donelson et al. 2016; Klein 2002), but it is unclear whether this effect would hold in controlled companies given the inherent agency conflicts.

To test whether there is greater information asymmetry between investors and controlled companies, we examine the bid-ask spread (Ali et al. 2007) and daily stock return volatility (Bushee and Noe 2000). Specifically, we compute the bid-ask spread (*Baspread*) as the average of daily closing bid-ask spread as a percentage of daily closing price and stock return volatility (*Retvol*) as the log of the standard deviation of average daily stock returns. To test whether controlled companies engage in different levels of earnings management, we use accrual quality (*AQ*) and restatements (*Restate*). Specifically, we measure *AQ* as the standard deviation of residuals over the last five years from the Dechow and Dichev (2002) accrual quality measure as adjusted by McNichols (2002) and Francis et al. (2005b). Larger values for *AQ* indicate worse

accruals quality.[8] We use accrual quality to capture earnings management because Jones et al. (2008) find that it is the best accounting-based proxy for fraud and restatement risk. We create an indicator variable, *Restate*, set equal to one if the firm-year was restated, and zero otherwise.

3.4 Data and Sample Selection

We use controlled company data from MSCI (formerly GMI), data on controlled companies, family firms, dual-class firms and boards of directors from firm proxy statements, financial statement data from Compustat, headquarter location data from Bill McDonald's website, restatement data from AuditAnalytics, institutional ownership data from Thomson-Reuters, merger and acquisition data from SDC Platinum, stock return data from CRSP, executive compensation data from Execucomp, Fama French and momentum factors from Kenneth French's website and corporate governance data from Boardex for U.S. firms from 2006-2012. The sample begins in 2006 because this is the first year for which data on controlled companies is consistently populated in MSCI. The sample ends in 2012 because data on controlled companies is no longer regularly collected in MSCI after that year.

We begin with all U.S. firms in the MSCI database for 2006 through 2012. This sample includes 18,564 firm-year observations representing 3,830 unique firms. Because the controlled company information in MSCI appears to be incorrectly coded in some years, we hand-collect data on whether the firm is a controlled company from proxy statements. We also hand-collect data on whether the firm is a family firm or a dual-class firm from proxy statements and firm websites, as needed.[9] We eliminate observations lacking proxy statements on the SEC's website

[8] We use the standard two-stage regression model, rather than the single-stage regression advocated by Chen et al. (2018), to estimate accrual quality because we are unable to implement entropy balancing with a single-stage regression because it requires industry-year interactions with each independent variable from the first stage regression, resulting in over one thousand extra variables. However, Chen et al. (2018) also state that the same inferences can be found using a two-stage model when researchers include the independent variables from the first-stage regression in the second-stage. We find similar results when using such an approach (untabulated).

[9] Because controlled companies are required to disclose their controlled company status and the basis for this

and missing data for control variables for our tests. We winsorize continuous variables at the 1st and 99th percentiles to mitigate the risk of outliers. Our final sample with available data for all our control variables includes 10,542 firm-year observations for 2,332 unique firms.

4. Empirical Results

4.1 Descriptive Statistics

Panel A of Table 2 presents descriptive statistics for our full sample. Approximately nine percent of the sample firms are controlled companies. In comparison, 41 percent of the sample firms are family firms and seven percent have dual-class structures, similar to prior research (Anderson et al. 2012; Gompers et al. 2010; Wang 2006). Our average firm has a Tobin's *q* of 1.9, an ROA of 0.02, approximately $1 billion in assets and a board independence percentage of 77 percent, suggesting that on average these firms are profitable, larger and well governed.

To provide more background on controlled companies (*CC* = 1) as compared to non-controlled companies (*CC* = 0), Panel B of Table 2 presents descriptive statistics for all variables separately in our analyses for each type of firm. Means for 24 out of 32 variables are statistically different between the two groups ($p < 0.10$ or lower). For example, relative to non-controlled companies, controlled companies are larger, have lower Tobin's *q*, spend less on firm investment, are more likely to invest efficiently and have higher bid-ask spreads and stock return volatility. Consistent with the governance exemption for controlled companies, these firms also have fewer independent directors on their boards.

The large number of significant differences between controlled companies and non-controlled companies validates our decision to use entropy balancing in our analyses. Panels C through E of Table 2 present descriptive statistics for our full sample, low board independence

determination in their proxy statements (see SEC 2009), we search proxy statements for the term "controlled company" or similar variations thereof. Appendix B provides examples of these disclosures.

sample and high board independence sample, after entropy balancing each sample. For each panel, there is excellent covariate balance as there are no significant differences between controlled companies and non-controlled companies for any of our control variables ($p \geq 0.99$).

4.2 Correlation Matrix

Table 3 reports univariate Pearson correlations between our controlled company indicator variable, our dependent variables of interest and the control variables used in our analyses. Controlled companies are positively associated with both family firms and dual-class firms (0.15 and 0.58, respectively), further consistent with the notion that controlled companies are a largely distinct ownership form from the other ownership structures. Controlled companies are positively associated with bid-ask spreads, investment efficiency and return volatility, but negatively associated with Tobin's *q* and total investment. However, given the numerous differences between controlled companies and non-controlled companies, it is necessary to further evaluate these relations in a multiple variable regression setting.

4.3 Controlled Companies and Firm Value

4.3.1 Firm Value

Table 4 presents the results from regressing Tobin's *q* on *CC*. Column 1 reports that *CC* is positive and significant for the full sample (0.377, $p < 0.01$). Thus, controlled companies exhibit a valuation premium incremental to family and dual-class firms. This effect is highly economically significant, as it represents approximately 20 percent of the mean Tobin's *q* for the full sample. In comparison, the coefficient on *Family* is positive and significant (0.378, $p < 0.05$) while it is negative and significant for *DC* (-0.547, $p < 0.01$), consistent with prior research in earlier periods (Gompers et al. 2010; Villalonga and Amit 2006).

Columns 2 and 3 report results for firms with low board independence (*Low Bdindep*)

and high board independence (*High Bdindep*), respectively. The coefficient on *CC* is positive and significant in the low sample (0.339, $p < 0.01$), but insignificant in the high sample (0.057, $p > 0.39$). This difference is statistically significant ($p < 0.01$). Thus, the positive relation between controlled company structure and firm valuation is concentrated in low independence firms.

4.3.2 Stock Returns

We next examine portfolio returns to further assess the valuation premium we observe for controlled companies. Table 5 presents the results of estimating Equation (2) using equal-weighted (Columns 1 and 2) and value-weighted portfolios (Columns 3 and 4). Consistent with the results from our Tobin's *q* analyses, we find a significant and positive abnormal alpha on portfolios of controlled companies using equal-weighted returns (0.004, $p < 0.05$), but an insignificant alpha on portfolios of non-controlled companies (0.002, $p > 0.29$).[10] In terms of economic significance, portfolios of controlled companies generate long-run abnormal returns in excess of 40 basis points per month, or an annual rate of 4.91 percent. In contrast, we find no evidence that portfolios of controlled companies and non-controlled companies generate a statistically significant abnormal alpha using value-weighted portfolio returns. This evidence suggests that controlled companies do command a persistent, higher value and that smaller firms may be driving this valuation premium.[11]

While collectively these results suggest that controlled companies carry a valuation premium relative to non-controlled companies, whether this relation is due to managerial myopia (e.g., earnings management), better strategic decisions (e.g., more efficient investing) or an

[10] When forming our portfolios of controlled and non-controlled companies, we use all controlled companies even if they are also family firms or have dual-class structures. However, in untabulated analysis, we also re-estimate our analyses after forming portfolios for "pure" controlled companies (i.e., those that are not also family or dual-class firms) and find similar results (untabulated).

[11] We revisit the effect of firm size on the valuation premium in Section 4.5.

alternative explanation is unclear. As discussed in Section 3, we next explore some of the potential mechanisms most likely to contribute to this effect to disentangle these stories.

4.4 Mechanisms Driving the Relation between Controlled Companies and Firm Value

Table 6 presents the results of estimating Equation (1) separately for *Totalinvest* and *Inveff*. Regarding total investment in the full sample, the coefficient on *CC* is negative but insignificant for *Totalinvest* (-0.008; $p > 0.17$). In subsample analysis, we find that the coefficient on *CC* is negative and significant for the low board independence subsample (-0.009, $p < 0.10$), but is insignificant in the high board independence subsample (-0.009, $p > 0.34$). However, the magnitude of the effect is not statistically different between the low and high subsamples ($p > 0.99$). However, when we shift to investment efficiency, we find that the coefficient on *CC* is negative and significant for the full sample for *Inveff* (-0.061, $p < 0.05$), suggesting that controlled companies invest less efficiently in capital assets, R&D and advertising. We also find that the coefficient is negative and significant for the low board independence subsample (-0.044, $p < 0.10$) but is insignificant in the high board independence subsample (0.003, $p > 0.93$). Similar to *Totalinvest*, this difference is not statistically significant ($p > 0.17$). Collectively, it does not appear that the valuation premium we observe for controlled companies is justified by their investment behavior nor that lower board independence is able to moderate these decisions through superior investment advising (Faleye et al. 2011).

Table 7 presents the results of estimating equations (1) and (2) using either *Baspread* or *Retvol* as the dependent variable for information asymmetry. With regard to the bid-ask spread, we find that the coefficient on *CC* is positive and significant for the full sample (0.261, $p < 0.01$) and the low board independence subsample (0.377, $p < 0.01$) but is insignificant in the high board independence subsample (0.038, $p > 0.84$), and this difference is significant ($p < 0.10$).

This suggests that controlled companies have greater information asymmetry relative to non-controlled companies, driven by firms in the low board independence sample. With respect to return volatility, while the coefficient on *CC* is positive for the full sample for *Retvol*, it is not statistically significant (0.025; $p > 0.14$). However, when we estimate equation (2) for the subsamples, we find that the coefficient on *CC* is positive and significant for the low board independence subsample (0.036, $p < 0.05$) but is insignificant in the high board independence subsample (-0.048, $p > 0.19$), and the difference is statistically significant ($p < 0.05$). Overall, the evidence suggests that controlled companies with low board independence appear to have higher information asymmetry between the firm and its shareholders.

Table 8 presents the results of estimating equation (1) using either *AQ* or *Restat*e as the dependent variable for earnings management. Beginning first with *AQ*, we find that the coefficient on *CC* is positive but insignificant for the full sample (0.003, $p > 0.28$). However, when we estimate this regression separately for the low and high board independence sub-samples, the coefficient on *CC* is positive and significant (0.005, $p < 0.05$) in the low independence sample but is negative and significant in the high board independence sample (-0.006, $p < 0.05$), and this difference is statistically significant ($p < 0.01$). This suggests that, in controlled companies, low (high) board independence is associated with more (less) accruals-based earnings management. Similar to the *AQ* results, the coefficient on *CC* for *Restate* for the full sample is positive but insignificant (0.028, $p > 0.10$), while it is positive and marginally significant coefficient in the low board independence subsample (0.036, $p < 0.10$) and insignificant in the high board independence subsample (0.003, $p > 0.92$). The magnitude of this difference is not statistically significant ($p > 0.33$). Collectively, these results suggest that controlled companies are more likely to manipulate their financial reporting, driven by controlled

companies with low board independence. However, controlled companies with high board independence engage in *less* accruals earnings management, consistent with greater board independence serving as a monitoring mechanism for agency issues in these firms (Klein 2002).

Combining Tables 5 through 8, our results thus far document that controlled companies exhibit higher firm valuations, relative to non-controlled companies. However, these results are more consistent with managerial myopia, as evidenced by our tests on earnings management combined with information asymmetry than managers using the controlled company status to engage in long-term investment activities that enhance firm value.

4.5 Individual Investors and the Relation between Controlled Companies and Firm Value

Under a rational expectations framework, investors are rational agents who make informed economic decisions. However, recent evidence provides instances of individual investors systematically departing from this theory. For instance, Barber and Odean (2000) find that individual investors who trade the most earn lower market returns relative to those who trade less frequently, likely because of investor overconfidence. Similarly, behavioral biases of individual investors may explain some of the valuation premium for controlled companies. For example, retail investors desiring to invest on the ground floor of the next Facebook or Google may invest in smaller controlled companies, potentially overvaluing these firms in the process, either due to overconfidence (Barber and Odean 2000), engaging in wishful thinking that ultimately leads them to form overly optimistic valuations about these firms (Seybert and Bloomfield 2009) or because they are attention-grabbing firms (Barber and Odean 2007).[12] This would also be consistent with finding small controlled companies appear to drive the returns analysis and may be related to the small-firm effect (Banz 1981).

[12] In fact, the unique ability of controlled companies to opt out of board independence requirements may make them more attention-grabbing due to all the discussion on board independence in the media.

To test this possibility, we re-estimate Equation (1) using dependent sorts of market capitalization and institutional ownership to isolate firms where results should be concentrated. Specifically, we first partition our sample based on the median market capitalization by year and then further partition each subsample based on the median institutional ownership percentage.[13] To the extent that individual investors of small controlled companies drive the valuation premium, the relation between controlled companies and Tobin's *q* should be concentrated in firms with the lowest market capitalization and institutional ownership. Table 9 presents the results of this analysis. The coefficient on *CC* is positive and significant both for the smallest firms with the lowest institutional ownership (0.671, $p < 0.01$) and the highest institutional ownership (0.346, $p < 0.01$). However, the magnitude of the effect for firms with low levels of both market capitalization and institutional ownership is nearly double that of the effect for firms with low market capitalization and high institutional ownership, and this difference is significant ($p < 0.01$). In contrast, we find no evidence of a relation between *CC* and Tobin's *q* for firms with high market capitalization in either subsample. Collectively, this suggests that retail investors overvalue small, controlled companies, potentially due to behavioral biases, resulting in some of the valuation premium observed for controlled companies.

4.6 Additional Analysis Using Propensity Score Matching

While we use entropy balancing to maximize our covariate balance and sample size, to ensure that our results are robust to more commonly used matching methods, we re-estimate our analyses using propensity score matching in untabulated analysis. Specifically, for each sample (i.e., the full sample, low board independence subsample and the high board independence subsample), we estimate our first stage logit model using Equation (1) with *CC* as the dependent

[13] Results are similar if we use independent sorts (untabulated). We control for *Size* because it is used in our main regressions and is measured based on assets. However, results are similar if we exclude this variable.

variable. Using the predicted propensity score, we then use a one-to-many match of controlled companies to non-controlled companies within the same industry-year. Following the recommendation of Shipman et al. (2017), we match with replacement, and we use a caliper of 0.05 to maximize our sample size.[14] We then re-estimate our analysis using this matched sample.

For our full sample, we find similar results for both our firm value and mechanism tests with the only exception being *Inveff*. In subsample analysis, results are directionally consistent with those obtained using entropy balancing but are sometimes insignificant. For example, for the low (high) subsample *Totalinvest* and *Restate* (*AQ*) are insignificant ($p > 0.64$). However, given that our sample sizes for these tests are reduced by approximately 82 percent in the full sample, 75 percent in the low and 85 percent in the high subsamples, these differences are likely due to a combination of reduced power and measurement error resulting from lower quality matches between the treatment and control firms.

5. Conclusion

In this study, we examine the valuation effects of controlled companies, a type of firms that are majority controlled by one party and afforded special exemptions from the major stock exchanges' board independence requirements. Despite the economic significance of these firms, recent media attention highlighting their existence, potential agency issues inherent in this structure and the fact that the major stock exchanges have carved out special independence exemptions for these firms, surprisingly little is known about these firms and the implications of this ownership structure and the governance exemptions.

[14] This caliper size trades off sample size versus improving covariate balance. Even with this caliper, there are still several significant differences between controlled and non-controlled companies, particularly in the full sample (e.g., *StdCFO*, *Stdsales*, *CEOchair*, *Bdsize*, *Restructuring* and *Lnturnover* are significantly different at the $p < 0.10$ level or greater). We obtain a better covariate balance if we use a caliper of 0.0001 (i.e., only *Lnturnover* is significantly different between controlled and non-controlled companies), but this reduces our sample by over 99 percent. While we achieve better covariate balance within our low and high board independence subsamples, these matching limitations further emphasize the advantages of using entropy balancing in our setting.

Our findings suggest that controlled companies exhibit higher firm value, driven by a combination of lower board independence firms maintaining greater information asymmetry and engaging in earnings management, as well as retail investors for small firms assessing these firms a valuation premium. A key implication of our findings is that investors and rating agencies are correct to be cautious and concerned about dealing with controlled companies (NYSE 2016; IRRC Institute 2016). That is, the major exchanges' governance reform carve-out for these firms may have unanticipated and negative consequences for the market.

Appendix A - Variable Definitions

Variable	*Definition*
AQ	The standard deviation of the residuals from firm-specific estimates of changes in working capital accruals on cash flow from operations for t-1, t, and t+1, change in revenue, and plant, property, and equipment expense for the past five years. A minimum of three years of data is required to calculate the standard deviation.
Baspread	The average bid-ask spread, computed as the annual average of daily closing bid-ask spread as a percentage of daily closing price.
Bdindep	The percentage of independent board members, computed as the number of outside directors divided by the total number of directors.
Bdsize	The total number of directors on the board.
BigN	An indicator variable equal to 1 if the auditor (au) is a Big 4 audit firm, and 0 otherwise.
CC	An indicator variable equal to 1 if the firm is a controlled company as indicated in its proxy statement, and 0 otherwise.
CEOchair	An indicator variable equal to 1 if the CEO is also the chairman of the board of directors, and 0 otherwise.
DC	An indicator variable equal to 1 if the firm has more than one share of stock as indicated on its proxy statement.
DE	An indicator variable equal to 1 if the firm is incorporated in Delaware, and 0 otherwise.
Equitycomp	Equity-based compensation, calculated as the annual value of option grants divided by total CEO compensation.
Exgrowth	An indicator variable equal to 1 if firm's sales growth from the prior year is in the highest quintile of sales growth for the firm's industry, and zero otherwise.
Family	An indicator variable equal to 1 if the firm is a family firm. Following Chen et al. (2010), we define a family firm as one in the founder or relative of the founder is in executive management, on the board of directors, or a blockholder, as indicated in its proxy statement.
HML	The difference in returns to portfolios of high and low book-to-market stocks, as provided by Kenneth French's data library.
Instown	The percentage of institutional ownership.
Inveff	An indicator variable equal to 1 if the absolute value of a firm's investment residual from a benchmark investment model falls below the median absolute value of the distribution of investment residuals, and zero otherwise. The benchmark investment model is estimated by industry-year by regressing total investment on lagged Tobin's q, lagged asset growth, lagged total investment, and cash flows from operations (oancf). A minimum of 20 observations is required for each industry-year.
Lev	Total debt (dltt + dlc) scaled by total assets (at).
Localmktshare	The ratio of the firm's sales (sale) relative to the sales of all other firms in the firm's MSA.
Lossproportion	The number of years in the previous five years where income before extraordinary items (ib) was negative. Each firm is required to have at least three years of data when calculating the loss proportion.
Lnsegments	The natural logarithm of the number of business segments reported in the Compustat Segments database.
Lnturnover	The natural logarithm of the annual median value of daily trading volume scaled by total shares outstanding (shrout).
MissingEquiycomp	An indicator variable equal to 1 if the percentage of equity compensation (*Equitycomp*) is missing, and 0 otherwise.
Pfirmsinregion	The percentage of Compustat firms located in the firm's MSA in the year prior to the firm's IPO. The date of the IPO is determined based on the year of firm's first listing on Compustat.
Profitrank	The firm's percentile rank of profitability in its IPO year (first year appearing in Compustat) in the distribution of all other new firms appearing in Compustat that year.
Psalesinregion	The percentage of total sales (sale) on Compustat reported by firms located in the firm's MSA in the year prior to the firm's IPO. The date of the IPO is determined based on the year of firm's first listing on Compustat.

Restate	An indicator variable equal to 1 if the firm-year was restated and 0 otherwise, as indicated in AuditAnalytics. Restatements include both Form 8-K Item 4.02 non-reliance restatements and SAB Topic 108 restatements.
Restructuring	An indicator variable equal to 1 for non-zero restructuring costs (rcp) in year t, and 0 otherwise
Retvol	The log of the standard deviation of daily stock returns, averaged over the year.
ROA	Return on assets, defined as pretax income (pi) divided by lagged total assets (at).
Ri-Rf	The portfolio return in excess of the risk-free rate. Portfolios are rebalanced every May. For value-weighted returns, portfolio weights are based on market capitalization at the end of the previous month.
Rm-Rf	The monthly CRSP value-weighted (equal-weighted) market return in excess of the risk-free rate where value-weighted (equal-weighted) portfolio returns is the dependent variable.
Salesrank	The firm's percentile rank of sales in its IPO year (first year appearing in Compustat) in the distribution of all other new firms appearing in Compustat that year.
Size	The natural logarithm of assets (at) at the end of the fiscal year.
SMB	The difference between returns to portfolios of small and big firm stocks,as provided by Kenneth French's data library.
StdCFO	Standard deviation of cash flow from operations (oancf) scaled by total assets (at), where the standard deviation is calculated using the prior five years. A minimum of three years of data is required to calculate the standard deviation.
Stdsales	Standard deviation of sales (sale) scaled by total assets (at), where the standard deviation is calculated using the prior five years. A minimum of three years of data is required to calculate the standard deviation.
Tobinsq	The firm's market value of equity (prcc_f*csho) plus the book value of assets (at) less the book value of equity (ceq), all scaled by the book value of assets.
Totalinvest	Total investment, computed following Goodman et al. (2014) as the sum of R&D (xrd), capital (capx), and advertising expenditures (xad), scaled by lagged total assets (at).
UMD	The difference in returns to portfolios of stocks with high past returns minus those with low past returns, as provided by Kenneth French's data library.

Appendix B – Firm Disclosures of Controlled Company and Controlled Company Exemption Status

This appendix provides excerpts of disclosures from firm proxy statements of controlled company and controlled company exemption status.

A. CBS Corporation[15]

“CBS Corporation's corporate governance practices are established and monitored by its Board of Directors. The Board, with assistance from its Nominating and Governance Committee, regularly assesses CBS Corporation's governance practices in light of legal requirements and governance best practices. In several areas, CBS Corporation's practices go beyond the requirements of the NYSE corporate governance listing standards (the "NYSE listing standards"). For example, despite being a "controlled company" (which is a company of which more than 50% of the voting power is held by an individual or another company), CBS Corporation has a majority of independent directors on its Board and has an independent Compensation Committee and an independent Nominating and Governance Committee, none of which is required for controlled companies under the NYSE listing standards.”

B. HCA Holdings Inc.[16]

“Hercules Holding II, LLC (“Hercules Holding”) controls a majority of our common stock. As a result, we are a “controlled company” within the meaning of NYSE corporate governance standards. Under the NYSE rules, a company of which more than 50% of the voting power is held by an individual, group or another company is a “controlled company” and may elect not to comply with certain NYSE corporate governance standards, including (1) the requirement that we have a majority of the Board of Directors that consist of independent directors and (2) the requirement that we have a compensation committee and a nominating/corporate governance committee that are composed entirely of independent directors. We are, however, subject to the NYSE and SEC rules that require full independence of our Audit and Compliance Committee. As a result, our Audit and Compliance Committee is entirely comprised of independent directors, but we do not have a majority of independent directors on our Board, and our Compensation Committee and Nominating and Corporate Governance Committee do not consist entirely of independent directors.”

C. The Estée Lauder Companies Inc.[17]

“The Company is a "controlled company" under the rules of the New York Stock Exchange because the Lauder family and their related entities hold more than 50% of the voting power of the outstanding voting stock. As such, the Company may avail itself of exemptions relating to the independence of the Board and certain Board committees. Despite the availability of such exemptions, the Board of Directors has determined that it will have a majority of independent directors and that both the Nominating and Board Affairs Committee and the Compensation

[15] See https://www.sec.gov/Archives/edgar/data/813828/000104746906005152/a2169392zdef14a.htm.
[16] See https://www.sec.gov/Archives/edgar/data/860730/000119312512119885/d313045ddef14a.htm.
[17] See https://www.sec.gov/Archives/edgar/data/1001250/000104746909008621/a2194640zdef14a.htm.

Committee will have otherwise required provisions in their charters. The Board of Directors currently has also determined to use the two remaining exemptions, and thus will not require that the Nominating and Board Affairs Committee and Compensation Committee be comprised solely of independent directors."

D. TransDigm Group Incorporated[18]

"TD Group Holdings, LLC, an entity controlled by Warburg Pincus, owns more than 50% of the voting power of TD Group, and TD Group is therefore considered to be a "controlled company" for the purposes of the NYSE listing requirements. As such, TD Group is permitted, and has elected, to opt out of the NYSE listing requirements that would otherwise require its Board of Directors to be comprised of a majority of independent directors."

[18] See https://www.sec.gov/Archives/edgar/data/1260221/000119312518033306/d445576ddef14a.htm.

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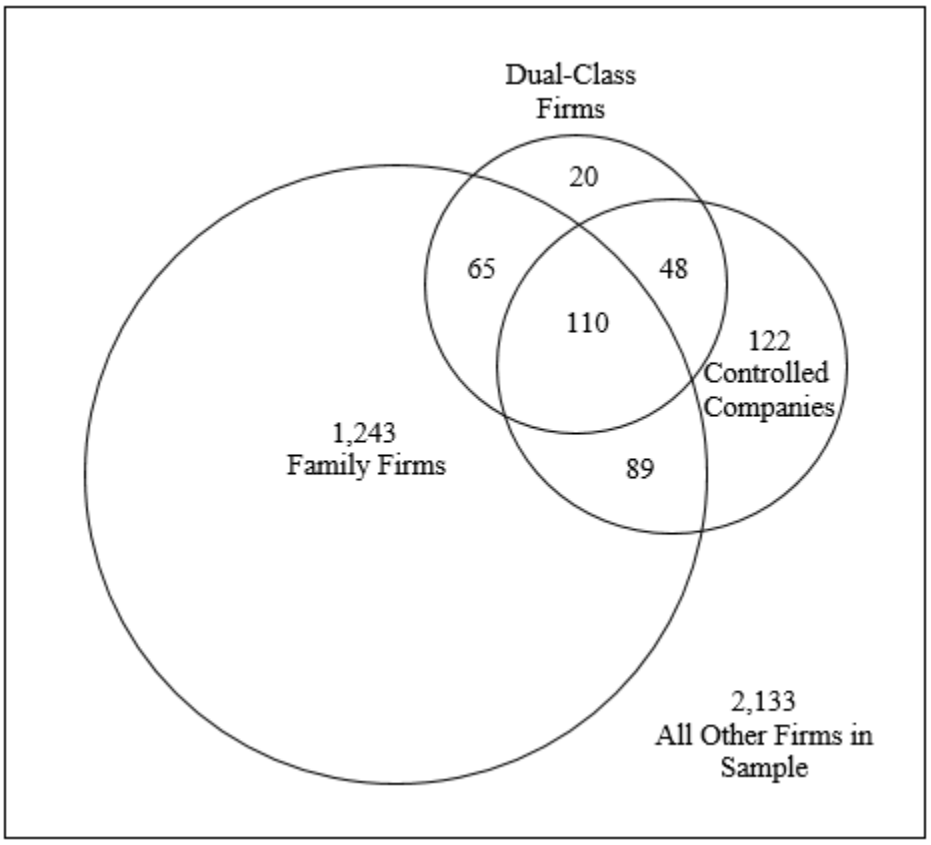
Figure 1

Number of Unique Firms in Sample by Type of Firm



This figure reports the degree of overlap between family firms, dual-class firms and controlled companies in our sample.

Table 1
Descriptive Information for Controlled Companies

Panel A: Number and Percent of Controlled Company Firm-Years by Industry

FF48 Industry	Industry Description	# Firm-Years	# CC Firm-Years	Non-CC Firm-Years	% CCs in Industry	% of CCs
1	Agriculture	48	12	36	25	1
2	Food Products	283	44	239	16	3
3	Candy & Soda	45	14	31	31	1
4	Beer & Liquor	50	14	36	28	1
5	Tobacco Products	21	0	21	0	0
6	Recreation	77	18	59	23	1
7	Entertainment	195	62	133	32	4
8	Printing and Publishing	127	57	70	45	3
9	Consumer Goods	242	36	206	15	2
10	Apparel	231	54	177	23	3
11	Healthcare	277	15	262	5	1
12	Medical Equipment	502	1	501	0	0
13	Pharmaceutical Products	1,074	43	1,031	4	3
14	Chemicals	369	27	342	7	2
15	Rubber and Plastic Products	82	0	82	0	0
16	Textiles	41	15	26	37	1
17	Construction Materials	316	35	281	11	2
18	Construction	242	16	226	7	1
19	Steel Works	198	5	193	3	0
20	Fabricated Products	32	6	26	19	0
21	Machinery	605	20	585	3	1
22	Electrical Equipment	226	17	209	8	1
23	Automobiles and Trucks	265	16	249	6	1
24	Aircraft	110	8	102	7	0
25	Shipbuilding, Railroad Equipment	60	13	47	22	1
26	Defense	55	0	55	0	0
27	Precious Metals	31	0	31	0	0
28	Non-Metallic and Industrial Metal Mining	66	13	53	20	1
29	Coal	63	0	63	0	0
30	Petroleum and Natural Gas	762	64	698	8	4
31	Utilities	618	9	609	1	1
32	Communication	556	176	380	32	11
33	Personal Services	226	40	186	18	2
34	Business Services	1,817	167	1,650	9	10
35	Computers	568	27	541	5	2
36	Electronic Equipment	1,012	49	963	5	3
37	Measuring and Control Equipment	322	18	304	6	1
38	Business Supplies	198	16	182	8	1
39	Shipping Containers	61	9	52	15	1
40	Transportation	497	41	456	8	2
41	Wholesale	490	32	458	7	2
42	Retail	977	128	849	13	8
43	Restaurants, Hotels, Motels	278	15	263	5	1
44	Banking	1,696	82	1,614	5	5
45	Insurance	703	130	573	18	8
46	Real Estate	104	11	93	11	1
47	Trading	1,389	78	1,311	6	5
48	Other	357	19	338	5	1
	Total	18,564	1,672	16,892	9	100

Table 1, Continued

Panel B: Number and Percent of Controlled Company Firm-Years by Controlling Party		
Party Controlling Voting Power	# of CCs	% of CCs
Executives or Directors	480	29
Founding Family	877	52
Other Parties (e.g., institutional investors)	315	19
Total Controlled Company Firm-Years	1,672	100

Panel C: Number and Percent of Controlled Company Firm-Years by Exemption		
Type	# of CCs	% of CCs
Claiming exemption	992	59
Not claiming exemption	680	41
Total Controlled Company Firm-Years	1,672	100

Panel D: Reasons Disclosed in Proxy Statement for Claiming Controlled Company Exemption		
Reason	# of CCs	% of CCs
Board of directors	148	15
Compensation committee	135	14
Nominating or governance committee	381	38
No reason given	571	58

This table presents descriptive information about controlled companies in our full sample without imposing data restrictions due to control variable data availability. Panel A provides the number and percent of controlled company firm-years in each industry and overall using Fama-French 48 industries. Panel B presents the number and percent of controlled company firm-years by the party controlling the voting power of the firm. Panel C presents the number and percent of controlled company firm-years based on whether they claim the exemption and Panel D provides the reasons disclosed in firm proxy statements for why the firm claims the controlled company exemption. With the exception of cases where no reason is provided, all other categories of reasons in Panel D are not mutually exclusive.

Table 2
Descriptive Statistics

Panel A: Full Sample

Variable	*N*	*Mean*	*SD*	*P25*	*P50*	*P75*
Tobinsq	10,542	1.888	1.374	1.116	1.472	2.156
Totalinvest	10,542	0.108	0.132	0.032	0.069	0.135
Inveff	10,542	0.492	0.500	0.000	0.000	1.000
Baspread	10,542	4.174	2.004	2.800	3.700	5.030
Retvol	10,229	-3.689	0.394	-3.957	-3.709	-3.434
AQ	9,277	0.039	0.037	0.018	0.029	0.046
Restate	10,542	0.106	0.308	0.000	0.000	0.000
CC	10,542	0.092	0.289	0.000	0.000	0.000
Family	10,542	0.409	0.492	0.000	0.000	1.000
DC	10,542	0.073	0.260	0.000	0.000	0.000
Instown	10,542	0.258	0.307	0.000	0.204	0.401
StdCFO	10,542	0.056	0.070	0.023	0.038	0.064
Stdsales	10,542	0.192	0.208	0.077	0.137	0.238
CEOchair	10,542	0.103	0.303	0.000	0.000	0.000
Bdindep	10,542	0.771	0.121	0.700	0.800	0.875
Bdsize	10,542	8.512	2.066	7.000	8.000	10.000
Lnsegments	10,542	1.435	0.689	1.099	1.386	1.946
Exgrowth	10,542	0.152	0.359	0.000	0.000	0.000
Lossproportion	10,542	0.256	0.324	0.000	0.200	0.400
Restructuring	10,542	0.006	0.024	0.000	0.000	0.003
Size	10,542	6.907	1.570	5.790	6.775	7.912
BigN	10,542	0.871	0.336	1.000	1.000	1.000
Lev	10,542	0.193	0.219	0.001	0.136	0.304
ROA	10,542	0.016	0.179	-0.007	0.044	0.090
Profitrank	10,542	56.271	30.625	28.000	65.000	83.000
Salesrank	10,542	57.345	22.634	43.000	57.000	75.000
DE	10,542	0.671	0.470	0.000	1.000	1.000
Pfirmsinregion	10,542	0.020	0.017	0.007	0.017	0.032
Psalesinregion	10,542	0.023	0.027	0.003	0.013	0.032
Localmktshare	10,542	0.058	0.163	0.001	0.005	0.026
Lnturnover	10,542	2.108	0.657	1.715	2.124	2.534
Equitycomp	10,542	0.135	0.195	0.000	0.000	0.237
MissingEquitycomp	10,542	0.286	0.452	0.000	0.000	1.000

Table 2, Continued

Panel B: Sample Split on CC

	CC=0			CC=1			Diff in Means	
Variable	*N*	*Mean*	*SD*	*N*	*Mean*	*SD*	T-Stat	P-Value
Tobinsq	9,575	1.900	1.364	967	1.768	1.468	2.85	0.00
Totalinvest	9,575	0.112	0.136	967	0.069	0.087	9.50	0.00
Inveff	9,575	0.487	0.500	967	0.540	0.499	3.14	0.00
Baspread	9,575	4.142	1.962	967	4.484	2.359	-5.05	0.00
Retvol	9,293	-3.693	0.390	936	-3.640	0.429	-3.99	0.00
AQ	8,408	0.039	0.036	869	0.039	0.041	0.17	0.86
Restate	9,575	0.104	0.306	967	0.120	0.325	-1.51	0.13
Family	9,575	0.385	0.487	967	0.640	0.480	-15.52	0.00
DC	9,575	0.025	0.156	967	0.544	0.498	-72.52	0.00
Instown	9,575	0.245	0.278	967	0.385	0.492	-13.58	0.00
StdCFO	9,575	0.057	0.072	967	0.054	0.055	1.34	0.18
Stdsales	9,575	0.190	0.203	967	0.210	0.253	-2.80	0.01
CEOchair	9,575	0.107	0.309	967	0.060	0.238	4.58	0.00
Bdindep	9,575	0.787	0.103	967	0.614	0.164	46.49	0.00
Bdsize	9,575	8.494	2.047	967	8.697	2.241	-2.92	0.00
Lnsegments	9,575	1.432	0.689	967	1.468	0.687	-1.55	0.12
Exgrowth	9,575	0.150	0.358	967	0.169	0.375	-1.49	0.14
Lossproportion	9,575	0.256	0.326	967	0.248	0.303	0.76	0.44
Restructuring	9,575	0.006	0.023	967	0.008	0.031	-2.70	0.01
Size	9,575	6.893	1.587	967	7.039	1.388	-2.75	0.01
BigN	9,575	0.870	0.336	967	0.874	0.332	-0.31	0.75
Lev	9,575	0.187	0.210	967	0.246	0.284	-7.91	0.00
ROA	9,575	0.016	0.182	967	0.019	0.148	-0.51	0.61
Profitrank	9,575	55.414	30.449	967	64.755	31.077	-9.07	0.00
Salesrank	9,575	56.592	22.733	967	64.800	20.182	-10.81	0.00
DE	9,575	0.669	0.471	967	0.695	0.461	-1.66	0.10
Pfirmsinregion	9,575	0.020	0.017	967	0.021	0.019	-2.18	0.03
Psalesinregion	9,575	0.023	0.026	967	0.027	0.031	-4.78	0.00
Localmktshare	9,575	0.057	0.159	967	0.071	0.196	-2.59	0.01
Lnturnover	9,575	2.149	0.621	967	1.700	0.840	20.67	0.00
Equitycomp	9,575	0.142	0.198	967	0.068	0.152	11.23	0.00
MissingEquitycomp	9,575	0.262	0.440	967	0.531	0.499	-17.88	0.00

Table 2, Continued

Panel C: Entropy Balanced Full Sample Split on CC

	CC=0			CC=1			Diff in Means	
Variable	*N*	*Mean*	*SD*	*N*	*Mean*	*SD*	T-Stat	P-Value
Family	9.575	0.640	0.480	967	0.640	0.480	0.00	1.00
DC	9.575	0.544	0.498	967	0.544	0.498	0.00	1.00
Instown	9.575	0.385	0.515	967	0.385	0.492	0.00	1.00
StdCFO	9.575	0.054	0.068	967	0.054	0.055	0.00	1.00
Stdsales	9.575	0.210	0.256	967	0.210	0.253	0.00	1.00
CEOchair	9.575	0.060	0.237	967	0.060	0.238	0.00	1.00
Bdindep	9.575	8.697	2.739	967	8.697	2.241	0.00	1.00
Bdsize	9.575	0.614	0.113	967	0.614	0.164	0.00	1.00
Lnsegments	9.575	1.468	0.732	967	1.468	0.687	0.00	1.00
Exgrowth	9.575	0.169	0.374	967	0.169	0.375	0.00	1.00
Lossproportion	9.575	0.248	0.292	967	0.248	0.303	0.00	1.00
Restructuring	9.575	0.008	0.030	967	0.008	0.031	0.00	1.00
Size	9.575	7.039	1.662	967	7.039	1.388	0.00	1.00
BigN	9.575	0.874	0.332	967	0.874	0.332	0.00	1.00
Lev	9.575	0.246	0.243	967	0.246	0.284	0.00	1.00
ROA	9.575	0.019	0.132	967	0.019	0.148	0.00	1.00
Profitrank	9.575	64.750	27.599	967	64.750	31.077	0.00	1.00
Salesrank	9.575	64.800	20.785	967	64.800	20.182	0.00	1.00
DE	9.575	0.695	0.460	967	0.695	0.461	0.00	1.00
Pfirmsinregion	9.575	0.021	0.021	967	0.021	0.019	0.00	1.00
Psalesinregion	9.575	0.027	0.032	967	0.027	0.031	0.00	1.00
Localmktshare	9.575	0.071	0.192	967	0.071	0.196	0.00	1.00
Lnturnover	9.575	1.700	0.757	967	1.700	0.840	0.00	1.00
Equitycomp	9.575	0.068	0.143	967	0.068	0.152	0.00	1.00
MissingEquitycomp	9.575	0.531	0.499	967	0.531	0.499	0.00	1.00

Panel D: Entropy Balanced Sample Split on CC for Low Bdindep Firm-Years

	CC=0			CC=1			Diff in Means	
Variable	*N*	*Mean*	*SD*	*N*	*Mean*	*SD*	T-Stat	P-Value
Family	3,932	0.632	0.482	802	0.632	0.482	0.00	1.00
DC	3,932	0.541	0.498	802	0.541	0.499	0.00	1.00
Instown	3,932	0.368	0.490	802	0.368	0.469	0.00	1.00
StdCFO	3,932	0.054	0.074	802	0.054	0.055	0.00	1.00
Stdsales	3,932	0.215	0.228	802	0.215	0.260	0.00	1.00
CEOchair	3,932	0.064	0.244	802	0.064	0.244	0.00	1.00
Bdsize	3,932	8.666	2.529	802	8.666	2.253	0.00	1.00
Lnsegments	3,932	1.472	0.716	802	1.472	0.648	0.00	1.00
Exgrowth	3,932	0.155	0.362	802	0.155	0.362	0.00	1.00
Lossproportion	3,932	0.250	0.303	802	0.250	0.307	0.00	1.00
Restructuring	3,932	0.007	0.024	802	0.007	0.030	0.00	1.00
Size	3,932	6.997	1.608	802	6.997	1.392	0.00	1.00
BigN	3,932	0.869	0.337	802	0.869	0.337	0.00	1.00
Lev	3,932	0.244	0.262	802	0.244	0.285	0.00	1.00
ROA	3,932	0.023	0.137	802	0.023	0.152	0.00	1.00
Profitrank	3,932	63.560	27.727	802	63.570	31.340	0.00	1.00
Salesrank	3,932	64.720	19.506	802	64.730	20.782	0.00	1.00
DE	3,932	0.716	0.451	802	0.716	0.451	0.00	1.00
Pfirmsinregion	3,932	0.022	0.022	802	0.022	0.019	0.00	1.00
Psalesinregion	3,932	0.028	0.033	802	0.028	0.032	0.00	1.00
Localmktshare	3,932	0.066	0.178	802	0.066	0.195	0.00	1.00
Lnturnover	3,932	1.705	0.773	802	1.705	0.841	0.00	1.00
Equitycomp	3,932	0.069	0.139	802	0.069	0.154	0.00	1.00
MissingEquitycomp	3,932	0.522	0.500	802	0.522	0.500	0.00	1.00

Table 2, Continued

Panel E: Entropy Balanced Sample Split on CC for High Bdindep Firm-Years

	CC=0			CC=1			Diff in Means	
Variable	*N*	*Mean*	*SD*	*N*	*Mean*	*SD*	T-Stat	P-Value
Family	5,643	0.678	0.467	165	0.679	0.468	0.00	1.00
DC	5,643	0.557	0.497	165	0.558	0.498	0.01	0.99
Instown	5,643	0.464	0.547	165	0.464	0.590	0.00	1.00
StdCFO	5,643	0.054	0.137	165	0.054	0.053	0.00	1.00
Stdsales	5,643	0.185	0.209	165	0.185	0.212	0.00	1.00
CEOchair	5,643	0.042	0.202	165	0.042	0.202	0.00	1.00
Bdsize	5,643	8.849	2.396	165	8.848	2.185	0.00	1.00
Lnsegments	5,643	1.449	0.738	165	1.449	0.852	0.00	1.00
Exgrowth	5,643	0.236	0.425	165	0.236	0.426	0.00	1.00
Lossproportion	5,643	0.237	0.283	165	0.237	0.279	0.00	1.00
Restructuring	5,643	0.014	0.040	165	0.014	0.038	0.00	1.00
Size	5,643	7.240	1.627	165	7.240	1.350	0.00	1.00
BigN	5,643	0.897	0.304	165	0.897	0.305	0.00	1.00
Lev	5,643	0.255	0.221	165	0.255	0.284	0.00	1.00
ROA	5,643	-0.001	0.156	165	-0.001	0.126	0.00	1.00
Profitrank	5,643	70.510	24.304	165	70.520	29.177	0.00	1.00
Salesrank	5,643	65.160	18.022	165	65.160	17.015	0.00	1.00
DE	5,643	0.594	0.491	165	0.594	0.493	0.00	1.00
Pfirmsinregion	5,643	0.016	0.016	165	0.016	0.016	0.00	1.00
Psalesinregion	5,643	0.020	0.026	165	0.020	0.026	0.00	1.00
Localmktshare	5,643	0.095	0.193	165	0.095	0.204	0.00	1.00
Lnturnover	5,643	1.678	0.869	165	1.678	0.840	0.00	1.00
Equitycomp	5,643	0.066	0.140	165	0.066	0.138	0.00	1.00
MissingEquitycomp	5,643	0.569	0.495	165	0.570	0.497	0.00	1.00

This table presents descriptive statistics. Panel A presents descriptive statistics for the main variables in our analyses for the full sample of firm-year observations. Panel B presents descriptive statistics for the main variables in our analyses split on whether the firm was a controlled company in that year. Panel C presents descriptive statistics for control variables split on whether the firm was a controlled company in that year after reweighting observations using entropy balancing. Panel D presents descriptive statistics for control variables split on whether the firm was a controlled company in that year for all firm-years where the firm's board independence is below the mean board independence of all firms in that year. Panel E presents descriptive statistics for control variables split on whether the firm was a controlled company in that year for all firm-years where the firm's board independence is above the mean board independence of all firms in that year. We reweight all observations in Panels D and E separately using entropy balancing. All variables are defined in Appendix B.

Table 3
Correlations

Variable		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CC	(1)								
Tobinsq	(2)	**-0.03**							
Totalinvest	(3)	**-0.09**	**0.33**						
Inveff	(4)	**0.03**	**-0.16**	**-0.08**					
Baspread	(5)	**0.05**	**-0.09**	**0.06**	**-0.20**				
Retvol	(6)	**0.04**	**-0.09**	**0.06**	**-0.18**	**0.87**			
AQ	(7)	0.00	**0.27**	**-0.08**	**-0.12**	**0.24**	**0.22**		
Restate	(8)	0.01	**-0.04**	-0.01	0.00	0.01	0.01	0.01	
Family	(9)	**0.15**	**0.08**	**0.05**	0.01	0.00	**0.02**	**0.05**	0.00
DC	(10)	**0.58**	**-0.06**	**-0.05**	0.00	-0.01	-0.01	**-0.05**	**0.02**
Instown	(11)	**0.13**	**-0.04**	**-0.06**	**0.07**	**-0.13**	**-0.07**	**-0.06**	**-0.02**
StdCFO	(12)	-0.01	**0.26**	**-0.02**	**-0.16**	**0.32**	**0.26**	**0.58**	**-0.02**
Stdsales	(13)	**0.03**	**0.04**	**-0.02**	**-0.07**	**0.21**	**0.19**	**0.21**	0.01
CEOchair	(14)	**-0.04**	-0.01	**0.03**	**0.04**	**-0.04**	**-0.10**	**-0.05**	**-0.03**
Bdindep	(15)	**-0.41**	0.00	**-0.05**	**0.06**	**-0.08**	**-0.09**	**-0.03**	-0.02
Bdsize	(16)	**0.03**	**-0.11**	**-0.06**	**0.08**	**-0.23**	**-0.26**	**-0.17**	0.00
Lnsegments	(17)	0.02	**-0.04**	-0.01	**0.09**	**-0.12**	**-0.12**	**-0.06**	**0.02**
Exgrowth	(18)	0.01	**-0.07**	**-0.04**	**-0.10**	**0.19**	**0.16**	**0.16**	0.01
Lossproportion	(19)	-0.01	**0.09**	**-0.04**	**-0.18**	**0.44**	**0.39**	**0.34**	**0.02**
Restructuring	(20)	**0.03**	**-0.13**	**-0.05**	**-0.04**	**0.31**	**0.20**	**0.02**	**0.02**
Size	(21)	**0.03**	**-0.26**	**0.03**	**0.19**	**-0.36**	**-0.37**	**-0.37**	0.01
BigN	(22)	0.00	**-0.06**	**-0.02**	**0.07**	**-0.14**	**-0.14**	**-0.13**	**0.04**
Lev	(23)	**0.08**	**-0.08**	**0.08**	**-0.03**	**0.09**	**0.05**	**-0.10**	**0.03**
ROA	(24)	0.00	**-0.06**	0.01	**0.12**	**-0.39**	**-0.30**	**-0.25**	-0.01
Profitrank	(25)	**0.09**	**-0.16**	-0.01	**0.04**	**-0.17**	**-0.17**	**-0.22**	-0.02
Salesrank	(26)	**0.10**	**-0.15**	**-0.06**	**0.05**	**-0.12**	**-0.12**	**-0.17**	0.01
DE	(27)	0.02	**0.05**	0.00	**0.02**	**0.05**	**0.05**	**0.04**	-0.01
Pfirmsinregion	(28)	**0.02**	0.00	**-0.03**	0.01	**0.02**	0.02	**0.06**	-0.01
Psalesinregion	(29)	**0.05**	**-0.04**	-0.01	0.01	0.00	0.00	0.01	-0.01
Localmktshare	(30)	**0.03**	**-0.06**	**0.03**	-0.01	**-0.08**	**-0.09**	**-0.11**	0.02
Lnturnover	(31)	**-0.20**	**0.07**	**0.15**	**0.03**	**0.07**	**0.07**	-0.01	0.01
Equitycomp	(32)	**-0.11**	**0.08**	**-0.04**	**0.09**	**-0.12**	**-0.13**	**-0.07**	**-0.03**
MissingEquitycomp	(33)	**0.17**	**0.05**	**0.04**	**-0.13**	**0.27**	**0.26**	**0.21**	0.01

This table reports Pearson correlation coefficients for our variables of interest and all control variables. Correlations reported in bold indicate significance at the 0.05 level (two-tailed) or better. All variables are defined in Appendix B.

Table 4
Controlled Companies and Firm Value

	DV: Tobinsq		
	(1)	(2)	(3)
Variables	Full Sample	Low Bdindep	High Bdindep
CC	0.377***	0.339***	0.057
	(3.578)	(3.354)	(0.843)
Family	0.378**	0.377***	-0.059
	(2.519)	(2.599)	(-0.891)
DC	-0.547***	-0.600***	-0.100
	(-4.181)	(-4.297)	(-1.396)
Instown	0.041	0.032	-0.110
	(0.471)	(0.358)	(-1.277)
StdCFO	4.485***	5.338***	1.904***
	(2.622)	(3.467)	(3.829)
Stdsales	-0.331	-0.359*	0.081
	(-1.582)	(-1.707)	(0.278)
CEOchair	0.146	0.149	0.158*
	(1.096)	(1.019)	(1.949)
Bdindep	0.728**		
	(2.512)		
Bdsize	0.023	0.019	0.014
	(1.124)	(0.813)	(0.826)
Lnsegments	-0.001	0.021	-0.016
	(-0.021)	(0.287)	(-0.483)
Exgrowth	-0.301***	-0.308***	-0.194***
	(-2.706)	(-2.713)	(-2.882)
Lossproportion	-0.511*	-0.401*	-0.353***
	(-1.863)	(-1.800)	(-2.695)
Restructuring	-2.154*	-2.671**	-1.420**
	(-1.849)	(-2.107)	(-2.089)
Size	-0.242***	-0.253***	-0.088***
	(-3.877)	(-3.700)	(-2.840)
BigN	-0.112	0.027	0.036
	(-0.614)	(0.166)	(0.341)
Lev	0.962**	0.775**	1.014***
	(2.388)	(2.217)	(6.048)
ROA	0.427	0.393	0.289
	(0.435)	(0.434)	(0.798)
Profitrank	-0.002	-0.004**	0.001
	(-1.526)	(-2.064)	(0.611)
Salesrank	-0.002	-0.001	-0.000
	(-0.564)	(-0.346)	(-0.137)
DE	-0.172	-0.158	-0.107
	(-1.633)	(-1.477)	(-1.461)
Pfirmsinregion	14.442**	7.693	15.515***
	(2.141)	(1.192)	(3.179)
Psalesinregion	-2.873	-0.306	-9.825***
	(-0.763)	(-0.083)	(-3.284)
Localmktshare	0.086	0.121	0.312*
	(0.284)	(0.322)	(1.739)
Lnturnover	0.203***	0.176**	0.088
	(2.904)	(2.559)	(1.463)
Equitycomp	0.548*	0.739**	0.698**
	(1.899)	(2.376)	(2.093)
Test of *CC* for (2) vs. (3)			0.282***
χ^2			(17.35)
MissingEquitycomp	Yes	Yes	Yes
Year & Industry FE	Yes	Yes	Yes
Observations	10,542	4,734	5,808
Adjusted R^2	0.326	0.350	0.573

This table presents results of weighted least squares regressions of *TobinsQ* on an indicator variable for whether the firm is a controlled company and control variables. Column 1 reports results for the main sample while Columns 2 and 3 report results for the low and high board independence samples, respectively. t-statistics and χ^2-statistics are shown in parentheses. To test coefficient equality for *CC* across columns, we estimate the regressions simultaneously. Standard errors are clustered by firm. ***, **, and * indicate statistical significance at $p < 0.01$, $p < 0.05$, and $p < 0.10$, respectively. All variables are defined in Appendix A.

Table 5
Controlled Companies and Stock Returns

	Equal-Weighted Returns		Value-Weighted Returns	
	(1)	(2)	(3)	(4)
Variables	CCs	Non-CCs	CCs	Non-CCs
Alpha	0.004**	0.002	0.000	0.000
	(3.316)	(1.149)	(0.969)	(0.470)
MKTRF	1.051***	1.034***	1.102***	0.958***
	(41.638)	(33.197)	(30.362)	(71.082)
SMB	0.402**	0.360***	0.375***	-0.010
	(3.504)	(8.849)	(4.068)	(-0.373)
HML	0.450***	0.266**	-0.080*	0.072**
	(9.716)	(2.535)	(-1.977)	(2.664)
UMD	0.040	0.013	-0.026	0.022**
	(0.975)	(0.474)	(-1.177)	(2.862)
Observations	84	84	84	84
Adjusted R^2	0.960	0.977	0.943	0.992

This table presents results of regressions of monthly portfolio returns on *MKTRF*, *SMB*, *HML* and *UMD* using equally-weighted returns (Columns 1 and 2) and value-weighted returns (Columns 3 and 4). Columns 1 and 3 report results for portfolios of controlled companies and Columns 2 and 4 report results for portfolios of non-controlled companies. Portfolios are rebalanced each year every calendar year May. t-statistics are shown in parentheses. Standard errors are clustered by year. ***, **, and * indicate statistical significance at $p < 0.01$, $p < 0.05$, and $p < 0.10$, respectively. All variables are defined in Appendix A.

Table 6
Controlled Companies and Firm Investment

	DV: Totalinvest			DV: Inveff		
	(1)	(2)	(3)	(4)	(5)	(6)
Variables	Full Sample	Low Bdindep	High Bdindep	Full Sample	Low Bdindep	High Bdindep
CC	-0.008	-0.009*	-0.009	-0.061**	-0.044*	0.003
	(-1.358)	(-1.706)	(-0.947)	(-2.399)	(-1.708)	(0.077)
Family	0.021***	0.014**	0.002	-0.019	0.011	0.048
	(3.259)	(2.070)	(0.231)	(-0.828)	(0.499)	(1.281)
DC	-0.010	-0.013*	-0.019**	0.061**	0.057*	0.017
	(-1.625)	(-1.867)	(-1.965)	(2.021)	(1.813)	(0.419)
Instown	0.008	0.014**	0.025**	-0.074**	-0.029	-0.096**
	(1.389)	(2.193)	(2.523)	(-2.528)	(-1.241)	(-1.968)
StdCFO	0.139**	0.155**	0.192***	0.660*	0.592***	0.526***
	(2.358)	(2.480)	(3.718)	(1.870)	(2.599)	(3.758)
Stdsales	-0.031***	-0.031***	-0.070***	-0.028	-0.110*	0.148*
	(-2.790)	(-2.624)	(-3.277)	(-0.570)	(-1.952)	(1.931)
CEOchair	0.013*	0.004	0.016**	-0.134*	-0.130**	0.066
	(1.773)	(0.553)	(2.015)	(-1.928)	(-2.071)	(0.891)
Bdindep	0.021			0.087		
	(1.043)			(1.074)		
Bdsize	-0.001	-0.001	-0.007***	0.012*	0.010	0.002
	(-1.079)	(-0.381)	(-3.035)	(1.699)	(1.303)	(0.217)
Lnsegments	-0.002	-0.001	-0.000	-0.009	-0.002	-0.024
	(-0.736)	(-0.344)	(-0.020)	(-0.473)	(-0.126)	(-1.058)
Exgrowth	-0.018***	-0.019**	-0.024***	-0.074*	0.002	-0.121***
	(-2.594)	(-2.204)	(-3.186)	(-1.823)	(0.054)	(-2.613)
Lossproportion	0.006	0.005	0.048*	0.015	-0.000	-0.263***
	(0.553)	(0.398)	(1.960)	(0.275)	(-0.001)	(-2.653)
Restructuring	-0.192***	-0.196***	-0.095	0.183	0.223	-0.201
	(-3.845)	(-2.912)	(-1.456)	(0.490)	(0.565)	(-0.535)
Size	-0.004	-0.004	0.005	0.029**	0.034***	0.002
	(-1.345)	(-1.587)	(1.063)	(2.553)	(3.143)	(0.118)
BigN	-0.013	-0.011	0.023**	0.065	0.017	0.083
	(-1.118)	(-0.870)	(1.992)	(1.336)	(0.341)	(1.306)
Lev	-0.022*	-0.032**	0.004	-0.125**	-0.091*	0.073
	(-1.785)	(-2.516)	(0.167)	(-2.438)	(-1.808)	(0.874)
ROA	-0.060**	-0.049*	-0.091**	-0.126	0.050	-0.086
	(-2.312)	(-1.727)	(-2.520)	(-0.792)	(0.400)	(-0.436)
Profitrank	0.000	-0.000	0.000**	0.000	0.000	-0.001
	(0.406)	(-0.141)	(2.333)	(0.583)	(0.576)	(-1.521)
Salesrank	-0.000***	-0.000***	-0.001***	0.000	-0.000	0.001
	(-2.834)	(-2.746)	(-2.697)	(0.086)	(-0.483)	(0.865)
DE	-0.014**	-0.008	-0.033***	0.042*	0.022	0.090**
	(-2.028)	(-1.330)	(-3.092)	(1.665)	(0.853)	(2.565)
Pfirmsinregion	0.302	0.142	1.444**	-0.167	-0.165	1.070
	(0.832)	(0.389)	(2.065)	(-0.120)	(-0.127)	(0.411)
Psalesinregion	-0.096	-0.076	-0.806*	-0.245	-0.304	0.016
	(-0.531)	(-0.430)	(-1.817)	(-0.302)	(-0.405)	(0.012)
Localmktshare	0.013	0.019	-0.004	-0.010	-0.024	-0.075
	(0.871)	(1.159)	(-0.184)	(-0.132)	(-0.253)	(-0.788)
Lnturnover	0.025***	0.026***	0.018***	-0.090***	-0.060***	-0.089***
	(5.329)	(5.627)	(2.600)	(-3.698)	(-3.157)	(-2.690)
Equitycomp	0.049***	0.040***	0.043*	-0.025	-0.045	0.327**
	(3.587)	(3.437)	(1.648)	(-0.359)	(-0.632)	(2.095)
Test of *CC* for (2) vs. (3) & (5) vs. (6)			0.00			-0.047
χ^2			(0.00)			(1.82)
MissingEquitycomp	Yes	Yes	Yes	Yes	Yes	Yes
Year & Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	10,542	4,734	5,808	10,542	4,734	5,808
Adjusted R^2	0.416	0.357	0.719	0.412	0.416	0.560

This table presents results of weighted least squares regressions of *Totalinvest* and *Inveff* on an indicator variable for whether the firm is a controlled company and control variables. Columns 1 and 4 report results for the main sample, Columns 2 and 5 report results for the low board independence sample and Columns 3 and 6 report results for the high board independence sample. t-statistics and χ^2-statistics are shown in parentheses. To test coefficient equality for *CC* across columns, we estimate the regressions simultaneously. Standard errors are clustered by firm. ***, **, and * indicate statistical significance at $p < 0.01$, $p < 0.05$, and $p < 0.10$, respectively. All variables are defined in Appendix A.

Table 7
Controlled Companies and Information Asymmetry

	DV: Baspread			DV: Retvol		
	(1)	(2)	(3)	(4)	(5)	(6)
Variables	Full Sample	Low Bdindep	High Bdindep	Full Sample	Low Bdindep	High Bdindep
CC	0.261***	0.377***	0.038	0.025	0.036**	-0.048
	(2.610)	(3.855)	(0.191)	(1.439)	(2.411)	(-1.307)
Family	0.122	-0.019	0.440**	0.021	0.018	0.086**
	(1.015)	(-0.183)	(2.022)	(1.011)	(0.987)	(2.258)
DC	-0.226**	-0.198*	-0.590**	-0.027	-0.034*	-0.018
	(-1.976)	(-1.731)	(-2.372)	(-1.355)	(-1.758)	(-0.413)
Instown	-0.440***	-0.579***	-0.138	0.042*	0.026	0.046
	(-2.581)	(-2.852)	(-0.493)	(1.697)	(1.071)	(1.059)
StdCFO	-1.864*	-1.147	-1.028	-0.692**	-0.394***	-0.077
	(-1.663)	(-1.082)	(-1.324)	(-2.568)	(-2.993)	(-0.593)
Stdsales	1.091***	0.895***	0.460	0.117***	0.101***	-0.041
	(3.003)	(4.210)	(0.953)	(2.892)	(3.167)	(-0.439)
CEOchair	0.351**	0.317*	0.208	0.072**	0.074**	-0.020
	(2.019)	(1.722)	(0.723)	(2.408)	(2.376)	(-0.315)
Bdindep	-0.869**			-0.110		
	(-2.314)			(-1.588)		
Bdsize	-0.028	-0.038	-0.059	-0.001	-0.005	-0.015*
	(-0.974)	(-1.237)	(-1.442)	(-0.228)	(-1.038)	(-1.949)
Lnsegments	-0.100	-0.067	-0.091	-0.007	-0.009	-0.017
	(-1.345)	(-0.960)	(-0.694)	(-0.505)	(-0.631)	(-0.725)
Exgrowth	0.328**	0.225*	0.199	0.045*	0.030	0.024
	(2.561)	(1.808)	(0.831)	(1.888)	(1.446)	(0.644)
Lossproportion	1.451***	1.421***	1.415***	0.276***	0.279***	0.306***
	(6.796)	(6.443)	(3.264)	(8.065)	(8.825)	(4.244)
Restructuring	10.591***	13.351***	7.010**	0.264	0.503**	0.512
	(5.409)	(6.571)	(2.184)	(0.988)	(2.221)	(1.308)
Size	-0.263***	-0.279***	-0.218**	-0.071***	-0.072***	-0.044***
	(-4.182)	(-4.136)	(-2.504)	(-7.185)	(-7.327)	(-2.932)
BigN	-0.180	-0.259*	-0.402	-0.019	-0.014	0.017
	(-1.124)	(-1.701)	(-1.335)	(-0.660)	(-0.648)	(0.323)
Lev	0.849***	0.651***	0.446	0.157***	0.116***	0.078
	(4.108)	(3.000)	(1.085)	(4.093)	(3.129)	(1.057)
ROA	-1.870***	-1.994***	-2.841***	-0.127*	-0.177**	-0.086
	(-4.082)	(-4.499)	(-2.661)	(-1.777)	(-2.548)	(-0.504)
Profitrank	0.002	0.002	-0.002	0.000	0.001**	-0.002***
	(1.348)	(1.362)	(-0.565)	(1.471)	(2.280)	(-2.828)
Salesrank	-0.003	-0.004	-0.012**	-0.000	-0.000	-0.001
	(-1.079)	(-1.582)	(-1.969)	(-0.364)	(-0.523)	(-0.768)
DE	-0.105	-0.238**	-0.078	-0.047**	-0.061***	-0.027
	(-0.900)	(-2.080)	(-0.458)	(-2.282)	(-3.271)	(-0.807)
Pfirmsinregion	-1.885	-1.268	4.318	0.012	0.334	0.543
	(-0.321)	(-0.238)	(0.384)	(0.012)	(0.342)	(0.246)
Psalesinregion	0.252	-0.977	-2.857	-0.159	-0.296	-0.765
	(0.081)	(-0.332)	(-0.505)	(-0.283)	(-0.528)	(-0.690)
Localmktshare	-0.104	-0.127	-0.274	-0.052	-0.054	-0.102
	(-0.295)	(-0.379)	(-0.780)	(-0.821)	(-0.897)	(-1.145)
Lnturnover	0.496***	0.467***	0.607***	0.075***	0.074***	0.056*
	(5.137)	(4.353)	(3.603)	(4.270)	(4.955)	(1.792)
Equitycomp	-0.084	-0.107	-0.780	-0.060	-0.084	0.024
	(-0.265)	(-0.326)	(-1.468)	(-0.989)	(-1.606)	(0.173)
Test of *CC* for (2) vs. (3) & (4) vs. (6)			0.339*			0.084**
χ^2			(2.90)			(5.30)
MissingEquitycomp	Yes	Yes	Yes	Yes	Yes	Yes
Year & Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	10,542	4,734	5,808	10,229	4,548	5,681
Adjusted R^2	0.657	0.659	0.756	0.690	0.694	0.761

This table presents results of weighted least squares regressions of *Baspread* and *Retvol* on an indicator variable for whether the firm is a controlled company and control variables. Columns 1 and 4 report results for the main sample, Columns 2 and 5 report results for the low board independence sample and Columns 3 and 6 report results for the high board independence sample. t-statistics and χ^2-statistics are shown in parentheses. To test coefficient equality for *CC* across columns, we estimate the regressions simultaneously. Standard errors are clustered by firm. ***, **, and * indicate statistical significance at $p < 0.01$, $p < 0.05$, and $p < 0.10$, respectively. All variables are defined in Appendix A.

Table 8
Controlled Companies and Earnings Management

	DV: AQ			DV: Restate		
	(1)	(2)	(3)	(4)	(5)	(6)
Variables	Full Sample	Low Bdindep	High Bdindep	Full Sample	Low Bdindep	High Bdindep
CC	0.003	0.005**	-0.006**	0.028	0.036*	0.003
	(1.061)	(2.323)	(-2.036)	(1.636)	(1.667)	(0.099)
Family	0.004	0.007**	-0.003	0.001	0.005	-0.004
	(1.412)	(2.335)	(-0.986)	(0.054)	(0.218)	(-0.136)
DC	-0.006**	-0.010***	-0.002	-0.000	-0.006	-0.070*
	(-2.007)	(-3.151)	(-0.484)	(-0.022)	(-0.275)	(-1.849)
Instown	0.001	0.002	0.001	-0.011	-0.019	-0.003
	(0.375)	(0.578)	(0.285)	(-0.477)	(-0.676)	(-0.074)
StdCFO	0.317***	0.249***	0.214***	-0.177	-0.293*	0.120
	(5.750)	(3.164)	(7.492)	(-1.152)	(-1.902)	(0.917)
Stdsales	-0.002	0.000	-0.029***	-0.021	0.034	-0.234***
	(-0.422)	(0.040)	(-3.314)	(-0.727)	(1.009)	(-2.811)
CEOchair	0.005	0.004	-0.001	0.021	0.018	0.033
	(1.158)	(0.918)	(-0.324)	(0.542)	(0.423)	(0.518)
Bdindep	-0.002			-0.039		
	(-0.257)			(-0.615)		
Bdsize	0.000	0.001	0.001**	-0.002	0.001	0.006
	(0.139)	(0.905)	(2.050)	(-0.495)	(0.120)	(0.624)
Lnsegments	0.001	0.003*	0.003**	0.018	0.026	-0.003
	(0.934)	(1.672)	(2.117)	(1.212)	(1.277)	(-0.122)
Exgrowth	0.000	0.004	0.010***	0.005	0.011	0.035
	(0.162)	(1.501)	(5.161)	(0.289)	(0.499)	(1.015)
Lossproportion	0.001	0.005	0.015**	-0.068*	-0.061	-0.006
	(0.245)	(0.964)	(2.266)	(-1.855)	(-1.408)	(-0.068)
Restructuring	-0.081***	-0.058**	-0.050**	0.205	-0.012	0.328
	(-3.438)	(-2.056)	(-2.399)	(0.653)	(-0.039)	(0.551)
Size	-0.002	-0.004**	-0.006***	-0.010	-0.015	-0.025*
	(-1.397)	(-2.289)	(-4.538)	(-0.905)	(-0.964)	(-1.647)
BigN	0.000	-0.001	-0.007*	0.033	0.063**	-0.122**
	(0.120)	(-0.382)	(-1.872)	(1.221)	(2.002)	(-2.170)
Lev	-0.009	-0.012*	0.002	0.035	0.026	-0.095
	(-1.267)	(-1.741)	(0.359)	(1.013)	(0.621)	(-1.453)
ROA	-0.022*	-0.023*	0.002	-0.050	-0.112	-0.018
	(-1.869)	(-1.839)	(0.175)	(-0.793)	(-1.567)	(-0.086)
Profitrank	-0.000	-0.000	0.000	-0.001*	-0.000	-0.000
	(-1.630)	(-1.048)	(0.670)	(-1.749)	(-0.900)	(-0.325)
Salesrank	0.000	0.000	0.000	-0.001	-0.002**	-0.000
	(0.400)	(0.613)	(1.612)	(-1.361)	(-2.294)	(-0.190)
DE	-0.002	-0.006*	0.001	-0.006	-0.046	-0.068*
	(-0.765)	(-1.797)	(0.249)	(-0.243)	(-1.510)	(-1.955)
Pfirmsinregion	0.342*	0.275	0.000	-0.491	-0.251	-0.830
	(1.896)	(1.437)	(0.001)	(-0.433)	(-0.197)	(-0.483)
Psalesinregion	-0.130	-0.078	0.071	0.591	0.823	-0.044
	(-1.211)	(-0.622)	(0.511)	(0.847)	(1.019)	(-0.049)
Localmktshare	-0.002	-0.004	0.006	0.059	-0.021	0.261***
	(-0.521)	(-0.847)	(0.703)	(1.117)	(-0.395)	(2.900)
Lnturnover	0.005**	0.005**	0.010***	0.035*	0.037	0.079*
	(2.204)	(2.124)	(4.214)	(1.894)	(1.537)	(1.890)
Equitycomp	-0.007	-0.011*	0.010	-0.006	0.031	-0.262*
	(-1.217)	(-1.882)	(0.943)	(-0.095)	(0.444)	(-1.688)
Test of *CC* for (2) vs. (3) & (5) vs. (6)			0.011***			0.033
χ^2			(16.30)			(0.90)
MissingEquitycomp	Yes	Yes	Yes	Yes	Yes	Yes
Year & Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	9,277	4,164	5,113	10,542	4,734	5,808
Adjusted R^2	0.457	0.462	0.635	0.096	0.097	0.329

This table presents results of weighted least squares regressions of *AQ* and *Restate* on an indicator variable for whether the firm is a controlled company and control variables. Columns 1 and 4 report results for the main sample, Columns 2 and 5 report results for the low board independence sample and Columns 3 and 6 report results for the high board independence sample. t-statistics and χ^2-statistics are shown in parentheses. To test coefficient equality for *CC* across columns, we estimate the regressions simultaneously. Standard errors are clustered by firm. ***, **, and * indicate statistical significance at $p < 0.01$, $p < 0.05$, and $p < 0.10$, respectively. All variables are defined in Appendix A.

Table 9
Controlled Companies and Firm Value Using Dependent Sorts of Institutional Ownership and Market Capitalization

	DV: Tobinsq			
	(1)	(2)	(3)	(4)
Variables	Low Size Low I/O	Low Size High I/O	High Size Low I/O	High Size High I/O
CC	0.671***	0.346***	-0.040	0.129
	(3.767)	(3.646)	(-0.267)	(0.863)
Family	0.249	-0.042	0.183**	-0.014
	(1.198)	(-0.571)	(2.328)	(-0.054)
DC	-0.795***	-0.194**	0.083	-0.471**
	(-4.628)	(-2.023)	(0.498)	(-2.408)
StdCFO	0.392	1.520	8.651***	8.593***
	(0.353)	(1.606)	(4.572)	(5.150)
Stdsales	-0.111	-0.289**	0.493**	0.647
	(-0.464)	(-2.001)	(2.198)	(1.172)
CEOchair	-0.091	0.136	-0.176**	0.369**
	(-0.455)	(0.943)	(-2.010)	(2.116)
Bdindep	0.942**	-0.114	-0.193	0.093
	(2.074)	(-0.466)	(-0.666)	(0.224)
Bdsize	-0.049	0.037	0.025	-0.049
	(-1.141)	(1.540)	(1.350)	(-1.471)
Lnsegments	0.171	-0.081	-0.105**	0.094
	(1.505)	(-1.269)	(-2.360)	(1.097)
Exgrowth	-0.469***	0.069	-0.245***	-0.175
	(-2.865)	(0.846)	(-3.770)	(-0.977)
Lossproportion	-0.711***	0.115	-0.531***	0.693
	(-2.683)	(0.807)	(-3.258)	(1.069)
Restructuring	-0.609	-2.763***	-5.994***	7.538
	(-0.515)	(-3.313)	(-2.587)	(0.930)
Size	-0.919***	-0.444***	-0.252***	-0.383***
	(-6.199)	(-5.517)	(-5.446)	(-3.363)
BigN	-0.498**	0.299**	0.041	-0.646**
	(-2.265)	(2.401)	(0.202)	(-2.498)
Lev	2.256***	0.750***	-0.121	0.253
	(4.803)	(5.730)	(-0.413)	(0.524)
ROA	-0.846	0.626**	1.186**	1.491
	(-1.366)	(2.484)	(2.126)	(1.578)
Profitrank	-0.007**	0.001	-0.001	-0.003
	(-2.451)	(0.822)	(-0.831)	(-1.469)
Salesrank	0.001	0.000	-0.003	-0.004
	(0.242)	(0.055)	(-1.577)	(-0.949)
DE	-0.212	-0.326**	0.023	-0.048
	(-1.213)	(-2.377)	(0.307)	(-0.232)
Pfirmsinregion	22.747**	5.118	-0.856	1.151
	(2.368)	(0.946)	(-0.194)	(0.149)
Psalesinregion	-7.878	-3.585	-2.035	-5.502
	(-1.380)	(-1.243)	(-0.792)	(-1.110)
Localmktshare	0.140	0.953*	-0.442**	-0.247
	(0.510)	(1.823)	(-2.504)	(-0.495)
Lnturnover	0.554***	0.025	0.067	-0.229
	(5.503)	(0.329)	(1.040)	(-1.474)
Equitycomp	-0.473	0.280	0.650***	1.547***
	(-0.974)	(0.435)	(4.065)	(2.666)
Test of *CC*		(2) vs. (3)	(3) vs. (4)	(2) vs. (4)
Differences	(1) vs. (2)			
Difference	0.325***	0.386**	-0.169	0.217
χ^2	(12.35)	(3.98)	(0.09)	(2.43)

Table 9, Continued

MissingEquitycomp	Yes	Yes	Yes	Yes
Year & Industry FE	Yes	Yes	Yes	Yes
Observations	2,636	2,634	2,635	2,637
Adjusted R^2	0.627	0.568	0.400	0.660

This table presents results of weighted least squares regressions of *TobinsQ* on an indicator variable for whether the firm is a controlled company and control variables in separate subsamples based on dependent sorts of market capitalization and institutional ownership. Column 1 reports results for firms with below median market capitalization and institutional ownership. Columns 2 report results for firms with below median market capitalization and above median institutional ownership and Column 3 reports results for firms with above median market capitalization and below median institutional ownership. Column 4 reports results for firms with above median market capitalization and institutional ownership. t-statistics and χ^2-statistics are shown in parentheses. To test coefficient equality for *CC* across columns, we estimate the regressions simultaneously. Standard errors are clustered by firm. ***, **, and * indicate statistical significance at $p < 0.01$, $p < 0.05$, and $p < 0.10$, respectively. All variables are defined in Appendix A.