"CAN ENTREPRENEURS SELL THEIR FIRMS AND STILL OWN THEM?": THE ADOPTION OF DUAL-CLASS STRUCTURES AND THEIR EFFECTS ON IPO PERFORMANCE

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DISSERTATION

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A dissertation submitted in partial fulfillment of the
requirements for the degree of Doctor of Philosophy in the
College of Business at the University of Texas at Arlington

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August, 2019

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ABSTRACT OF DISSERTATION

Dual-class Structures enable entrepreneurs to separate voting rights and cash-flow rights in arbitrary proportions to exercise control of the firm. Dual-class structures allow entrepreneurs to retain the benefits of being private and reap the benefits of going public. This dissertation identifies the governance, firm-specific, and strategic antecedents of firms that adopt dual-class structures and determines its effect on IPO performance. This study finds that firms that adopt fewer governance mechanisms, have a greater number of insiders, are younger, have a higher level of sales, pursue risky strategies (such as internationalization, acquisition, and innovation) are more likely to adopt dual-class structures. Further, I find that entrepreneurs adopt dual-class structures to gain entrenchment, but shareholders are more concerned about having unity of command in IPO firms than they are about avoiding entrenchment. They likely consider entrepreneurs to have more information about the future value of the opportunities. Thus, entrenchment strategies of entrepreneurs do not appear to have negative effects on IPO performance. We hand-collect data on a comprehensive set of IPO firms that went public between 2006 to 2018 and use a matched sampling research design to draw our conclusions.

KEYWORDS: dual-class structures, corporate governance, board of directors, venture capitalist, acquisition, internationalization, innovation

ACKNOWLEDGEMENT

I would like to express my sincere gratitude to my dissertation chairs, Dr. Susanna Khavul and Dr. Abdul Rasheed for their patience, motivation, enthusiasm, and immense academic knowledge which I relied on constantly throughout this rewarding process.

In addition to dissertation chairs, I would like to thank Dr. Parthiban David for his valuable guidance in theory development and his fruitful comments that have contributed immensely to my dissertation. I would also like to thank Dr. Mahmut Yasar for his valuable inputs pertaining to the methodology and data analysis.

Additionally, I would like to thank all my professors for teaching me all that I know and who have constantly encouraged me and provided me with all their support during my academic journey. I would also like to thank my colleagues whose company made this arduous journey enjoyable and full of memories.

Last but not the least, I would like to thank my family for their unconditional support and love: Malti Basudeo Singh, Nishi Singh, Shayna Singh, Shaurya Singh, Sarita Agrawal, and Nilesh Singh.

<u>DEDICATION</u>

I dedicate this dissertation to my father: Late Shri Basudeo Singh, my wife: Nishi Singh, and my

two angels: Shayna Singh and Shaurya Singh.

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CHAPTER ONE

INTRODUCTION

Entrepreneurs face several challenges in procuring financial and social resources for

survival and growth (DeSantola & Gulati, 2017; Katila, Rosenberger, & Eisenhardt, 2008).

These challenges often manifest in the form of difficult choices between control of the firm and

the growth of the firm (Wasserman, 2017). Entrepreneurs desire control of their firm, but to

grow they need to dilute their equity holding as growth funds are mostly obtained through equity

financing. The other sources of financing such as debt financing are limited for entrepreneurial

firms due to the liability of newness and smallness, and entrepreneurs may not have sufficient

sources of personal funding to invest in their firm (Bygrave & Timmons, 1992; Kotha & George,

2012). Scholars find that entrepreneurs are motivated by control considerations rather than the

growth considerations (Davidsson, 1989; Field & Karpoff, 2002), and thus, control of the firm is

more important for entrepreneurial firms but so is the realization that they must grow to survive.

Thus, entrepreneurship literature indicates that control of the firm and the growth of the firm are

a mutually exclusive phenomenon, and both are equally salient for the survival of the firm.

Another contentious decision that presents a choice between control and growth funding

is the initial public offering (IPO), the context of our study. Many entrepreneurs have to

undertake IPO as it is a means of exit for their initial investors (Gompers & Lerner, 2001).

Taking the firm public requires the firm to adhere to the institutional logics of shareholder value

maximization (Westphal & Graebner, 2010; Lok, 2010). Thus, IPO firms have to provide

participation rights to their shareholders by providing rights to exercise decision control through

the board of directors (Fama & Jensen, 1983), independence of board of directors (Useem,

1993), reporting audited financial statements (Aguilera, Desender, Bednar, & Lee, 2015), disclosing executive compensation (Gupta & Wowak, 2017), dividend payments (Demsetz & Lehn, 1985), disclosing business models (Zott & Amit, 2011), etc. These governance mechanisms provide greater participation rights to shareholders (Aoki, 2000), and is instrumental in attracting shareholders, and securing large scale financing for IPO firms' growth plans. On the other hand, greater participation rights of shareholders dilute entrepreneurs' control, as outside shareholders exercise control through the corporate governance mechanisms. Thus, going public is a compromise between control of the firm and the growth of the firm.

The ensuing contrast between the desire for control by entrepreneurs and the ensuing dilution of control characterized by equity financing and IPO lead to envisioning of reconciliation strategies by entrepreneurs. This study argues that entrepreneurs balance their need for control and the often control-diluting consequence of firm growth, by indulging in strategy of structural elaborations that allows them to adhere to the dominant institutional logics and legal requirements of the environment while at the same time fostering their interest of controlling the firm (Edelman, 1992; Joseph, Ocasio, & McDonnell, 2014). This desire of entrepreneurs to control their firm, and also have growth capital for their firm, can be either for gaining unity of command and unity of direction (Fayol, 1949) or for maximizing self-centered goals and gaining entrenchment. Edelman (1992) conceptualized structural elaboration theory by showing that the often-ambiguous legal mandates were exploited by organizations to adopt formal structures that appeared to conform to the legal requirements, but which were designed to foster managerial interests (Joseph et al., 2014). This study argues that dual-class structures are one of the most potent tools used by entrepreneurs to adhere to the legal requirements of corporate governance while still being able to foster their self-interest of controlling the firm, as

there are no legal guidelines in regard to structures to be adopted by corporates in America (Fischel, 1983; Bainbridge, 2007). This study also argues that dual-class structures further enable entrepreneurs to adhere with the institutional logics of shareholder value maximization, by elaborating dual-class structures only as an anti-takeover mechanism (although it is much more, as will be discussed), that protects the firm from corporate raiders (DeAngelo & DeAngelo, 1985), while the firm makes long-term investments in growth strategies. This elaboration helps them in gaining legitimacy for their actions, from institutions in their environment, while at the same time endows them with absolute control of their firm.

Business strategy is concerned with making an appropriate choice ex-ante, under conditions of predictive uncertainty, to achieve a specific business goal (Porter, 1996). The variations in capital structures available for adoption by a firm and, the often-conscious choice of entrepreneurs to choose one capital structure over another, is in dire need of explanation from the lens of organizational strategy. There is a distinct stream of literature in management on ownership structures, but mostly these studies have concentrated on the effect of characteristics of owners and their holdings, and their business strategy (Johnson & Greening, 1999; Mallette & Fowler, 1992; Schulze, Lubatkin, & Dino, 2003; Goranova, Dharwadkar, & Brandes, 2010; etc.). This study proposes that we also need to study the characteristics of the capital structure itself and the distribution of voting rights associated with it, as that can affect firm strategy. For e.g., one share-one vote capital structures (single-class) and dual-class capital structures. My search for literature on capital structure, in strategy and entrepreneurship field, could identify only a few studies that have focused on the relationship between capital structure and organizational strategy. Strategy scholars have studied several anti-takeover mechanisms like poison pill adoption (Mallette & Fowler, 1992; Davis, 1991; Schepker & Oh, 2013), golden parachutes

(Cochran, Woods, & Jones, 1985; Singh & Harianto, 1989; Wade, O'Reilly III, & Chandradat, 1990; Fiss, Kennedy, & Davis, 2012; etc.), Greenmail (Kosnik, 1987, 1990; etc.), etc., but there are no studies on dual-class structures although its characteristics make it the most potent anti-takeover mechanism that a corporation can adopt. Also, dual-class structures endow absolute control in the hands of the insiders, and thus, we must understand whether this absolute control leads to the pursuit of shareholder value maximization or self-maximization goals. Thus, this study is a step forward in addressing this gap and showing that capital structures (or rights allocated in capital structures) have a paramount effect on firm strategy and there is a dire need to understand the fundamentals that affect the choice of capital structures as well as its effect on performance.

Dual-class structures have at least two different classes of shares and may have three or even more than three classes of shares, but irrespective of the number of classes of shares, they have been subsumed under the name of dual-class structures (Gompers, Ishii, & Metrick, 2003). More recently they have also been called as super-voting structures, alluding to the fact that one class of shareholders in dual-class shares (usually class B, which is not usually traded in the stock market) have more voting rights per share than the inferior class of share (usually class A) - which are likely to have less than one vote per share, exactly one vote per share, or no votes per share (DeAngelo & DeAngelo, 1985; Grossman & Hart, 1988). For example, Class A shareholders of Alphabet Inc. (holding company of Google) have one vote per share while Class B shareholders have 10 votes per share. Class A shareholders of Snap Inc. have no votes for any number of shares held while Class B shareholders have 10 votes for every share held. To put this example in perspective we cite the control structure of Snap, Inc. whose co-founders hold only 38.4% of the shares (cash-flow rights) but have 90.5% of the voting rights, leading to

control in disproportion to the number of shares held. Usually, the entrepreneurs and a few select early investors of the firm hold the Class B shares – the superior voting right shares.

Bebchuk, Kraakman, & Triantis (2000) termed dual-class structures as one of the controlling-minority structures as the controlling owners have minority ownership of equity shares but majority ownership of the voting rights. These structures often lead to principal-principal conflict and are more likely to be found in countries with lax corporate laws (Bebchuk et al., 2000; La Porta, Lopez-de-Silanes, & Schleifer, 1999; Douma, George, & Kabir, 2006). Khanna & Palepu (2005) find that controlling-minority structures are more prevalent in economies with institutional voids as these structures provide firms with the ability to replace the inefficient institutions by developing their own internal capital markets, internal labor markets, etc. Finally, Gomez-Mejia, Larranza-Kitana, and Makri (2003) found that minority controlling structures are used by family firms to achieve their family goals of providing employment to family members, etc. None of the above-said characteristics are associated with the US markets but as of 2015, 15% of the firms listed on NYSE have dual-class structures (Wall Street Journal, 2017). Thus, this study infers that the proliferation of super-voting structures cannot be entirely explained by the presence of lax corporate laws (Bebchuk et al., 2000), inefficient institutions (Khanna & Palepu, 2005), or existence of family ownerships (Gomez-Mejia et al., 2003). There are other, as yet unexplored reasons that can better explain the antecedents of super-voting structures. Thus, this study aims to unravel the antecedents of super-voting structures which, we conjecture, are not correlated with the quality of institutions or characteristics of institutions but may be embedded in the initial life-experiences of the entrepreneur firms, which we refer to as firm-specific characteristics, and the proclivity of the entrepreneurs to control their firms.

This study explores the governance, firm-specific, and strategic antecedents of dual-class structures by undertaking an elaborate study of IPO prospectuses, which contain the details of strategies undertaken by the firms, the characteristics of the firm at the time of IPO, and the governance considerations of the firms. We consider the effect of firms' growth strategies such as acquisition, internationalization, and innovation on the probability of dual-class adoption, and take into account the control considerations that emerge due to the presence of concentrated owners, corporate funding, venture capitalists (VCs), etc.

Dual-class structures allow entrepreneurs to exercise control without the requirement of owning the majority of the common-stock as the control is exercised through voting rights rather than the cash-flow rights of the common-stock (Fischel, 1983; Smart, Thirumalai, & Zutter, 2008). Through their control over the majority of the voting rights, the entrepreneurs are able to appoint their nominees as boards of directors although these nominees are independent and have no relation to the owners, the socio-political perspective would indicate that they would be beholden to the controlling owners who get them appointed (Golden & Hillman, 2003; Westphal & Zajac, 1995). Thus, entrepreneurs (controlling owners) are able to exercise absolute control over the firm by making corporate governance mechanisms symbolic rather than an effective oversight mechanism. There are arguments in favor of and against such absolute control being in the hands of controlling owners. Agency theory would assert that entrepreneurs may use this absolute power to entrench themselves while the classic organizational theory would assert that entrepreneurs gain unity of command to pursue their strategies without being subjected to oversight by stakeholders, who may not have complete information about the future value of firm's strategies (Westphal, 1998). This study uses competing hypotheses between agency theory and organizational theory assertions to identify whether factors influencing the adoption

of dual-class structures are borne out of concerns for gaining unity of command or for entrenchment.

Entrepreneurs who adopt super-voting structures are able to adopt such structures due to the legitimacy of the institutional logic that entrepreneurial firms are often the target of corporate raiders during their growth phase, which may negatively impact the shareholder value. This assertion indicates that entrepreneurs adopt these structures to gain unity of strategic direction by gaining unity of command. Thus, organizational theory scholars would argue that entrepreneurs adopt dual-class structures to drive the long-term growth of their firms without having to invest time in managing stakeholders who have short term considerations, and who may not have perfect information about the firm and its strategy (Westphal, 1998). On the other hand, if organizational theory scholars adopt a structural elaboration view, they may argue that entrepreneurs elaborate dual-class structures as an anti-takeover mechanism although they had the option of adopting other anti-takeover mechanisms which are more targeted to protect firms from takeovers, such as poison pills, greenmails, golden handshakes, etc. as dual-class structures are not only adopted as an anti-takeover mechanism but also as a mechanism that provides entrepreneurs unity of command to pursue their growth strategies. Thus, other anti-takeover mechanisms are overlooked by entrepreneurs as dual-class structures provide entrepreneurs wider control over their firm's governance and growth strategies as compared to just the market for corporate control.

Agency perspective in capital structure literature argues that the absolute control endowed by dual-class structures enable controlling owners to maximize their self-interest at the cost of common shareholders who do not have any mechanism to exercise decision control (Jensen & Meckling, 1976; Baysinger & Hoskisson, 1990). Thus, dual-class structures would

facilitate the entrenchment of controlling owners by debilitating market for corporate control and internal governance mechanisms. Agency scholars in finance domain have argued that entrenchment is desired by controlling owners to gain private benefits of control. Private benefits of control are benefits obtained by controlling shareholders not obtainable by common equity shareholders (Grossman & Hart, 1988; Chemmanur & Jiao, 2011). Thus, if agency scholars adopt a structural elaboration view then they may argue that dual-class structures are elaborated by entrepreneurs to gain entrenchment in their firms so that the private benefits associated with the firm can be reaped.

The agency theory-based studies function under the assumption that individuals are self-interested and if they are not monitored efficiently then it can lead to problems such as shirking or moral hazard, adverse selection, and entrenchment of management or owners (La Porta et al., 1998; Bebchuk et al., 2000; etc.). On the other hand, the studies that argue for the efficiency reasoning associated with different ownership structures function under the assumptions promulgated by organizational theory that agents are collectivist, pro-organizational, and trustworthy (Davis, Schoorman, & Donaldson, 1997), and require clear unity of command to make their strategies effective (Finkelstein & D'Aveni, 1994). In most of the contexts where the test of agency theory and organizational theory has been done, e.g., executive compensation, CEO-Duality, board of directors, concentrated ownership, dispersed ownership, etc., the results have been contingent on certain firm-specific factors leading to no generalizable conclusions. Similarly, it is very difficult to discern whether dual-class structures are adopted to gain unity of command or entrenchment, but in the context of IPO, it is possible to gauge from shareholder reaction whether shareholders perceive dual-class structure adoption as a unity of command strategy or entrenchment strategy. Most of the investment decisions of individual dispersed

investors are based on investment recommendations of their financial advisors, public recommendations by brokerage houses, or on reports published in credible media outlets. These investment specialists have sufficient motivation to engage in information search about specific companies and the goals of the strategies perceived by these companies. Thus, their assessment of dual-class structure adoption as positive or negative may be largely based on their conclusion of whether these structures are adopted for the unity of command or entrenchment. We use this understanding to argue that if dual-class structure adoption leads to a positive outlook on a firm's offering then investors perceive dual-class structure being adopted for the unity of command. Otherwise, they perceive it as an entrenchment strategy.

This dissertation explores the effect of agency prescriptions in the context of concentrated ownership in dual-class structures, which is different from the extant literature on concentrated ownership in single-class structures, as the concentrated ownership in dual-class structures is on account of voting right concentration rather than the cash-flow right concentration. This study identifies firm-specific, strategic, and governance-related antecedents of dual-class structures and then tests whether these antecedents are representative of the entrepreneur's need for unity of command or entrenchment. This dissertation is organized into seven chapters: The first chapter is the introduction, the second chapter is a literature review, the third chapter is hypotheses development, the fourth chapter is data sources and analysis, the fifth chapter is discussion of results, the sixth chapter is discussion, and chapter seven is the conclusion.

CHAPTER TWO

LITERATURE REVIEW

"Agency theory is a theory of ownership (or capital structure) of the firm" (Jensen &
Meckling, 1976; Pg. 309). The extant literature on ownership structure or capital structure has
subsequently employed agency theory to research several dysfunctionalities that are caused due
to the separation of ownership and management. Some of the literature streams that have used
agency theory, since the seminal paper of Jensen & Meckling (1976), are executive
compensation, board of directors, market for corporate control, concentrated ownership,
shareholder activism, etc. Essentially these literature streams have discussed issues of
maximizing the goals of shareholders who by virtue of their cash-flow rights are the de facto
owners of the company as these shareholders were part of single class companies. In single-class
firms, shareholders have voting rights in proportion to their number of shares, and thus, the
number of shares determines the controlling owner. Thus, most of the literature studying
ownership structures have subsumed capital structures within the domain of ownership
structures. This assumption, we argue, was largely valid in the 1970s and 1980s as most of the
firms had one share-one vote structures and any deviance from one share-one vote structures
were statistically insignificant. One share-one vote structures meant that the number of shares
held was equal to the number of votes and thus, controlling owners held the number of shares
and votes necessary to exercise control. But what if equity holdings do not determine the
ownership structures? That is the capital invested by shareholders does not correlate with the
percentage of ownership that they are allocated. It necessitates the study of capital structures as
a distinct phenomenon from the ownership structures.

2.1 Capital Structures

The capital structure of the firm is composed of several instruments through which the firm acquires capital for its operational and growth strategies. Thus, capital structures may be composed of equity shares, preferential shares, debentures, promissory notes, bank debt, bonds, etc. The focus of this dissertation is on the voting rights of equity shares of the firm, as most often than not it determines the ownership of the company. This dissertation categorizes equity capital structures into two types; the single-class and the dual-class structures (Grossman & Hart, 1988; Harris & Raviv, 1988; Smart et al., 2008). Under one share-one vote structure (single-class), shareholders are granted one vote for every share that they possess while in dual-class structures voting rights may not necessarily be in the same proportion as the number of shares held. Dual-class structures are capital structures that allow firms to segregate cash-flow rights and voting rights of a common-stock in a way that one common-stock may have more than one vote, exactly one vote, or no vote at all (DeAngelo & DeAngelo, 1985; Grossman & Hart, 1988).

Most of the scholarly work related to the capital structure is in finance and law literature. The domain of law literature is concerned with the alignment of capital structure with the corporate law and provisions of the shareholder rights while finance literature is concerned with the study of capital structures that aid in efficient growth of the firm and maintain attractive market valuation. Finance literature has studied many influences of capital structure on firm valuation and business strategy including the effect of dual-class structures on IPO pricing and discount, firm's financial performance, operating performance, rate of CEO turnover, expenditure on R&D, value-destroying mergers, and pay-for-performance, etc. Few of the dependent variables studied in finance literature may have relevance for organizational science and business strategy. Specifically, in the context of dual-class structures, there are several

findings that indicate organizational strategy being affected by this kind of structures (Smart et al., 2008; Masulis, Wang, & Xie, 2009; Gompers, Ishii, & Metrick, 2003, 2010; Harris & Raviv, 1988; etc.).

2.2 Dual-Class Structures

There are several forms of ownership of public companies, but the focus of this dissertation is on the type of ownership that is facilitated by dual-class structures where the controlling owners have voting-rights in proportions greater than the Cash-flow rights (DeAngelo & DeAngelo, 1985), also termed as controlling-minority structure by Bebchuk et al. (2000). Grossman & Hart (1988) have said that "…securities can be designed in various ways: one share of a given class may have a claim to votes disproportionately larger or smaller than its claim to income" (pg. 175). In this context, scholars have defined super-voting shares as having voting rights in significantly greater proportion to the cash-flow rights. Super-voting shares exist in companies that go public through dual-class or multi-class shares and have at least one class of shares with superior voting rights and thus, they are called as super-voting shares, and the firms that have these shares are called super-voting structures or dual-class structures. Super-voting shares, as their name suggests, creates an inferior class of stock, with lesser or no voting rights in comparison to the superior class of stock although, in terms of cash-flow rights, both classes of shares are at par. This means that the inferior class of stock has either 1 vote per share (while the superior class, for e.g., may have 10 votes per share) or no vote per share (superior class shares may be the only class of share with voting rights). The important aspect here is that the cash-flow rights remain in proportion to the number of shares held even though the voting rights associated with these shares may vary. The superior class of shares is usually owned by the insiders, who devise this structure to maintain control of the firm in the market for corporate

control. Thus, super-voting structures are one of the most extreme examples of antitakeover protection (DeAngelo & DeAngelo, 1985; Gompers, Ishii, & Metrick, 2010) and there is a virtual consensus that antitakeover protections debilitate shareholder rights by denying them rights of executive decision control (Fama & Jensen, 1983; Gompers et al., 2003).

The proportion of share-holding and vote-holding can vary in various ratios in dual-class structures, but this study would like to focus on dual-class structures that provide controlling owners with the control that is disproportionately upwards to their equity stake. For simplification and theory development, we assume that the controlling owners in a super-voting structure have a minority claim to cash-flow rights but majority claim to control rights (i.e. controlling owners will have less than 50% claim on the outstanding cash-flow rights but more than 50% on the outstanding voting rights - vote-holding>share-holding). They have a control which is disproportional to the outstanding shares being held by them, which we label as disproportional control. I further label the holders of super-voting shares with disproportional control as the owners of the firm while the holders of the inferior class of stock, who are also minority shareholders, as the shareholders of the firm. Thus, the term owner and shareholder shall be used in the above-described context.

The owners of companies with dual-class structures have disproportional control and their goals will likely find primacy over the goals of other dispersed owners who have no benefit to organizing collective action since they are voting minority. These structures may render corporate governance prescriptions ineffective as owners are endowed with the power to symbolically comply with the corporate governance requirements while still maintaining their interests (Edelman, 1992; Joseph et al., 2014). Super-voting structures, more popularly known as the dual-class structures, are neither prohibited nor required and are considered to be the

domain of private contract between the firm and its various types of investors (Fischel, 1987).

Thus, this study argues that entrepreneurs use this legal leverage and power to adopt dual-class

structures which enable them to form corporate governance structures that conform to the legal

requirements, but which fosters entrepreneurs' self-interest of having formal control of the firm.

This formal control of the firm can be used by entrepreneurs to gain unity of command to further

the goals of collective owners (public benefits of control) or to entrench themselves and reap

private benefits of control.

 2.2.1 Benefits of control. Control of shares can endow two types of benefits to

investors; private benefits and public benefits. Private benefits of control are usually available

only to the controlling owners of the firm while public benefits of control are shared benefits

available to all shareholders equally (Grossman & Hart, 1988). For example, private benefits of

control are most apparent in the case of corporate takeovers where the controlling shareholders

are offered a premium to sell their shares (Grossman & Hart, 1988). Private benefits of control

may also include corporate synergy benefits realized by the acquirer (for e.g. financial benefit

accruing due to product synergy between acquired and acquiring firms, etc.), perquisites of

control like inflated compensation, and in extreme cases, the diversion of resources from the

security holders to subsidiaries of management or the acquirer (Grossman & Hart, 1988).   The

public benefits of control are the benefits available in the open markets through dividends issued

by a firm (cash-flow rights) and premiums offered by the market for firm performance

(Grossman & Hart, 1988).

 Scholars have provided arguments for and against the private benefits of control and how

it can create value or compromise value for the public benefits of control (Bebchuk, 1994, 1999;

Barclay & Holderness, 1989; Maug, 1998; Schleifer & Summers, 1988; La Porta, Lopez-de-

Silanes, Shleifer, & Vishny, 2000). Private benefits of control, if endowed in the hands of large block holders, ensures effective monitoring of executives, and creation of positive public benefits, as these block holders have the incentive to enhance non-distortionary distribution of dividend (Filatotchev & Mickiewicz, 2001), and thus, maximize return on their investments by maximizing public benefits.

If the controlling owner does not have public benefits of control in proportion to the private benefits of control, as in the case of super-voting shares where voting rights far exceed the cash-flow rights, then it reduces the incentive to maximize public benefits of control and reduces the cost of expropriation of minority shareholders (Bebchuk, 1994; Stiglitz, 1995). Secondly, it increases the probability of entrenchment of controlling owners (McConnell and Servaes, 1990; Mikkelson and Partch, 1989). These two aspects may lead to subjective evaluation of investment opportunities, asset stripping, transferring wealth from minority shareholders to themselves (La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 1998), colluding with managers to pursue value-destroying growth rather than returns to residual risk bearers (Gibbs, 1993), lack of diversification (Maug, 1998), etc. Thirdly, controlling owners bear the risk of management decision in proportion much lesser to their voting-rights. Private benefits of control in super-voting structures leads to dilution of risk of decision control and inflation in the risk of public benefits of control. Thus, management decision risk is diluted for the controlling owners and inflated for the minority shareholders.

2.2.2 Voting rights. The traditional finance parlance of Modigliani and Miller (1958) recognized securities by their cash flows (equities by their dividends and debt by its interests), but the later research pointed out that cash flows were only half the story and the more defining feature were the rights associated with these securities (voting rights in equities and collateral

possession rights in debt)(Hart, 1995; La Porta, Lopez-De-Selanes, Schleifer, & Vishny, 1998).

The worth of these rights is derived from the legal rules of the jurisdiction where these securities

are issued. Thus, we find different value for voting and cash-flow rights in different countries

like USA, Sweden, Israel, and Italy (Zingales, 1994; La Porta et al., 1998). These rights are

important as it empowers investors to extract returns on their investment from the managers

(Schleifer & Vishny, 1997). Shareholders get dividends because they have the power to replace

the incumbent management while creditors receive their payments because they have the right to

repossess collateral (Hart, 1995). Without some form of rights associated with shares, investors

would not get paid, and firms would find it difficult to raise external finance.

The contractarian view of economics views firms as a web of contracts. These contracts

are often incomplete and cannot be written by accounting for all contingencies which may occur

during the life of the firm. Since the contracts are incomplete and the legal rules of corporate

governance provide an only general outline regarding the structural rules, fiduciary principle, and

the relations amongst corporate actors, many of the actions of contract holders are left to the

discretion of contract-holders (Easterbrook & Fischel, 1983). The right to vote enables the

contract-holder with utmost risk, to make decisions on actions that are discretionary and not

specifically covered by the provisions in the contract (Manne, 1964; Easterbrook & Fischel,

1983; Burkart & Lee, 2008). Thus, voting rights are an integral part of the ownership that serves

the function of decision control through fiduciary representatives (Fama & Jensen, 1983).

Voting rights and its use in exercising control of the firm is as old as the history of the

public corporation. This dissertation is interested in the study of controlling minority structures

where the control is exercised by owners on account of owning the majority of the voting rights

rather than the cash flow rights. Bebchuk, Kraakman, & Triantis (2000) examined the agency

costs associated with three primary structures that allow shareholders to control a firm despite possessing only a fractional claim over the firm's cash-flow; super-voting structures, pyramids, and cross-holdings (see also La Porta, Lopez-de-Silanes, & Schleifer, 1999). They termed it as controlling-minority structures. These structures are often found in legal environments with lax corporate law as these structures are embedded with high agency costs (Bebchuk et al., 2000). More specifically, dual-class structures have been studied widely by the scholars in finance, economics, and law streams as these structures not only distort the risk-reward relationship that is an integral part of economic theory, but it also distorts the rules of corporate democracy and eliminates the market for corporate control (Harris & Raviv, 1988; Fischel, 1987). Dual-class structures and the widely associated increase in agency costs by such structures are based on the assumption that individuals are self-interested and tend to maximize their own goals over the goals of other cooperating members in the firm (Jensen & Meckling, 1976).

More pertinently super-voting structures present a context where controlling owners may maximize their own goals at the cost of other owners of the firm. Thus, leading to the principal-principal conflict (Dharwadkar, George, and Brandes, 2000; Douma, George, and Kabir, 2006; La Porta et al., 1999). In the context of dual-class, the failure of the agent and principal to align their goals is not as important as is the conflict between two groups of owners, one group is the controlling owner, but minority shareholder and the other group is the minority owner, but the majority shareholder (La Porta et al., 2002). It has been pointed out by scholars that controlling principals are often able to legally expropriate minority principals and creditors (Schleifer & Vishny, 1997), and thus, if controlling owners have a higher cash-flow rights then it may lead to lower expropriation, as expropriation, in general, is costly to exercise (Burkart, Gromb, and Panunzi, 1998; Claessens et al., 2002). This is evident in the fact that countries with inferior

shareholder rights attach a greater premium to voting rights (Lease, McConnell, & Mikkelson, 1983; Zingales, 1994; Nenova, 2001).

      2.2.3 Dual-class structure creation. Dual-Class structures can be created in two ways. The primary way that the dual-class structures have been created in recent years (e.g. Google, Groupon, Snap Inc., etc.) is through the adoption of these structures at the time of initial public offering (IPO). The second way of adopting these structures, which was largely used during the prominence of corporate raiders in the 1980s, is to adopt these structures through a charter amendment creating two classes of common stock. Class A shares would be the existent common stock while class B shares are created by issuing it to existent shareholders as a stock dividend. These stock dividends are largely given to the existing managers or even if they are distributed generally amongst all shareholders, normal shareholder turnover would concentrate these class of shares in the hands of the long-term investors, especially the incumbent managers (Bainbridge, 2007). This method of converting to dual-class structures may be categorized as a dual-class recapitalization.

      Jarrell & Poulsen (1988) have elaborated on three methods used by firms to recapitalize to dual-class. The first method is the dividend method which involves either splitting of the existing stock or issue of low-vote stocks as a dividend. The existing stock is designated as the high-vote stock while the newly issued stock is designated as low-vote stock. Management issues a higher dividend (usually 10%) to low-vote stocks and thus, encourages high-vote stockholders to exchange their shares with low-vote stock. Alternatively, management restricts the transfer of high-vote stock only to the family members, affecting its liquidity and thus, motivating existing shareholders to prefer low-vote stock. On the other hand, insiders usually

purchase the high-vote stock from the markets and hold their current holdings to consolidate their control.

The second method is the exchange method. In exchange method a new class of stock with higher voting rights is issued while the existing class of shares is designated as low-vote shares, entitled to a high rate of dividend but having restricted selling rights (can be sold only to the family members). Further, shareholders are allowed to exchange their low-vote high-dividend shares with high-vote low-dividend shares for a limited period. Needless to mention that insiders exchange their shares into high-vote shares while most of the common shareholders either sell their shares or hold their low-vote shares. Thus, insiders are able to increase their control through this method of recapitalization.

The third method is the length-of-time method involving a change in the voting rights depending upon the length of time the shares are held. Thus, when the firms adopt this method of recapitalization, all shares currently outstanding become long-term shares and are allocated superior voting rights, say ten votes per share. Any shares that are sold after the effective date of recapitalization get converted into short-term shares and are allocated low-voting rights, say one vote per share. Thus, shares are considered to be long-term shares only if they are held for a considerable duration of time, mostly fixed at four years.

2.2.4 History of dual-class structures. When we are acquainted with dual-class structures, the very elemental question that arises in our mind is – are these structures legal? How can there be a provision in corporate law to adopt such structures that may limit the voting power of, or disenfranchise, the shareholders from the process of participating in their own corporation. We look towards the history of super-voting structures to find how have super-voting structures been able to survive for more than 100 years. Traditionally in the U.S.,

corporations have issued shares with equal voting rights. The first company to violate this norm was International Silver Company which issued twenty million stock with no voting rights (Howell, 2017), but soon it had to issue votes to the non-voting stock (in 1902), and it chose to allocate one vote for every two shares held (Stevens, 1926). The issue of International Silver Company became a precedent for adopting capital structures with differential voting rights. The momentum of adoption of these structures increased in the 1920s and by mid-1920s 183 firms had issued dual-class stocks (Dewing, 1953). One of the famous examples of a dual-class structure is Dodge Brothers who adopted this capital structure in 1925 by issuing non-voting stocks to the public while retaining the voting stock for themselves. Effectively the public invested $130 million while the owners exercised control by holding only $2.25 million worth of stocks (Seligman, 1986; Howell, 2017).

The first voice of dissension was raised by Professor William Ripley in 1925. "Ripley's railings against these "management shares" are summarized in the following quote: "Yet the plan [dual class system] bears every appearance of a bold and outrageous theft of the last title of responsibility for management of the actual owners by those who are setting up these latest financial erections. Isn't it the prettiest case ever known of having a cake and eating it too?" (Howell, 2017; Pg. 444). Ripley's railings and the wide media coverage that the advent of dual-class structures received, led to public outcry and the first talk of prescribing limits on such structures by NYSE in 1926 although formal ban on such structures was implemented only in 1940, While the American Stock Exchange (AMEX) implemented a prohibition only in 1972 (Howell, 2017). Between 1926 and 1985 NYSE largely prohibited such structures with a few exceptions like Ford Motors which was allowed to adopt super-voting structure on the condition that it would not issue non-voting stock, and thus, Ford Motors issued a superior class stock and

an inferior class stock (Seligman, 1986). In 1985 there were only ten firms with super-voting

structures in NYSE, 60 firms out of 785 in AMEX, and 110 of 4101 in NASDAQ (Seligman,

1986).

       With the advent of corporate raiders and hostile takeovers in the 1980s, the demand for

dual-class structures began to rise. NYSE allowed the adoption of dual-class structures in 1985

with certain limitations like approval of such structures from the majority of the existing

shareholders (Howell, 2017). This gave rise to the adoption of dual-class structures through a

recapitalization of stock by public companies. As this practice grew, dissension against this

practice also increased, as it coerced existing shareholders to give up their voting rights (Howell,

2017). Securities and Exchange Commission (SEC) issued a rule 19C-4 in 1988, restricting

dual-class structures through recapitalizations. But Business Roundtable challenged SEC's

discretion over matters that were in the domain of state law, the D.C. Circuit agreed and nullified

SEC's directive in 1990 (Bainbridge, 2007). NYSE, NASDAQ, and AMEX, with some

variations, still adopted many of the provisions contained in 19C-4. SEC again requested all the

stock exchanges to arrive at a uniform policy regarding dual-class structures in December 1993

(Howell, 2017). By May 1994 all stock exchanges had formed a uniform policy for adoption on

dual-class stocks in which these structures were mostly allowed to be adopted only through new

issues and recapitalization processes were severely restricted (Howell, 2017). With the advent of

dot com companies and the web technology companies in the year 2000, the interest in dual-class

structures has increased leading to an exponential growth in dual-class structure adoption. As of

April 2017, 15% of all listed companies on NYSE have dual-class structures (Wall Street

Journal, 2017).

2.2.5 Literature review of dual-class structures. Smart, Thirumalai, & Zutter (2008) in their sample of dual-class and single class IPOs between 1990 and 1998, found that dual-class structures have an idiosyncratic effect on the firm events and market-based events. In dual-class structure firms, CEO subpar performance over a period of time did not result in CEO turnover, while in single-class shares the period of CEO subpar performance led to CEO turnover. Dual-class firms invest less in R&D and are more profitable than the single-class shares, although the share valuation of dual-class shares, over a five-year period after IPO, underperformed the share value created by the single-class shares. Dual-class shares, in comparison to single-class, have a greater number of institutional investors, less pre-IPO venture financing, and lists less frequently on NASDAQ. Masulis, Wang, & Xie (2009) found that in dual-class structures cash-holdings are worth much less to outside shareholders, CEOs receive higher compensation than the one share-one vote structures, acquisitions are often value-destroying, and capital expenditures contribute less to the shareholder value. Dual-class structures entrench controlling owners and lead to failure of the market for corporate control (Grossman & Hart, 1988; Harris & Raviv, 1988). Gompers et al. (2010) find that firm valuation increases with insider's cash-flow rights while decreasing with insider's voting rights in dual-class structures. These findings foster the agency theory hypothesis that insiders with greater voting rights as compared to the cash flow rights are more likely to pursue private benefits of control (Masulis et al., 2009).

Few other studies indicate a mixed result with few scholars finding results of efficiency while few others finding results of agency costs. Partch (1987) found that the separation of voting rights and cash-flow rights does not harm inferior class shareholders. Jarrell & Poulsen (1988) found that dual-class structure announcements through recapitalization lead to significant negative abnormal stock returns. Cornett & Vetsuypens (1989), in their sample of firms that

adopted dual-class structures through recapitalization between 1962-1986 found that the announcement of dual-class structure, on an average, leads to an abnormal increase in stock prices. Bergstrom and Rydqvist (1990) and DeAngelo & DeAngelo (1985) show that a company with a small group of investors usually related by a familial tie are more likely to undertake dual-class structures. Amoako-Adu & Smith (2001) found that dual-class structures are often adopted by large shareholders with family interests rather than just any concentrated owners and dual-class structures have increasing voting inequity for the first 15 years but despite that, control changes are as frequent as single class structures. This finding concludes that dual-class structures do not unduly entrench management. In another study, Amoako-Adu, Baulkaran, & Smith (2014), found that super-voting structures pay less cash dividends and repurchase fewer shares and dividend distribution decreases as the divergence between voting and cash-flow increases. They concluded that super-voting structures are more likely to reap private benefits of control as these are structures with high executive compensation and high family participation on the board of directors. Jordan, Liu, & Wu (2014) found that dual-class structures are more likely to pay cash dividends as compared to single class shares ruling out the private benefits hypothesis.

Managers adopt dual-class structures not to expropriate minority shareholders nor to extract a premium on takeover but to reduce their lack of diversification costs by protecting their control rights (Arugaslan, Cook, Kieschnick, 2010). Lauterbach & Pajutse (2015) found that dual-class share unification in Europe between 1996-2009 led to a significant increase in Tobin's Q of these firms. Dual-class share unification takes place by reducing the wedge between the ownership and voting rights and by decreasing the controlling shareholders' voting powers. Dimitrov & Jain (2006) studied U.S. firms that adopted dual-class structures through

recapitalization between 1979-1998 and found support for value-enhancing effect as earlier found by Lehn, Netter, & Poulsen (1990). Jordan, Kim, & Liu (2016) found that firm valuation increases in dual-class structures as compared to single class structures. They categorized the firm into high growth and low growth based on their R&D investment and sales growth. The effect of improved valuation was observed in high growth firms.

Chemmanur & Jiao (2012) have forwarded a contingency theory on dual-class structures. They argue that dual-class structures can enable able managers to create value by investing in risky, long-term projects while low ability managers may destroy value by increasing agency costs. Super-voting structures are likely to employ a greater number of shareholder rights provisions, but lower board and board committee independence as compared to single class shares (Li & Zaiats, 2017). This study asserts that the evidence of greater shareholder provisions while lower board independence in dual-class structures is one of the findings that can allude to the structural elaboration undertaken by entrepreneurs by adopting dual-class structures. Li & Zaiats (2017) further found that the firm value of dual-class structures increases with greater board independence and other board-related governance measures. Li & Zaiats (2017) also found that managers in super-voting structures create greater information asymmetries so that they can reap private benefits of control.

Across our discussion of super-voting structures, ownership structures, corporate governance, etc., we find that agency theory and organizational theory have contrastingly different predictions regarding the inefficiencies and effective management of the firm. Thus, it is imperative that we understand these theories to link its various prescriptions with the characteristics of dual-class structures.

Agency theory has been the theory of choice when it comes to specifying inefficiencies caused by the separation of ownership and control of a firm (Dalton et al., 2007; Gilson, 1996; Westphal & Zajac, 2013). Corporate governance, on the other hand, prescribes mechanisms to ameliorate these inefficiencies by making cooperative endeavors more effective (Little, 2012; Finkelstein & D'Aveni, 1994: Hambrick, von Werder, & Zajac, 2008). One of the factors that have been studied by several scholars and shown to affect corporate governance standards in a firm is the ownership structures. Ownership structures can lead to the negative consequence of management entrenchment (Walsh & Seward, 1990) or the positive consequence of effective monitoring of the management (Baysinger & Hoskisson, 1990).

Dual-class structure is one of the few types of ownership structures that may lead to the entrenchment of controlling-owners, denying the minority owners with mechanisms to replace the incumbent management team in case better management team becomes available (Grossman & Hart, 1988). It is also one of the mechanisms by which controlling owners can exercise unity of command as other owners do not have the authority to exercise decision control. Dual-class structure is also considered to be one of the most potent anti-takeover mechanism that makes the market for corporate control ineffective and thus, capital markets are unable to act as a monitoring institution (Fama, 1980). The contentions made against the dual-class structures, in this dissertation, are influenced by agency theory which argues that inefficacy of corporate governance mechanisms may lead to the entrenchment of the management or controlling owners. While the contentions made for the dual-class structures are influenced by the classical organizational theory which argues that unity of command can establish clear power structure in an organization and facilitate unity of strategic direction (Fayol. 1949; Barnard, 1968; Finkelstein & D'Aveni, 1994).

2.3 Agency Theory

Firms are cooperative structures that capitalize on the specialization of its cooperating members to generate positive returns over the production costs. "Resource owners increase productivity through cooperative specialization and this leads to the demand for economic organizations which facilitate cooperation" (Alchian & Demsetz, 1972: Pg. 777). These cooperative structures, popularly known as firms, do not occur by themselves but are coordinated by an individual or a group of individuals known as entrepreneurs (Clark, 1908; Coase, 1937). These entrepreneurs undertake the ex-ante risk to actualize a positive reward from the ex-post returns, under the conditions of predictive uncertainty that the outcome would be positive (Knight, 1921). Thus, these coordinators or producers have greater bargaining power over positive returns. In financial parlance of agency theory, these entrepreneurs who undertake the financial investment necessary to aggregate complimentary resource owners into cooperative structures are called principals and cooperative structure constituents who are paid ex-ante to spend the resources efficiently, to maximize the returns ex-post, are called agents (Fama & Jensen, 1983).

The agency theory postulates that when one or more principals engage one or more agents to perform certain services on their behalf and for which, delegate some decision-making authority to them, then an agency relationship is formed (Ross, 1973; Jensen & Meckling, 1976). In this relationship, there is a probability that agents may work towards maximizing their own goals by shirking and causing adverse selection especially when there is a separation of ownership and control of the organization (Jensen & Meckling, 1976). Thus, principals need to incur monitoring costs to limit the opportunistic actions of the agents. They also need to pay the

agents to incur the bonding costs ex-ante so that the goals of the principals are maximized ex-post. And finally, despite the discussed costs being incurred, it is recognized that there still may remain some divergence of interests that may reduce the principal's welfare, leading to residual cost. All these three costs are collectively called the agency cost (Hill & Jones, 1992; Jensen & Meckling, 1976).

    2.3.1 Historical account of agency theory. The very first mention of a company with the required elemental characteristic of being publicly traded and being a multinational enterprise is found in the year 1600 when Elizabeth-I chartered the East India Company (Baskin & Miranti, 1997; Dalton et al., 2007). From the onset of the corporation system, companies have been largely documented to engage in self-interest and were seen as entities without a soul that did as they wished (Micklethwait & Woolridge, 2003; Dalton et al., 2007). In 1776, Adam Smith in his book, An Inquiry into the Nature and Causes of the Wealth of Nations, specified the problem that infected joint-stock companies – owners appointing others as stewards of their wealth. The seeds of agency theory thus, were sown when Adam Smith suggested that stewards of other's wealth cannot be expected to "watch over it with the same anxious vigilance" one would expect from owners, and that "negligence and profusion, therefore, must always prevail, more or less, in the management of the affairs of such a company" (Hutchins translation of Adam Smith's book, 1952: p. 324 – taken from Dalton et al., 2007). But prescriptions for the solution of this problem remained largely elusive until the publication of The Modern Corporation and the Private Property by Berle & Means in 1932. Scholars believe that this book had an enormous effect on the management and legal aspects of the corporation (Bratton, 2001; Gilson, 1996; Shapiro, 2005). It was this book that pointed out to the increasing number of companies having dispersed

shareholders and control of the corporation being in the hands of the professional management, who may not have the same goals as the owners of the corporation (Roe, 1994; Coffee, 2001).

Till mid-1950s Organizational scholars concentrated largely on the economic aspects of the organization. It was only in 1958 that March & Simon's celebrated work introduced the behavioral theory of management. The conceptual introduction of bounded rationality and information asymmetries were used to operationalize inducements and realize contributions from employment contracts (Eisenhardt, 1989). All these theories at their root have the assumption of goal conflict between the agents and the principals and specify the behaviors that would facilitate the alignment of an agent's behavior to the principal's goals, but they did not specify as to how these behaviors could be controlled. Chandler (1962), Galbraith (1973), and Lawrence & Lorsch (1967) used the bounded rationality and information asymmetry to explain the effective organizational forms and appropriate decision-making responsibilities that formed the basis of contingency theory (Eisenhardt, 1989). But the extant literature at that time had still not provided the answers as to how individuals in these organizing forms can be expected to work for the goals of the principal and not to actualize their self-interest. Thus, we knew which forms of organizing are more efficient, but we still did not know how behaviors in these organizing forms can be aligned to the goals of the principals.

In the late 1960s and the early 1970s, we saw the advent of risk-sharing literature (Arrow, 1971; Wilson, 1968) that later formed the foundation of agency theory. The risk-sharing literature highlighted the differing risk perceptions between cooperating parties and how this phenomenon can impact productivity. Alchian & Demsetz (1972) in their seminal paper discussed the aspects of contractual problems and how contracts cannot be implemented by the

authority possessed by organizations. They discussed that the performance of the organization would suffer if the rewards and productivity are only loosely correlated. Ross (1973) has been chronicled to be the first scholar who explicitly identified the problem of differing goals and the need for it to be aligned given the information asymmetries and the environmental uncertainty. He explicitly tried to explain the utility function by using the element of pay, but in follow-up work, Jensen & Meckling (1976) explained this alignment problem using pay and ownership equity which is now largely accepted as a tool of goal alignment (Dalton et al., 2007).

2.3.2 The relevance of agency theory in organizations. Organizational theorists have used agency theory to facilitate efficient organization of information and risk-bearing costs, as information asymmetry and differences in risk preferences may impede effective organization (Eisenhardt, 1985, 1989). One of the primary factors that cause divergence of interests in agents and principals is the role of risk-taking (Beatty & Zajac, 1994; Wright, Ferris, Sarin, & Awasthi, 1996). Agents have their human capital, and, in some cases, financial capital invested in a specific firm, and thus, are averse to undertake risk. On the other hand, principals may diversify their risk by investing in several firms and are thus, in a risk-neutral position (Dalton et al., 2007). Eisenhardt (1989) has used this understanding of differential risk perception to frame agency relationship based on outcome-based contract or behavior-based contract. Scholars have asserted that efficient and effective organizations favor governance structures that economize on agency costs (Hill & Jones, 1992; Fama & Jensen, 1983; Jensen, 1983). Scholars of agency theory and organization theory view different ownership structures presenting differing agency costs.

2.3.3 Concentrated ownership vs. dispersed ownership structures. The extant literature on ownership structure can be divided into two distinct categories of concentrated ownership and dispersed ownership. Within these two categories of ownership structures of the firm, scholars have researched several questions pertaining to the agency costs associated with these structures as well as efficiency promoted by these structures. Scholars, using agency theory, have found that concentrated ownership leads to entrenchment of owners and principal-principal conflict (Bebchuk, Cohen, & Hirst, 2017; Dharwadkar, George, and Brandes, 2000; Young, Peng, Ahlstrom, Bruton, & Jiang, 2008), where expropriation of minority shareholders is likely (Claessens et al., 2002). While scholars, using organizational theory, have found that concentrated ownership leads to efficient decision making by management allowing the management to use their idiosyncratic knowledge about the firm and its technology to form long term strategy (Finkelstein & D'Aveni, 1994; Westphal, 1998).

Scholars, using agency theory, have found that dispersed ownership leads to greater agency cost as compared to concentrated ownership due to difficulties in coordinating collective action (Grossman & Hart. 1988). Dispersed ownership may lead to managerial perquisite consumption (Gedajlovic & Shapiro, 1998), greater information asymmetries between the management and the shareholders (Eisenhardt, 1989), and management entrenchment (Walsh & Seward, 1990). Scholars, using organization theory, found that dispersed ownership efficiently allocates the risk of decision making to shareholders who can easily diversify their risk (Baysinger & Hoskisson, 1990). Dispersed ownership leads to effective governance of management by capital markets (Fama, 1980), while allowing management the independence required in guiding the firm strategy (Dalton et al., 2007). All these literature findings have been mostly in the context of single-class firms where there is a clear separation of ownership and

management, this study endeavors to test agency theory prescriptions of concentrated ownership in the context of dual-class structures.

2.3.4 Dual-class concentrated ownership. The popularity of the agency theory in academic literature stems from the fact that it is able to reduce large organizations into basically two participants – managers and the shareholders (Daily, Dalton, & Cannella Jr., 2003).   This dissertation presents a context of dual-class structure where the control of the firm is concentrated but the ownership of the firm is dispersed. This is made possible by separating cash-flow rights and voting rights of the equity shares in arbitrary proportions (Gomers et al., 2003; DeAngelo & DeAngelo, 1985). Controlling owners allot themselves equity shares having proportionately large voting rights while possessing the same cash-flow rights as the common shareholders. Thus, controlling owners can exercise control over their firm despite having minority cash-flow rights while majority cash-flow owners are unable to exercise control due to lesser voting rights associated with their equity. Thus, controlling owners, who are also managers, despite being minority shareholders have unity of command in the firm and can pursue their independent strategic choice as all oversight mechanisms become dysfunctional in such structures.   Although research in agency theory suggests that failure to monitor one group of owners may lead to increased probability of expropriation of other groups of owners (Bebchuk et al., 2017; Claessens et al., 2002; Young et al., 2008), there have been arguments from organizational theory scholars that absolute control of the firm by one group of owners may lead to unity of command in the organization and ultimately to unity of strategic direction (Fayol, 1949; Barnard, 1968; Gulick & Urwick, 1937; Pfeffer, 1981; Finkelstein & D'Aveni, 1994; Krause & Semadeni, 2013), which may be beneficial for firm performance. I test these contrasting assertions in two different theories. Scholars have found that these contrasting

assertions have been effective under different contingencies (Finkelstein & D'Aveni,1994; Krause & Semadeni, 2013), and thus, I too specify that different antecedents of dual-class structures may present different contingencies under which one or the other theory prescriptions may be valid.

    2.3.5 Entrenchment. Entrenchment "occurs when managers gain so much power that they are able to use the firm to further their own interests rather than the interests of shareholders" (Weisbach, 1988: 435). Entrenchment is more likely to occur when managers do not experience discipline from corporate governance mechanisms, monitoring by board fails, there is no threat of dismissal or takeover, and compensation is unrelated to firm performance (Berger, Ofek, & Yermack, 1997). Entrenchment may lead to the persuasion of strategies that endows private benefits of control to controlling managers. Prior literature provides evidence that entrenchment leads to suboptimal investment decisions, inefficiency in the market for corporate control, tunneling of resources, and consumption of perks (Bebchuk et al., 2000; Johnson, La Porta, Lopez-de-Silanes, and Shleifer, 2000; Yermack, 2006; Manowan, 2010). Some studies indicate entrenchment may lead to the diversion of corporate resources for self-benefit such as directed equity issuance or personal loans to insiders, and self-dealing transactions such as executive perquisites, excessive compensation, appropriation of corporate opportunities (Schleifer & Vishny, 1997). "In other instances, controlling shareholders can increase their shares in the firm without transferring any assets. Such transactions may take the form of diversion of corporate opportunities from the firm, assignment of unqualified family members to managerial positions, insider trading, creeping acquisitions, and other financial transactions against minorities" (Manowan, 2010: 3).

Several scholars examine the consequences of entrenchment of controlling shareholders in dual-class firms. For example, Claessens et al. (2002) find that market-to-book ratios increase with the cash-flow rights held by the controlling shareholders and decrease with the increase in the divergence between the cash-flow rights and the control-rights. Nenova (2003) finds evidence of premium for super-voting structures indicating a reward for private benefits of control. Lemmons & Lin (2003) find that dual-class structures earn 10-20% lower than their single-class counterparts. These studies validate the assertions of entrenchment theory that entrenched owners /managers may abuse their office since they are not afraid of replacement/discharge (James & Soref, 1981; Kroll, Wright, & Theeratham, 1993). These findings also validate that entrenched owners may not engage in growth strategies as it enhances their risk of returns and destabilizes their flow of perquisites (Wright & Ferris, 1997; Wright, Ferris, Sarin, & Awasthi, 1996).

2.4 Organizational Theory

Barnard's (1938) classic book, The Functions of the Executive, laid down the foundations of organizational theory and influenced management literature immensely. He led down the nature and functions of co-operative behavior in an organizational context (Eisenhardt, 1989), as well as advocated for the strong leadership at the top so that the co-ordination of co-operative functions are facilitated (Finkelstein & D'Aveni, 1994). This view was reiterated by another very prominent work, Fayol (1949)'s, General and Industrial Management, which is largely viewed as the administrative theory of the organization. Fayol prescribed fourteen management principles, primary amongst it is the unity of command and the unity of direction principle, that help executives to perform the five major functions of planning, organizing,

coordinating, commanding and controlling. Certain scholars have criticized the categorization of management functions in these five broad categories (Kotter, 1982; Mintzberg, 1973) but now it is largely accepted that variations in management functions prescribed by different scholars can still be arguably categorized into five broad categories prescribed by Fayol (Hales, 1986; Wren, 1994). Thus, the management principles prescribed by Fayol (1949), specifically, the unity of command principle and the unity of direction principle has been used by several prominent agency scholars to contrast it with entrenchment effects (Finkelstein & D'Aveni, 1994; Krause & Semadeni, 2013). Organizational theorists have issues of structure, leadership, and legitimacy at the fore and they argue unity of command can enhance organizational effectiveness (Finkelstein & D'Aveni, 1994). Scholars agree that it is difficult to avoid entrenchment when the unity of command is established but however contentious the phenomenon of the unity of command maybe its benefits cannot be simply dismissed (Dalton et al., 2007; Finkelstein & D'Aveni, 1994; Krause & Semadeni, 2013).

2.4.1 Unity of Command. Unity of command leads to a clear power structure in an organization (Fayol, 1949). Unity of Command means that each employee is held accountable to only one supervisor. "For any action whatsoever, an employee should receive orders from one superior only … Should it be violated, authority is undermined, discipline is in jeopardy, order disturbed, and stability threatened."(Fayol, 1949: Pg. 24) . According to Fayol unity of command is a fundamental principle as the social organism is incapable of adapting to dual command (Fells, 2000). Fayol further expounded the unity of command principle to propose the unity of direction principle which is similar to the unity of command however unity of direction relates to the organization of the business rather than the personnel. Fayol (1949) states that unity of direction requires proper focus and co-ordination – "one head and one plan for a group

of activities having the same objective". The strategy formation literature, consistent with the administrative theory of the organization, advocates for strong leadership in an organization which can set strategic directions, issue commands to lower levels, and then have strategies implemented effectively (Andrews, 1971; Barnard, 1938; Finkelstein & D'Aveni, 1994). Thus, unity of command can empower managers to set strategic directions (Fayol, 1949), adapt to environmental demands (Chandler, 1962; Mintzberg & Waters, 1982), and take decisive actions (Miller & Friesen, 1977).

Certain laboratory studies have argued that the participation of constituencies who review a negotiator's actions during the negotiation process leads to decreased effectiveness and increased difficulty to negotiation process (Druckman, 1968; Jackson & King, 1983; Vidmar, 1971). Thus, sharing of command may weaken and disrupt a manager's ability to manage the firm's task environment (Anderson & Anthony, 1986; Finkelstein & D'Aveni, 1994). Proponents of unity of command further argue that strong leadership may send signals to the stakeholders that the firm has the ability to pursue clear strategic direction (Salancik & Meindl, 1984; Lorsch & Zelleke, 2005) and that the firms actions are influenced by the leader and not the environment (Pfeffer & Salancik, 1978). Thus, unity of command can enable firms to maintain the needed resource relationship with its stakeholders (Salancik & Meindl, 1984).

Studies of dual-class structures have found several positive assertions about its effectiveness. For example, Arugaslan, Cook, & Kieschnick (2010) find that managers adopt dual-class structures not to expropriate minority shareholders nor to extract a premium on takeover but to reduce their lack of diversification costs by protecting their control rights. Managers may hold greater voting rights to exercise unity of command to avoid the costs

associated with difficulties in communicating managerial performance, managerial decisions, and managerial investments to the proxy fight organizers and to the outside shareholders who vote in such contests (DeAngelo & DeAngelo, 1985). Insider-managers may hold voting rights to deter the relatively uninformed outside shareholders from mistakenly replacing the incumbent management team by a less productive management team (Alchian & Demsetz, 1972). Managers' vote ownership enables them to exercise greater influence in determining the current and future composition of the board of directors and thus, reducing the probability of relatively uninformed board of directors, resisting or vetoing difficult-to-evaluate proposals (DeAngelo & DeAngelo, 1985). Managers' vote-ownership encourages them to invest in firm-specific capital because they are assured that the returns would be appropriable by them and outside shareholders do not have the means to transfer the control of the firm to another management team (Williamson, 1975; Easterbrook & Fischel, 1982). Similarly, antitakeover provisions and other long-term employment agreements can encourage managers to invest in organization-specific human capital, benefitting both, the managers and the outside stockholders (DeAngelo & DeAngelo, 1985).

Scholars have pointed out that managers' vote-ownership may stem the competition from other management teams but there could be other constraining mechanisms that can discipline managers. For example, an efficient capital market may determine the supply price of external capital to such firms by incorporating the expected consequences of managerial discretion. Thus, the price at which investors subscribe for shares of these firms may be discounted (DeAngelo & DeAngelo, 1985). The arguments of Jensen & Meckling (1976) have been used by Easterbook & Fischel (1983) to assert that holding of greater voting rights by managers would induce managers to hold greater cash-flow rights than they would ideally hold if

they had a fewer or zero voting rights. This is the reason that voting rights and cash flow rights are more often held by the same party as it incentivizes the exercise of voting right to increase the firm value.

Despite these forceful arguments, for the unity of command and against the entrenchment, two decades of literature has not found conclusive evidence regarding the dominance of one perspective over the other and its effect on firm performance (Boyd, 1995; Coles, McWilliams, & Sen, 2001, Dahya, Garcia, & van Bommel, 2009; Dalton, Daily, Ellstrand, & Johnson, 1998). This dissertation is an effort in resolving this inconclusive literature by testing the assertion of entrenchment and unity of command in the dual-class structure context, and to understand whether the assertions of either of the theories can explain the correlation between the antecedents of dual-class structures and the IPO premium.

CHAPTER THREE

HYPOTHESES DEVELOPMENT

Entrepreneurs have a choice between the adoption of dual-class structures and single-class structures and this decision has crucial implications for control of their firm. Control is desired by all entrepreneur firms, but there are only a few who control their firms through dual-class structures, this study predicts that the corporate governance mechanisms, firm experience till the time of IPO (such as time to IPO or firm age, type of entrepreneurial finance, and firm performance), and the strategic considerations of the entrepreneur firms may explain the variations observed in the IPO markets between the single-class and dual-class firms. Thus, we explore the antecedents of dual-class structures under three broad categories of corporate governance, firm-specific factors, and firm Strategy.

3.1 Corporate Governance Antecedents

Corporate governance mechanisms make the separation of ownership and management effective (Dalton et al., 1998; Schleifer & Vishny, 1997). But when ownership role and management role is concentrated in the same individual then there is no real separation between management and control leading to a reduction in the agency cost (Fama & Jensen, 1983). In dual-class structures, although the management role and ownership role are concentrated in the same individual or group of individuals, the ownership is through voting rights, and thus, cash-flow rights may still be in minority, giving rise to agency costs. Thus, agency theory argument is that adoption of corporate governance mechanisms may facilitate broader participation from the stakeholders of the firm and bring about a reduction in the agency costs related to the absolute control endowed by dual-class structures. Thus, the presence of countervailing mechanisms to

the absolute control exercised by the controlling owners, may reduce the agency cost and promote effective governance of the firm.

Proponents of organizational theory may argue that number of corporate governance mechanisms can be an impediment for an entrepreneur to pursue their strategic directions as stakeholders may exercise decision control based on incomplete information about the firm's strategy (DeAngelo & DeAngelo, 1985; Yukl & Tracy, 1992; Westphal, 1998). Secondly, greater the number of stakeholders in the firm who participate in the corporate governance process, greater the probabilities that these stakeholders may want to pursue strategies that serve their self-interest which may not necessarily create value for the minority shareholders (Morck, 2000). Thirdly, the participation of various stakeholders in the governance of the firm may give rise to decision making through persuasion (Westphal, 1998) and shared command (Pearce & Conger, 2003). This shared command may give rise to socio-political processes in the firm leading to multiple power centers in the organization. For example, persuasion used by CEOs when they lack formal power (Westphal, 1998). In this shared command scenario entrepreneurs may not be able to leverage their firm-specific knowledge to pursue value-creating strategies (Westphal, 1998; Yukl & Tracy, 1992) as stakeholders may not know the future value of opportunities (McMullen & Shepherd, 2006).

Thus, entrepreneurs have to balance between the need for control to pursue their strategies and providing rights to stakeholders to participate in firm governance. If entrepreneurs exercise absolute control by the adoption of dual-class structures and do not provide opportunities to stakeholders to participate in firm governance then it can be argued that entrepreneurs are creating information asymmetries to reap private benefits of control and to entrench themselves (Jensen & Meckling, 1976; Eisenhardt, 1989). On the other hand, if entrepreneurs adopt

corporate governance mechanisms to facilitate stakeholder participation, shareholders may view the presence of corporate governance mechanisms positively and infer the need for unity of command as the reason for the adoption of dual-class structures. In this section, we identify the corporate governance antecedents that can explain the adoption of these agency-cost laden structures and specify means to gauge shareholder perception in regard to whether they perceive such structures to be adopted for the unity of command or entrenchment.

3.1.1 Corporate governance. Corporate governance is concerned with the governance of actors that constitute the cooperative structures and lays down mechanisms to align the goals of these actors, with the goal of the principals given primacy, as they are the ones that undertake the effort to constitute the cooperative structures. The basic tension underlying the corporate governance literature is how can we construct efficient constraints to agents self-serving actions and maximize the return for the principals (Fama & Jensen, 1983). The tensions of differing goals are largely found when there is a separation of management and ownership (Ross, 1973; Jensen & Meckling, 1976). The overwhelming emphasis of the extant literature is on this conceptualization of corporate governance. Agency theory is the theory of choice when it comes to operationalizing the problems of differing goals and how agents can be motivated to maximize the goals of the shareholders (Dalton et al., 1998; Schleifer & Vishny, 1997). The definition by Hambrick, von Werder, and Zajac (2008) broadly includes all elements of corporate governance and they state it as "the formal structures, informal structures, and processes that exist in oversight roles and responsibilities in the corporate context" (p. 381). Some scholars view corporate governance as a mechanism to structure the control rights of each stakeholder in such a way that the goals of each stakeholder are maximized. In that spirit, Aoki (2000) defines

corporate governance as "the structure of rights and responsibilities among the parties with a stake in the firm" (pg. 11). In Finance literature, corporate governance has been largely seen as a mechanism that enables the suppliers of finance to get positive returns on their investments. For example, Schleifer & Vishny (1997) define corporate governance as "the ways in which suppliers of finance to corporations assure themselves of getting a return on their investment" (Pg. 737).

Some scholars have subsumed the aspects of organizational governance and corporate governance by conceptualizing them as largely a similar phenomenon with overlapping prescriptions. For example, Daily et al., (2003) have defined corporate governance as "the determination of the broad uses to which organizational resources will be deployed and the resolution of conflicts among the myriad participants in organizations" (Pg. 371). Scholars have largely used two types of governance mechanisms to obtain positive returns from cooperative structures that thrive on an efficient utility function of resources. The cooperative structures have been made efficient using the corporate governance mechanisms bridging the gap between the diverse goals of myriad stakeholders (Alchian & Demsetz, 1972; Ross, 1973, Jensen & Meckling, 1976, etc.). While the utility value of resources that are integral for the production function has been enhanced by using organizational governance (more popularly referred to as transaction cost economics (Williamsons, 1975; 1985; etc.)). The primary distinction that I wish to derive is between the idiosyncratic nature of corporate governance and organizational governance. Corporate governance is a socialized view of the corporation and stresses on making co-operative nature of organizations effective, while organizational governance is an undersocialized view of the corporation whereby the resource sets are made more efficient by decisions of internalizing or externalizing the productive assets of the firm. The cooperative

function requires that the group as a whole works towards a common goal rather than their own personal disparate goals and the efficient use of resources requires that maximization of the utility function price of each asset is achieved by choosing between internalization and externalization.

Organizational Governance is concerned with the logic underlying the governance of assets required by the organization. The basic tension underlies in the question – whether the returns from resources would be higher by owning these resources or by renting these resources. If the difference between owning and renting an asset would have been negligible then there would be no need to form a firm and own asset (Coase, 1937; Williamson, 1975). In this dissertation, I am concentrating explicitly on corporate governance, and thus, the aspects of organizational governance are outside the purview of this study. Although I find that few scholars have treated corporate governance as a broad mechanism that governs the cooperative efforts as well as the asset governance, in line with the broader literature, I prefer to make a distinction between them and treat it as a separate phenomenon.

Scholars are largely in agreement that corporate governance mechanisms can be segregated into internal control mechanisms and the external control mechanisms (Walsh & Seward, 1990; Aguilera, Desender, Bednar, & Lee, 2015). Internal control mechanisms include the board of directors, controlling owners, and managerial incentives, while the external control mechanisms include six distinct mechanisms of the legal environment, the market for corporate control, external auditors, stakeholder activism, rating organizations, and the media (Aguilera et al., 2015). Within the firm, governance structures, lays down the guidelines in the form of rules and procedures that prescribes boundaries to corporate behavior and also lays down constraining mechanisms that makes implicit and explicit set of contracts between principals and agents

effective (Hill & Jones, 1992; Demsetz, 1983; Fama, 1980; Westphal & Zajac, 2013). But corporate governance mechanisms are largely concerned with aligning the goals of the CEO and top management teams (TMT) with that of the principals. In line with the agency theory, the CEO's hierarchical power has been used as a proxy for the whole set of internal organization, and thus, representative of the operational and decision-making function of the firm. Scholars have studied the role of the board of directors, who act as fiduciaries of principals, in aligning the goals of the CEO and the principal. Other internal control mechanisms that are instituted within the organization are the separation of CEO and board chair positions (Finkelstein & D'Aveni, 1994; Krause, 2017, etc.), Independence of board of directors and the role of lead independent director (Krause, Withers, & Semadeni, 2017; Dalton et al., 1998; Boivie, Bednar, Aguilera, & Andrus, 2016, etc.), executive compensation (Daily, Johnson, Ellstrand, & Dalton, 1998; Wowak & Hambrick, 2010, Devers, Cannella Jr., Reilly, & Yoder, 2007; etc.), ownership structures (Dalton, Daily, Certo, & Roengpitya, 2003; Tihanyi, Johnson, Hoskisson, & Hitt, 2003; Bethel & leibeskind, 1993; Boyd & Solarino, 2016; etc.), etc.

This study argues that the decision control characteristic of corporate governance dilutes an entrepreneur's independence in taking decisions and thus, entrepreneurs not only use super-voting structures to elaborate corporate governance compliant structures that adhere to the institutional requirements but also to shape its structural implementation in ways that it endows them with control of the firm. This phenomenon has a greater probability to occur in effective legal environments where the cost of diversion from corporate governance measures may be specifically very high for a firm. Thus, dual-class structures endow entrepreneurs with absolute control of their firm, but whether this control is used to expropriate minority shareholders, or to

increase the public benefits of control through the unity of command, is dependent on the level of participation that controlling owners provide to the firm's stakeholders.

Corporate governance mechanisms allocate certain rights and responsibilities to different stakeholders of the firm (Aoki, 2000) leading to greater collective bargaining and decision making. Thus, the command of the firm is shared between different stakeholders giving rise to social-political processes such as persuasion in the firm to exercise influence (Westphal, 1998; Zahra & Pearce, 1989; Leblanc & Schwartz, 2007; Pearce & Conger, 2003). These political processes are known to give rise to multiple power centers and present obstacles in effective organizational governance. Secondly, stakeholders that are external to the firm have incomplete information about the future value of opportunities (McMullen & Shepherd, 2006) and firms' strategy (Yukl & Tracy, 1992). Thus, decision control exercised by them may restrict an entrepreneur's ability to pursue their idiosyncratic knowledge as they are said to possess greater firm-specific knowledge (Westphal, 1998). Thirdly, as number of stakeholders governing the firm increases, there are probabilities that these stakeholders may pursue their own self-interest and sometimes it may be pursued at the cost of the minority shareholders (Morck, 2000).

Entrepreneurs willing to balance their power through adoption of a number of corporate governance mechanisms may indicate that dual-class structures have been adopted by entrepreneurs for establishing unity of command rather than entrenchment. Thus, following Gompers et al. (2003), I build a corporate governance index that gives a corporate governance score to each company and I expect that firms that adopt greater number of corporate governance mechanisms (firms that have high score on corporate governance index) are more likely to adopt dual-class structures as adherence to a greater number of corporate governance mechanisms will provide it with positive assessments from the institutions while at the same time empower

entrepreneurs to exercise unity of command and pursue their strategic directions. Thus, I hypothesize:

Hypothesis 1a: Firms having a higher score on the corporate governance index are more likely to adopt dual-class structures.

If entrepreneurs adopt a lesser number of corporate governance mechanisms (firms low on corporate governance index score) then it means that the stakeholders have not been given sufficient rights to participate in firm governance (Aoki, 2000). Also, when shareholders are not given sufficient rights of participation and if entrepreneurs still adopt dual-class structures then it may indicate the intentions of entrepreneurs to entrench themselves and create information asymmetries that can help them reap private benefits of control. Thus, firms that have a low score on the corporate governance index and still adopt dual-class structures, may signal to shareholders the intentions of entrenchment. So, it is hypothesized:

Hypothesis 1b: Firms having a lower score on the corporate governance index are more likely to adopt dual-class structures.

As dual-class structures are mechanisms to exercise absolute control, it is difficult to predict whether this control would be exercised to pursue public benefits of control by leveraging unity of command, or to pursue private benefits of control by engaging in entrenchment. Although the intentions of the entrepreneurs to adopt these structures cannot be predicted ex-ante, we can infer whether shareholders perceive dual-class structure adoption as unity of command strategy or an entrenchment strategy, based on the premium or discount that the offer price of the share commands in the market. Scholars have found that when the presence of controlling owners through vote ownership stems the competition from other management teams, an efficient capital market can incorporate the expected consequences of managerial discretion in the price at which

shareholders subscribe for shares of these firms (DeAngelo & DeAngelo, 1985). Thus, IPO premium which is the premium in the offer price that is over and above its book value at the time of IPO, is an indication of the price that investors are willing to pay for the stock of the IPO company given the expected consequences of managerial discretion. A premium in the stock price may indicate that the shareholders consider adoption of dual-class structures as a unity of command strategy while a discount in the stock price may indicate that shareholders perceive dual-class structure as an entrenchment strategy.

This study further contends that the significance of corporate governance mechanisms differs based on the different types of capital structures and the rights allocated to shareholders in these structures. Single-class shares provide greater shareholder rights as compared to dual-class structures and, thus in single-class firms, alternative control mechanisms are present while the same is absent in dual-class structures. Thus, I argue that the participatory rights provided through corporate governance mechanisms are of greater value in dual-class compared to single-class. This study contends that dual-class structures mediate the relationship between corporate governance index score and IPO performance for three reasons. Firstly, in single-class firms, shareholders have alternative mechanisms to exercise decision control and restrict entrenchment strategies of insiders, such as using collective bargaining (Grossman & Hart, 1988), replacing the management through the market for corporate control (Easterbrook & Fischel, 1983), etc. On the other hand, in dual-class structures, such mechanisms are absent due to the absolute control of insiders through voting rights, and thus, participation rights provided by corporate governance mechanisms become more salient for shareholders of these firms.

Secondly, dual-class firms are more likely to have a greater concentration of insiders (Masulis et al., 2009) leading to exacerbation of problems evident in the separation of

management and control, and thus, corporate governance mechanisms in such firms will be more

salient for shareholders as compared to corporate governance mechanisms in single-class.

Thirdly, and in contrast to the earlier two points, insiders are likely to incur greater bonding costs

to adopt dual-class structures (as insiders are likely to own equity stake), and this may signal a

greater value of future opportunities in such firms. Additionally, scholars have found that

effective opportunity exploitation requires insiders' human capital (Taylor & Whittred, 1998),

and thus, it may provide additional information to shareholders about the ability of the firm to

exploit these opportunities, and that may affect IPO performance. The above points indicate that

corporate governance mechanisms become an important point of consideration for IPO

performance if firms are dual-class structure otherwise the salience share-class structure for IPO

performance is limited. Thus, it is predicted that dual-class structures will mediate the

relationship between corporate governance index score and IPO performance. So, it is

hypothesized:

Hypothesis 1c: Dual-class structure will mediate the relationship between the corporate

governance index score and IPO performance.

3.1.2 Outsider concentrated ownership. Largely, corporate ownership structures around the

world can be categorized into two types; the Anglo-Saxon diverse-ownership structures and the

business-group structures. Most of the English-speaking countries, predominantly the UK and

the USA, have diverse-ownership structures while the rest of the world mostly follows the

business-group structures (Chattopadhyay, 2013; Boyd & Solarino, 2016). There are different

consequences of concentrated ownership and dispersed ownership as studied in the extant

literature. Dispersed ownership endows management with greater control to pursue their growth

strategies, but it also leads to problems in the alignment of the goals between the agents and the

principals (Ross, 1973; Jensen & Meckling, 1976). Concentrated ownership leads to alignment of the goals of the principals and the agents by effective monitoring mechanisms, but it also leads to principal-principal conflict that may enhance agency costs (Dharwadkar et al., 2000; Morck, 2000). Since dual-class structures endow concentrated ownership through control rights, we explore the literature on concentrated ownership through cash-flow rights and study its effect on dual-class structures.

There are two types of owners identified in the agency literature; the insiders and the outsiders. Managers of the firm on the board of directors are termed as the insiders in the agency literature, and institutional investors, blockholders, and other investors, who are not performing any executive role are known as the outsiders (Dalton et al., 2003; Bethel & Liebeskind, 1993). The broad distinction between the insiders and the outsiders is that the insiders are the agents and the owners, while the outsiders are owners only. Dalton et al. (2003) have summarized this stream of research by dividing the literature into two parts; alignment and control. The concern of outsiders is to align the goals of the insiders to that of their own by controlling the behavior of these agent/owners. As we will see, alignment and control perspectives are two distinct but interdependent prescriptions to alleviate agency problem inherent in an agency relationship (Dalton et al., 2007). We study the implications of outside concentrated ownership and of insiders to ascertain their effect on dual-class structures.

In most parts of the world other than the USA and the UK, corporate control is highly concentrated (La Porta, Lopez-de-Silanes, & Shleifer, 1999; Morck, 2000). Holderness, Kroszner, & Sheehan (1999) argue that even in USA ownership is more concentrated than is generally believed. Concentrated ownership may lead to either the controlling principals maximizing their goals at the cost of other shareholders, who are minority owners (Morck,

2000), or increase in the firm performance, as found by Thomsen & Pederson (2000), Amihud & Lev (1981), etc. The agency theory hypothesis proposes that controlling owners can maximize their goals by both pecuniary and non-pecuniary ways (Morck, 2000). If pecuniary goals are maximized then it benefits the minority shareholders too but if non-pecuniary goals are maximized then the benefits largely accrue to the controlling shareholders only (Morck, 2000). While the stakeholder theory hypothesis proposes that control exercised by concentrated ownership may lead to an increase in firm performance and public benefits of control (Kochhar & David, 1996).

Dual-class structures are a variant of concentrated ownership where the controlling owners are concentrated on account of voting-rights rather than the cash-flow rights. Thus, findings associated with concentrated ownership can be broadly applied to the context of super-voting structures. Morck, Schleifer, & Vishny (1988) found that concentrated ownership may lead to negative control effects due to entrenchment and positive incentive effects due to higher ownership. Gorton & Schmid (2000) found a positive effect of bank ownership on firm valuation. When the assumption of the self-interested individual is replaced with the assumption of stewardship then many of the agency prescriptions become limited in their effect. This assumption can be broadly applied to family-controlled firms where the goals of the agents and the principals are aligned. Gomez-Mejia, Larraza-Kintana, & Makri (2003) state that around 80% of the firms in the U.S. are family-controlled and few scholars have put the estimates as high as 95% (Beehr, Drexler, & Faulkner, 1997; Daily & Dollinger, 1992). These majority of family firms are small private businesses with fewer than 500 employees but are also quite prominent in large businesses across a broad range of industries (La Porta et al., 1999).

Scholars have also asserted that ownership structures are determined by different country contexts (La Porta et al., 1998; Lee & O'Neill, 2003) as well as different owners having different preferences (Hoskisson, Hitt, Johnson, & Grossman, 2002; Tihanyi, Johnson, Hoskisson, & Hitt, 2003). For Example, Lee & O'Neill (2003) found that concentrated ownership had a positive effect on R&D in the U.S. firm sample while no effect on Japanese firm sample. This difference was largely attributed to the market-based system in the U.S. and the relation-based systems in Japan. Scholars have tried to identify causal mechanisms that can explain the emergence and sustenance of concentrated ownership structures in several of developed and developing economies, but it has been difficult to explain the proliferation of concentrated ownership and its causes. Khanna & Palepu (2005) assert that in developing economies like India, concentrated ownership exists due to institutional voids, and thus, business group structures allow firms to overcome the shortcomings of specialized intermediaries in capital markets (Khanna & Palepu, 1997). This observation is further validated by Young et al. (2008) who find that 51% of equity is owned by concentrated owners in 28 emerging economies as opposed to 41% equity being concentrated in the hands of controlling owners in 21 countries in developed economies. Faccio & Lang (2002) and Barca & Becht (2001) find that many European economies have concentrated ownership as most of the businesses are family-owned and concentrated ownership helps in furthering family goals (Claessens et al., 2000; Carney, 1998). Almeida & Wolfenzon (2006) state that concentration of ownership in many parts of the world is achieved through pyramidal structures rather than the dual-class structures (also see La Porta et al., 1999), this is done to finance new companies with low yield but requiring high investments. Thus, concentrated ownership is not only used to control a firm but also to build internal capital markets which may be beneficial to minority shareholders or may lead to private benefits for controlling owners.

Ghemawat & Khanna (1998) have discussed the dominance of business groups in economies with concentrated ownership. These business group structures may largely be family-owned (Biggart & Hamilton, 1992) and help in navigating the product market and labor market failures as well as capital market failures (Li et al., 2006; Zhao et al., 2005)

Morck, Schleifer, & Vishny (1988) found that the performance of the firm has a strong correlation with the type of owners controlling the said firm and their equity stake in the firm. The presence of family-owners in the management led to lower Tobin's Q as opposed to non-founder-related managers in the management. This finding also indicates the negative effect of entrenchment on the firms' market performance. They also found that the 0-5% ownership by the managers and board of directors led to positive effect on Tobin's Q, 5-25% equity stake of insiders led to negative relationship with Tobin's Q, and 25% and above equity stake led to positive relationship with Tobin's Q. Demsetz & Lehn (1985) found no correlation between the presence of non-management large owners and the rate of profitability. Several other authors found that the presence of concentrated ownership leads to higher firm performance (Gedajlovic & Shapiro, 1998; Kang & Shivadasani, 1995; Shleifer & Vishny, 1986; Short, 1994; Thomsen & Pederson, 2000). Concentrated ownership also leads to decrease in the liquidity of the stock markets and leads to less information content in its share prices and thus, inhibiting the ability of capital markets to monitor such firms (Holmstrom & Tirole, 1993; Morck et al., 2005). Lee & O'Neill (2003) found that ownership concentration has a different effect in different country contexts. They found that ownership concentration was positively associated with R&D investment in US companies while there was no relationship between ownership concentration and R&D investment in Japanese companies.

Schleifer & Vishny (1997) and Bebchuk et al. (2000) argued that the proliferation of concentrated ownership is mostly found in countries with poor investor protection laws. Scholars have also identified several other factors that can explain concentrated ownership, aptly summarized by Young et al. (2008), "such as fewer publicly traded firms (La Porta et al., 1997), lower levels of dividends payout (La Porta et al., 2000), lower firm valuations (Claessens et al., 2002; La Porta et al., 2002; Lins 2003), less information contained in stock prices (Morck et al., 2000), inefficient strategy (Filatotchev et al., 2003; Wurgler, 2000), less investment in innovation (Morck et al., 2005), and, in many cases, expropriation of minority shareholders (Claessens et al., 2000; Faccio et al., 2001; Johnson et al., 2000b; Mitton, 2002)"(Pg. 197). Zahra and Filatotchev (2004) argue that concentrated ownership is more salient as the firms mature, as these owners are able to have effective monitoring of the controlling managers. Similarly, Gedajlovic et al. (2004) argue that the wide presence of concentrated ownership in emerging economies is on account of the greater governance needs in such economies.

From the above discussion, we can infer that concentrated ownership leads to greater governance and greater governance may lead to effective oversight or ineffective oversight of the management (Morck, 2000; Dharwadkar et al., 2000). But whether the governance mechanisms facilitate effective or ineffective oversight it dilutes control of the entrepreneurs. Thus, entrepreneurs may want to balance the need for effective oversight and the dominance of their strategic insights by adopting control endowing structure of dual-class. This control can be used by entrepreneurs to either pursue strategies that may increase the firm value and provide public benefits of control or to expropriate minority shareholders and reap private benefits of control. This study argues that greater number of outside concentrated owners may lead to the adoption of dual-class structures as it provides entrepreneurs with control mechanisms to pursue strategies

that leverage their firm-specific knowledge (Yukl & Tracy, 1992) and deter concentrated owners from pursuing self-interest maximizing strategies (Morck, 2000). When dual-class structures are adopted due to a number of outside concentrated owners, it may be for gaining unity of command to pursue the unity of direction, Thus, it is hypothesized:

Hypothesis 2a. Presence of a greater number of outside concentrated owners may lead to the adoption of dual-class structure.

If dual-class structures are adopted despite having less concentrated owners then the reasons for adoption may not be to gain unity of command but to make the market for corporate control ineffective and to avoid monitoring by the stakeholders by creating information asymmetries (Jensen & Meckling, 1976; Eisenhardt, 1989). Thus, it is hypothesized:

Hypothesis 2b: Presence of a lesser number of outside concentrated owners may lead to the adoption of dual-class structure.

As dual-class structures are mechanisms to exercise absolute control, it is difficult to predict whether this control would be exercised to pursue public benefits of control by leveraging unity of command or to pursue private benefits of control by engaging in entrenchment. Although the intentions of the entrepreneurs to adopt these structures cannot be predicted ex-ante, we can very well infer the investor's perception by assessing the effect on IPO premium. It is predicted that a greater number of outside concentrated owners will signal shared command in the firm and thus, a greater need for unity of command. If investors perceive the unity of command to be value-creating in the context of the firm, then it may lead to premium in the offer price, otherwise, investors may perceive dual-class adoption as an entrenchment strategy and discount the offer price.

More importantly, the effect of presence of concentrated owners will be more consequential in case of dual-class structures as compared to single-class structures, as it may lead to increase in principal-principal conflict, and may affect IPO performance, thus, I further contend that dual-class structures will mediate the relationship between number of outside concentrated owners and IPO performance, primarily for two reasons. Firstly, the advantage of having concentrated outsiders in single-class firms is that they help in monitoring agents and reduce agency costs (Dharwadkar et al., 2000). In the absence of concentrated owners in single-class firms, shareholders have other mechanisms such as the market for corporate control (Easterbrook & Fischel, 1983), efficient capital markets(Fama & Jensen, 1983), etc. to monitor agents and reduce agency cost. On the other hand, in dual-class firms, shareholders cannot use market for corporate control, capital markets, etc. to monitor agents and reduce their agency costs, and thus, presence of outsiders can become salient for the role of monitoring. Also, in dual-class structures, insiders are likely to have a greater stake in the firm, and thus, lower agency costs.

Secondly, in dual-class structures, outsiders can act as efficient monitors while the presence of unity of command can act as a facilitative mechanism to unlock the future value of opportunities (McMullen & Shepherd, 2006). Also, in dual-class structures, the probability of higher principal-principal conflict may lead to a lower value in IPO markets. Thus, the presence or absence of outsiders is more consequential in dual-class structure firms than single-class firms, and thus, the effect of many outsiders is likely to affect IPO performance through dual-class structures, so, it is hypothesized:

Hypothesis 2c. Dual-class structures will mediate the relationship between the number of concentrated outsiders and IPO performance.

3.1.3 Insider control. The extant literature discusses equity holdings by following constituents as insider equity holding: CEO equity holdings, managerial equity holdings, officer & director equity holdings, and insider board members equity holdings (Dalton et al., 2003). This stream of literature argues that equity ownership possessed by insiders would cause executives' wealth to vary with firm performance, and thus, their interests would be aligned with the shareholders' interest (Jensen & Murphy, 1990; Bryan, Hwang, & Lilien, 2000; Perry & Zenner, 2000). Demsetz & Lehn (1985) found that the relationship between insider equity ownership and firm performance is endogenous. Their research did not provide any systematic relationship between insider equity holding and firm performance leading to a conclusion that it is difficult to ascertain whether the firm performance determines insider equity holding or does insider equity holding determine firm performance.

Smallholdings of insiders in the firm may not be sufficient to deter them from shirking (Morck et al., 1988). Insiders may have greater incentives for shirking even if they have some equity holdings in the firm. The insiders may realize that concentrating their energies on other tasks whose benefits accrue only to them is more advantageous than concentrating their energies on tasks whose benefits are going to be divided amongst several shareholders – also any loss incurred due to shirking is going to be divided amongst all shareholders, thus, insiders incurring only a small cost of shirking which is much less than the benefits incurred from shirking (Demsetz & Lehn, 1985). Scholars have found that the agency cost in the relationship between the principals and the agents is negatively moderated by the managerial incentives and managerial ownership (Fama & Jensen, 1983; Jensen & Murphy, 1990; Perry & Zenner, 2000; Himmelberg, Hubbard, & Palia, 1999). Some scholars have found an inverted U-shaped relationship between the equity ownership of the board of directors and the managers, and the

performance of the firm (Morck, Schleifer, & Vishny, 1988). CEO's shareholdings have a positive effect on firm performance (Zhang & Wiersema, 2009).

If insiders have a minority equity holding in the firm, then the firm is governed by concentrated owners through mechanisms such as the board of directors and various committees on compensation. When there is no concentrated ownership, the market for corporate control is active and stakeholders exercise control through mechanisms such as proxy voting, board control, shareholder activism, etc. Thus, insiders with minority shareholding have to often manage the concerns of the concentrated shareholders as well as of the other active shareholders leading to dilution of their control of the firm. This leads to sharing of command with multiple stakeholders (Pearce & Conger, 2003) and dealing with various power centers in the same organization (Westphal, 1998). This shared command may lead to ineffective decision making as decisions will often be a compromise of various perspectives forwarded by various stakeholders. Insiders with minority shareholding may not be able to pursue their strategic directions (Yukl & Tracy, 1992) due to the decision control rights possessed by the majority-holders. Insiders will also not be able to pursue future opportunities as the future value of opportunities cannot be fathomed by outside stakeholders perfectly (McMullen & Shepherd, 2006). In shared command structures, insiders' firm-specific knowledge cannot be leveraged effectively (Westphal, 1998). Since control in dual-class structures is determined through voting rights rather than the equity shareholding, we argue that under conditions of insiders' minority voting rights, insiders are more likely to adopt dual-class structures to gain unity of command and pursue their value-creating firm strategies. So, it is hypothesized:

Hypothesis 3a: *Minority voting rights of insiders may lead to the adoption of dual-class structures*.

On the other hand, insiders with firm control are more likely to adopt takeover defenses to seek private benefits of control (Brennan & Franks, 1997). Insiders with firm control are more likely to enjoy high compensation, monetary, and non-monetary perquisites, tunneling of resources (Bebchuk et al., 2000; La Porta et al., 2000; Yermack, 2006; Devers et al., 2007). Thus, if insiders with majority voting rights decide to adopt dual-class structures then it may indicate that insiders wish to entrench themselves and reap the private benefits of control. Thus, it is hypothesized:

Hypothesis 3b: Majority voting rights of insiders may lead to the adoption of dual-class structures.

The above assertions lead us to conclude that minority voting rights by insiders may increase the probability of adoption of dual-class structures if insiders wish to maintain their future control over the firm. There could be two contrasting objectives to maintain the future control of the firm: 1) to increase the value of the firm without facing obstacles from other investors who may have insufficient information about the future value of the firm and differ in perception about the value of entrepreneurs' strategies (DeAngelo & DeAngelo, 1985; Cornett & Vetsuypens, 1989; Yukl & Tracy, 1992), and 2) to create information asymmetries to reap private benefits of control by making market for corporate control ineffective. The above arguments indicate that the control of the firm in the hands of the insiders can be beneficial or detrimental depending upon the goals of the insiders. It is very difficult to predict ex-ante whether insiders' control of the firm will lead to value creation or value destruction, but it is possible to assess how investors perceive the adoption of dual-class structures by insiders based on the price that they are willing to pay for the shares of the IPO firm. I argue that the insider's voting rights and the consequent need for monitoring will be more pronounced in dual-class

structures in comparison to single-class structures due to the absence of sufficient governance provisions and the resulting participation rights.

This study predicts that dual-class structures will mediate the relationship between insider's shareholding and IPO performance because of two reasons. Firstly, in single-class firms, the presence of majority or minority shareholding by insiders may have a consequential effect on the agency cost that shareholders will have to bear. In the case of higher agency cost, shareholders have the option to enact greater monitoring mechanisms or use institutional mechanisms such as the market for corporate control and capital markets. Thus, the IPO performance is less likely to be influenced by insiders' control in single-class firms. On the other hand, in case of dual-class structures, if agency costs to outsiders are high, there are no alternative mechanisms to reduce this agency cost as monitoring mechanisms such as the right of decision control and the market for corporate control are absent. This may lead to the increased significance of insiders' ownership in IPO performance. Thus, the effect of insiders' ownership on IPO performance will be more pronounced in dual-class structures. Secondly, in single-class firms, if insiders do not meet performance expectations then shareholders have the power to replace the management with more efficient management while in dual-class firms, insiders cannot be replaced by the shareholders even if the insiders do not meet performance expectations. So, for shareholders, control of insiders is of greater significance in dual-class firms as compared to the single-class firms, and thus, it is hypothesized that the effect of insiders' control on IPO performance will be mediated by dual-class structures:

Hypothesis 3c: Dual-class structure will mediate the relationship between insider voting rights and IPO performance.

3.1.4 Board power. Insiders are known to discount share price at IPO to gain greater

dispersion of shareholders, as wider dispersion of shareholders creates collective action problems

and dilutes monitoring of insiders (Booth & Chua, 1996; Brenner & Franks, 1997; Smart &

Zutter, 2003). This reduced monitoring hypothesis has been further supported by the findings of

Field & Sheehan (2000). It is also known that insiders strive to reduce monitoring from other

stakeholders (Brennan & Franks, 1997; Field and Sheehan, 2000). Single-class shares with

dispersed ownership as well as dual-class shares with unequal voting rights are two structures

that can enable reduced monitoring of the insiders. But single-class shares are still vulnerable to

capital market monitoring by activation of the market for corporate control (Easterbrook &

Fischel, 1983) whereby management can be replaced by a more efficient management team.

Thus, dual-class structure is one mechanism that provides protection from the market for

corporate control as well as the collective action of shareholders.

When insiders have a minority representation on the board of directors, they have to take

into account the varied assertions of the stakeholders represented on the boards. Thus, insiders

are not able to pursue strategies that they think are valuable (McMullen & Shephed, 2006).

Insiders minority representation on the boards leads to sharing of the command with the

concentrated owners who may each have their own self-interest laden agendas to pursue (Morck,

2000). This shared command leads to ineffective decision making (Pearce & Conger, 2003) and

the proliferation of multiple power structures within the firm (Westphal, 1998). Thus, unity of

command is desired by insiders to leverage their firm-specific knowledge and pursue their

idiosyncratic strategies (Yukl & Tracy, 1992; Westphal, 1998). Unity of command assertions

also argues that reduced monitoring can enable insiders to invest appropriately in risky

opportunities, ensure effective investment of insiders human capital in the focal firm, and reduce

the coordination costs of managing multiple stakeholders who have less information than the insiders about the focal firm (DeAngelo & DeAngelo, 1985). Thus, insiders may be able to concentrate on value-adding activities instead of using their time in inefficient investor management processes. Takeover reduces insider's welfare and loss of human capital (Jarell & Poulsen, 1988) and so insiders may want to adopt structures that shield them from unwanted takeovers. This study argues that firms with a lower proportion of insiders on the boards are more likely to adopt mechanisms that can provide them with the unity of command to control their firms. Thus, it is hypothesized:

Hypothesis 4a: Lower proportion of insiders on the BODs may lead to the adoption of dual-class structures.

If the board is dominated by insiders, then they possess the control of the firm and agency theory asserts that insiders may reap the private benefits of control by reducing monitoring. For example, super-voting shares are more likely to receive a premium in the event of a takeover as compared to the inferior-voting shares (Nenova, 2003). Insiders are also likely to get higher compensation and valuable option grants if they have anti-takeover charter amendments (Borokhovich, Brunarski, and Parrino, 1997). They are also likely to have more control over the strategic direction of the firm and unity of command. But despite the board majority if insiders adopt dual-class structures then it may be inferred that the dual-class adoption may be for reasons of entrenchment rather than unity of command. Thus, agency theory argument is that the team of insiders with board majority, who wish to reduce monitoring of their firm and reap private benefits of control, are more likely to adopt dual-class structures. Thus, it is hypothesized:

Hypothesis 4b: Higher proportion of insiders on the BODs may lead to the adoption of dual-class structures.

Although insiders prefer reduced monitoring, whether reduced monitoring is going to lead to effective persuasion of entrepreneurs' strategies or entrenchment of the insiders is difficult to ascertain ex-ante. Thus, we use the firms' IPO performance to gauge how investors perceive the adoption of dual-class structures. The relationship between board power of insiders and IPO performance is going to differ based on the type of capital structure as they endow differential participatory rights for shareholders. In single-class structures, board power of insiders can be countered by the market for corporate control and collective bargaining (Grossman & Hart, 1988). In dual-class structures, board power of insiders provides a greater possibility of insiders' entrenchment as the market for corporate control and collective bargaining are effectively absent. Thus, board power of insiders at the time of IPO is likely to influence shareholder decision to a much greater extent if a firm adopts a dual-class structure as opposed to when a firm adopts single-class structure. Additionally, the board power of insiders may make decision control difficult and may lead to boards pursuing strategies that do not maximize the shareholder goals. The limited decision control rights in single-class firms may be countered by exercising monitoring through collective bargaining, market for corporate control, etc., but in dual-class structures, the alternative participatory rights are absent and thus, insiders' board power may have greater significance for IPO performance in case of dual-class structures as compared to the single-class structures. Thus, I contend that dual-class structure adoption by insiders will mediate the relationship between the proportion of insiders on board and IPO performance. Thus, it is hypothesized:

Hypothesis 4c: Dual-class structure will mediate the relationship between the proportion of insiders on the board and IPO performance.

3.2 Firm-Specific Antecedents

Firm-specific factors can be significant predictors of dual-class structures. Life-cycle theory of the firm states that firms go through different types of problems in different stages of their life-cycle, and as the firms mature, they develop the sophistication required to deal with their problems (Churchill & Lewis, 1983). Thus, we will study the effect of firm age on the dual-class structure and its effect on IPO performance. Entrepreneurial finance literature has largely concentrated on financing cycle that begins with three F's of friends, family, and "fools", followed by business angels, venture capitalists, and capital markets (Bellavitis et al., 2017). It is largely assumed that the bank finance and external debt is not available to new ventures due to the few idiosyncratic factors associated with them such as moral hazard problems, adverse selection, lack of stable cash-flows and high-quality collateral (Berger & Udell, 1998; Bellavitis et al., 2017), but Robb & Robinson (2014) found that in venture capital (VC) backed firms, debt plays a crucial role. Thus, we consider VC funding as an important firm-level factor that can influence the control considerations in IPO firms. Finally, firm performance is the most effective signal of firm effectiveness (Venkatraman & Ramanujam, 1986), and it is widely accepted that the ownership structures or capital structures are an outcome of firm performance (Demsetz & Lehn, 1985).

3.2.1 Time to IPO. At the initial stage entrepreneur firms are largely driven by ideas that have unsystematic risk associated with it and thus, there is a paucity of investors and greater challenges to secure resources. The entrepreneurial literature says that unsystematic or

stochastic risk (more relevantly described as uncertainty by Knight (1921)) transcends to more probabilistically determined, also called as systematic risk, once the entrepreneur firm is operational and there is some market feedback. At this stage financial options for the firm increases as commercial banks, venture capitalists, etc. are willing to invest in such firms. Also, the access of firm to other resources like human capital increases too. Thus, the time for which a firm has been operational determines the growth processes and also differentiates between the structure and the type of strategies it pursues (Hambrick & Brandon, 1988).

Firm age has also been accepted as an important factor in the development of routines (Nelson & Winter, 2002) and the development of dynamic capabilities (Teece, Pisano, & Shuen, 1997). The routines literature underlines the importance of capability in accessing and maintaining resources while the dynamic capabilities literature argues that second-order capabilities are essential to gain competitive advantage. Both these streams of literature agree that ordinary capabilities and second-order capabilities are developed over time through experience (Zahra, Sapienza, & Davidsson, 2006).

There has been growing attention towards new sources of financing that have emerged over the last decade (Bruton, Khavul, Siegel, & Wright, 2015). Few of the prominent sources of finance that have changed the landscape of entrepreneurial finance are crowdfunding (Agrawal, Catalini, & Goldfarb, 2013), Microfinance (Khavul, 2010), peer to peer lending (Moenninghoff & Wieandt, 2013), Venture Capital (Bellavitis, Filatotchev, and Kamuriwo, 2014), etc. Technology and science startups have few additional sources of finance such as accelerators and incubators, proof-of-concept centers, university-based seed funds, IP-backed financial instruments, etc. (Bellavitis et al., 2017). Also, globalization of financial markets has facilitated

entrepreneurial ventures with sources of finance from different countries (Devigne, Vanacker, Manigart, Paeleman, 2013), and reduced the cost of capital (Bekaert & Harvey, 2000). This indicates that the entrepreneur firms are delaying their public market forays as the alternative finance options are increasing. Davidsson (1989) found that entrepreneur firms are more motivated by control considerations than the growth considerations and the increased entrepreneurial finance options in private markets are allowing entrepreneurs to retain most of the control while they pursue growth strategies.

Entrepreneurial finance literature has seen exclusive focus on a single source of financing leading to silos of literature developing in regard to bank finance, lease finance, business angel finance, venture capital finance, private equity, supplier finance, and crowdfunding (Cosh, Cumming, and Hughes, 2009; Bellavitis et al., 2017). There has been growing evidence that the proliferation of multiple sources of finance have actually increased the base of entrepreneurship in developing countries (Khavul & Bruton, 2013) and has also increased the access to capital for entrepreneurs in developing and developed economies (Bruton et al., 2015). Additionally, Gao, Ritter, & Zhu (2013) found that the time to IPO from the date of its incorporation has increased from 8 years (1980-1999) to 9 years since the year 2000. I contend that the increased availability of entrepreneurial finance has increased the tendency of entrepreneurial firms to delay their initial public offering, as much of the required growth capital can now be accessed in the private markets itself.

Based on risk and uncertainty theory (Knight, 1921), we contend that young firms are likely to face greater uncertainty in exploiting or creating market opportunities increasing the risk of survival. The life-cycle theory also suggests that the type of finance available at the

different stages of the firm's life-cycle may also differ. During the initial stage of firm's life when the risk is unsystematic and high uncertainty prevails, mostly angel investors are the ones who make some investments in such firms (Mitteness, Sudek, & Cardon, 2012). Entrepreneurial finance literature argues that firm's access to finance is dependent on the firm's age and the market feedback, as greater sources of finance are available if a firm shows market performance (Bellavitis et al., 2017). Finally, the evolutionary theory of firm indicates that firm's ordinary capabilities and second-order capabilities are both developed over time and are significant predictors of resource access and firms' competitive advantage (Teece et al., 1997). Thus, we contend that younger firms are likely to have greater risk and uncertainty in exploiting market opportunities due to the liability of newness (Stinchcombe, 1965). Additionally, scholars have found that the importance of strong leadership is enhanced in younger firms due to the absence of structure and strategy history (Hambrick & Brandon, 1988). Thus, younger firms are more likely to need unity of command as opposed to older firms.

If firms become public, they have to adhere to different governance norms specified by Sarbanes-Oxley Act of 2002, which requires them to share information about their business and the revenue model in the public domain, making them vulnerable to competition. Since the disclosure requirement can significantly impact the competition for young firms, entrepreneurs are likely to adopt protective mechanisms to gain control over the market for corporate control. Public firms also have to share the rights of firm governance with their multiple stakeholders subjecting themselves to increased monitoring and decreased the ability to pursue their growth strategies (Yukl & Tracy, 1992). Given that the entrepreneurs have idiosyncratic information about the future value of opportunities (McMullen & Shepherd, 2006), entrepreneurs are more likely to adopt mechanisms that can provide them with the unity of command to pursue their

strategies. This study expects that firms which go public early in their life-cycle are more likely to adopt dual-class structures because these firms want to avoid sharing control of their firm with multiple stakeholders and be subjected to governance norms that further dilutes their ability to pursue their strategies (Pearce & Conger, 2003; Westphal, 1998). So, it is hypothesized:

Hypothesis 5a: Lesser the time-to-IPO greater is the likelihood of adoption of dual-class structures.

Older firms who have systematized their risk and have gained access to the required resources to exploit market opportunities are less likely to adopt dual-class structures. Older firms are likely to come to the public markets to provide their early investors with exit opportunities and are likely to have developed effective business models with appropriate intellectual right protections to limit competition that may arise from the disclosure requirements. Private investors such as venture capitalists are known to closely govern the firms that they invest in (Rosenstein, 1988). These investors are experienced in firms' technologies and have specialized knowledge about the firms' industry providing entrepreneurial firms with the required experience and greater access to resources. I contend that firms that have established their market, have access to required resources, and have developed their competitive advantage are less likely to adopt dual-class structure. On the other hand, if entrepreneurs want to pursue entrenchment strategies such as tunneling of resources, consumption of perks, etc. (Bebchuk et al., 2000), then they are likely to adopt dual-class structures despite the advantages that have been endowed to them by firm age. For example, the presence of VCs may provide greater access to resources but also makes it difficult for entrepreneurs to engage in shirking and moral hazard. With a micro-management by investors in the private markets, it is difficult for

entrepreneurs to create information asymmetries to reap private benefits of control and thus, such entrepreneurs may want to pursue dispersed ownership through public markets so that they can reap private benefits of control (Booth & Chua, 1996; Brennan & Franks, 1997). Thus, agency theory arguments of entrenchment may be true if firms going public late decide to adopt dual-class structures. So, it is hypothesized:

Hypothesis 5b: Greater the time-to-IPO greater is the probability of dual-class structures.

Dual-class structures endow unity of command to young and old firms. We may make theoretical assertions in regard to when it seems dual-class is being adopted for unity of command and when it is being adopted for entrenchment, but it is very difficult to ascertain ex-ante whether the control endowed by dual-class structures would be used by entrepreneurs to maximize private benefits of control or to maximize the public benefits of control. I use firms IPO performance as a proxy for investor sentiments and ascertain when are dual-class structures considered to be for unity of command, or entrenchment. Furthermore, I contend that the firm age is going to be more salient to investors when firms adopt dual-class structures as compared to when shareholders adopt single-class structures. I argue that if investors ascertain ex-post that firms have adopted single-class structure for entrenchment, they have alternative control mechanisms such as replacing the incumbent management with more efficient management or exercising decision control through collective bargaining processes, etc. On the other hand, such participatory rights are absent in dual-class firms and thus, investors are more likely to weigh in the age of the firm when firms adopt dual-class structure. Secondly, in young firms, the importance of effective leadership is enhanced due to the liability of newness, and insiders can

become effective leaders if they have unity of command to pursue their strategies, as insiders

human capital is essential to exploit opportunities in new firms (Taylor & Whittred, 1998), thus,

if insiders incur bonding costs to have effective control of the firm it signals greater unlocked

value of opportunities as well greater ability of the management to realize these opportunities.

Thus, firm age will likely affect IPO performance when it adopts the dual-class structure. Thus, it

is hypothesized:

Hypothesis 5c: Dual-class structure mediates the relationship between time-to-IPO and IPO performance.

3.2.2 Venture capital funding. Gompers & Lerner (2001) have defined venture capital

(VCs) "as independent, professionally managed, dedicated pools of capital that focus on equity

or equity-linked investments in privately held, high growth companies" (Pg. 146). Venture

capital organizations raise capital from individuals and institutions to invest in early-stage

businesses characterized by high potential and the consequent high risk (Sahlman, 1990). Thus,

venture capitalists have contracts with fund suppliers as well as the entrepreneurs whom they

fund (Sahlman, 1990). These arrangement subjects venture capitalists to multiple agency

problems as they are the agents to fund suppliers and principals to funded entrepreneurs (Bruton

et al., 2015; Bellavitis et al., 2017; Arthurs, Hoskisson, Busenitz, & Johnson, 2008). The

purview of this dissertation is limited to the study of venture capitalist's role as principal to

funded entrepreneurs.

VCs are an important source of advice and contacts (Bellavitis, Filatotchev, and

Kamuriwo, 2014; Sapienza, Manigart, and Vermeir, 1996), and there is a broad consensus that

venture capital investment provides entrepreneurs with the required legitimacy (Stuart, Hoang, &

Hybels, 1999; Amit et al., 1998; Gompers & Lerner, 2001). While the venture capitalists often infer the legitimacy of an entrepreneur firm from their participation in incubation programs (Stuart et al., 1999). High-growth potential firms are often required to grow by utilizing external finance with limited debt(Vanacker & Manigart, 2010), as high growth firms are plagued by a higher probability of bankruptcy. VC funding has a stronger impact on growth in domestic and international markets as compared to bank financing (Cole, Cumming, & Li, 2016). However, VC funding is available only to a few entrepreneurial firms as shown by Robb & Robinson (2014) who found that only 26 new firms out of a sample of 4928 new firms were able to attract VC funding. Thus, the highly selective nature of VC funding provides other external investors with signals of the quality of the entrepreneurial firm.

We might be compelled to ask why do venture capitalists exist despite the presence of commercial banks. In the United States, banks are only allowed to extend loans to firms but are not allowed to hold controlling equity or simultaneously loan to a firm and hold its equity (Marx, 1997; Pozdena, 1990). Thus, banks in the U.S.A. cannot control the risks associated with entrepreneurial firms due to their limitations in engaging pure equity financing (Pozdena, 1990). Although there are few scholars who have argued that despite these limitations entrepreneurial firms are largely financed by commercial banks and other external debt sources (Zarutski, 2006) but other scholars have found that most of these financing is relationship-based financing (Berger & Udell, 2002) or can be explained by the heterogeneity in the working of large and small banks (Howorth and Moro, 2006). Largely, banks in the USA are known to lend only to well-capitalized, established firms, having ample collateral, and selling established products (Pozdena, 1990; Marx, 1997). The other reason that can explain the proliferation of venture capital despite the existence of commercial banks is that leveraged firms have a higher

probability of financial distress and given the high level of uncertainty associated with entrepreneur firms, entrepreneurs prefer venture capital over bank finance (Carpenter & Petersen, 2002b). Venture capitals are organized in the form of limited partnerships where venture capitalists act as general partners who administer the fund as well as contribute funds to its corpus while outside investors act as limited partners and participate in venture capital by contributing funds(Sahlman, 1990; Gompers & Lerner, 2001).

Due to the liability of newness associated with entrepreneurial firms, there are stochastic risks that also get attached to entrepreneurial firms leading to a limited supply of external finance. Venture capitalists have developed mechanisms to deal with this stochastic risk along with the adverse selection and moral hazard problems associated with entrepreneur firms (Amit et al., 1998). Venture capitalists often take up the board of director's seats as well as economic rights and ownership rights in firms that they invest (Sahlman, 1990). Venture capitalists prefer to have a mix of equity and debt in the companies that they invest in, with the equity being mainly in the form of convertible preferred shares (Marx, 1997; Gompers, 1997; Testa, 1988). Preferred stocks provide debt-rights at the time of liquidation while its conversion to equity provides the upside potential of common stock (Marx, 1997). Cumming (2008) found that convertible equity is more likely to be used in the seed investment and early investment stages and for the firms in Internet/communications sector while common equity is used in the expansion stage investments and for the firms in medical/biotech industries. Gilson and Schizer (2002) found that the use of convertible preferred shares by venture capitalists is related to tax practices in the USA which enables favorable entrepreneurial compensation. Thus, preferred stocks have advantages for venture capitalists as well as entrepreneurs and that can explain the proliferation of its use in the USA.

Mostly, VCs prefer to separately allocate voting rights, cash-flow rights, board rights, liquidation rights, and other control rights (Kaplan & Stromberg, 2003). These rights are often contingent on the financial and non-financial performance of the entrepreneurial firm whereby poor performance transfers the control rights to VCs while a good performance leads to transfer of control rights and liquidation rights to entrepreneurs (Kaplan & Stromberg, 2003). Hellman (1998) found that entrepreneurs voluntarily relinquish control rights if the venture capitalist has to engage in the costly search for a new CEO, due to shortfalls in the performance of the entrepreneurial firm. This finding indicates that the VCs take on greater operational responsibilities if the performance of the firm is poor, which has a negative effect on the control rights of the entrepreneurs. Thus, the performance of the venture fund -backed entrepreneurial firm and control rights of entrepreneurs are intrinsically interlinked. VCs exit their investments by reaching the goal of an IPO or selling the company to a larger firm (Berger & Udell, 1998; Cumming & MacIntosh 2003).

From the discussion above we can infer that VC-backed firms which reach the stage of IPO are more likely to be high performing firm, as those VC-backed firms that do not perform well or do not meet the high standards of performance set by VCs, are more likely to be divested by selling to a larger firm. The existence of VCs provides firms with legitimacy in the private markets where the information asymmetries make it impossible for other investors to assess the risk of investment (Robb & Robinson, 2014). Thus, the presence of VCs leads to increased interest in such firms from other outside investors such as institutional investors, hedge funds, corporate funds, etc. leading to greater management control by these investors and thus, entrepreneurs may adopt super-voting structures to gain unity of command to pursue their strategies which may get hampered by oversight exercised by other investors who may have

incomplete information about the future value of the entrepreneurs' strategies (Yukl & Tracy, 1992; Westphal, 1998; McMullen & Shepherd, 2006). Thus, we hypothesize:-

Hypothesis 6a: Venture capital-backed firms are more likely to adopt super-voting structures.

Non-venture capital-backed firms do not have specialized investors such as venture capitalists to govern them. Also, firms not having venture capitalists are less likely to find investors who take up concentrated shareholding in such firms as these investors do not have any mechanism to ascertain the future value of the firm (Stuart, Hoang, & Hybels, 1999; Amit et al., 1998; Gompers & Lerner, 2001). Thus, control issues and governance issues are less likely to be contentious for such firms. In the absence of specialized investments, such firms are more likely to be successful in creating informational asymmetries (Stuart, Hoang, & Hybels, 1999). Further, if the firm also adopts dual-class structures then it may suffer value discount in the IPO markets (Easterbrook & Fischel, 1991; Field & Karpoff, 2002). This study argues that if entrepreneurs adopt dual-class structures despite not requiring control mechanisms to control their firm and despite the probability of value discount in the IPO markets, then it may signal that entrepreneurs want to entrench themselves at the cost of minority shareholders. Thus, it is hypothesized:

Hypothesis 6b: Non-Venture capital-backed firms are more likely to adopt dual-class structures.

Dual-class structures endow control by providing unity of command but whether this control is exercised to create value for the common shareholders or to reap private benefits of control is very difficult to ascertain ex-ante, but it is possible to infer investors perception by IPO performance. We have argued above that if venture capital-backed firms adopt these structures

then it may be perceived as a need for unity of command, and further, it is expected that it will lead to a positive effect on IPO performance. On the other hand, if these structures are adopted by non-venture backed firms then it may indicate intentions of entrenchment, and lead to negative IPO performance. I contend that not only the direction of effect is determined by dual-class structure adoption but in fact, the whole effect of VC presence on IPO performance will depend on dual-class structure adoption. This is because in case shareholders realize ex-post that the dual-class structure has been adopted for entrenchment, then they have alternative mechanisms to protect their investment in single-class firms like the provision of decision control, right to replace the incumbent management, market for corporate control, etc., but in case of dual-class structure they do not have any such recourse. Secondly, adoption of dual-class structures by VC backed firms (who are ideally resistant to such structures) can signal greater growth potential existing in such firms (Taylor & Whittred, 1998). Thus, the use of dual-class structures will be perceived as a unity of command. Thus, ex-ante, firms with VC funding that adopt dual-class structure are likely to influence shareholders decision to a much greater extent than the VC funded firms that adopt single-class structure. Thus, it is hypothesized:

Hypothesis 6c: Dual-class structure will mediate the relationship between Venture capital-backed firms and IPO performance.

3.2.3 Firm Performance. Firm performance is a proxy for firm effectiveness (Venkatraman & Ramanujam, 1986). For entrepreneur firms, firm performance signifies a key to access more resources from their environment by providing these firms with the required instrumental legitimacy (Pfeffer & Salancik, 1978; Suchman, 1995). For example, entrepreneur firms backed by venture capitalists are often periodically assessed based on performance targets and as these targets are achieved, VCs are more willing to dilute their control of the firm in favor

of the entrepreneurs (Kaplan & Stromberg, 2003). We can infer from this example that firm performance is one of the key parameters by which the VCs judge the abilities of entrepreneurs to manage their firms effectively. In the absence of the required firm performance levels, VCs are more likely to change the management of the firm or divest from the firm (Kaplan & Stromberg, 2003; Hellman, 1998). Thus, positive firm performance enables entrepreneurs to get more control of their firm as well as to gain the trust of its initial investors.

Firm performance is also one of the factors based on which firm effectiveness is assessed and as such firms having high performance are evaluated positively by the investor community. Thus, investors are more interested to participate in the firms having high performance either through passive investments or through active investments as categorized by Brickley, Lease, & Smith (1988). This can activate the market for corporate control and make the firm vulnerable to takeovers. Also, firms with high performance are often the source of private benefits of control for the controlling owners (Fama & Jensen, 1983). Controlling owners can choose non-pecuniary consumption and may diverge scarce resources from profitable projects to benefit themselves (Demsetz, 1983). Thus, this dissertation argues that super-voting structures may be adopted by controlling managers (entrepreneurs) with the intention of protecting the larger interests of the firm by shielding itself from takeover by another management, which may not have the future-value creating information as possessed by the entrepreneurs (Yukl & Tracy, 1992), or, super-voting structures may be adopted to appropriate the private benefits of control. Under either of the arguments, firm performance is one factor based on which underlying reasons for adoption of super-voting structures may be predicted.

It is also argued that entrepreneurs gain legitimacy from their investors by demonstrating positive firm performance and by meeting their expectations. Thus, entrepreneurs will have more leverage in persuading their current investors to support their strategic initiatives if they can demonstrate positive firm performance (which is the result of their strategic initiatives), as it provides them with advantages in managing the socio-political processes of board decision making (Westphal, 1998). This dissertation argues that high firm performance will lead to the adoption of dual-class structures as high firm performance will attract investor interest and increase the probability of takeovers in the initial stages of its growth. Thus, we hypothesize:

Hypothesis 7a: Entrepreneur firms with positive firm performance are more likely to adopt dual-class structures.

Entrepreneurial firms with negative performance may require the replacement of incumbent management with more productive management (Baysinger & Hoskisson, 1990). Negative performance may also indicate that the entrepreneurs' firm-specific knowledge is not leading to positive value creation, and thus, there is a need to replace the current management. If firms with subpar firm performance adopt dual-class structures, then it may be to protect itself from the market for corporate control. The management is trying to protect its interests while at the same time harming minority shareholders' interests. Thus, it may be inferred that firms with negative performance may adopt dual-class structures to gain entrenchment. So, it is hypothesized:

Hypothesis 7b: Firms with negative firm performance are more likely to adopt dual-class structures.

It is difficult to assess ex-ante whether the dual-class structure adoption is for the unity of command that increases firm performance, or it is for gaining private benefits of control. We use firms' IPO performance as a proxy for investors perception about the dual-class structure adoption by firms. I further contend that the effect of firm performance on IPO performance will be mediated by the dual-class structure. This study argues that if firm performance in single-class structure is not up to the expectation of the shareholders then they have alternative mechanisms such as the ability to replace the incumbent management, exercise management decision control, activate market for corporate control, etc. On the other hand, in dual-class structures such provisions are absent and thus, shareholders have limited recourse to protect their investments.

Secondly, adoption of dual-class structures by firms that have good firm performance may signal greater future value of the firm (DeAngelo & DeAngelo, 1985), leading to a greater effect of firm performance on IPO Performance as compared to single-class firms. Thus, shareholders decision to invest or not to invest in an IPO share will be greatly influenced by the presence or absence of dual-class structure, leading to the significant impact of firm performance on IPO performance in the presence of dual-class firms. So, it is hypothesized:

Hypothesis 7c: Dual-class structure will mediate the relationship between firm performance and IPO performance.

3.3 Strategic Antecedents

Startups, typically small in size and privately held, are plagued by the liability of newness (Stinchcombe, 1965) and there is a large difference between what the entrepreneurs know, and the investors know (Gompers & Lerner, 2001; Bellavitis, Filatotchev, Kamuriwo, & Vanacker,

2017). Moreover, these firms control few physical assets, lack internal capital markets (Carpenter & Petersen, 2002a), and operate in nascent and fast-moving domains characterized by extreme product, technological, and market uncertainties (DeSantola & Gulati, 2017; Hiatt & Sine, 2014; Santos & Eisenhardt, 2009). Thus, the above-said factors make it difficult for new ventures to source financial and social resources to pursue growth (Katila, Rosenberger, & Eisenhardt, 2008; Baker & Nelson, 2005; DeSantola & Gulati, 2017), but growth is essential for survival of these firms (Wasserman, 2017). These growth strategies are laden with the risk of failure as the future value of opportunities in uncertain environments is difficult to be assessed (Knight, 1921). Also, entrepreneur firms need to invest substantially in growth opportunities, the returns of which may be staggered over a long period of time, but investors act only on current information of firm performance (Froot, Scharfstein, & Stein, 1992) leading to further escalation of risk. If growth strategies are successful, it may attract future investors leading to shareholders micro-management (DeAngelo & Rice, 1983). If growth strategies fail, entrepreneurial firms may not have the resources to engage in restructuring, leading to activation of the market for corporate control (Grossman & Hart, 1988) and even to firm failure (King, Dalton, Daily, & Covin, 2004; Lavie & Miller, 2008). In this section, we identify the strategic antecedents of dual-class structures and examine whether these strategic antecedents indicate the need for unity of command or entrenchment.

3.3.1 Firm risk. Entrepreneur firms are largely driven by ideas that may not be path-dependent, and thus, many a times entrepreneurs underestimate the resource requirements of risky initiatives (Shane & Stuart, 2002). Firm risk may have important implications for firm performance and survival (Sanders & Hambrick, 2007; Shapira, 1995). It is known that future value of opportunities in uncertain environments is difficult to assessed (Knight, 1921) and thus,

greater the risk assumed by the entrepreneur firms the greater is the probability of firm failure (King et al., 2004). If strategies of entrepreneur firm fail then it may lead to activation of the market for corporate control (Fama & Jensen, 1983). All these assertions indicate that the firm risk can increase the probability of takeovers by decreasing the value of the firm.

 Growth strategies require huge investments and the returns from these investments are staggered over a long period of time. Firm risk can lead to continuous firm value assessments by investors. Most of active investors turn over their portfolio over a short duration of time periods (Brickley et al., 1988) and these investors trade on information that can immediately affect the firm performance (Froot et al., 1992). Thus, persuasion of growth strategies increases the firm risk as the future value of these strategies is discounted by the investors, leading to a decrease in the stock price and increase in the probability of firm takeover. Thus, entrepreneurs who invest in growth strategies and assess high risk for their firm are more likely to demand unity of command to ensure the continued survival of the firm. These firms are more likely to adopt dual-class structures as it endows them with the power to make the market for corporate control ineffective. It also facilitates the uninhibited investment of entrepreneurs' human capital in the firm as it assures them returns from the future value created by their growth strategies (DeAngelo & DeAngelo, 1985). It also reduces coordination cost to manage the strategic preferences of several stakeholders and allows entrepreneurs to concentrate on firm value creation (DeAngelo & DeAngelo, 1985). Thus, it is hypothesized:

   Hypothesis 8a: Greater the firm risk greater is the probability of adoption of dual-class structure.

If the firm risk is low and investment in growth strategies are not pursued, then entrepreneurs are operating conservatively. If such firms adopt dual-class structures then it may be to entrench themselves to reap private benefits of control such as constant employment, tunneling of resources, enjoying pecuniary and non-pecuniary perquisites, etc. (Bebchuk et al., 2000). Entrenchment assertion is made as these firms do not undertake risky strategies and do not have to face any unsystematic risk associated with growth strategies and thus, control is utilized for private benefits of control rather than public benefits of control. Thus, it is hypothesized:

Hypothesis 8b: Lesser is the firm risk greater is the probability of adoption of dual-class structure.

Dual-class structures provide unity of command to the entrepreneurs to pursue their growth strategies, but it is difficult to ascertain ex-ante whether this control would be leveraged to create public value for the firms' shareholders or private benefits of control for entrepreneurs. This study uses Firms' IPO performance as a proxy for assessing investors perception in regard to dual-class structure adoption. Furthermore, this study contends that the effect of firm risk on IPO performance is significant only when firms adopt a dual-class structure. I argue that in case single-class firms having high firm risk indulge in entrenchment strategies, shareholders still have other governance mechanisms such as the ability to replace incumbent management, exercise greater decision control, activate market for corporate control, etc., and thus, the significance of firm risk in single-class firms is lower. On the other hand, if dual-class firms indulge in entrenchment strategies then shareholders do not have any alternate recourse to control their behavior. Secondly, if firms with high risk adopt dual-class structures, it can signal

a greater value of firms' future opportunities (McMullen & Shepherd, 2006), leading to the increased salience of firm risk in case firms adopt dual-class structures. Thus, firms that have high risk and that decide to adopt dual-class structures are more likely to influence the decision of shareholders and thus, have a significant impact on IPO performance. So, it is hypothesized:

Hypothesis 8c: Dual-class structure will mediate the relationship between firm risk and IPO performance.

3.3.2 Acquisition. Acquisitions are pursued by corporations to achieve economies of scale, scope, market share, prestige, survival, and other outcomes that can provide temporary or sustained competitive advantage (Shi, Sun, & Prescott, 2012). Acquisitions may result from the firms' desire to pursue new opportunities or to broaden the existing opportunity exploitation capabilities (Brauer, 2006; Weston, 1989), but acquisitions do not always result in positive outcomes. Scholars have found that the majority of acquisitions are followed by divestitures and firms divested more formerly acquired businesses than they kept (Kaplan & Weisbach, 1992; Porter, 1987). Scholars have further asserted that acquisitions have a poor track record in providing competitive advantage and acquisitions result in a high rate of failure (King et al., 2004; Lavie & Miller, 2008). These discussions allude to the fact that acquisitions do not always result in increased performance for the focal firm and more often acquisitions lead to an increased rate of restructuring (Bowman & Singh, 1993), and also increase in the rate of acquisition failure (Lavie & Miller, 2008).

Entrepreneurial firms operate under resource constraints and may not be able to absorb the cost of failed acquisitions leading to decreased probability of their survival. Also, failed acquisitions may reduce the price of entrepreneur firm's stock in the capital markets leading to it

becoming a target of takeovers. Thus, indulging in acquisition activity may present a great risk for entrepreneurial firms and we argue that realization of this risk and to reduce the implications of acquisition failure, firms may desire the unity of command and adopt dual-class structures. Also, acquisition of firms requires time to manage the merger of the acquired firm with the parent firm, and the parent firm has to make several investments in human capital and portfolio restructuring to achieve an independent effect of the acquired entity on parent firm's bottom line (Brauer, 2006). The time lag and repeated investments required to show the effect of the acquisition on parent firm's bottom line may result in a negative reaction from markets which trade on information that can immediately affect the firm performance (Froot, Scharfstein, and Stein, 1992). Thus, firms in the private markets, which have grown through acquisition, may want the unity of command and adopt dual-class structures at the time of going public to protect itself from the market for corporate control and from investors who act based on their own short term interests rather than the long term prospects for the firm:

Hypothesis 9a: Firms that have made acquisitions before IPO are more likely to adopt dual-class structures.

If a firm that does not indulge in the growth strategy of acquisition, as it may lead to firm failure (King et al., 2004), but still adopts dual-class structure, then it may indicate that entrepreneurs desire to entrench themselves rather than pursue growth strategies. Thus, it is hypothesized:

Hypothesis 9b: Firms that have not made acquisitions before IPO are more likely to adopt dual-class structures.

Unity of command may be desired by entrepreneurs who wish to pursue growth strategies as well as those who want to pursue conservative strategies, but it is very difficult to predict ex-

ante whether the unity of command will result in public benefits of control or private benefits of control. We use firms' IPO performance to assess ex-ante whether investors perceive dual-class structure adoption as a unity of command or entrenchment. This study further contends that the effect of acquisition on IPO performance will be mediated by dual-class structure firms. I argue that the effect of acquisition on IPO performance is of greater significance if firms have dual-class structure as against single-class structure. If single-class firm that has made acquisitions pursues entrenchment strategies or begins to fail, shareholders have sufficient participation rights such as decision control, replacement of incumbent management, market for corporate control, etc. to protect their investments while in dual-class structures such mechanisms are absent. Secondly, it has been found that firms with anti-takeover mechanisms are more effective in making acquisitions, and less likely to overpay for their acquisitions (Humphery-Jenner, 2014). Thus, if firms having acquisition experience adopt dual-class structures it can indicate more efficient acquisitions in the future, and thus, the need for unity of command, and since such firms make efficient acquisitions, it is likely to impact IPO performance. Thus, the presence or absence of acquisition will become a significant factor for shareholders only when firms adopt the dual-class structure. Thus, it is hypothesized:

Hypothesis 9c: Dual-class structure will mediate the relationship between acquisition and IPO performance.

3.3.3 Innovation. "Ownership structure has implications for long-term strategic investments that are needed to build competencies and exploit growth opportunities to maximize long-term profitability (Kochhar and David, 1995)" (David, Yoshikawa, Chari, & Rasheed, 2006: Pg. 591). This statement clearly states that a firm's ability to pursue its long-term strategy is dependent on the type of ownership structure that it possesses, specifically the type of owners

that are its shareholders. For example, active investors are often short-term investors which put pressure on firms R& D strategies and investments (Hoskisson et al., 2002; Porter, 1992) while stable investors are often long-term investors having a positive effect on firms' R& D strategies and investments (Lee & O'Neill, 2003). Since entrepreneur firms that are going public cannot control the investor profile of their firms, there is substantial uncertainty that is faced by such firms to strategize appropriate investment in innovation strategies. To avoid uncertainties related to investor reaction, high growth firms may choose to adopt dual-class structures to shield themselves from the effect of shareholders micro-management (DeAngelo & Rice, 1983) and the market for corporate control.

It has been found that firms engaging in a single concentrated R&D activity internally are less likely to introduce new products or substantially improve their existing products (Cassiman & Veugelers, 2004). Thus, entrepreneurial firms need to engage in a broad range of R&D activities which entails substantial investments in multiple research programs. Entrepreneurs may find it difficult to explain the substantial R&D expenses incurred by them to their investors, especially after the firm has gone public and this may lead to devaluation of stock of such firms. Since the sub-optimal stock price of firms makes it vulnerable to takeovers, it is argued that need to invest in innovation activities may lead entrepreneurial firms to gain unity of command by the adoption of dual-class structures. Thus, I hypothesize:-

Hypothesis 10a: Innovative firms are more likely to adopt dual-class structures.

If non-innovative entrepreneurial firms adopt dual-class structures it may indicate entrenchment intentions as these firms are indulging in strategies that do not pose a threat of failure and thus, unity of command may not necessarily facilitate public benefits of control. In

fact, there is a greater probability that entrepreneur adopt these structures to protect their control rights for entrenchment. Thus, it is hypothesized:

Hypothesis 10b: Non-innovative firms are more likely to adopt dual-class structures.

Thus, unity of command may be desired by entrepreneurs who wish to pursue growth strategies as well as those who want to pursue conservative strategies. But it is very difficult to predict ex-ante whether the unity of command will result in public benefits of control or private benefits of control. We use firms' IPO performance, in terms of IPO premium, to assess ex-ante whether investors perceive dual-class structure adoption by innovative firms as the unity of command or entrenchment. This study further contends that the effect of innovation on IPO performance will be mediated by dual-class structure firms. I argue that the effect of innovation on IPO performance is of greater significance if firms have dual-class structure as against single-class structure. If a single-class firm that has made acquisitions pursues entrenchment strategies or begins to fail, shareholders have sufficient participation rights such as decision control, replacement of incumbent management, market for corporate control, etc. to protect their investments while in dual-class structures such mechanisms are absent. Secondly, Humphrey-Jenner (2014) found that firms with anti-takeover mechanisms are more likely to generate value-creating innovations, indicating that dual-class structure adoption by firms active in research and development is an indication of the need for unity of command so that greater value-creating innovations can be generated. Thus, I argue, presence or absence of innovation will become a significant factor for shareholders only when firms adopt dual-class structure. Thus, it is hypothesized:

Hypothesis 10c: Dual-class structure will mediate the relationship between innovative firms and IPO performance.

3.3.4 Internationalization. Firms usually internationalize in gradual progressive stages (Johanson & Vahlne, 1977). But of late firms have begun to internationalize from the time of their incorporation itself (Oviatt & McDougall, 1994). Carpenter, Pollock, & Leary (2003) have aptly summarized their observation regarding the double-edged consequence of early internationalization "…recent research on new ventures have suggested that pursuing an international strategy early in an organization's life can enhance legitimacy, technological learning, sales growth, and performance (Autio, Sapienza, and Almeida, 2000; Lu and Beamish, 2001; Zahra, Ireland, and Hitt, 2000). However, internationalization can have adverse effects on firm performance and survival if inadequately planned or poorly implemented (Mitchell *et al*., 1992; Hitt, Hoskisson, and Kim, 1997)" (Pg. 804).

Against this backdrop, We argue that entrepreneur firms who internationalize very early in their life cycle, despite the advantages, bear a greater risk of bankruptcy as compared to the firms who have not internationalized, as internationalization has a negative effect on firm performance (Hitt, Hoskisson, & Kim, 1997). Also, international firms are likely to face an unfamiliar business environment, cultural differences, political differences, and economic differences, which may create challenges for firm performance (Zaheer, 1995). International firms may also be more visible to investors and corporates across several countries (Reur & Tong, 2010), and this visibility may also increase their attractiveness for acquisitions (Brau & Fawcett, 2006).

Internationalized firms face challenges in replicating their capabilities across the spatial geographies as well as challenges of acquiring resources to compete in multiple markets (Autio, Sapienza, & Almeida, 2000). Thus, we can infer that international firms require greater

investments in their growth activities as well as have to incur greater costs of coordination of resources across the spatial distance. This greater investment in growth coupled with the need for managing activities across geographies increases the risk of operations and leads to sufficient investment lag in showing results on the balance sheet. Portfolio owners are mainly concerned with the short-term profits, and thus, trade on information that is likely to quickly affect the stock price (Froot, Scharfstein, and Stein, 1992). Since entrepreneurial firms, that are going public, are often judged based on their short-term performance, firms with a need to invest substantial amounts in their growth trajectories will be evaluated negatively in the short term by the investors. This may lead to a decrease in the stock price and an increase in the probability of takeover in the public markets. Thus, we hypothesize that entrepreneur firms with international operations are more likely to adopt super-voting structures to gain unity of command and to protect itself from risks imposed by stock market discounting of its stock. Thus, it is hypothesized:-

Hypothesis 11a: Entrepreneur firms that internationalize early are more likely to adopt dual-class structures.

Firms that do not internationalize face substantially less risk of failure as they do not have to indulge in risky investments across the boundaries of culture, language, regulation, and different legal environment (Zaheer, 1995). But if such firms still adopt dual-class structures then it may be to protect their private benefits of control by indulging in the entrenchment. Thus, it is hypothesized:

Hypothesis 11b: Entrepreneur firms that do not internationalize are more likely to adopt dual-class structures.

It is difficult to assess ex-ante whether the dual-class structure adoption is for the unity of command that increases firm performance or to gain private benefits of control. We use firms' IPO performance as a proxy for investors perception about the dual-class structure adoption by the firm. This study further contends that the effect of internationalization on IPO performance will be mediated by dual-class structure firms. I argue that the effect of internationalization on IPO performance is of greater significance if firms have dual-class structure as against single-class structure. If a single-class firm that has internationalized pursues entrenchment strategies or begins to fail, shareholders have sufficient participation rights such as decision control, replacement of incumbent management, the market for corporate control, etc. to protect their investments, while in dual-class structures such mechanisms are absent. Secondly, firms that rapidly internationalize may do so because they have valuable information assets (Morck & Yeung, 1997) which help them to produce differentiated products to serve different international markets (Caves, 1971; Kogut & Zander, 1993). Thus, international firms that adopt dual-class structures are likely to signal greater information assets and greater unlocked value in the firm, and so the need for unity of command. Thus, the presence or absence of internationalization will become a significant factor for shareholders only when firms adopt the dual-class structure. Thus, it is hypothesized:

Hypothesis 11c: Dual-class structure will mediate the relationship between internationalization and IPO performance.

I have discussed eleven antecedents that are most likely to predict the adoption of a dual-class structure. My dissertation model is depicted in the figure 1.
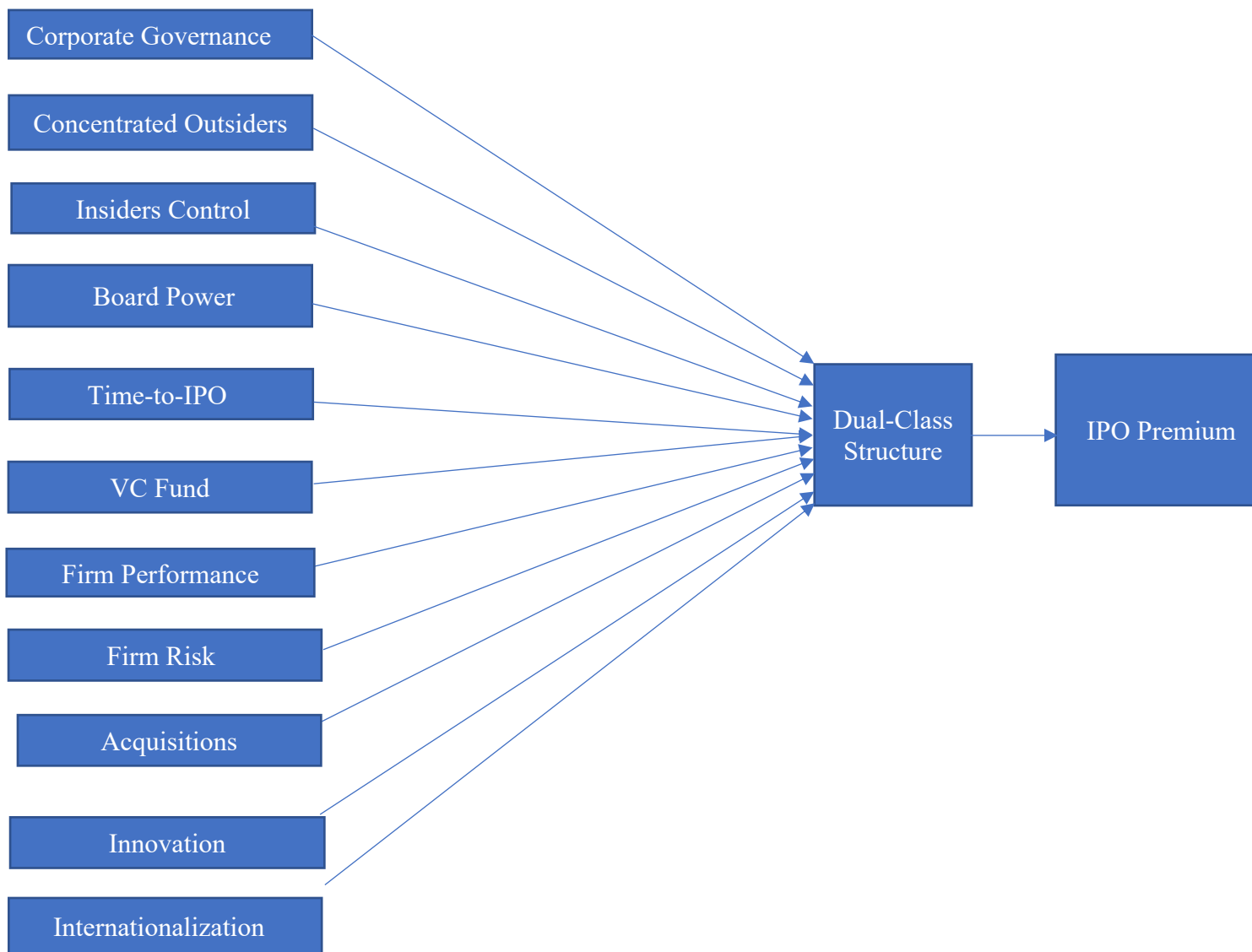
FIGURE 1
Dissertation Model

CHAPTER FOUR

DATA SOURCES AND ANALYSIS

The reason behind the adoption of dual-class shares has not been explored empirically. Thus, this dissertation identifies the likely antecedents of dual-class structures and tests them empirically. In this exploration, it is pertinent that we study the effect of dual-class structure adoption on IPO markets and the ex-ante effect of IPO consideration on the adoption of dual-class structures.

Why IPO? The first reason is the obvious, firms desire to unlock the market value of its assets, an IPO is the most effective way of doing it. For entrepreneurial firms, IPO is the first liquidity event of their life (Zingales, 1995). The second reason is that company cannot leverage the debt markets as it lacks tangible assets as compared to the intangible assets, placing limits on the firm's capability to obtain debt through a mortgage (Ramamurti, 2000). The third reason is that the focal firm has a negative difference between the cash inflows from the markets and the expected cash outflows to the debt markets (Pagano, Panetta, and Zingales, 1998). This situation would perilously endanger the risk on the owner's capability to maintain corporate control over the focal firm. The fourth and final reason is that the firm's risk dispensation is greatly reduced by allocating the risk-bearing to the shareholders (Chemmanur and Fulghieri, 1999). The literature has specified that investors subscribe to IPO to reap certain benefits of control which cannot be reaped without holding the shares. Study of IPO firms provides fertile opportunities to test agency-based contingency perspectives (Beatty & Zajac, 1994). In fact, elements related to corporate governance are most clear at the time of IPO than at any point in the firm's history (Filatotchev & Wright, 2005).

Scholars in entrepreneurship have found that entrepreneurs tend to give more weight to control considerations than the factors important for firm valuation (Field & Karpoff, 2002) and firm growth (Davidsson, 1989). We study a sample of IPO firms that have adopted dual-class structures, since such structures are adopted for control considerations and these structures are formalized at the time of IPO (although certain scholars have asserted that the decision to adopt dual-class structures is taken much earlier than the IPO stage (Gompers et al., 2003)). In our sample of dual-class firms, we find that the majority of the firms have adopted dual-class through a recapitalization of their firm just before the IPO. This recapitalization is done to convert preferred classes of shares into equity shares of class A or class B or to simply convert single class shares into multiple classes of shares. Thus, our observation indicates that in most of the firms dual-class is formalized at the time of IPO.

4.1 Sample and Data Collection

The sample period of our study is 2006-2018. This sample period has been determined to account for the financial crisis of 2008-2009 and its related effects on the IPO market. We want to be able to assert that the antecedents of the dual-class structure are determined through the idiosyncratic history of the firm rather than the idiosyncrasies of the stock market performance. Our dataset has been built by manual hand-coding of variables from the IPO prospectuses available on the Securities and Exchange Commission's Edgar website. Every firm going public must file a prospectus with the SEC, and The Securities Act of 1933 requires that the IPO prospectus must be consistent in the way it is framed. Additionally, IPO prospectus is required to disclose certain mandatory operational information and top management is legally liable for any false or misleading information contained in the document (Beatty & Zajac, 1994). Thus, IPO prospectus

is a reliable document. "The typical prospectus writing process involves at least three lawyers (one for the company and one for each of the investment bankers), two investment banking firms, and at least one certified public accountant. Each party has a vested interest in providing the public with an honest view of the company. Thus, we can be reasonably assured that the prospectus is a useful data source (Gulati & Higgins, 2003; Marino, Castaldi, & Dollinger, 1989; Sanders & Boivie, 2004)" (Welbourne et al., 2007:531).

As there is no definitive database containing all dual-class shares, we identify our sample firms from multiple sources. We identified all multiple class firms from SDC platinum's Global New Issues Database. We compared this list to the list of firms identified by Jay Ritter and Council of Institutional Investors (CII) on their website. We include initial public offerings of all dual-class firms identified by these three sources. We refer to CII website because they track all firms going public with dual-class structure and having more than 200 million in revenues while Jay Ritter maintains a list of dual-class IPOs from 1980 to 2017. We deviated from the standard practice of collecting a list of dual-class firms through comparison of CRSP and Compustat databases that differ on last two digits in the CUSIP (Zhang, 2003, Gompers et al., 2003; Manowan, 2010; etc.). For our research question, the time of IPO is an important event and we are not interested in the subsequent firm history. The identification of data by using CRSP/Compustat provides us with all firms that are trading with the dual-class structure in each of the sample years without regard to their date of the initial public offering. To ascertain the firms that went public during our sample period, we had to go back to SDC Platinum. Thus, we used SDC Platinum dataset to get our sample firms along with Jay Ritter's website and CII website to affirm a comprehensive set of dual-class firms. After excluding closed-end fund issues, real-estate investment trusts, unit issues, ADRs, subscription share issues (mostly banking

shares), limited partnership issues, and issues whose prospectus is not available on Securities and Exchange Commission's Edgar website, our final sample of the dual-class firm is 202 firms.

To make causal inference we adopt a matched sampling research design. The matching of single-class shares to dual-class shares is done on size, industry, and the year of IPO, as scholars have identified them to be influencing factors of dual-class structures (Smart & Zutter, 2003; Gompers et al., 2010). The matched sampling is done through propensity score matching technique. We identify single class firms that went public between 2006 to 2018 using SDC Platinum's New Issues Global Database. After excluding closed-end fund issues, real-estate investment trust, unit issues, ADRs, subscription share issues, and limited partnership issues, the final sample of single-class firms is 1280. The combined comprehensive sample consists of 1482 firms which are matched on size, industry, and IPO year. Propensity scores for this sample are generated by creating unique blocks of firms with common support. Based on these propensity scores we match dual-class firms with its nearest single-class counterpart (Li & Zaiats, 2017), and we have ascertained that the difference in propensity scores between any of the matched firms did not breach the threshold of 0.05. Thus, our final matched sample of single-class and dual-class firms is 404 firms.

4.2 Measures

Dependent Variable. IPO Premium, our dependent variable, is defined as the price premium paid for the stock of the firm at the time of IPO (Rasheed, Datta, & Chinta, 1997). IPO premium is calculated by taking into account the difference between the book value of the firm and offer price of the firm. In accordance with the previous scholarly studies (Nelson, 2003,

Welbourne & Andrews, 1996; Chahine, Filatotchev, Bruton, and Wright, 2019), we have calculated the IPO premium as follows:-

$$= \frac{\text{Offer Price} - \text{Net tangible book value after IPO}}{\text{Offer Price}}$$

The offer price is an important reflector of the demand for the IPO firm's stock. Underwriters conduct pre-IPO roadshows to attract investors to the IPO, and during this process, they also determine the price that investors are willing to pay for the stock (Welbourne & Andrews, 1996). These investors are well informed about the IPO company's past performance and future performance probabilities. And thus, their willingness to pay a certain price reflects the market value that stock market associates with the IPO firm. By comparing the offer price to the book value of the firm, we include the effects of fundamental factors such as intangible assets and competitive advantages of the firm that are not included in the accounting value of the assets (Nelson, 2003; Chahine et al., 2019). Thus, in a highly uncertain context of stock market listing, the price premium is a reliable proxy to measure investor perceptions of a firm (Filatotchev, Chahine, & Bruton, 2018).

In the majority of the scholarly studies, we find that underpricing has been used as a measure of IPO performance. We consider IPO premium to be a better measure of IPO performance than underpricing as reasons for underpricing are varied and based on the trading price that itself varies due to several stock-market-specific factors (Aggarwal & Rivoli, 1990). Also, there is strong evidence that in initial trading days, IPO shares trade at significantly higher prices compared to longer periods (Rasheed, Datta, & Chinta, 1997; Eysell & Kummer, 1993).

Some of the reasons that scholars have found for underpricing are market fads (Aggarwal & Rivoli, 1990), underwriter price support (Ruud, 1993), overpricing in the early markets (Schultz & Zaman, 1994), to generate excess demand and ownership dispersion (Brennan & Franks, 1997), etc. IPO premium not only takes into account the book value of the firm which is based on the net tangible assets, but it also takes into account the 'intangible assets, monopoly control, investor overenthusiasm, or some other factor that would dislocate stock price from accounting-based figures' (Nelson, 2003: 715). Also, since our research question relates to the determinants of dual-class structure adoption at the time of IPO, it is important to have a dependent variable that measures the price premium, or discount, based on the firm-specific factors reflected in the IPO prospectus rather than use a measure adulterated by market fads and trading considerations. As Offer price is determined based on the feedback received on the contents of IPO prospectus – "The prospectus is a document provided to the Securities and Exchange Commission (SEC) prior to the public offering, and it is also the document circulated by the underwriter to assess demand for the firm's stock" (Welbourne et al., 2007:531), it is an appropriate measure for our study.

Mediating Variable. Dual-class is a binary variable that takes on the value of 1 for dual-class structures and value of 0 for single class structures. We have considered all those firms as dual-class that have two or more classes of shares with different or similar voting rights. As discussed in theory development and hypotheses development sections, dual-class structures are a proxy of absolute control of the firm. We have hypothesized that entrepreneurs' risk-laden strategies may necessitate the adoption of dual-class structure to gain unity of command, and this will be understood by investors as a necessity to maximize firm performance, and thus, such firms may be valued at a premium. On the other hand, if firms with conservative strategies adopt dual-class structure, this will be construed by investors as an effort to gain entrenchment, and

thus, such firms are less likely to be valued at a premium. The effect of firm strategies on IPO premium is likely to be mediated by the dual-class structure.

Independent Variable. We build a corporate governance index to measure the openness of the firm to shareholder participation in its decision making. Governance index is a score variable. We have selected five governance mechanisms that are declared by each firm in its IPO prospectus. We have awarded 1 point per governance mechanism adopted by these firms. Firms not having duality (CEO and Chairman position with one individual) are given 1 point. Firms not having classified board are given 1 point. Firms having Lead Director are given 1 point. Firms not opting for control company exemption (firms opting have limited disclosure requirements) are given 1 point. Firms not availing of the right to issue undesignated preference shares without the approval of the board of directors are given 1 point. Thus, greater corporate governance score means greater participation rights for shareholders. We have hand-coded these items from the IPO prospectuses.

Insiders Control. We consider insiders as top management executives who are also on the board of directors. This variable is a measure of the voting rights controlled by the insiders. We consider voting rights instead of the cash flow rights as a measure of insider's control because in dual-class firms there is a wedge between voting rights and cash flow rights, and voting rights are more important for the control consideration. This information is coded from the principal stockholder section in the IPO prospectus.

Concentrated Outsiders. All principal stockholders who are not on the top management team and having greater than 1% holding in the company are considered as concentrated

outsiders. This variable is a count of the number of outsiders as discussed in the principal stockholder section of the IPO prospectus.

Board Power. This variable is a ratio of insider directors to the independent directors. We have considered directors not having any management position in the company as independent directors and directors who are also on the top management team are considered as the insider directors. This information is coded from the management section in the IPO prospectus.

Time to IPO. The time taken to reach the IPO stage is an important determinant of the dual-class structures. This variable is calculated by subtracting the year of founding from the year of IPO. There is a wide variation in this variable and thus, we use a log of this variable in our analysis.

Venture Capital Funding. The presence of VC funding is an important factor in the type of strategies adopted by IPO firms. We create a binary variable that takes a value of 1 if VC funding is present in the firm or 0 otherwise. VCs have been considered to be present if they have a stake in the company as determined in the principal stockholding discussion in the IPO prospectus and/or VC's have representation on the board of directors as determined in the management section of the IPO prospectus. We have found that in several IPOs VCs presence is to be inferred through the presence of Limited partnership funds, General Partnership funds, growth investment firms, and private equity firms.

Firm Risk. We measure firm risk by counting the number of risks discussed in the IPO prospectus. Securities and Exchange Commission (SEC) requires all companies filing their prospectus for IPO to mention risk factors associated with investing in their firm's IPO, this is

considered to be a good proxy to assess firm risk (Beatty & Zajac, 1994; Welbourne & Andrews, 1996). We use a log of this count variable.

Acquisition. This is a binary variable taking on the value of 1 if the IPO firm has made at least 1 acquisition before the IPO and 0 otherwise. Acquisitions have been coded from the information in IPO prospectus. A firm is said to have made an acquisition if it acquired a firm or a business of a firm, or a rent generating asset from a company. An example of a rent generating asset is oilfield (in case of energy or oil companies), ships (in case of shipping company), etc.

Innovation. We have considered the audited research and development expense declared by the firm (Graves, 1988), in the consolidated financial statements section of IPO prospectus. We use this as a proxy for Innovation. The yearly investments in R&D are appropriate for our study as given the resource constraints faced by entrepreneurial firms, their investment in R&D reflects their strategy of pursuing growth through innovation.

Internationalization. We consider a firm to be international if they have a revenue-generating business in any of the countries other than the United States of America. This is a binary variable which is coded as 1 for international and 0 otherwise.

Firm Performance. We consider the audited sales figure of the latest year as declared in the consolidated financial statement section of the IPO prospectus. The sales achieved by a firm in a particular year is a good indicator of its performance, especially in the context of IPO firms, where many firms are still to make any sales (Rasheed, Datta, and Chinta, 1997). Katila(2002) also discussed firm sales as an ability of the firm to commercialize its products and garner market share. The descriptive statistics concerning all my variables are provided in table 1.

TABLE 1
Descriptive Statistics

Variable	Obs	Mean	Std.Dev.	Min	Max
IPO Premium	391	.775	.595	-2.29	2.79
Dual-Class	404	.5	.501	0	1
International	404	.78	.415	0	1
Acquisition	404	.594	.492	0	1
Innovation	404	16557.56	48216.77	0	427000
Governance Index	404	1.792	.954	0	5
Board Power	404	.299	.348	0	4
Conc. Outsiders	404	2.027	2.897	-6	17
Insider Voting	399	21.603	28.159	0	100
Time to IPO	375	2.533	.999	0	5.165
Firm Risk	404	3.93	.247	3.178	4.543
VC Funding	404	.77	.421	0	1
Firm Performance	390	12.225	1.751	5.62	16.679
Size	404	6.553	1.818	1.386	11.533
IPO Year	404	8.213	3.623	1	13
Industry	404	8.24	3.179	1	12
Legal Cases	404	.413	.493	0	1
Profit/Share	404	.026	.603	-1.266	12.046
Founder CEO	404	.441	.497	0	1

Control Variables. This study controls for the effect of several variables that may

influence the adoption of dual-class structure and IPO firm performance. Industry is one control

variable that may have undue effect on our hypothesized relationships. We group the four digits

SIC codes into 12 groups of industries as classified by Fama & French. Group 1 consists of

Consumer Non-Durables, group 2 is Consumer Durables, group 3 is Manufacturing, group 4 is

Oil, Gas, and Coal Extraction, group 5 is Chemicals and Allied Products, group 6 is Business

Equipment (Computers, Software, and Electronic Equipment), group 7 is Telephone and

Television Transmission, group 8 is Utilities, group 9 is Wholesale, Retail, and Some Services,

group 10 is Healthcare, Medical Equipment, and Drugs, group 11 is Finance, group 12 includes

all other industries such as Mines, Construction, Building Material, Transport, Hotels, Bus

Service, & Entertainment. We also control for the year-specific effects on IPO performance and

dual-class adoption by including year dummies in our analysis. Our sample consists of 13 years

of data and thus, we include 12 year-dummies in our analysis. We control for the size of the firm by including a log of the number of employees.

We control for the presence of founder CEO by including a binary variable that takes on the value of 1 if the founder is also the CEO of the firm and 0 otherwise. Past literature has shown that founders have a positive effect on return on investment and financial performance (Begley & Boyd, 1986), which may influence IPO performance positively. Also, they may engender loyalty within their organization (Pfeffer, 1981) that may increase their power to adopt a dual-class structure. We also control for family-firm-specific factors as the presence of founder CEO who has some stake in the firm as well as an active organizational responsibility is more likely to be treated as a family firm, and DeAngelo & DeAngelo (1985) have shown that family firms are more likely to undertake dual-class structures.

We control for the presence of legal cases against the IPO firm. This data is found under the legal section in the IPO prospectus. Presence of legal cases takes a value of 1 and 0 otherwise. Legal cases have been shown to increase the riskiness of the firm (Welbourne & Andrews, 1996) which may affect the adoption of dual-class structure as well as the IPO performance. We control for the net profit per share as it is an indication of the positive firm performance outlook for the share which may affect IPO premium (Welbourne & Andrews, 1996). The correlation table of all my variables is provided in table 2.

4.3 Methods

As discussed earlier, my dissertation uses a propensity score matching method to build a matched sample of dual-class and single-class firms. "Propensity score matching is a technique

used to control for selection effects by comparing a sample of subjects who received treatment with a matched sample of similar subjects who did not receive the treatment (Rosenbaum and Rubin, 1983; Guo and Fraser, 2010). A propensity score is a conditional probability of assignment to a treatment group that is estimated by regressing the treatment variable onto a set of plausible covariates" (Graffin, Bundy, Porac, Wade, & Quinn, 2013: 334). We have used the firm size, industry, and IPO year to match single-class firms with our dual-class firms. The propensity scores matching technique allowed us to test the counterfactual condition that single-class firms which are similar to dual-class firms differ on governance and strategic risk and the reaction of shareholders is not similar to both these types of firms.

We are testing the direct effects of our eleven independent variables on the propensity of firms to adopt the dual-class structure. Also, we are testing the indirect effect of these independent variables on the likelihood of getting a premium valuation from the shareholders. We have a mediation model in which the dependent variable, IPO premium, is continuous and the mediating variable, dual, is binary. Given that we need to test the direct effects of our independent variables on both continuous dependent variable and the binary mediating variable, we choose to use OLS regression for the continuous dependent variable and probit regression for the binary dependent variable which is unlikely to bias our conclusions (Li, Schneider, & Bennett, 2006). We use OLS regression to test the effects in equation i and ii, and, to test the direct effect of our independent variables on the mediating variable we use probit regression, as it does not bias results of a binary dependent variable.

TABLE 2
Correlations Matrix

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
(1) Dual	1																
(2) IPO Premium	0.11*	1															
(3) Gov. Index	-0.23*	0.03	1														
(4) board Power	0.13*	0.01	-0.14*	1													
(5) Conc. Outsiders	0.15*	0.01	-0.19*	0.23*	1												
(6) Insiders Control	0.28*	0.06	-0.18*	0.43*	0.37*	1											
(7) Time to IPO	-0.03	0.02	-0.10*	0	0.03	-0.08	1										
(8) VC Funding	-0.03	-0.11*	0.01	-0.10*	-0.26*	-0.12*	-0.09*	1									
(9) Firm Performance	0.17*	-0.04	-0.22*	-0.02	0	-0.10*	0.33*	-0.07	1								
(10) Firm Risk	0.08	-0.10*	0.01	0.01	0	0.05	-0.13*	0.13*	-0.16*	1							
(11) Acquisition	0.27*	-0.02	-0.20*	0	0.04	-0.01	0.13*	-0.02	0.28*	-0.02	1						
(12) Innovation	0.13*	0.08	0.02	-0.08*	-0.10*	-0.01	-0.12*	0.08	0.08	0.14*	0	1					
(13) International	0.21*	0.09*	0.01	0.04	-0.08	-0.02	0.06	0.06	0.16*	0.10*	0.12*	0.08*	1				
(14) Size	0.07	0.03	-0.15*	-0.17*	-0.03	-0.17*	0.43*	0.01	0.69*	-0.17*	0.26*	0.09*	0.14*	1			
(15) Legal Cases	0.14*	0.08	-0.11*	0.02	0.04	0	0.18*	-0.03	0.27*	-0.08	0.14*	0.04	0.17*	0.29*	1		
(16) Profit/Share	-0.04	0.01	-0.05	0.01	-0.04	0	-0.09*	0.04	0.06	0.01	0.05	-0.02	0.04	-0.05	0.05	1	
(17) Founder CEO	0.13*	-0.01	-0.01	0.16*	0.05	0.34*	-0.21*	0.05	-0.18*	0.19*	-0.05	0.11*	-0.01	-0.18*	-0.15*	-0.05	1

* shows significance at the .10 level

Baron & Kenny (1986) have proposed a causal steps approach to mediation that involves the following three equations:-

$$Y = \beta 0 + \beta X i + \varepsilon \qquad \text{------ (i)}$$
$$M = \beta 0 + \beta X i + \varepsilon \qquad \text{------ (ii)}$$
$$Y = \beta 0 + \beta X i + \beta M + \varepsilon \qquad \text{------ (iii)}$$

Our analysis of the direct effect of independent variables on our dependent variable is insignificant, barring a few variables. Ideally, this would mean that there is no mediation effect to be tested if there is no direct effect. We instead choose to test the indirect effects through the product of coefficients method or the Sobel test. This is done to take into account the fact it is

difficult to specify a complete model in social science, where there is always a possibility of leaving out certain paths, this is more clearly explained by Hayes "….X can exert an indirect effect on Y through M in the absence of an association between X and Y becomes explicable once you consider that a total effect is the sum of many different paths of influence, direct and indirect, not all of which may be a part of the formal model" (Hayes, 2009; 414). Additionally, sometimes there are two or more indirect paths from X to Y which operate in opposite directions and may lead to non-significant indirect effects (MacKinnon, Krull, & Lockwood, 2000). Further, the causal steps approach has come under heavy criticism in the last two decades (MacKinnon & Dwyer, 1993; Hayes, 2009), as many simulation studies have shown that causal steps approach has the lowest power among the various methods of testing the indirect effects (Fritz & MacKinnon, 2007; MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002). Hayes (2009: 410), discusses the limitations of this method in lucid detail "….if X's effect on Y is carried in part indirectly through intervening variable M, the causal steps approach is least likely of the many methods available to detect that effect. Another criticism of this approach is that it is not based on a quantification of the very thing it is attempting to test - the intervening effect. Rather, the existence of an indirect effect is inferred logically by the outcome of a set of hypotheses tests. If a and b are both different from zero by a statistical significance criterion, then so too must be the indirect effect according to the logic of this approach".

To make conclusions about the indirect effect of my independent variables on IPO premium through dual-class, we test the model as stated in equation (i) and (ii) and then we test the product of path coefficients(**ab**), refer to figure 2, using the Sobel test. As described by
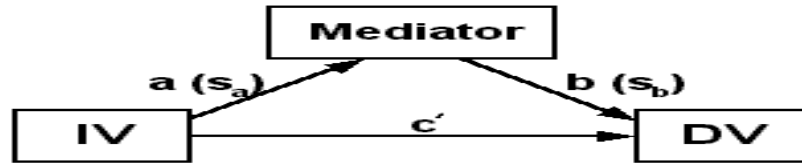
FIGURE 2
Mediation Model

MacKinnon, Fairchild, and Fritz (2007), in the product of coefficients approach, we multiply the

bivariate regression coefficients which are estimated via simultaneous equations, and the

resulting product term is compared to a normal sampling distribution for significance (also see

Graffin, Bundy, Porac, Wade, and Quinn, 2013)).

CHAPTER FIVE

RESULTS

5.1 Descriptive Statistics

Table 1 reports the descriptive statistics and Table 2 reports the correlations for all variables in our model. We do not find any correlation between any of our variables to be large (greater than 0.70) and thus, multicollinearity is unlikely to bias the OLS and probit regression coefficients. We find dual-class is correlated ($p<.10$) with governance index, insiders voting rights, board power, concentrated outsiders, internationalization, acquisition, innovation, and sales. This gives us a preliminary indication of support for our majority of the hypotheses. Similarly, IPO premium is correlated ($p<.10$) with dual, internationalization, firm risk, and VC funding.

In our model 1, refer to Table 3, we regress the effect of control variables on our dependent variable, IPO premium. Industry 2, Industry 8, and IPO year 2013 are dropped from the analysis by OLS estimator due to multicollinearity, and thus, we choose to drop these three variables from our analysis. The control model is significant ($F<.001$), with industry 4 (Coal and Gas) and industry 12 (Mines, Construction, Building Material, Transport, Hotels, Bus Service, & Entertainment) being significant at $p<.001$ and $p<.05$ respectively. This model indicates the importance of controlling for industry effects. In model 2, we regress all independent variables along with the control variables on IPO premium, and we find that model 2 is significant ($F<0.001$). The direct effect of only VC funding and firm performance is significant ($p<.05$), since these are just two of our eleven hypothesized relationships, as per the causal steps approach, we must abandon the test of indirect effects as there are no effects to mediate in absence of a direct effect. We instead proceed to test the mediation effects by using the product

of coefficients approach or the Sobel test (1982, 1986), considered to be a statistically more

powerful test of indirect effects as compared to causal steps approach (Hayes, 2009).

TABLE 3
Results of Regression and Probit Analyses

VARIABLE	Hypotheses	1 IPO Premium	2 IPO Premium	3 IPO Premium	4 Dual	5 Dual
Founder CEO		-0.01	-0.03	-0.03	0.45***	0.24
		-0.05	-0.07	-0.06	-0.13	-0.17
Legal Cases		0.08	0.10	0.09	0.41**	0.19
		-0.07	-0.08	-0.07	-0.14	-0.16
Employees		0.03	0.11	0.11	0.14	-0.22
		-0.02	-0.03	-0.03	-0.041	-0.08
Profit/Share		-0.00	0.02	0.02†	-0.13	-0.30**
		-0.00	-0.01	-0.01	-0.07	-0.08
Gov. Index	H1		0.02	0.03		-0.47**
			-0.03	-0.03		-0.08
Conc. Outsiders	H2		0.08	0.08		-0.04
			-0.01	-0.01		-0.03
Board Power	H3		0.00	0.00		0.00
			-0.09	-0.08		-0.34
Insider's Control	H4		0.06	0.03		0.79***
			0.00	-0.00		-0.00
Time to IPO	H5		-0.02	-0.00		-0.34†
			-0.04	-0.04		-0.09
VC Funding	H6		-0.14*	-0.14**		0.07
			-0.09	-0.08		-0.20
Firm Performance	H7		-0.18*	-0.20**		0.56*
			-0.03	-0.028		-0.07
Firm Risk	H8		-0.12	-0.13*		0.25
			-0.18	-0.17		-0.39
Acquisition	H9		-0.01	-0.04		0.70***
			-0.06	-0.06		-0.16
Innovation	H10		0.06	0.04		0.81**
			0.00	-4.25		-2.89
International	H11		0.12	0.09		0.54**
			-0.10	-0.09		-0.20
Dual				0.14*		
				-0.07		
Constant		***	**	***		**
		-0.20	-0.85	-0.85	-0.44	-1.66
Observations		391	348	348	404	358
R-squared		0.06	0.12	0.13		
Pseudo R Square					0.05	0.24
Pseudolikelihood					-265.52	-188.26
Overall					29.42	95.42
Df					24	35

The above results have included the industry and year dummies as control variables. Results can be provided by author on request.
Regression coefficients are standardized. Robust standard errors in parentheses
***$p<0.001$, ** $p<0.01$, * $p<0.05$, †$p<.10$

In model 3, we test the effect of mediation variable on our dependent variable while controlling for the effects of independent variables. This model is significant (F<.001). We observe that the direct effect of dual is significant (p<.05) along with the direct effect of firm risk (p<.05), VC funding (p<.01), and firm performance (p<.01). The significant effect of dual-class on IPO premium enables us to test the significance of indirect effects through the Sobel test or the product of coefficients method. We derive the coefficient of path **b** and the standard error of path **b**, s_b, in model 3, as per figure 2. In model 5, we use probit regression to test the effect of independent variables on our binary mediating variable. This model is significant ($\chi 2$<.001).

TABLE 4
Indirect Effect Sobel Test Statistics

Variables	**A**	**S_a**	Sobel Test Results		
			Test Statistic	**Std. Err**	**P-Value**
Gov Index	-0.25	0.08	-1.79	0.02	0.07 †
Conc. Outsiders	-0.00	0.02	-0.27	0.00	0.78
Insiders Voting	1.40	3.61	1.99	0.00	0.04**
BOD_PWR	0.00	0.36	0.01	0.06	0.98
Time to IPO	-0.17	0.09	-1.46	0.02	0.14
VC Funding	0.09	0.19	0.47	0.03	0.63
Firm Risk	0.52	0.38	1.18	0.07	0.23
Acquisition	0.72	0.16	2.03	0.06	0.04**
Innovation	8.11	3.79	1.57	9.30	0.11
International	0.66	0.21	1.87	0.06	0.06 †
Firm Performance	0.16	0.06	1.67	0.01	0.09 †
	b	**S_b**			
Dual	0.18	0.07			

Coefficients are unstandardized as required by the Sobel test
***p<0.001, ** p<0.01, * p<0.05, † p<.10

Also, the effect of governance index, insider's control, internationalization, acquisition, innovation, sales are significant at p<.01 while time to IPO is significant at p<.10.   These

significant direct relationships of IVs with the mediating variable provides us with the coefficient of path '**a**' and the standard error of path a **(s_a),** refer to figure 2**.**

We conduct the Sobel test using the coefficients derived in model 3 and model 5, the results are presented in Table 4. This test of indirect effect indicates that the indirect effect of governance index, insider's voting rights, acquisition, internationalization, and firm performance are significant at 10% or lesser level.

5.2 Hypotheses Discussion

Hypothesis 1 (1a, 1b, and 1c). The significant direct effect of governance index score on dual-class shares is significant (p<.01) with the direction of the effect being negative. Thus, our unity of command hypothesis, hypothesis 1a, is not supported, while hypothesis 1b is supported. This result indicates that firms that adopt dual-class structures are more likely to limit the participation rights of their shareholders even though they have sufficient decision control, endowed by dual-class structures. This indicates that dual-class structures are adopted for entrenchment rather than unity of command. Hypothesis 1c is also supported since the mediating effect of dual-class is significant in the relationship between the governance index and IPO premium. This result indicates that shareholders do not consider governance index as an important factor once dual-class structures are adopted, as the presence of greater score on governance will not enable greater participation rights if the entrepreneurs have adopted dual-class structure, which provides them absolute decision control. Thus, the presence of the dual-class structure itself is considered to be a unity of command strategy and the weaker governance score is considered to be an extension of this need for unity of command. Thus, in essence, the hypothesis 1b and 1c

indicates that although entrepreneurs adopt dual-class structures for entrenchment, shareholders consider it as a unity of command strategy and reward it with premium valuation.

Hypothesis 2 (2a, 2b, and 2c). The results show that the effect of concentrated outsiders on the dual-class structure and IPO premium is insignificant. There is no significant effect on the dual-class structure adoption if the number of concentrated outsiders increases. Thus, our hypothesis 2a and 2b are not supported. There is no indirect effect of concentrated outsiders on IPO premium, maybe because the coefficients of the two effects are opposite in sign, and thus, our hypothesis 2c is also not supported. The negative sign of the coefficient in model 5 indicates that as the number of concentrated outsiders increases the likelihood of adoption of dual-class structure decreases. In contrast, as the number of concentrated outsiders increases the premium in IPO offer price increases. This result may be due to greater monitoring ability of the outsiders.

Hypothesis 3 (3a, 3b, and 3c). Insider's control is a proxy of insider's voting rights. The effect of insider's voting rights on dual-class structures is significant and positive, indicating that a firm is likely to adopt dual-class structure if its insiders have greater voting rights. This result supports our inference in hypothesis 2, as an increase in outsiders leads to the adoption of the single-class structure. Again, we find that the entrenchment hypothesis 3b is supported and the unity of command hypothesis 3a is not supported. Hypothesis 3c is also supported as the indirect effect of insiders control on IPO performance is significant ($p<.05$). This result shows that dual-class structure adoption signals the greater unlocked value of the firm to shareholders, and there is a greater value attached to the firm if it's accompanied with greater voting rights of insiders, who have idiosyncratic information about the future value of the firm (Westphal, 1998).

Additionally, the agency cost inherent in the separation of ownership and management decreases in the presence of greater control of insiders, as the goal of insiders and outsiders is more aligned (Jensen & Meckling, 1976). Thus, the effect of insider's majority voting rights on IPO premium is more pronounced through the presence of dual-class structure.

Hypothesis 4 (4a, 4b, and 4c). The results in model 5 show that the effect of a greater proportion of insiders on board of directors, is insignificant, while the result in model 3 indicates that the effect of a greater proportion of insiders on IPO premium is insignificant. Thus, both hypothesis 4a and 4b are not supported. Hypothesis 4c is also not supported, leading to the conclusion that there is no indirect effect of the proportion of insider directors on IPO premium, and dual-class does not influence this relationship significantly. Although the coefficient of the relationship between the proportion of greater proportion of insiders on the board of directors (BOD) on dual-class structure adoption is positive in direction, indicating that the increase in the proportion of insider directors on BOD increases the probability of dual-class structure adoption and IPO premium.

Hypothesis 5 (Hypothesis 5a, 5b, and 5c). Time to IPO is a proxy of firm age, which quantifies the experience that IPO firm has had in the market, and more relevant for our hypothesis is the quantification of time that a firm has survived in the market with private investments. The results in table 3 show that the direct effect of time to IPO on dual-class is significant at the 10% level and has a negative coefficient. This supports our unity of command hypothesis 5a, indicating that firms that have a limited firm history are more likely to adopt dual-class structure. Thus, our hypothesis 5b is not supported. The lack of support for hypothesis 5b may be the consequence of an increased number of outsiders in firms that have remained private for long,

who may prefer to have single-class structure rather than dual-class structure. The indirect effect of time to IPO on IPO premium is insignificant, and thus, hypothesis 5c is not supported. We observe a negative sign on the coefficient of the direct effect of time to IPO on IPO premium, which may be because the book value of firms that takes longer to get to the IPO stage is much more than the book value of firms that come to IPO market within a shorter duration of time. Thus, firms that take longer to get to the IPO market are likely to get a lesser IPO premium.

Hypothesis 6 (6a, 6b, and 6c). The result shows that the effect of VC presence on the dual-class structure is insignificant, refer to Table 3. Although the sign of the coefficient is positive, indicating that the presence of VCs is likely to lead to dual-class structure although this effect is not significant. Thus, our hypothesis 6a and 6b are not supported, as we cannot derive any meaningful conclusion regarding the effect being a reflection of the unity of command or the entrenchment. Hypothesis 6c is also not supported as the indirect effect of VC presence on IPO premium through the dual-class structure is not significant. Although the direct effect of VCs presence on IPO premium is significant with a negative sign on the coefficient. This result indicates that firms with VC investors are likely to experience negative IPO performance. One of the explanations for this result could be that firms with VC investments incorporate a premium in their offer price, as investors are likely to perceive the presence of VCs positively, and thus, there is no additional premium offered by the markets.

Hypothesis 7 (7a, 7b, and 7c). The hypothesis 7a is supported as the effect of firm performance on the dual-class structure is significant ($p<.05$). Thus, firms having good firm performance are likely to experience greater confidence from shareholders for the use of control strategies such as dual-class structure adoption. Shareholders may take into account that greater firm value can be

unlocked by insiders who have idiosyncratic information about the future value of the firm (Westphal, 1998). Hypothesis 7b is not supported. The indirect effect of firm performance on IPO premium is significant but so is the direct effect of firm performance. We can thus interpret that there is a partial mediation effect that exists in the relationship between firm performance and IPO premium as both the direct effect and the indirect effect are significant. This also indicates that firm performance by itself is a significant determinant of IPO premium. Thus, hypothesis 7c is partially supported.

Hypothesis 8 (8a, 8b, and 8c): As is evident in model 5, we do not find a significant effect of firm risk on the dual-class structure. Thus, our hypothesis 8a and 8b are not supported. Hypothesis 8c is also not supported as there is no significant indirect effect of firm riskiness on IPO performance. It is interesting to point out here that the direct effect of firm risk on IPO performance is significant (p<.05), this indicates that the shareholders do account for firm risk but the adoption of dual or single-class structures does not provide any additional information on the firm risk to shareholders.

Hypothesis 9 (9a, 9b, and 9c). The result of the direct effect of the acquisition on the dual-class structure is significant (p<.001). Acquisition is one of the risky strategies, and thus as hypothesized in 9a, firms engaging in acquisition are more likely to adopt dual-class structure to protect themselves from the failure of these risky strategies. The unity of command hypothesis, 9a, is significant while the entrenchment hypothesis, 9b, is not significant. The indirect effect of acquisition on IPO premium through dual-class structure is significant (p<.001), and thus, hypothesis 9c is supported. This indicates that the effect of acquisition on IPO premium is significant only for firms adopting a dual-class structure as the rest of the firms having similar

characteristic as dual-class but not adopting dual-class structure are considered to be more prone to failure.

Hypothesis 10 (10a, 10b, and 10c). Innovation requires investments that may or may not materialize into greater firm performance, and thus, there is a risk of failure associated with this strategy. The direct effect of innovation on the dual-class structure is significant ($p<.01$), indicating support for hypothesis 10a while there is no support for hypothesis 10b. Thus, firms adopting riskier strategies are more likely to adopt a dual-class structure to gain unity of command. Hypothesis 10c is not supported as the indirect effect of innovation on IPO premium is insignificant. This non-significant effect may be observed because there may not be a significant difference between the research and development expenses incurred by single and dual-class firms.

Hypothesis 11 (11a, 11b, and 11c). Internationalization is one of the most widely used growth strategies of firms. We find that the effect of internationalization on the dual-class structure is significant ($p<.001$), and thus, the unity of command hypothesis, 11a, is supported while hypothesis 11b is not supported. The indirect effect of internationalization on IPO premium (hypothesis 11c) is also significant at a more liberal 10 % level. This effect may be a reflection of the need for international firms to gain unity of command and protect themselves from the failure of their risky strategies.

5.3 Endogeneity

Scholars have argued that ownership structures are simultaneously determined with firm value and performance, and thus, studies of ownership structures and its determinants are often plagued by endogeneity concern (Demsetz & Lehn, 1985; Coles, Lemmon, & Meschke, 2012;

Gompers et al., 2010). Also, "since ownership structure is one of the many governance variables

that is endogenously determined with firm value and performance, it will always be difficult to

uncover the underlying relationship with reduced-form empirical analysis" (Gompers et al.,

2010:1054; Demsetz & Lehn, 1985). In our study, we find that dual-class structures are formally

adopted just before the IPO as entrepreneurs take into account the increased governance

requirement of public markets, and thus, the temporal order of our independent variables and the

dependent variable is distinct. While we do believe that endogeneity is not a problem in our

study due to the strict temporal order of the events, but we do accept that we did not find any

section in the prospectus that discussed the evolution of firm's capital structure, thus, restricting

us from making a concrete inference about the temporal order.

Given this limitation, we conduct a two-stage regression analysis with two instrumental

variables of CEO duality and family firm. CEO Duality takes on a value of 1 if the role of CEO

and the Chairman is being performed by one individual, and 0 otherwise. The literature on CEO

duality has found that firms with power concentrated at the top are more likely to adopt a lesser

governance mechanism, and thus, require greater monitoring (Finkelstein & D'Aveni, 1994).

Our second instrumental variable is whether the firm is a family firm (value of 1) or a

professional firm (value of 0). Family firms are known to adopt greater governance mechanisms

to gain legitimacy and competitive advantage (Carney, 2005). Thus, we expect both CEO

duality and family firm variable to be correlated with the governance index. In the first stage, I

regress duality and family firm along with all the IVs and control variables on governance index.

We observe that both duality (p<.001) and family firm (p<.05) are significantly correlated with

the governance index variable, see Table 6. The two instrumental variables are significant

predictors of the governance index score is confirmed through the Anderson-Rubin Wald test

(p<.05). In the second stage, we regress predicted governance index equation in the first stage

along with all the independent variables and the control variables on the dual-class structure.

The coefficient of governance index is significant (p<.05). Also, the coefficients on all the other

TABLE 5
Two-Stage Regression Results

VARIABLES	(1) dual
Gov Index	-0.15*
	(0.06)
Founder CEO	0.08
	(0.05)
Legal	0.04
	(0.05)
Employee	-0.01
	(0.02)
Profit/Share	-0.07†
	(0.03)
Insider Control	0.00***
	(0.00)
Conc. Out	0.00
	(0.00)
Board Power	-0.08
	(0.08)
Time to IPO	-0.05†
	(0.02)
VC Funding	0.00
	(0.06)
Firm Risk	0.15
	(0.11)
Acquisition	0.19***
	(0.05)
International	0.21***
	(0.06)
Innovation	1.08*
	(5.01)
Firm Performance	0.03†
	(0.02)
Constant	-0.50
	(0.54)
Observations	358
R-squared	0.25
Degrees of Freedom	35
Wild Statistic	38.69
Sargan Test	2.25
Exogenous Variables	2
Endogenous Variables	1

Standard errors in parentheses
*** p<0.001, ** p<0.01, * p<0.05, , † p<0.10
I have included the control variables of industry and IPO year in this analysis,
but I have not reported it. Available on request.

independent variables are significant although the level of significance is influenced downwards.

We confirm whether the instruments are weak in the 2sls regression by conducting a Wald

statistic test. Instrumental variables have an eigenvalue statistic 38.69 and are greater than any of the critical threshold values, leading to the conclusion that the instruments are strong. We further conduct the Sargan overidentification test to confirm whether the two-instrument set is valid, and the model is appropriately identified. Sargan test statistic affirms the null hypothesis that the instrument set is valid, and the model is appropriately identified (P=0.2466). Thus, we conclude that the endogeneity problem does not occur in our analysis and the possibility of our regression coefficients being upwardly biased is not supported. Please see Table 5 for results of two-stage regression.

5.4 Sample Selection Problem

Two-stage regression enables us to rule out measurement problems, omitted variable problems, and also simultaneity problems, although sample selection problems could be a concern if the sample does not consist of the universal sample of dual-class firms (Gompers et al., 2010). My sample is representative of the entire set of dual-class firms in the United States that have undertaken their IPO in the years 2006 to 2018, and thus, sample selection bias is less likely to affect our sample. Additionally, I have a matched sampling research design consisting of dual-class and single-class firms which are different from each other and may differ in their relationship with governance, strategic, and firm factors. To correct for sample selection bias that may occur due to observable factors that may bias the interpretation of our results, I use methods of Heckman(1979). My first stage model predicting governance index included all the control variables along with the independent variables in our model. In the second stage regression with dual-class, I include all the control variables and the IVs from the first stage along with the inverse Mills ratio generated in the first stage. The inverse Mills ratio represents the selection hazard for the treatment and eliminates potential bias due to sample selection

(Hamilton & Nickerson, 2003). The results show that the inverse mills ratio is not significant in the second stage, providing robustness to the possibility that differences between the single-class and dual-class firms are influenced by factors in our model. The results are contained in Table 6.

TABLE 6
Heckman Test

	Dual	Gov Index
Size	-0.02	0.10
	-0.02	-0.17
Legal Cases	0.04	-0.15
	-0.05	-0.42
Profit/Share	0.06†	5.71
	-0.04	-15.40
Founder CEO	0.06	0.10
	-0.06	-0.62
Conc. Outsiders	0.01	-0.09
	-0.01	-0.07
Insider Control	0.00***	0.00
	0.00	-0.01
Board Power	-0.04	-0.30
	-0.09	-0.44
Time to IPO	-0.05	-0.02
	-0.03	-0.20
VC Funding	0.02	-0.25
	-0.06	-0.47
Firm Performance	0.04*	-0.23
	-0.02	-0.21
Firm Risk	0.14	-0.64
	-0.12	-0.84
Acquisition	0.23***	-0.49
	-0.05	-0.45
Innovation	1.22*	0.00
	0.00	0.00
International	0.17**	0.15
	-0.07	-0.42
Constant	-0.88	20.63***
	-0.54	-3.46
CEO Duality		-13.83
		0.00
Family Firm		-0.20
		-0.66
lambda	0.12	
	-0.15	
Observations	358	
Chi Square	105.50	
Degrees of Freedom	34	
P Value	0.00	
lambda	0.12	
rho	0.27	
sigma	0.43	

*** p<0.001, ** p<0.01, * p<0.05, ,† p<0.10
I have included the control variables of industry and IPO year
in this analysis, but I have not reported it. Available on
request.

CHAPTER SIX

DISCUSSION

This dissertation identifies the governance-related, firm-specific, and strategic antecedents of dual-class structures. These antecedents are predictive of the firm's propensity to adopt the dual-class structure. Additionally, this study ascertains the relationship between the antecedents of dual-class structure and IPO performance. These relationships, as I observe in this study, depends on the type of capital structure(more specifically, share-class structure) as different share-class structures embed different shareholder rights, and provides additional information about the firm governance to shareholders who are actively engaged in interpreting information signals due to the information asymmetry that exists between the insiders and the shareholders. Effectively, this dissertation accomplishes three goals, first, I identify the antecedents of dual-class structure, which is important given the inextricable relationship between the strategy of the firm and its capital structure. Secondly, I test the effect of antecedents of dual-class structure on IPO performance, as performance measures can most appropriately specify the importance of capital structure. Finally, I identify the differences in effect on IPO performance if a firm adopts dual-class structure instead of a single-class structure.

Dual-Class structure is one of the most potent anti-takeover mechanisms. Like other anti-takeover mechanisms, for example, poison pills, golden parachutes, greenmail, etc., dual-class structures create impediments in replacing the existing controlling-owners with other owners in the market, who value the firm at a premium to its market value, and thus, denying additional value to existent shareholders. Additionally, unlike the other anti-takeover mechanisms, dual-class structures render the market for corporate control ineffective and facilitate the

entrenchment of management by weakening decision control (Walsh & Seward, 1990). Most of the findings in finance literature concludes that dual-class structures lead to entrenchment (Smart et al., 2008; Masulies et al., 2009; Gompers et al., 2010), but scholars also find that dual-class firms perform much better than the single-class firms (Dimitrov & Jain, 2006; Smart et al., 2008; Jordan et al., 2016). The entrenchment hypothesis does not explain this paradox, and thus, we test the assertions of organizational theory that absolute control conferred by dual-class structure leads to unity of command, which is value-enhancing, rather than the value-destroying effect of entrenchment proposed by agency theory.

Based on the prior literature, we build two competing hypothesis, one affirming organizational theory predictions and the other affirming agency theory predictions. This study tests the validity of these competing hypotheses by using the measure of IPO performance. I find that the entrenchment and unity of command hypotheses are supported depending on the type of antecedent of dual-class structures. Agency theory predictions of entrenchment are supported in governance antecedents, indicating that entrepreneurs adopt lesser governance mechanisms even if they have absolute control of the firm through the dual-class structure. More importantly, I find that shareholders reward dual-class firms that have lesser governance mechanisms. One of the reasons for this could be that shareholders value unity of command much more than they are bothered about entrenchment avoidance. Another reason could be that entrepreneurs who adopt dual-class structures are likely to have a reasonably high equity stake in their firm, and thus, this bonding cost that they incur to gain entrenchment indicates to the shareholders a higher value of future opportunities.

The results of firm antecedents support the unity of command hypothesis. Thus, younger firms that are at higher risk of being a takeover target, or VC-backed firms where control is in hands of VCs, or firms having higher performance who are at higher risk of being taken over as well as are likely to have more outside investors who dilute entrepreneurs decision control power, are more likely to adopt dual-class structure. The indirect effect of these firm-specific antecedents on IPO performance is insignificant although the direct effects are significant, indicating that the firm-specific antecedents are an important consideration for shareholders independent of the kind of share-class structures.

Strategic antecedents of dual-class structure support the unity of command hypothesis, indicating that firms that pursue risky strategies are likely to adopt countervailing mechanisms such as dual-class structure to protect themselves from the ill-effects of value dilution in the capital markets. Additionally, I find that the shareholder's reward firms that adopt risky strategies and adopt dual-class structures. This result shows that shareholders are not motivated by gaining premium through the market for corporate control as they perceive the gains to be much higher if entrepreneurs are provided with the unity of command to pursue their idiosyncratic strategies (even if they are risky strategies).

This dissertation contributes to the understanding of dual-class structures and their effect on IPO performance. Several important findings emerged during this study which can contribute to the extant literature of ownership structures and its effect on firm strategies. The first major finding is about the preference for insider's control by shareholders, especially at the stage of IPO. We find that as insiders' control of the firm increases, even if it is manifested through an entrenchment tool such as dual-class structure, it increases the IPO premium. This indicates that

shareholders prefer unity of command even at the cost of facilitating entrenchment. This result contradicts agency theory predictions and thus, I dwell deeper into my data to explain this finding. I find that insiders in dual-class structures have greater equity stakes (32%) compared to single-class structures (17%), thus, insiders in dual-class structures incur greater bonding costs leading to reduced agency cost. So, when insiders who have incurred bonding cost pursue entrenchment strategies, it is perceived positively by shareholders, maybe because of two points: such firms are likely to have lesser agency cost, and such firms are likely to have a greater value of future opportunities (McMullen & Shepherd, 2006). A different but contextually similar finding has been echoed by Finkelstein & D'Aveni (1994) where they find that vigilant boards are more concerned with having unity of command rather than avoiding entrenchment.

Second interesting finding of this study is the effect that corporate governance index score has on dual-class structure adoption and IPO performance. In line with the finding of Li and Zaiats (2017), who in a sample of 1994 to 2006 find that dual-class firms adopt greater governance mechanisms, I expected that dual-class structures would have a greater corporate governance score, as these corporate governance mechanisms are not going to significantly impact their control of the firm since they already have the voting control through dual-class structure, but our results are in contrast to this finding. We observe that dual-class structures are likely to adopt lesser governance mechanisms even when they have absolute control of the firm (through the dual-class structure). This difference in finding could be attributed to the difference in the sample period. It could be inferred that firms in the sample period of 1994 to 2006 balanced adoption of the dual-class structure by adoption of greater governance mechanisms, to please the different stakeholders since such structures were not widely adopted in the said period. In our sample period of 2006 to 2018, the number of firms adopting dual-class structure has

increased, which may be the consequence of greater acceptability of such firms and their ability to create a better firm performance (Jordan, Kim, & Liu, 2016). Thus, firms adopting dual-class structures do not feel the need to display any structural elaboration by adopting more governance mechanisms. Additionally, I find that having a greater score on corporate governance index leads to marginally positive IPO performance although the difference in IPO performance between the firms with greater governance mechanisms and lesser governance mechanisms is not significantly different.

Thirdly, scholars have observed that the firm age of VC backed firms at the time of IPO is 5 years (Gompers, 1996) and 18 years (Field and Karpoff, 2002). In my sample, I find that the average age of the firm at the time of IPO is 21 years. There could be two possible reasons to observe this difference in age of the IPO firms as compared to the previous studies. First, I have considered the year of incorporation of the firm to be either the firm's incorporation year or if the firm has a parent company then its parent's year of incorporation. In some cases, I observe that the date of incorporation of the parent company is 80 years before the year of incorporation of the focal company. Thus, the IPO age may be biased by my method of recording the year of incorporation. The second reason for this observation may be the difference in the sample period compared to the other scholars. My sample includes dual-class firms of the last 13 years, which to the best of my information is the most comprehensive and latest sample of dual-class firms. I further find that in our sample the average age of VC backed firms is 18.5 years and non-VC backed firms is 28 years. Thus, there is a substantial increase in the time for which firms remain private, and this is substantially influenced by private investors other than VCs.

In my data analysis, I observe a significant negative relationship between the age of the firm and dual-class structure adoption. This result can be explained through two perspectives. Young firms are likely to be undervalued as the opportunities of such firms are hard to value (Humphery-Jenner, 2014), and thus, such firms are more likely to adopt dual-class structure to protect themselves from the market for corporate control. Secondly, firms with a higher value of opportunities are more likely to seek investments through public markets to disperse the shareholding and avoid concentrated ownership which can dilute the entrepreneur's control. Given that the relationship of firm age to IPO premium is negative, although insignificant, we can infer that shareholders do not penalize such firms, as for them unity of command is more important than entrenchment avoidance.

The fourth important finding that we observe in our data analysis is the negative relationship between VC funding and IPO premium. The extant literature findings are unanimous on the positive effect of the presence of venture capitalists on the IPO performance of the firm. Venture capitalists are considered to be specialist investors who have greater information about the risks inherent in startup investments (Gompers & Lerner, 2001), and thus, VC backed firms perform better than non-VC backed firms (Cole, Cumming, & Li, 2016). Despite the legitimacy offered by VC investment and its observed impact on firm performance, we observe that firms with VC investments receive lesser IPO premium as compared to firms without VC investments. In the context of our study this result indicates that VCs are less likely to provide unity of command to the insiders and thus, shareholders discount these shares. Thus, I find strong evidence that shareholders highly value the presence of unity of command at the IPO stage of the firm. One other plausible reason to explain this finding could be that the firms having VC investments are likely to have greater book value than the firms not having VC

investments, as IPO premium is calculated based on the book value of the firm. In further analysis of our sample, we find that VC backed firms have an average book value of $4.30 while non-VC backed firms have an average book value of $1.42. Thus, we may infer that firms with VC backed investments are likely to invest much more in tangible assets as compared to the non-VC backed firms, and thus, the value of opportunities is largely incorporated in the offer price leading to less IPO premium as compared to non-VC backed firms.

The fifth finding that we observe in our data analysis is the differing, although insignificant, relationship of internationalization and acquisition with IPO premium. The results of this study show that the effect of internationalization on IPO premium is positive and insignificant, indicating that shareholders perceive internationalization as a value-creating growth strategy although its effect does not significantly increase IPO premium. On the other hand, the relationship between acquisition and IPO premium is negative and insignificant, indicating that acquisition strategy is considered as a risky and value-destroying strategy by shareholders although its impact on IPO performance is marginal and thus, insignificant. In regard to the indirect effect of internationalization and acquisition on IPO performance, I find that both of these strategies have a positive impact on IPO premium, allowing me to conclude that dual-class structures, due to its characteristic of providing unity of command, increase the salience of growth strategies or risky strategies for shareholders.

We find that dual-class companies invest more in research and development as compared to single-class companies. This is in contrast to the findings of Smart et al., 2003, who in their sample of 1990-1998 found that dual-class companies invested less in research and development as compared to the single-class. This indicates that firms in the 1990s may have adopted dual-

class structures for entrenchment but firms in 2000s may be adopting it for the unity of command. The evidence that shareholders are more interested in the unity of command than in entrenchment avoidance (as shown by our results) indicates that shareholders' understanding of reasons for which dual-class structures are adopted are aligned with the reasons for which entrepreneurs adopt such structures. It would be interesting to see if these differences in results are due to the differences in equity holding of insiders in 1990s and 2000s, as I argue that greater equity holding of insiders in 2000s coupled with dual-class structures indicates to shareholders that insiders are incurring higher bonding costs as they perceive the future value of opportunities to be high.

Finally, innovation, measured as the level of research and development expense, is considered as a risky strategy by entrepreneurs, and thus, this study argues that they adopt dual-class structures to gain unity of command, this assertion is supported in our results, although the effect of innovation on IPO performance is not significant. It seems that shareholders do not consider innovation expense as a value-creating strategy, due to which I observe no significant difference between the IPO premium commanded by the firms with higher innovation expense and firms with a lower innovation expense. On further research, I find that most of the firms in our sample have an innovation strategy, although the average dollar investment of dual-class firms in our sample is $63286, while average investment by a single-class firm is $24345. Thus, this study finds that dual-class firms take significantly more risk by investing in research and development, and thus, their unity of command need is supported, although shareholders do not reward firms that take higher risk by investing higher amounts in research and development, as it seems their primary concern is the existence of an active research and development program. Future studies can explore if the tangible output from research and development activity, such as

patents or new products, has a positive indirect impact on IPO performance, as shareholders may perceive firms with higher research and development output to be more promising than firms with higher research and development expenses.

6.1 Limitations

This dissertation suffers from certain limitations which must be taken into account while interpreting our results. This is a cross-sectional study of firms that adopt dual-class structures. A longitudinal study could have enabled us to look at the firm performance over a period of time and draw more conclusive evidence related to the dual-class antecedents and its effect on firm performance. Secondly, our dataset is limited to United States dual-class firms. This could further limit the generalizability of our study in the context of other countries. Bebchuk et al. (2000) have found that minority controlling structures such as dual-class are adopted by countries with weak institutions or by family firms. I contend that this study of dual-class structures in the United States can inform the literature about the effect of dual-class structures in effective institutional environment, while on the other hand, it may also be possible that a multi-country sample may lead to results that indicate entrenchment through dual-class structures, which is in contrast to our findings. I argue that in weak institutions firms may adopt dual-class structures to build an internal capital market or the internal labor market, which could be growth strategies for firms rather than entrenchment strategies as classified in the literature (Khanna & Palepu, 1997).

Thirdly, scholars have pointed out that IPO firms engage in signaling to gain legitimacy (Cohen & Dean, 2005), and thus, there is a possibility that the IPO firms may pursue growth strategies just before the IPO to signal greater growth opportunities. Our study is not able to

ascertain the time at which pursuit of growth strategies has been undertaken by the firm, and thus, we are not able to remedy our results from signaling effects. Fourthly, we have used a matched sampling research design that allows us to force-match single-class with dual-class on certain predetermined criteria. This forced matching method may introduce some bias in our results as the relationships that are significant in our sample may not hold in another sample where matching is done on criteria different than ours. Another limitation that may potentially affect the results of this study is the use of the product of coefficients method to test our mediation hypothesis. Although Baron & Kenny(1986) is a popular method of testing mediation it has been severely criticized for its requirement to have the direct effect significant (Hayes, 2009). We adopt coefficient of products method because our theoretical assertions indicate that the effect of our independent variables on IPO performance should be significant only when they adopt dual-class structures, thus we do not foresee the direct effect of our IVs to be significant in our model, as it would dilute the role of dual-class structures in this study.

6.2 Implications for Theory and Practice

This study has several implications for theory development and practice. Entrepreneurs are increasingly pursuing capital structures that provide them absolute control at the cost of common shareholders. Such control mechanisms can decrease the cost of appropriation of minority shareholders and increase the entrenchment strategies pursued by such entrepreneurs (Bebchuk et al., 2000; La Porta et al., 2002). Thus, it is important to know the effect of the dual-class structure on firm performance. Scholars have largely asserted that dual-class structures lead to entrenchment and persuasion of private benefits of control, but this study dwells deeper into the strategies of entrepreneurs and contends that since entrepreneurs pursue risky strategies

they use dual-class structures as a countervailing mechanism to protect themselves from the market for corporate control and decision control of outsiders. Further, this study also finds that entrepreneurs incur bonding costs to pursue the unity of command indicating that they value unity of strategic direction to exploit future opportunities.

Secondly, dual-class structures provide scholars with a context of the absolute unity of command which is unhindered by any of the control mechanisms that dilute the control of insiders such as the market for corporate control, decision control, etc. This context of the absolute unity of command provides scholars with an opportunity to test firm strategies and their effect on firm performance. This context is valuable as all other contexts of management control are diluted to a certain extent by the presence of internal and external governance mechanisms. Additionally, scholars have argued that the entrepreneur's human capital is essential to the exploitation of future opportunities in entrepreneurial firms. Dual-class structures enable scholars to test the effect of entrepreneurs absolute control on firm outcomes, as entrepreneurs have unity of strategic direction in such structures as governance mechanisms such as decision control and the market for corporate control are absent in such firms. In other words, it allows a test of whether the unity of strategic direction creates value or leads to entrenchment.

This study unravels shareholders decision making criteria and how they are likely to affect IPO performance. Given that the relationship between the agents and the principals is marred with information asymmetry and agency costs, inherent in the separation of management and control, shareholders or the principals, are likely to use intricate mechanisms of interpreting the available information and drawing performance conclusions from these signals. Our results show that dual-class structure adoption embeds positive signals about the entrepreneur's belief in

the value of future opportunities of the firm and their commitment to pursue these opportunities. Thus, this need for unity of command has a much more potent signal for shareholders than the possibility of entrenchment through dual-class structures.

In practice, as I observe in my sample, dual-class structures are largely adopted by entrepreneurial firms. This study has several implications for practice. I find in my sample that shareholders perceive adoption of dual-class structures by young firms positively. Entrepreneurs that want to grow by using public money rather than accessing private finance opportunities are likely to be rewarded by public markets if such firms are pursuing risky growth strategies and if entrepreneurs have incurred bonding costs in their firm. It is known that the presence of VCs provide legitimacy to the entrepreneurial firms and also facilitates greater access to resources. In the context of IPO Performance, I find that presence of VCs will not lead to significant premium in the offer price as the book value of the firm accounts for most of the premium that is associated with the presence of VCs. Thus, entrepreneurial firms that have VCs are largely going to experience lesser IPO premium and the performance of stock price will be largely dependent on the firm performance post IPO.

Another interesting finding that can provide valuable insights to practitioners is the insignificant effect that investments in innovation have on IPO performance. Thus, if entrepreneurs expect a premium based on the quantum of investment in the research and development program, I find that shareholders are not likely to oblige. Despite this assertion, I find that dual-class firms are still investing a higher portion of their revenue in research and development as compared to single-class firms. I also find that the effect of risky strategies on IPO performance is mediated by dual-class structures. This finding alludes that risky strategies

can lead to premium in the IPO markets only if the accompanying countervailing mechanisms to control the firm have been adopted.

This study also informs market institutions about the behavior of dual-class firms. Council of Institutional Investors(CII) has banned investment by its members in dual-class firms because these structures dwarf shareholder rights, and thus, it is assumed that entrepreneurs in such firms are likely to pursue entrenchment. My findings indicate that entrenchment of entrepreneurs is not necessarily a negative consequence in itself, until and unless supported with entrenchment strategies. In my sample of firms, I observe that although entrepreneurs pursue entrenchment through dual-class structures, they largely adopt strategies that indicate the intention of the unity of command to maximize shareholder value. This study also observes that young firms are more likely to seek dual-class structures due to the risk of takeover that they may experience in public markets, but it also indicates that if firms adopt dual-class structures with sunset clause (a fixed time period after which the firms will revert to single-class structure), it would further allay fears of broader set of investors and may lead to greater IPO performance.

CHAPTER SEVEN

CONCLUSION

The findings in this study indicate that the shareholder's perception of entrenchment and unity of command are complex and inherently dependent on contingent factors. More importantly, the findings of extant literature that dual-class structures are tools of entrenchment rather than unity of command is not supported in our study as there is a multitude of factors that influence the logics of entrenchment. Some of the findings in this dissertation study indicate that shareholders perceive entrenchment positively if as a consequence insider are able to exercise unity of command. For example, in our sample, shareholders perceive insiders' control, and greater power in the hands of the insiders, as an indication of the unity of command rather than entrenchment. Greater score on corporate governance index score does not affect IPO premium significantly, maybe because shareholders attach greater value to the control of insiders who may have a better understanding of the future value of opportunities (McMullen & Shepherd, 2006). On the other hand, firms that have adopted risky strategies and have unity of command are more likely to be valued at a premium by the shareholders. Thus, when firms pursue risky strategies, shareholders are more concerned with having a unity of command than to avoid entrenchment.

Finally, the presence of certain firm factors also influences whether the absolute control endowed by dual-class structures are perceived by shareholders as a unity of command or entrenchment. For example, if a firm with substantial years of operation (greater than 28 years) decides to go public with a dual-class structure, it is construed to be a strategy to gain entrenchment and thus, shareholders discount the value of such firms. Similarly, if a firm has a VC investor than the IPO premium is lower as such firms are penalized for the absence of unity of command. Other than unraveling how the unity of command and entrenchment influence IPO

premium differentially, we also find important antecedents of firms that can predict the adoption of dual-class structures. Firms that have insider's control, are early to IPO markets, and have undertaken risky strategies such as internationalization, acquisition, innovation, etc. are more likely to adopt dual-class structure.

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ANNEXURE
Name of Companies Included in The Sample
(Single-class ordered year-wise followed with dual-class ordered year-wise)

Aircastle Ltd	SPS Commerce Inc	Liquid Holdings Group Inc
Loopnet Inc	Midas Medici Grp Hldg Inc	Rally Software Development Corp
Town Sports Int Holdings Inc	Financial Engines Inc	Marin Software Inc
Emergent Biosolutions Inc	Amyris Inc	Nimble Storage Inc
Vonage Holdings Corp	Ellington Financial LLC	Model N, Inc
J Crew Group Inc	Accretive Health Inc	Fireeye, Inc
Complete Production Svcs Inc	Michael Kors Holdings Ltd	Frank's International N.V.
Gatehouse Media Inc	Pandora Media Inc	Potbelly Corp
KBR Inc	Fusion-IO Inc	Epizyme, Inc.
Morton's Restaurant Group Inc	Kosmos Energy Ltd	Boise Cascade Co
CAI Int Inc	RPX Corp	Norcraft Companies Inc
Cardtronics Inc	Digital Domain Media Group Inc	Essent Group Ltd.
TechTarget Inc	Jintai Mining Group, Inc.	Stonegate Mortgage Corp
Meruelo Maddux Properties Inc	Kips Bay Medical, Inc.	WCI Communities, Inc.
JMP Group Inc	AcelRx Pharmaceuticals Inc	Cheniere Energy Partners LP Holdings, LLC
Validus Holdings Ltd	Trunkbow Intl Hldgs Ltd	Endurance International Group Holdings, Inc.
Flagstone Reinsurance Hldg Ltd	Thermon Group Holdings Inc	Sprouts Farmers Market, Inc.
Employers Holdings Inc	Delphi Automotive Plc	Pinnacle Foods Inc.
Rosetta Genomics Ltd	China Century Dragon Media, Inc	Scynexis Inc
Energysolutions Inc	Homestreet Inc	AAC Holdings, Inc
Neutral Tandem Inc	Merrimack Pharmaceuticals Inc	Amphastar Pharmaceuticals, Inc
Switch & Data Facilities Co	Greenway Medical Tech Inc	Tubemogul Inc
Cinemark Holdings Inc	Lifelock Inc	Arista Networks, Inc
Solera Holdings Inc	Guidewire Software Inc	Aspen Aerogels Inc
Pinnacle Gas Resources, Inc.	Servicenow Inc	Diplomat Pharmacy Inc
Castlepoint Holdings Ltd	Proto Labs Inc	TCP International Holdings Ltd
Tomotherapy Inc	Wageworks Inc	FMSA Holdings Inc
Oceanfreight Inc	Gaslog Ltd	GWG Holdings Inc
U.S. Stem Cell, Inc.	FX Alliance Inc	Heritage Insurance Holdings, Inc.
IPC Healthcare, Inc.	Roundy's Inc	Healthequity Inc
Energy Recovery, Inc.	Del Frisco's Restaurant Grp Ltd	IHS Markit Ltd.
Mistras Group, Inc.	Amira Nature Foods Ltd.	Zoe's Kitchen, Inc.
Addus Homecare Corp	Ceres, Inc	Vivint Solar, Inc.
Select Medical Holdings Corp	Armada Hoffler Properties Inc	Care.Com Inc
Dole Food Co Inc	Xoom Corp	Rice Energy
ZST Digital Networks Inc	Yume Inc	Geopark Ltd
Mediamind Technologies Inc	Marcus & Millichap, Inc	Continental Building Products, Inc.
Quinstreet Inc	Diamond Resorts International, Inc	Boot Barn Holdings, Inc
Aveo Pharmaceuticals Inc	Tandem Diabetes Care Inc	Maxpoint Interactive Inc
Meru Networks Inc	Professional Diversity Network	Catabasis Pharmaceuticals Inc

Conformis Inc	Tintri, Inc.	Forty Seven, Inc.
Endochoice Holdings Inc	Yext, Inc.	Adt Inc
Natera Inc	Casa Systems Inc	Chipotle Mexican Grill Inc
Penumbra Inc	Wideopenwest, Inc.	Omega Navigation Enterprises
HTG Molecular Diagnostics Inc	Sailpoint Technologies Holdings, Inc.	Mastercard Inc
Ooma Inc	Cloudera, Inc.	SAIC Inc
Solaredge Tech Inc	PQ Group Holdings Inc.	Spirit Aerosystems Holdings
Apigee Corp	Keane Group, Inc.	Mueller Water Products Inc
Rapid7 Inc	Venator Materials Plc	Ntelos Holdings Corp
Instructure Inc	ASV Holdings, Inc.	Evercore Partners Inc
Sunrun Inc	Evoqua Water Technologies Corp.	Warner Chilcott Holdings Co
Gener8 Maritime Inc	Reto Eco-Solutions, Inc.	One Beacon Insurance Group
Press Ganey Holdings Inc	ZK International Group Co., Ltd.	HFF
Patriot National Inc	Rev Group, Inc.	Clearwire Corp
Etsy Inc	Gardner Denver Holdings, Inc.	Interactive Brokers Group
Conifer Holdings, Inc.	Jeld-Wen Holding, Inc.	Skilled Healthcare Group Inc
Davidstea Inc.	Presidio, Inc	Biofuel Energy Corp
CPI Card Group Inc.	National Vision Holdings, Inc.	Sucampo Pharmaceuticals Inc
Arcadia Biosciences, Inc.	Quanterix Corp	VMware Inc
Transunion	Veritone, Inc	Duff & Phelps Corp
Party City Holdco Inc.	Meiragtx Holdings Plc	Virgin Mobile USA, Inc
Cotiviti Holdings, Inc.	Translate Bio, Inc.	MSCI Inc
Novan, Inc.	Cardlytics, Inc.	Internet Brands Inc
Audentes Therapeutics, Inc.	Legacy Housing Corp	Triple-S Management Corp
Patheon N.V.	Mdjm Ltd	Teekay Tankers Ltd
		Fortress Investment Group LLC
Everbridge, Inc.	Mesa Air Group Inc	Greenlight Capital Re Ltd
Coupa Software Inc	Axa Equitable Holdings, Inc.	Pzena Investment Management
Ichor Holdings, Ltd.	Upwork Inc.	Och-Ziff Cap Mgmt Grp LLC
Nanthealth, Inc.	Svmk Inc.	Visa Inc
TPI Composites, Inc	Carbon Black, Inc.	RHI Entertainment Inc.
Smart Global Holdings, Inc.	Zscaler, Inc	Real Goods Solar Inc
Restoration Robotics, Inc.	Elastic N.V.	Mead Johnson Nutrition Co
Denali Therapeutics Inc.	Tenable Holdings, Inc.	Emdeon Inc
Curo Group Holdings Corp.	nlight, Inc.	Artio Global Investors Inc
SG Blocks, Inc.	Avalara, Inc.	Verisk Analytics Inc
J.Jill, Inc.	Docusign Inc	Hyatt Hotels Corp
Netshoes (Cayman) Ltd.	Solarwinds Corp	Green Dot Corp
Foundation Building Materials, Inc.	Nine Energy Service, Inc.	Ameresco, Inc.
Aquantia Corp	Establishment Labs Holdings Inc.	Ironwood Pharmaceuticals, Inc.
Sendgrid, Inc.	Graftech International Ltd	

Maxlinear Inc.	Veeva Systems	Virtu Financial Inc
Dynavox Inc.	Tableau Software Inc	Planet Fitness Inc
First Interstate Bancsystem (Montana)	Pattern Energy Group	Evolent Health Inc
Swift Transportation Co	Jones Energy Inc	Houlihan Lokey Inc
FXCM, Inc	Coty Inc	First Data Corp
Booz Allen Hamilton Holding Co	Truett-Hurst Inc	VTV Therapeutics Inc
Crude Carriers Corp.	Zulily	Appfolio Inc
Air Lease Corporation	Noodles & Co	Fitbit Inc
Zillow Inc	NRG Yield Inc	Shopify Inc
Manning & Napier Inc	AMC Entertainment Holdings	Mindbody Inc
Groupon Inc	Premier, Inc	Pure Storage Inc
Linkedin Corp	Constellium N.V	Box Inc
Zynga Inc	Artisan Partners Asset Mgmt Inc	Square Inc
Kior Inc	Fairway Group Holdings Corp	Atlassian Corp Plc
Apollo Global Management Llc	Blackhawk Network Holdings Inc	Black Knight Financial Svcs
GNC Holdings Inc	Luxoft Holding Inc	Godaddy Inc
Arcos Dorados Holdings Inc	Silvercrest Asset Management	Duluth Holdings Inc
TMS International Corp	Re/Max Holdings	Shake Shack Inc
Yandex Nv	JGWPT Holdings LLC	Match Group Inc
Box Ships, Inc.	Intrexon Corp	Inovalon Holdings
Digital Cinema Destinations Corp.	Medley Management Inc	Live Oak Bancshares
Kayak Software Corp	Neff Corp	Summit Materials Inc
Manchester United Plc	Uniqure BV	Terraform Global Inc
Vantiv Inc	Adeptus Health Inc	Secureworks Corp
Globus Medical Inc	Phibro Animal Health Corp	Red Rock Resorts Inc
Workday Inc	Castlight Health,	Reata Pharmaceuticals Inc
Facebook Inc	Parsley Energy Inc	Twilio Inc
Renewable Energy Group Inc	Spark Energy, Inc	The Trade Desk Inc
PBF Energy Inc	Malibu Boats, Inc	Ac Immune Sa
Edgen Group Inc	GoPro,	Nutanix Inc
		Camping World Holdings Inc
Yelp Inc	Wayfair Inc	Athene Holding Ltd
Tilly's Inc	The Habit Restaurants Inc	Hamilton Lane Inc
The Whitewave Foods Co	Moelis & Co LLC	Snap
Restoration Hardware Hldg Inc	Townsquare Media LLC	Ardagh Group Sa
Health Insurance Innovations, Inc.	Workiva LLC	Mulesoft Inc
UCP Inc	Terraform Power, Inc	Alteryx Inc
Pennymac Finl Svcs Inc	Lumenis Ltd	Schneider National Inc
Taylor Morrison Home Corp	Ep Energy Corp	Okta Inc
Zoetis Inc	Fifth Street Asset Management	Cadence Bancorporation
Ringcentral	Inc Research Holdings Inc	

Select Energy Services Inc
Carvana Co
Zymeworks Inc.
Solaris Oilfield Infrastructure
Appian Corp
Altice USA Inc
Petiq Inc
Roku, Inc
Switch, Inc
Cargurus, Inc
Mongodb, Inc
Altair Engineering Inc
Funko, Inc
Acm Research, Inc
Bandwidth Inc.
Stitch Fix, Inc
Boxlight Corp
Blue Apron
Laureate Education
Newmark Group, Inc
Canada Goose Holdings Inc
Floor & Decor Holdings Inc
SSLJ.Com Ltd
Cactus, Inc
Victory Capital Holdings, Inc
Zuora Inc
Goosehead Insurance, Inc
Smartsheet Inc
Construction Partners, Inc
Evo Payments, Inc
Greensky, Inc
Kiniksa Pharmaceuticals Ltd
Us Xpress Enterprises Inc
I3 Verticals Inc
Everquote, Inc
Domo, Inc
Bloom Energy Corp
Focus Financial Partners Inc
Eventbrite Inc
Dropbox

Liberty Oilfield Services Inc
Hudson Ltd
Pivotal Software, Inc
Pluralsight, Inc