The Control Risk Premium

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Abstract
Firms with dual-class shares exhibit low stock valuations. We show this discount is limited to dual-class firms controlled by founding families. Founding family shareholders control 89% of dual-class firms, holding vast economic or cash-flow stakes. We find that such firms also enjoy positive abnormal stock returns of 350 basis points per year. The effect is especially strong during periods of elevated macroeconomic uncertainty and on macroeconomic announcement days. These results suggest that investors receive a risk premium to hold shares of family firms, and therefore that such firms are *systematically* riskier than their single-class counterparts. This channel can explain the valuation discount, even if dual-class firms on average produce the same cash flows for outside shareholders.

JEL classification: G31; K22; L22; G23

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Critics routinely describe limited voting shares, commonly known as dual class shares, as severely harming outside investors.[1] Concerns about these structures arise from the view that insiders separate their voting power from their economic interests to insulate management from external monitoring, suggesting the use of super voting shares should be curtailed to protect minority investors (Glover and Thamadoaran, 2013). Yet, securities designed to exploit or expropriate outside investors should die out over time unless impediments facilitate their continuance (Nelson, 1995; Kole and Lehn, 1997). Rather than facing extinction, dual class structures continue to survive the natural selection process, with issuance growing from 2% of initial public offerings in 1980 to nearly 14% of offerings in 2014 (see Figure 1). The media tends to focus on new technology dual class offerings such as Facebook and Alphabet (Google). However, limited voting share companies include numerous long-term stalwarts such as Brown-Forman (the makers of Jack Daniels founded in 1870) and John Wiley & Sons (a publishing company dating to 1807). Dual class firms represent a combined market capitalization of over $2.1 trillion even when excluding the large technology firms that went public in the last 15 years (about a quarter of recent technology IPOs involve dual class shares (Mirabella, 2017))

Early research suggests that dual class structures potentially encourage entrepreneurs to invest in organization specific capital whose returns may otherwise be appropriable by outside shareholders (Klein, Crawford, and Alchian, 1978). Admati et al. (1994) emphasize that leads them to hold small stakes, thereby reducing monitoring incentives. DeMarzo and Urozevic (2006) show that controlling shareholders' incentive to diversify their portfolio prompts a reduction in the

[1] A Bloomberg report, in 2013, indicated that dual class share firms exhibit weak internal controls and experience more external conflicts, concluding "Buyers Beware". CalPERS, in 2011, announced that dual class shares are a "corruption of the governance system". Research on the costs dual class shares, such as the potential for self-dealing and expropriation by the controlling shareholder, provides compelling evidence ((Masulis, Wang, and Xie, 2009; Gompers, Ishi, and Metrick, 2010). Predicated on these concerns, S&P Dow Jones announced in August 2017 that firms with dual class shares would no longer be joining the S&P 500. Additionally, the FTSE Russell Index is reportedly considering booting dual class share firms from their indices (see *The Wall Street Journal*, June 19, 2017).

controlling shareholders' stake, creating a deficiency in firm monitoring. Super voting shares potentially provide this mechanism by allowing full control of their large, undiversified stakes.

Perhaps, a more complete explanation centers on firms issuing a variety of securities or claims on the assets of the firm to solve specific contracting problems that in the case of dual class shares, incentivizes large shareholder monitoring and simultaneously creates the potential for conflicts of interests among different claimants. This perspective suggests that low valuations in dual class share firms arise from a risk premium attached to family control. Rather than exploiting outside shareholders, dual class shares sell at a discount for a given expected cash flow relative to single class firms. In this context, family owners bear the cost of issuing dual class shares. Unsurprisingly, corporate bylaws of dual class companies often specific automatic conversion of high voting shares into low voting shares upon their transfer or sale to non-family members. Motivated by recent calls from practitioners, researchers, and stock exchanges to ban or discriminate against firms with limited voting shares, we ask whether these structures harm outside shareholders.

Our empirical tests start with a simple question, "who controls dual class share firms?" The monitoring-incentive approach suggests that dual class shares should be held by a large, controlling shareholder. In contrast, to arguments about dual class exploitation and limited economic exposure by insiders, this monitoring rationale also predicts these controlling shareholders maintain large cash flow stakes in the firm. We then investigate the effect of dual class structures on outside shareholders or more specifically, the returns that outside investors earn in dual class firms. The dual class structure and the controlling shareholder exists prior to the realization of stock returns, allowing causal inference under the assumption of market efficiency.

To further explore the use of dual class structures, we compare dual class firms that restrict the liquidation of super voting shares to those imposing no restrictions on liquidating shares. That is, liquidation restrictions arguably increase large shareholder monitoring incentives so as to protect their investment, suggesting differences in stock returns for dual class firms where just one class publicly trades to those where both classes publicly trade. Finally, we examine the shareholder

group, if any, that holds the minority or low voting shares in dual class share firms, namely retail investors or institutional shareholders. Arguments for banning and eliminating dual class structures often rely on protecting unsophisticated investors (retail) who potentially lack the capacity to evaluate the risk of self-dealing arising from super and limited voting shares.

We begin by analyzing the prevalence of multiple equity class firms. Focusing on the industrial firms of the Russell 3000, we collect information on ownership composition, differential voting rights, and capital structure. To mitigate concerns about recent high technology firms distorting the results, our analysis starts with 2,379 industrial firms in the Russell 3000 firms as of December 31, 2001 – representing about 98% of the industrial U.S. market capitalization. Within the Russell 3000, dual class and single class firms constitute 9.4% (2,333 firm-year observations) and 90.6% (22,391 firm-year observations), respectively, of all firms. Our investigation into the insider or shareholder behind multi-equity class firms reveals that dual class structures primarily occur in firms with continued founding-family influence.

The analysis reveals that family owners control nearly 89% of dual class firms through their holdings of the super voting shares.[2] These influential owners hold an average cash-flow stake of 31% of the firm's shares and 58.1% of the voting right. We find that the family holds an average economic interest or cash-flow stake of $2.85 billion, have held their shares for 53.9 years, and serve as COB/CEO in 65.7% of the firms. As a reference frame or benchmark, single class family firms constitute 28% of the Russell 3000 with family owners maintaining an average economic interest of $1.26 billion (22.9% of shares), an investment period of 36.4 years, and serving as COB/CEO post in 61.5% of these firms. Interestingly, the family owners stake in a dual class firm outstrips the entire size of single class firms with a family owner; suggesting that dual class

[2] Following Shleifer and Vishny (1986), we define a family firm as those where the founder or founder's descendants own more than 5% of the firm's outstanding shares. The remaining 11% of dual class firms fall within two categories. First, about 7% arise in firms with diversified shareholder bases and tend to have brief or short-lived lives after going public (e.g., Mondelez International). Second, the remaining 4% represent legacy structures where the founders initiated multiple security classes, exited the firm, and the firm continues with dual class shares (e.g., Hershey Corporation) that are generally held by a diversified shareholder base.

structures provide an incentive for undiversified shareholders to maintain large economic interests or cash flow stake in the firm. Our initial observations indicate that dual class structures exhibit a robust association with the presence of a large, undiversified, controlling family shareholders that retain substantial economic interests in the firm.

The standard exploitation argument for dual class shares centers on the notion that insiders use their super voting rights to insulate themselves from oversight, allowing them to heavily spend on firm resources on personal consumption. One potential avenue for exploitation centers on excess spending for corporate headquarters to the benefit of insiders. A more direct way to exploit outside shareholders is through excess executive compensation. In contrast to the self-dealing explanation for dual class shares, the large-shareholder monitoring motivation predicts lower headquarters spending and less excess compensation in dual class family firms. Contrary to the exploitation hypothesis predictions, the evidence strongly points to lower compensation levels in dual class and single class family firm versus the benchmark. For headquarters spending, we find that dual class family firms have the lowest levels, followed by single class family firms, and non-family firms experience the highest headquarters spending. Instead of exacerbating opportunism by insiders, dual class shares appear to be associated with greater managerial discipline.

Existing evidence on limited voting shares primarily focuses on comparing firm valuations (market-to-book) in single and dual class firms. Consistent with earlier research, we observe that when founding families hold the super-voting shares (89% of all dual class firms), dual class firms exhibit a 12% market-to-book discount relative to the benchmark. However, dual class firms *without* family owners (11% of dual class firms) exhibit significantly higher market-to-book ratios versus the benchmark firms. Although only a small fraction of all firms, dual class nonfamily firms exhibit 21% market-to-book premiums relative to the reference group. Investors, of course, care about the price of the shares they purchase but the notion of harm centers on the returns they subsequently experience or realize.

We investigate the effect of dual class structures on outside shareholders by exploring future, excess stock returns in dual class share firms. Dual class structures exist before the realization of actual stock returns, suggesting they provide a good gauge of unanticipated, outside shareholder harm in firms with these structures. Our identification strategy thus centers on comparing future, excess stock returns for dual class family firms relative to single class family firms, dual class nonfamily firms, and single class nonfamily firms to assess the effect, if any, of dual class structures on outside investors. Outside shareholders could buy into dual class family firms at discounts because of concerns about the potential for self-dealing and earn similar risk-adjusted returns, lower, or even higher returns, as other organizational forms (Gandhi and Lustig, 2015). If dual class shares harm outside shareholders, then investors should earn negative excess returns after purchasing the stock[3]. Alternatively, investors in dual class firms could receive positive excess returns, suggesting they demand a risk premium for holding these firms.

Our analysis of stock returns indicates that when controlling family owners hold the super voting shares, dual class firm investors demand a risk premium. Using industry adjusted, market adjusted, and Fama-French adjusted returns, we find that a buy-and-hold strategy of dual class family firms earns excess returns of about 350 basis points more per year relative to our benchmark. Results from the matched sample suggest an even greater excess return – about 430 basis points more per year versus the reference firms. Notably, dual class firms *without* a controlling family owner earn similar stock returns as single class firms.[4] After controlling for time, industry, and a wide variety of firm-specific factors, our analysis lends support to the notion family control is associated with a risk premium.

[3] Harm implicitly suggests that some frictions lead outside shareholders to underestimate the potential risks of purchasing limited voting shares (i.e. the discounted price was too high). In contrast, a behavioral finance perspective also suggests that investors overly discount dual class firms for non-monetary reasons – biases against dual class structures – and thus earn positive excess returns. Our subsequent results on institutional investors garnering the bulk of these excess returns imply that behavioral biases could drive the dual class discount in family firms, which institutional investors recognize and partially exploit.

[4] We also find similar standard deviations in the distribution of returns for single and dual class firms but larger kurtosis (peaks) with dual class firms relative to single class firms; indicating dual class firms are more likely to experience extreme negative or positive future returns than single class firms.

In further analysis, we explore the role of the penalty from the liquidation of the dual class shares. Selling these high-vote shares to outsiders by converting them to low- vote share provides for a substantial price discount. We compare dual class family firms with traded super-voting shares (non-liquidity restricted) to their peers where the high votes shares do not publicly trade (liquidity restricted). Our analysis indicates that in non-liquidity restricted dual class firms, outside investors do not earn excess returns on their holdings. Instead, the excess return effect is isolated to those firms where the dual class shares face an additional liquidity restriction.[5]

Assessing the monitoring benefits from dual class structures, if any, potentially requires sophisticated investors. Moreover, the exploitation hypothesis implies that unsophisticated investors are harmed by dual class structures, presumably because they lack the capability to evaluate the potential for self-dealing by the controlling shareholder. If dual class shares harm outside shareholders, this should primarily involve the exploitation of naïve, retail investors. In contrast, the monitoring-incentive perspective suggests that sophisticated investors should recognize both the potential costs (self-dealing) and benefits (monitoring) of a large, controlling shareholder. We find that institutional investors hold 14 times more of the floated equity of limited voting family firms relative to other firm types. Rather than controlling family owners of dual-class firms taking advantage of retail investors, it appears that institutional owners invest in dual class firms and capture the excess returns associated with these organizations structures.

Academic studies often advocate that the benefits to family ownership, if any, stem primarily from founders and professional managers rather than descendants who arguably receive their positions via birthright (Bloom and Van Reenen, 2007; Fahlenbrach, 2009). Thus, another potential method to explore whether dual class shares serve to benefit or harm outside shareholders is to compare their use in founder versus descendent run firms. The monitoring-

[5] Often the wedge between the cash flow and voting rights is described as capturing the potential costs of dual class shares. Yet, after controlling for family ownership, we find no evidence of a significant relation between stock returns and the wedge separating voting rights and cash flow rights.

incentive story does not differentiate between founders and their heirs, while the self-dealing story suggests greater harm in heir-controlled firms. When segregating dual class family firms across founders, descendants, and professional managers, we note that all three dual-class family subcategories earn about 350 basis points more per year of excess returns than single class with controlling family owners.

Our study makes several important contributions to the literature. First, our analysis provides an economic motivation for the allocation of control rights in dual class share firms, providing an incentive for controlling shareholders to maintain and exercise their voice in the firm. In contrast to exploitation arguments suggesting insiders hold small economic interests in dual class firms, we find that controlling family shareholders maintain substantial economic stakes (cash flow positions) with dual class structures. Inconsistent with the exploitation explanation for dual class shares, multi-equity class firms spend less on both headquarters spending and executive compensation than their single class peers. Moreover, we provide additional evidence showing that liquidity constraints attached to super voting shares form an integral part of explaining excess returns in dual class share firms. We interpret this evidence seems to support the view that the allocation of control rights in dual class shares centers on incentivizing large shareholder monitoring.

Second, we find that nearly all-existing dual class structures arise from family ownership (89% of Russell 3000 firms). Because family owners establish the dual class structure and sell their shares into the market at a substantial discount, these owners appear to bear a high cost arising from this organizational structure at IPO or when recapitalizing from single to dual class structures. This suggests that founders face a trade-off in issuing either dual or single class shares, maintaining formal control or receiving higher prices per share for the cash flow rights they sell to the public. Firm size arguably stands out as one of the most notable differences with dual class firms nearly twice the size of their single class family counterparts. Notably, dual class family firms are, on average, the same size as firms without controlling owners (the atomistically held firm as typified

by Berle and Means, 1932). One interpretation of our findings suggests that dual class structures facilitate large shareholder monitoring, thus allowing these firms to pursue growth opportunities and ultimately outperform firms or structures not ensuring the economic interests of controlling owners. Thus, our analysis implies that dual class shares arise as costly solution to contracting or governance problem, creating potential conflicts of interest among equity claimants (which investors recognize by discounting the price of these shares) and simultaneously incentivizing large shareholder monitoring.

Finally, finance practitioners have recently made calls for firms with dual class structures to eliminate super-voting classes to place all shareholders on an equal footing. The London Exchange Group PLC – the owner of the Russell 3000 Index – is proposing restrictions on the inclusion of companies with unequal voting rights in its indices; suggesting that dual class firms could arguably suffer from poorer liquidity and valuations when barred from passive and actively managed portfolios. Similarly, S&P Dow Jones Indices will limit firms with dual class shares from inclusion in their indices.[6] Yet, institutional shareholders hold over 87% of the floated shares of these dual class firms. Rather than exploiting retail shareholders, dual class shares appear to attract relatively sophisticated institutional shareholders as investors (and reward them for holding these shares). Our analysis indicates that a super voting arrangement does not appear to provide a net harm to outside investors. Instead, we interpret these results to suggest that these structures arise to facilitate large-shareholder monitoring, allowing for much larger firms than typically found with a controlling shareholder.

I. Data and Descriptive Statistics

A. Sample

[6] See *The Wall Street Journal*, August 2, 2017; Stock Indexes Push Back Against Dual-Class Listings by C. Dietrich, M. Farrell, and S. Krouse.

For our empirical analysis, we start with the Russell 3000 firms as of December 31, 2001. We exclude regulated public utilities (SIC codes 4812, 4813, 4911 through 4991) and financial firms (SIC codes 6020 through 6799) because government regulation potentially affects firm equity ownership structure. Data on equity ownership structure, capital structure (i.e., single- and dual-class), inside owners' cash flow and voting rights, and the family's role in management comes from annual corporate proxy statements. We gather firm specific control and primary variables from CompuStat and stock return information from the Center on Research in Security Prices (CRSP). To control for survivorship basis, we allow firms to exit and re-enter the sample. Our final sample consists of 2,379 industrial firms (non-financial and non-utility) or 24,724 firm-year observations, spanning from 2001 through 2015. Notably, as our base sample starts in 2001, our data does not include many of the technology firms such as Alphabet, Facebook, or Alibaba that recently underwent IPOs as dual class companies and experienced impressive and sustained stock returns.

B. Share Class Structure

Firms issue one or multiple classes of common equity. We define single class firms as those where the firm establishes one class of common equity that grants shareholders equal cash flow and voting rights on a per share basis. Dual class firms are those issuing two or more outstanding classes of common stock. The class with the largest number of shares outstanding typically receives equivalent cash flow and voting rights, e.g., one share, one vote, one dividend. The class with the smaller number of outstanding shares most frequently receives 10-votes per share and one cash flow right per share, e.g., one share, 10-votes, one dividend. Although we find the most prevalent voting-right differential to be 10-to-1 between the two classes, for some firms, we observe that the super voting class provides 100 or more votes to their holders. In our analysis, we measure dual class firms with a binary variable that equals one for dual-class firms and zero for single class firms (Braggion and Giannetti, 2017).

C. Equity Ownership Structure

Family firms are those where the family (founders and/or their descendants) continue to maintain a 5% or larger voting stake in the firm. Notably, Shleifer and Vishny (1986) and Villalonga and Amit (2006) use a definition of 5% or more of the cash flow rights. For the single class firms in our sample (90.6%), using cash flow or voting rights yields the same level of dominant shareholder (e.g., family) influence because one share provides one vote and one cash flow right. For dual class firms (9.4%) however, we note that the dominant shareholder, on average, hold 30.2% of the cash flow rights and 58.2% of the voting rights. To ascertain the effect of the controlling shareholder influence on firm characteristics, we focus our analysis on voting power.

To be classified as a family firm, a family member does not necessarily need to hold the COB, CEO or director position (Anderson and Reeb, 2003). The classification refers to families maintaining a minimum voting stake of 5%. The initial analyses use a binary variable that equals one when families hold a 5% or larger voting right in the firm and zero otherwise. In additional testing, we also use a continuous measure of family ownership and voting power, and examine the effect of the "wedge" on stock returns. The wedge is the difference between voting control and economic interests for the holder of the super voting shares (e.g., family owners).

Firms, through their public filings, frequently do not provide information on whether founding-family members retain equity stakes or hold managerial posts and director seats. Although regulations stipulate that firms disclose any shareholder with a 5% stake or larger equity stake, firms do not typically disclose if the shareholder is part of the original founding family. To ascertain founders and their subsequent lineage and involvement in the firm, we examine corporate histories for each of the 2,379 firms in our sample. Corporate histories come from ReferenceforBusiness.com, FundingUniverse.com, Gale Business Resources, and from individual companies.

Prior literature notes that direct family involvement in firm management influences firm performance (Bennedsen et al., 2007). We segregate family firms into three subcategories based on CEO type; founder firms, descendant firms, and professionally managed firms. Founder firms

are those where the founder holds the CEO post. Descendant firms represent those companies where an heir of the founder holds the CEO post. Professionally managed firms are family firms where the firm sources their CEO from the external (nonfamily) labor market.

D. Valuation and Performance Measures

To be consistent with prior research on assessing outside investors' perception of firm value, we develop a proxy for Tobin's *Q* by using the ratio of the market value of total assets to the book value of assets (Morck, Shleifer and Vishny, 1988; 1996; Masulis et al., 2009; Fahlenbrach, 2009). The market value of total assets is the sum of the book value of assets and the market value of common stock less the book value of common stock. We measure the market value of common equity at the end of each calendar year.

Only the low-voting share class trades for the vast majority of dual class firms (81% in our sample) with the non-traded super-voting class held entirely by corporate insiders (family members). In calculating market values for dual class firms, if both classes trade, we use the share price for the respective class multiplied by the number of shares for each class. With one traded class, we calculate market value as the sum of shares for both classes multiplied the price of the traded class. In additional analysis of firms with two publicly traded classes, we find that super voting shares, on average, trade at a 1.92% premium relative to low voting shares. Consequently, we likely downwardly bias our estimate of market value for dual class firms with only one publicly traded share class.

We measure stock price performance using three measures of returns. First, we industry-adjusted returns that equal each firm's annual return less the annual return of the corresponding return of the Fama-French (1997) industry code (based on the 48 industries). Second, we calculate market adjusted returns as the firm's annual return less the return on the CRSP value-weighted market return (De Bondt and Thaler, 1985). Third, we use size and book-to-market adjusted returns that equal each firm's annual stock return less the Fama-French size and book-to-market benchmark portfolios (Faulkender and Wang, 2006). When investigating stock returns for dual

class firms, we examine the low-voting publicly traded class. The correlation coefficient between the returns for low voting and high voting stock is 96.5% when both classes trade (19% of dual class firms), suggesting little variation in stock returns for the two traded classes.

E. Control Variable Measurement

Previous literature indicates that firm performance varies with firm characteristics. We measure firm size as the natural logarithm of total assets at fiscal year-end. Firm age is the natural log of the number of years since the firm's inception and captures firm and industry maturity as well as the family's investment period with the firm. We use return on assets to control for operating performance and measure it as operating income before depreciation scaled by total assets. Volatility is the standard deviation of stock returns for the previous 36-months.[7] Because family shareholders may be more reluctant to use debt in the firm's capital structure (Anderson, Mansi, and Reeb, 2004), we control for leverage with the ratio of long-term debt to total assets. We control for firm growth opportunities with the ratio of R&D expense to sales. In robustness testing, we substitute R&D expense to sales with Tobin's *Q* as an alternative metric for growth opportunities and find similar results. We control for industry effects with the Fama-French 48-industry codes and for time effects with year binary variables.

F. Matched Samples

Dual class firms comprise less than 10% of our firm-year observations. To assess the robustness of our results with better comparability in sample size and to isolate the separate effects of dual class structures and family control on stock returns, we develop four different matched samples using coarsened exact matching (CEM) (Iacus, King, and Porro, 2009). In the first matched sample (matched sample #1), we match dual class firms to single class firms based on exact Fama-French industry code, and then on total assets and firm age. This matched sample consists of 3,584 firm-year observations, comprising 1,792 dual-class firm-year observations and

[7] Internet appendix IV shows an alternate specification where we replace the standard deviation of stock returns with the market beta, SMB beta, and the HML beta from the Fama-French three factor model. The results are similar when using either specification to control for firm risk.

1,792 single-class firm year observations. When segregating matched sample #1 based on dual/single class and family/nonfamily firms, the breakdown is: 1,573 dual class family firm observations (43.89%), 616 single class family firm observations (17.19%), 1,176 single class nonfamily firm observations (32.81%), and 219 dual class nonfamily firm observations (6.11%).

In matched sample #2, we eliminate all family firms from the sample and then match dual class firms to single class firms – absent family control – using CEM based on exact Fama-French industry code, and then on total assets, and firm age. Dual class nonfamily firms comprise just 1.06% (263 observations) of the total sample but this matching process allows a segregation of the family effect (i.e., no family firms) from the dual class effect. Our matching process results in 452 firm-year observations, consisting of 226 dual class nonfamily firms and 226 single class nonfamily firms.

With matched sample #3, we eliminate all the dual class firms from the sample and then match single class family firms to single class nonfamily firms using CEM based on exact Fama-French industry, and then on total assets, and firm age. This matching process eliminates the dual class effect and allows a comparison of family influence relative to a group of similar nonfamily firms. Our matching process yields 11,494 firm-year observations, comprising 5,747 family firm and 5,747 nonfamily firm year-observations.

Finally, matched sample #4 compares single class and dual class family firms with high levels of economic ownership to ascertain whether a family effect or dual class effect influences excess stock returns. That is, we compare just family firms (single and dual) where the family owns more than 40% of the cash flow rights. Using CEM based on exact Fama-French industry, and then on total assets, and firm age, this matched sample consists of 466 firm-year observations, comprising 233 single class family firms and 233 dual class family firms – all with family ownership exceeding 40% of the cash flow rights.

Table 2, Panel A, columns 5 through 8 present the summary statistics for matched sample #1 and indicate a relatively homogeneous match between single and dual class firms. Mean tests

indicate no difference in firm size, firm age, volatility, leverage, return on assets, and R&D to sales for the matched single and dual class firms. Internet appendix II, Panels A, B, and C, provide the summary statistics for matched sample #2, #3, and #4 respectively, and again indicates a fairly homogenous match between the groupings.

II. Univariate and Correlation Analyses

A. Descriptive Univariate Statistics

Table 2, Panel A provides summary statistics for the full sample and matched sample #1 consisting of 24,724 and 3,584, firm-year observations, respectively. We show mean values for the full sample (column 1), dual class firms (column 2), single class firms (column 3) and also *t*-values for difference of mean tests between single- and dual- class firms (column 4). Across the Russell 3000 industrials from 2001 through 2015, dual class firms and single class firms constitute 9.44% (2,333 observations) and 90.56% (22,391 observations), respectively, of the sample. Dual class firms exhibit substantial differences from single class firms. Notably, we observe that dual class firms are larger (total assets: $5,553 billion versus $4,918 billion), older (53.5 versus 45.1 years) and substantially more levered (25.1% versus 19.3% of total assets) than their single class counterparts. These firms also exhibit better operating performance and stock return performance than single class firms. On average, dual class firms exhibit operating performance (ROA based on EBITDA) of 10.33% per year while single class firms' performance comes in at 8.48%. Using industry adjusted returns and market adjusted returns, we find the dual class stocks outperform single class firms by over 200 basis points per years.

Dual class firms appear to be a manifestation of founders and their families. Table 2, Panel B provides summary statistics for single and dual class firms segregated into family and nonfamily firms. Within the dual class set, family firms comprise 88.7% (2,070) of firms with the remaining 11.3% (263 observations) falling under a nonfamily categorization. In further analysis, we examine corporate histories for the 263 firm-year observations that comprise the dual class nonfamily firm subset. A substantial number of these observations (99 observations, 38%) are originally family

firms where the family owners exited their equity stake and the firm continues to operate with the dual class structure. For instance, Milton Hershey established the firm bearing his name in the late 1800's. With no heirs to leave his fortune, in 1909, he bestowed ownership of the firm to the Hershey School Trust that controls the firm (76% of votes) through the super-voting B shares. The remaining dual class nonfamily firms (165 observations, 62%) appear to arise from special corporate transactions such as Cooper Industries, Inc. where one of their subsidiaries holds the entirety of the B shares, which have no voting rights, thereby preventing voting-power dilution of class A-shareholders. The univariate analysis clearly points to dual class firms originating primarily from founders and their families.

The analysis also points to significant differences between dual class family firms and single class family firms. Dual class family firms are significantly older (53.9 vs. 36.4 years), larger ($5,554 vs. 2,751), less risky (13.83% vs. 15.90%), and use substantially more debt (24.9% vs. 16.0%) than single class family firms. We also find that dual class family firms exhibit significantly better operating performance relative to their single class cousins (ROA: 10.84% vs. 8.25%). Our descriptive statistics show that family shareholders in dual class firms own 31.3% of the firm's cash flow rights and control 58.1% of firm voting power. Single class family owners in contrast, hold 22.9% of the cash flow and voting rights. Although voting control of dual class family owners outstrips their economic interests, our analysis does not indicate that these influential owners hold small equity stakes. Rather, we find that dual class family owners hold significantly larger equity stakes than their single class counterparts.

Table 3 segregates dual class and single class firms by Fama-French industry codes. We observe a clustering of dual class firms in a small number of industries. Specifically, nearly 38% of dual-class firms reside in just four of the 48 Fama-French industry codes. The communications industry (FF48=32) accounts for over 19% of dual-class firm observations, followed by retail (FF48=42) with 8.5%, print and publishing (FF48=8) with 5.3%, and electronic equipment (FF48=36) with 5.0% of dual class observations. Ten industry groups account for 64.4% of dual class firm

observations. Another ten industries that the media often characterizes as 'old line' (i.e., railroad, tobacco) contain no dual class firms. The clustering of dual class firms suggests that industry characteristics appear to play an important role in entrepreneurs' and family owners' decision to establish and maintain dual class structures.

B. Correlation Analysis of Firm Valuation

Prior literature indicates that firms' issuing two classes of equity securities suffer from governance problems that negatively affect firm valuation and performance (Masulis et al., 2009; Gompers et al., 2010). Consistent with prior research, our univariate results indicate a significant valuation difference between dual class and single class firms. Using Tobin's *Q* as a proxy for firm value, Table 2 Panel A shows that dual class firms and single firms exhibit *Q* values of 1.71 and 1.99, respectively. Intuitively, the difference in *Q* of 0.28 (1.99-1.71), suggest that dual class firms bear valuation discounts of about 14.3% relative to single class firms.[8]

Most dual class firm are also family firms, suggesting that family presence confounds the relation between dual class structures and Tobin's *Q*. To disentangle the effects of family ownership, dual class shares and firm value, we segregate our sample firms into four mutually exclusive groups; dual class family firms (8.4% of observations), dual class nonfamily firms (1.1% of observations), single class family firms (25.6% of observations), and single class nonfamily firms (65.0% of observations). We then examine the association between firm value, equity ownership structure, and share structure in a multivariate framework.[9]

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[8] We calculate this discount as: (Dual class Tobin's Q – Single Class Tobin's Q)/(Tobin's Q for Full Sample) = (1.71-1.99)/1.96 = -14.3%.

[9] For the descriptive analysis, we run the following regression.

$$Tobin's\ Q_{it} = a + \beta_1(Single\ Class\ Family\ Firm)_{it} + \beta_2(Dual\ Class\ Family\ Firm)_{it} + \beta_3(Dual\ Class\ Nonfamily\ Firm)_{it} + \beta_X X_{it} + \varepsilon_{it}$$

Table 1 provides the variable definitions. We include a vector of control variables that include natural log of total assets, natural log of firm age, leverage, return on assets, volatility, and R&D expense to sales. The analysis uses binary variables to captures single class family firms, dual class family firms and dual class nonfamily firms. The reference variable for the regression specification is single class nonfamily firms. We control for serial correlation and heteroskedasticity using the Huber-White sandwich estimator (clustered on firm-level identifier) for the standard errors on the coefficient estimates. Internet appendix III provides the regression output in tabular form.

Figure 2 provides a graphical depiction of firm valuation differences across the combinations of dual/single class and family/nonfamily firms. For the graph, we show the percent difference in Tobin's *Q* for each of the firm types (e.g., dual class family firm) relative to the benchmark group of single class nonfamily firms. The 90th and 95th percentile confidence intervals are displayed as 'wings' for each point estimate with the 95th percent interval extending furthest from the point estimate. The estimates in black are for the full sample and those in gray are for the matched sample.

Three notable points from the correlation analysis. First, family firms with a single class of common equity exhibit a negative relation to Tobin's *Q*, indicating a valuation discount of about 3.7% relative to the reference group of single class nonfamily firms. The results from the matched sample provide a similar inference but with a deeper discount – about 10.9%. Second, we find that firm valuation particularly suffers under the family firm-dual class combination. For the full (matched) sample, dual class family firms exhibit discounts of 11.8% (13.5%) relative to the benchmark group. Third and perhaps most striking, dual class firms *without* family owners exhibit a positive association to Tobin's *Q*; suggesting that a dual class structure – in and of itself – does not appear to be a detrimental factor in influencing firm valuations. Our analysis suggests that dual class firms, absent family control, bear premiums of nearly 21% relative to the reference group; suggesting that family owners play an important role in understanding the relation between limited-voting shares and firm value.

Academic studies often advocate that the benefits to family ownership, if any, stem primarily from founder and/or professional manager control (Fahlenbrach, 2009). We segregate family firms into three subcategories based on the CEO status; founder firms, descendant firms, and professionally managed firms. Founder and descendant firms are those where the founder or one of the founder's descendants, respectively, holds the CEO position. Professional managed firms are family firms where an outside executive holds the CEO post. Table 2, Panel B shows that within dual class family firms, we find a relatively equal distribution of the three firm types.

Founder firms constitute 31.3% of the total with descendant and professional managed firms comprising 34.5% and 34.2%, respectively. As a reference frame, within single class family-firms, we document that founders, descendants, and professional managers hold 44.1%, 17.3%, and 38.5% of the CEO posts.

Figure 3 shows the results of a valuation analysis when segregating single and dual class family firms across founders, descendants, and professional managers. Like our earlier valuation analysis, we present the percent difference in Tobin's *Q* for each firm type relative to the reference group of single class nonfamily firms. We present results for the full sample. Our analysis suggests that all three types of dual class family firms exhibit significant valuation discounts. We find that dual class descendant firms bear the deepest discounts (-19.7%) followed by founder (-8.6%) and professionally managed dual class firms (-8.3%), all relative to the benchmark (single class nonfamily firms). In *F*-tests examining the equality of valuation discounts across the dual-class family-firm types, we infer that descendant firms exhibit the largest discounts with similar discounts in founder and professionally managed firms. Notably, our analysis also indicates that single class family firms with descendant CEOs exhibit large valuation discounts – 14.5% relative to the benchmark; suggesting investors severely discount descendant firms of all stripes.[10]

The Russell 3000 captures nearly 98% of total U.S. market capitalization, suggesting that our sample of dual class firms likely provides a relatively fair representation of the prevalence of dual class firms. Although dual class nonfamily firms constitute only a small fraction of all firms (about 1.1%), our analysis from the full and matched samples indicates that these firms exhibit a positive relation to equity valuations. The dual-class family-firm combination however, bears significant

[10] In an *F*-test examining the equality of coefficient estimates for dual class descendant and single class descendant, we do not reject the null and thus, infer that single- and dual- class descendant firm experience similar discounts relative to the benchmark. Bennedsen et al. (2007) and Anderson, Duru and Reeb (2009) provide additional insights on heir and founder differences.

valuation discounts; suggesting that the type of ultimate owner (family) of the super voting shares influences outside investors' perceptions and valuations.

III. Stock Returns across Equity Ownership and Share Structures

A. Family Firms, Dual Class Shares and Stock Returns

Our analysis thus far suggests that dual class firms with family owners sell at deep discounts relative to single class family firms. Yet, these organizational structures could still be consistent with the objective of shareholder wealth maximization. Family owners may utilize super voting shares to mitigate asymmetric information problems, protect firm specific investments, and to prevent appropriation or interference from hostile outsiders (DeAngelo and DeAngelo, 1985); suggesting that these firms earn similar market adjusted-returns as other organization forms. Alternatively, outside investors may bear substantially greater risk for holding dual class shares. Risks arise from family members expropriating firm resources to their private benefit, engaging in nepotistic actions that place incompetent family members before qualified outside managers, and generally placing family interests in front of the interests of the entire shareholder base. If super voting shares expose outside shareholders to greater risk relative to single class firms, then we expect investors to earn a risk premium for investing in dual class firms. Assuming super voting shares pose the sole source of risk, investors should require premiums in both family and nonfamily firms. Our source of identification thus focuses on comparing excess stock return for dual class family firms to dual class nonfamily firms to isolate the effect, if any, of super voting shares on outside investors. To examine this argument, we use the following ordinary least squares (OLS) specification;

$$Stock\ Returns_{it} = a + \beta_1(Dual\ Class\ Firm)_{it} + \beta_2(Family\ Firm)_{it} + \beta_3(Dual\ Class\ Firms * Family\ Firm)_{it} + \beta_X X_{it} + \varepsilon_{it} \qquad (1)$$

X represents a vector of control variables that includes natural log of total assets, natural log of firm age, leverage, return on assets, volatility, R&D expense to sales, and year and industry dummies. The reference group in the analysis is single class nonfamily firms. We control for serial

correlation and heteroskedasticity using the Huber-White sandwich estimator (clustered on firm-level identifier) for the standard errors on the coefficient estimates.

For our analysis, we use three measures of stock returns; industry excess returns, market excess returns, and Fama-French size and book-to-market adjusted returns. Industry excess returns are buy-and-hold stock returns that we measure as each firm's annual stock return less the annual return for the respective Fama-French industry classification code (48 industries). Similarly, market excess returns are buy-and-hold returns that we calculate as each firm's annual return less the CRSP value-weighted market return. Our last measure, Fama-French size and book-to-market returns are each firm's stock return less the Fama-French size and book-to-market benchmark portfolios (Faulkender and Wang, 2006).

Table 4, Panel A presents the results for the full sample using excess industry stock returns. Table 5 shows the results with excess market returns and Fama-French size and book-to-market excess returns for the full sample and matched sample #1. Because the results are largely the same across the three excess return measures, we confine our discussion to excess industry returns.

We find that dual class firms earn significantly superior returns relative to single class firms. Column 1 presents a specification with no control for family ownership and indicates that dual class firms (β_1) earn about 270 basis point more per year relative to single class firms. The coefficient estimate is significant at the 1% level.

Column 2 includes both the dual class variable (β_1) and the family firm variable (β_2). After controlling for family presence, we note that the coefficient estimate on dual class firms drops to 190 basis points per year and becomes marginally significant (p-value of 10%); suggesting that family ownership confounds the relation between dual class firms and stock returns. The family firm variable in the specification is positive and significant, indicating that investors in family firms earn excess returns of 160 basis points per year.

Column 3 presents a specification with variables for dual class (β_1), family firm (β_2), and the interaction of dual class and family firm (β_3). After controlling for family ownership with the

standalone variable and the interaction variable, we no longer find that dual class firms earn excess returns. The coefficient on dual class becomes negative and insignificant at conventional levels, suggesting that the dual class structure – by and of itself – does not yield excess return to investors. Notably, the standalone family-firm variable continues to bear a positive estimate and indicates that investors earn about 140 basis points more for investing in family firms relative to other organizational forms.

Our analysis with the interaction term (column 3) suffers from a relatively severe multicollinearity problem because nearly all dual class firms are also family firms. We find a correlation coefficient of 93.65% between the standalone dual class variable (β_1) and the interaction term between dual class and family firm (β_3). Consequently, the standard errors of the coefficient estimates on the variables of interest exhibit a relatively high degree of variance inflation, rendering unstable coefficient estimates.[11] To mitigate the multicollinearity issue, we segregate our sample firms into four mutually exclusive firm groups; dual class family firms (8.4% of observations), dual class nonfamily firms (1.1% of observations), single class family firms (25.6% of observations), and single class nonfamily firms (65.0% of observations). Column 4 of Table 4 shows the results with single class nonfamily firms as the benchmark group.

The results when using the sample segregated into the four mutually exclusive groups yield three notable points. First, dual class family firms earn about 370 basis point more per year in excess returns than our benchmark. Second, single class family firms also earn excess returns relative to the benchmark – about 140 basis points. Third, we find no evidence that dual class firms *without* family owners earn superior returns. The coefficient estimate on dual class nonfamily firm is not significant at conventional levels.

[11] The variance inflation factors (VIF) on dual class and the interaction of dual class and family firm are 8.33 and 8.77, respectively.

Our earlier analysis documents that dual class firms tend to cluster in a small number of industries, tend to be larger, and tend to be older than single class firms; suggesting that industrial or firm characteristics potentially influence the stock returns results. To investigate this possibility, we repeat our analysis using matched sample #1 outlined in Section I.F. Table 4, Panel B, column 1 shows the multivariate analysis for the matched sample. The matched sample results provide additional evidence that dual class family firms outperform other organizational forms. Using a simple buy-and-hold strategy, the results indicate that a portfolio of dual class family firms would outperform the benchmark group (single class nonfamily firms) by about 430 basis points per year. The results from the full and matched sample indicate that dual-class family-firm investors demand and earn a premium for buying and holding these shares.

The clear majority of dual class firms (89%) are also family firms, thus blurring the effect of family ownership and dual class structures on firm valuation. To provide further insights into the effect of dual class structures on stock returns, we use matched sample #2 (outlined in Section I.F) that compares dual class nonfamily firms and single class nonfamily firms. That is, we drop family firms from the analysis and create a matched sample of single- and dual- class nonfamily firms, thus allowing us to separate the family effect from the dual class effect. The sample consists of 452 firm-year observations, providing 226 single class firms and 226 dual class firms (all nonfamily).[12] Column 2 of Table 4, Panel B shows the results when comparing dual class firms to single class firms in the absence of family owners, i.e., all nonfamily firms. Although a minute subset of dual class firms, the results again suggest that investors in nonfamily firms with super voting structures do not require or earn excess returns. Investors appear only to require a premium return when family owners hold the super voting shares.

[12] Our full sample of dual class nonfamily firms consists of 263 firm-year observations. Thus, we capture 85.9% (226/263 = 85.9%) of the dual class nonfamily firms in our matching process. Internet appendix II provides summary statistics for this matched sample.

The analysis suggests that investors do not require a return premium for dual class structures but rather appear to require a premium for holding shares of family firms. To further segregate the effect of dual class shares from family ownership, we examine matched sample #3 that compares single class family firms to single class nonfamily firms, i.e., just single class structures. Section I.F outlines the matching process for matched sample #3. Column 3 of Table 4, Panel B provides the analysis and indicates that investors earn a premium for holding family shares – absent a dual class effect – relative to nonfamily firms. Notably, we find a return premium of about 190 basis points more per year for family firms than for nonfamily firms; suggesting that investors require greater compensation for holding shares in firms with family shareholders versus firms without family shareholders.

Finally, we test for differences in excess returns between single class and dual class firms where the family holds a large economic stake in the firm (>40% of cash flow rights). Table 4, Panel B, Column 4 shows the results. Dual class family firms and single class family firms where the family holds large cash flow rights exhibit similar excess returns. The results suggest that outside investors do not require a different premium for family control that stems from a dual class or single class structures. Instead, market participants require greater returns for investing in firms with continued founding family control. Thus, our analysis implies that the detrimental effects previously ascribed to dual class structures appear to be attributable to family control and further suggests that investors earn a founding family risk premium.

Table 5 presents the results when using excess market returns and Fama-French size and book-to-market excess returns. To mitigate multicollinearity concerns, we use the four mutually exclusive groups with single class nonfamily firms as the reference group. Columns 1 through 3 show the results for the full sample. Columns 4 through 6 show the results for matched sample #1. When using market excess returns and Fama-French size and book-to-market excess returns, the analysis reinforces the analysis using industry excess returns. Specifically, investors earn stock

return premiums of about 350 basis points per year for holding dual class family firms relative to our benchmark group (single class nonfamily firms) (Braggion and Giannetti, 2017).

B. The Wedge between Economic Ownership and Voting Control

Academic research and the business press often focus their criticism of dual class structures on the disparity or difference in the dominant shareholders' economic stakes and voting control. For instance, Charlie Ergen, the founder of DISH Network, holds 50% of the economic interest in the firm while maintaining about 82% of the voting power, rendering a 32% wedge or excess voting control. Conventional wisdom suggests that as the disparity or wedge between economic ownership and voting control continues to widen, firms experience worsening governance problems that negatively affect outside shareholders (e.g. Gompers, Ishii, and Metrick, 2010). A widening disparity between cash flow rights and voting control arguably exposes outside investors to greater governance risks, suggesting a positive relation between returns and the size of the wedge. However, consistent with our earlier argument, if super voting shares comprise the sole risk to investors, then we expect to observe a positive relation between returns and the wedge for both family and nonfamily firms.

Table 6 presents the results when examining stock returns and the disparity between ownership and control. Column 1 begins with a standalone variable for the wedge that we construct as the difference between voting rights and economic ownership for all dual class firms (family and nonfamily firms). The analysis indicates that as the size of the wedge increases, stock returns also increase, consistent with the notion that outside investors earn increasingly larger premiums as insider control exceeds their economic interests. Economically, at the average wedge for a dual class firm (24.01%), our results indicate that these firms earn 201 basis points more per year relative to single class firms.

Column 2 splits the wedge between family firms and nonfamily firms. We find that the wedge in family firms bears a significant and positive relation to excess returns. Notably however,

although only a small subset of total firms (1.1%), the analysis indicates that the wedge in firms without family owners does not exhibit a significant relation to excess returns. Our results indicate that the disparity between ownership and control appears only to affect stock returns in dual class firms where family owners hold the super voting shares.

The prior wedge analyses examine excess voting control of family shareholders and corporate insiders. Families however, hold substantial economic interests in their firms. Family owners hold 31.3% of the cash flow rights in dual class firms and 22.9% of the rights in single class firms. The strong economic incentives arising from cash flow rights arguably further influence corporate insiders' ability to affect firm governance and thus the risk borne by outside shareholders. Column 3 of Table 6 introduces the level corporate insider cash flow rights (e.g., family and nonfamily corporate insiders). Two notable points from the analysis. First, family cash flow rights exhibit a positive and significant relation to excess stock returns. At the average level of family cash flow rights (24.9%), our analysis indicates that outside investors earn 142 basis points more per year in excess returns than in nonfamily firms. Second, the wedge or excess voting rights that family owners maintain is insignificant at conventional levels. That is, the family wedge coefficient (β_2), although positive, only bears a *t*-stat of 1.57; suggesting that after controlling for family owners cash-flow rights, the disparity between ownership and control has little effect on excess returns.

Table 6, Column 4 repeats the analysis for the matched sample. The results further confirm that family cash flow rights appear to be the primary driver of outside investors earning excess stock returns as compared to the wedge between ownership and control. The coefficient estimate on family cash flow rights is positive and significant at the 1% level while the estimate on the family wedge does not exhibit a significant relation to excess returns. The coefficient estimates on the wedge and cash-flow rights variables for nonfamily insiders (β_4 and β_5) are not significant at conventional levels. Overall, our analysis indicates that the risk borne by outside shareholders appears to arise from family ownership rather than the wedge between family owners' cash flow rights and voting control.

C. Dual Class Shares and Family Firm Type

As noted in our correlation analysis of firm valuation, academic studies often advocate that the benefits to family ownership, if any, stem primarily from founder and/or professional manager control with descendant control often leading to poor execution and performance (Bennedsen et al., 2007; Fahlenbrach, 2009). Table 7 presents excess industry stock returns regressions when segregating family firms into the three subcategories of founder, descendant, or professionally managed. All subcategories of dual-class family firms earn superior excess returns versus the benchmark. That is, the coefficient estimates on founder, descendant, and professionally managed dual-class firms exhibit positive and significant relations to excess industry returns of 280, 410, 420 basis points, respectively, more per year than the benchmark group. *F*-tests, shown at the bottom of the table, indicate that excess industry returns between the three subcategories do not significantly differ from one another.[13]

Column 3 of Table 7 shows the return analysis for the matched sample. We observe that dual-class family firms with descendants or professional managers serving as CEO earn substantially higher excess returns than the benchmark group. Descendant and professionally managed dual class firms beat the benchmark by 440 and 660 basis points per year. Although we observe a positive coefficient on dual-class founder firms, the estimate is not significant at conventional levels. The results from the matched sample generally reflect those from the full sample but suggests that the superior returns for dual class family firms largely reside in descendant and professionally managed family firms. One potential interpretation is that non-founder firms suffer greater succession risk.

D. Robustness Testing of Excess Stock Returns

[13] Within the single class family firms, we find that descendant firms earn excess returns of about 520 basis points per year versus the benchmark of single class nonfamily firms. Neither single class founder nor professionally managed firms outperform the benchmark. In an *F*-test examining the equality of coefficient estimates for dual class descendant and single class descendant, we fail to reject the null and infer that single- and dual- class descendant firms earn similar returns, but these returns are superior relative to single class nonfamily firms.

We conduct a series of robustness tests on our return analyses. First, to gain further insights into firm and family characteristics influencing excess returns, we conduct a first difference analysis between a matched sample of dual class and single class firms. Specifically, using propensity score matching, we match dual class firms to single class firms on exact Fama-French 48 industry code, exact year, and then on firm size and firm age with one-to-one matching, no replacement, and a caliper of 0.20. We then difference firm and family characteristics for each firm pair from the matched sample. For instance, the first difference in excess stock returns is calculated as;

$$\Delta \textit{(Excess Returns)} = \textit{(Dual class firm excess return} - \textit{Single class firm excess return)}.$$

Figure 4 displays the results from the analysis. Internet appendix II, Panel D provides the summary statistics for the variables in the analysis. The first-difference analysis clearly indicates that direct family control of dual class firms (*ΔFounder* and *ΔFamily descendants*) strongly influences the difference in excess returns between dual and single class firms. The variables for the difference in founder and family descendant assume values of -1, 0, and 1. The other variables bearing a strong association to the difference in excess returns are growth opportunities (*ΔGrowth Opp.),* firm performance *(ΔROA),* and uncertainty *(ΔUncertainty).* The results of the first difference analysis support our primary findings.

Second, to ensure that no single year (or small number of years) accounts for our results, in untabulated results we run Fama-MacBeth (1973) regressions for the full- and matched- sample over the three return measures (Petersen, 2009). The results of the analysis again, indicate that dual class family firms outperform the benchmark by about 260 and 400 basis points for the full sample and matched sample #1, respectively. Third, because small absolute dollar increases in low price stock can result in large percentage increases in stock returns, we exclude all firm-year observations with stock prices less than $5.00. For the full sample and matched sample #1, we find excess industry returns of 200 and 410 basis points per year for dual class family firms respectively over the benchmark group of single class nonfamily firms. Overall, our results strongly indicate that investors earn premiums for holding dual class family firms relative to other organizational forms.

IV. Outside Investor Base across Equity Ownership and Share Structure

Although outside shareholders in dual class firms have little voice in firm decision-making, our analysis suggests that investors appear to be no worse-off for investing in these firms relative to single class firms. These investors rather, buy into super voting firms at significant discounts and then earn superior returns on their holdings. Given the negative views and press on dual class structures, institutional shareholders – with greater resources and sophistication – potentially shun these shares relative to retail investors. We examine the composition of the outside shareholder base relative to equity structure. For the analysis, we compute the fraction of institutional shareholdings as;

$$\textit{Adjusted Institutional Ownership} = \frac{\textit{Total Number of Shares held by Institutions}}{\textit{(Total Outstanding Shares – Total Shares held by the Family)}}$$

In calculating institutional shareholding, we reduce total shares outstanding by the shares held by the dominant shareholder (e.g., family). Our measure captures the fraction of freely traded shares held by institutions. Total shares are the sum of shares for the low and high voting classes.

Table 8 provides the result of the analysis. We use a similar specification to that in equation 1 but replace the dependent variable with the fraction of institutional shareholdings. Column 1 shows the results for the full sample and column 2 shows the results for matched sample #1. In contrast to the notion that sophisticated investors avoid dual class family firms, we find that institutional shareholders hold significantly more of the freely floated shares relative to retail investors. The coefficient estimate on family dual class for the full sample (matched sample) in column 1 (2) indicates that institutional investors hold 27.4% (25.7%) more of the outstanding shares in dual class family firms than in the benchmark group (single class nonfamily firms). Intuitively, institutional investors hold 87.4% of the free float in dual class family firms and 60.0%

of the free float in the reference group.[14] As an additional reference point, we find that institutional investors do not hold a substantially greater fraction of shares in single class family firms relative to our benchmark. The results suggest that institutions hold only about 2% more of the free float in single class family firms versus single class nonfamily firms. Overall, our analysis does not support the notion that institutions avoid or shun dual class family firms, rather, we document that these sophisticated investors appear to hold nearly the entire free float in super-voting family firms.

V. Conclusion

Regulators, academics, and practitioners' growing emphasis on corporate governance practices arises from concerns of managers self-dealing and diverting wealth from minority investors to corporate insiders' (Djankov et al., 2008). The business press frequently laments that corporate insiders use super voting shares as a mechanism to extract private benefit of corporate control at the expense of outside shareholders. Motivated by recent calls from critics to sanction or interdict dual class share firms, we examine whether these structures harm outside shareholders.

We begin our investigation with a simple question; "where do dual class shares arise?" To understand better the role or reason for issuing dual class shares, we begin by investigating the owners or originators of these multiple equity class firms. Using the Russell 3000 industrial firms from 2001 through 2015, we find that the dual class firms appear to be a manifestation of family ownership. Most dual class structures arise from founders and their families (93%) with family owners continuing to control most of these firms (89%) through the super voting shares.

Our analysis paints a somewhat different picture from conventional wisdom on the association between dual class structures and firm value. We find that dual class firms *without* family owners

[14] In the regression specification, the intercept captures the fraction of institutional holdings in single class nonfamily firms (the reference variable) while the intercept plus the coefficient estimate on dual class family firm captures institutional holdings in dual class family firms, all else equal.

exhibit valuation *premiums* of about 20% versus the benchmark of single class nonfamily firms. Dual class shares only exhibit discounts when the super-voting shares are held by founding family owners – about a 12% discount relative to the benchmark. The observations indicate that family presence plays an important role in understanding the effect of super voting shares on value.

Although shares of dual class family firms sell at deep discounts, our analysis suggest this organizational form is *not* inconsistent with the goal of shareholder wealth maximization. Using stock returns to identify the effect of dual class structures on outside shareholders, we investors demand a risk premium for holding super-voting shares. Notably however, the superior returns only appear in dual class family firms, i.e., not in dual class nonfamily firms. Using industry adjusted, market adjusted, and Fama-French size and book-to-market adjusted returns, we find that a buy-and-hold strategy of dual class family firms earns excess returns of about 350 basis points per year relative to our benchmark (single class nonfamily firms). Results from the matched sample confirm our analysis by suggesting excess returns of 430 basis points per year versus our benchmark group. After controlling for time, industry, and a wide variety of firm-specific factors, our analysis suggests that outside investors earn a premium for shares in family firms.

Our analysis adds to the body of literature on dual class firms by providing several key insights. First, we document that dual class shares appear to be a manifestation and continuance of family ownership. Nearly 90% of dual class firms are also family firms. Second, dual class firms exhibit valuation discounts only when family owners hold the super voting shares – about a 12% discount. In the absence of family owners, dual class shares exhibit valuation premiums of 20%. Third, outside investors appear to buy shares in dual class family firms at substantial discounts relative to other organizational forms. These investors however, earn greater excess returns on their holdings – about 350 basis points more per year than investors in the benchmark group (single class nonfamily firms). Investors in dual class family firms appear to require and earn a premium for holding shares in this organizational form. Fourth, although we find marginal differences between dual class, founder firms, descendant firms, and professionally-managed firms, our analysis

indicates that stock returns do not materially differ based on family firm type. Instead, we observe the greatest family control premiums with direct family control (founder or heir) and when the firm has strong profits and growth opportunities.

Overall, our analysis indicates that dual class structures provide both costs and benefits to the firms. On the cost side, entrepreneurs and their families – as originators of two classes of common equity – appear to bear significant discounts when selling their shares to the investing public and bear a high level of negative media attention for continuing to hold super-voting shares. On the benefit side, dual class shares appear to be a structure that large, concentrated shareholders deploy to maximize shareholder wealth. In total, our study documents that dual class shares are a manifestation of family control, allowing family owners the ability to sell cash flow rights while still maintaining formal firm control, yielding economic benefits to family- and outside-shareholders.

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Figure 1: Dual Class IPOs as a Fraction of Total IPOs.
This Figure presents the fraction of dual class IPO firms as a fraction of total IPO firms from 2001 through 2014. The data for this analysis comes from Professor Jay Ritter's website (https://site.warrington.ufl.edu/ritter/ipo-data/).

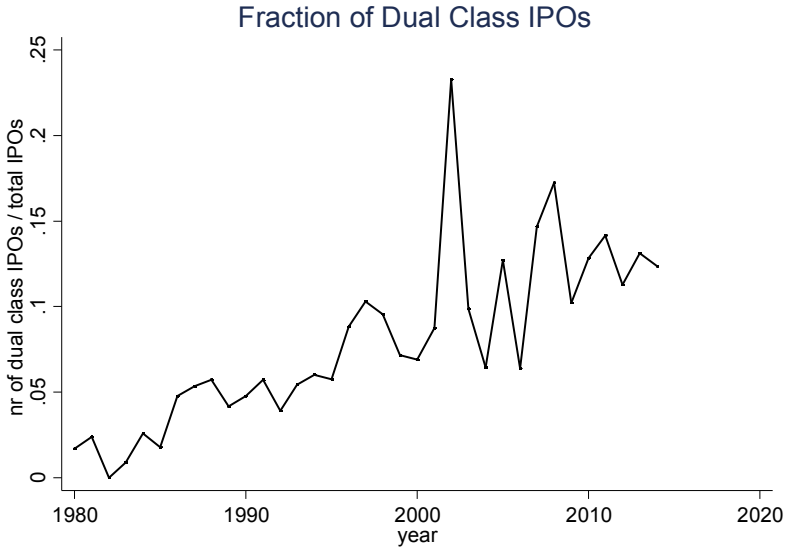

Figure 2: Firm Valuation and Organizational Structure.
This Figure presents a correlation analysis of the Russell 3000 industrials form 2001 through 2015 depicting the percent difference in Tobin's *Q* for single class family firms, dual class family firms, and dual class nonfamily firm relative to the benchmark group of single class nonfamily firms. The black (gray) symbols denote the full (matched sample). The 'wings' of each point estimate are the 90th and 95th confidence intervals for statistical significance with 95th expanding furthest from the point estimate. Section I.F. Table 1 provides the data definitions and matching process.

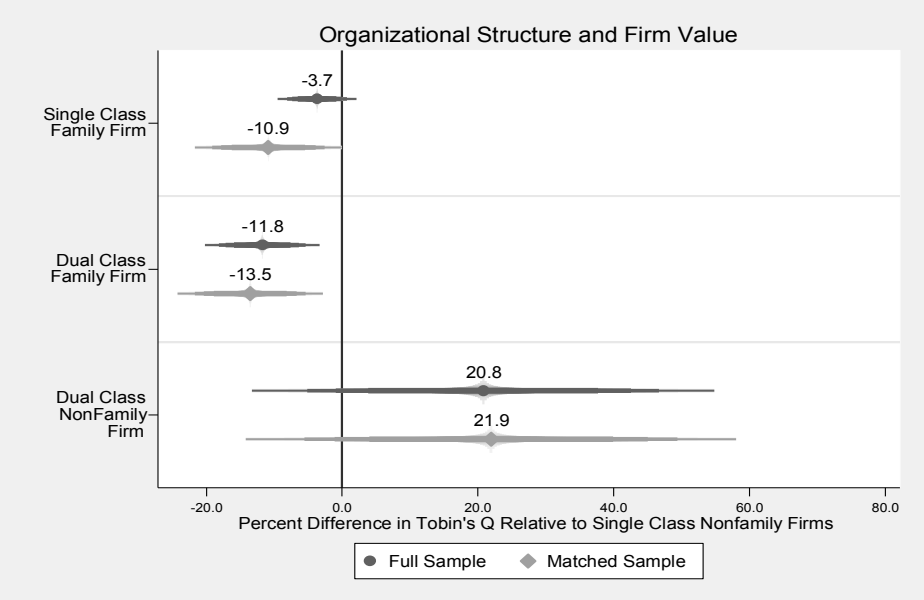

Figure 3: Firm Valuation and Direct Family Control

This Figure presents a correlation analysis of the Russell 3000 industrials form 2001 through 2015 depicting the percent difference in Tobin's *Q* for single class family firms categorized by CEO type, dual class family firms categorized by CEO type, and dual class nonfamily firm relative to the benchmark group of single class nonfamily firms. For the analysis, we use the full sample of 24,724 firm-year observations. The 'wings' of each point estimate are the 90th and 95th confidence intervals for statistical significance with 95th expanding furthest from the point estimate. The matched sample procedure is outlined in Section I.F. Table 1 provides the data definitions.

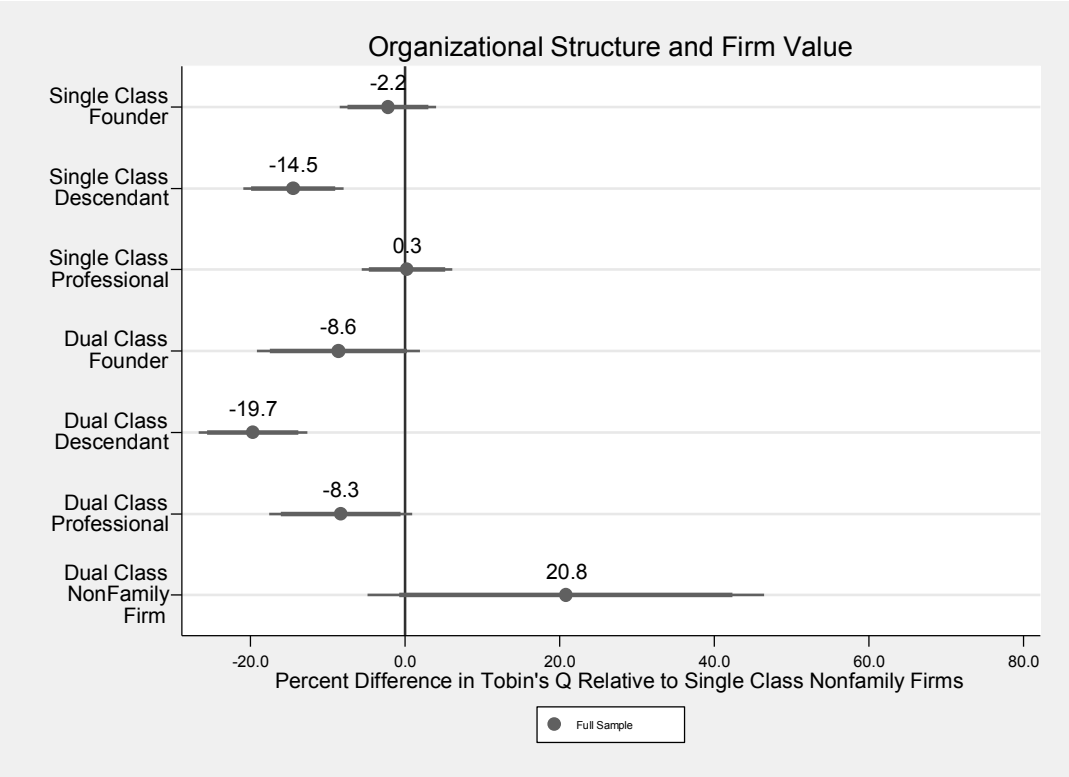

Figure 4: First Difference Analysis of Dual- and Single- Class Paired Firms
This Figure presents a first difference analysis of a propensity scored matched sample of Russell 3000 industrials form 2001 through 2015 depicting the difference in sensitivity of stock returns for dual class firms and single class firms. The point estimates come from the following specification:

$$\Delta(\textit{Dual Class Firm Excess Returns} - \textit{Single Class Firm Excess Returns}) = a + \beta(\Delta X) + \varepsilon_t$$

Where ΔX represents the difference between dual class firms less single less firms for the variables of interest. The sample comprises 2,127 firm-year observations, consisting of 2,127 dual-class observations and 2,127 single-class observations. The matching criteria are exact year, exact Fama-French 48 Industry Code, and then total assets and firm age with one-to-one matching and a caliper of 0.20. The 'wings' of each point estimate are the 90th and 95th confidence intervals for statistical significance with 95th expanding furthest from the point estimate. Table 1 provides the data definitions.

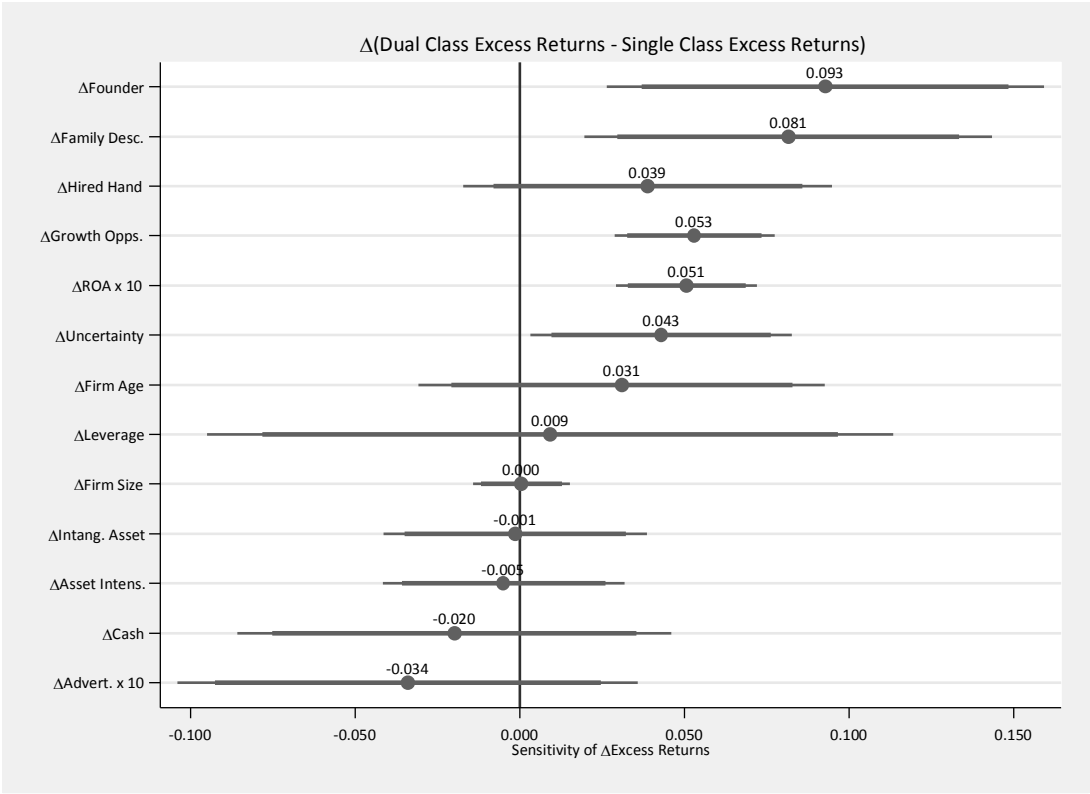

Table 1: Data Definitions

Advertising: Advertising expense divided by total revenue.
Asset Intensity: Total revenue divided by total assets.
Cash: Cash and liquid short-term securities divided by total assets.
Dual Class Family Firm: Binary variable equals to one when the family holds a 5% or larger voting stake and the firm maintains two outstanding classes of common stock, and zero otherwise.
Dual Class Nonfamily Firm: Binary variable equals to one when the founding family holds no equity stake and the firm maintains two outstanding classes of common stock, and zero otherwise.
Dual Class: Binary variable equals to one if the company has multiple common stock classes, equals to zero otherwise.
Fama-French Excess Returns: Size and book-to-market adjusted returns that equal each firm's annual stock return less the Fama-French size and book-to-market benchmark portfolios.
Family Firm: Binary variable that equals to one when the family holds a 5% or larger voting rights and zero otherwise.
Family Ownership: Total cash-flow right ownership, across all stock classes, by founding family members.
Family Vote: Total voting rights, across all stock classes, by founding family members.
Firm Age: Number of years since firm's foundation.
Volatility: Standard deviation of monthly stock returns during past three years. Source: CRSP.
Adjusted Institutional Ownership: Total Stock Ownership held by institutions divided by total shares outstanding less family shares, across all classes of common stock. Source: Thomson Reuters Institutional Ownership.
Growth Opportunities: The sum of the market value of equity + book value of long-term debt, divided by total assets. For dual class firms the market value of equity includes both share classes.
Industry Excess Return: Annual return (CRSP) minus the annual returns based on Fama–French (1997) 48-industry classification (Ken French's website).
Institutional Ownership: Total Stock Ownership Percentage held by institutions. Source: Thomson Reuters Institutional Ownership.
Intangible Assets: Book value of intangible assets divided by total assets.
Leverage: Total Long Term Debt (item# 9) divided by total assets (item# 6). Source: Compustat.
Market Excess Return: Buy-and-hold stock returns minus buy-and-hold CRSP value-weighted market returns. Source: CRSP.
R&D/Sales: Research and development (item# 46, set to 0 if missing) divided by sales/turnover net (item# 12). Source: Compustat.
Return on Assets: Operating Income before Depreciation (item# 13)/total assets (item# 6). Source: Compustat.
Single Class Family Firm: Binary variable equals to one when the family holds a 5% or larger voting stake and the firm has one outstanding class of common stock, and zero otherwise.
Single Class Nonfamily Firm: Binary variable equals to one when the founding family holds no equity stake and the firm has one outstanding class of common stock, and zero otherwise.
Single Class: Binary variable equals to one if the Company has one common stock, equals to zero otherwise.
Tobin's Q: Market value of assets over book value of assets: (item# 6 − item# 60 + item# 25 × item# 199) / item# 6. Source: Compustat.
Total Assets: Book value of total assets (item# 6). Source: Compustat.
Uncertainty: Standard deviation of monthly stock returns during past three years multiplied by 10.
Wedge: Total insider (family) voting rights minus total insider (family) ownership rights.

Table 2: Sample Summary Statistics: Russell 3000 Industrial Firms

Panel A presents mean values for our variables and *t*-values for difference of mean tests between dual class firms and single class firms. Columns 1 through 4 present data for the full sample of Russell 3000 industrial firms from 2001 through 2015. Columns 5 through 8 provide data for the matched sample. The matching process is outlined in Section I.F **Panel B** presents mean values and t-values for difference of mean tests for dual class family firms, single class family firms, dual class nonfamily firms, and single class nonfamily firms. a, b, and c indicate significance at the 1%, 5%, and 10% levels respectively. *t*-tests are corrected for serial correlation and heteroskedasticity.

Panel A:

	Full Sample				***Matched Sample***			
	All	*Dual Class*	*Single Class*	*t-test*	*All*	*Dual Class*	*Single Class*	*t-test*
	1	*2*	*3*	*4*	*5*	*6*	*7*	*8*
Observations	24,724	2,333	22,391	-	3,584	1,792	1,792	-
Family Firm	33.97	88.73	28.27	28.68	59.85	85.32	34.38	16.81[a]
Family Own.	8.63	26.82	6.73	0.28	17.72	26.66	8.79	10.73[a]
Family Votes	10.97	51.63	6.73	13.94[a]	30.18	51.60	8.79	18.43[a]
Founder CEO	17.54	28.33	16.42	3.86[a]	22.96	31.08	14.84	4.48[a]
Heir CEO	8.09	31.50	5.65	8.04[a]	19.73	29.41	10.04	5.35[a]
Outside CEO	17.83	31.42	16.42	4.98[a]	24.16	30.02	18.30	3.35[a]
Total Assets	5,102.2	5,553.3	4,918.1	22.01[a]	2,269.4	2,222.5	2,316.3	0.37
Firm Age	45.86	53.46	45.07	3.20[a]	48.27	48.10	48.44	0.12
Volatility	14.54	14.20	14.58	0.91	14.80	14.83	14.77	0.12
Leverage	19.81	25.10	19.26	3.76[a]	23.18	22.83	23.54	0.36
Tobin's Q	1.96	1.71	1.99	4.15[a]	1.81	1.74	1.88	1.62
ROA	8.65	10.33	8.48	2.44[b]	10.32	9.89	10.76	0.87
R&D/Sales	23.24	6.23	25.01	6.01[a]	9.22	7.53	10.92	0.93
Adj. Inst. Own.	61.87	78.78	60.11	6.36[a]	67.88	78.16	57.60	5.85[a]
Ex. Ind. Ret.	5.01	6.97	4.80	2.27[b]	5.80	7.20	4.41	1.71[c]
Ex. Mkt. Ret.	6.74	8.57	6.55	2.10[b]	7.53	9.03	6.03	1.80[c]
Ex. FF Ret.	1.80	3.43	1.62	1.68[c]	1.83	3.09	0.57	1.51
# of Industries	48	38	48	-	38	38	38	-

Panel B:

	Full Sample									
	Family Dual	*Nonfam Dual*	*Family Single*	*Nonfam Single*	*t-tests*					
	1	*2*	*3*	*4*	*1 vs 2*	*1 vs 3*	*1 vs 4*	*2 vs 3*	*2 vs 4*	*3 vs 4*
Observations	2,070	263	6,329	16,062	2,333	8,399	18,132	6,592	16,325	22,391
Family Own.	31.30	0.41	22.93	0.35	20.49[a]	4.56[a]	20.75[a]	32.18[a]	-	32.83[a]
Family Votes	58.12	0.59	22.93	0.35	30.66[a]	17.92[a]	31.31[a]	31.18[a]	-	32.86[a]
Founder CEO	31.30	0.00	44.13	0.00	5.99[a]	3.42[a]	7.76[a]	11.32[a]	-	21.07[a]
Heir CEO	34.49	0.00	17.35	0.00	4.24[a]	4.58[a]	9.69[a]	1.68[c]	-	11.16[a]
Outside CEO	34.20	0.00	38.52	0.00	4.51[a]	1.20	8.22[a]	5.87[a]	-	17.44[a]
Total Assets	5,554.1	5,547.0	2,750.8	5,963.2	0.00	1.41	0.20	1.37	0.21	4.78[a]
Firm Age	53.88	50.11	36.37	48.49	0.50	6.00[a]	1.90[c]	1.92[c]	0.23	7.82[a]
Volatility	13.83	17.14	15.90	14.06	2.15[b]	4.47[a]	0.55	0.82	2.05[b]	6.48[a]
Leverage	24.89	26.75	15.97	20.55	0.35	5.22[a]	2.66[b]	2.12[b]	1.23	5.89[a]
Tobin's Q	1.639	2.27	1.99	1.99	2.25[b]	4.95[a]	5.51[a]	1.00	1.03	0.07
ROA	10.84	6.32	8.25	8.57	1.31	3.31[a]	3.42[a]	0.54	0.64	0.50
R&D/Sales	4.05	23.43	24.56	25.19	1.91[c]	5.46[a]	7.60[a]	0.10	0.16	0.17
Adj. Inst. Own.	83.09	44.90	60.25	60.06	5.97[a]	7.11[a]	7.50[a]	2.61[b]	2.63[b]	0.14
Ex. Ind. Ret.	7.26	4.65	7.26	3.84	0.86	0.01	3.34[a]	0.89	0.28	4.83[a]
Ex. Mkt. Ret.	8.85	6.36	9.00	5.58	0.84	0.13	3.15[a]	0.93	0.28	4.74[a]
Ex. FF Ret.	3.61	2.02	2.18	1.41	0.53	1.26	2.17[b]	0.06	0.21	1.05
# of Industries	37	23	44	48	-	-	-	-	-	-

Table 3: Industry Breakdown of Single- and Dual- Class Share Firms by Ownership Type

This table presents the percent of dual-class family-firms, single-class family-firms, dual-class nonfamily-firms and single-class nonfamily-firms by industry designation for the Russell 3000 industrials form 2001 through 2015. Industry is designated by the Fama-French 48 classifications. Data definitions are supplied in Table 1.

			Family Firms		Nonfamily	
	Industry	**Full**	**Single**	**Dual**	**Single**	**Dual**
1	Agriculture	0.38	0.13	0.72	0.42	1.14
2	Food Prod.	2.07	2.31	3.72	1.67	7.60
3	Candy & Soda	0.30	0.49	0.82	0.11	3.42
4	Beer & Liquor	0.42	0.21	3.09	0.16	0.00
5	Tobacco Prod.	0.21	0.24	0.00	0.23	0.00
6	Recreation	0.57	0.74	0.53	0.51	0.00
7	Entertainment	1.61	2.16	4.15	1.06	1.14
8	Print & Publish	0.98	0.55	5.80	0.52	1.14
9	Consumer Goods	1.86	1.66	2.51	1.81	4.94
10	Apparel	1.55	2.21	5.02	0.86	0.00
11	Healthcare	1.79	1.37	0.77	2.11	0.00
12	Medical Eq.	2.87	2.69	0.72	3.27	0.00
13	Pharma. Prod.	7.64	6.19	2.46	8.97	1.90
14	Chemicals	2.75	2.29	0.10	3.29	1.14
15	Rubber & Plastic	0.61	0.77	0.39	0.59	0.00
16	Textiles	0.47	0.76	2.17	0.14	0.00
17	Construction Mat.	2.36	2.37	1.93	2.36	5.32
18	Construction	1.84	2.65	1.45	1.59	0.00
19	Steel Works Etc	1.73	1.36	0.24	2.09	0.76
20	Fabricated Prod.	0.23	0.32	0.00	0.22	0.00
21	Machinery	5.04	3.48	1.69	6.14	1.52
22	Electrical Eq.	2.03	1.83	1.45	2.18	2.66
23	Autos and Trucks	1.96	1.67	1.69	2.10	1.90
24	Aircraft	0.77	0.47	1.21	0.78	4.18
25	Shipbuild, RR Eq.	0.24	0.22	0.00	0.28	0.00
26	Defense	0.42	0.32	0.00	0.52	0.00
27	Precious Metals	0.12	0.00	0.00	0.19	0.00
28	Mining	0.38	0.21	0.00	0.49	0.76
29	Coal	0.34	0.00	0.00	0.52	0.00
30	Petro. & Nat. Gas	4.30	3.74	0.48	4.92	9.89
31	Utilities	0.32	0.08	0.00	0.47	0.00
32	Communication	3.18	1.61	20.29	1.49	9.13
33	Personal Services	1.56	1.69	2.85	1.37	0.0
34	Business Services	13.16	18.47	4.93	12.01	20.53
35	Computers	3.79	3.92	0.63	4.21	0.00
36	Electronic Eq.	7.56	6.51	5.07	8.36	4.18
37	Measure/Cont. Eq.	2.72	2.01	1.21	3.24	0.00
38	Business Supplies	1.55	0.90	2.03	1.76	0.00
39	Shipping Containers	0.59	0.57	0.82	0.59	0.00
40	Transportation	3.21	3.93	3.29	2.86	6.46
41	Wholesale	3.69	4.16	3.86	3.49	3.04
42	Retail	7.38	9.34	8.84	6.44	6.08
43	Rest, Hotels, Motels	1.72	1.96	0.92	1.76	0.00
44	Banking	0.02	0.00	0.00	0.03	0.00
45	Insurance	0.30	0.33	0.53	0.26	0.00
46	Real Estate	0.27	0.43	0.00	0.25	0.00
47	Trading	1.09	0.68	1.59	1.19	1.14
48	Almost Nothing	0.06	0.00	0.00	0.09	0.00
	Total Observations	**24,724**	**6,329**	**2,070**	**16,062**	**263**

Table 4: Excess Industry Stock Returns, Share Structure, and Ownership Structure
Panel A presents OLS regressions of excess industry stock returns on equity ownership and equity share structure for the Russell 3000 industrials form 2001 through 2015 for our full sample of firms. *t*-values are shown in parentheses. Table 1 provides data definitions. a, b, and c indicate significance at the 1%, 5%, and 10% level, respectively. The coefficient-estimate standard-errors are corrected for serial correlation and heteroskedasticity using the Huber-White sandwich estimator (clustered on firm-level identifier).

Panel A:	***Dependent Variable = Excess Industry Return***			
	1	*2*	*3*	*4*
Intercept	0.074[b]	0.060[b]	0.061[b]	0.061[b]
	(2.55)	(2.03)	(2.07)	(2.08)
β_1(Dual-Class)	0.027[b]	0.019[c]	-0.004	-
	(2.58)	(1.67)	(0.16)	
β_2(Family Firm)	-	0.016[b]	0.014[b]	-
		(2.38)	(2.06)	
β_3(Dual Class*Family Firm)	-	-	0.028	-
			(0.97)	
β_4(Single-Class Family)	-	-	-	0.014[b]
				(2.06)
β_5(Dual-Class Family)	-	-	-	0.037[a]
				(3.28)
β_6(Dual-Class Nonfamily)	-	-	-	-0.002
				(0.06)
Ln(Total Assets)	-0.008[a]	-0.007[a]	-0.007[a]	-0.096[a]
	(3.69)	(3.25)	(3.25)	(3.29)
Ln(Firm Age)	0.003	0.004	0.004	0.004
	(0.71)	(0.84)	(0.80)	(0.80)
Leverage	0.026	0.029	0.029	0.029
	(1.45)	(1.58)	(1.58)	(1.58)
Return on Assets	0.568[a]	0.566[a]	0.566[a]	0.566[a]
	(17.91)	(17.79)	(17.79)	(17.79)
Volatility	0.619[a]	0.620[a]	0.621[a]	0.621[a]
	(9.04)	(9.06)	(9.08)	(9.08)
R&D/Sales	0.010[b]	0.010[b]	0.010[b]	0.010[b]
	(2.13)	(2.12)	(2.13)	(2.13)
Yr./Ind. Dummies	Yes	Yes	Yes	Yes
Observations	24,724	24,724	24,724	24,724
Adj. R^2 (%)	6.94	6.95	6.95	6.95
$\beta_1 = \beta_1 + \beta_2 + \beta_3$ (*F*-test)	-	-	2.27	-
$\beta_1 + \beta_2 + \beta_3 = 0$ (*F*-test)	-	-	11.31[a]	-
$\beta_4 = \beta_5$ (*F*-test)	-	-	-	3.37[c]
$\beta_4 = \beta_6$ (*F*-test)	-	-	-	0.29
$\beta_5 = \beta_6$ (*F*-test)	-	-	-	1.51

Table 4: Excess Industry Stock Returns, Share Structure, and Ownership Structure
Panel B presents OLS regressions of excess industry stock returns on equity ownership and equity share structure for four different matched samples comprising Russell 3000 industrial firms form 2001 through 2015. Section I.F outlines the matching process for the three matched samples. *t*-values are shown in parentheses. Table 1 provides data definitions. a, b, and c indicate significance at the 1%, 5%, and 10% level, respectively. The coefficient-estimate standard-errors are corrected for serial correlation and heteroskedasticity using the Huber-White sandwich estimator (clustered on firm-level identifier).

Panel B:	***Dependent Variable = Excess Industry Return***			
	Matched Sample #1	***Matched Sample #2***	***Matched Sample #3***	***Matched Sample #4***
	Dual Class to Single Class Firms	*No Family Firms (Nonfamily Single Class to Nonfamily Dual Class Firms)*	*No Dual Class Firms (Single Class Family to Single Class Nonfamily Firms)*	*High Levels of Family Ownership for Dual Class and Single Class Family Firms*
	1	*2*	*3*	*4*
Intercept	0.153	0.188	0.143[a]	0.745[c]
	(1.62)	(0.68)	(3.38)	(1.81)
β_1(Dual-Class)	-	-0.002	-	-
		(0.03)		
β_2(Family Firm)	-	-	0.019[b]	-
			(2.30)	
β_3(Single-Class Family)	0.027	-	-	-
	(1.04)			
β_4(Dual-Class Family)	0.043[b]	-	-	-0.048
	(2.34)			(0.90)
β_5(Dual-Class Nonfamily)	0.009	-	-	-
	(0.23)			
Ln(Total Assets)	-0.017	-0.016	-0.011[a]	-0.033
	(2.04)	(0.71)	(2.83)	(0.95)
Ln(Firm Age)	-0.004	-0.005	0.006	-0.067
	(0.29)	(0.13)	(0.90)	(0.89)
Leverage	0.039	-0.093	0.035	0.063
	(0.70)	(0.55)	(1.48)	(0.52)
Return on Assets	0.509[a]	0.386[b]	0.590[a]	0.300
	(5.23)	(1.98)	(15.32)	(0.97)
Volatility	0.589[a]	0.424	-0.028	0.019
	(3.23)	(0.88)	(0.34)	(0.03)
R&D/Sales	0.014	0.018	0.017[b]	-0.063
	(0.59)	(0.49)	(2.63)	(1.57)
Yr./Ind. Dummies	Yes	Yes	Yes	Yes
Observations	3,584	452	11,494	466
Adj. R^2 (%)	6.82	3.52	7.35	7.91
$\beta_3 = \beta_4$ (*F*-test)	0.47	-	-	-
$\beta_3 = \beta_5$ (*F*-test)	0.20	-	-	-
$\beta_4 = \beta_5$ (*F*-test)	0.87	-	-	-

Table 5: Alternative Measure of Excess Returns on Share and Ownership Structure
This Table presents OLS regressions of excess industry stock returns, excess market returns, and Fama-French size and book-to-market excess returns on equity ownership and equity share structure for the Russell 3000 industrials form 2001 through 2015. Columns 1 to 3 show the results for the full sample and columns 4 to 6, the results for matched sample #1 outlined in Section I.F. *t*-values are shown in parentheses. Table 1 provides data definitions. a, b, and c indicate significance at the 1%, 5%, and 10% level, respectively. The coefficient-estimate standard-errors are corrected for serial correlation and heteroskedasticity using the Huber-White sandwich estimator (clustered on firm-level identifier).

	Full Sample			***Matched Sample***		
Dependent Variable =	***Industry Excess***	***Market Excess***	***Fama-French***	***Industry Excess***	***Market Excess***	***Fama-French***
	1	*2*	*3*	*4*	*5*	*6*
Intercept	0.061[b]	0.158[a]	-0.085[a]	0.153	0.270[a]	-0.028
	(2.08)	(5.53)	(2.86)	(1.62)	(2.83)	(0.39)
β_1(Single-Class Family)	0.014[b]	0.012	0.006	0.027	0.020	0.021
	(2.06)	(1.63)	(0.81)	(1.04)	(0.73)	(0.78)
β_2(Dual-Class Family)	0.037[a]	0.035[a]	0.029[b]	0.043[b]	0.041[b]	0.037[b]
	(3.28)	(3.06)	(2.56)	(2.34)	(2.15)	(1.96)
β_3(Dual-Class Nonfamily)	-0.002	-0.001	0.017	0.009	0.010	0.032
	(0.06)	(0.04)	(0.53)	(0.23)	(0.26)	(0.78)
Ln(Total Assets)	-0.007[a]	-0.012[a]	-0.005[b]	-0.017	-0.020[b]	-0.011
	(3.29)	(5.12)	(2.28)	(2.04)	(2.31)	(1.33)
Ln(Firm Age)	0.004	0.004	0.006	-0.004	-0.001	0.003
	(0.80)	(0.96)	(1.19)	(0.29)	(0.10)	(0.19)
Leverage	0.029	0.039[b]	0.029	0.039	0.051	0.033
	(1.58)	(2.10)	(1.54)	(0.70)	(0.89)	(0.57)
Return on Assets	0.566[a]	0.584[a]	0.613[a]	0.509[a]	0.522[a]	0.604[a]
	(17.78)	(18.03)	(17.85)	(5.23)	(5.25)	(5.72)
Volatility	0.621[a]	0.484[a]	0.463[a]	0.589[a]	0.450[b]	0.387[b]
	(9.07)	(6.93)	(6.57)	(3.23)	(2.44)	(2.63)
R&D/Sales	0.010[b]	0.010[b]	0.012[b]	0.014	0.012	0.014
	(2.13)	(2.09)	(2.45)	(0.59)	(0.52)	(0.58)
Yr./Ind. Dummies	Yes	Yes	Yes	Yes	Yes	Yes
Observations	24,724	24,724	24,724	3,584	3,584	3,584
Adj. R^2 (%)	6.95	8.41	4.59	6.82	8.50	4.30
$\beta_1 = \beta_2$ (*F*-test)	3.37[c]	3.64[b]	3.61[c]	0.47	0.81	0.47
$\beta_1 = \beta_3$ (*F*-test)	1.51	0.17	0.12	0.20	0.05	0.01
$\beta_2 = \beta_3$ (*F*-test)	0.29	1.29	0.13	0.87	0.62	0.54

Table 6: Excess Returns and the Disparity between Cash-flow Rights and Voting Control
This Table presents OLS regressions of excess industry stock returns on the wedge between voting rights and cash flow rights for holders of super-voting shares for the Russell 3000 industrials form 2001 through 2015. Wedge is the insiders' fractional voting rights less their cash-flow rights. Columns 1-3 present full sample results and column 4 presents the results for matched sample #1. Section I.F. outlines the matching process. *t*-values are shown in parentheses. Table 1 provides data definitions. a, b, and c indicate significance at the 1%, 5%, and 10% level, respectively The coefficient-estimate standard-errors are corrected for serial correlation and heteroskedasticity using the Huber-White sandwich estimator (clustered on firm-level identifier).

	Dependent Variable = Excess Industry Return			
	Full Sample			*Matched Sample*
	1	*2*	*3*	*4*
Intercept	0.075[b]	0.075[b]	0.063[b]	0.129
	(2.58)	(2.58)	(2.15)	(1.38)
β_1("Wedge")	0.084[b]	-	-	-
	(2.69)			
β_2("Family Wedge")	-	0.085[a]	0.053	0.019
		(2.72)	(1.57)	(0.36)
β_3(Family Cash Flow Rights)	-	-	0.057[a]	0.118[a]
			(2.80)	(2.88)
β_4(Nonfamily Wedge)	-	-1.961	-1.492	0.857
		(1.38)	(0.99)	(0.27)
β_5(Nonfamily Cash Flow Rights)	-	-	-0.545	-0.028
			(1.43)	(0.03)
Ln(Total Assets)	-0.008[a]	-0.008[a]	-0.007[a]	-0.015[c]
	(3.72)	(3.72)	(3.13)	(1.78)
Ln(Firm Age)	0.003	0.003	0.003	-0.002
	(0.75)	(0.76)	(0.67)	(0.16)
Leverage	0.026	0.026	0.028	0.040
	(1.43)	(1.43)	(1.52)	(0.73)
Return on Assets	0.568[a]	0.568[a]	0.564[a]	0.507[a]
	(17.84)	(17.84)	(17.69)	(5.23)
Volatility	0.619[a]	0.619[a]	0.624[a]	0.607[a]
	(9.04)	(9.04)	(9.13)	(3.39)
R&D/Sales	0.010[b]	0.010[b]	0.010[b]	0.015
	(2.12)	(2.13)	(2.18)	(0.67)
Yr./Ind. Dummies	Yes	Yes	Yes	Yes
Observations	24,724	24,724	24,724	3,584
Adj. R^2 (%)	6.96	6.93	6.96	6.89
$\beta_2+\beta_3=0$ (*F*-test)	-	2.07	-	-
$\beta_2+\beta_3=\beta_4+\beta_5$	-	-	1.98	0.04

Table 7: Excess Stock Returns relative to Family Firm Type

This table presents OLS regressions of excess industry returns on equity and share ownership structure segregated by CEO type for the Russell 3000 firms from 2001 through 2015. Founder, Descendant and Professional denote whether the firm's founder, a founder's descendant, or an external professional manager serve as CEO in a family firm. Columns 1 and 2 show full sample results and column 3 shows the results for matched sample #1 which is outlined in Section I.F. *t*-values are shown in parentheses. Table 1 provides data definitions. a, b, and c indicate significance at the 1%, 5%, and 10% level, respectively. The coefficient-estimate standard-errors are corrected for serial correlation and heteroskedasticity using the Huber-White sandwich estimator (clustered on firm-level identifier).

	Dependent Variable = Excess Industry Returns		
	Full Sample		*Matched Sample*
	1	*2*	*3*
Intercept	0.071[a]	0.064[b]	0.190
	(2.74)	(2.16)	(1.99)
β_1(Single-Class Founder)	0.010	0.011	-0.006
	(0.93)	(0.98)	(0.13)
β_2(Single-Class Descendant)	0.053[a]	0.052[a]	0.098[b]
	(4.05)	(4.03)	(2.57)
β_3(Single-Class Professional)	0.001	0.011	0.004
	(0.16)	(0.15)	(0.13)
β_4(Dual-Class Founder)	0.028[c]	0.028[c]	0.019
	(1.67)	(1.70)	(0.75)
β_5(Dual-Class Descendant)	0.042[b]	0.041[b]	0.044[c]
	(2.59)	(2.53)	(1.88)
β_6(Dual-Class Professional)	0.043[b]	0.042[b]	0.066[b]
	(2.33)	(2.30)	(2.58)
β_7(Nonfamily Dual)	-0.002	-0.002	0.007
	(0.06)	(0.06)	(0.19)
Ln(Total Assets)	-0.007[a]	-0.007[a]	-0.018
	(3.18)	(3.17)	(2.16)
Ln(Firm Age)	-	0.002	-0.012
		(0.47)	(0.81)
Leverage	0.029	0.029	0.040
	(1.61)	(1.60)	(0.72)
Return on Assets	0.566[a]	0.566[a]	0.520[a]
	(17.82)	(17.78)	(5.35)
Volatility	0.622[a]	0.626[a]	0.581[a]
	(9.17)	(9.14)	(3.19)
R&D/Sales	0.010[b]	0.010[b]	0.014
	(2.15)	(2.15)	(0.63)
Yr./Ind. Dummies	Yes	Yes	Yes
Observations	24,724	24,724	3,584
Adj. R^2 (%)	6.97	6.97	6.86
$\beta_4 = \beta_5$ (*F*-test)	0.44	0.34	0.75
$\beta_4 = \beta_6$ (*F*-test)	0.40	0.34	2.38
$\beta_5 = \beta_6$ (*F*-test)	0.00	0.00	0.56

Table 8: Institutional Holdings, Share Structure, and Ownership Structure
This table presents OLS regressions of institutional shareholdings on equity ownership and equity share structure for the Russell 3000 industrial firms from 2001 through 2015. Fraction of Freely Floated Shares held by Institutional Investors is the sum of all shares across institutions divided by (total firms shares less the shares held by family (inside) shareholders, across all common equity classes). Column 1 presents the results for the full sample and column 2 for matched sample #1outlined in Section I.F. *t*-values are shown in parentheses. Table 1 provides data definitions. a, b, and c indicate significance at the 1%, 5%, and 10% level, respectively. The coefficient-estimate standard-errors are corrected for serial correlation and heteroskedasticity using the Huber-White sandwich estimator (clustered on firm-level identifier).

	Dependent Variable = Adjusted Institutional Ownership	
	Full Sample	*Matched Sample*
	1	*2*
Intercept	0.600[a]	0.437[a]
	(13.88)	(3.04)
β_1(Single-Class Family)	0.023[c]	0.043
	(1.79)	(1.43)
β_2(Dual-Class Family)	0.274[a]	0.257[a]
	(9.00)	(7.90)
β_3(Dual-Class Nonfamily)	-0.07	-0.024
	(1.47)	(0.38)
Ln(Total Assets)	0.009[b]	0.011
	(2.04)	(0.80)
Ln(Firm Age)	-0.027[a]	0.007
	(2.84)	(0.26)
Leverage	-0.036	-0.179[b]
	(1.34)	(2.52)
Return on Assets	0.510[a]	0.580[a]
	(15.57)	(5.80)
Volatility	-0.695[a]	-0.476[a]
	(10.71)	(2.92)
R&D/Sales	0.021[a]	0.015
	(3.97)	(0.99)
Yr./Ind. Dummies	Yes	Yes
Observations	24,724	3,584
Adj. R^2 (%)	23.07	26.20
$\beta_1 = \beta_2$ (*F*-test)	63.39[a]	31.02[a]
$\beta_1 = \beta_3$ (*F*-test)	3.59[c]	1.03
$\beta_2 = \beta_3$ (*F*-test)	37.15[a]	18.02[a]