

THE UNIVERSITY OF CHICAGO

THE DETERMINANTS OF DUAL-CLASS STOCK STRUCTURES AT  
INNOVATIVE FIRMS: EVIDENCE AND IMPLICATIONS

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THE DETERMINANTS OF DUAL-CLASS STOCK STRUCTURES AT  
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## DISSERTATION OVERVIEW

This J.S.D dissertation consists of two articles that shed new light on the determinants of dual-class structures among technology-based firms, and contribute to the long-standing debate over the desirability and uses of dual-class stock structure more broadly, from both empirical and theoretical perspectives.

The use of dual-class stock structure is growing in practical importance due to its exponential spread in recent years among US listed firms, from 1% in 2005 to 19% in 2017. In addition, dual-class firms are of growing economic importance, including some of the largest recent IPOs and accounting for an estimated market value between \$4 trillion and \$5 trillion, including 9% of the S&P 100. This trend, which began following Google's (now listed under its parent firm's name "Alphabet") dual-class listing in 2004, with Facebook notably following suit in 2012, has rapidly grown to include other prominent technology-based firms, such as LinkedIn, Square, Yelp, Zynga, and Snap.

In the wake of rapid increase in dual-class listings in recent years, the institutional investors community has lobbied regulators and major stock index providers to prohibit the use of dual-class stock, arguing that the core business justification for dual-class structures do not apply to technology-based firms. Simultaneously, in recent years, jurisdictions that have traditionally been averse to dual-class listings, such as Singapore and Hong Kong, have revised their regulatory framework to allow dual-class structures in order to attract technology-based firms. Both steps hang on the purported conflict between, on the one hand, protection of founders' ability to implement their idiosyncratic vision, unimpeded by asymmetric information between founders and outside shareholders and avoid the market's tendency towards short-term horizons; versus, on the other hand, protecting outside shareholders from a lack of managerial accountability and the risk of extraction of private benefits of control.

Both of the articles included in this dissertation challenge institutional investors' argument that the use of a dual-class structure for technology-based firms is an unnecessary defensive measure rather than a core business need. Over the last several decades, firms have steadily increased their investments in products that rely on new technology. In this new setting, the traditional single-class, one-share one-vote structure technology-based firms, and the balance it sets between control rights and agency costs, can impose serious constraints in the pursuit of innovation. The importance of this trade-off was highlighted in the literature. Yet, questions such as how to strike the right balance in the technology sector, whether it warrants treatment unlike that of different types of firms, and its impact regarding the suitability of existing regulation, have not been closely examined. The findings suggest that the unique features of the value-creation processes in technology-based firms, may call for a different balance with greater emphasis on the importance of control rights in the technological sector, as they are more vulnerable to shareholders' involvement in decision-making.

The first article, included in this dissertation as Chapter One, contributes to the dual-class debate by introducing a novel measure to analyze factors influencing technology-based firms in their decision to adopt a dual-class structure. Using media coverage of firms' founders prior to their IPO as a proxy for their idiosyncratic vision, this article's first and primary finding indicates that idiosyncratic vision strongly predicts the use of dual-class structure among technology-based firms. Further analysis shows that the effect of media coverage as a proxy for a founder's idiosyncratic vision differs according to a firm's state of incorporation, such that idiosyncratic vision is of greater importance for firms incorporated outside of the state of Delaware. While exploring possible explanations for this striking finding, this analysis also highlights certain costs associated with the penalties and obstructions institutional investors impose to discourage

divergence from a single-class structure. This is a significant contribution to the dual-class debate, and suggests that dual-class structure, rather than a single-class structure, is likely to be an efficient capital structure for technology-based firms at the IPO stage.

The second article, included in this dissertation as Chapter Two, builds on the empirical findings described in Chapter One to identify the increased benefits and the reduced costs associated with dual-class structures for firms with significant innovative activity, and to further analyze the implications of recent policy efforts on both financial markets and innovation in firms. It argues in favor of dual-class listings on the grounds that it protects against the possibility of founders being prevented prematurely from realizing their long-term strategic vision. leading to suboptimal performance and an increase in firms' cost of capital. This article analyzes through this lens recent attempts to limit the use of dual-class stock structure. It suggests that the SEC and the principal US exchanges should resist recent calls from institutional investors to mandate the use of a single-class structure. A total prohibition on issuing non-voting shares, exclusion of dual-class firms from index funds, and more judicial review could deter firms from going public with dual-class structures. Private firms might prefer to remain private or list abroad, while public firms might decide to go private, eliminating the option to buy even the inferior voting stock. Instead, policymakers should consider fixed-time sunset provisions, as they offer a more balanced tool to regulate dual-class structure that recognizes the value of founders' control in the first few years following a firm's IPO.

CHAPTER 1:  
WHAT DRIVES THE USE OF DUAL-CLASS STOCK STRUCTURES  
IN TECHNOLOGY IPOs?

This paper contributes to the longstanding and escalating debate over the use of dual-class structure in initial public offerings (IPOs) by introducing a novel measurement to analyze factors influencing technology-based firms in their decision to employ a dual-class structure. Using media coverage of firms' founders prior to their IPO as a proxy for their idiosyncratic vision, this paper's first and primary finding indicates that idiosyncratic vision strongly predicts the use of dual-class structure among technology-based firms. Further analysis shows that the effect of media coverage as a proxy for a founder's idiosyncratic vision differs according to a firm's state of incorporation, such that idiosyncratic vision is of greater importance for firms incorporated outside of the state of Delaware. While exploring possible explanations for this striking finding, this analysis also highlights certain costs associated with the penalties and obstructions institutional investors impose to discourage divergence from a single-class, one-share, one-vote structure.

## I. INTRODUCTION

In 2004, Google surprised the market by going public with a dual-class stock structure, in which Class B shares, held by management and existing shareholders, had ten times the voting power of Class A shares offered to the public.<sup>1</sup> Though this stock structure was legally permissible, it had been widely viewed by the media, academia, and the institutional investor community as suitable only for certain industries, like the media industry for instance, where it allows firms to concentrate on their core, long-term interest in serious news coverage, despite fluctuations in quarterly results. Under a single-class structure, where outside shareholders hold a majority of votes, concerns about fluctuations in quarterly results might force editors of media firms to settle for the quality of news coverage in order to cater to shareholders demands. For a technology firm like Google however, dual-class structures have been considered an unnecessary defensive measure rather than a core business need, isolating holders of high-voting-power shares from market discipline, while potentially increasing agency costs. And yet, today, dual-class structured technology-based IPOs account for an increasingly significant portion of all recent IPOs— a trend that should be of growing interest to the debate over the desirability of dual-class stock structure more broadly. This paper contributes to this debate by providing important new evidence on the factors influencing technology-based firms in their decision to adopt this structure.

Despite various efforts made by Google’s founders—including an extraordinary letter to potential new shareholders justifying their decision<sup>2</sup>—the institutional investor community

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<sup>1</sup> Google Inc., Registration Statement (Amend. No. 9 to Form S-1) (Aug 18, 2004).

<sup>2</sup> See, for instance, Google Inc., *supra* note 1, where Google founders, Larry Page & Sergey Brin, acknowledge that their registration for dual-stock structure required future public shareholders to place a potentially risky, long-term bet on Google that would enable the company to retain many of the positive aspects of being private so that that everyone —new *public* shareholders included— would benefit.

continued to oppose Google’s move, insisting on a substantial price discount to dual-class shares.<sup>3</sup> The lower value assigned to dual-class shares would presumably reflect the fact that dual-class stock structure facilitates extraction of private benefits of control, solidifying and empowering management at the expense of shareholders. If institutional investors indeed place a lower value on technology stocks with dual-class structure, a typical “market for lemons” should theoretically exist: investors cannot distinguish between firms that wish to maximize value (“good” firms) and firms that plan to extract private benefits at the expense of public shareholders (“bad” firms). Thus, investors should discount all dual-class firms, driving “good” value-enhancing firms out of the dual-class market. In practice though, despite investors’ outcry, and contrary to theoretical predictions, many prominent technology-based firms, including Facebook, LinkedIn, Snap, and more recently Dropbox, and Lyft, have followed Google in making the same dual-class choice.<sup>4</sup> Thus, the dual-class structure seen as so unusual in 2004, has come to be regarded as a kind of industry standard.<sup>5</sup> This paper explores whether investors can actually observe firms’ intentions

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<sup>3</sup> See, Simon London, U.S. Fund Criticizes Google’s IPO Structure, FIN. TIMES (May 4, 2004), [http://www.nbcnews.com/id/4900355/ns/business-financial\\_times/t/us-fund-criti-%20cizes-google-ipo-structure/%20#.Xctr9m5FxpZ%20\[https://%20/%20perma.cc/%207RHS-7SQP\]](http://www.nbcnews.com/id/4900355/ns/business-financial_times/t/us-fund-criti-%20cizes-google-ipo-structure/%20#.Xctr9m5FxpZ%20[https://%20/%20perma.cc/%207RHS-7SQP]) (quoting Peter Chapman, senior vice-president at the Teachers Insurance Annuity Association of America (“TIAA”) remark that Google’s shares should be priced at “a substantial discount to reflect the fact that the founders will retain control of the firm following its IPO,” as “this structure effectively disenfranchises outside shareholders”).

<sup>4</sup> An especially extreme case is Snap Inc., which listed nonvoting stock to the public in 2017 (2017). See Snap Inc., Prospectus, (Form 424B) (Mar. 1, 2017), <http://www.sec.gov/Archives/edgar/data/1564408/000119312517068848/d270216d424b4.htm>.

<sup>5</sup> See Jeffrey Green & Ari Levi, *Zuckerberg Grip Becomes New Normal in Silicon Valley*, BLOOMBERG BUSINESS (May 7, 2012), <https://www.bloomberg.com/news/articles/2012-05-07/zuckerberg-stock-grip-becomes-new-normal-in-silicon-valley-tech> (quoting Lise Buyer, principal at Class V Group in California: “When Google did it, there was tremendous pushback from the banks.... Today the bankers are often the ones suggesting it”); Steven Davidoff Solomon, Shareholders Vote with Their Dollars to Have Less of a Say, N.Y. Times (Nov. 4, 2015), <https://www.nytimes.com/2015/11/05/business/dealbook/shareholders-vote-with-their-dollars-to-have-less-of-a-say.html> (noting that more than 13.5 percent of the 133 companies listing shares on United States exchanges in 2015 have set up a dual-class structure, according to the data provider Dealogic. About half the companies choosing the structure were in the technology industry. That compares with 12 percent in 2014 and just 1

and distinguish between “good” firms, seeking to employ dual-class structure in order to pursue idiosyncratic vision, and “bad” firms, aiming to use this structure to extract private benefits of control. If investors are able to observe firms’ intentions pre-IPO and adjust the discount appropriately, then it would at least partly solve the adverse selection problem of “good” firms leaving the market, as the discount on a dual-class stock would be lower for “good” firms and higher for “bad” firms.

In order to determine this distinction, this paper analyses how the unique needs of technology firms—including their emphasis on idiosyncratic vision—might incline them towards a dual-class structure. Specifically, this paper explores how the protections from capital market pressure afforded by the use of dual-class structure might be crucial for fostering innovation and pursuing idiosyncratic vision. Indeed, my findings suggest that the conditions necessary for innovation, which are so vital to technology-based firms, are vulnerable to increased involvement by shareholders in three key ways: First, since technological innovation requires constant investment in new ideas with returns that may only exist in the long term, technology-based firms are at greater risk for quarter-to-quarter volatility, disrupting market’s ability to evaluate long-term investments and potentially reducing the value of technology-based firms. Thus, under a single-class, one-share, one-vote structure, where technology-based firms are pressured to keep their earnings in line with forecasts, firms may counterproductively accept smaller, predictable earnings

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percent in 2005); Alice Gomstyn, *Supervoters, Stocks, and Silicon Valley: What Investors Should Know About Dual-Class Voting Structures*: Tech companies are joining the trend of giving more voting rights to selected shareholders, *The Alert Investor* (Dec. 5, 2015), <https://www.foxbusiness.com/markets/supervoters-stocks-and-silicon-valley-what-investors-should-know-about-dual-class-voting-structur> (mentioning that a growing number of U.S. firms have adopted the dual-class structure: Between 2013 and late 2015, 98 companies newly listed on U.S. exchanges had dual-class IPOs, compared to 59 between 2010 and 2012, according to data from information provider Dealogic).

rather than larger and less predictable returns.<sup>6</sup> Second, specialized knowledge associated with technology investment and limitations on the ability to share details on innovative projects in progress, create asymmetric information between founders and outside shareholders that can generate uncertainty and divergent views concerning projects' economic potential.<sup>7</sup> More broadly, the process of transforming new ideas into tangible products is an ongoing and unexpected process.<sup>8</sup> Finally, within the context of the innovation process, a founder's value may lie not only in the specialized knowledge required to accurately evaluate technological innovation, but in the ability to see the true value of the innovation where others do not, and to execute it according to her idiosyncratic vision. Thus, any limitation on founder's discretion can lead to early termination of potentially successful inventions. This paper tests the centrality of founders' idiosyncratic vision to the adoption of dual-class structure among technology-based firms.

Taking these unique features of the technology industry into account, this paper explores whether investors can observe firms seeking to pursue their founders' idiosyncratic vision and reflect it in the discount assigned to firm's value. If founders' control is important to firm value,

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<sup>6</sup> For a general discussion of short versus long term value incentives see, for example, Leo E. Strine, *Towards a True Corporate Republic: A Traditionalist Response to Bebchuk's Solution for Improving Corporate America*, 54 HARV. L. REV. 1759 (2006) (responding to Professor Bebchuk's proposal to empower shareholders to amend corporate charters, by arguing it might undermine managerial flexibility and lead to a counterproductive short-term perspective); see also Martijn K.J. Cremers et al., *Staggered Boards and Long-Term Firm Value, Revisited*, 126 J. of Fin. Econ. 422 (2017) (demonstrating that firms with lower firm value tend to adopt staggered boards, because of the potential to promote long-term value creation as a credible commitment device by the shareholders). The adoption of antitakeover defenses has a stronger positive association with firm value, where longer-term commitment plays a greater role in the firm's operation, as is the case with innovative firms).

<sup>7</sup> See Zohar Goshen & Assaf Hamdani, *Corporate Control and Idiosyncratic Vision*, 125 YALE L. J. 560, 565-566 (2016).

<sup>8</sup> See Ronald J. Gilson et al., *Braiding: The Interaction of Formal and Informal Contracting in Theory, Practice, and Doctrine*, 110 COLUM. L. REV. 1377, 1422-1444 (2010); Goshen & Hamdani, *supra* note 8, at 565-566 (explaining how where unexpected difficulties and redefinitions of a product can lead to delays in delivery, and delays can lead to disagreements between founders and outside shareholders about the product's future).

and investors can observe it and distinguish the firm from firms wishing to extract private benefits, then a lower discount would allow an easier adoption of dual-class structure. Certain characteristics of firms employing dual-class structures have already been well-documented in the literature; media firms, firms including a person's name, and family or founder owned firms are all more likely to use a dual-class structure. Dual-class firms also tend to be larger, older, with higher profits relative to single-class firms. This paper contributes to the literature by developing a new, key correlation between firms and their adoption of dual-class structure that has so far been overlooked; media coverage on a firm's founders prior to firm's IPO. By quantifying media mentions of firm founders, and applying them to a hand-collected dataset of technology IPO from 2000 to 2015, this paper has constructed a novel empirical measure of founder's idiosyncratic vision. This measure also uncovered important differences in the patterns of media coverage across dual-class and single-class firms.

Unlike other possible proxies of a founder's idiosyncratic vision, media coverage is an observable measurement created by external media agencies rather than by founders themselves. The intrinsic motivation of founders captured by the media coverage variable, shows that a founder's idiosyncratic vision plays a crucial role in the decision to employ a dual-class structure. In a regression framework that controls for firm characteristics, the association of media coverage and the probability of having a dual-class status is both statistically significant and meaningfully substantial: a one standard deviation increase in media coverage increases the probability of having a dual-class structure from 9 percent to 11.5 percent. The data also demonstrates that the effect of media coverage differs significantly by a firm's state of incorporation, such that the effect of high media coverage on the probability of having a dual-class structure is more than 14 times higher for firms incorporated outside of Delaware than for firms incorporated in Delaware. The strength of

corporate law, as well as the various network effects associated with incorporation in different states, might provide possible explanations for this striking finding.

This paper challenges the contention that technology-based firms are inclined to use dual-class structure based on the extraction of private benefits of control alone. Instead, its finding complements the private benefits theory by demonstrating that, at least in the technology sector, the desire to protect founders' idiosyncratic vision is a key factor in choosing a dual-class structure. The data analyzed in this paper should be taken into account by institutional investors in their vigorous attempts to discourage the use of dual-class structure. If the incentive of technology-based firms in adopting dual-class structure is to implement their founder's idiosyncratic vision in a manner that maximizes firm value for all shareholders, then imposing penalties on these IPOs, or restricting or banning them more generally, is counterproductive.

Before continuing further, it is important to note that while the findings presented in this paper and the implications derived from them have been produced from technology-based firms, these IPOs account for a significant portion of all recent dual-class IPOs. About 22 percent of all dual-class IPOs from 2000 to 2015 were in the technology sector, with an increasing trend of dual-class IPOs.<sup>9</sup> Dual-class firms had an aggregated market value between \$4 trillion and \$5 trillion, which means that technology-based firms account for about \$880 billion to \$1.1 trillion.<sup>10</sup> In 2018,

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<sup>9</sup> Stephen M. Bainbridge, *Should We Worry About Tech Sector Dual-Class Stock? In Short, No*, ProfessorBainbridge.COM, April 4, 2017), <http://professorbainbridge.com/professorbainbridgecom/2017/04/should-we-worry-about-techsector-dual-class-stock-in-short-no.html> (describing data compiled by University of Florida finance professor Jay Ritter and explains that approximately 15 percent of all technology-based firms which went public between 2012 and 2016 used a dual-class structure, versus only 7 percent of all technology-based firms between 2007 and 2011).

<sup>10</sup> See Bernard Sharfman, *A Private Ordering Defense of a Company's Right to Use Dual-Class Shares in IPOs*, 63 VILL. L. REV. 1, 3 (2018) (estimating that the aggregated market value is close to \$4 trillion as of June 2018); Robert J. Jackson, Jr., SEC Comm'r, *Perpetual Dual-Class: The Case Against Corporate Royalty* (Feb. 15, 2018),

roughly 19 percent of the IPOs listed on U.S. exchanges had a dual-class stock structure, compared with 12 percent of firms in 2014, and just 1 percent in 2005.<sup>11</sup> As the prominence of dual-class stock firms steadily increases, this paper’s analysis and its implications are increasingly crucial in the broader debate on the use of dual-class structure.

The remainder of this paper is organized as follows: Section II reviews the debate over the use of dual-class structure and the empirical evidence that supports each view. Section III describes the data used in the empirical analysis that follows. Section IV analyzes the determinants of the dual-class structure in the technology sector. Section V makes concluding remarks.

## II. THE DUAL-CLASS DEBATE

The use of dual-class structure has long been the subject of heated debate. Specifically, critics have been especially concerned with the “wedge” it creates between voting rights and cash-flow rights, allowing founders to misbehave, while public shareholders who bear the consequences have limited options to influence the firm. When Google went public with a dual-class structure in 2004, the debate gained steam; it broke unprecedented ground with Snap’s IPO without voting rights in 2017. The growing trend of technology-based firms adopting a dual-class structure has

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<https://www.sec.gov/news/speech/perpetual-dual-class-stock-case-against-corporate-royalty> (mentioning that public firms using dual-class worth more than \$5 trillion as of Feb. 2018); See also SEC, Investor Advisory Committee, Discussion Draft: Dual Class and Other Entrenching Governance Structures in Public Companies (Dec. 17, 2017), <https://www.sec.gov/spotlight/investor-advisory-committee-2012/discussion-draft-dual-class-recommendation-iac-120717.pdf>; Charles M. Elon & Craig K. Ferrere, *Unequal Voting and the Business Judgement Rule*, HARV. L. SCH. F. ON CORP. GOV. AND FIN. REG. (April 2, 2018), <https://corpgov.law.harvard.edu/2018/04/07/unequal-voting-and-the-business-judgment-rule/>.

<sup>11</sup> Council of Institutional Investors, investors Petition NYSE, NASDAQ To Curb Listings of IPO Dual-Class Share Companies (Oct. 24, 2018), <https://www.prnewswire.com/news-releases/investors-petition-nyse-nasdaq-to-curb-listings-of-ipo-dual-class-share-companies-300737019.html>; SEC, Investor Advisory Committee, *supra* note 11; Elon & Ferrere, *supra* note 11.

heightened the discussion over the key drivers to retain unconditional control over the firm's decision making.

The prevailing critical view represented by the media, academia, and the institutional investor community points to agency costs and entrenchment problems, such as the availability of private benefits of control, and the ability to isolate from market pressure.<sup>12</sup> On this view, founders of technology-based firms adopt a dual-class stock structure in order to extract private benefit of control, such as empire building and tunneling resources, or make managerial decisions with limited accountability. They are able to “get away with it” due to their dominant position in the market. When Facebook went public in 2012, Institutional Shareholder Services, a proxy advisory firm, articulated this stance precisely, arguing that “this IPO event itself presents a Hobson's choice: accept governance structures which diminish shareholder rights and board accountability, or miss out on what appears to be one of the hottest business models of the internet age”.<sup>13</sup> Consistent with this view, empirical studies demonstrate that dual-class stock structure is associated with lower shareholder value. Smart et al., found that the discount assessed to dual-class structure at the IPO date appears to be rational in the sense that post-IPO dual-class abnormal returns are zero.<sup>14</sup> Gompers et al., showed that firm value is negatively associated with the “wedge” between voting rights and cash-flow rights increases.<sup>15</sup> Furthermore, Masulis et al., reported that the wider the divergence between insider voting and economic interests, the less corporate cash

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<sup>12</sup> Lucian A. Bebchuk, A Rent Protection Theory of Corporate Ownership and Control, at 24 (Harvard Law and Econ. Discussion Paper No. 260, 1999).

<sup>13</sup> *The Tragedy of the Dual Class Commons*, Institutional Shareholder Services, Feb. 13, 2012, at 1, <http://online.wsj.com/public/resources/documents/facebook0214.pdf>.

<sup>14</sup> Scott B. Smart et al., *What's in a Vote? The Short- and Long- Run Impact of Dual-Class Equity on IPO Firm Values*, 16 J. ACCT. & ECON. 94 (2008).

<sup>15</sup> Paul Gompers et al., *Extreme Governance: An Analysis of Dual-Class Shares in the United States*, 23 REV. OF FIN. STUD. 1051, 1084 (2010).

reserves were worth to public shareholders, the more CEO compensation tended to be excessive, and the more managers were likely to carry out value-destroying acquisitions or were to make capital expenditures that yielded lower returns.<sup>16</sup>

Proponents of dual-class stock structure argue that it facilitates a focus on long-term value.<sup>17</sup> Such benefit should be of a greater significance as innovation has become increasingly vital in the marketplace: in order to meet the growing pace of innovative development and user's demand for more frequent upgrades, technology-based firms have found they must invest in innovation and the R&D that generates it. This requires exploring new ideas, pursuing risky long-term plans and keeping information private for longer periods than ever before. The unique features of this value-creation process have led technology-based firms to seek more control on their innovative activities in order to insulate themselves from short-term financial pressures and to reach their full potential.<sup>18</sup> In addition, founders' vision, talent and skills are of greater importance in technology-based firms, where a specialized knowledge is required and outside shareholders are less informed. Limiting market pressure and allowing founders to invest

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<sup>16</sup> Masulis et al., *Agency Problems at Dual-Class Companies*, 64 J. FIN. 1697-1727 (2009); See also Claessens et al., *Disentangling the Incentive and Entrenchment Effect of Large Shareholdings*, 57 J. FIN. 2741-2771 (2002) (showing that in East Asian firms, separation of cash flow and control decreases firm value. Note that the sample was dominated by pyramid ownership in Asian business groups, such that the authors could not clearly attributed the decrease in firm value to the dual-class structure); Karl V. Lins, *Equity Ownership and Firm Value in Emerging Markets*, 38 JOURNAL OF FINANCIAL AND QUANTITATIVE ANALYSIS 159 (2003) (indicating that in emerging markets, the wedge between voting and economic interests is negatively correlated with firm value).

<sup>17</sup> See, e.g., Jeremy C. Stein, *Takeover Threats and Managerial Myopia*, 96 J. POL. ECON. 61 (1988); Jeremy C. Stein, *Efficient Capital Markets, Inefficient Firms: A Model of Myopic Corporate Behavior*, 104 Q. J. ECON. 655 (1989).

<sup>18</sup> See Letter from Larry Page, CEO and Co-Founder, Google, & Sergey Brin, Co-Founder, Google, to Google Shareholders (Apr. 2012), (noting that "technology products often require significant investment over many years to fulfill their potential. For example, it took us over three years to ship our first Android handset, and then another three years on top of that before the operating system truly reached critical mass. These kinds of investments are not for the faint-hearted").

significant firm-specific human capital in the firm could generate materially better results than under other, non-founder leadership.<sup>19</sup> Empirical support for this view is mainly found in studies on dual-class recapitalizations,<sup>20</sup> but several studies on dual-class IPOs reinforce it as well: Bohmer et al. reported normal to above-normal market and operating performance of dual-class IPOs relative to a matched sample of single-class IPOs, which indicates that dual-class structure confers benefits to all firm shareholders.<sup>21</sup> Taylor and Whittred found that Australian “second board” firms adopting dual-class structure have a higher rate of growth opportunities relative to single class firms, and so realization of these opportunities highly depends on the freedom of the founder to pursue its idiosyncratic vision.<sup>22</sup> Most recently, Cremers et al. and Kim and Michaely showed that dual-class structures tend to have a valuation premium over single-class firms during the first few years after the IPO.<sup>23</sup> Furthermore, Field and Lowry found that when insiders’ power

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<sup>19</sup> Armen A. Alchian & Harold Demsetz, *Production, Information Costs, and Economic Organization*, 62 AM. ECON. REV. 777 (1972); Harry DeAngelo & Linda DeAngelo, *Managerial Ownership of Voting Rights: A Study of Public Corporations with Dual Classes of Common Stock*, 14 J. FIN. ECON. 33 (1985); Strine, *supra* note 7, at 1763; Microsoft and Apple are two examples of successful firms which had struggled without Bill Gates and Steve Jobs, their respective founders.

<sup>20</sup> Kenneth Lehn et al., *Consolidating Corporate Control: Dual-Class Recapitalizations Versus Leveraged Buyouts*, 27 J. FIN. ECON. 557 (1990) (showing that dual-class recapitalization firms grow faster and engage in secondary equity offerings (SEOs) more frequently following recapitalizations); Valentin Dimitrov & Prem Jain, *Recapitalization of One Class of Common Stock into Dual-Class: Growth and Long-Run Stock Return*, 12 J. CORP. FIN. 342 (2006) (demonstrating that growth is beneficial to the shareholders, as they earn significant positive abnormal returns in the years to follow the announcement); Scott W. Bauguess et al., *Large Shareholder Diversification, Corporate Risk Taking, and the Benefits of Changing to Differential Voting Rights*, 36 J. BANK. AND FIN. 1244 (2012) (indicating that the change from single-class to dual-class improves firm’s performance, as greater corporate risk taking are being employed).

<sup>21</sup> Ekkehart Bohmer et al., *The Effect of Consolidated Control on Firm Performance: The Case of Dual-Class IPOs*, 95 EMPIRICAL ISSUES IN RAISING CAPITAL 95 (1996).

<sup>22</sup> Steven Taylor & Greg Whittred, *Security Design and the Allocation of Voting Rights: Evidence from the Australian IPO Market*, 4 J. CORP. FIN. 107 (1998).

<sup>23</sup> Martijn Cremers et al., *The Life-Cycle of Dual Class Firms* 1, 27 (Euro. Corp. Governance Inst., Working Paper Series in Finance, Working Paper No. 550, 2018), [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3062895](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3062895); Hyunseob Kim & Roni Michaely, *Sticking Around Too Long? Dynamics of the Benefits of Dual Class Structures* 1, 34 (Euro. Corp. Governance Inst., Working Paper Series in Finance, Working Paper No. 590,

is smaller and less permanent, larger institutional investors with long-term holdings are less likely to vote against directors, suggesting the benefits outweigh the costs for these firms in the early stage of their public life cycle.<sup>24</sup>

Research on the factors influencing the choice of a dual-class structure suggests a correlation with several characteristics: family or founder ownership,<sup>25</sup> person's name in the firm's name,<sup>26</sup> media firms,<sup>27</sup> larger firms,<sup>28</sup> older age,<sup>29</sup> higher CEO salary,<sup>30</sup> higher leverage,<sup>31</sup> higher profits and more assets.<sup>32</sup> Building on and departing from this extant body of literature, this paper analyzes possible determinants on the drivers to adopt dual-class structure in the technology sector in several unique ways. First, to-date, most research has used trading dual-class firms of all ages in their samples, this analysis examines only new dual-class IPOs. The IPO-approach to studying drivers of dual-class structure has a distinct advantage over analyzing established firms, since the considerations prior to going public, and the consequences of such a move, are different in later stages. Second, where previous research has analyzed all industries, with some additional emphasis

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2019), [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3145209](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3145209).

<sup>24</sup> Laura Casares Field & Michelle B. Lowry, *Bucking the Trend: Why do IPOs Choose Controversial Governance Structures and Why do Investors Let Them* (Working Paper, 2019). [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2889333](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2889333).

<sup>25</sup> DeAngelo & DeAngelo, *supra* note 20, at 50-51; Laura Casares Field, *Control Considerations of Newly Public Firms: The Implementation of Antitakeover Provisions and Dual Class Shares Before the IPO*, at 6 (Working Paper, 1999), [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=150488](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=150488); Ben Amoako-Adu & Brian Smith, *Dual Class Firms: Capitalization, Ownership Structure and Recapitalization Back into Single Class*, 25 J. BANK AND FIN. 1083, 1096 (2001); Field & Lowry, *supra* note 25, at 9-10.

<sup>26</sup> Gompers et al., *supra* note 16, at 1104.

<sup>27</sup> DeAngelo & DeAngelo, *supra* note 20, at 40; Gompers et al., *supra* note 16, at 1104.

<sup>28</sup> Kim & Michaely, *supra* note 24, at 10.

<sup>29</sup> Scott B. Smart & Chad J. Zutter, *Control as a Motivation for Underpricing: A Comparison of Dual and Single-Class IPOs*, 69 J. FIN. ECON. 85, 111 (2003); Kim & Michaely, *supra* note 24, at 10; Field & Lowry, *supra* note 25, at 9.

<sup>30</sup> Field, *supra* note 26, at 17.

<sup>31</sup> Kim & Michaely, *supra* note 24, at 10.

<sup>32</sup> Smart & Zutter, *supra* note 30, at 111.

on the media sector, this paper focuses its attention on the technology sector, and in particular on technology-based founder firms. Spotlighting the technology sector makes it possible to examine whether technology warrants unique treatment distinct from other types of industries – as many technology firm executives claim should be the case. Limiting the scope to founder firms also assists in this evaluation, as the motivations underlying the adoption of dual-class structures for founder firms might be different than those of equity carve-outs in which the superior class belongs to the parent firm. Third, most previous papers compared firms from the 1980s to 2002, a timespan limited in its ability to test the effect of the rapid and incalculable nature of innovation on the choice of stock structure, particularly in the technology sector. This paper’s sample includes newer data between the years 2000 and 2015, bringing the extant research up to speed. These three crucial differences in this paper’s sampling choice allow its analysis to capture the increasing trend of technology-based firms to utilize dual-class structure, as well as to better understand the motives behind such trends.

### III. DATA

The data set analyzed here includes all IPOs of both U.S. and foreign firms registered for trade on American stock exchanges and filed with the Securities and Exchange Commission (SEC) from January 2000 through December 2015. The list of IPOs, together with their offer dates, have been constructed from IPOscoop.com, Thomson Financial Venture Expert, and SDC data<sup>33</sup>. Each Firm’s stock structure and its Standard Industrial Code (SIC) were collected from Jay R. Ritter IPO database.<sup>34</sup> Ritter and Loughran’s definition of “technology stocks” was used to filter

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<sup>33</sup> The information collected from these sources was compared and amended in Martin Kenney & Donald Patton, *Kenny-Patton Firm and Management Database of Emerging Growth IPOs: 1990-2010* (2013), <https://kenney.faculty.ucdavis.edu/kenney-patton-firm-and-management-database-of-emerging-growth-ipos-1990-2010/>.

<sup>34</sup> Jay R. Ritter database includes a description all IPOs from 1980-2018, including- offering

technology SIC codes.<sup>35</sup> The data set has been updated to reflect changes in “technology stock” definition, as reported in Jay R. Ritter’s IPO database. The following types of firms were excluded from the sample: mutual funds, real estate investment trusts (REITs), asset acquisition or blank check companies, firms that had gone public at an earlier time, and all spin-offs, carve-outs or subsidiaries of other firms.

The primary explanatory variable of interest is media coverage of a firm’s founder prior to the firm’s IPO, which serves as a proxy for the founder’s idiosyncratic vision. “Media coverage” was constructed in several steps: to find the name that media outlets use to refer to a firm, this paper’s analysis followed Tetlock et al. in matching the names on the IPO list with common firm names taken from one of the three web-based data sources: Mergent Online, the SEC website, or Factiva database.<sup>36</sup> For all firms extant after 1993, Mergent Online company search function was used, and for firms with no information on Mergent Online, the SEC company search function was used to identify common names. Finally, for firms extant prior to 1993, the Factiva search function provided common names. In many cases, the names had to be tweaked to improve the quality of the search mainly by shortening them to their first word or two.

The primary data source to find founders’ names was the SEC filings. Every firm going public must file a registration statement (S-1, or F-1 for foreign issuers) and a prospectus (form 424B) with the SEC prior to its IPO, as well as annual reports (10-K) and quarterly reports (10-Q)

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with multiple share class outstanding:  
<https://site.warrington.ufl.edu/ritter/files/2017/09/IPOs-from-1980-2017-with-Multiple-Share-Classes-Outstanding.pdf>. This source of information is described in more detail on Appendix B of Tim Loughran & Jay R. Ritter, *Why Has IPO Underpricing Changed over Time?* 33 FIN. MGT. 5, 35 (2004).

<sup>35</sup> *Id.*

<sup>36</sup> Paul Tetlock et al., *More than Words: Quantifying Language to Measure Firms’ Fundamentals*, 63 J. FIN. 1437 (2008).

on an ongoing basis. All documents were closely examined for any biographical details on the founders. For firms with no information in the SEC filings, a company profile search was run in the Business Source Complete database, followed by a general search on the firm's website and the founder's LinkedIn page. Finally, for the few firms with no information, a search was conducted through Factiva, with priority given to major financial news sources, such as the Wall Street Journal, the New York Times, and the Financial Times. In cases where no information was available on a firm's founders, firms were excluded from the sample. To obtain a precise measure of founder's media coverage, the search query included the name of the founder together with the common name of the firm, in order to avoid confusion if, for example, the same founder was associated with more than one firm, or multiple people shared the founder's name. The search was also adjusted to allow for variations of the founder's first and middle names. The search window was limited to the period between incorporation date and one day prior to the offering date, counting the number of articles and news stories that mention the founder and the firm during this window. All web news and blogs, wire services, and press release wires were excluded, as they were considered unreliable news sources, easy to manipulate or "spin" in a way that might benefit the firms. As a measure of news tone, the number of positive and negative news articles was obtained by the Factiva news sentiment filter, which uses a fixed set of terms to identify positive and negative stories. Each founder's media coverage was measured by three values: the overall number of news articles, the number of positive news articles, and the net number of positive news articles (positive minus negative articles).

For the media coverage variable, three alternative measurements were created: "media coverage sum", which sums the media coverage for all founders of a firm; "media coverage average", which scales the sum by the number of founders; and "media coverage max", which uses

the maximum number of media mentions on one of the founders. While each of the three measurement has its own advantages, in this case, media coverage max was chosen to be the primary measurement, as it is less sensitive to possible gaps in the collected data.

Control and robustness checks variables used in the analysis below include: EBITDA-to-price ratio, debt-to-assets ratio, R&D expenses-to-assets ratio (imputing missing values of R&D to zero),<sup>37</sup> income-to-assets ratio, 1-year sales growth rate (the change in revenue between the year prior to the IPO to two years prior to the IPO), total assets, revenue, firm's age (based on the founding year to capture time passed to firm's IPO), offer year, and state of incorporation (a dummy variable equals to one for incorporation in Delaware, equals to two for incorporation in non-Delaware state, and zero otherwise). The financial data was collected from Standard and Poor's Compustat database for the year prior to the IPO. The public offering price, adjusted for underwriter discount, and state of incorporation were collected from firm's prospectus (form 424B) on the SEC website. Founding years were taken from Jay R. Ritter IPO database.

Table 1 reports the descriptive statistics for the sample of 618 single-class IPOs and 62 dual-class IPOs for years 2000-2015. The data displays some well-known characteristics of dual-class firms, such as they tend to be larger, older, with higher offering price relative to single-class firms. They also have more assets, larger profits and debt, more leverage, and lower R&D expenses (scaled by assets) than single-class firms. Furthermore, the data shows that a larger proportion of dual-class firms, relative to single-class firms, went public during the second half of the sample

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<sup>37</sup> For similar adjustments see Alon Brav et al., *How Does Hedge Fund Activism Reshape Corporate Innovation*, 130 J. FIN. ECON. 237, 245 (2018); Kim & Michaely, *supra* note 24, at 45.

period, which might be explained by the increasing trend of technology-based firms to employ a dual-class structure at the IPO stage.

The most illuminating finding relates to differences in media coverage on founders of dual-class and single-class firms prior to their IPO. Founders of dual-class firms have significantly higher media coverage relative to founders of single-class firms, with a much more significant difference in the means than in the medians of the media coverage variable. These results are consistent for the different media coverage variables (media coverage max, media coverage average, media coverage min, positive coverage, net coverage). A possible explanation might be that the right-tail of relatively high media coverage is substantially larger among dual-class firms relative to single-class firms; the 75<sup>th</sup> percentile of dual-class firms, for instance, has about the same media coverage as the 95<sup>th</sup> percentile of single-class firms.

Another relevant finding in relation the choice of dual-class structure involves the states in which firms choose to incorporate. Among U.S. incorporated firms, 490 firms were incorporated in Delaware (81 percent of firms), and 112 firms were incorporated in non-Delaware states (19 percent of firms). Strikingly, the proportion of dual-class and single-class firms incorporated in Delaware is identical to the overall proportion of firms (81 percent of the dual-class and the single class firms). The entire sample reveals a similar pattern. 490 firms were incorporated in Delaware (72 percent of firms) and 190 were incorporated in non-Delaware firms (28 percent). Slightly less than 76 percent of the dual-class firms and slightly less than 72 percent of the single-class firms were incorporated in Delaware. No substantial differences were found between Delaware-incorporated and non-Delaware-incorporated firms, apart from an earlier IPO year for those firms incorporated in Delaware, relative to those incorporated outside of Delaware. Beyond this IPO

year, these findings do not indicate any strong general tendency towards selection across Delaware and non-Delaware firms.

#### IV. DETERMINANTS OF A DUAL-CLASS STRUCTURE IN THE TECHNOLOGY INDUSTRY

Building upon previous finance literature, a proxy of founders' idiosyncratic vision was constructed to analyze determinants of dual-class structure in the technology sector. This proxy measured the number of articles and news stories on a firm's founders prior to the IPO.

The paper assumes two dimensions of quality: one is the distinction between founders of technology-based firms who intend to extract private benefits of control and those who do not. In both groups, destruction of a firm's value may occur, but while the motivation for the former is to extract private benefits of control, for the latter there is an intrinsic desire to realize founders' idiosyncratic vision (although it can turn out to be mistaken ex-post). The fact that there is an intrinsic motivation to realize idiosyncratic value - which cannot be consciously created by founders - provides some degree of confidence that the founders will not self-deal even if they have the opportunity to do so in the future. Among those who do not intend to expropriate, some founders are of higher quality, or their control is at least more important to firm value. Media-based measures of reputation are a reasonable proxy for this dimension of quality, as "good" firms are likely to automatically acquire favorable coverage in the course of their activities. As stronger founder reputation leads to lower discounts for dual-class stocks, the strength of the founders' reputation should lead to the choice of dual-class structure. If founders' reputation is weak, a dual-class choice would be inferred by investors as a way to use control for self-dealing, and thus a given firm should prefer a single-class structure. If founders' reputation is strong, investors can observe the reputation and distinguish the firm from self-dealers, which will lead to its use of dual-class structure.

Media coverage is a novel measure of founders' idiosyncratic value. While the finance literature has documented the impact of media coverage on market trading,<sup>38</sup> on prices of large and widely followed stocks,<sup>39</sup> and on initial returns and long-term value,<sup>40</sup> not much is known about the relationship between media coverage on founders and their firms' decisions to adopt a dual-class structure. Indeed, measuring media coverage involves a risk of capturing a high degree of "noise," as articles and news stories can be manipulated by firms to advance their own interests, or, regardless of intentional manipulation, the media can mistakenly provide favorable coverage to "bad" firms.<sup>41</sup> As noted above, in order to reduce the risk associated with manipulation, the search quarry was limited to exclude blogs, wire services and press releases, that were considered as less reliable news outlets. As for the risk of media mistakes or misreporting, a validation check was implemented to test the importance of media coverage to the IPO price. The baseline assumption is that while it might be that the media detects idiosyncratic value imperfectly, there is a positive correlation between the two. The empirical specification used here included regressing IPO price on media coverage, while controlling for firm characteristics, including: EBITDA-to-price, debt-to-assets, R&D expenses-to-assets, income-to-assets, 1-year sales growth rate. The

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<sup>38</sup> See Brad M. Barber & Terrance Odean, *All That Glitters: The Effect of Attention and News on the Buying Behavior of Individual and Institutional Investors*, 21 Rev. Fin. Studies 785 (2008); Utpal Bhattacharya et al., *The Role of the Media in the Internet IPO Bubble*, 44 JOURNAL OF FINANCIAL AND QUANTITATIVE ANALYSIS 657 (2009); Joseph E. Engelberg & Christopher A. Parsons, *The Causal Impact of Media in Financial Markets*, 66 J. FIN. 67 (2011).

<sup>39</sup> See Paul C. Tetlock, *Giving Content to Investor Sentiment: The Role of Media in the Stock Market*, 62 J. FIN 1139 (2007); Paul C. Tetlock, *All the News That's Fit to Reprint: Do Investors React to Stale Information*, 24 REV. OF FIN. STUD. 1481 (2011).

<sup>40</sup> See Laura Xiaolei Liu et al., *The Long-Run Role of the Media: Evidence from Initial Public Offerings*, 8 MANAGEMENT SCIENCE 1861 (2014).

<sup>41</sup> For active attempts by firms to influence their stock prices through the media see, Kenneth R. Ahern & Denis Sosyura, *Who Writes the News? Corporate Press Releases During Merger Negotiations*, 69 J. FIN. 241 (2014) (showing that bidders in stock mergers originate substantially more new stories after the start of merger negotiations, but before the public announcement to generate a short-lived run-up in bidders' stock prices during the period when the stock exchange ratio is determined).

results are reported in Table 2, with robust standard errors. Column 1 presents the results of the regression with no controls, while Column 2 includes the full set of controls. The findings imply that media coverage has a positive and highly significant association with IPO price.

Based on the correlation between media coverage and IPO price, an empirical specification was constructed to model media coverage as a determinant of dual-class structure, while controlling for firm characteristics. The empirical specification included regressing dual-class status on media coverage along with variables from earlier regression, firm's age, IPO year, and state of incorporation as controls. Table 3 displays OLS results, using robust standard errors.

The estimated 0.510015 coefficient implies that the media coverage variable has a positive and highly significant association with the probability of having a dual-class status. Moreover, the results are robust to measures of firm size, such as total assets and revenue, to mitigate the concern that larger firms have a higher degree of familiarity and thus could potentially acquire more media coverage. Controlling for firm's age addresses the problem of measuring media coverage for longer windows for older firms relative to shorter windows for younger firms. In addition to the positive and highly significant association, the magnitude of the estimated relationship between media coverage and the probability of having a dual-class status is substantial: an one standard deviation increase in media coverage (corresponding to 477 articles and news stories) increases the probability of having a dual class structure from approximately 9 percent to approximately 11.5 percent. The baseline analysis includes media coverage max, but media coverage average and media coverage sum lead to consistent results. The correlation is much stronger with positive media coverage and net media coverage.

Separately regressing dual-class status on media coverage pre- and post- Google's IPO year, displays that the overall results are mostly driven by the post-2004 period. Table 4 reports OLS results, using robust standard errors.

Column 1 presents the results of regressing dual-class status on media coverage prior to the year 2004. Column 2 reports the results for the years from 2004. The results are only statistically significant for the years from 2004. The point estimate for this period is similar to the one reported for the overall regression. This is robust to the different measures of firm size to address the possibility that the results are driven by smaller firms going public in the pre-2004 period relative to post-2004 IPO firms.

It should be noted that while the probit model supports the correlation between media coverage and dual class-structure, the logit model leads to insignificant results. The different results, in this case, may be attributed to the relatively small sample size, particularly of dual-class firms. Figure 1 backs the results reported in Table 3. The bars depict means of media coverage of dual-class and single-class firms. The bar chart portrays clear and significant differences in the means of dual-class firms and single class firms, which suggests that firms with higher media coverage are more likely to adopt a dual-class structure.

Figure 2 and Figure 3 depict the means of media coverage of dual-class and single-class firms for the periods pre and post 2004 (respectively). These bar charts illustrate that significant differences in means appear to exist only for the years from 2004. The difference in means portrayed in Figure 3 is much larger than the one in Figure 1, which reinforces the finding that the correlation between media coverage and dual-class structure is significant.

The observed correlation between media coverage on founders prior to the IPO and dual-class structure suggests that a major factor in the choice of dual-class structure is founders' idiosyncratic vision. Conventional private benefits of control would presumably not be related to the media coverage variable, as "bad" firms should not be expected to automatically acquire favorable coverage in their course of activities. Moreover, even if firms can invest in generating media coverage, it would be much more expensive for "bad" firms to acquire such coverage in traditional and reliable news outlets.

The effect of media coverage on the probability of having a dual-class status was also analyzed with regard to the state of incorporation. Column 1 of Table 5 presents the results of regressing a dummy stock structure variable on the interaction term of Delaware incorporation and the media coverage variable, while controlling for firm characteristics. The sample was limited to US incorporated firms.

Interestingly, the estimated correlation between media coverage and dual-class structure is considerably stronger for firms incorporated outside of Delaware. The results are robust to the different measurements of firm size. Column 2 and Column 3 of Table 5 illustrate such differences: the 0.045 coefficient reported in Column 2 relative to the 0.64 coefficient reported in Column 3 suggests that for firms incorporated outside of Delaware, the effect of high media coverage on the probability of having a dual-class structure is more than 14 times higher. Table 5 reports OLS results, using robust standard errors, but probit and logit probability models lead to highly consistent results. The results were also found to be significant for the entire sample of firms, which includes also firms incorporated outside of the US.

It may well be the case that Delaware corporate law, together with its specialized corporate courts and the broad discretion in enforcement of fiduciary duties, provide a better protection for

minority shareholders relative to corporate law in other states. Under this view, founders' vision might be less important in the choice of dual-class and single-class structure among firms incorporated in states with stronger corporate law, as the choice of incorporation provides an alternative signal that the founders are unlikely to extract private benefits of control. Among firms incorporated in weaker corporate law states, however, media coverage may be of greater importance. A low-quality firm will tend to choose a single-class structure, or risk being perceived as a self-dealer with a high discount assigned to its value, whereas a high-quality firm will tend to choose a dual-class structure despite a lower discount for its use.

The strength of states' corporate law has been previously used in the literature to analyze determinants of firms' decisions regarding where to incorporate,<sup>42</sup> the evaluation of incorporation's effect on stock returns,<sup>43</sup> and to examine determinants of the dual-class structure.<sup>44</sup> Gompers et al., hypothesized that for firms incorporated in states with stronger anti-takeover laws, dual-class structure might be less valuable, however, their study was unable to find a statistically significant correlation between state law and dual-class structure.<sup>45</sup> Regressing a dual-class dummy on incorporation in Delaware dummy, while controlling for firm characteristics, leads to consistent results. Technology-based firms at the IPO stage were not found to have statistically significant correlation between Delaware incorporation and dual-class stock structure. If the main reason to adopt a dual-class structure is to extract private benefits of control, and Delaware is in

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<sup>42</sup> See Lucian A. Bebchuk & Alma Cohen, *Firms' Decision Where to Incorporate*, 46 J. L. & ECON. 383 (2003); Field & Lowry, *supra* note 25.

<sup>43</sup> Paul Gompers et al., *Corporate Governance and Equity Prices*, 118 QTRLY J. ECON. 105 (2003).

<sup>44</sup> Gompers et al., *supra* note 16.

<sup>45</sup> Gompers et al., *supra* note 16, at 1101-1105; State law was proxied by an index of state takeover laws, defined in Gompers et al., *supra* note 42, from the firm's state of incorporation in the previous year.

fact better at protecting minority shareholders, then expropriators should prefer to incorporate outside of Delaware, and to choose a dual-class structure. The fact that there is no evidence that non-Delaware incorporated firms are more likely to use dual-class structure, while there is clear evidence that media coverage is of greater importance in the dual-class choice outside of Delaware, might indicate that expropriation is not the only driver for firms to adopt a dual-class structure.

The premise that Delaware corporate law provides a better protection for minority shareholders has been controversial. Though it has gained support in the literature, it has also been contested by prominent corporate scholars. Daines, for example, reported that incorporation in Delaware between 1981 and 1996 was associated with higher Tobin's Q relative to incorporation outside of Delaware. Tobin's Q, which is the ratio between a firm's market value and its book value, is a widely used measure of the value of firm's assets in relation to their replacement costs. Based on this finding, it was inferred that minority shareholders are willing to pay more for the share of Delaware firms in exchange for better minority protection.<sup>46</sup> However, as suggested elsewhere, the correlation might have been due to selection effect, in which firms with higher value tend to incorporate in Delaware.<sup>47</sup> The authors demonstrated that controlling for firm age and for firm-specific corporate governance arrangements, no correlation exists between Delaware incorporation and higher Tobin's Q in 1990 to 2001 data.<sup>48</sup>

It is also possible that the stronger effect of media coverage on the probability of having a dual-class structure for firms incorporated outside of Delaware is led by network externalities.

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<sup>46</sup> See Robert Daines, *Does Delaware Law Improve Firm Value?* 62 J. FIN. ECON. 525, 537-540 (2001).

<sup>47</sup> See Bebchuk et al., *Does the Evidence Favor State Competition in Corporate Law?* 90 Cal. L. Rev. 1776, 1784-1789 (2002); Bebchuk & Cohen, *supra* note 42.

<sup>48</sup> *Id.*

Romano and Klausner argued that the value of a state's corporate law depends on the number of firms incorporated in that state.<sup>49</sup> The large number of firms incorporated in Delaware results in diverse and continuously developing legal precedents, as well as a large and comprehensive base of legal opinions. Investors tend to not only have previous familiarity with Delaware corporate law, but can also expect to benefit from its predictability going further. Under these circumstances, founders' vision might be less important in the choice of dual-class and single-class among firms incorporated in Delaware, as network externalities provide investors with reassurance as to Delaware's ability to restrain self-dealing. Among firms incorporated outside of Delaware, however, media coverage may be of greater importance, as investors are less familiar with the strength of a state's corporate law. Furthermore, even if a state's corporate law is identical to Delaware's, investors cannot adequately predict a state court's future rulings. For these firms, media coverage serves as a much more significant signal of firm's intrinsic motivation. A lower quality firm will tend to choose a single-class structure, otherwise it will be perceived as an expropriator, whereas a high-quality firm will tend to choose a dual-class structure.

## V. CONCLUSION

This paper has aimed to contribute to the discussion on dual-class structure utilization, by focusing on technology-based firms. Its analysis has demonstrated that extraction of private benefits of control alone cannot adequately explain the tendency of technology-based firms to adopt dual-class structure. Rather, its findings complement the private benefits theory by showing that, at least in the technology sector, the desire to protect founders' idiosyncratic vision also drives

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<sup>49</sup> See Roberta Romano, *Law as a Product: Some Pieces of the Incorporation Puzzle*, 1 J. L. ECOM. AND ORG. 225 (1985); Michael Klausner, *Corporations, Corporate Law, and Networks of Contracts*, 81 Va. L. Rev. 757, 774-778 (1995).

the choice of dual-class structure. Founders' reputation prior to the IPO, measured by media coverage, is being used by the market to evaluate firm's intentions post IPO. For firms with a weak founders' reputation, a dual-class choice would be inferred by investors as a way to use control to extract private benefits, thus, firms would tend to settle for a single-class structure. Firms with strong founders' reputation, however, would not be perceived as expropriators and would tend to choose a dual-class structure. Further analysis has also indicated that founders' reputation matters more for firms incorporated outside of Delaware than for firms incorporated in Delaware. This result might be driven by the strength of corporate law in and outside of Delaware, as the choice to incorporate in strong corporate law states can provide an alternative signal that the founders are unlikely to extract private benefits of control. Another possible explanation might be that Delaware corporate law is associated with stronger network externalities, which provide additional reassurance of a firm's inability to self-deal.

These findings highlight some of the costs associated with the penalties and obstructions imposed by institutional investors to discourage the use of a dual-class structure. If the incentive of technology-based firms in adopting a dual-class structure is to implement their founder's vision to benefit all shareholders, then imposing penalties or other obstructions is counterproductive. Whereas media coverage can assist large or well-established technology-based firms to obtain dual-class structure, smaller or newer technology-based firms with a less established reputation are pushed to stay private, to be acquired by larger firms, or to settle for a stock structure that does not maximize their value.

## CHAPTER 2:

### DUAL-CLASS STOCK STRUCTURE AND FIRM INNOVATION

Firms operating in innovative, technology-based environments account for an increasingly significant portion of all recent dual-class IPOs. Shedding new light on the determinants of dual-class structure among such firms, this article contributes to the long-standing debate over the desirability and uses of dual-class stock structure more broadly. In a companion article, that constructed a novel empirical measure of firm founders' idiosyncratic vision based on media mentions, I demonstrated that expropriation alone cannot adequately explain the tendency of technology-based firms to adopt dual-class structure and that the desire to protect founders' idiosyncratic vision also drives the choice of stock structure. This article builds on these findings to identify the increased benefits and the reduced costs associated with dual-class structures for firms with significant innovative activity. It argues that placing limitations on dual-class stock structure can prevent such firms from implementing the optimal stock structure needed for the execution of their founders' vision, leading to suboptimal performance and an increase in firms' cost of capital. This article analyzes through this lens recent attempts to limit the use of dual-class stock structure.

## I. INTRODUCTION

In 2017, the messaging service Snap Inc. went public with a dual-class stock structure, listing only non-voting shares to the public.<sup>1</sup> Within this structure, Snap’s founders Evan Spiegel and Robert Murphy were given control to steer the company as they saw fit, without any meaningful oversight from outside shareholders.<sup>2</sup> Though the consolidation of voting power through the use of such unequal voting rights was no novelty, the decision to issue *only* non-voting shares generated a firestorm of criticism.<sup>3</sup> Despite favorable coverage in the pages of prominent newspapers that painted Snap’s founders as the latest enigmatic geniuses in a line of technology

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- <sup>1.</sup> See Snap Inc., Prospectus, (Form 424B) (Mar. 1, 2017), <http://www.sec.gov/Archives/edgar/data/1564408/000119312517068848/d270216d424b4.htm> [<https://perma.cc/QV7Y-RQV4>]; Steven Davidoff Solomon, *Snap’s Plan Is Unfriendly to Outsiders*, N.Y. TIMES: DEAL BOOK (Feb. 2, 2017), [http://www.nytimes.com/2017/02/03/business/dealbook/snap-ipo-plan-evan-spiegel.html?\\_r=0](http://www.nytimes.com/2017/02/03/business/dealbook/snap-ipo-plan-evan-spiegel.html?_r=0) [<https://perma.cc/QV7Y-RQV4>] (describing how, unlike the typical dual-class structure, in which corporate insiders receive common stock with multiple votes per share while public shareholders receive shares with one vote per share, Snap’s stock structure offered no voting rights to public shareholders).
  - <sup>2.</sup> Snap Inc., *supra* note 1, at 4-6 (stating that as a result of firm’s stock structure, Evan Spiegel and Robert Murphy, and potentially each one of them alone, have the ability to control the outcome of all matters submitted to the stockholders for approval until their death or the sale of more than 69% of their stock. It is also mentioned that since non-voting stock is being offered to the public, the firm will not be required to file proxy statements or information statements under Section 14 of the Exchange Act).
  - <sup>3.</sup> Steven Foley & Hannah Kuchler, *Snap’s Offer of Voteless Shares Angers Big Investors*, FIN. TIMES (Feb. 3, 2017), <http://www.ft.com/content/17db65c0-e997-11e6-893c-082c54a7f539> [<https://perma.cc/DS3N-MQBZ>]; Michael Greene, *Snap IPO Gets Investors Fired Up Over Dual-Class Stock*, BLOOMBERG LAW (Mar. 8, 2017), <https://news.bloomberglaw.com/corporate-law/snap-ipo-gets-investors-fired-up-over-dual-class-stock> [<https://perma.cc/FT3X-JP25>]; Jack Newsham, *Investors Blast Snap’s Plan to Offer Non-Voting Shares*, LAW360 (Feb. 7, 2017), <http://www.law360.com/articles/889313/investors-blast-snap-s-plan-to-offer-non-voting-shares> [<https://perma.cc/SQH4-NU53>] (discussing a letter from the Council of Institutional Investors and a group of investors to the founders and board chairman of Snap Inc. urging them to adopt a different stock structure); Ronald Orol, *Activist Investors Target Snapchat Parent Snap Over Non-Voting IPO Shares*, THE STREET (Feb. 8, 2017, 8:51 PM), <http://www.thestreet.com/story/13993165/1/insurgents-rail-against-snap-over-non-voting-ipo-shares.html> [<https://perma.cc/QD35-62YY>] (“This is egregious. . . . When you are a public company and you are tapping the public markets, there needs to be a mechanism to hold companies accountable to shareholders. A lack of voting rights means we have no say in the board of directors.”(quoting Aeisha Mastagni of CalSTRS)).

visionaries, the institutional investors community strongly opposed the move.<sup>4</sup> Thus alarmed by the prospect of disenfranchisement through non-voting stock structures, institutional investors turned to index providers to exclude dual-class shares from their indexes.<sup>5</sup> Subsequently, the three largest index providers, S&P Dow Jones, FTSE Russell and MSCI, responded by taking action to limit dual-class stocks from their index funds.<sup>6</sup>

The controversy over whether firms should be permitted to adopt dual-class structures while seeking capital through public listing began a century ago, with the Dodge Brothers' IPO in

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4. See Paresh Dave & David Pierson, *There's One Part of Snapchat that Facebook Can't Copy: CEO Evan Spiegel*, L.A. TIMES (Mar. 1, 2017, 3:10 AM), <https://www.latimes.com/business/technology/la-fi-tn-evan-spiegel-20170228-htmlstory.html> [<https://perma.cc/TC64-34G2>]; Katie Benner, *Snap's Chief Taps Into the 'Right Now'*, N.Y. TIMES (Feb. 1, 2017), <https://www.nytimes.com/2017/02/01/technology/snapchat-snap-ceo-evan-spiegel.html> [<https://perma.cc/K4ZA-ZRZT>] (quoting Eric Schmidt, Google's chairman, referring to Evan Spiegel as "the next Gates or Zuckerberg"); see also Benjamin Robertson & Andrea Tan, *Dual Class Shares*, WASH. POST (Jan. 14, 2019), [http://www.washingtonpost.com/business/dual-class-shares/2019/01/14/a6158f3a-186d-11e9-b8e6-567190c2fd08\\_story.html?noredirect=on&utm\\_term=.9f0c838cfe59](http://www.washingtonpost.com/business/dual-class-shares/2019/01/14/a6158f3a-186d-11e9-b8e6-567190c2fd08_story.html?noredirect=on&utm_term=.9f0c838cfe59) [<https://perma.cc/55NW-FNWY>].
  5. Michael Greene, *Snap IPO Gets Investors Fired Up Over Dual-Class Stock*, BLOOMBERG LAW (Mar. 8, 2017), <https://news.bloomberglaw.com/corporate-law/snap-ipo-gets-investors-fired-up-over-dual-class-stock> [<https://perma.cc/JXU9-SDSB>] (reporting that Ken Bertsch of CII met with S&P Dow Jones Indices LLC and MSCI Inc. to persuade them to exclude companies with non-voting stock from their indexes); Letter from Ken Bertsch, Exec. Dir., Council of Institutional Inv'rs, to FTSE Russell Governance Bd. (Mar. 24, 2017); Letter from Ken Bertsch, Exec. Dir., Council of Institutional Inv'rs, to MSCI Equity Index Comm. (Mar. 29, 2017).
  6. See, e.g., *FTSE Russell Voting Rights Consultation – Next Steps*, FTSE RUSSELL (Jul. 2017), [http://research.ftserussell.com/products/downloads/FTSE\\_Russell\\_Voting\\_Rights\\_Consultation\\_Next\\_Steps.pdf](http://research.ftserussell.com/products/downloads/FTSE_Russell_Voting_Rights_Consultation_Next_Steps.pdf) [<https://perma.cc/A4M5-LTXG>] (announcing it would exclude firms issuing less than five percent of voting rights to the public); Press Release, S&P Dow Jones Indices, S&P Dow Jones Indices Announces Decision on Multi-Class Shares and Voting Rights (July 31, 2017), [https://www.spice-indices.com/idpfiles/spice-assets/resources/public/documents/561162\\_spdjimulti-classsharesandvotingrulesannouncement7.31.17.pdf?force\\_download=true](https://www.spice-indices.com/idpfiles/spice-assets/resources/public/documents/561162_spdjimulti-classsharesandvotingrulesannouncement7.31.17.pdf?force_download=true) [<https://perma.cc/A2MA-PCAM>] (announcing the exclusion of all multi-class firms from their S&P 500 index); MSCI, *Temporary Treatment of Unequal Voting Structures in the MSCI Equity Indexes* (Jan. 2018), <http://www.msci.com/documents/1296102/5603800/TemporaryTreatment> [<https://perma.cc/2AH9-WY7V>].

1925.<sup>7</sup> However, the rapidly growing use of dual-class structures among technology-based firms—from Google (now Alphabet) in 2004, to Facebook in 2012, and Snap in 2017<sup>8</sup>—has reignited the debate. In 2005, only 1% of IPOs listed on U.S. exchanges had a dual-class structure,<sup>9</sup> most of which were media firms wishing to ensure journalistic editorial independence, or other firms led by a team of insiders.<sup>10</sup> Yet in 2018, roughly 19% of IPOs employed this structure,<sup>11</sup> the majority of them technology-based firms.<sup>12</sup> The aggregate market value of the dual-class firms is between

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7. Joel Seligman, *Equal Protection in Shareholder Voting Rights: The One Common Share, One Vote Controversy*, 54 GEO. WASH. L. REV. 687, 694 (1986).

8. See Steven Davidoff Solomon, *Shareholders Vote with Their Dollars to Have Less of a Say*, N.Y. TIMES (Nov. 4, 2015), <http://www.nytimes.com/2015/11/05/business/dealbook/shareholders-vote-with-their-dollars-to-have-less-of-a-say.html> [https://perma.cc/B48W-FJVG] (“More than 13.5% of the 133 companies listing shares on United States exchanges in 2015 have set up a dual-class structure, according to the data provider Dealogic. That compares with 12% last year and just 1% in 2005.”); Alice Gomstyn, *Supervoters, Stocks, and Silicon Valley: What Investors Should Know About Dual-Class Voting Structures: Tech companies are joining the trend of giving more voting rights to select shareholders*, THE ALERT INVESTOR (Dec. 5, 2015), <https://www.foxbusiness.com/markets/supervoters-stocks-and-silicon-valley-what-investors-should-know-about-dual-class-voting-structur> [https://perma.cc/GKH7-FDGT] (“A growing number of U.S. firms have adopted [the dual-class] structure: Between 2013 and late 2015, 98 companies newly listed on U.S. exchanges had dual-class IPOs, compared to 59 between 2010 and 2012, according to data from information provider Dealogic”).

9. SEC, Investor Advisory Committee, *Discussion Draft: Dual Class and Other Entrenching Governance Structures in Public Companies* (Dec. 17, 2017), <http://www.sec.gov/spotlight/investor-advisory-committee-2012/discussion-draft-dual-class-recommendation-iac-120717.pdf> [https://perma.cc/VTL4-G2W7]; Charles M. Elson & Craig K. Ferrere, *Unequal Voting and the Business Judgment Rule*, HARV. L. SCH. F. ON CORP. GOV. AND FIN. REG. (Apr. 7, 2018), <http://corpgov.law.harvard.edu/2018/04/07/unequal-voting-and-the-business-judgment-rule/> [https://perma.cc/Z8DA-BB9P]; Council of Institutional Investors, *Investors Petition NYSE, NASDAQ To Curb Listings of IPO Dual-Class Share Companies* (October 24, 2018), [https://www.cii.org/files/issues\\_and\\_advocacy/correspondence/FINAL%20Dual%20Class%20Petition%20Press%20Release%20Oct%2024,%202018.pdf](https://www.cii.org/files/issues_and_advocacy/correspondence/FINAL%20Dual%20Class%20Petition%20Press%20Release%20Oct%2024,%202018.pdf) [https://perma.cc/JN6E-T9C3].

10. David J. Berger, *Are Dual-Class Companies Harmful to Stockholders? A Preliminary Review of the Evidence*, HARV. L. SCH. F. ON CORP. GOV. AND FIN. REG. (Apr. 15, 2018), <http://corpgov.law.harvard.edu/2018/04/15/are-dual-class-companies-harmful-to-stockholders-a-preliminary-review-of-the-evidence/> [https://perma.cc/24VN-9V8Z].

11. See Council of Institutional Investors, *Dual-Class IPO Snapshot: 2017–2018 Statistics* (Apr 3, 2018), <https://www.cii.org/files/2018Y%20IPO%20Stats%20for%20Website%20FLIP.pdf> [https://perma.cc/5GBQ-CYQZ].

12. Jay R. Ritter, *Initial Public Offerings: Dual Class IPOs* (Dec. 31, 2018),

\$4 trillion and \$5 trillion.<sup>13</sup>

Opponents and proponents of dual-class structure view the separations it produces between voting rights and cash flow rights as having vastly different implications. Opponents of dual-class structure argue that the separation between voting-rights and cash-flow rights dangerously raises agency costs: in this context, retaining uncontested voting control while holding only a minority of a firm's cash flow rights undermines a management's accountability to outside shareholders, who are left with no direct means of influencing the firm. Accordingly, founders could then potentially exploit their superior control and voting power to extract private benefits from the firm at the cost of more efficient uses of corporate resources.<sup>14</sup>

Alternatively, the proponents of dual-class structure argue that it helps to overcome asymmetric information between founders and outside shareholders as to firm's direction and bring founders' ideas to the market without being subject to that market's tendency towards short-term horizons.<sup>15</sup> These benefits are especially relevant, I argue, for firms operating in innovative

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<https://site.warrington.ufl.edu/ritter/files/2019/04/IPOs2018DualClass.pdf>  
[<https://perma.cc/4EYB-TBPG>].

13. See Bernard Sharfman, *A Private Ordering Defense of a Company's Right to Use Dual-Class Shares in IPOs*, 63 VILL. L. REV. 1, 3 (2018) (estimating that the aggregate market value of the dual-class firms is close to \$4 trillion as of June 2018); Robert J. Jackson, Jr., SEC Comm'r, *Perpetual Dual-Class Stock: The Case Against Corporate Royalty* (Feb. 15, 2018), <https://www.sec.gov/news/speech/perpetual-dual-class-stock-case-against-corporate-royalty> [<https://perma.cc/VR9L-YN78>] (noting that public firms using dual-class worth more than \$5 trillion as of Feb. 2018); see also SEC, Investor Advisory Committee, *Discussion Draft: Dual Class and Other Entrenching Governance Structures in Public Companies* (Dec. 17, 2017), <http://www.sec.gov/spotlight/investor-advisory-committee-2012/discussion-draft-dual-class-recommendation-iac-120717.pdf> [<https://perma.cc/VTL4-G2W7>]; Elson & Ferrere, *supra* note 9.
14. See, e.g., Lucian A. Bebchuk et al., *Stock Pyramids, Cross-Ownership, and Dual Class Equity: The Mechanisms and Agency Costs of Separating Control from Cash-Flow Rights*, in CONCENTRATED CORPORATE OWNERSHIP 295, 298-301 (Randall K. Morck ed., 2000); Lucian A. Bebchuk & Kobi Kastiel, *The Untenable Case for Perpetual Dual-Class Stock*, 103 VA. L. REV. 585, 602-603 (2017).
15. See, e.g., George Dent, Jr., *Dual Class Capitalization: A Reply to Professor Seligman*, 54

environments. Finance literature has repeatedly described the challenges of fostering innovation in firms, especially following an IPO; over the last several decades, the steady increase in investments made in products that rely on technology has uncovered a growing need to explore new ideas, pursue risky long-term plans, and keep information private for longer periods.<sup>16</sup> That these conditions seem to require an expanded emphasis on the importance of control rights in the technology sector is one of this article's key arguments. Furthermore, other characteristics specific to technology-based firms—like high growth potential, substantial initial investment made by the founder, and the founder's reputation and emotional connection to the company—lower agency costs. Thus, the benefits afforded by dual-class structure in isolating technology-based firms from market pressure may ultimately offset the agency costs generally associated with them.<sup>17</sup> This article aims to shed new light on the motives behind the growing use of the dual-class structure among technology-based firms.

Though several empirical studies have associated dual-class structure with lower firm

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GEO. WASH. L. REV. 725, 748 (1986) (stating that fear of takeover may prompt managers to forego profitable plans that cannot be adequately explained to shareholders, because the information is too expansive to verify or disclose in public or because it involves a secret); Zohar Goshen & Assaf Hamdani, *Corporate Control and Idiosyncratic Vision*, 125 YALE L. J. 560, 590 (2016) (arguing that dual-class stock structures provide entrepreneurs with maximum ability to realize their idiosyncratic vision—which can ultimately benefit shareholders as a whole).

<sup>16</sup>. See, e.g., Lauren Cohen et al., *Misvaluing Innovation*, 26 REV. FIN. STUDIES 635 (2013) (demonstrating that while firm's ability to innovate is predictable, persistent, and relatively simple to compute, the stock market ignores the implications of past success when valuing future innovation. This misevaluation is noted to be a significant concern due to the substantial shift in the funding of R&D from the public sector to the private sector over the past few years); Jordan D. Bradford et al., *Growth Opportunities, Short-Term Market Pressure, and Dual-Class Share Structure*, 41 J. CORP. FIN., 304, 305 (showing that a dual-class structure helps to promote risk-taking and R&D spending in growth stocks).

<sup>17</sup>. See, e.g., Kenneth Lehn et al., *Consolidating Corporate Control: Dual-Class Recapitalizations Versus Leveraged Buyouts*, 27 J. OF FIN. ECON. 557 (1990) (showing that firms with growth opportunities often convert to dual-class shares); Hyunseob Kim & Roni Michaely, *Sticking Around Too Long? Dynamics of the Benefits of Dual Class Structures* 1, 34 (2018).

value<sup>18</sup> and expropriation of private benefits, and others have indicated that it confers benefits to all shareholders (rather than to the superior voting class alone), the debate over dual-class structure remains unresolved.<sup>19</sup> This article intervenes to make a definitive claim based on new evidence, at least with regards to technology-based firms that have increasingly adopted dual-class structures in recent years. As such, it argues that *overexposure* to certain kinds of shareholder involvement—an occasional byproduct of IPOs—seems to be a genuine concern for such firms on account of features specific to their innovative environments. In a companion article, I applied a novel empirical measure of firm founders based on media mentions to a hand-collected dataset of recent technology IPOs. The findings demonstrated that founders’ idiosyncratic vision predicts the choice of dual-class structures.<sup>20</sup> This data also showed that a founder’s idiosyncratic vision is of greater importance in choosing dual-class structure for firms incorporated outside of the state of Delaware than for those incorporated inside of Delaware.<sup>21</sup> These findings confirm that expropriation alone cannot adequately explain the tendency of technology-based firms to adopt dual-class structure, and that the desire to protect founders’ idiosyncratic vision also drives the decision to do so. This

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<sup>18</sup>. See, e.g., Paul Gompers et al., *Extreme Governance: An Analysis of Dual-Class Shares in the United States*, 23 REV. OF FIN. STUD. 1051, 1084 (2010) (showing that “firm value is positively associated with insiders’ cash-flow rights and negatively associated with insiders’ voting rights, and negatively associated with the wedge between the two”); see also Ronald Masulis et al., *Agency Problems at Dual-Class Companies*, 64 J. FIN. 1697 (2009) (demonstrating that as the gap between cash-flow and voting-rights widens, corporate cash holdings are worth less to outside shareholders, CEOs receive higher compensation, managers make shareholder value-destroying acquisitions more often, and capital expenditures contribute less to shareholder value); Scott B. Smart et al., *What’s in a Vote? The Short- and Long-Run Impact of Dual-Class Equity on IPO Firm Values*, 16 J. ACCT. & ECON. 94, 94 (2008) (finding that dual-class firms trade at lower valuations than single class firms, both at the time of IPO and for the subsequent 5 years after IPO).

<sup>19</sup>. Kenneth Lehn et al., *Consolidating Corporate Control: Dual-Class Recapitalizations Versus Leveraged Buyouts*, 27 J. OF FIN. ECON. 557 (1990); Lucian A. Bebchuk, *Why Firms Adopt Antitakeover Arrangements*, 152 U. PA. L. REV. 713 (2003).

<sup>20</sup>. Adi Grinapell, *What Drives the Use of Dual-Class Structures in Technology IPOs?* J. L. Econ. Pol’y (forthcoming 2021). I discuss the empirical findings in greater detail in Part IV.

<sup>21</sup>. *Id.*

significant contribution to the controversy over this debate suggests that a dual-class structure, rather than a single-class structure, is likely to be an efficient capital structure for some technology-based firms at the IPO stage.

This article builds on my previous work to further analyze the implications of recent policy efforts on both financial markets and innovation in firms. Its first two contributions to the policy debate are linked directly to my data analysis; its third and fourth focus on technology-based firms to argue for how the control afforded by dual-class structure might be essential for innovation-based industries and to different states of incorporation in general. First, my data analysis indicates that restrictions on the issuance of dual-class stock should be carefully examined, as they might harm a founder's ability to pursue their idiosyncratic vision, thereby hindering innovation, reducing competition among firms, and negatively impacting shareholders as a whole. As the data indicates, such restrictions might also adversely affect investors' ability to learn of firms' intentions from their founder's reputation. Second, my analysis raises questions about the penalty imposed by institutional investors on technology-based, dual-class firms, which are often smaller and newer. As the data suggests, media coverage helps larger firms with established founder's reputation signal their intentions and obtain dual-class structure. However, smaller or newer firms with less established reputations cannot take advantage of this signal mechanism to avoid the increased penalty. As I suggest above, since expropriation alone cannot adequately explain technology-based firms' tendency to adopt dual-class structure, then discounting dual-class stock wholesale is inefficient. This might pressure some firms to be acquired by larger firms, or to settle for corporate governance structures that do not maximize their value. Alternatively, some firms might delay going public in favor of first obtaining the reputation needed to actually acquire a dual-class structure, or consider registering on a foreign stock exchange instead.

Examining the dual-class debate through the lens of technology firms, this article's third contribution suggests that the performance of certain types of firms might actually depend on the greater control afforded by dual-class structure—at least at their beginnings. Over the years, dual-class structure has been considered justified for certain types of firms, often on the grounds of their specific needs; for instance, family-owned firms have used dual-class structure to preserve control over their businesses, and the media sector has used it to allow media firms to concentrate on objective news coverage.<sup>22</sup> This article demonstrates that dual-class structure is similarly attractive to the booming technology sector because it helps foster and protect innovation. Similar analysis of other industries could reveal new findings about industry-specific motives for adopting dual-class structure. Finally, another implication of this article's theory, to be further investigated, is the need to tailor different voting structure limitations to different states, according to the minority shareholder protection provided there.

Focusing mainly on the United States, while also describing recent developments in other jurisdictions, Part II of this article provides background on the dual-class debate, describing the rise of dual-class stock listings, and the opposition posed to dual-class structure through regulators, stock-exchanges, and most recently, index providers. Part III presents and analyzes the costs and benefits of dual-class structure within the context of the innovation process, demonstrating that the unique features of that process increase the need for founders' control while decreasing agency

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<sup>22</sup>. See, e.g., Ava Seave, *45 Media Companies Where Investors Are Flying Second Class*, FORBES (Oct. 21, 2013, 5:02 AM), <https://www.forbes.com/sites/avaseave/2013/10/21/45-media-companies-where-investors-are-flying-second-class/#2f53d1fd93f9> [<https://perma.cc/XT2D-VF5V>]; Google Inc., Registration Statement (Amend. No. 9 to Form S-1) at 30 (Aug 18, 2004) (“[S]imilar [dual class] structures are common in the media business and has had a profound importance there. The New York Times Company, the Washington Post Company and Dow Jones, the publisher of The Wall Street Journal, all have similar dual class ownership structures”); Berger, *supra* note 10.

costs, such that dual-class structure may be net-beneficial for technology-based firms. Part IV summarizes my companion article's novel empirical contributions, highlighting those factors that influence technology-based firms in their decision to adopt a dual-class structure. Part V discusses how recently proposed and enacted limitations on dual-class structures bear on further policy making and capital market practices. This section shows that restricting the use of dual-class structure can prevent some firms from implementing the optimal equity structure needed for the execution of their founders' vision, leading to suboptimal performance, and increasing those firms' cost of capital. Part VI serves as a conclusion to all of these findings.

## II. DUAL-CLASS STRUCTURE: BACKGROUND

This part describes the roots of the controversy over the desirability of dual-class structures, from their rise, to the lobbying attempts made to prohibit them, to the strictures ultimately put in place to limit them. Though this discussion focuses on dual-class structures in the United States, it will briefly touch on main developments in other jurisdictions.

### *A. Dual-Class Structures in the United States*

#### **i. At the Federal Level**

Though dual-class structures were commonplace in the early 20<sup>th</sup> century, all three U.S. stock exchanges would eventually attempt to limit their usage.<sup>23</sup> As early as 1925, the New York

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<sup>23</sup>. For further history of the use of dual-class structure in the United States see *NYSE's Proposed Rule Changes on Disparate Voting Rights*, 18 Sec. Reg. & L. Rep. (BNA) No. 37, at 1389 (Sep. 19, 1986); Gabriela M. Engler Pinto, *Why They Persist? An Analysis of Dual Class Structures and the Unification Process in the U.S. and Brazil*, 10 REV. DIREITO GV 23, 28-31 (2014); Stephen M. Bainbridge, *The Scope of the SEC's Authority Over Shareholder Voting Rights*, UCLA Sch. L. Research. Paper. No. 07-16 1, 3-9 (2007); Stephen M. Bainbridge, *Understanding Dual Class Stock Part I: An Historical Perspective*, PROFESSORBAINBRIDGE.COM, September 9, 2017),

Stock Exchange (NYSE) announced that dual-class stock structures would be subject to increased scrutiny,<sup>24</sup> a policy that became a formal prohibition on unequal voting rights listings in 1940, remaining so with few exceptions until the mid-1980s.<sup>25</sup> In 1976, the American Stock Exchange (AMEX) followed suit, assuring outside shareholders the right to elect at least 25% of the firm's directors to the board<sup>26</sup> in a set of prelisting conditions for dual-class firms that would eventually become the policy known as the "Wang Formula."<sup>27</sup> The National Association of Securities Dealers (NASD) waited until 1985 to consider limitations on dual-class firms. Although corporate governance rules were adopted to govern firms traded in the computerized trading system (NASDAQ), and the National Market System (NMS), neither of the two alternative proposals for equal voting-rights listings were ultimately implemented.<sup>28</sup>

Responding to increasing competitive pressure from NASDAQ and AMEX on attractive listings, the NYSE proposed amendments to its own policy in 1985 to allow issuances of dual-

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<http://www.professorbainbridge.com/professorbainbridgecom/2017/09/understanding-dual-class-stock-part-i-an-historical-perspective.html> [<https://perma.cc/C76S-2NUB>]; Seligman, *supra* note 7, at 693-707.

<sup>24</sup>. Seligman, *supra* note 7, at 694-97, mentioning the decision was reasoned by "the Exchange's long-standing commitment to encourage high standards of corporate democracy", which requires listed firms to "follow certain practices aimed at maintaining appropriate standard of corporate responsibility, integrity and accountability to shareholders."

<sup>25</sup>. Bainbridge, *supra* note 23, at 5; Seligman, *supra* note 7, at 690.

<sup>26</sup>. See Andrew Winden, *Sunrise, Sunset: An Empirical and Theoretical Assessment of Dual-Class Stock Structures* 1, 8-10 (Rock Ctr. for Corp. Gov. at Stanford Univ., Working Paper No. 228, 2017), [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3001574#](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=3001574#) [<https://perma.cc/JFV6-TY9P>]; Seligman, *supra* note 7, at 704.

<sup>27</sup>. Seligman, *supra* note 7, at 704 n.90 (noting the full requirements of the "Wang Formula": (1) the limited voting class must have the ability to elect at least 25% of the board; (2) the voting ration should not be greater than 10 to 1 in favor of the superior voting class; (3) no additional stock should be issued which diluted the limited voting shareholders stack; (4) superior voting right would be lost if the number of shares fell below a certain percentage; and (5) dividend preference was strongly recommended for the limited voting stock).

<sup>28</sup>. Seligman, *supra* note 7, at 691-92; Louis Lowenstein, Shareholder Voting Rights: A Response to SEC Rule 19c-4 and to Professor Gilson, 89 COLUM. L. REV. 979, 979 n.4 (1989).

class structures as well as dual-class recapitalizations.<sup>29</sup> The Securities and Exchange Commission (SEC) was the first to respond to the relaxed rules and the upsurge of dual-class issuance that has followed. It did so in 1988 by implementing Rule 19c-4, which was designed to limit the listing standards of self-regulatory organizations (i.e. the major stock exchanges), in order to curtail firms from concentrating their voting rights through recapitalizations, thereby prohibiting most forms of dual-class stock.<sup>30</sup> However, Rule 19c-4 was promptly nullified by the Court of Appeals for the District of Columbia for exceeding the SEC's authority under the Securities and Exchanges Act of 1934,<sup>31</sup> despite the court's ruling, both the NYSE and the NASD adopted a standard based on Rule 19c-4, under which firms were granted wide latitude to employ dual-class structures at the time of the IPO, but were limited in subsequent actions that restricted the rights of existing outside shareholders.<sup>32</sup> The AMEX decided not to adopt this standard, but to maintain its "Wang Formula" to regulate dual-class listings. Thus, under the SEC's influence in 1994, all three exchanges

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<sup>29</sup>. *NYSE's Proposed Rule Changes on Disparate Voting Rights*, *supra* note 17, at 1389-92; Stephen M. Bainbridge, *The Short Life and Resurrection of SEC Rule 19c-4*, 69 WASH. U. L. REV. 565, 576-77 (1991) (a majority of the issuer's independent directors and "public" shareholders were needed to approve the recapitalization); Ronald J. Gilson, *Evaluating Dual Class Common Stock: The Relevance of Substitutes*, 73 VA. L. REV. 807, 807 n.1 (1987).

<sup>30</sup>. Voting Rights Listing Standards; Disenfranchisement Rule, 53 Fed. Reg. 26, 376 (July 12, 1988) (under this rule, the SEC prohibited self-regulatory organizations from listing and trading the stocks of any firms that issue new shares carrying more than one vote per share and permitted those with unequal voting rights to still be traded); Bainbridge, *supra* note 17, at 8; Seligman, *supra* note 7, at 699.

<sup>31</sup>. Bainbridge, *supra* note 23, at 8-9; *Business Roundtable v. SEC*, 905 F.2d 406 (D.C. Cir. 1990) (mentioning that "the Exchange Act [could not] be [understood] to include regulation of an issue that is so far beyond matters of disclosure, and of the management and practices of self-regulatory organizations, and that is concededly a part of corporate governance traditionally left to states." The regulation of dual-class stocks should be initiated by Congress, shareholders, or form state-level regulators).

<sup>32</sup>. See Rule 313.00(A) and (B), NYSE Listed Company Manual (May 1994), [https://nyseguide.srorules.com/listed-company-manual/document?treeNodeId=csh-da-filter!WKUS-TAL-DOCS-PHC-%7B0588BF4A-D3B5-4B91-94EA-BE9F17057DF0%7D—WKUS\\_TAL\\_5667%23teid-99](https://nyseguide.srorules.com/listed-company-manual/document?treeNodeId=csh-da-filter!WKUS-TAL-DOCS-PHC-%7B0588BF4A-D3B5-4B91-94EA-BE9F17057DF0%7D—WKUS_TAL_5667%23teid-99) [<https://perma.cc/5PGF-TRMQ>]; Rule 5640, Voting Rights, Nasdaq Stock Market Listing Rules, [http://nasdaq.cchwallstreet.com/NASDAQTools/PlatformViewer.asp?selectednode=chp\\_1\\_1\\_1\\_1&manual=/nasdaq/main/nasdaq-equityrules/](http://nasdaq.cchwallstreet.com/NASDAQTools/PlatformViewer.asp?selectednode=chp_1_1_1_1&manual=/nasdaq/main/nasdaq-equityrules/) (last updated Mar. 12, 2009).

adopted the uniform policy still in place today, which allows multi-class listings but prohibiting reduction of voting right through recapitalizations.<sup>33</sup>

The status quo surrounding this issue became especially unsettled in 2004, when Google made the unusual decision to adopt a dual-class structure through its IPO in order to preserve the control of its founders, Sergey Brin and Larry Page.<sup>34</sup> Where no technology-based firm had done so before,<sup>35</sup> dozens of them followed suit: Facebook, LinkedIn, and, more recently, Dropbox, Spotify, Lyft and Pinterest, all adopted dual-class structures to assure founders' control post-IPO. In response, the institutional investor community immediately lobbied Congress, state legislatures and the SEC to prohibit the use of dual stock, arguing that the core business justifications for dual-class structures in family-owned firms or in the media sector did not apply to technology firms.<sup>36</sup> Similarly, in 2012, the Council of Institutional Investors (CII)—an association of public, union, and corporate pension funds with combined assets under management of over \$3 trillion—petitioned the NYSE, NASDAQ and the SEC to institute a one-share-one-vote policy.<sup>37</sup> CII's call

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<sup>33</sup>. Order Granting Approval to Rule Changes Relating to the Exchanges' and Association's Rules Regarding Shareholder Voting Rights, 59 Fed. Reg. 66,570 (Dec 27, 1994).

<sup>34</sup>. Google Inc., *supra* note 22, at 1.

<sup>35</sup>. *Id.* at 29-30.

<sup>36</sup>. See Phyllis Plitch, *Google Governance Receives Low Marks*, WALL ST. J. (Aug. 23, 2004), <http://www.wsj.com/articles/SB109329022665598681> [<https://perma.cc/2RHX-6YCU>], (mentioning that the influential proxy advisor, Institutional Shareholder Services (ISS), ranked Google near the bottom of its corporate governance ranking, below any company in the S&P stock index. The decision was reasoned by ISS special counsel Patrick McGurn: "Because Google lacks the usual checks and balances provided at public companies by shareholder votes, holders must closely scrutinize the judgment of the company's top decision makers. . . . Rank-and-file shareholders have no meaningful avenue for recourse — other than selling their low-vote shares, of course — if the company loses its way.")

<sup>37</sup>. Letter from Jeff Mahoney, Gen. Counsel, Council of Inst. Inv'rs, to Edward S. Knight, Exec. Vice President, Gen. Counsel & Chief Regulatory Officer, NASDAQ OMX Grp. 1-2 (Oct. 2, 2012), [http://www.cii.org/files/issues\\_and\\_advocacy/correspondence/2012/10\\_02\\_12\\_cii\\_letter\\_to\\_nasdaq\\_dual\\_class\\_stock.pdf](http://www.cii.org/files/issues_and_advocacy/correspondence/2012/10_02_12_cii_letter_to_nasdaq_dual_class_stock.pdf) [<https://perma.cc/6MVP-CNVH>]; Letter from Jeff Mahoney, Gen. Council of Instit. Inv'rs, to Claudia Crowley, CEO and Chief Regulatory Officer, NYSE Regulation (Oct. 2, 2012),

for action was even reiterated in 2013 by Elizabeth Warren in a letter to the NYSE and NASDAQ, emphasizing the sharp rise in “public companies using multi-class stock structures,” and the need “to generate public comment on the...corporate governance issue.”<sup>38</sup>

Despite concerns about the increasing dual-class use, neither the stock exchanges nor the SEC have indicated any intention to prohibit dual-class listings.<sup>39</sup> NASDAQ has even directly supported dual-class use, noting that “[e]ach publicly-traded company should have flexibility to determine a class structure that is most appropriate and beneficial for them, so long as this structure is apparent and disclosed up-front so that investors have complete visibility into the company. Dual-class structures allow investors to invest side-by-side with innovators and high growth companies, enjoying the financial benefits of these companies’ success.”<sup>40</sup>

Without any meaningful limitation, the dual-class trend has not only continued to exist, but been taken further by several firms who have sharply increased their voting rights ratio from the common 10:1 ratio. In 2011, Zynga went public with a founder-only class of 70:1 ratio; in 2015, Groupon issued a voting ratio of 150:1, and most radically, Snap offered shares with no voting

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[http://www.cii.org/files/issues\\_and\\_advocacy/correspondence/2012/10\\_2\\_12\\_cii\\_letter\\_to\\_nyse\\_dual\\_class\\_stock.pdf](http://www.cii.org/files/issues_and_advocacy/correspondence/2012/10_2_12_cii_letter_to_nyse_dual_class_stock.pdf) [<https://perma.cc/6MVP-CNVH>].

38. Letter from Elizabeth Warren, U.S. Sen., to John Carey, Vice President-Legal, NYSE Regulation, Inc., and NYSE Euronext & Edward Knight, Exec. Vice President and Gen. Counsel, NASDAQ OMX (June 5, 2013), <http://www.warren.senate.gov/files/documents/Senator%20Warren%20letter%20to%20NYSE,%20Nasdaq%20-%206-5-2013.pdf> [<https://perma.cc/A7ND-9NLF>] (explaining that “[t]he number of public companies using multi-class stock structures has risen sharply in recent years, which underlines the urgency of issuing a proposal to generate public comment on the important corporate governance issue.”)
39. SEC Chairman Jay Clayton, *Remarks to the SEC Investor Advisory Committee* (Mar. 8, 2018), <http://www.sec.gov/news/public-statement/statement-clayton-2018-3-8>.
40. NASDAQ, INC., *THE PROMISE OF MARKET REFORM 17* (2017), [https://www.nasdaq.com/docs/Nasdaq\\_Blueprint\\_to\\_Revitalize\\_Capital\\_Markets\\_April\\_2018\\_tcm5044-43175.pdf](https://www.nasdaq.com/docs/Nasdaq_Blueprint_to_Revitalize_Capital_Markets_April_2018_tcm5044-43175.pdf) [<https://perma.cc/NC5W-MKYK>].

rights whatsoever in 2017.<sup>41</sup> Moreover, several firms have undertaken follow-on issuances of non-voting stock or low-voting stock, that have attracted additional criticism, and in some cases, shareholder litigation.<sup>42</sup>

Stymied by the lack of action in the stock exchange, institutional investors turned to additional channels. In 2016, the CII adopted a policy directly opposing dual-class structures, under which firms going public with a dual-class structure would commit to unifying their shares over a reasonably limited period through sunset mechanisms.<sup>43</sup> Following Snap's unprecedented decision to issue *only* non-voting stock to the public in 2017,<sup>44</sup> CII and the SEC's Investor Advisory Committee petitioned the major stock index providers to change their methodologies to exclude dual-class firms from their benchmarks.<sup>45</sup> All three major index providers—FTSE Russell, S&P Dow Jones, and MSCI—acceded to the CII's request, and moved to limit dual-class firms in their indexes: S&P Dow Jones decided to exclude all dual-class stock from the S&P composite 1500 as well as its components<sup>46</sup>; FTSE Russell decided to exclude all firms offering the public less than

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<sup>41</sup>. Elson & Ferrere, *supra* note 9.

<sup>42</sup>. *See infra* Section II.A.2.

<sup>43</sup>. The Council of Institutional Investors Policies, *Investor Expectation for Newly Public Companies* (2016), [http://www.cii.org/ipo\\_policy](http://www.cii.org/ipo_policy) [<https://perma.cc/PT6T-4SAR>].

<sup>44</sup>. The firm used a three-tiered system, reserving its two classes of voting stock for insiders, with the super-voting stock remaining to the two founders. As a result, the founders hold 88.5% of the voting power and 18.7% of the outstanding equity. The founders' control will go away only when they both die or sell off 70% of their super-voting shares. *See* Snap Inc., Registration Statement (Amend. No. 2 to Form S-1) at 4 (filed Feb. 16, 2017), <http://www.sec.gov/Archives/edgar/data/1564408/000119312517045870/d270216ds1a.htm> [<https://perma.cc/MRW2-ZXJ8>]; Davidoff Solomon, *supra* note 1.

<sup>45</sup>. *See, e.g.*, Michael Greene, Snap IPO Gets Investors Fired Up Over Dual-Class Stock, Bloomberg BNA (Mar. 9, 2017), <https://news.bloomberglaw.com/corporate-law/snap-ipo-gets-investors-fired-up-over-dual-class-stock> [<https://perma.cc/FT3X-JP25>]; Hazel Bradford, Snap IPO Igniting Furor; Institutions Not Pleased, PENSIONS & INVS. (Mar. 20, 2017), <https://www.pionline.com/article/20170320/PRINT/303209977/snap-ipo-igniting-furor-institutions-not-pleased> [<https://perma.cc/RN6T-BLNP>].

<sup>46</sup>. S&P Dow Jones Indices, *Decision on Multi-Class Shares and Voting Rights* (Jul. 2017), [45](http://www.spice-indices.com/idpfiles/spice-</a></p></div><div data-bbox=)

5% of total voting power;<sup>47</sup> MSCI initially decided to reduce the weight dual-class firms occupy in its index,<sup>48</sup> reasoning that total exclusion would “deprive investors of the opportunity to benefit from the growth prospects and diversification potential offered by these companies”.<sup>49</sup> Eventually, MSCI would scrap this plan, opting instead for a new series of benchmarks that specifically include voting rights in their eligibility criteria.<sup>50</sup> Dual-class firms, however, would continue to be eligible for inclusion in the MSCI general indexes at their free float market capitalization weight.<sup>51</sup>

In February 2018, Commissioner Robert J. Jackson Jr. responded to the index providers’ decision, warning that excluding all dual-class firms from our major market indices could mean “Main Street investors may lose out on the chance to be a part of the growth of our most innovative companies.”<sup>52</sup> Instead, he suggested, the SEC should consider fixed-time sunset provisions, which

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assets/resources/public/documents/561162\_spdjimulti-classsharesandvotingrulesannouncement7.31.17.pdf?force\_download=true [https://perma.cc/NP8Z-D9HV].

47. FTSE Russell, FRSE Russell Voting Rights Consultation: Next Steps, *supra* note 6; FTSE Russell, Market Consultation – Voting Rights Consultation (May 2017), <http://www.ftse.com/products/indices/market-consultations> [https://perma.cc/V2GU-83MX].
48. MSCI, Consultation on the Treatment of Unequal Voting Structures in the MSCI Equity Indexes (January 2018), <http://www.msci.com/documents/1296102/5603800/TemporaryTreatment> [https://perma.cc/M7Y7-VSYH].
49. Dimitris Melas, *MSCI Inc., Summary of the MSCI Consultation Paper on Voting Rights and Index Inclusion*, HARV. L. F. CORP. GOV. FIN. REG. (May 22, 2018), <http://corpgov.law.harvard.edu/2018/05/22/summary-of-msci-consultation-paper-on-voting-rights-and-index-inclusion/>.
50. Press Release, MSCI, MSCI Will Retain the MSCI Global Investable Market Indexes Unchanged and Launch a New Index Series Reflecting the Preferences of Investors on Unequal Voting Structures (Oct. 30, 2018), [http://www.msci.com/documents/10199/238444/PR\\_Voting\\_Results.pdf/0b548379-fbe7-71c7-b392-7140b2215cc9](http://www.msci.com/documents/10199/238444/PR_Voting_Results.pdf/0b548379-fbe7-71c7-b392-7140b2215cc9) [https://perma.cc/Z63F-4R8V].
51. *Id.*; Rachel Evans, *MSCI Rejects Calls to Ban Dual-Class Stocks From its Indexes*, BLOOMBERG: MKTS (Oct. 30, 2018), <https://www.bloomberg.com/news/articles/2018-10-30/msci-rejects-calls-to-ban-dual-class-stocks-from-its-indexes> [https://perma.cc/4YGH-ARVC].
52. Robert J. Jackson, Jr., *supra* note 13.

would provide outsider shareholders a pre-determined period of time after the IPO with a choice of whether to eliminate the dual-class structure or to maintain it for additional period.<sup>53</sup> Thus, “[c]ompanies would still be able to IPO with dual-class voting arrangements—but only if management is willing to someday give shareholders their say”.<sup>54</sup>

## ii. At the State Level, and in Delaware

In general, shareholder voting rights are largely regulated by state law. Prior to the mid-19<sup>th</sup> century, individual corporate charters were granted by state legislatures in three different forms: some firms embraced one-share-one-vote, others provided one-vote per shareholder, and most limited the shares of larger shareholders by capping the number of votes owned by individual shareholders or decreasing the number of votes as the size of their holdings increased.<sup>55</sup> Gradually, states removed such limitations on voting rights and adopted a one share, one vote principle as a default standard<sup>56</sup> This change aimed to encourage large scale capital investments by firms through public markets.<sup>57</sup> However, since voting rules were considered to be a matter of private contract between the firm and its shareholders, firms were allowed to issue multiple votes per share by amending the firms’ charters.<sup>58</sup>

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<sup>53.</sup> *Id.*

<sup>54.</sup> *Id.*

<sup>55.</sup> See Bainbridge, *supra* note 23, at 4-5.

<sup>56.</sup> *Id.*

<sup>57.</sup> *Id.*

<sup>58.</sup> See, e.g., DEL. CODE ANN. tit. 8, § 212 (“Unless otherwise provided in the certificate of incorporation . . . each stockholder shall be entitled to 1 vote for each share of capital stock held by such stockholder. If the certificate of incorporation provides for more or less than 1 vote for any share, on any matter, every reference in [the Delaware General Corporations Law] to a majority or other proportion of stock, voting stock or shares shall refer to such majority or other proportion of the votes of such stock, voting stock or shares.”); see also Daniel Fischel, *Organized Exchange and the Regulation of Dual-Class Stock*, 54 U. CHI. L. REV. 119, 120 (1984).

With the adoption of a one-share, one-vote principle as a default, the treatment of dual-class stock structure *per-se* was no longer much different across states and general flexibility was granted with regards to corporate voting structures.<sup>59</sup> Delaware—the state in which most firms incorporate—granted an additional significant protection in the form of its judges’ business expertise. This expertise, which enabled judges to better recognize opportunism, was a result of the large number of firms incorporated in Delaware and hence, the large amount of corporate litigation there.<sup>60</sup>

The Delaware Court of Chancery saw several attempts to adjust the capital structure in place by adding a class of nonvoting shares. For example, in 2012, Google faced shareholder litigation after issuing a new class of nonvoting stock, allocating a Class C share for every outstanding Class A and Class B share.<sup>61</sup> This issuance was challenged on the grounds that Google’s board of directors had breached its fiduciary duties by authorizing a split engineered to unfairly keep control of the firm in its founders’ hands.<sup>62</sup> This suit was eventually settled by compensating Class A shareholders for any difference in value greater than 1% between Class A and Class C shares in the year following the issuance of Class C. Since Class C shares were traded at 1.4% lower than Class A shares on average, Google paid a total of \$522 million to shareholders.<sup>63</sup>

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<sup>59</sup>. Bainbridge, *supra* note 23, at 574-75.

<sup>60</sup>. See Michael Klausner, *Corporations, Corporate Law, and Networks of Contracts*, 81 VA. L. REV. 757, 845 (1995).

<sup>61</sup>. In re Google, Inc. Class C S’holder Litig., No. 7469-CS, 2013 WL 6735045 (Del. Ch. Oct. 28, 2013).

<sup>62</sup>. See *id.*

<sup>63</sup>. See Section 2 (Definitions) and Section 3 (Terms of Settlement) of the Stipulation of Compromise and Settlement, In re Google, Inc. Class C S’holder Litig. (Oct. 28, 2013), <http://www.sec.gov/Archives/edgar/data/1288776/000119312513418880/d618226dex991.htm>; Google, Inc., (Form 8-K) (Oct. 30, 2013) (reporting that Delaware Court of Chancery approved the settlement entered into by the firm, its board of directors and the plaintiffs in

In 2016, similar suits were filed against Facebook,<sup>64</sup> IAC/InterActive, and NRG Yield for their approval of issuing a new class of non-voting or very low-voting stock.<sup>65</sup> In 2017, Facebook and IAC/InterActive announced they would abandon the stock reclassification plans and opt to settle the litigation.<sup>66</sup> With NRG Yield, however, the court held that the recapitalization expressly provided a unique benefit to the controlling shareholder whose control had eroded over time, by extending the time with majority voting rights over the firm's decisions.<sup>67</sup> Despite applying the entire fairness standard, the court concluded that the recapitalization was approved by a fully empowered, independent committee of the board of directors and by a fully informed, uncoerced majority of the minority. Therefore, the court applied the business judgment rule and dismissed the case.<sup>68</sup>

The litigation in Delaware sends a strong message about the risks faced by shareholders with a majority vote, and firms looking to change to a dual-class voting structure; either of these bodies might attract criticism from regulators, public, and the institutional investors community,

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the class action captioned *In Re: Google Inc. Class C Shareholder Litigation*, Civil Action No. 7469 – CS).

<sup>64.</sup> See *In re Facebook, Inc. Class C Reclassification Litig.*, C.A. No. 12286-VCL, 2018 Del. Ch. LEXIS 1117 (Del. Ch. Oct. 24, 2018).

<sup>65.</sup> See *id.*; *In re IAC/InterActiveCorp Class C Reclassification Litig.*, C.A. No. 12975-VCL, 2017 Del. Ch. LEXIS 586 (Del. Ch. June 26, 2017); *IRA Trust FBO Bobbie Ahmed v. Crane*, C.A. No. 12742-CB, 2017 Del. Ch. LEXIS 869 (Del. Ch. Dec. 11, 2017).

<sup>66.</sup> See *Facebook, Inc.*, (Form 8-K) (Sept. 22, 2017).

<sup>67.</sup> See *IRA Trust FBO Bobbie Ahmed v. Crane*, C.A. No. 12742-CB, 2017 Del. Ch. LEXIS 869 (Del. Ch. Dec. 11, 2017).

<sup>68.</sup> See *id.*; David Berger et al., *2017 Delaware Corporate Law Year in Review*, HARV. L. SCH. F. ON CORP. GOV. AND FIN. REG. (Feb. 12, 2018), <http://corpgov.law.harvard.edu/2018/02/12/2017-delaware-corporate-law-year-in-review/> [<https://perma.cc/LZ5K-CY9L>]; David Berger et al., *Delaware Court Ruling on Dual-Class Recapitalization Involving Controlling Stockholders*, HARV. L. SCH. F. ON CORP. GOV. AND FIN. REG. (Jan. 8, 2018), <https://corpgov.law.harvard.edu/2018/01/08/delaware-court-ruling-on-dual-class-recapitalization-involving-controlling-stockholders/> [<https://perma.cc/C4JM-L6TW>].

or nuanced review by the Delaware courts.

### *B. In Other Jurisdictions*

The use of dual-class structure is permitted in several important jurisdictions outside of the United States, including Canada, Sweden, Switzerland, Denmark, Finland, Netherlands, and France.<sup>69</sup> Conversely, other jurisdictions, such as Singapore, Hong Kong, Belgium, Germany, Luxembourg, Poland, Spain, Russia, and South Korea have taken a more restrictive approach, limiting, or strongly discouraging divergence from the one-share-one-vote approach.<sup>70</sup> However, the increased competition for prominent technology-based listings have recently led foreign stock exchanges—among them, top global financial centers, including Hong-Kong, Singapore, and

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<sup>69.</sup> See, e.g., OECD Steering Grp. On Corp. Governance, *Lack of Proportionality Between Ownership and Control: Overview and Issues for Discussion* 14-17 (2007), <http://www.oecd.org/daf/ca/corporategovernanceprinciples/40038351.pdf> [<https://perma.cc/P43E-XNH4>] (mentioning listing requirements in different jurisdictions); Anita Anand, *Governance Complexities in Firms with Dual Class Shares*, 3 ANNALS OF CORP. GOV. 184, 191 (2018) (mentioning that “[i]n Canada, the list of DCS firms includes icons of the Canadian corporate establishment: Bombardier, Power Corp., Rogers Communications, Onex and Canadian Tire”); Renee Adams & Daniel Ferreira, *One Share-One Vote: The Empirical Evidence*, 12 REV. FIN. 51, 55 (2008) (noting that “[m]ultiple-voting shares are common in Sweden (59%), France (58%) and the Netherlands (41%)”); Bebchuk & Kastiel, *supra* note 14, at 595-99; Morten Bennesen & Kasper Meisner Nielsen, *Incentive and Entrenchment Effects in European Ownership*, 34 J. BANK. AND FIN. 2212, 2214 (2010).

<sup>70.</sup> See, e.g., OECD Steering Grp., *supra* note 69, at 14-17; Katie Bentel & Gabriel Walter, *Dual Class Shares*, Comparative Corporate Governance and Financial Regulation, Select Seminar Papers from U. OF PA. L. SCH., (2016), [http://scholarship.law.upenn.edu/fisch\\_2016/](http://scholarship.law.upenn.edu/fisch_2016/); Hong Kong Exchs. & Clearing Ltd., Concept Paper, Weighted Voting Rights, at III-1 to III-17 (Aug. 2014), <https://www.hkex.com.hk/-/media/HKEX-Market/News/Market-Consultations/2011-to-2015/August-2014-Weighted-Voting-Rights/Consultation-paper/cp2014082.pdf> [<https://perma.cc/5NTY-U9M3>] (mapping the regulatory treatment to dual-class structures in different jurisdictions).

London,<sup>71</sup>—to consider changing their listing rules.<sup>72</sup> Each of these exchanges initially prohibited dual-class structures and, after missing significant IPOs, reassessed their rules, often with special attention toward technology firms. In the case of Hong Kong and Singapore, changes were ultimately made.<sup>73</sup>

### i. Hong Kong

Dual-class stock structures have been allowed by the Hong Kong Companies Ordinance<sup>74</sup> but restricted by the Hong Kong Exchanges (“HKEx”) to a case-by-case basis.<sup>75</sup> The loss of Alibaba’s IPO to the NYSE in 2014,<sup>76</sup> and the fear of missing out on the next fast-growing firms

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<sup>71.</sup> John Geddie, *Singapore Lowers Bar for Proposed Dual-Class Share Listings*, REUTERS: BUS. NEWS (Mar. 28, 2018), <https://www.reuters.com/article/us-sgx-listing/singapore-lowers-bar-for-proposed-dual-class-share-listings-idUSKBN1H416Y> [https://perma.cc/WF7N-R5MW]; Benjamin Robertson, *Hong Kong Adds Dual-Class Shares, Paving Way for Tech Titans*, BLOOMBERG: MKTS. (Apr. 24, 2018), <http://www.bloomberg.com/news/articles/2018-04-24/hong-kong-approves-dual-class-shares-paving-way-for-tech-titans> [https://perma.cc/WF7N-R5MW]; Press Release, Fin. Conduct Auth., FCA Reviews Effectiveness of U.K. Primary Capital Markets (Feb. 14, 2017), <https://www.fca.org.uk/news/press-releases/fca-reviews-effectiveness-uk-primary-capital-markets> [https://perma.cc/G67E-Y76Q].

<sup>72.</sup> *See, e.g.*, John Geddie, *Singapore Lowers Bar for Proposed Dual-Class Share Listings*, REUTERS: BUS. NEWS (Mar. 28, 2018), <https://www.reuters.com/article/us-sgx-listing/singapore-lowers-bar-for-proposed-dual-class-share-listings-idUSKBN1H416Y> [https://perma.cc/WF7N-R5MW]; Benjamin Robertson, *Hong Kong Adds Dual-Class Shares, Paving Way for Tech Titans*, BLOOMBERG: MKTS. (Apr. 24, 2018), <http://www.bloomberg.com/news/articles/2018-04-24/hong-kong-approves-dual-class-shares-paving-way-for-tech-titans> [https://perma.cc/3GRJ-R58G].

<sup>73.</sup> For a comparison of the changes made with regards to dual-class listings, *see* CFA Institute, *Dual-Class Shares and Their Emergence in Asia Pacific* 50-52 (2018), <https://www.cfainstitute.org/-/media/documents/survey/apac-dual-class-shares-survey-report.ashx>.

<sup>74.</sup> Companies Ordinance, (2019) Cap. 622, 341, § 588(4) (H.K.); Companies (Model Articles) Notice, (2019), 45, § 50(4) (H.K.).

<sup>75.</sup> The Hong Kong Stock Exchange Main Board Rule 8.11, [http://en-rules.hkex.com.hk/en/display/display\\_main.html?rbid=4476&element\\_id=2318](http://en-rules.hkex.com.hk/en/display/display_main.html?rbid=4476&element_id=2318).

<sup>76.</sup> Enda Curran, *Hong Kong Right to Reject Alibaba – Fund*, WALL ST. J.: MONEYBEAT (May 12, 2014, 12:31 AM), <https://blogs.wsj.com/moneybeat/2014/05/12/hong-kong-right-to-reject-alibaba-fund/> [https://perma.cc/68XS-ZVW2].

seeking IPO forced HKEx to reconsider allowing dual-class structures.<sup>77</sup> In 2018, following years of debate,<sup>78</sup> HKEx adopted new measures for allowing dual-class IPOs:<sup>79</sup> notably, only “innovative” firms can utilize the structure;<sup>80</sup> holders of high-vote shares should demonstrate the merits of their direct contribution to the firm, serve as directors and their votes should be capped to 10:1 ratio;<sup>81</sup> recapitalizations are prohibited and sunset provisions should be placed in case a high-vote holder dies, is incapacitated, or ceases to be a director.<sup>82</sup> In October 2019, the Shanghai and Shenzhen stock exchanges revised their rules to permit mainland Chinese investors to buy

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77. See Emma Dunkley, *HKEx Admits Alibaba Forced It to Rethink Dual-Class Shares*, FIN. TIMES (Jan. 16, 2018), <http://www.ft.com/content/6f0e9914-fa96-11e7-a492-2c9be7f3120a>.
78. SFC, *SFC Statement on the SEHK’s Draft Proposal on Weighted Voting Rights*, (June 25, 2015), <http://edistributionweb.sfc.hk/t/ViewEmail/j/C5CD004D12EE9F25/F672ACDCDBF32846942A2DF08F503B7C>; Jacky Wong, *Hong Kong Stock Exchange Kills Dual-Class Share Plan*, WALL ST. J. (Oct. 5, 2015), <http://www.wsj.com/articles/hong-kong-stock-exchange-kills-dual-class-share-plan-1444042360> (noting that HKEX terminated a plan to allow dual-class shares and describing regulator’s opposition to the plan).
79. See H.K. Exchs. and Clearing Ltd. (HKEX), *Consultation Conclusions: A Listing Regime for Companies from Emerging and Innovative Sectors*, (Apr. 2018), [https://www.hkex.com.hk/-/media/HKEX-Market/News/Market-Consultations/2016-Present/February-2018-Emerging-and-Innovative-Sectors/Conclusions-\(April-2018\)/cp201802cc.pdf](https://www.hkex.com.hk/-/media/HKEX-Market/News/Market-Consultations/2016-Present/February-2018-Emerging-and-Innovative-Sectors/Conclusions-(April-2018)/cp201802cc.pdf) [<https://perma.cc/H9K7-VC5J>]; HKEX, *Listing Regime Reforms for Dual-Class Shares Structure and Biotech Industry—Summary*, (Apr. 24, 2018), [http://www.hkex.com.hk/-/media/HKEX-Market/News/Research-Reports/HKEx-Research-Papers/2018/CCEO\\_DualClass\\_201804\\_Summary\\_e.pdf?la=en](http://www.hkex.com.hk/-/media/HKEX-Market/News/Research-Reports/HKEx-Research-Papers/2018/CCEO_DualClass_201804_Summary_e.pdf?la=en) [<https://perma.cc/EY4A-LAUB>].
80. HKEX, *Consultation Conclusions: A Listing Regime for Companies from Emerging and Innovative Sectors*, 11 (Apr. 2018), <http://www.hkex.com.hk/-/media/HKEX-Market/News/Market-Consultations/2016-Present/February-2018-Emerging-and-Innovative-Sectors/Consultation-Paper/cp201802.pdf> (establishing that a firm can either be a “new technology” focused firm, have a significant R&D component, demonstrate unique features of intellectual property, or have either an unusually high market capitalization or intangible asset value).
81. *Id.*; Benjamin Robertson, *Hong Kong Targets Next Alibaba in Revamp of IPO Rules*, BLOOMBERG MKTS. (Dec. 15, 2017), <http://www.bloomberg.com/news/articles/2017-12-15/hong-kong-moves-toward-dual-class-shares-wooing-next-alibaba> [<https://perma.cc/BTB3-LGXH>].
82. See HKEX, *supra* note 80, at 11-14 (maintaining the right to reject IPO applications regardless of whether they met these requirements to ensure that only firms who fit the target profile would be listed).

dual-class shares traded in Hong Kong.<sup>83</sup>

## ii. Singapore

Originally, the Singapore Companies Act restricted firms to one-share-one-vote, with an exception for newspaper companies.<sup>84</sup> After losing the listing of the football club Manchester United to the NYSE due to its request to employ a dual-class structure,<sup>85</sup> a general revision to the Companies Act ensued. These changes lifted the one-share-one-vote restriction and allowed public firms to have multiple class shares subject to certain conditions; a maximum voting differential of 10:1, limitations on post-listing issuance, and the auto-conversion of a founder's shares if the founder ceases to hold them, or ceases to maintain a role in the firm.<sup>86</sup> The SGX has continued to develop and revise its admission criteria for firms with dual-class structure over the last years.<sup>87</sup> In

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<sup>83</sup>. Bloomberg News, *China Allows Access to Dual-Class Stocks Listed in Hong Kong*, BLOOMBERG (Oct 18, 2019), <https://www.bloomberg.com/news/articles/2019-10-18/china-allows-access-to-dual-class-stocks-listed-in-hong-kong> [https://perma.cc/8DMR-PHH6]; Business News, *China Revises Stock Connect Rules to Include HK-Listed Dual-Class Shares*, REUTERS (Oct 19, 2019), <https://www.reuters.com/article/us-china-connect-inclusion/china-revises-stock-connect-rules-to-include-hk-listed-dual-class-shares-idUSKBN1WY07E> [https://perma.cc/3CZB-ZXX4] (stocks qualified for purchase must meet certain thresholds in terms of liquidity, market cap and trading period, such as minimum listing history of six months plus 20 trading days on the HKEx, and a minimum market cap of \$2.6 billion on average during the 183 days prior to the vetting).

<sup>84</sup>. Singapore Companies Act, (Cap 50) 64(1) (amended 2016) (Sing.) <https://sso.agc.gov.sg/Act-Rev/50/Published/20061031?DocDate=20061031&ProvIds=P11V-#pr64-> [https://perma.cc/BZD7-GY9C].

<sup>85</sup>. Daniel Stanton & Fiona Lau, *Exclusive: Manchester United Drops Asia IPO for U.S.*, REUTERS (June 13, 2012), <http://www.reuters.com/article/us-singapore-us-ipo-manchester-united-if-idUSBRE85C0MO20120613> [https://perma.cc/HF6S-8LBC]; Bentel & Walter, *supra* note 70, at 23.

<sup>86</sup>. Singapore Companies Act, (2018) (Cap 50) ss 64(1)-64A (Sing.) <https://sso.agc.gov.sg/Act/CoA1967?Timeline=Off#pr64-> [https://perma.cc/WV79-6VR7].

<sup>87</sup>. In 2017, SGX released a consultation paper seeking feedback on possible admission criteria for firms with dual-class structure. Later that year, the SGX clarified that dual-class firms listed on any of the 22 markets that the FTSE and MSCI classify as “developed markets” would be permitted to hold a secondary listing in Singapore. Any company with a primary listing on one of those markets would not face additional post-listing conditions, except for the requirement to disclose all announcements made on their home exchange to the SGX. One year later, SGX announced that dual-class firms would be allowed to have their primary

June 2018, SGX approved its rules for dual-class listings: in particular, only named individuals or permitted holder groups would be allowed to hold superior shares.<sup>88</sup> Commenting on this decision, SGX’s chief executive officer, Loh Boon Chye, described the SGX as “join[ing] global exchanges in Canada, Europe and the US, where companies led by founder entrepreneurs who require funding for rapid ramp-up of the business while retaining the ability to execute long-term strategy, are able to list”.<sup>89</sup>

### iii. United Kingdom

The UK Companies Act allows firms to deviate from the one-share, one-vote default rule and issue multiple classes of shares.<sup>90</sup> Accordingly, in the late nineteenth century, dual-class stock structures were fairly prevalent, possibly due to the London Stock Exchange requirement that at least two thirds of any security would be offered to the public, which made it difficult to form

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listings in Singapore, and after two rounds of public consultations. *See* David Smith, *Singapore Exchange Risks a Race to the Bottom on Dual-Class Shares*, FIN. TIMES (Mar. 15, 2017), <http://www.ft.com/content/c414e8e6-096a-11e7-ac5a-903b21361b43> [https://perma.cc/QYX4-Y6CF]. *See also* Kenneth Lim, *SGX to Allow Dual-Class Structures from Developed Markets for Secondary Listings*, BUS. TIMES (Jul. 28, 2017), <http://www.businesstimes.com.sg/companies-markets/sgx-to-allow-dual-class-structures-from-developed-markets-for-secondary-listings> [https://perma.cc/ST3V-KTCE]; Andrea Tan, *Singapore Exchange Takes on Hong Kong With Dual-Class Shares*, BLOOMBERG (Jan. 22, 2018), <http://www.bloomberg.com/news/articles/2018-01-22/singapore-exchange-eyes-startup-ipos-with-dual-class-shares> [https://perma.cc/9C6M-8TY4].

<sup>88</sup>. In addition, all shares would be required to carry one vote in the case of the appointment or removal of independent directors or auditors, any variation of rights attached to any class of shares, or a reverse takeover, winding-up or delisting. *See* Yunita Ong, *SGX to Allow Listing of Dual-Class shares with Immediate Effect*, BUS. TIMES (June 26, 2018, 5:10PM), <http://www.businesstimes.com.sg/companies-markets/sgx-to-allow-listing-of-dual-class-shares-with-immediate-effect> (other limitations include one vote to each share regardless of class for appointment and removal of independent directors or auditors, variation of rights attached to any class of shares, reverse takeover, winding-up or delisting).

<sup>89</sup>. *See* Angela Tan, *SGX Enters New Era as It Starts Dual-Class Shares for Qualifying IPOs*, Business Times (June 27, 2018, 5:50 AM), <http://www.businesstimes.com.sg/stocks/sgx-enters-new-era-as-it-starts-dual-class-shares-for-qualifying-ipos>.

<sup>90</sup>. *See* Companies Act 2006, c. 1, § 284 (UK).

controlling blocks.<sup>91</sup> With the rise of institutional investors in the twentieth century and their ability to own large proportions of stocks, the use of dual-class structures has diminished greatly.<sup>92</sup> In 2017, with the increased competition among stock exchanges on high-profile listings, the Financial Conduct Authority (FCA) published a discussion paper on the effectiveness of the UK primary equity markets in providing capital for growth, particularly for early stage science and technology firms.<sup>93</sup> Whereas dual-class firms are still prohibited from going public with dual-class stock structures, it remains to be seen whether changes would be made to allow dual-class listings, especially following the Brexit.<sup>94</sup>

### III. THE GREATER BENEFITS AND LOWER COSTS OF DUAL-CLASS STRUCTURE FOR INNOVATION-ORIENTED FIRMS

The next part of this article analyzes the benefits and costs of dual-class structure and how they might support the innovation process, especially in technology-based firms. As we have briefly seen above, debates over dual-class structure have largely fallen into two categories: its use is either justified by the need to protect a firm's founders from short-term market pressure, and by the need to pursue the idiosyncratic vision of those founders; or, its use is criticized on the grounds

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<sup>91</sup>. See Fabio Braggion & Mariassunta Giannetti, At the Origins of the Non-Voting Shares' Discount 7 (Dec. 2012) (unpublished manuscript), <http://pdfs.semanticscholar.org/a48e/53a18141d21de29615ed9cdc4e472c6e2c5a.pdf> [<https://perma.cc/A4ME-WTLU>].

<sup>92</sup>. See Wolf-Georg Ringe, *Deviations from Ownership-Control Proportionality—Economic Protectionism Revisited*, COMPANY L. & ECON. PROTECTIONISM 209, 228 (Bernitz & W. Ringe eds., 2010).

<sup>93</sup>. *Review of the Effectiveness of Primary Markets: The U.K. Primary Markets Landscape* 8 (Fin. Conduct. Auth., Discussion Paper No. DP17/2, February/2017), <http://www.fca.org.uk/publication/discussion/dp17-02.pdf>.

<sup>94</sup>. Aurelio Gurrea-Martinez, Theory, Evidence, and Policy on Dual-Class Shares: A Country-Specific Response to a Global Debate, Ibero-American Institute for Law and Finance Working Paper Series 3/2019, at 4 (June 2, 2019), [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3397880](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3397880).

that a founder's uncontested control, coupled with a smaller fraction of cash-flow rights, can leave outside shareholders highly exposed to agency costs. Given that about half of dual-class listings since Google's 2004 IPO are of technology firms and that more than a third of all technology listings are dual-class,<sup>95</sup> I argue that the specific needs of firms' dependent on the innovation process justify the implementation of dual-class structures in a new light. Specifically, the unique features of the innovation process itself increase asymmetric information among founders and outside investors, making the need to protect and pursue a founder's idiosyncratic vision even more important. At the same time, the features of the innovation process lower agency costs, very possibly making the use of dual-class structure net-beneficial. Accordingly, prohibiting the issuance of non-voting or low-voting shares, and either excluding dual-class firms from index funds, or subjecting them to increased judicial review can threaten firms at innovation's cutting edge.

#### *A. Long-Termism*

Proponents of dual-class structure argue that capital markets tend to be myopic—preferring quick, short-term profits over riskier long-term investments. This may be due to different investment horizons among investors, or to the high cost of correcting inefficient pricing—both of which distort the value of certain investments.<sup>96</sup> By insulating management from short-term market

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<sup>95</sup>. Davidoff Solomon, *supra* note 8 (“More than 13.5% of the 133 companies listing shares on United States exchanges in 2015 have set up a dual-class structure, according to the data provider Dealogic. That compares with 12% last year and just 1% in 2005. About half the companies choosing the structure were in the technology industry”); Jay R. Ritter, *supra* note 12 (showing that roughly 19% of the 134 companies listing shares on United States exchanges in 2018 have set up a dual-class structure; 13 dual-class IPOs are of technology companies (representing 34.2% of all technology IPOs) relative to 12 dual-class IPOs that are not of technology companies (representing 12.5% of non-technology IPOs)).

<sup>96</sup>. See Goshen & Hamdani, *supra* note 14, at 580-81; John R. Graham, Campbell R. Harvey & Shiva Rajgopal, *The Economic Implications of Corporate Financial Reporting*, 40 J. ACCT. & ECON. 3, 5-6 (2005) (showing that a majority of CFOs declared that they are willing to

pressures and providing greater opportunities to plan and act in the long-term, dual-class structure provides a potential solution to such distortion.

On the one hand, short-term pressure can be particularly problematic for firms in the technology sector. As product cycles are increasingly short-lived, there is a constant need for investment in new ideas, whose return can take a long time to recoup.<sup>97</sup> This wait is a long process, full of uncertainty, and a high probability of failure.<sup>98</sup> Here, dual-class structures can supply a tolerance for failure, which are therefore necessary for effectively motivating and nurturing innovation.<sup>99</sup> Larry Page and Sergey Brin, founders of Google, stated specifically that the dual-class structure was necessary for Google as a technology firm, because “technology products often require significant investment over many years to fulfill their potential. For example, it took over three years just to ship our first Android handset, and then another three years on top of that before the operating system truly reached critical mass. These kinds of investments are not for the faint-hearted.”<sup>100</sup>

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sacrifice long-term value to meet the desired short-term earnings targets due to their own wealth, career, and external reputation considerations).

<sup>97</sup>. Testimony of Scott Kupor, the CEO and Managing Partner for VC firm Andreessen Horowitz, to the SEC Investor Advisory Committee, June 22, 2017, <http://www.sec.gov/spotlight/investor-advisory-committee-2012/kupor-sec-testimony.pdf>.

<sup>98</sup>. Bengt Holmstrom, *Agency costs and Innovation*, 12 J. ECON. BEHAV. & ORG. 305 (1989).

<sup>99</sup>. Gustavo Manso, *Motivating Innovation*, 66 J. FIN. 1823-60 (2011) (suggesting that managerial contracts that tolerate failure in the short run and reward for success in the long run are best suited for motivating innovation in firms); Xuam Tiam & Tracy Yue Wang, *Tolerance for Failure and Corporate Innovation*, 27 REV. FIN. STUDIES. 221-55 (2014) (finding “IPO firms backed by more failure-tolerance VC investors are significantly more innovative and VC failure tolerance is particularly important for ventures that are subject to high failure risk”).

<sup>100</sup>. Letter from Larry Page, CEO and Co-Founder, Google, & Sergey Brin, Co-Founder, Google, to Google Shareholders (Apr. 2012), <http://abc.xyz/investor/founders-letters/2011/> [<https://perma.cc/2D83-CG3N>]; In Google’s IPO documents filed in 2004, the founders state, “This [dual-class] structure will also make it easier for our management team to follow the long term, innovative approach emphasized earlier . . .”

On the other hand, long-term investments are subject to quarter-to-quarter volatility, as a firm realizes losses on some projects and gains on others. Capital markets can have trouble precisely evaluating these long-term investments, thereby potentially reducing the value of technology-based firms. This uncertainty can push firms to alter and limit their innovative projects, passing up riskier, yet more novel projects in favor of more incremental models of innovation that can be more easily communicated to outside shareholders.<sup>101</sup> Alternatively, founders may decide to acquire ready-made technologies, which are transparent to the stock market and less prone to failure.<sup>102</sup> Thus, without the protection of dual-class structures, technology-based firms can remain under constant pressure to keep their earnings in-line with the forecasts, by accepting smaller, predictable earnings rather than larger and less predictable returns.<sup>103</sup>

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<sup>101.</sup> See Lauren Cohen et al., *Misvaluing Innovation*, 26 REV. FIN. STUDIES 635-66 (2013); Daniel Ferreira et al., *Incentives to Innovate and the Decision to Go Public or Private*, 27 REV. FIN. STUDIES 256, 260 (2014) (showing that under public ownership there is a positive probability of investment in conventional projects, even if innovation is ex-ante efficient. This is due to market's lack of tolerance for failure, as well as its rapid incorporation of good news into market prices, which creates incentives conventional projects with higher probability of early success); Jie He & Xuan Tian, *The Dark Side of Analyst Coverage: The Case of Innovation*, 109 J. OF FIN. ECON. 856, 857 (2013) (showing that analysts coverage impede firm innovation as they exert pressure on managers to meet short-term goals); Alexia Tsotsis, *Mark Zuckerberg: Facebook Will Not Go Public Anytime Soon*, TechCrunch (Sept. 10, 2010), <http://techcrunch.com/2010/09/10/zuckerberg-ipo/> [<https://perma.cc/ZK77-MD7Y>] (citing Mark Zuckerberg, founder of Facebook, explaining the delay in firm's IPO with the need to innovate. He noted that, "being private is better for us right now because of some of the big risks we want to take in developing new products. . . . Managing the company through launching controversial services is tricky, but I can only imagine it would be even more difficult if we had a public stock price bouncing around"); Philippe Aghion et al., *Innovation and Institutional Ownership*, (Nat'l Bureau Econ. Research, Working Paper No. 14769, 2009).

<sup>102.</sup> See Shai Bernstein, *Does Going Public Affect Innovation?* 70 J. OF FIN. 1365-1403 (2015) (demonstrating that the transition to public equity markets effects innovative activities in three ways: first, it changes the nature of projects pursued by the firm as internal innovation becomes less novel, and relies on a narrower set of technologies; second, key inventors are more likely to leave the firm, and the productivity of the remaining declines; third, firms rely more heavily on the acquisition of external technologies).

<sup>103.</sup> For a general discussion of short versus long term value incentives see, e.g., Strine (2006) (responding to Professor Bebchuk's proposal to empower shareholders to amend corporate charters, by critiquing that, from a traditionalists perspective, it might undermine managerial

## B. Founders' Skills and Vision

Another key benefit to dual-class stock structure according to its proponents, is the degree of control afforded to founders holding the majority of voting rights. This control is crucial for pursuing business strategies and prioritizing the founders' vision over other shareholders' objections, with the aim of producing above-market returns.<sup>104</sup> Since such positive returns ultimately benefit both the founders as well as outside shareholders, the allocation of superior voting rights to the founders is overall value-enhancing.<sup>105</sup>

The benefits of maintaining founders' control are especially important since outside shareholders are often less informed than the founders themselves.<sup>106</sup> This asymmetry is often owed to the fact that sharing a project's details can endanger the value of its innovation, whether because of different estimates concerning the innovation's potential, or uncertainty about its feasibility.<sup>107</sup> Firms investing more heavily in innovation generally have a larger degree of information asymmetry between their founders and outside shareholders: founders usually hold specialized knowledge that outside shareholders lack, and the education process, to the extent that it is

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flexibility and lead to a counterproductive short-term perspective); *see also* Martijn K.J. Cremers et al., *Staggered Boards and Long-Term Firm Value, Revisited*, 126 J. OF FIN. ECON. 422-44 (2017) (showing that firms with lower firm value (defined as the ratio of market value of assets to the book value of assets) tend to adopt staggered boards, due to these boards' potential to promote long-term value creation as a credible commitment device by the shareholders. Thus, the adoption of antitakeover defenses (e.g., staggered boards), has a stronger positive association with firm value, where longer-term commitment plays a greater role in the firm's operation, as is the case with innovative firms.)

<sup>104.</sup> *See* Goshen & Hamdani, *supra* note 14, at 567.

<sup>105.</sup> *Id.*; Letter from Larry Page & Sergey Brin, 2004 Founders' IPO Letter: "An Owner's Manual" for Google's Shareholders, <http://abc.xyz/investor/founders-letters/2004/ipo-letter.html> [<https://perma.cc/472U-KBTK>] (last visited Nov. 15, 2018) (noting that they are convinced that "everyone associated with Google-including new investors-will benefit from this structure").

<sup>106.</sup> Armen A. Alchian & Harold Demsetz, *Production, Information Costs, and Economic Organization*, 62 AM. ECON. REV. 777-95 (1972).

<sup>107.</sup> *See* Goshen & Hamdani, *supra* note 14, at 579-83.

possible, can take time.<sup>108</sup> Evan Spiegel, Snap’s founder and CEO, explained the decision to employ a dual-class structure due to information asymmetry: “We built our business on creativity. And we’re going to have to go through an education process for the next five years to explain to people how our users and that creativity creates value.”<sup>109</sup> By granting outside shareholders only unequal voting rights, at least for a few years, firms can overcome the information asymmetry among shareholders.

In addition to asymmetric information, firms are also limited in their ability to disclose information about future innovations, since their value is usually tied to keeping them confidential until being launch in the market.<sup>110</sup> As going public already entails significant information disclosure and thus reduces the marginal benefit of conducting innovation, further disclosure can make investing in innovative products less worthwhile.<sup>111</sup> Such asymmetry and limited disclosure

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<sup>108</sup>. Vijay Govindarajan & Anup Srivastava, Reexamining Dual-Class Stock, 61 *Business Horizons* 461, 463 (2018), (noting founders and key executives in technology-based firms possess proprietary information and expertise on variables such as product lifecycle and future product pipeline, which can neither be easily explained to shareholders nor fully revealed to the market for risk of competitors’ advance knowledge); George Dent, Jr., Dual Class Capitalization: A Reply to Professor Seligman, 54 *GEO. WASH. L. REV.* 725, 748 (1986) (stating that managers would forego profitable plans that cannot be adequately explained to shareholders, because the information is too expansive to verify or disclose in public or because it involves a secret); Jeffrey L. Coles et al., *Boards: Does One Size Fit All?*, 87 *J. FIN. ECON.* 329, 333 (finding that for R&D intensive firms, for which the firm-specific knowledge of insiders is relatively important, firm value increases with the fraction of insiders on the board).

<sup>109</sup>. See Paresh Dave, *Exclusive Interview: How Snapchat Founder Evan Spiegel Feels After the Historic IPO*, *L.A. TIMES* (Mar. 2, 2017, 10:55 AM), <http://www.latimes.com/business/technology/la-fi-tn-evan-spiegel-bobby-murphy-20170302-story.html> [<https://perma.cc/ERA3-6WU9>].

<sup>110</sup>. Sudipto Bhattacharya & Jay R. Ritter, *Innovation and Communication: Signaling with Partial Disclosure*, 50 *REV. OF ECON. STUDIES* 331 (1983); Vijay Govindarajan & Anup Srivastava, *supra* note 108, at 463; George Dent, Jr. *supra* note 108, at 748.

<sup>111</sup>. Vikas Aggarwal & David H. Hsu, *Entrepreneurial Exits and Innovation*, 60 *MGMT. SCI.* 867 (2014) (examining how entrepreneurial exit choices, namely, IPO vs. acquisitions, affect patenting outcomes, and finding that innovation quality is highest under private ownership and lowest under public ownership, with acquisition intermediate between the two).

get even worse with the long investment horizons of innovation. Transforming new ideas into tangible products is a lengthy, ongoing process, full of unanticipated technological obstacles. Under such circumstances, debates as to how or whether to pursue a developing project occur repeatedly between founders and outside shareholders, potentially slowing progress;<sup>112</sup> dual-class structure alleviates this concern by reassuring founders that they will not lose control, and that all of their plans will be utilized and implemented.

Founders' control may be vital to the execution of ideas not only due to their specialized knowledge, but also because of their unique vision or extraordinary skills that cannot be replicated. In other words, the control is crucial due to founders' ability to see the true value of an innovation where others cannot. Some of the most prominent technology-based firms are managed by young visionary founders who are responsible for their own creations and success. These founders were able to lead their firms forward not only because of their knowledge or business skill, but also due to their specialized "hunches".<sup>113</sup> For example, Mark Zuckerberg was criticized for making the largest acquisition in the history of Facebook right as the firm was about to IPO, without consulting the board. The decision to acquire a two-years-old app that had 13 employees and zero revenue for \$1 billion, raised concerns about the 27-years-old founder and his ability to lead a publicly held firm.<sup>114</sup> This acquisition was Instagram, which currently worth about \$25 to \$35 billion.<sup>115</sup> Without

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<sup>112</sup>. Goshen & Hamdani, *supra* note 14, at 565-66.

<sup>113</sup>. See Leo E. Strine, *Towards a True Corporate Republic: A Traditionalist Response to Bebchuk's Solution for Improving Corporate America*, 54 HARV. L. REV. 1759, 1763 (2006) (noting that the ingenuity and skill of talented managers is what ultimately produces corporate wealth).

<sup>114</sup>. See Alexei Oreskovic, *Everyone Thought Mark Zuckerberg Was Crazy to Buy a 13-Person App for \$1 billion—Now Instagram Looks Like One of the Most Brilliant Tech Acquisitions Ever Made*, BUS. INSIDER. (Jan. 30, 2016), <https://www.businessinsider.sg/instagram-zuckerbergs-biggest-win-so-far-2016-1/>.

<sup>115</sup>. Yoni Heisler, *Once Mocked, Facebook's \$1 Billion Acquisition of Instagram Was a Stroke of Genius*, YAHOO! TECH (Dec. 29, 2016,) <http://finance.yahoo.com/news/once-mocked->

sufficient degree of control in Zuckerberg’s hands, outside shareholders might have questioned the quality of his performance and prevented him from implementing his idiosyncratic vision. While it may well be that as times goes on, certain founders will be done implementing their idiosyncratic vision or lose their golden touch,<sup>116</sup> at least for the first few years following IPO, a firm’s specialized knowledge, unique vision and growth opportunities are tied to its founders’ presence.<sup>117</sup>

### *C. Agency Costs*

Opponents of the dual-class stock structure argue that it creates distorted incentives: by holding superior voting rights, founders can avoid the threat of market mechanisms that have traditionally served to keep management in line, or in the words of Daniel Fischel, “[t]he cost of dual-class common stock is that the effectiveness of the market for corporate control as a monitoring device is reduced.”<sup>118</sup> Since a founder’s cash flow rights are smaller than their voting rights, founders bear only fraction of the negative effects of their actions, while keeping all of the private benefits of control. Thus, founders can have an incentive to advance their personal interests while outside shareholders, with limited ability to influence the firm, bear the consequences. The wider the gap between voting and cash flow rights, the more distorted the incentives get. Thus, holders of superior voting rights may extract private benefit of control, such as empire-building and tunneling resources, or make managerial decisions with limited accountability.<sup>119</sup>

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facebook-1-billion-acquisition-instagram-stroke-042604919.html [https://perma.cc/438U-7QEQ].

<sup>116</sup>. Bebchuk & Kastiel, *supra* note 14, at 589.

<sup>117</sup>. Kenneth Lehn et al., *Consolidating Corporate Control: Dual-Class Recapitalizations Versus Leveraged Buyouts*, 27 J. FIN. ECON. 557 (1990).

<sup>118</sup>. Daniel Fischel, *Organized Exchanges and the Regulation of Dual Class Common Stock*, 54 U. CHI. L. REV. 119, 140 (1987).

<sup>119</sup>. Bebchuk & Kastiel, *supra* note 14, at 602-04; *See also* Gompers et al., *supra* note 13, at 1051-88 (finding that firm value is positively associated with insiders’ cash-flow rights and

At the same time, agency costs associated with dual-class structures are expected to be smaller for technology-based firms.<sup>120</sup> First, these firms are often young and fast-growing, such that the potential payoff of the future of the firm is much larger than current consumptions of private benefits.<sup>121</sup> Furthermore, founders of technology-based firms do not only have economic interest invested in the firm, but also significant noneconomic interest. This comes in the form of founders' business reputation required for their success to raise money in future startups, and the emotional connection to the firm they founded.<sup>122</sup> Both noneconomic interests align founders with the firm's overall interests.

#### IV. EMPIRICAL EVIDENCE

Responding to Google's decision to issue dual-class shares, institutional investors lobbied for the prohibition of dual-class structure, insisting that it facilitates the extraction of private benefits of controls, serving to solidify and empower founders at the expense of outside shareholders.<sup>123</sup> They argued that Google's shares should be priced at "a substantial discount" to

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negatively associated with insiders' voting rights, and negatively associated with the wedge between the two); Ronald W. Masulis et al., *supra* note 13 (demonstrating that as the wedge between cash-flow and voting-rights widens, corporate cash holdings are worth less to outside shareholders, CEOs receive higher compensation, managers make shareholder value-destroying acquisitions more often, and capital expenditures contribute less to shareholder value).

<sup>120</sup>. Peter M. DeMarzo & Michael J. Fishman, *Optimal Long-Term Financial Contracting*, 20 REV. FIN. STUDIES 2079 (2007) (stating that the fact that founder's economic and noneconomic payoffs largely depend on the future of the firm value provides a strong incentive to mitigate agency conflicts).

<sup>121</sup>. Kim & Michaely, *supra* note 17, at 34.

<sup>122</sup>. *Id.*

<sup>123</sup>. Simon London, *U.S. Fund Criticizes Google's IPO Structure*, FIN. TIMES. (May 4, 2004), [http://www.nbcnews.com/id/4900355/ns/business-financial\\_times/t/us-fund-criticizes-googles-ipo-structure/#.Xctr9m5FxpZ](http://www.nbcnews.com/id/4900355/ns/business-financial_times/t/us-fund-criticizes-googles-ipo-structure/#.Xctr9m5FxpZ) [<https://perma.cc/7RHS-7SQP>].

reflect the ongoing control of Google’s founders following its IPO.<sup>124</sup>

This third part summarizes the novel contributions made to this discussion in a companion article empirically analyzing the factors that influence technology-based firms in their decision to adopt a dual-class structure.<sup>125</sup> Using media coverage on a firm’s founders prior to the firms’ IPO as a proxy for idiosyncratic vision, my empirical analysis finds that firms aiming to pursue their founders’ idiosyncratic vision find it easier to narrow the dual-class discount when they are larger. This, I argue, should raise concerns about the penalty institutional investors impose on technology-based, dual-class firms, which are often smaller and newer, with less established reputations. When a firm’s choice of dual-class structure discounts the offering and trading price of its stock, such that it risks being left with significantly fewer funds than might have been raised without the discount in price, smaller or newer firms wishing to pursue their founders’ idiosyncratic vision might find themselves pushed to be acquired by larger firms, or might settle for a corporate governance structure that does not actually maximize their value. The policy implications of these findings will be analyzed in the fourth part of this article.

#### *A. Data Collection*

Technology *IPOs*: The data set includes 618 single-class and 62 dual-class technology-based IPOs over the years 2000-2015, of both domestic and foreign firms registered for trade at a U.S. stock exchange. To ensure the data set was as comprehensive as possible, data was taken from several sources: IPOscoop.com, Thomson Financial Venture Expert, and SDC.<sup>126</sup> Several

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<sup>124.</sup> Smart, *supra* note 17, at 95.

<sup>125.</sup> Grinapell, *supra* note 15.

<sup>126.</sup> IPOscoop.com, Thomson Financial Venture Expert, and Thomson Reuters Securities Data Company (SDC) Platinum are all online trackers of an IPO activity in the United States. The

types of firms—mutual funds, real estate investment trusts (REITs), asset acquisition of blank check firms, firms that had gone public at an earlier time, and all spin-offs or subsidiaries of other firms—were excluded from the sample to provide better accuracy. The data set was limited to technology-based firms,<sup>127</sup> and was designed to include the years 2000 to 2015 to capture sufficient time frame prior to the dual-class trend among technology-based firms, along with the trend itself.

*Firms' Names:* the names used by media outlets to refer to firms were found by matching the names on the list of firms above with the names appear on Mergent Online database, the SEC website, or Factiva database.<sup>128</sup> In many cases, firms' names had to be tweaked, mainly by shorting them to their first word or two, to improve the quality of the search.

*Founders' Names:* founders' names were collected mainly from SEC filings. The SEC requires firms going public to file Form S-1 (for U.S. issuers) or Form F-1 (for foreign issuers). Both filings provide investors with an initial view of firms' business models, financial statements and potential risks. If the S-1 or F-1 is followed by a successful IPO, firms file a final prospectus (Form 424). Following the IPO, firms are required to file quarterly and annual reports (Form 10-Q and Form 10-K) on their financial performance. All of these filings include information on the

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information collected from these sources was compared and amended in Martin Kenney & Donald Patton, *Kenney-Patton Firm and Management Database of Emerging Growth IPOs: 1990-2010* (2013), <http://kenney.faculty.ucdavis.edu/kenney-patton-firm-and-management-database-of-emerging-growth-ipos-1990-2010/> [<https://perma.cc/2FBY-Y7FZ>].

<sup>127.</sup> Tim Loughran & Jay Ritter, *Why Has IPO Underpricing Changed over Time?* 33 FIN. MGT. 5, 35 (2004) (their definition of “technology stock”, and all updates reported by Jay Ritter IPO database, was used to classify technology-based firms).

<sup>128.</sup> The matching technique followed Paul Tetlock et al., *More Than Words: Quantifying Language to Measure Firms' Fundamentals*, 63 J. FIN. 1437-1467 (2008). Mergent Online company search function was used for all firms existing after 1993, and for firms with no information on Mergent Online, the SEC company search function was used to identify common names. For firms existing prior to 1993, Factiva search function provided common names.

firms' history and biographical details on their executives, which in most cases, are sufficient for learning about the firms' founders. For firms with no information found on their founders in the SEC filings, a company profile search was run in Business Source Complete database, as well as general search on firm websites, LinkedIn, and Factiva database.<sup>129</sup>

*Media Coverage Proxy:* a proxy of founders' idiosyncratic vision was constructed based on media coverage on firms' founders prior to their IPOs. Media coverage was found through the Factiva database, by limiting the search query to include the name of the founder together with the common name of the firm, in order to avoid confusion for cases in which a single founder was associated with multiple firms or multiple people shared the founder's name. All web news and blogs, wire services, and press release wires were excluded, as they are more likely to be biased. To measure news tone, a sentiment analysis was run manually to count the frequency of predefined positive and negative words on Factiva database.

*Firms' Financials:* financial data was collected on each firm in the sample from Standard and Poor's Compustat, firm's prospectus (form 424) taken from the SEC website, and the Jay Ritter IPO database to control for firm characteristics.<sup>130</sup>

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<sup>129.</sup> In a few cases, no information was available on firms' founders, resulting in the exclusion of those firms from the sample.

<sup>130.</sup> The financial data includes each firm's EBITDA-to-price ratio, debt-to-assets ratio, R&D expenses-to-assets ratio, income-to-assets ratio, 1-year sales growth rate, total assets and revenue, firm's age, offer year, and state of incorporation.

## *B. Results and Analysis*

### **i. Determinants of Dual-Class Status in Technology Sector**

*Figure 1* summarizes the findings regarding whether media coverage predicts dual-class structure. *Figure 1* depicts the means of media coverage on founders prior to firms' IPOs for all firms in the sample, organized by stock structure. The bars in *Figure 1* shows a clear and significant difference in the means of media coverage for dual-class and single-class firms. This suggests that firms with higher media coverage are more likely to adopt a dual-class structure. Specifically, it requires an increase of approximately 475 articles and news stories to increase the probability of having a dual-class structure from 9% to 11.5%.

These findings indicate that a major factor in the choice of dual-class structure is a founder's idiosyncratic vision. Conventional private benefits of control would presumably not be related to the media coverage measurement, as "bad" firms are not likely to automatically acquire favorable coverage in the course of their activities. Moreover, even if "bad" firms can invest in generating media coverage, it would be much more expensive for "bad" firms to acquire such coverage in traditional and reliable news outlets.

*Figure 2* and *Figure 3* depict the means of media coverage of dual-class and single-class firms for the periods before and after Google's IPO in 2004 (respectively). The bar charts illustrate that the significant difference in means in *Figure 1* exists in the years prior to 2004, but increases greatly in the years following Google's IPO.

## ii. Idiosyncratic Vision and State of Incorporation

The previous subsection showed that idiosyncratic vision is a major factor in the choice of stock structure, such that firms with higher media coverage (and thus more idiosyncratic vision), are more likely to adopt a dual-class structure. This subpart presents the results of examining whether the effect of media coverage on the probability of having a dual-class status differs with regards to the firm's state of incorporation.

### *a. Different Effects of Media Coverage on the Use of Dual-Class Structure in and Outside of Delaware*

While it might be assumed that media coverage would have the same effect on the choice of stock-structure in and outside the state of Delaware, the data indicates otherwise. The estimated correlation between media coverage and the use of dual-class structure is stronger for firms incorporated outside of Delaware than for Delaware incorporated firms, such that the effect of a high media coverage on the likelihood of having a dual-class structure is more than 14 times higher for firms incorporated outside of Delaware relative to firms incorporated in Delaware.<sup>131</sup>

One possible explanation may be that Delaware corporate law, together with its specialized corporate courts and the broad discretion in enforcement of fiduciary duties, provides a better protection for minority shareholders relative to corporate law in other states. Under this view,

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<sup>131</sup>. For other use in state of incorporation, see Lucian A. Bebchuk & Alma Cohen, *Firms' Decisions Where to Incorporate*, 46 J. L. & ECON. 383-425 (2003) (analyzing determinants of firms' decision where to incorporate); Paul Gompers et al., *Corporate Governance and Equity Prices*, 118 QTRLY J. ECON. 107-155 (2003) (evaluating incorporation effect on stock returns); Gompers et al., *supra* note 13, at 1051-88 (examining determinants of the dual-class structure). Gompers et al. hypothesized that for firms incorporated in states with stronger anti-takeover laws, dual-class structure might be less valuable, however, they were not able to find statistically significant correlation between state law (proxied by index of state takeover laws) and dual-class structure.

founders' vision might be less important in the choice of dual-class and single-class structure among firms incorporated in stronger corporate law states, as the choice of incorporation provides an alternative signal that the founders are unlikely to extract private benefits of control. Among firms incorporated in weaker corporate law states, however, media coverage may be of greater importance. A low-quality firm will tend to choose a single-class structure, or else be perceived as a self-dealer with a high penalty assigned to its value, whereas a high-quality firm will tend to choose a dual-class structure with a lower penalty assigned for its use.

Another explanation might be that the stronger effect of media coverage on the probability of having a dual-class structure for firms incorporated outside of Delaware is led by network externalities. The large number of firms incorporated in Delaware results in diverse and continuously developing legal precedents and a large base of legal opinions. Not only do investors tend to have previous familiarity with Delaware corporate law, they can also expect to benefit from its predictability going forward.<sup>132</sup> Under these circumstances, founders' vision might be less important in the choice of dual-class and single-class among firms incorporated in Delaware, as network externalities provide investors with reassurance as to Delaware's ability to restrain self-dealing. Among firms incorporated outside of Delaware, however, media coverage may be of greater importance, as investors are less familiar with state corporate law. Furthermore, even if a state's corporate law is identical to Delaware's, investors would be unable to adequately predict a state's court future rulings. For these firms, media coverage serves as a much more significant signal of a firm's intrinsic motivation. A low-quality firm will tend to choose a single-class structure, or else be perceived as an expropriator, whereas a high-quality firm will tend to choose

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<sup>132</sup>. See Klausner, *supra* note 48 at 774-78 (arguing that the value of state's corporate law depends on the number of firms incorporated in that state).

a dual-class structure.

*b. Differing Tendencies to Use Dual-Class Structure in and Outside of Delaware*

If Delaware is indeed better at protecting minority shareholders, and the main reason to adopt a dual-class structure is to extract private benefits of control rather than pursue idiosyncratic vision, then expropriators should prefer to incorporate outside of Delaware and to choose a dual-class structure. The data shows, however, no correlation between Delaware/non-Delaware incorporation and dual-class stock structure. The fact that there is no evidence that non-Delaware incorporated firms are more likely to use dual-class structure, whereas there is a clear evidence that outside of Delaware, media coverage is of a greater importance in the dual-class choice, might provide additional indication that expropriation is not the only driver for firms to adopt a dual-class structure.

V. IMPLICATIONS FOR LAW

Part V presents the main implications of the empirical findings above, namely the impact of proposed and enacted restrictions on dual-class stock structures. Though my analysis recognizes the costs associated with the separation of voting-rights and cash-flow rights, it also considers the importance of dual-class stock structures in maximizing shareholder value. As my evidence shows, limitations on dual-class structures use could be counterproductive, as it can lead firms to employ suboptimal structures that harm their performance and increase their cost of capital.

*A. Index Providers Bar Dual-Class Firms*

Two major index providers—S&P Dow Jones and FTSE Russell—changed their eligibility criteria to exclude or limit dual-class firms from significant stock index funds. S&P Dow Jones

imposed an approach of total prohibition of multiple class stock structures from S&P Composite 1500 indexes, including the S&P 500, though grandfathering existing firms;<sup>133</sup> FTSE Russel took a more moderate approach, introducing a voting-rights inclusion criterion of at least 5% of a firm's voting rights, while grandfathering existing firms for five years.<sup>134</sup> MSCI, however, decided not to exclude or limit dual-class firms from its general stock index funds but to launch a new index series that will specifically include voting rights in the eligibility criteria.<sup>135</sup>

In making these changes, index providers are not creating new law *per se*, but forming private regulation. However, these changes may still be of great significance for listed firms. Index funds are a significant driver of passive funds' demand for U.S. stocks.<sup>136</sup> In the last decade, more than a trillion dollars of equity assets have moved from actively managed funds to index funds and ETFs.<sup>137</sup> As of 2018, index funds hold 13% of the shares of the S&P500 firms and about 12% of

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<sup>133.</sup> See Press Release, S&P Dow Jones Indices, S&P Dow Jones Indices Announces Decision on Multi-Class Shares and Voting Rules (Jul. 31, 2017), [https://us.spindices.com/documents/indexnews/announcements/20170731-561162/561162\\_spdjimulti-classsharesandvotingrulesannouncement7.31.17.pdf?force\\_download=true](https://us.spindices.com/documents/indexnews/announcements/20170731-561162/561162_spdjimulti-classsharesandvotingrulesannouncement7.31.17.pdf?force_download=true).

<sup>134.</sup> See Chris Dieterich et al., *Stock Indexes Push Back on Dual Class Listings*, WALL ST. J. (Aug. 2, 2017, 7:34 AM), <http://www.wsj.com/articles/stock-indexes-push-back-against-dual-class-listings-1501612170> [<https://perma.cc/5RZL-ARX4>]; FTSE RUSSELL VOTING RIGHTS CONSULTATION RESULTS, (Jul. 2017), [https://research.ftserussell.com/products/downloads/FTSE\\_Russell\\_Voting\\_Rights\\_Consultation\\_Results.pdf?kui=ahHnoPLRt9QjbLARUC7FmA](https://research.ftserussell.com/products/downloads/FTSE_Russell_Voting_Rights_Consultation_Results.pdf?kui=ahHnoPLRt9QjbLARUC7FmA) [<https://perma.cc/B3RY-CHJD>]; FTSE Russell, *FTSE Russell Voting Rights Consultation – Next Steps*, *supra* note 5.

<sup>135.</sup> MSCI, *Consultation on the Treatment of Unequal Voting Structures in the MSCI Equity Indexes* (Jan. 2018, updated June 2018), [http://www.msci.com/documents/1296102/8328554/Consultation\\_Voting+Rights.pdf/15d99336-9346-4e42-9cd3-a4a03ecff339](http://www.msci.com/documents/1296102/8328554/Consultation_Voting+Rights.pdf/15d99336-9346-4e42-9cd3-a4a03ecff339).

<sup>136.</sup> See, e.g., Tom McGinty et al., *Index Funds Are Taking Over the S&P 500*, WALL ST. J. (Oct. 17, 2016, 10:30 AM), <https://www.wsj.com/graphics/index-funds-taking-over-sp-500/> [<https://perma.cc/296E-UQ7W>]; Ari I. Weinberg, *Why Index Funds Have a Limited Presence in the IPO Market*, WALL ST. J. (Sept. 4, 2017, 10:04 PM), <https://www.wsj.com/articles/why-index-funds-have-a-limited-presence-in-the-ipo-market-1504577040> [<https://perma.cc/UZF7-HJN8>].

<sup>137.</sup> See Jan Fichtner et al., *Hidden Power of the Big Three? Passive Index Funds, Re-concentration of Corporate Ownership, and New Financial Risk*, 19 BUS. POLIT. 298, 299

all U.S. equities.<sup>138</sup> Since inclusion in index funds results in a share price increase,<sup>139</sup> and index funds' influences is predicted to further grow,<sup>140</sup> exclusion from these indices could involve a harmfully higher cost of capital. If the cost of capital increase is sufficiently high, it may, in some ways, clash with the private ordering of governance arrangements of firms wishing to employ dual-class structures.<sup>141</sup> Rather than having the flexibility to determine the most beneficial class structure, firms would be pushed to adhere to the index committee's eligibility criteria.

Index providers presumably strive to reflect the investable market, so that passive investors can obtain returns that reflect the market's.<sup>142</sup> They do so either through holding all securities available in the market (known as full replication), or through buying the most representative sample of the securities, based on correlations, exposure and risk (known as optimization).<sup>143</sup>

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(2017) (mentioning that between 2008 and 2015 investors sold holding of actively managed equity mutual funds worth roughly \$800 billion, while buying passively managed funds worth approximately \$1 trillion).

- <sup>138</sup>. Andrew Winden & Andrew Baker, *Dual-Class Index Exclusion*, 22-23 (Rock Ctr. For Corp. Gov., Working Paper Series No. 233, 2018), [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3201578](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=3201578).
- <sup>139</sup>. Andrei Shleifer, *Do Demand Curves for Stocks Slope Down?* 41 J. FIN. 579 (1986) (demonstrating that stocks tend to jump after being added to the S&P 500).
- <sup>140</sup>. *Id.*
- <sup>141</sup>. See Bernard Shafman, *A Private Ordering Defense of a Company's Right to Use Dual Class IPOs*, 63 VILL. L. REV. 1, 20-23 (2018).
- <sup>142</sup>. Investment Company Institute, *Investment Company Fact Book*, 123 (2018), [http://www.ici.org/pdf/2018\\_factbook.pdf](http://www.ici.org/pdf/2018_factbook.pdf) [<https://perma.cc/PX9C-W9ZM>]; *S&P Dow Jones Indices Announces Decision on Multi-Class Shares and Voting Rules*, S&P Dow Jones Indices (July 31, 2017) (mentioning the index is "designed to reflect the U.S. equity market and, through the market, the U.S. economy"); see Fichtner et al., *supra* note 137, at 303-04 (mentioning that in the ETF segment, the market shares in December 2016 have been 37% for BlackRock, 18.5% for Vanguard, and 15.5% for State Street. Data about market shares in index mutual funds are not publicly available, but it is estimated that Vanguard dominates this segment).
- <sup>143</sup>. See William Sharpe, *The Arithmetic of Active Management*, 47 FIN. ANA. J. 7, 7-8 (1991); *How to Run An Index Fund: Full Replication Vs. Optimization*, ETF.com, <http://www.etf.com/etf-education-center/21038-how-to-run-an-index-fund-full-replication-vs-optimization.html> [<https://perma.cc/YNP4-68C6>]; Winden & Baker, *supra* note 138, at 13; Adriana Robertson, *The Mis(Uses) of the S&P 500*, 4 (Sept. 6, 2019) (unpublished manuscript), [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3205235](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=3205235) (explaining that

Including dual-class shares in index funds increases the diversification and representativeness of the offered index, but does also introduce some degree of governance risk from shareholders' perspective.<sup>144</sup> The SEC does not regulate the risk level of the index funds,<sup>145</sup> but allows each index committee the discretion to create its own eligibility requirements to be included in the index.<sup>146</sup> The index committee also has the discretion to adjust the rules, on a case-by-case basis. For example, S&P 500 waived the profitability and domicile requirements to allow inclusion of prominent firms that would have otherwise been left out.<sup>147</sup> The decisions to exclude or to limit dual-class shares from significant index funds broaden the scope of the eligibility criteria—from financial-based to governance-based characteristics.<sup>148</sup>

Theoretically, index sponsors should demand the kinds of index funds that their

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Standard and Poor, for example, aim to include about 500 securities on the S&P 500 at any given time, selected by certain thresholds such as size, liquidity, and financial viability).

- <sup>144.</sup> See, e.g., George Dallas, Policy Director, Eugenia Jackson & Bram Hendriks, Shareholder Rights Committee, International Corporate Governance Network, *ICGN View: The Inclusion of non-voting or limited voting shares in stock market indices* (November 2017), <https://www.icgn.org/inclusion-non-voting-or-limited-voting-shares-stock-market-indices> [<https://perma.cc/NR4H-44SK>] (mentioning that ICGN's general view is that the mismatch of ownership and control through differential ownership rights can create significant governance risks for minority shareholders); FTSE Russell *Voting Rights Consultation – Next Steps*, *supra* note 5, at 4 (noting that the consultation showed broad support for the introduction of voting rights threshold, but a significant minority argued that the role of the index provider was to reflect the investable universe and not to require minimum governance standards).
- <sup>145.</sup> *Fast Answers: Market Indices*, U.S. SEC (Mar. 7, 2019), <http://www.sec.gov/fast-answers/answersindiceshtm.html> [<https://perma.cc/9FAD-SSE4>].
- <sup>146.</sup> See, e.g., S&P Dow Jones Indices, *S&P U.S. Indices Methodology* 8 (Apr. 2018); Gabriel Rauterberg & Andrew Verstein, *Index Theory: The Law, Promise and Failure of Financial Indices*, 30 YALE J. REG. 1, 18-19 (2012) (describing the substantial degree of discretion exercised by index providers).
- <sup>147.</sup> Rauterberg & Verstein, *supra* note 146, at 19.
- <sup>148.</sup> Anita Anand & Adriana Robertson, *Stock Market Indices: Inside the Black Box*, CLS BLUE SKY BLOG (Mar. 21, 2018), <http://clsbluesky.law.columbia.edu/2018/03/21/the-lack-of-transparency-in-stock-market-indices> [<https://perma.cc/4MFM-5YBE>]; Scott Hirst & Kobi Kastiel, *Corporate Governance by Index Exclusion*, 99 Boston University Law Review 1229, 1244 (2019).

shareholders wish to replicate. Thus, the competition among index sponsors for investors' assets should lead index fund managers to reflect their shareholders' preferences. However, the strength of such competition relies on the index sponsors' stance toward losing its shareholders, and the subsequent costs of switching between sponsors. As of the end of 2016, there were about 850 funds sponsors who competed to offer 9,500 different mutual funds to investors.<sup>149</sup> However, despite this proliferation, there were only three dominant fund sponsors in the market: BlackRock, Vanguard, and State Street, together constituting the largest shareholder in 88% of S&P 500 firms.<sup>150</sup> Meanwhile, there are more index funds than publicly traded U.S. stocks.<sup>151</sup> Index sponsors owe fiduciary duties to their shareholders, like the duty to take reasonable measures to maximize the value of the investment.<sup>152</sup> These fiduciary duties may result in the alignment of preferences even when market forces are imperfect.<sup>153</sup> However, the significantly concentrated ownership in the hands of three index sponsors raises concerns as to the degree of competition in the market, and their ability to actually represent their shareholders' interests.<sup>154</sup>

This concern also seems true when evaluating market competition among index funds. Since index funds compete for sponsors to engage with their portfolio firms, sufficient competition

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<sup>149</sup>. Jill E. Fisch et al., *The New Titans of Wall Street: A Theoretical Framework for Passive Investors*, U. PA. L. REV. 11 (forthcoming 2019), [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3192069](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=3192069) [<https://perma.cc/8LFV-G8S5>].

<sup>150</sup>. Fichtner et al., *supra* note 137, at 313.

<sup>151</sup>. *See, e.g., There Are Now More Indexes Than Stocks*, BLOOMBERG (May 12, 2017, 2:00 AM PDT), <http://www.bloomberg.com/news/articles/2017-05-12/there-are-now-more-indexes-than-stocks> [<https://perma.cc/KX9D-SBLZ>] (mentioning that, as of May 2017, there were almost 5000 stock indexes).

<sup>152</sup>. Fisch, *supra* note 149, at 15.

<sup>153</sup>. *Id.*

<sup>154</sup>. Hirst & Kastiel, *supra* note 148, at 1249-50 (noting that all of the "Big Three" fund sponsors offer index funds that are linked to the indices of each of the three index providers).

should lead them to offer compositions that sponsor fund shareholders presumably want. This means, that if the representativeness benefits of including dual-class firms exceed their governance risks from the shareholders' perspective, index providers will include dual-class firms in their portfolios. S&P 500 still dominates the U.S. market with over \$3.4 trillion being directed under its management,<sup>155</sup> though it holds a much smaller percentage of the index assets than it did 30 years ago.<sup>156</sup> In addition, many of the new funds were created for a single fund sponsor seeking to offer a new product by converting the traditional active investment strategy into rule-based approach,<sup>157</sup> they are not completely substitutive for index funds. It seems that despite the boost in index funds and the steady decrease in S&P 500 influence, there is still a sufficient lack of competition for index funds to arguably not be perfect representatives of shareholders' interests.

If market imperfections lead to a misrepresentation of fund shareholders' interests, then it might be that the exclusion of dual-class firms from significant index funds is not socially optimal. Dual-class firms generally outperform the market, at least in the first few years following their IPOs.<sup>158</sup> While index sponsors can invest their personal wealth in dual-class firms in the pre-IPO stage and as public firms, the retail investor is left with the option to invest in the stock market primarily through index funds. This form of investment allows investors to maximize returns by

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<sup>155</sup>. S&P Dow Jones Indices, *S&P 500 Factsheet 1* (June 29, 2018).

<sup>156</sup>. John C. Coates IV & R. Glenn Hubbard, *Competition in the Mutual Fund Industry: Evidence and Implications for Policy*, 33 IOWA J. CORP. L. 151, 153 (2007) (describing the competition among mutual funds).

<sup>157</sup>. Fisch et al., *supra* note 149, at 11-12.

<sup>158</sup>. Dimitri Melas *Putting the Spotlight on Spotify: Why Have Stocks with Unequal Voting Rights Outperformed?* MSCI: GLOBAL INVESTING, April 3, 2018), <https://www.msci.com/www/blog-posts/putting-the-spotlight-on/0898078592> [<https://perma.cc/WG38-CNAY>] (noting that unequal voting stock in aggregate outperformed the market over the period from November 2007 to August 2017, and that excluding them from market indexes would have reduced the indices' total returns by approximately 30 basis points per year over their sample period).

investing in the most innovative firms, while mitigating the risk in doing so by tracking a diversified portfolio.<sup>159</sup> Actively investing in dual-class firms creates a risk that is much more expensive to diversify.<sup>160</sup> While some individuals do have access to private markets via investments of public mutual funds, the amount of this exposure is quite limited.<sup>161</sup> Thus, to the extent that the benefit of including dual-class firms in index funds outweighs the governance risks, from the shareholders' perspective, retail investors would miss out on the potential upside of some of the most dynamic firms.

### *B. Proposal of Mandatory Sunset Provisions*

Legal scholars and policy makers have proposed fixed-time sunset provisions that give outside shareholders a pre-determined period of time after the IPO within which they can choose to keep or eliminate dual-class structures.<sup>162</sup> This proposal assumes that a dual-class structure is an efficient capital structure for a firm's beginning, but that it might not be an efficient means of maintaining stock as a firm matures, and the costs of the structure increase while its benefits

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<sup>159</sup>. Robert J. Jackson Jr., *supra* note 13.

<sup>160</sup>. *Id.*; see also MSCI, *Should Equity Indexes Include Stock of Companies with Shares Classes Having Unequal Voting Rights?* (Consultation Discussion Paper, Jan. 2018), [http://www.msci.com/documents/1296102/8328554/Discussion+Paper\\_Voting+rights.pdf/d3ba68f1-856a-4e76-85b6-af580c5420d7](http://www.msci.com/documents/1296102/8328554/Discussion+Paper_Voting+rights.pdf/d3ba68f1-856a-4e76-85b6-af580c5420d7) [<https://perma.cc/8YKK-JEYU>] (noting that a total exclusion of dual-class firms from its indexes would deprive investors from the growth prospects and diversification potential of those firms).

<sup>161</sup>. Testimony of Scott Kupor, the CEO and Managing Partner for VC firm Andreessen Horowitz, to SEC Inv'r Advisory Comm. (June 22, 2017), <http://www.sec.gov/spotlight/investor-advisory-committee-2012/kupor-sec-testimony.pdf> [<https://perma.cc/WYN4-YGV2>] (mentioning that the value of mutual fund investments in private tech firms was estimated at \$7 billion in 2016, or about 0.05% of total U.S. mutual fund assets).

<sup>162</sup>. Lucian A. Bebchuk & Kobi Kastiel, *supra* note 14, at 585 (arguing that dual-class firms should include some limit on the amount of time before ordinary shares are allowed to vote on whether the firm should continue with the dual-class stock structure); Robert J. Jackson, Jr., *supra* note 13 (calling to consider proposed listing standards limiting in time the use of perpetual dual-class stock); Council of Institutional Investors, *supra* note 9 (describing a proposal made by the Council of Institutional Investors to the exchanges to impose a seven year mandatory sunset provision in order to ensure voting power directly proportional to an investor's capital at risk).

decline.<sup>163</sup> As has been discussed above, these benefits can decrease because founder’s vision was largely fulfilled, because the general economic environment has changed, or because investors have become more knowledgeable about the firm. At the same time, the costs of dual-class structure can increase as founders tend to dilute their economic interest in the firm due to wealth diversification considerations.

Several empirical studies have examined this theory by analyzing how the costs and benefits of dual-class stock structures change over time.<sup>164</sup> Their diverse findings include evidence that dual-class structures tend to have a valuation premium over single-class firms during the first few years after the IPO.<sup>165</sup> Indeed, the data presented in my companion article is compatible with the concept behind a fixed-time sunset provision proposal; it demonstrates that at the IPO stage, the dual-class choice is driven by the desire to pursue a founder’s idiosyncratic vision and thus, it would be efficient to provide the founder with a period of time to realize such vision before

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<sup>163.</sup> See Bebchuk & Kastiel *supra* note 14, at 604-607 (arguing that dual-class structures become more inefficient with age, such that an explicit fixed-time sunset provision is needed); see also Robert J. Jackson Jr., *supra* note 13 (stating, “There is reason to think that, at least for a defined period of time early in a company’s life, dual-class can be beneficial. The structure can allow entrepreneurs to build for the long term—and even transform entire industries—without being subject to short-term pressure. When many managers are at the mercy of daily stock-market pressure, dual-class can help America’s most innovative companies create the sustainable long-term value we need to grow our economy.”).

<sup>164.</sup> See, e.g., Bebchuk & Kastiel, *supra* note 14, at 590.

<sup>165.</sup> Martijn Cremers et al., *The Life-Cycle of Dual Class Firms* 1, 27 (Euro. Corp. Governance Inst., Working Paper Series in Finance, Working Paper No. 550, 2018), [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3062895](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3062895) (demonstrating by a matching analysis of single-class and dual-class firms that firm valuations evolve over time: in the first few years after IPO, dual-class firms have higher valuations, but after 6-9 years, the valuation premiums disappear); Kim & Michaely, *supra* note 17, at 26 (demonstrating that dual-class firms outperform single-class firms for eleven years following the IPO); Commissioner Robert J. Jackson, Jr., *The Case Against Corporate Royalty – Data Appendix*, 2018, <http://www.sec.gov/files/case-against-corporate-royalty-data-appendix.pdf> [<https://perma.cc/V3ZM-H9GQ>] (comparing 157 dual-class IPOs with and without sunset provisions, and showing that starting 3 years after the IPO, firms without any sunset clause are discounted relative to dual-class firms with a sunset provision).

converting to a single-class structure.

One of the challenges of this proposal is identifying the appropriate length of the time before the sunset is triggered; setting a fixed-time in advance requires speculating on when the structure will become inefficient. Among existing firms with fixed-time sunset provisions, the length varies significantly—from as short as 5 years in the case of Groupon to as long as 20 years in the case of Workday.<sup>166</sup> Empirical studies have provided some evidence on optimal length, with a wide range of 3 to 11 years. CII requested U.S. exchanges to require newly-listed dual-class firms to wind-down their structure within seven years of IPO.<sup>167</sup> Further studies examining the ideal duration of such a provision, with special emphases on specific industries, firms' maturity at the IPO stage, and other specific firms characteristics are much needed here,<sup>168</sup> to ensure that asymmetric information among shareholders would not abolish a structure that is still actually optimal once the predetermined period has passed. To some extent, this cost can be mitigated by allowing outside shareholders to extend the duration of the dual-class structure. In order to win votes for an additional duration of uncontested control, founders would be forced to take active

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<sup>166.</sup> *Time-Based Sunset Approaches to Dual-Class Stock*, COUNCIL INSTITUTIONAL INVESTORS (Feb. 14, 2018), <http://www.cii.org/files/2-14-18%20Time-based%20Sunsets.pdf> [<https://perma.cc/HYR8-6KCW>].

<sup>167.</sup> Letter from Ash Williams et al., Council of Institutional Inv'rs, to John Zecca, Senior Vice President, NASDAQ Stock (Oct. 24, 2018), [http://www.cii.org/files/issues\\_and\\_advocacy/correspondence/2018/20181024%20NASDAQ%20Petition%20on%20Multiclass%20Sunsets%20FINAL.pdf](http://www.cii.org/files/issues_and_advocacy/correspondence/2018/20181024%20NASDAQ%20Petition%20on%20Multiclass%20Sunsets%20FINAL.pdf) [<https://perma.cc/5VS8-M5HT>]; Letter from Ash Williams et al., Council of Institutional Inv'rs, to Elizabeth King, Chief Regulatory Officer, Intercontinental Exch. Inc, (Oct. 24, 2018), [http://www.cii.org/files/issues\\_and\\_advocacy/correspondence/2018/20181024%20NYSE%20Petition%20on%20Multiclass%20Sunsets%20FINAL.pdf](http://www.cii.org/files/issues_and_advocacy/correspondence/2018/20181024%20NYSE%20Petition%20on%20Multiclass%20Sunsets%20FINAL.pdf) [<https://perma.cc/X9P7-A3VT>].

<sup>168.</sup> See Jill Fisch & Steven Davidoff Solomon, *The Problem of Sunsets*, B.U. L. Rev., 1057, 1082 (2019), (mentioning that the time frame necessary for realization of firm's goals is likely to vary depending on the firms based on factors like the firm's maturity at the IPO stage, the duration of its business model, and the time required to develop its products or services and bring them to market).

steps through the initial time period in order to prove their added value to the firm. With the passage of time, outside shareholders would have a better knowledge about the firm, its products, and the value the founders bring. If founders prove their value to the firm, outside shareholders would then be expected to support the extension of the dual-class structure. If they are unable to show their value, outside shareholders might assume that the founders' control may no longer be necessary.<sup>169</sup> Thus, the use of fixed-time sunset provisions could potentially be useful, as long as the time limitation is long enough to allow founders to pursue a significant degree of their idiosyncratic vision and to the outside shareholder to get a better sense about the firm and its management.

Another challenge of the proposed sunset provision is that founders might be incentivized to extract private benefits in the period prior to the sunset of the dual-class structure.<sup>170</sup> As the findings in my companion project show, this concern might be more limited. This is because, at least for technology-based firms, the choice of dual-class structure is driven by a need to pursue founder's idiosyncratic vision. The fact that there is an intrinsic motivation to realize idiosyncratic vision (which cannot be consciously created by the founder) provides some degree of confidence that the founder will not extract private benefits from the firm, even if there is eventually opportunity to do so.<sup>171</sup> However, the problem could be that founders' idiosyncratic vision might turn out to be mistaken and so the firm's assets will end up being used in a suboptimal way, despite not being tunneled out. As time passes, and founders' idiosyncratic vision declines, the likelihood

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<sup>169</sup>. See Lucian A. Bebchuk & Kobi Kastiel, *supra* note 14, at 626-27 (discussing the end-period problem of sunset provisions).

<sup>170</sup>. John Coffee, Jr., *Dual Class Stock: The Shades of Sunset*, CLS BLUE SKY BLOG (Nov. 19, 2018), <http://clsbluesky.law.columbia.edu/2018/11/19/dual-class-stock-the-shades-of-sunset/> [<https://perma.cc/XJL4-43WD>].

<sup>171</sup>. Grinapell, *supra* note 18.

of a founder's mistakes increases. In addition, it might be towards the end of the dual-class period that a founder would reduce the degree to which the firm invests in new ideas in order to pursue those ideas in a different firm with an improved degree of control.<sup>172</sup>

The fixed-time sunset provision might be different in length for firms incorporated in and out of Delaware. As I have noted above, founders' idiosyncratic vision seems to be less important in choosing dual-class and single-class among firms incorporated in Delaware, since the state has a greater number of assurances against the expropriation of private benefits. Hence, dual-class structures could sunset on a longer duration for firms incorporated inside of Delaware in comparison to firms incorporated elsewhere. Moreover, regardless of one's views about whether or not index providers should include governance characteristics in their eligibility criteria, to the extent they do, it might be justified to exclude dual-class firms without a sunset provision that have maintained their structure for too long. At the point when the benefits of investing are declining, while costs are increasing, the risk associated such an investment might justify less representativeness of the index. It might also be valuable to distinguish between Delaware and non-Delaware incorporated firms, such that the age of exclusion for non-Delaware firms would be lower as higher degree of risk is associated with these firms.

Furthermore, the use of sunset provisions for converting from a dual-class structure to a single-class structure is not limited to the passage of time, but could focus on specific events around the presence of the founder in the firm, such as the founder's death, incapacitation, or departure from the firm.<sup>173</sup> Inclusion of a threshold event of the founder's presence at the firm is

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<sup>172</sup>. Fisch & Davidoff Solomon, *supra* note 168, at 18.

<sup>173</sup>. See Andrew Winden, *supra* note 26, at 9 (argues that death and incapacity sunset provisions should be included in all dual-class charters). An example of the importance of this kind of

being supported by the evidence provided in the companion article.<sup>174</sup> If the main driver for the choice of dual-class structures is founders' unique vision and specific set of skills, there is a little reason to maintain this structure when the founders are no longer present or able to lead the firm.<sup>175</sup> These kind of event-based provision would provide additional protection on top of the fixed-time provisions, and would be trigger in the extreme cases where the time period for the dual-class structure has not yet passed, but the founder can no longer realize the idiosyncratic vision.<sup>176</sup> It is less clear whether a decline in the percentage of shares held by the founder should justify the conversion of stock structure –and if so, by how much. There are reasons for founders to maintain meaningful economic interest in the firm: first, as the economic interest of the founder is reduced while the economic interest remains the same, the interests of the firm and the founder are less aligned and the founder is incentivized to extract private benefit of control; second, a reduction in the founder's economic interest can lead to less of founder's engagement in firm's operations.<sup>177</sup> Therefore, dilution-based sunsets could offer a response to the reduced economic interest. Yet, since the decision to dilute founder's economic interest can be driven by risk diversification considerations, the level of dilution required to trigger the sunset should not be too high to terminate an efficient stock structure.

Lastly, while recognizing the advantages of sunset provisions, it is unclear whether they should be mandated by SEC rules or stock exchange listing standards. An increasing number of

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provision is in the case of 94-year-old Sumner Redstone, who holds the majority of the votes in Viacom, yet is immobile and unable to speak coherently. *See*, Fisch & Davidoff Solomon, *supra* note 168, at 189-191; Bebchuk & Kastiel, *supra* note 14, at 588.

<sup>174</sup>. Grinapell, *supra* note 18.

<sup>175</sup>. *Id.*

<sup>176</sup>. Fisch & Davidoff Solomon, *supra* note 168, at 189-191; Bebchuk & Kastiel, *supra* note 14, at 588.

<sup>177</sup>. Fisch & Davidoff Solomon, *supra* note 168, at 1086.

dual-class firms are choosing to go public with fixed-time and event-based sunset provisions incorporated into their charters.<sup>178</sup> The CII reported that the year 2017 set a record for IPOs with fixed-time sunset provisions in the U.S., with 26% of dual-class IPOs including a fixed-time sunset provision.<sup>179</sup> The length of the sunset provision has also been shortened as well, with the mean sunset for 2017 at 9.5 years, down from 10.3 years in 2016.<sup>180</sup> It may well be that the market's response to the challenges associated with dual-class structure obviates the need for mandatory regulation.<sup>181</sup>

### *C. Bar on No-Vote Stock Listings*

The theory presented in this article and its supporting empirical evidence does not distinguish between low-voting and non-voting stock structures.<sup>182</sup> In both cases, founders choose to hold uncontested control in order to pursue their idiosyncratic vision. One is an extreme case of the other: instead of having no effective voting power in a low-voting class, outside shareholders have no actual voting rights in the non-voting class. I have suggested that firms with a stronger

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<sup>178.</sup> See, e.g., Andrew Winden, *supra* note 26, at 872, 950-951 (analyzing a sample of 139 dual-class firms, only two of which had fixed-time sunset provisions prior to 2010; 32% of dual-class firms which went public in 2010 or after had a fixed-time sunset provision. 48 out of 139 firms in the data set, 8 of which went public prior to 2000, included a dilution based sunset provision in their articles).

<sup>179.</sup> Council of Inst. Inv's, *Dual-Class IPO Snapshot: 2017-2018 Statistics* (Apr. 3, 2018), <http://www.cii.org/files/Board%20Accountability/2018Q1%20IPO%20Stats%20for%20Website.pdf>.

<sup>180.</sup> *Id.*

<sup>181.</sup> See Stephen Bainbridge, *Dual Class Stock Sunset Provisions* (Oct. 31, 2018), <http://www.professorbainbridge.com/professorbainbridge.com/2018/10/dual-class-stock-sunset-provisions-.html> (noting that dual-class sunsets on the rise may be an appropriate market-based response to the issues raised by dual-class stock, obviating the need for SEC rules or stock exchange listing standard).

<sup>182.</sup> See Ken Bertsch, Exec. Dir., Council of Inst. Inv's, *Unequal Voting Rights in Common Stock*, Remarks to the SEC Investor Advisory Committee (Mar. 9, 2017), <http://www.sec.gov/spotlight/investor-advisory-committee-2012/bertsch-remarks-iac-030917.pdf> [<https://perma.cc/G2EX-7E7Z>].

founder's reputation may be able to offer only non-voting stock to the public, whereas firms with lesser established founder's reputation would be less likely to have the option.

Furthermore, issuing non-voting class stock may be most efficient at first few years following firm's IPO, when it is able to further secure founder's control. Owners of non-voting shares are entitled to less information than holders of voting stock shares, as some of the most basic disclosure requirements do not apply. For instance, without issuing voting rights to the public, firms can avoid holding an annual meeting or providing a proxy statement to its shareholders.<sup>183</sup> Founders could thereby keep information such as firm's financial ability, potential conflict of interests, or executive compensation, private for a longer period than would be possible under a low-vote structure, where disclosure of this information would have been mandatory.<sup>184</sup> In addition, owners of non-voting shares lack mechanisms to accelerate change and hold management accountable, like the ability to nominate directors, raise shareholder proposals, cast say-on-pay votes, or call special meetings.<sup>185</sup> Thus, they are significantly limited in their ability to put pressure on the firm to change its direction or to keep founders from implementing their plans.

The issuance of such non-voting class, however, entails increasingly high costs. Annual

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<sup>183.</sup> See, e.g., Snap Inc., Amendment No. 2 to Registration Statement (Form S-1), at 5 ("Because our Class A common stock will be our only class of stock registered under Section 12 of the Exchange Act and is non-voting, we will not be required to file proxy statements or information statements under Section 14 of the Exchange Act unless a vote of the Class A common stock is required by applicable law").

<sup>184.</sup> Dov Solomon, *The Importance of Inferior Voting Rights in Dual-Class Firms*, *BYU L. REV.* 21-23 (forthcoming), [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3179375](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3179375).

<sup>185.</sup> Dual-class firms listed in AMEX during the years 1976-1985 were required to follow the "Wang Formula" that, among other things, provides holders of inferior voting shares the right to elect 25% of the board of directors. This structure provides minority shareholders with better mechanisms to accelerate change. See Kobi Kastiel, *Against All Odds: Hedge Fund Activism in Controlled Companies*, 61 *COLUM. L. BUS. REV.* 133-135 (2016) (describing the activist campaign against The New York Times and the engagement with Dillard's Inc., that were both facilitated by the ability to nominate minority directors to the boards).

meetings and proxy statements provide important information about a firm's performance, its financial statements, potential conflict of interests, and executive compensation.<sup>186</sup> The availability of this information could help outside shareholders recognize when founders have fulfilled their vision, and accordingly, when a founder's control is no longer needed. Moreover, the existence of these mechanisms is of great importance. While they are not likely to jeopardize a founders' ability to pursue their vision, they could challenge it; a seat on the board allows access to a firm's books, records, and board meetings, at which difficult questions can be posed, and important information brought in and out. These mechanisms allow for the possibility of influencing other independent directors by presenting arguments that counter the firm's strategy.<sup>187</sup> All of these interventions might become especially valuable with the passage of time, as the likelihood of a founder's strategy foundering increases.

As we will recall, Snap's unprecedented non-voting stock offering prompted clarion calls by institutional investors to bar future non-voting stock issuance. The initial investors in Snap's IPO were mainly sophisticated investors, able to conduct thorough analyses as a basis for their investment decisions.<sup>188</sup> Some of them, like Third Point LLC and Jana Partners LLC, tend to hold 5-10% of firm's voting share in order to threaten a proxy contest to accelerate change.<sup>189</sup> Given the lack of voting rights in Snap's IPO, it might suggest that the benefits of giving the founders

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<sup>186.</sup> See Dorothy S. Lund, *Nonvoting Shares and Efficient Corporate Governance*, 71 *STAN. L. REV.* 41-42 (forthcoming 2019).

<sup>187.</sup> See, e.g., Michelle Jarboe, *Forest City to Eliminate Dual-Class Stock Structure, Reduce Ratner Family's Presence on Board*, CLEVELAND.COM (Dec. 6, 2016) (describing Forest City Realty Trust, Inc.'s recent elimination of its dual-class stock led by Scopia Capital Management, activist hedge fund who held 8.4% of the class A shares), [https://www.cleveland.com/realestate-news/2016/12/forest\\_city\\_to\\_eliminate\\_dual.html](https://www.cleveland.com/realestate-news/2016/12/forest_city_to_eliminate_dual.html) [<https://perma.cc/G2EX-7E7Z>].

<sup>188.</sup> See Bernard Shafman, *A Private Ordering Defense of a Company's Right to Use Dual Class IPOs*, 63 *VILL. L. REV.*, 1, 20-21 (2018).

<sup>189.</sup> *Id.*

uncontestable control outweigh the costs of no-voting shares. Whether this is because it is still possible to influence firm's decision-making or because the founders are trusted to lead the firm properly is unclear. Therefore, the calls to prohibit all use of non-voting stock are misguided. A firm should be allowed to tailor its corporate governance structures to best fit its business strategy, industry, and personal characteristics of its founders.<sup>190</sup> To the extent one believes that certain limitations should be imposed in order to reduce the increasing costs associated with no-voting rights, these limitations might involve implementing mandatory, fixed-time sunset provisions for a time period shorter than that of low-voting shares, or, adding disclosure requirements to firms issuing non-voting shares.

#### *D. Increasing Competition Among Stock-Exchanges*

Policy makers in the U.S. have considered proposals to discourage the use of dual-class structures and index providers have partially or completely excluded dual-class firms from their benchmarks. Yet, the HKEx and the SGX, which initially barred the listing of dual-class firms, went the opposite way by revising their rules to permit firms going public with dual-class stock structures.<sup>191</sup> These decisions to allow dual-class listings were granted in light of the regulatory competition from the U.S. and after steadily losing significant IPOs to NASDAQ and the NYSE.<sup>192</sup> Prominent firms, like Alibaba and Manchester United, have shown that they are willing to list

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<sup>190</sup>. Zohar Goshen & Richard Squire, *Principal Costs: A New Theory for Corporate Law and Governance*, COLUM. L. SCH.: BLUE SKY BLOG (May 8, 2017), <http://clsbluesky.law.columbia.edu/2017/05/08/principal-costs-a-new-theory-for-corporate-law-and-governance/> [<https://perma.cc/98B4-895X>].

<sup>191</sup>. For a review on use of dual-class stock structure in other jurisdictions and the recent changes in HKEx and SGX, *see supra* notes 36-57 and accompanying text.

<sup>192</sup>. *Id.*

away from their home jurisdictions in order to ensure their dual-class structure.<sup>193</sup>

Under recent changes to the HKEx and the SGX listing rules, foreign listings in U.S. based stock exchanges—especially in the technology sector—could potentially go down in number. This is because foreign firms that prior to these changes were forced to list in the U.S. in order to have a dual-class stock structure, would prefer from now on to list their shares in their home jurisdiction or other foreign stock exchanges. Xiaomi Corporation, the Chinese electronics giant, and Meituan Dianping, China's biggest platform for on-demand services, are apt examples, as both firms decided to list their shares on the HKEx shortly after the new rules were implemented.<sup>194</sup> Alibaba's recent successful listing of its shares on the HKEx could potentially drive other foreign technology-based firms listed in the U.S. to follow suit.<sup>195</sup> Imposing restrictions on the ability to go public with dual-class structures would make U.S. markets even less attractive to foreign firms.

As for U.S.-headquartered firms, it is less clear that foreign stock-exchanges, such as the HKEx or the SGX, would pose a serious threat for their listings. Even if the U.S. becomes more restrictive in its dual-class acceptance policy than foreign stock exchanges, it seems that U.S.

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<sup>193</sup>. Curran, *supra* note 76; Stanton & Lau, *supra* note 85.

<sup>194</sup>. See Press Release, HKEX, HKEX to Offer Investors More Options When Xiaomi Shares Debut (Jul. 4, 2018), [https://www.hkex.com.hk/News/News-Release/2018/180704news?sc\\_lang=en](https://www.hkex.com.hk/News/News-Release/2018/180704news?sc_lang=en) [<https://perma.cc/5L26-ZTSH>]; Joanne Chiu and Liza Lin, *Chinese App Meituan Raises \$4.2 Billion in IPO*, WALL ST. J. (Sept. 13, 2018, 2:21 am ET), <https://www.wsj.com/articles/chinese-app-meituan-raises-4-2-billion-in-ipo-1536819691> [<https://perma.cc/77ZQ-ZQHV>].

<sup>195</sup>. Aaron Pressman & Clay Chandler, *Data Sheet - Why Alibaba's Hong Kong IPO Signal a Chinese Retreat from Wall Street*, FORTUNE (May 29, 2019), <https://fortune.com/2019/05/29/data-sheet-alibaba-hong-kong-ipo/>; Hudson Lockett, Mercedes Ruehl & Louise Lucas, *Alibaba Listing Offers Hong Kong a Shot at the One that Got Away*, FIN. TIMES (May 30, 2019), <https://www.ft.com/content/61abc226-81f2-11e9-b592-5fe435b57a3b> [<https://perma.cc/82GW-YMCZ>]; Naomi Xu Elegant, *Alibaba's Hong Kong Debut Is the Biggest IPO of 2019 - by Far*, FORTUNE (Nov 26, 2019), <https://fortune.com/2019/11/26/markets-alibaba-ipo-hong-kong/>.

headquartered firms may still not consider listing abroad. The U.S. financial market provides significant advantages over foreign stock exchanges for its listing firms, as it is the most liquid capital market in the world and has better access to global investors.<sup>196</sup> It is also easier for firms—especially startups—to stay in the U.S., rather than bear the heavy regulatory costs associated with foreign listings.<sup>197</sup>

### *E. Discouraging Listings*

As discussed above, it is not entirely clear whether the relaxation of rules in foreign stock exchanges to allow dual-class listings will shift U.S.-headquartered firms to list abroad. Yet, tightened restrictions on dual-class structures could encourage U.S. headquartered firms to remain private, or motivate listed firms to go private, eliminating the option to buy even the inferior voting stock. As the empirical evidence has shown, the desire to pursue founder’s idiosyncratic vision is a driver for the use of dual-class structure among technology-based firms. Therefore, from the founder’s perspective, listing for trade must offer firms a way to maintain their creative and innovative control, apart from the financial advantage of raising capital. Otherwise, firms might prefer to obtain outside equity from private venture capital funds. As it is also noted that one principal reason for the sharp decline in the number of IPOs in the past two decades, despite dramatic increase in aggregated market capitalization, is the increasing reluctance of technology-based firms to go public.<sup>198</sup> This is largely because the rising shareholder activism and its focus on

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<sup>196.</sup> See, e.g., Tin Zanki, *Dual-Listed IPOs Carve A Small But Steady Niche*, LAW 360 (Aug. 4, 2016), <https://www.law360.com/%2Farticles/%2F824591/%2Fdual-listed-ipos-carve-a-small-but-steady-niche> [<https://perma.cc/FNC5-P7W5>].

<sup>197.</sup> Bebchuk & Kastiel, *supra* note 14, at 625 n.111.

<sup>198.</sup> Vijay Govindarajan, Shivaram Rajgopal, Anup Srivastava & Luminita Enache, *Should Dual-Class Shares Be Banned?*, HARV. BUS. REV. (December 3, 2018), <https://hbr.org/2018/12/should-dual-class-shares-be-banned> [<https://perma.cc/U2CQ-YKQF>]; Vijay Govindarajan, Shivaram Rajgopal, Anup Srivastava & Luminita Enache, *Why*

short-term gains.<sup>199</sup> Restricting firms from going public with dual-class structures would encourage more technology-based firms to remain private, or motivate listed technology-based firms to go private.

The outcome of delaying IPOs, remaining private, or delisting is expected to be detrimental to the U.S. capital markets. Firms would be forced to settle for a higher cost of capital in order to maintain their innovative activity, rather than to obtain cheaper capital from accessing the public capital markets. Meanwhile, investors, would be deprived of beneficial investment opportunities in some of the most innovative firms.<sup>200</sup> While sophisticated investors might still invest in firms that remain private, the general public would miss out on their potential. To the extent that one sees value in providing innovative investment opportunities to the general public, rather than limiting innovation to a smaller group of sophisticated investors, this cost should be taken into account.

Indeed, remaining private is not an option for all firms. Founders with limited personal wealth would find it challenging to remain private, as accessing the public market at some point is generally considered critical to scaling up the firms' and to create liquidity for themselves and for early investors.<sup>201</sup> In addition, investors often provide financing based on an expectation to eventually liquidate their holdings through an IPO or a sale.<sup>202</sup> These "exit" opportunities will allow

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*We Shouldn't Worry About the Declining Number of Public Companies*, HARV. BUS. REV. (August 27, 2018), <https://hbr.org/2018/08/why-we-shouldnt-worry-about-the-declining-number-of-public-companies#comment-section>[<https://hbr.org/2018/08/why-we-shouldnt-worry-about-the-declining-number-of-public-companies#comment-section>].

<sup>199</sup>. Govindarajan, Rajgopal, Srivastava & Enache, *supra* note 198.

<sup>200</sup>. See FTSE Russell *Voting Rights Consultation – Next Steps*, *supra* note 5, at 4 (acknowledging that this is a feasible risk in changing the inclusion criteria).

<sup>201</sup>. See Bebchuk & Kastiel, *supra* note 14, at 625.

<sup>202</sup>. See Bebchuk & Kastiel, *supra* note 14, at 626.

investors to capture the return generate by their investment. Therefore, it seems that some firms would be forced to settle on their capital structure or to delay their IPO for a limited time, rather than to permanently remain private. However, as the number of public firms has declined by more than 45% in the past two decades, further discouraging founders from taking their firms public by placing limitations on dual-class structures would seem shortsighted.<sup>203</sup>

#### *F. Applying the Business Judgment Rule in Dual-Class Firms*

Scholars have speculated that the trend of dual-class listings might force the Delaware courts to consider more judicial intervention when dual-class stock structures are involved.<sup>204</sup> Generally, under the business judgement rule, a court will not substitute its own business judgment for that of a firm’s directors—even if the directors’ decision ultimately proves to be wrong—as long as the directors are disinterested, independent and have acted in good faith.<sup>205</sup> This is because

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<sup>203.</sup> See Jay Clayton, SEC Chairman, *Remarks at the Economic Club of New York* (Jul. 12, 2017), [http://www.sec.gov/news/speech/remarks-economic-club-new-york#\\_ftn7](http://www.sec.gov/news/speech/remarks-economic-club-new-york#_ftn7) [<https://perma.cc/6KWU-5G55>] (mentioning that the total number of listed companies in 2016 was approximately 4,300, compared to about 8,100 in 1996). Commission staff produced these estimates using data from the Center for Research in Securities Prices US Stock and US Index Databases (2016), U. CHI. BOOTH SCHOOL OF BUSINESS; Scott Kupor, CEO and Managing Partner for Andreessen Horowitz, Testimony to the SEC Investor Advisory Committee, (June 22, 2017), <http://www.sec.gov/spotlight/investor-advisory-committee-2012/kupor-sec-testimony.pdf> [<https://perma.cc/Q7L3-MSKG>] (mentioning that the raw number of IPOs has declined significantly: from 1980-2000, the US averaged roughly 300 per year; from 2001-2016, the average fell to 108 per year).

<sup>204.</sup> See BLOOMBERG BNA, *Del. Courts Must Rethink Approach if Dual-Class Stock Catches On*, YOUTUBE (May 25, 2017), <https://www.youtube.com/watch?v=T9FTIP05-Bc> (Yin Wilczek, Assistant Managing Editor at Bloomberg Law, interviews Professor Charles Elson, Director of the University of Delaware’s John L. Weinberg Center for Corporate Governance, stating that “At some point, whether its dual-class or no voting stock, I think the Delaware courts are going to have to rethink their approach to for fiduciary duties for those kinds of companies. . . . It might either call into question how Delaware approaches dual-class companies, or ultimately, does Delaware allow non-voting or dual-class stock”); Elson & Ferrere, *supra* note 9.

<sup>205.</sup> William T. Allen, Jack B. Jacobs & Leo E. Strine, Jr., *Function Over Form: A Reassessment of Standards of Review in Delaware Corporation Law*, 26 DEL. J. CORP. L. 859, 870 (2001) (“[A] standard formulation of the business judgment rule in Delaware is that it creates a presumption that (i) a decision was made by directors who (ii) were disinterested and

shareholders are able to hold directors accountable for their business decisions through an election.<sup>206</sup> However, when shareholders have limited votes or cannot vote at all, the court might take on greater responsibility for shareholder protection.<sup>207</sup> Consistent with this view, in December 2017, the Court of Chancery held that firm’s recapitalization plan to issue low-voting stock was a “conflicted controller transaction” that would be subject to strict entire fairness review. The court held that the controller obtained a “unique benefit” from the transaction not shared with other shareholders—the perpetuation of its control that had eroded over time.<sup>208</sup>

The application of the entire fairness standard might be justified when control transactions are involved, such as in the case of changes in the voting rights of shares midstream after they have been issued. In such circumstances, courts’ increased scrutiny will substitute the lack of market or board constraints and will police founders not take advantage of their position to further entrench themselves. However, in day-to-day management decision, the courts’ ability to carefully examine the terms of the transaction seems to be smaller than in control transactions, due to the specialized knowledge and unique skills required.

The empirical evidence presented in my companion article suggests that courts should

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independent, (iii) acted in subjective good faith, and (iv) employed a reasonable decision making process.”); Melvin Aron Eisenberg, *The Divergence of Standards of Conduct and Standards of Review in Corporate Law*, 62 FORDHAM L. REV. 437, 443 (1993) (“Under this standard, a director or officer will not be liable for a decision that resulted in a loss to the corporation, even if the decision is unreasonable, as long as the conditions of the business-judgment rule have been met and the decision is rational.”).

<sup>206</sup>. BLOOMBERG BNA, *supra* note 204.

<sup>207</sup>. Elson & Ferrere, *supra* note 9.

<sup>208</sup>. *See also* Sinclair Oil Corp v. Levien 280 A.2d 717, 720 (Del. 1971) (the Delaware Supreme Court held that the entire fairness review does not apply on a transaction led by a parent corporation that caused its 97%-owned subsidiary to pay large cash dividends on a pro-rata basis to its shareholders. The Court of Chancery distinguished between the cases, stating that in Sinclair the parent received nothing from the subsidiary to the exclusion of the minority shareholders of the subsidiary).

exercise caution in interfering in management decisions made by founders of dual-class firms.<sup>209</sup> If firms choose dual-class structure to retain control over management decisions in order to overcome asymmetric information among shareholders and to pursue founders' idiosyncratic vision, then founders should be free to make all the management decisions to implement such vision. If courts decide to scrutinize a dual-class firm's day-to-day management decisions more forcefully, then the asymmetry of information and difference in opinions would arise again. Increased interference from courts would not only undermine the objective of the dual-class structure, but would also be far more counterproductive than interference from outside shareholders in a single-class structure. This is because courts, as opposed to outside shareholders, require verifiable facts as the basis for their ruling. They cannot just follow founders' "hunch" or a vision as a justification for their rulings. Businesses, however, often call for quick decisions based on less than perfect information, especially when technology is involved. As it is nearly impossible to infer from a single unfavorable outcome whether it was due to bad luck or bad management, courts should abstain from engaging in scrutiny of day-to-day decisions of dual-class firms.<sup>210</sup> Moreover, unlike outside shareholders who own an equity stake in the firm, courts have no economic interest invested in the firm. Thereby, courts do not bear any consequence of their mistakes. If dual-class is preferred over single-class structures due to the burden of convincing outside shareholders with some skin in the game, it would be worse to change the standard of

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<sup>209.</sup> See also Goshen & Hamdani, *supra* note 14, at 598-601 (Goshen and Hamdani analyze the application of the business judgment rule in concentrated ownership in general rather than dual-class structures in particular. However, as the driver for dual-class is similar—pursuing idiosyncratic vision—the logic in their claims was employed here as well).

<sup>210.</sup> *Joy v. North*, 692 F.2d 880, 886 (2d Cir. 1982) (“The circumstances surrounding a corporate decision are not easily reconstructed in a courtroom years later, since business imperatives often call for quick decisions, inevitably based on less than perfect information. The entrepreneur’s function is to encounter risks and to confront uncertainty, and a reasoned decision at the time made may seem a wild hunch viewed years later against a background of perfect knowledge.”); See also Elson & Ferrere, *supra* note 9.

review and have courts with *no* skin in the game scrutinizing such transactions more forcefully. Thus, while it might be justified to have courts' police dual-class firms through greater scrutiny of control transactions, an increased interference in day-to-day management decisions would be potentially counterproductive.

## VI. CONCLUSION

More than a decade ago, Google went public employing a dual-class structure and was followed by prominent technology-based firms. The upward trend reignited the century-old controversy over whether firms should be permitted to adopt dual-class structures while seeking capital through public listing. This article has aimed to contribute to this discussion by focusing on determinants of dual-class structure among firms operating in an innovative environment.

The findings in my companion project demonstrate that founders' idiosyncratic vision predicts the choice of dual-class structures among technology-based firms. A further analysis has shown that founders' idiosyncratic vision is of greater importance in choosing dual-class structure for firms incorporated outside of the state of Delaware than for Delaware-incorporated firms. These findings confirm that expropriation alone cannot adequately explain the tendency of technology-based firms to adopt dual-class structure, and that the desire to protect founders' idiosyncratic vision also drives the choice of dual-class structure. This is a significant contribution to the dual-class controversy, and suggests that a dual-class structure, rather than a single-class structure, is likely to be an efficient capital structure for technology-based firms at the IPO stage.

This article has identified increased benefits and reduced costs of the dual-class structure for firms with significant innovative activity. The unique features of the innovation process on

which such firms depend increase asymmetric information between founders and outside investors, making the need to pursue a founder's idiosyncratic vision even more important. At the same time, these unique features lower agency costs, making the use of dual-class structure beneficial in net terms. This different strike of balance should be taken into account in any assessment of the desirability of dual-class structures.

The vigorous attempts to discourage the use of dual-class structure should be examined with care, as they might limit founders' ability to pursue their idiosyncratic vision. A total prohibition on issuing non-voting shares, exclusion of dual-class firms from index funds, and more judicial review could deter firms from going public with dual-class structures. Private firms might prefer to remain private or list abroad, while public firms might decide to go private, eliminating the option to buy even the inferior voting stock. Fixed-time sunset provisions, however, offer a more balanced tool to regulate dual-class structure, as they recognize the value of founders' control in the first few years following a firm's IPO.

## APPENDIX: TABLES AND FIGURES

**Table 1. Descriptive Statistics**

Variable	Dual-Class Firms			Single-Class Firms		
	Mean (Median)	Std. Dev.	Obs.	Mean (Median)	Std. Dev.	Obs.
Media Coverage Max	645.73 (69.5)	3145.43	62	66.39 (23)	209.12	618
Media Coverage Ave.	560.70 (46)	3118.03	62	47.99 (16)	131.32	618
Delaware Inc.	0.7580645	0.4317514	62	0.7168285	0.450904	618
EBITDA-to-Price	0.043 (0.012)	0.217	62	0.039 (-0.006)	1.038	615
Debt-to-Assets	0.226 (0.057)	0.347	62	0.173 (0.051)	0.308	614
R&D-to-Assets	0.136 (0.088)	0.142	62	0.220 (0.171)	0.236	614
Income-to-Assets	-0.107 (-0.034)	0.307	62	-0.297 (-0.149)	0.605	614
1-Y Sales Growth Rate	1.473 (0.639)	3.393	61	677.63 (0.613)	6327.15	610
Age	12.268 (9)	10.434	62	8.012 (8)	9.324	618
Offer Year	2007.081 (2006)	5.451	62	2005.655 (2005)	5.157	618
Price	17.263 (14.88)	11.123	62	12.873 (12.09)	5.249	618
EBITDA (per share)	0.621 (0.177)	2.507	62	0.693 (-0.093)	16.887	615
Total Debt	149.948 (8.633)	312.391	62	46.272 (1.694)	295.508	614
Assets	677.753 (196.344)	1361.823	62	133.858 (44.639)	483.599	614
Revenue	447.457 (128.641)	966.649	62	110.574 (38.580)	384.688	614
R&D Expenses	69.233 (11.32)	209.643	62	11.806 (6.983)	34.541	614
Net Income	-8.768 (-1.708)	171.332	62	-7.410 (-5.750)	44.185	614

**Table 2. The Effect of Media Coverage on IPO Price in Technology Sector**

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Dependent variable:  
IPO Price

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	(1)	(2)
Media Coverage Max	1.334136 (0.3646178)***	1.319458 (0.3681714)***
EBITDA-to-Price		0.1475134 (0.0386488)***
Debt-to-Assets		-0.8099503 (0.565874)
Income-to-Assets		0.5628848 (0.427605)
R&D-to-Assets		-0.9989577 (1.115608)
1-Y-Sales Growth Rate		0.0000717 (0.0000337)**

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Note: This table reports estimated coefficients from OLS model. Robust standard errors are in parentheses; \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%.

**Table 3. Determinants of Dual-Class Status in Technology Sector**

	Dependent variable: Dual-Class Status (=1)	
	(1)	(2)
Media Coverage Max	0.0510015 (0.0140756)***	0.0479913 (0.0127925)***
Inc. in DE		0.0474294 (0.031363)
Inc. in non-DE US state		0.0515739 (0.0401337)
EBITDA-to-Price		-0.0006963 (0.033127)
Debt-to-Assets		0.0302111 (0.0417716)
Income-to-Assets		0.0195476 (0.0188941)
R&D-to-Assets		-0.0852577 (0.045553)*
1-Y-Sales Growth Rate		-0.0000008 (0.0000004)*
Offer Year		0.0027743 (0.0024025)
Age		0.0027743 (0.0020159)

Note: This table reports estimated coefficients from OLS model, in which the dependent variable equals one for dual-class status, and zero otherwise. Robust standard errors are in parentheses; \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%.

**Table 4. Media Coverage as a determinant of Dual-Class Status in Technology Sector – Pre and Post 2004**

	Dependent variable: Dual-Class Status (=1)	
	(1)	(2)
	Pre-2004	Post-2004
Media Coverage Max	0.1562644 (0.2996451)	0.0476426 (0.0133391)***
Inc. in DE	-0.0926101 (0.0867195)	0.1035357 (0.0294305)***
Inc. in the non-DE state	-0.0999972 (0.0888915)	0.1178411 (0.0499843)**
EBITDA-to-Price	0.4659789 (0.5378212)	-0.0010996 (0.0031456)
Debt-to-Assets	0.1635176 (0.0942753)*	-0.03192 (0.0477118)
Income-to-Assets	0.0049511 (0.0247306)	0.0128433 (0.0310022)
R&D-to-Assets	-0.0970117 (0.0542336)*	-0.1268777 (0.0817697)
1-Y-Sales Growth Rate	-0.00000354 (0.00000229)	-0.0000001 (0.0000003)
Offer Year	0.0237098 (0.0249649)	0.0049939 (0.0042472)
Age	0.0019954 (0.0038158)	0.0023926 (0.0022264)

Note: This table reports estimated coefficients from OLS model, in which the dependent variable equals one for dual-class status, and zero otherwise. Robust standard errors are in parentheses; \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%.

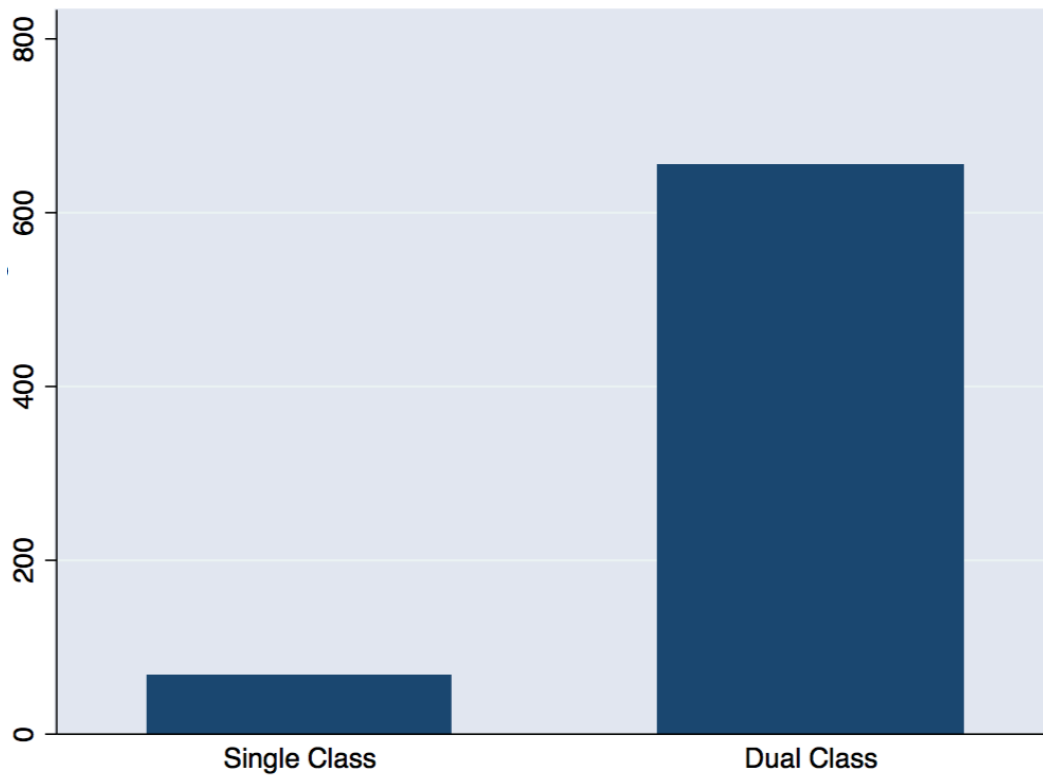
**Table 5. Dual-Class Status and Media Coverage by State**

	(1) All states	(2) Delaware	(3) non-Delaware States
Delaware Inc. (=1)*	-0.5882058		
Media Coverage Max	(0.1476571)***		
Media Coverage Max	0.6337844	0.0454417	0.640046
	(0.1474421)***	(0.0105931)***	(0.155364)***
Delaware Inc. (=1)	0.0431873		
	(0.0302308)		
EBITDA-to-Price	-0.0003869	-0.0005718	0.6927978
	(0.0035326)	(0.0032937)	(0.8161789)
Debt-to-Assets	0.0175971	-0.0187695	0.0055121
	(0.0434942)	(0.0574035)	(0.049944)
R&D-to-Assets	-0.067661	-0.0910958	0.002799
	(0.0463143)	(0.0583038)	(0.0657533)
Income-to-Assets	0.0216326	0.0174704	-0.0021435
	(0.020358)	(0.0250993)	(0.0448929)
1-Y Sales Growth	-0.0000027	-0.00000255	-0.0000873
	(0.0000012)**	(0.00000129)**	(0.0000987)
Age	0.0038499	0.004297	-0.0016951
	(0.0026267)	(0.0029135)	(0.005095)
Offer Year	0.002307	0.0024391	0.0033159
	(0.0025494)	(0.0028627)	(0.0055307)

Note: This table reports estimated coefficients from OLS model, in which the dependent variable equals one for dual-class status, and zero otherwise. Robust standard errors are in parentheses; \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%

**Figure 1. Media Coverage for Single- and Dual-Class Firms**

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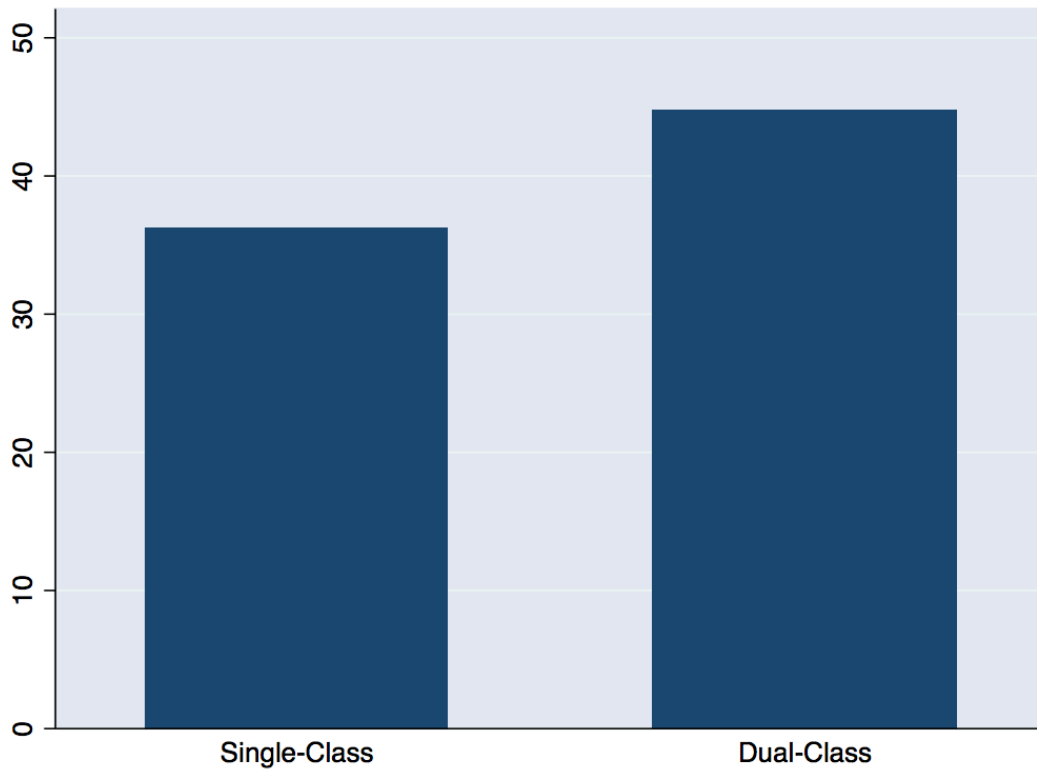


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Note: The bars describe mean media coverage (max) on firms' founders prior to the IPO for dual-class and single-class structure firms

**Figure 2. Media Coverage for Single- and Dual-Class Firms Pre-2004**

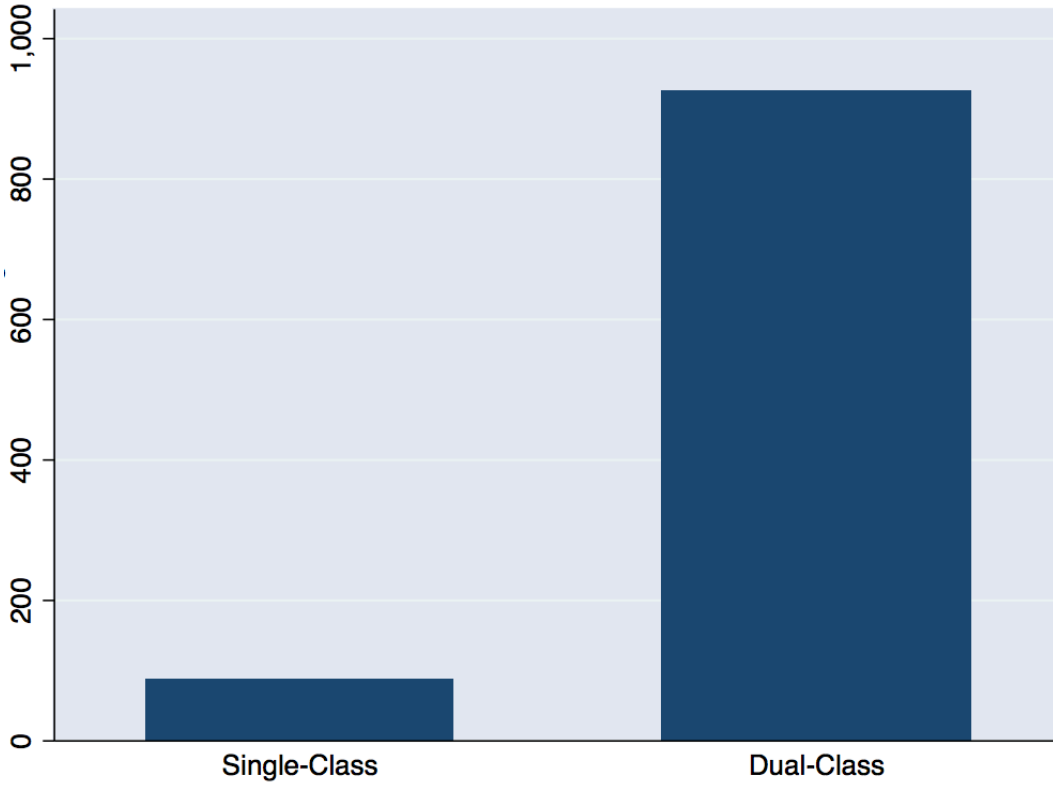
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Note: The bars describe mean media coverage (max) on firms' founders prior to the IPO for dual-class and single-class structure firms

**Figure 3. Media Coverage for Single- and Dual-Class Firms Post-2004**



Note: The bars describe mean media coverage (max) on firms' founders prior to the IPO for dual-class and single-class structure firms