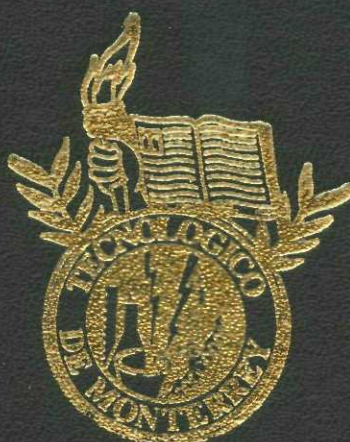


INSTITUTO TECNOLÓGICO Y DE ESTUDIOS
SUPERIORES DE MONTERREY
EGADE



THE EFFECTS OF MANAGERIAL DISCRETION AND
CORPORATE CONTROL VARIABLES ON THE CHOICE
OF AN IPO COMMON EQUITY STRUCTURE

DOCTORAL DISSERTATION

CARLOS SERRANO SALAZAR

MONTERREY, N. L., MAYO 2007

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CORPORATE CONTROL VARIABLES ON THE CHOICE OF AN
IPO COMMON EQUITY STRUCTURE**

by

Carlos Serrano Salazar

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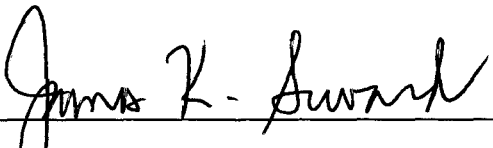
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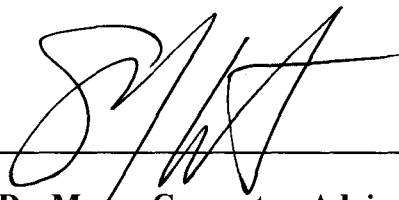
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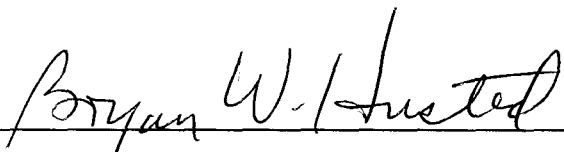
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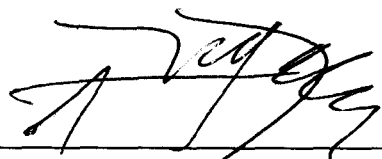
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To all those who have had an influence on my life and have been a source of
motivation and encouragement to complete this dissertation;
you know who you are.

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THE EFFECTS OF MANAGERIAL DISCRETION AND CORPORATE CONTROL VARIABLES ON THE CHOICE OF AN IPO COMMON EQUITY STRUCTURE

Carlos Serrano Salazar, Ph.D. in Business Administration

Chair of Dissertation Committee: James Seward

Instituto Tecnológico y de Estudios Superiores de Monterrey, 2007

The primary purpose of this study has been to build a regression model with the ability to predict whether a firm should go public with a dual-class or a single-class common equity structure. A dual-class IPO is the creation of two separate classes of common stock with different voting rights. There is mixed evidence in the related literature regarding the value benefits of a dual-class IPO for the corporation; therefore, it was necessary to search for a set of financial characteristics that would allow a firm to issue a dual-class IPO. I considered a final sample of 262 dual-class IPO's from 1990 to 2000 listed in the WRDS database (I eliminated Financial and utility firms to conform to the extant literature). The IPO common equity structure choice was studied from the perspectives of the degree of managerial discretion (Jung,

Kim and Stulz, 1996) and from the firm's likelihood of acquisition (Palepu, 1986).

Results showed 65% accuracy for the model's classification ability.

A second purpose has been to discover whether a dual-class IPO is a value enhancing or a value destroying initiative for the firm. Statistics from 18,864 firm-year observations indicate that dual-class IPO firms' returns outperformed those of single-class IPO's with regard to both three-year holding period returns and ROE terms. These results suggest that a dual-class IPO does not conform to managerial entrenchment purposes but rather to shareholder wealth maximization objectives.

Agency theory predicts an adverse reaction from the market for firms that issue dual-class IPO's. Hence, this study's empirical results are not consistent with agency theory; instead, they show that dual-class firms not only have high market-to-book ratios but also yield significantly higher market returns than single-class IPO's.

The implications for management are various. A firm with a set of valuable growth opportunities should issue a dual-class IPO in order to fund such investments without relinquishing control of the firm, thereby eliminating the underinvestment problem without suffering a market punishment loss. Another implication is that dual-class IPO's may represent the best choice for entrepreneurs who take their firms public to fund long-run investment opportunities but do not want to lose control of the firm.

LOS EFECTOS DE LAS VARIABLES DE DISCRECION ADMINISTRATIVA Y CONTROL CORPORATIVO SOBRE EL DISEÑO DE LA ESTRUCTURA ACCIONARIA DE UNA OPI

Carlos Serrano Salazar, Doctorado en Filosofía en Administración

Asesor Principal: James Seward

Instituto Tecnológico y de Estudios Superiores de Monterrey, 2007

El propósito fundamental de esta disertación es el de construir un modelo econométrico que tenga la habilidad de predecir cuándo una empresa debiera emitir acciones por primera vez (OPI) usando una estructura dual accionaria. Una OPI dual es una oferta pública inicial que vende acciones comunes con diferentes derechos de voto. Hay un conflicto en la literatura en relación a los beneficios de una estructura dual accionaria para crear valor en la empresa; por lo tanto, se generó la oportunidad de descubrir un conjunto de características financieras que hicieran posible que una empresa emitiera una OPI dual.

Mi muestra está compuesta por 262 empresas con OPIs duales de 1990 al 2000 en los Estados Unidos y que están listadas en la base de datos de WRDS (eliminé las empresas financieras y de servicios públicos para efectos de comparabilidad con la

literatura). El diseño de la estructura accionaria de una OPI se estudió desde las perspectivas de la discreción administrativa (Jung, Kim and Stulz, 1996) y de la probabilidad de adquisición de la firma (Palepu, 1986). Los resultados demostraron una habilidad predictiva del modelo de un 65%.

Un segundo propósito de esta disertación fue el descubrir si una OPI dual es una estrategia para incrementar el valor de la empresa o un instrumento para aislar al administrador del mercado por el control corporativo. La evidencia empírica generada por 18,864 observaciones de año/firma indica que los rendimientos de mercado y contables de las OPIs duales son superiores a los de las OPIs que entregan el esquema tradicional de un voto por acción (esto no es consistente con la teoría de agencia).

Las implicaciones para la administración son varias. Una empresa con un conjunto de oportunidades de inversión rentables debería emitir una OPI dual para poder capitalizar las oportunidades del mercado sin perder control de la firma. De esta manera se elimina el problema de la sub-inversión sin recibir una penalidad por parte del mercado accionario. Otra implicación es que las OPIs duales pueden representar la mejor forma de obtener capital social para los emprendedores pues uno de los mayores obstáculos para que emitan acciones es no querer perder el control de su empresa.

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CHAPTER 1

INTRODUCTION

A dual-class ownership structure refers to two types of common stock with different voting rights, organized as either a recapitalization program or an initial public offering (IPO). Most of the literature has focused on recapitalization programs (Dimitrov and Jain, 2006; Smith and Amoako, 1995; Moyer, Rao and Sisneros, 1992; Grossman and Hart, 1988; Harris and Raviv, 1988; Jarrell and Poulsen, 1988; Ruback, 1988; Partch, 1987; De Angelo and DeAngelo, 1985), providing mixed evidence about the dual-class structure's benefits for firm value.

Since the 1980s, however, dual-class IPO's have been gaining popularity, leading to the advent of research dealing with a compounded issue: dual-class structures and IPO behavior (Brau and Fawcett, 2006; Smart and Zutter, 2003; Böehmer, Sanger and Varshney, 1996). So far, this literature has studied issues such as dual-class IPO underpricing and long-run returns as compared to those of a matched control group of single-class IPO's. Nonetheless, what motivates a firm to issue a dual-class IPO has not yet been determined. Furthermore, because of the conflicting evidence of the dual-class structures' abilities to create or destroy value, there is an opportunity to search for a set of firm characteristics that may qualify the firm for a dual-class offering.

The many critics of the dual-class structure (Pajuste, 2005; Howe and Jagannathan, 2001; Grossman and Hart, 1988; Harris and Raviv, 1988) have a hazy

view of its benefits. It is unclear why some firms conduct initial public offerings granting one vote per share while others grant different voting rights by creating more than one class of common stock. What is their motivation for creating a dual-class equity structure? Is there a set of optimal conditions that triggers a firm to issue a dual-class IPO? By using extant literature, developing a theoretical foundation, and providing support from empirical results, this dissertation will try to answer these questions.

The consensus of the literature is that dual-class structures, either through recapitalization programs or IPO's, concentrate voting power in the managers of the corporation. Naturally, this issue considers the concerns raised by agency theory (Jensen and Meckling, 1976), which states that the structure of the public corporation, namely the separation of ownership and control, presents a potential conflict of interest between managers (agents/controllers) and the providers of capital (principals/owners). The objectives of these two parties will not be aligned when managers pursue their own interests and shareholders suffer from this misalignment. Hence, a dual-class IPO would create the potential conflict so eloquently expounded by Jensen and Meckling.

Agency theory argues that innately mundane managers will eventually develop a personal agenda with objectives differing from those of the firm's shareholders. In this framework and considering that a dual-class ownership structure concentrates voting power in the firm's management, a dual-class IPO implies an intimidating action against the shareholders at large because managers would enjoy an almost

unrestricted ability to expropriate funds at the expense of the firm's shareholders.

However, if this be the case, why has there been an increasing number of dual-class IPO's in the United States during the last twenty years? Is agency theory leading us to believe that dual-class IPO's are being conducted for managerial entrenchment purposes when in reality they may not be? What conclusions are we to draw from the late nineties when one out of every nine IPO's came out with a dual-class common equity structure (Smart and Zutter, 2003)?

Sources of agency conflicts, such as the manager's desire to remain in power and the discretion exercised in the allocation of free cash flow (coupled with the firm's set of valuable investment opportunities) are jointly the main driving forces of the degree of managerial discretion and the likelihood of acquisition in the market for corporate control. This dissertation argues that the degree of managerial discretion and the likelihood of acquisition are fundamental factors that influence the choice of the firm's IPO common equity structure. In other words, managers who consider the elements of managerial discretion to a certain extent, and corporate control to a larger extent, gain advantages in future takeover battles and in the allocation of corporate free cash flow (Israel, 1992; Jensen, 1986, Dann and DeAngelo, 1988). According to agency theory, managers will seek to get both a high degree of managerial discretion and protection from the market for corporate control to protect their own agenda, even against the corporation's best interests.

Jensen (1986) states that there are also agency costs associated with the corporation's free cash flow because managers have personal incentives to accumulate and misuse corporate cash flow. Nonetheless, if managers pay out to shareholders the cash flow in excess of all that is required to fund positive NPV projects when discounted at the appropriate cost of capital, then they will have lower resources at their disposal and will actually be working towards shareholder wealth maximization objectives.

Some of the forces that influence corporate managers' decisions, according to Jensen (1989), are corporate control's internal and external mechanisms. The primary external mechanism of control is the market for corporate control, which acts as a disciplinary force. Hence, managers have become increasingly concerned with protecting themselves from that market (Walsh and Seward, 1990; Jensen, 1989).

Due to improved aligning of management objectives with those of corporate shareholders, managerial ownership issues have been in vogue for the last several decades. However, while promoting managerial ownership has been recognized as beneficial for all corporate shareholders, a dual-class IPO presents another problem after to certain degree. Managerial ownership entrenches management so that the internal mechanisms of control (namely the board of directors of the public corporation) begin to lose their effectiveness in corporate guidance and control. (Walsh and Seward, 1990; DeAngelo and DeAngelo, 1985). In other words, a dual-class IPO's increased managerial voting power for corporate control creates isolation from the

market and represents a risk to shareholder wealth. The market for corporate control's external disciplinary force naturally induces self-interested managers to maximize the value of the shareholders' investment in the firm. Agency theory posits that in the absence of the main forces of managerial discipline, i.e., the board of directors and the corporate control market, corporate managers may make decisions to satisfy their personal agenda at the expense of the firm's shareholders.

Evidently, the most effective mechanism to isolate a firm from unwanted acquisitions is to grant corporate managers with voting control, which is why so many founders are taking their firms public with a dual-class structure. Furthermore, a dual-class IPO allows management to negotiate a fair premium from the bidding company. Nonetheless, the market does not always welcome this structure of corporate ownership as the extant literature argues though this equity structure also provides arguments for serious considerations by the firm.

Most of the literature's negative criticism of dual-class structures is due to recapitalization programs, in which voting control is transferred from outside shareholders to the firm's management. However, these programs have the consent of the firm's shareholders since a transaction like this needs shareholder approval. However, as Ruback (1988) mentions, outside shareholders are coerced to enter into these exchange offers since those who take the higher-dividend stock increase their wealth from those who chose not to exchange. The fear of seeing a decrease in their wealth on an individual basis makes shareholders choose to exchange. Shareholders

would act differently were they to act collectively. It is in this sense that dual-class recapitalization programs are coercive; they leave outside shareholders without a better option.

On the other hand, the case for dual-class IPO's does not fit into most of this criticism because in a dual-class IPO there is no transformation of the current ownership structure in the market; it is about newly created shares with each class having different voting rights. In this case the market can either buy them or not, exercising this right at the appropriate price adjusted by the market's own expectations.

In the presence of superior voting stock, the party holding the control of the corporation may obtain substantial private benefits of control at the expense of all security holders. The fear is that inferior management may take control of the corporation in this way. On the other hand, if superior management takes control of the corporation and can take full advantage of market opportunities, the aggregate market value of all the firm's securities should be higher than one produced by a single-class equity structure and thus avoid the shorter-term orientation on corporate investment policy that is common in public, single-class firms. A major issue that this dissertation intends to discover is whether dual-class IPO's are a result of value-enhancing strategies or of managerial entrenchment purposes.

Following the reasoning of agency theory, how is it that so many people and institutions are willing to turn their wealth over to corporations run by self-interested managers who are more concerned with maximizing their own utility objectives rather

than the market's? Why are investors even remotely interested in buying dual-class IPO's when they know they will not have a say in the corporate board rooms? This thesis will observe and analyze both the characteristics of dual-class issuing firms as well as the market response to such offerings.

In summary, corporate managers may benefit from the separation of ownership and control by retaining the major portion of corporate voting while owning only a fraction of the firm's common equity and residual cash flows. Because private benefits of control come from controlling the corporation, they come at the expense of shareholders. Hence, the firm should bear managerial discretion agency costs as a means of minimizing this potential drain of wealth. Monitoring and bonding are some examples of agency costs which reduce the value of the firm. Demsetz and Lehn (1985) state that some industries, such as sports and entertainment, lend themselves to a higher level of managerial shirking than other industries.

The extant literature's conflicting reports regarding the effects of dual-class structures on firm value may indicate that there is a specific set of circumstances under which a firm may issue a dual-class IPO and increase firm value without being punished by the capital markets. Dual-class IPO's may be a valuable financing choice for long-term oriented corporate entrepreneurs as well as for managers looking for isolation from the market for corporate control in order to better capitalize on market opportunities. A set of control variables will analyze the effects of this equity ownership structure on the firm's market and operating performance.

The recent popularity of dual-class IPO's in the U.S. markets (though common in countries such as Norway, Sweden, Mexico and Italy (Doidge, 2004)) combines with the mixed evidence in the literature regarding their benefits and the current debate on effective corporate governance and protection of the minority shareholder. The use of an econometric model presented in this dissertation will try to predict when—if ever—it is optimal for a firm to go public with a dual-class IPO. The purpose of the model is to characterize the firm that is fit to go public with a dual-class structure. This is a unique contribution to the literature: the development of an econometric model that predicts when a firm should issue a dual-class IPO based on the dimensions of the degree of managerial discretion (Jung, Kim and Stulz, 1996) as well as the likelihood of acquisition (Palepu, 1986). Market and accounting performance measures along with other financial and proxy variables will act as determinants of the IPO equity structure choice. In this way, there may be an explanation for the literature's evidence that a dual-class IPO does well at times and poorly at other times. More companies will use a dual-class structure in the future; hence there is a need to understand what the value drivers behind this equity structure choice are.

Another distinction of this dissertation is that it deals with IPO's as opposed to recapitalization programs, the subject of most of the literature. This is relevant because a dual-class IPO does not treat wealth expropriation as an event by means of an exchange program. On the contrary, it gives potential shareholders the natural option

to put their money where they choose to. Then, a dual-class structure might just become the investment of choice for market investors.

This dissertation is organized as follows. After this introduction, the relevant literature discusses the subject matter in Section II. Section III reviews and analyzes Jung, Kim and Stulz (1996) and Palepu (1986) on managerial discretion and corporate control as the main motives for ownership design in IPO's. Stock price performance and operating performance implications of a dual-class ownership structure as compared to a single-class IPO issue. The hypotheses are developed and discussed in section IV while Section V introduces the model and the instrumentation of variables and section VI describes the methodological approach, sample selection and data description. The results and concluding remarks are presented in the last two sections of this dissertation.

CHAPTER 2

LITERATURE REVIEW

2.1 Initial Public Offerings

An initial public offering (IPO) refers to the first time a firm issues equity in the stock market. Even though the attraction to the public investor comes from the profit potential embedded in the issued security, the IPO research work is vast and diverse, and among the different topics within the extant IPO literature, there are two that directly relate to the IPO equity structure choice that pertains to this research: the motivation for going public and the long-run performance of IPO's.

The motivation for going public is in response to the need for funding capital expenditures as well as for assessing the value of and creating a market for the investment of the founding shareholders. Furthermore, according to Zingales (1995), by going public a firm may change the ownership of votes and cash flow structure, thereby allowing the founders of the firm to maximize the proceeds from an eventual sale or acquisition. Hence, by choosing a dual-class IPO, the founders may actually be assuring the highest possible return for their investment in case of a future acquisition. Supporting this view, in a recent study surveying over 300 CFOs in the U.S., Brau and Fawcett (2005) find that the IPO decision is made primarily on the grounds of future acquisitions by the new listed firm. They argue that CFOs consider, as the main motivation behind the IPO, having the firm's shares in the market for acquisition

purposes. In other words, an IPO may help a company get a better price in case of a market acquisition.

However, the IPO firms' market performance does not reflect this potentially good news about future acquisitions according to Ritter (1991), who finds evidence that IPO's underperform a set of comparable firms, three years after going public. Böehmer, Sanger and Varshney (1996), however, do not find significant underperformance for dual-class IPO's. It is necessary to discover any significant differences in market returns for dual-and single-class firms in order to better understand whether managers use their control to create value or to expropriate it.

2.2 Managerial Discretion

In their seminal work, Jensen and Meckling (1976) showed how the separation of ownership and control is the underlying and fundamental cause for the presence of agency costs in the corporation. The agent (corporate manager) is hired by the principals (the company's owners) to deploy his skills and expertise in leading the firm's operations towards shareholder wealth maximization. However, because of human nature, corporate managers often develop an agenda of their own that leads to their own wealth maximization objectives, which many times are not aligned with those of shareholders.

When an entrepreneur starts his own company, every dollar amount that is spent reduces the wealth of the owner in the same amount. Hence, entrepreneurs will

seek to put the money wherever it can yield a return that will exceed the dollar that they spent. The higher the return, the better. However, when managers reduce their ownership to less than 100 percent, for example, 90 percent, then every dollar spent impacts only 90 cents of his wealth; the lower the percentage of common equity owned by the entrepreneur, the lower the impact of the invested money on his or her personal wealth. The modern, public corporation presents such a diffuse ownership that the manager owns only a fraction, if any, of the corporation, and then the possibility of wealth expropriation—along with agency costs—rises exponentially.

Managers tend to benefit, at the expense of shareholders, from non-pecuniary sources which have little to no impact on their personal wealth given their slight to no participation in the common equity of the corporation. According to agency theory, managers will invest as much as possible in order to increase their benefits (perquisites) in relation to the size of the firm (Jensen and Meckling, 1976; Stulz, 1990). This is what Jensen (1986) calls growing the firm beyond its optimal size.

In order to prevent wealth expropriation from happening, the firm incurs agency costs, mostly from managerial discretion sources, that include monitoring in order to prevent managerial behavior that will provoke a loss of value in the shareholders' invested equity. Nonetheless, these agency costs still come at the expense of corporate shareholders' wealth. Hence, if the marginal benefits of agency costs are less than the losses caused by managerial discretion, and they usually are, shareholders will derive value by means of monitoring and bonding costs.

According to Stulz (1990) and Jensen (1986), managerial discretion costs may come in either of two forms: overinvestment or underinvestment. The former is related to the issue of growing the firm beyond its optimal size through investments made on negative-net present value projects. The latter means not having enough cash flow to invest in value-creating projects. The motivation for overinvesting is grounded in agency theory, which states that the larger the firm, the greater the resources under the control of management and the greater the possibility for expropriation. Also, it is more difficult to monitor managers in larger firms (Jensen, 1986). On the other hand, increasing the resources under management's control will reduce the problem of underinvestment but may detonate the overinvestment problem (Mann and Sicherman, 1991; Stulz, 1990).

Usually, managers will overinvest to protect their human capital (to reduce their employment risk) in a firm by investing in unrelated lines of business and, in general, by increasing the size of the corporation (Amihud and Lev, 1981; Mann and Sicherman, 1991; Stulz, 1990). In order to help reduce this overinvestment problem and hence reduce the costs of managerial discretion, the corporation may issue debt which will tie up future expected corporate cash resources; this, however, may cause an underinvestment problem by not providing the firm with enough flexibility to capitalize on market investment opportunities because future cash flows will already be committed to service corporate debt. The advantages of debt as a mechanism for corporate control are more effective for firms with positive free cash flow and few

growth opportunities (Jensen, 1986). This situation may not necessarily be the case for the average IPO firm since one reason to come out to the equity markets is to tap positive investment opportunities.

A dual-class IPO further complicates the managerial discretion issue because such an ownership structure grants voting control to management (DeAngelo and DeAngelo, 1985). Therefore, it is clear that it is impossible to reduce both costs of managerial discretion along with corporate financing, either through equity or debt. Nonetheless, the underinvestment and the overinvestment problems do not normally coexist within a corporate framework because the firm either has positive free cash flow or it does not. As a matter of fact, if a firm is issuing equity for the first time, it probably has a lack of cash together with a set of investment opportunities.

On the other hand, the agency costs of free cash flow are present even when managers invest in all possible net-present-value projects if the excess cash is not distributed to shareholders and is used instead for increasing the utility of corporate managers. Hence, monitoring and bonding costs are incurred even in the presence of valuable investment opportunities.

According to Fama and Jensen (1983), the “separation of decision and risk-bearing functions survives in the organization in part because of the benefits of specialization of management and risk bearing but also because of an effective common approach to controlling the agency problems caused by separation of the decision and risk bearing functions” (p. 2). Decision control systems in which the

decision maker shares only a small fraction of the cash flow claim that results from their decisions need ratification and monitoring from another actor, which is commonly known as the board of directors. Hence, besides advising on corporate strategy grounds, the corporate board has the hiring, firing and compensating of corporate managers as part of its main functions.¹ Agency costs are as real as any other cost, but the success of the corporate organization proves that wealth creation often more than compensates for agency costs.

The agency problem is accentuated and aggravated when the decision bearer has a limited participation in the residual income of the firm but at the same time enjoys the larger proportion of voting power in corporate decisions. This is the case of dual-class IPO's which are the topic of the following section.

2.3 Dual-Class IPOs

A dual-class IPO involves two types of common stock differing in the amount of votes granted to each type. The inferior-voting stock has limited voting rights or no voting rights at all and, usually, this is the class that trades on the public stock market. The superior-voting stock is usually held by managers who turn out to be the founders of the IPO-issuing firm. The most popular common equity structure in a dual-class IPO

¹ There is a wealth of research in the literature of corporate board performance and its link to corporate value creation, but this goes beyond the scope of this dissertation.

is granting ten votes to the superior-voting stock and 1 vote to the inferior-voting class even though there is no standard on this issue.²

Dual-class ownership structure is common in countries such as Mexico, Italy and Sweden, to name a few, and lately it has become more common in the U.S. This is due to recapitalization transactions which a number of companies have performed in the 1980s in order to transfer the control of the corporation from the public investor to the corporate manager. According to DeAngelo and DeAngelo (1985) and Ruback (1988), dual-class recapitalization programs lead to equity ownership concentration for the managers of the corporation. However, perhaps the most striking fact about the advent of dual-class ownership structures in the American economy today is the 400 IPO's coming out with common shares having different voting rights from 1980 to 2000.³ In the late nineties, one out of nine IPO's adopted a dual-class ownership structure in the U.S. capital markets (Smart and Zutter, 2003).

There are several arguments presented in the literature as a motivation for issuing a dual-class IPO, which may act as either advantageous or disadvantageous to the outside shareholders of the firm. There is also mixed empirical evidence regarding the benefits for firm value creation given the presence of a dual-class common equity structure. The theoretical arguments in favor and against dual-class IPO's will appear first, followed by a discussion of the empirical evidence so far as stated in the related literature.

² There may be 50 votes for stock A and zero for stock B, or any other combination.

³ Personal communication and data sharing with Jay Ritter (University of Florida) from 2001 to 2005.

2.3.1 Theoretical Arguments

A firm going public with a dual-class equity structure may send either of two signals to the market: 1) a value-enhancing signal that allows the manager/founder to run the business in the most efficient and effective possible way or 2) a value-destroying signal to outside shareholders conveying a risk for potential wealth expropriation by the controlling managers of the issuing firm.

A dual-class IPO has, first of all, the advantage of preventing minority shareholders from not getting a fair price in the event of an acquisition. In other words, a dual-class IPO is able to state the firm's intentions that management will ensure that shareholders do not get hurt by unfair takeover attempts. The controlling minority shareholder (the firm's manager) can make sure that the non-controlling shareholder, who has no protection against poor management practices, gets the best possible deal in the case of an acquisition. Firm managers have the power to negotiate and maximize the transaction value for the shareholders of the firm and get the bidding firm to pay the highest possible premium.

A second advantage is that a dual-class IPO enables management to focus on long-term investment decisions without fear of replacement under the influence of short-term oriented goals. Managerial ownership may contribute with unique talents and firm-specific know-how to offset any disadvantages brought in by concentrated managerial ownership. Firms with valuable projects will prefer to go public with a

dual-class IPO because managers can better take advantage of investment opportunities without the short-term influential threat from the market for corporate control.

Third, a dual-class IPO prevents current management from being replaced by a less efficient management team. What happens when management realizes that the one vote-one share rule treats incumbents and rivals symmetrically and that better management will prevail? There is a risk that incumbent management might lose control and power in case of managerial inefficiencies or any perceived lack of managerial talent to face the future challenges of the firm. This is another reason why managers may decide to issue a dual-class IPO.

Fourth, according to Fama and Jensen (1983), when few people have firm-specific knowledge, keeping control within these few individuals is an efficient governance structure for the firm. Also, dual-class issuing firms benefit from its management's reputation, i.e., corporate managers' track of value-maximizing decisions. According to Mann and Sicherman (1991), the market reacts positively to stock issues by firms with managers that have developed a strong reputation. This suggests the capital markets should not penalize firms issuing dual-class IPO's under a reputable management team. Successful managing is the case for IPO issuing firms since it would be difficult and undesirable to bring a poorly-performing firm to the public equity markets.

A fifth reason for conducting a dual-class IPO is to avoid dilution of corporate control (Partch, 1987). However, if managerial motives are not perceived to be aligned

with corporate wealth maximization objectives, the costs of raising outside capital increase (Lang, Poulsen and Stulz, 1995).

On the negative side, issuing a dual-class IPO with the intentions of maximizing shareholder value is in direct conflict with agency theory because of the potential misalignment between shareholders' and management's objectives discussed under this theory (Jensen and Meckling, 1976). Self-interested managers who possess voting control while owning only a fraction of the corporate cash flow claims create for themselves a clear opportunity for wealth expropriation. This increases the agency costs and reduces firm value. This line of reasoning leads to an important question: When, if ever, is a dual-class equity ownership structure beneficial to the firm? Or, under what circumstances is dual-class stock ownership optimal to the value of the corporation? The econometric model and sample data will attempt to answer these questions.

Second, another potentially damaging effect could be that managerial entrenchment deprives outside shareholders of a takeover premium. Harris and Raviv (1988) argue that going against the traditional one vote per share rule may place the wrong management team in control of the firm. Managers value control in and of itself, and when current managers succeed against an unwanted acquisition, they retain corporate control but forfeit an opportunity to gain a premium return for the equity holders: those in control of the firm's cash flow claims. Hence, a dual-class IPO makes the managers co-owners of the firm but with a disproportionate difference between

voting rights and cash flow claims. This may not enhance the alignment of management's objectives with those of the shareholders and hence may not avoid forgoing valuable premium payments in case of a potential acquisition. The reasoning is simple: when managers own stock or stock options, an increase in their personal wealth will naturally create value for the corporation as a whole, thus benefiting the rest of the shareholders.

Finally, several researchers raise the concern about the social and economic optimality of common shares with different voting rights. Basically, the concern focuses on whether or not there is firm value maximization when the superior voting stock is in the hands of corporate managers. Under the simple one vote-one share rule, the better action (or candidate) is selected (Harris and Raviv, 1988). The simple and traditional voting rule will be able to place the right management team in the company at the right time. This traditional voting system does not always produce the best outcome for shareholders in a corporate control contest, however (Grossman and Hart, 1988) because non-managerial shareholders may be misled by potential acquirers. In addition, well-intentioned managers without voting power will not be in the position to help maximize the value of the assets for the incumbent shareholders.

In summary, theory states that a dual-class IPO may have positive or negative effects on firm value.

2.3.2 Empirical Evidence

Studies that relate dual-class ownership structures with firm value have produced conflicting results. Jarrell and Poulsen (1988) provide evidence in favor of the negative effect dual-class ownership structure imposes on firms' value, having found abnormal negative returns at the time of the dual-class recapitalization announcement. They state that a dual-class structure gives current managers protection from removal by a new management team at the same time that it may create incentives for the incumbents to invest in firm-specific human capital. This negative market price reaction found, at the announcement date, was similar to the one generated by other anti-takeover provisions. Along these lines, Grossman and Hart (1988) also state that the firms' common stockholders would be harmed if the dual-class recapitalization's objective were to entrench management and isolate it from the market for corporate control. They state that the one vote-one share rule works fine and that any deviation from it, especially one that may entrench management, may be harmful to shareholders.

With regard to the effect that dual-class structures have on the aggregate market-value of the firm, DeAngelo and DeAngelo (1985) suggested that investors are willing to pay a premium for superior-voting stock which may lead to a higher aggregate market value for the firm. Smith and Amoako (1995) present evidence that voting power increases the premium of the superior voting stock over the restricted shares. Lease, McConnell and Mikkelsen (1983) found that stock with superior voting

rights trade at a premium when compared to the firm's other common stock with inferior voting rights. The authors do not, however, provide a specific reason for this difference in pricing. Unfortunately, as I have noted before, most superior-voting shares are not traded on any Exchange; they remain under the ownership of the firm's managers/founders. Furthermore, if there is the intention, from one of the superior-voting shareholders, of selling superior-voting shares, the corporate charters usually state that there needs to be consent from the other controlling shareholders who also have the option to buy such shares before an outsider can. The sale of the superior voting stock, therefore, rarely reaches the public equity market place.

In yet another type of response, there is no evidence of either negative or positive effects of dual-class ownership structures on the value of the firm in spite of managers of dual-class firms' creating dual-class structures in order to maintain their control position (Partch, 1987). This may suggest that managerial entrenchment does not occur with the idea of exerting private benefits of control at the expense of outside shareholders.

In their seminal work, Grossman and Hart (1988) derive conditions for the optimality of the one-share one-vote rule and then state that the one-share one-vote rule enhances shareholder value by treating all equity holders equally. They accept, however, that this rule may not be optimal to get the best deal for the shareholders and the corporation in a takeover attempt. Harris and Raviv (1988) argue that one-share one-vote ("the simple majority rule") is the socially optimal corporate governance

structure because of the premise that it allows good management to triumph over bad management by giving rivals and incumbent managers the same voting power. It does not permit inferior management to perpetually extract wealth from minority shareholders and other stakeholders of the corporation, which would be the worst case scenario in the case of a dual-class IPO. Along these lines, Howe and Jagannathan (2001) report that deviation from the one-share one-vote rule “leads to inferior performance” in accounting terms, that is, operating income divided by total assets.

Using a more comprehensive sample than previous dual-class studies, Böehmer, Sanger and Varshney (1996) documented that dual-class IPO’s outperformed a matched control group of single-class IPO’s and also found no evidence of negative long-run abnormal performance, contrary to what Ritter (1991) found in a comprehensive IPO study. They state that dual-class stock returns are not significantly below market returns during the period 1984-1988. In a more recent study, Dimitrov and Jain (2006) found that dual-class recapitalizations enhance shareholder value, and they did not find evidence of managerial entrenchment. On another positive note, Lehn, Netter and Poulsen (1990) argue that firms undertaking a dual-class equity structure are preceded by greater growth opportunities than firms that do not issue a dual-class IPO.

According to Field and Karpoff (2002), most firms issuing dual-class IPO’s do so for control considerations without significant evidence of their doing so as a first step to selling the firm, as argued by other authors (Mello and Parson, 1998; Zingales,

1995). In other words Field and Karpoff's findings do not support the adoption of an anti-takeover provision in order to pursue higher premiums in the market for corporate control. They do not, however, suggest that a dual-class IPO has the purpose of enabling management to extract the highest possible premium for outside shareholders should the firm be subject to an acquisition attempt.

Furthermore, agency costs are increasing in dual-class structures because concentrating ownership in corporate management creates monitoring costs under this equity structure (Partch, 1987; DeAngelo and DeAngelo, 1985). Managers hold stock with superior voting rights while the providers of long-term capital hold stock with superior rights to corporate cash flows. This has led to the idea of managerial entrenchment and the natural decrease in efficiency of external disciplinary mechanisms such as the market for corporate control. However, Moyer, Rao and Sisneros (1992) found that when firms announce a dual-class recapitalization program, the announcements are usually accompanied by changes in 1) the board of directors, resulting in an increase in the number of independent directors, and 2) the capital structure of the firm, resulting in higher use of corporate debt. These two changes help decrease the degree of managerial discretion though the increase of financial leverage works more effectively than an increase in the number of independent directors in the board. If management has voting control of the firm (as it usually does the case in a dual-class IPO), then it will also control the corporate board room.

There is evidence that dual-class IPO's experience less underpricing than their single-class counterparts (Smart and Zutter, 2003). The reason for this may be that in a dual-class IPO the firm is not afraid of losing control and hence there is no need to underprice in order to diffuse the ownership base. However, there is mixed evidence on the benefits of dual-class ownership structures for firm value (DeAngelo and DeAngelo, 1985; Partch, 1987; Jarrel and Poulsen, 1988 and Grossman and Hart, 1988). Apparently, there is no specific set of optimal corporate governance mechanisms for all firms; therefore, there could be a set of a firm's operating and ownership characteristics for which a dual-class ownership structure may be optimal.

Finally, according to Smart and Zutter (2003), isolating the incumbent management from the corporate control market comes at a cost by way of trading at lower price/earnings multiples. This does not necessarily mean the dual-class firms are undervalued. It may be that the market does not fully appreciate the firm's growth opportunities, as opposed to what Smart and Zutter (2003) found. An alternative explanation is that the market foresees a significant increase in the firm's risk and prices the IPO accordingly. It could also reflect that the market perceives lower growth prospects for dual-class firms than for their single-class counterparts.

In summary, if dual-class structures increase managerial ownership, there can be a negative or a positive effect on shareholder wealth depending on the motives that drove the firm to adopt a dual-class equity structure. If the purpose of the dual-class program is to entrench management and isolate it from the market for corporate control

with the intention of extracting private benefits of control, then the dual-class IPO should result in a value-destroying event for the corporation.

On the other hand, if positive pre-event operating performance accompanies the equity structure change, a set of valuable investment opportunities as well as alternative monitoring mechanisms such as an increase in corporate financial leverage would not lead to a pervasive effect on shareholder value. Table 1 presents a summary of the empirical evidence just discussed regarding dual-class ownership structure and its effects on firm value.

Table 1
Summary of Dual-Class Stock Ownership Effects

Issue	Effect	Authors
Dual-class ownership structure	<ul style="list-style-type: none"> · Destroys shareholder value · Entrenches management and destroys shareholder value · No negative effect on shareholder value · Concentrates voting power on management · Preceded by growth opportunities · Control considerations · Outperforms single-class IPO's · Trades at lower P/E multiples · Enhances corporate value 	<ul style="list-style-type: none"> · Jarrel and Poulsen, 1988 · Grossman and Hart, 1988 · Partch, 1987 · DeAngelo and DeAngelo, 1985; Smart and Zutter, 2003 · Lehn, Netter and Poulsen, 1990 · Field and Karpoff, 2002 · Böehmer, Sanger and Varshney, 1996 · Smart and Zutter, 2003 · Dimitrov and Jain, 2006
Superior voting rights	<ul style="list-style-type: none"> · Trade at a premium with respect to the low-voting stock 	<ul style="list-style-type: none"> · DeAngelo and DeAngelo, 1985; Lease, McConnell and Mikkelsen, 1983
One-share One vote rule is best	<ul style="list-style-type: none"> · Enhances shareholder value 	<ul style="list-style-type: none"> · Grossman and Hart, 1988; Harris and Raviv, 1988; Howe and Jagannathan, 2001
Other implications	<ul style="list-style-type: none"> · Induce alternative monitoring mechanisms · Preceded by two years of positive monthly average returns 	<ul style="list-style-type: none"> · Moyer, Rao and Sisneros, 1992 · Lease et al. 1983; Partch, 1987

CHAPTER 3

THEORETICAL APPROACH TO OWNERSHIP DESIGN IN IPO'S:

MANAGERIAL DISCRETION AND CORPORATE CONTROL

Since 1980, the controlling minority shareholder (CMS) structure has become a familiar characteristic for companies going public in the United States.^{4,5} Under a value-maximizing framework, the fundamental reason for a dual-class IPO is to provide management with control over corporate voting in order to ensure that long-term, value-creating projects can be pursued at management's discretion. According to Noe and Rebello (1997), corporate focus on short-term results is caused by capital market pressures, i.e., shareholders, rather than by investment preferences from management. They argue that managers develop firm-specific human capital through the knowledge and expertise acquired over the long run and that this is logically sustained by long-term investments.

In a particular way, this firm-specific know-how will entrench management in that it will make management replacement more costly to the firm and will therefore increase management's bargaining power. Furthermore, the pressure for short-term results, so typical from the stock market environment, can be reduced by means of a

⁴ Although the dual-class common stock structure first came into existence by way of recapitalization programs, this research work deals only with theory and empirical evidence from dual-class IPO's. Recent research (Dimitrov and Jain, 2005) shows a positive stock price reaction to the case of dual-class recapitalizations.

⁵ One recent example of this is Google's IPO. Type B common shares, withheld by the founders and top management, carried 10 votes per share while class A shares, issued to the investment community, carried only one vote per share. Only the latter trades on the exchange.

dual-class IPO since this equity issue transfers control from outside shareholders to management. However, the issuance of a dual-class IPO may not come free of cost for the corporation.

According to Jung, Kim and Stulz (1996), issuing a dual-class IPO brings either of two effects to the firm: 1) a direct effect which will grant increased managerial discretion through the transfer of voting control from the shareholders at large to the management of the firm, or 2) an indirect effect which will be conditional on the presence of valuable investment opportunities, and this effect can be adverse in the absence of such investment opportunities. Hence, the agency costs to founder/managers increase when they inappropriately issue a dual-class IPO. Investors may anticipate conflicts of interest between management and outside shareholders with the increase in managerial ownership rights going beyond an optimal point, and they will value the dual-class offering accordingly (Jensen and Meckling, 1976; DeAngelo and DeAngelo, 1985; Jensen, 1986; Ruback, 1988; Cronqvist and Nilsson, 2003).

The highest agency cost of a dual-class IPO may well be the residual loss borne by outside shareholders as a result of private, pecuniary and non pecuniary, benefits of control. Even though it is true that shareholders should have the incentive to monitor management, in reality monitoring by individual and small shareholders is limited for a number of reasons such as costs, time and free-rider problems. Only when an individual investor is large enough, will monitoring management be pursued by internalizing the interests of the shareholders as a group (Grossman and Hart, 1988).

This suggests that, given the current wave of shareholder activism in the United States, the voting structure influence of the market for corporate control would represent the strongest issue of a voting-power transaction. This voting power of the market for corporate control is eliminated within a dual-class common equity structure since the majority of the voting rights reside in the management's hands (Ruback, 1988; DeAngelo and DeAngelo, 1985).

In the presence of a high degree of managerial discretion over the allocation of free cash flows, agency costs rise with a value-destroying consequence for outside shareholders. A firm with large corporate free cash flow and a lack of valuable investment opportunities does not have a current need for an IPO, but if it were to issue equity, it should issue a single-class IPO. Otherwise, it would create a negative reaction in the public market, and this would mean a great loss of value to the firm. Thus, agency theory provides a framework for understanding the equity structure choice in an IPO issue from the perspectives of the market for corporate control and the degree of managerial discretion in the corporate setting.

Apparently, no paper has tried to explain the elements that should influence the decision of the equity structure for an IPO. Nor is there a model to predict when a firm should issue an IPO with a dual-class equity structure and when it should select a single-class IPO, providing the traditional one vote per share scheme to the market investors. Characterizing the suitable firm for a dual-class IPO is a relevant issue given the increasing use of dual-class IPO's in the United States and the conflicting evidence

in the extant literature on the benefits of a dual-class equity structure on firm performance and value.

Some studies have reported positive effects of a dual-class equity structure on the value of the corporation because of the higher premiums paid for the superior-voting stock.⁶ Others have not only reported a negative effect on value but have also suggested, by advocating for the social and economic optimality of the one vote-one share rule, that dual-class common equity structures should be banned from equity markets (Grossman and Hart, 1988; Harris and Raviv, 1989). The discussion from Table 1 also points out these differences. Hence, there is support for the contention that firm characteristics may make issuing a dual-class IPO beneficial while the same measure under different circumstances may be a value-destroying corporate financing decision. A well-devised model may shed some light on this predicament and indicate when it is appropriate for a firm to issue a dual-class structure if, indeed, there is a specific set of firm characteristics.

The literature on security issue decision (Jung, Kim and Stulz, 1996) and on the prediction of acquisition targets (Palepu, 1986) suggests that managerial discretion and acquisition likelihood are two of the main drivers that motivate a firm in the decision to go public with a specific common equity structure.

⁶ The problem with most of these papers is that the superior voting stock is usually not publicly traded; hence, they are forced to use small samples to consider only firms trading both types of common stock. Another limitation of these studies is the fact that some assume the same price for both types of shares, assigning the inferior-voting stock price to the superior voting stock. This is an assumption too risky and faulty to make, for it ignores the value of control.

Knowing that managers have more and better information on both the value of assets in place as well as the present value of growth opportunities (the value of the firm as explained in Myers and Majluf, 1984), investors will automatically adjust the price of the risky security being sold as soon as they get new information. Therefore, firms without valuable investment opportunities will receive a negative reaction from the market if they go public with a dual-class structure since this would further increase the degree of managerial discretion at the expense of outside shareholders. Raising cash flow through equity issues without attractive investment opportunities only increases the resources under management control, leaving the door open for wealth expropriation. The situation in which the worst price reaction would be expected is that of firms without attractive investment opportunities raising equity capital through a dual-class IPO. Investors would anticipate the conflict of interests and would punish the market price of the IPO. In this way, managers would have the incentive to deviate as little as possible from any value-enhancing decisions in the corporation. Agency theory states just the opposite.

The acquisition target literature is also related to the search for the optimal IPO equity structure choice on the premise that dual-class IPO's isolate managers from the threat of an unwanted acquisition. A dual-class IPO solves the problem of the ownership structure because it naturally concentrates voting control on the incumbent managers, isolating them from the disciplinary force of the market for corporate control as well as from the acquisition strategies of potential bidders. Smaller

companies should be more willing to issue dual-class IPO's since the acquisition likelihood is inversely related to firm size (Palepu, 1986); however, it should also be noted that the smaller the company, the less the opportunity for expropriation.

Because the managers/founders of a firm end up owning the higher portion of corporate votes with only a fraction of the firm's equity in a dual-class IPO, the idea of managerial entrenchment may negatively affect the firm's market value because of agency cost considerations. Therefore, the larger the firm is, the higher the probability of expropriation, but also the lower the likelihood of acquisition. In this case then, the firm should issue a single-class IPO.

Different combinations between the degree of managerial discretion and the likelihood of acquisition may affect the IPO's common equity structure. Figure 1 shows the equity structure choice for an IPO from the dimensions of managerial discretion and acquisition likelihood, taking shareholder value-maximizing objectives into account. Since the advisability for the equity choice of a firm lies on a continuum, four extreme positions are identified within the managerial discretion and corporate control perspectives in an attempt to characterize the best possible way for a firm to go public. Every quadrant in Figure 1 identifies each of these four categories. Here, managerial discretion is a function of the firm's set of positive-net present value investment opportunities in combination with the level of corporate free cash flow. A high degree of managerial discretion is the result of the combination of poor investment opportunities and large amounts of corporate free cash flow. With

increased resources under its control, management has the opportunity to obtain private benefits of control with positive free cash flow because it has cash in excess of its growth opportunities and no one to monitor managerial decisions effectively.

In the case of a low degree of managerial discretion, there is no available free corporate cash flow, and valuable investment opportunities are present. The need for reinvestment and the lack of cash puts management in a difficult position to expropriate. In a less extreme case of low managerial discretion, there is no corporate cash and no investment opportunities, which could lead towards normality in the balance of power.

The last case is valuable investment opportunities and large free corporate cash flow. Here, there is a funding need and pressure for the appropriate deployment of resources. This situation ranks from a “low to a normal” level of managerial discretion.

Figure 1
IPO Ownership Structure Choice

		Acquisition likelihood	
		Low	High
Managerial Discretion	High	Single (I)	No IPO (II)
	Low	Single or Dual (III)	Dual (IV)

Firms with a low degree of acquisition likelihood and a high degree of managerial discretion (quadrant I) are better suited for single-class IPO's. First, the low likelihood of acquisition removes the fear of an unsolicited offer, and, second, a single-class IPO structure conveys trust to the market by allowing it to discipline the management team if necessary. The market would appreciate the ability to discipline management given the high degree of managerial discretion in this case. Many firms present value-destroying alternatives for investors because their managers pursue higher degrees of managerial discretion without much regard for finding a valuable set of positive-net present value investments and thereby give rise to higher levels of agency costs for the corporation (Jensen and Meckling, 1976).

In the case of high managerial discretion, few valuable investment opportunities in the presence of large amounts of cash, and a high likelihood of acquisition (quadrant II), raising equity capital may not be the optimal mechanism for raising corporate cash. On the contrary, a firm would not need cash in the absence of valuable investment opportunities. It might, however, seek to increase private benefits of control by means of debt substitution or increased managerial ownership. According to agency theory, the management's desire to obtain cash without having growth opportunities places shareholders under a high risk of agency costs as a result of managerial expropriation. Without a set of valuable growth opportunities, with everything else being constant, there is no reason to raise cash. In fact, in quadrant II's

scenario, the firm already has cash! Hence, a firm in quadrant II should not raise equity capital of any kind under a corporate financing perspective.

Quadrant III has a low degree of managerial discretion, i.e., valuable investment opportunities as well as a low threat of an unwanted acquisition. This implies a reduced chance of wealth expropriation, among other things. Such a combination may lead to double interpretation. On one hand, because of the low threat from the market for corporate control, the firm does not need to seek the protection offered by a dual-class IPO. Firms with a low degree of managerial discretion, many investment opportunities and no corporate cash, in addition to a low threat from the market for corporate control, are better off issuing a single-class IPO. They would thus reduce managerial discretion agency costs since protection from the market for corporate control would not be necessary. On the other hand, as the set of investment opportunities improves, the agency costs of a dual-class IPO decreases since this facilitates the convergence of shareholder and managerial objectives. Management increases firm-specific human capital through long-term investments. Hence, a dual-class structure best employs the entrepreneurial drive and talent of the incumbent management because this common equity structure bestows control and decision power on the management team.

According to Dimitrov and Jain (2005), dual-class structures are value-maximizing decisions that rule out managers' desire to use corporate resources inefficiently as long as the managers are value-maximizing agents. A summary of

quadrant III indicates that the firm could go with either equity structure as long as the proper communication strategy to investors and the right managerial talent are in place. As opposed to upper right quadrant II, there is a need to raise cash for funding the valuable investment opportunities the firm has.

Quadrant IV indicates the presence of a high threat of acquisition coupled with a low degree of managerial discretion. A firm of this type should be willing to issue a dual-class IPO because of the probability of its becoming an acquisition target.

Management has little bargaining power to prevent a takeover due to the firm's growth opportunities and the absence of managerial power. A dual-class equity structure allows the firm's managers to reject an unwanted acquisition and give them bargaining power for all corporate decisions. According to Song and Walkling (1993), firms with higher managerial ownership are less likely to become acquisition targets. In addition, voting power allows management to gain higher premiums from potential bidders. Stulz (1988) states that the premium offered by bidding companies increases in the fraction of votes held by management.

In summary, because the continuation of the personal benefits that come from corporate control is important to managers (Brennan and Franks, 1997), a dual-class IPO should not convey the idea of managerial entrenchment to the market. On the contrary, the IPO should be accompanied by corporate governance mechanisms that may reduce the danger of corporate managers' expropriating shareholder wealth. One of these mechanisms could be the use of corporate debt, which commits the use of

future free cash flow (Jensen, 1986) to value-maximizing corporate projects. This form of financing might, however, exacerbate a managerial discretion cost, i.e., the underinvestment problem.

A firm going public with a single-class IPO might be less able to take advantage of profitable investment opportunities than a firm that retains corporate control. The latter, with given talent and firm-specific knowledge, could issue common shares with different voting rights and retain those that have superior voting rights. In the absence of positive-NPV investment opportunities, a dual-class IPO could increase agency costs positively with regard to the degree of managerial discretion. Outsiders would then price these securities according to the level of risk and costs incurred.

CHAPTER 4

HYPOTHESES

4.1 Managerial Discretion

(1) Firms without valuable investment opportunities will prefer to issue a dual-class IPO.

Under the agency theory framework, managers seek their own objectives at the expense of shareholders' wealth. Therefore, if a firm issues a dual-class IPO in the absence of valuable investment opportunities, it will create a form of organizational inefficiency that might increase the agency costs of managerial discretion because a dual-class IPO represents a form of financing with almost non-existent effective monitoring. With fewer value-creating projects available to the firm, more cash flow will be available for management's self interests. The manager will end up with a pool of corporate cash without value-enhancing investment opportunities, and the market might perceive this as a potential threat for wealth expropriation. Hence, agency costs born from managerial discretion will be negatively correlated to the quality of the firm's investment opportunities (Jung, Kim and Stulz; 1996).

In the case of a dual-class IPO, which allows corporate managers to expropriate wealth from shareholders in the absence of positive-net present value investment opportunities, corporate growth must rely on negative net-present-value projects. This is because managers pursuing their own agenda may enhance corporate growth through unprofitable investments if they want the firm to grow, as opposed to

distributing cash to shareholders as an alternative to the use of corporate free cash flow. Hence, firms with poor investment opportunities that issue a dual-class IPO will increase agency costs at the expense of shareholders' wealth and thereby reduce the market value of the firm. According to Demsetz and Lehn (1985), corporate managers in industries such as entertainment and sports will be more likely to expropriate wealth by issuing a dual-class IPO because of the wide array of perquisites available under those settings. Thus, under agency theory, the lower the firm's set of valuable investment opportunities, the higher the probability of issuing a dual-class IPO.

(1A) Firms with valuable investment opportunities will prefer to issue a dual-class IPO.

If the manager is a value-maximizing agent and there are valuable investment opportunities, the firm will issue a dual-class IPO to allow the manager enough latitude and power in the decision-making process to properly capitalize on market opportunities.

According to Jung, Kim and Stulz (1996), an increase in investment opportunities will decrease the marginal agency costs of managerial discretion because of a better alignment between managers' and stockholders' objectives in the presence of value-increasing investment opportunities.

A single-class IPO firm faces more active and effective monitoring from large investors and directors, more proxy fights and a higher threat of takeover if managerial

inefficiencies take place. These activities could also occur as a result of misinformed or inexperienced directors and shareholders in the firm's particular industry as well as in its specific key value drivers. Under the threat of replacement from the market for corporate control and the pressures to achieve short-term oriented results and goals, a dual-class IPO issue would make the firm more able to take full advantage of market opportunities by focusing on long-term planning and investments. Thus, the brighter the set of valuable investment opportunities, the higher the probability for the firm to issue a dual-class IPO.

4.2 Corporate Control

(2) The larger the firm, the higher the probability of issuing a single-class IPO.

Because takeovers of larger firms are less likely (Palepu, 1986), managers of large IPO firms tend to issue single-class IPO's because of the low threat from the corporate control market. By sheer separation of ownership and control, agency costs rise in direct proportion to the founder/manager's holdings. The manager will hold common equity, and thus this firm should face lower agency costs than the average public corporation in which management holds only a small fraction of its equity. A number of studies (Song and Walkling, 1993; Mikkelson and Partch, 1989; Palepu, 1986) have found firm size, measured either by total assets or equity, to be negatively related to the likelihood of acquisition. Furthermore, copious research (Comment and Schwert, 1995; Shivdasani, 1993; Palepu, 1986) on target merger prediction models

shows that only the variable of a firm's size has proved to be a consistent protection against a takeover. Hence, the size of the firm should be negatively related to the probability of issuing a dual-class IPO.

(3) Firms with poor operating performance will choose to issue a dual-class IPO.

Firms with negative operating returns have higher probabilities of receiving an unwanted acquisition attempt (Palepu, 1986) and are therefore more likely to issue a dual-class IPO in order to retain voting power within the firm. In terms of corporate control, the firm may be concerned with disciplinary action from the market which might replace marginally competent managers. According to agency theory (Jensen and Meckling, 1976), corporate acquisitions often take place to correct situations where managers are more concerned with their personal agenda than with corporate wealth maximization objectives. In such an instance, the agent will try to entrench his position as a manager of the firm and isolate himself from the market for corporate control.

Lack of managerial talent will lead the firm to disciplinary action from the corporate control market. In other words, inefficient management is usually reflected by the firm's poor profitability, and in such a case the managers of the firm will create a mechanism to prevent an unwanted acquisition from happening. A dual-class IPO would do just that: it would provide management with overwhelming voting power over corporate decisions, such as takeovers and board membership. However, this

transaction promotes managerial entrenchment to protect management from its poor results and inefficient operations. A dual-class IPO issue under these circumstances would definitely suffer a loss of value from market expectations. Hence, from the agency theory point of view, managers from poorly performing firms would be expected to issue a dual-class IPO in order to keep the market from gaining corporate control. Thus, performance should be negatively correlated to the probability of issuing a dual-class IPO.

(3A) Firms with good operating performance will choose to issue a dual-class IPO.

If firm profitability is a measure of managerial efficiency, then a profitable firm should not fear an unwanted acquisition, and the manager should feel no need to protect himself with a dual-class IPO. However, star performers may also attract the interest of corporate buyers. If a firm's positive profitability is a reflection of the firm's expected growth opportunities, then added cash and protection could enhance the managers' pursuit of long-term value creation opportunities. They would also protect the firm from short-term pressures and impatient or misinformed directors and shareholders.

Since the firm's manager has arguments to issue either type of IPO, the sign of the profitability variable under this hypothesis is not clear.

CHAPTER 5

THE ECONOMETRIC MODEL

The following logistic regression model is an attempt to characterize the firm's IPO equity structure choice based on managerial discretion and corporate control considerations. The model tries to predict whether a company should issue an IPO with different types of common shares differing in voting rights or whether it should issue a single-class IPO and maintain the traditional common equity structure's one vote-one share rule. An agency theory assessment of the possibilities of issuing stock with different voting rights considers the likelihood of acquisition and managerial discretion to determine which type of equity structure to issue. The variables and their proxies have been identified in the corporate control and managerial discretion literature as significant or relevant to the field.

In a logistic regression model, a dual-class IPO takes the value of one, and a single-class IPO takes the value of zero as values for the dependent variable. Therefore, a positive coefficient will indicate that a firm is more likely to go public with a dual-class IPO.

A review of the IPO literature shows that stock market performance and underpricing, both related to ex-post observations, govern most of the research. Therefore, there is little clear guidance from the literature about what firms with a need for pre-event information should do when building a predictive model. For instance, it is not possible to obtain fundamental ex-ante variables for IPO companies such as the

market-to-book ratio (MB ratio). Hence, I will follow Jung, Kim and Stulz (1996), and use the ex-post MB ratio to proxy for investment opportunities as a “look-ahead” value for future market expectations.⁷ Thus, firms with attractive investment opportunities should trade at higher MB multiples to reflect the market’s expectations for firm growth and sound investment policy. In the presence of abnormal returns (return on equity greater than the cost of equity capital), the MB ratio will probably be superior to 1.0. Another variable that will affect the degree of managerial discretion is the amount of corporate cash available. This will be measured by the firm’s cash balance and equivalents as well as by its operating cash flow.

On the other hand, the literature has identified certain variables such as size and firm performance as determinants for a firm’s acquisition vulnerability (Smith and Amoako, 1995; Palepu, 1986). Under these criteria, size will be measured as the book value of assets while firm performance will be measured from the perspectives of market returns and operating performance. Market return will be calculated by the firm’s holding period return during the 36 months following the IPO. Accounting performance will be measured by the return on equity (net income divided by stockholders’ equity) as well as the operating return of the firm (operating profit divided by sales).

The variable that will probably capture the degree of managerial discretion differences between dual- and single-class IPO’s is the market-to-book ratio. The

⁷ Two reasons to justify the use of ex-post MB ratio are (1) there is no market value for pre-IPO firms and (2) there is lack of historical information readily available to the public.

higher the MB ratio is, the higher the expected probability of issuing a dual-class IPO will be. In other words, a positive sign in the coefficient is expected. The variables that will predict a likelihood of acquisition are size and performance as captured by total assets, return on equity (ROE) and the asset turnover ratio. The control variables are cash balance (the amount of cash and short-term investment), operating cash flow and leverage. These last three variables are relevant in the managerial discretion and corporate control literatures since debt and corporate cash play important roles within the agency theory framework. A large cash balance accompanied by a strong generation of operating cash flow may motivate a manager to retain corporate control (free cash flow hypothesis) and encourage the firm to choose a dual-class common equity structure as an anti-takeover device. On the other hand, the presence of financial leverage prevents managers from wealth expropriation practices because corporate cash flow is already committed to serving the debt capital providers.

A logistic regression model herein will predict whether a company should issue stock with different voting rights or whether it should issue the traditional one- share-one vote common stock. The model tries to explain why firms choose to issue a particular type of IPO and how the market reacts to that choice.

$$EC = \alpha + \gamma_1(\text{size}) + \gamma_2(\text{ROE}) + \gamma_3(\text{MB}) + \gamma_4(\text{leverage}) + \gamma_5(\text{cash}) + \gamma_6(\text{cash flow}) + \gamma_7(\text{turnover}) + \varepsilon$$

Where,

EC is the choice of the IPO's common equity structure (1 if it is a dual-class IPO and 0 otherwise). ROE is the return on equity computed as the ratio of net income to stockholders' equity. MB is the ratio of the firm's market value (offering price times shares outstanding) divided by the book value of the stockholders' equity. Leverage is long-term debt divided by total assets. Cash is the balance of cash and short-term investments. Cash flow is the firm's operating cash flow using operating profit plus depreciation and amortization as a proxy because of the absence of an operating cash flow figure for most firms in the data set. Turnover is total asset turnover.⁸ γ is the independent variable coefficient.

The actual logistic regression model specified will be in the form of

$$P(i,t) = 1 / [1 + e^{-\beta x(i,t)}]$$

Where,

$p(i,t)$ is the probability that firm i will issue a dual-class IPO during the period of 1990 through 2000; $x(i,t)$ is a vector representing variables that measure the degree of managerial ownership as well as the acquisition likelihood for firm i at period t ; β is the estimated parameter vector. More specifically:

$$\begin{aligned} \text{Prob}(Y = 1 \mid X_1, X_2, X_3, \dots, X_N) &= F(\beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \dots + \beta_N X_N) \\ &= 1 / [1 + e^{-(\beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \dots + \beta_N X_N)}] \end{aligned}$$

⁸ This control variable is found to be significant in Dietrich and Sorensen (1984). The acquisition likelihood increases in the presence of low sales relative to total assets.

CHAPTER 6

DATA SOURCES, SAMPLE SELECTION AND SAMPLE DESCRIPTION

6.1 Data Sources

The number of firms used in the extant dual-class literature has usually been from only 30 to about 70 firms because of data limitations and also because a small number of firms have selected dual-class structures in the past. Before 1980, dual-class structures were usually the result of recapitalization programs. However, since 1980, dual-class firms have been gaining popularity in the IPO markets. This has presented a window of opportunity for more and larger dual-class studies to compare traditional issues such as under-pricing and underperformance of single-class IPO's to those of dual-class IPO's.

The CRSP/Compustat merged database from the Wharton Research Data Services, or WRDS, is the primary data source for this study. Secondary sources come from S&P's Security Owner's Stock Guide and the Mergent manuals. A data set of 331 dual-class IPO's from between 1990 and 2000 in the United States equity markets comes from the CRSP/Compustat merged database. In the absence of firms from the financial and utility industries for comparability purposes to the related financial literature, the dual-class IPO sample size includes 262 firms, which is the largest dual-class IPO sample in the literature. According to Barber and Lyon (1996), a pair-wise-matched set of 262 single-class IPO firms was selected based on book value of assets

without regard to industry.⁹ A second control group was formed matching firms first on industry (2-digit SIC codes) and then on size since Barber and Lyon (1996) also found that these criteria yield well-specified test statistics.

Barber and Lyon (1996) also suggest that in the case of an IPO, one should use a cash-based performance measure. The use of an accrual-based metric may lead the researcher to conclude that firms have experienced poorer post-event performance since sample firms may be reporting lower operating income as a result of their use of accruals to overstate pre-event earnings. Thus, we will be able to determine whether a decrease in performance is in fact erosion or just the reversal of pre-event accruals.

Even though industry matching is conducted in a variety of ways within the extant literature, for instance Böehmer, Sanger and Varshney (1996) use 3- and 4-digit SIC codes, this study will use a two-digit SIC code matching because according to Barber and Lyon (1996), “Analyzing the change in a firm’s performance relative to the change in the median performance of firms in its two-digit SIC code yields test statistics that are both well specified and powerful (p 396).” Furthermore, along with their findings, Barber and Lyon mention that matching by four-digit SIC codes does not improve the explanatory power of the regression model. Also, Barber and Lyon (1996) state that matching on size and pre-event performance is the one method that yields well-specified test statistics in every sample situation without necessarily controlling for industry. Unfortunately, in the case of IPO’s, the pre-event performance

⁹ Böehmer, Sanger and Varshney (1996) did not find a significant difference when using their full sample of single-class IPO’s as a control group without any matching at all.

factor is not available for the sampled firms. Therefore, matching conforms to the two ways described at the beginning of this section.

To measure raw long-run market returns¹⁰, a methodology similar to Ritter's (1991) tests was used in order to compare the long-run performance of dual-class and single-class IPO's. Long-run performance is a result of computing 3-year buy-and-hold returns for both the dual-class IPO's and the set of matching single-class firms. This buy-and-hold strategy will indicate the cumulative market return for each firm if it is purchased at the beginning of its listing and is held for 36 months. Three-year holding period returns are calculated as

$$[\sum_{t=1}^{36} (1 + r_{imt})] - 1,$$

Where r_{imt} is the monthly return for firm i in month t as provided by CRSP. The advantage of using buy-and-hold returns is that one can get exactly the same result by compounding monthly or daily returns, provided that the beginning and ending dates for both computations are the same.

6.2 Sample Selection

Since the 1990's are known as the IPO era for having the most intense period of dual class-IPO activity, the data set includes this sample period. Just in 1996 alone, 621 companies went public, averaging aggregate gross proceeds of 45.94 billion

¹⁰ In measuring long-run market returns the analysis can reflect either raw (absolute) performance or performance relative to a benchmark (abnormal returns). Theoretically, it is impossible to uphold one over the other since the literature is far from a consensus on this issue (Ritter and Welch, 2002).

dollars (Ritter and Welch, 2002). Three years later, in 1999, the average proceeds reached the amount of \$66.77 billion. As Ritter and Welch show, the long-run performance of IPO's is time variant and is therefore sensitive to the choice of the sampled period.

The sample under examination includes CRSP-listed firms that went public from 1990 to 2000. A total of 331 dual-class IPO's were identified, and 262 of them remained after financial and utilities firms were omitted. The number of single-class IPO's totaled 4,551.¹¹ A number of single-class IPO's create a control group for characterization purposes. The estimated size of the sample employs a \$0.50 margin of error around the offering price at a confidence level of 95 percent. The size of the sample resulted in 445 single-class IPO's,¹² which are matched with the control group as previously explained.

6.3 Sample Description

The yearly composition of the sample of dual-class IPO's appears in Table 2. Dual-class IPO's were very popular in the mid-nineties, when over fifty percent of the CRSP-listed dual-class IPO's took place between 1994 and 1997. The slowest activity for dual-class IPO's was in the years 1990 and 1992, with 1.91% and 5.34% of total

¹¹ A search from the Securities Data Corporation database revealed that the total number of IPO's during the period of 1990 to 2000 was 6,080 issues. The difference between this number and CRSP's may be largely due to the exclusion of unit offers.

¹² The formula used to compute the sample size from which the control group was formed is the following: $(Z_{\alpha/2})^2 \sigma^2 / E^2$, where $Z_{\alpha/2}$ equals 1.96 at a 95% confidence interval and E is the margin of error with a value of \$0.50.

activity, respectively. Table 3 shows the same composition analysis for single-class IPO's. The best year for single-class IPO issues was also 1996, with almost 50% of the activity taking place between 1993 and 1996. In 1991 only 3.10% of all single-class IPO's occurred. For both types of IPO's, the activity at the beginning and at the end of the decade shows its lowest level.

Table 2
Number of Dual-class IPO's.

Year	Number	Percentage
1990	5	1.91%
1991	21	8.02%
1992	14	5.34%
1993	25	9.54%
1994	27	10.31%
1995	24	9.16%
1996	51	19.47%
1997	36	13.74%
1998	20	7.63%
1999	22	8.40%
2000	17	6.49%
Total	262	100%

About 70 percent of all dual-class IPO's were listed in NASDAQ. The rest of the IPO's were issued on the NYSE and to a lesser extent on Amex. Considering matching groups based on industry and then on size, over 90 percent of all IPO's were listed in the NASDAQ market; if firms are matched based on size alone, 85 percent of them were listed in NASDAQ. Under any category of analysis, the majority of the firms issued their IPO's in NASDAQ between 1990 and 2000.

Table 3
Number of Single-class IPO's.

Year	Number	Percentage
1990	141	3.10%
1991	318	6.99%
1992	445	9.78%
1993	548	12.04%
1994	466	10.24%
1995	471	10.35%
1996	674	14.81%
1997	440	9.67%
1998	281	6.17%
1999	440	9.67%
2000	327	7.19%
Total	4,551	100%

The descriptive statistics of the sampled firms are in Tables 4 through 6. In Table 4, there is a brief statistical description of the financial characteristics for the whole database of both types of IPO's, without any specific kind of matching.

Table 4
Descriptive Statistics of Total Sample of IPO's.

Total assets are the figure reported in the first quarter following the IPO. ROE is calculated by dividing net income by stockholders' reported equity in the first quarter following the IPO issue. Cash/TA is the ratio of cash balance and short-term investments divided by the firm's total assets reported in the first quarter following the IPO. Leverage is determined by dividing long-term debt by total assets, both figures from the first quarter after the IPO issue. Net sales are the figure reported in the first quarter following the IPO. Total assets and net sales are in millions of dollars.

All samples	Total Assets		ROE		Cash/TA		Leverage		Net sales	
	<i>dual</i>	<i>Single</i>	<i>dual</i>	<i>single</i>	<i>dual</i>	<i>single</i>	<i>Dual</i>	<i>single</i>	<i>dual</i>	<i>single</i>
	<i>class</i>	<i>Class</i>	<i>class</i>	<i>class</i>	<i>class</i>	<i>class</i>	<i>Class</i>	<i>class</i>	<i>class</i>	<i>class</i>
Mean	862.65	143.63	0.27	-0.05	0.23	0.42	0.24	0.12	187.03	36.87
Std Error	159.21	18.94	0.29	0.02	0.02	0.02	0.02	0.01	38.77	5.41
T-statistics	5.42	7.58	0.92	-2.57	14.21	26.90	14.84	7.17	4.82	6.82
Std Dev	2,577.0	387.19	4.70	0.38	0.26	0.32	0.26	0.35	627.62	110.41

The table shows that dual-class IPO firms are significantly larger than their single-class counterparts when size is measured either by total assets or by net sales. This fact does not support the idea behind Hypothesis 2, which argues that the larger the firm the higher the probability of that firm's issuing a single-class IPO because size could act as a deterrent to a hostile takeover. Dual-class firms are significantly much larger than single-class IPO firms, averaging total assets of \$862.65 versus \$143.63, respectively. A threat for corporate control from the market should not concern such large firms. Therefore, the reason for issuing a dual-class IPO, far from isolating it from the corporate control market, could be to ensure managerial efficiency eased by the minimization of outside intervention.

The return on equity (ROE) figure supports this argument and indicates the superior managerial efficiency of dual-class IPO's over those with single-class IPO's. This is contrary to the findings of Howe and Jagannathan (2001). The dual-class firms averaged an outstanding 27% ROE versus a negative 5% for single-class firms.

Therefore, firms going public with a dual-class equity structure not only are larger but, as suggested by the profitability and leverage levels of both groups, also convey more trustworthiness to the investor community. This suggests that firms retaining voting control when going public may perform better than their counterparts. Along these lines, since agency costs reflect the degree of managerial discretion, the IPO firm's operating performance, subsequently confirmed by a positive stock return

performance, should convey optimism to the market on the talent, reputation and firm-specific knowledge of the management team.

Furthermore, dual-class IPO's have larger amounts of long-term debt with relation to total assets, and these serve as monitoring mechanisms to guard against firm managers' misusing corporate resources. These statistics confirm Moyer, Rao and Sisneros' (1992) findings that dual-class issues coincide with events such as more outside directors or higher corporate debt, which help in minimizing agency costs and wealth expropriation and thus in protecting the minority investor.

Single-class firms have more cash and short-term securities as a percentage of total assets than dual-class IPO's. This may indicate a lower risk of wealth expropriation for those firms issuing a dual-class IPO. In summary, agency theory does not seem to explain managers' issuing dual-class IPO's since there is no indication that managers do so in order to achieve managerial entrenchment and create better opportunities to extract private benefits of control.

These differences remain the same even when firms are matched by (1) firm size and by (2) firm size within the industry as a whole. Tables 5 and 6 present a statistical summary of the IPO firms' financial variables when matched by size only and when matched by industry and then on size again, respectively. Table 5 demonstrates that even though single-class IPO firms have a larger market capitalization value, they are trailing by an almost 10-fold difference from a weak 2% 3-year holding period return (HPR) to a much more attractive 19% HPR achieved by

dual-class IPO's. This large difference in value creation abilities also appears in the return on equity. Dual-class firms boast a 54% ROE while single-class IPO's yield a negative profitability of -6%.¹³ These two findings support Böehmer, Sanger and Varshney's (1996) results that dual-class IPO's outperform single-class IPO's in terms of both market and operating returns in contrast to the arguments supported by Jarrel and Poulsen (1988) and Grossman and Hart (1988) on the destruction of value created by dual-class firms.

¹³ Similar results were generated with the use of operating margins.

Table 5

Financial Characteristics of Dual-class and Single-class IPO's When Matched by Size.

Total assets are the figure reported in the first quarter following the IPO. ROE is calculated by dividing net income into stockholders' equity, and Cash&ST is the cash and short-term investment balances, both as reported in the first quarter following the IPO issue. MB ratio is calculated by dividing the market value of equity by the book value of the stockholders' equity. Market Cap is the market capitalization figure on the date of the IPO issue. Leverage is determined by dividing long-term debt by total assets from the first quarter after the IPO issue. Net sales are the figures reported in the first quarter following the IPO. 3-year HPR is the cumulative holding period return for the 36 months following the IPO issue date. Total assets, market cap and net sales are in million of dollars.

Size matched	Total Assets		ROE		Cash&ST		MB ratio		Leverage		Market Cap		Net Sales		3-year HPR	
	<i>dual</i>	<i>single</i>	<i>dual</i>	<i>single</i>	<i>dual</i>	<i>single</i>	<i>dual</i>	<i>single</i>	<i>dual</i>	<i>single</i>	<i>dual</i>	<i>single</i>	<i>dual</i>	<i>single</i>	<i>dual</i>	<i>single</i>
	<i>class</i>	<i>class</i>	<i>Class</i>	<i>class</i>	<i>class</i>	<i>class</i>	<i>class</i>	<i>class</i>	<i>class</i>	<i>class</i>	<i>class</i>	<i>class</i>	<i>class</i>	<i>class</i>	<i>class</i>	<i>class</i>
Mean	122.77	123.44	0.54	-0.06	23.48	34.66	61.17	19.11	0.18	0.13	168.69	352.50	46.55	28.53	0.19	0.02
Std Error	12.21	12.50	0.58	0.05	2.75	3.87	57.39	14.15	0.02	0.02	25.24	55.46	12.03	4.43	0.13	0.14
T-statistics	10.05	9.88	0.93	-1.40	8.53	8.97	1.07	1.35	7.79	7.46	6.68	6.36	3.87	6.44	1.43	0.14
Std Dev	139.25	142.48	6.67	0.52	31.37	44.07	654.26	161.29	0.26	0.20	287.78	632.40	137.19	50.50	1.52	1.64

Table 6

Financial Characteristics of Dual-class and Single-class IPO's when Matched by Industry.

Total assets are the figure reported in the first quarter following the IPO. ROE is calculated by dividing net income into stockholders' equity as reported in the first quarter following the IPO issue. Cash&ST is the cash and short-term investments balances as reported in the first quarter following the IPO. MB ratio is calculated by dividing the market value of equity by the book value of the stockholders' equity. Market Cap is the market capitalization figure on the date of the IPO issue. Leverage is determined by dividing long-term debt by total assets, both figures from the first quarter after the IPO issue. Net sales are the figure reported in the first quarter following the IPO. 3-year HPR is the cumulative holding period return for the 36 months following the IPO issue date. Total assets, market cap and net sales are in million of dollars.

SIC matched	Total Assets		ROE		Cash&ST		MB ratio		Leverage		Market Cap		Net Sales		3-year HPR	
	<i>dual</i>	<i>single</i>	<i>dual</i>	<i>single</i>	<i>dual</i>	<i>single</i>	<i>dual</i>	<i>single</i>	<i>dual</i>	<i>single</i>	<i>dual</i>	<i>single</i>	<i>dual</i>	<i>single</i>	<i>dual</i>	<i>single</i>
	<i>class</i>	<i>class</i>	<i>class</i>	<i>class</i>	<i>class</i>	<i>class</i>	<i>class</i>	<i>class</i>	<i>class</i>	<i>class</i>	<i>class</i>	<i>class</i>	<i>class</i>	<i>class</i>	<i>class</i>	<i>class</i>
Mean	89.67	88.48	0.93	0.00	22.61	37.06	2.74	3.26	0.15	0.09	163.02	269.61	29.70	18.54	0.38	0.16
Std Error	11.79	11.47	0.97	0.01	3.73	5.40	0.81	0.30	0.03	0.02	36.18	40.60	7.67	3.37	0.36	0.27
T-statistics	7.60	7.72	0.96	0.18	6.06	6.86	3.38	10.80	5.22	5.35	4.51	6.64	3.87	5.50	1.06	0.59
Std Dev	104.16	101.26	8.60	0.13	32.97	47.73	7.16	2.67	0.26	0.15	319.49	358.53	67.75	29.56	3.19	2.39

These findings are consistent with hypothesis 3B: firms with positive profitability will choose to issue a dual-class IPO. In addition, firms with a high degree of managerial discretion, as evidenced by low investment opportunities and larger amounts of cash, will prefer to issue a single-class IPO in order to avoid an adverse reaction from the market. In effect, Table 5 demonstrates that single-class firms have lower MB ratios and more cash than dual-class firms. Dual-class IPO's have more than 3 times the MB ratios than their counterparts, displaying much greater market growth opportunities. Hence, the market does not seem to penalize dual-class issuing firms, which average positive abnormal returns of 19 percent per year. Dual-class firms' managers may need more latitude for decision making than those working for firms with few investment opportunities because they need to capitalize on investment opportunities in the most efficient way.

Single-class IPO's use lower financial leverage (13%) than their dual-class counterparts (18%), and this adds importance to the condition. Not many investment opportunities with a low MB ratio, large cash balances and little debt place the firm under a high degree of managerial discretion, presenting the need to issue a single-class IPO. Table 5 confirms this data.

Table 6 takes into consideration industry differences (two-digit SIC matching) first, and then the matching proceeds by size. Again, dual-class firms prove to be more profitable than their single-class counterparts (average ROE of 93% versus 0.0%, respectively). In addition, they more than double the 3-year holding period return (38%

for dual-class IPO's versus 16% for single-class IPO's). These results contrast with those presented by Field and Karpoff (2002), who state that dual-class firms do not perform better than their single-class control group.

When matched on size alone, single-class IPO's have lower debt and more cash than dual-class IPO's; however, when it comes to industry differences, single-class firms present higher MB ratios than dual-class firms. This does not conform to the operating and market performance differences between both groups, for the firms with higher value creation abilities should show similar performance superiority in the MB ratio. The data here do not always confirm this expectation, so it is possible that taking industry differences into account, the market does not effectively differentiate between dual-class and single-class IPO's to generate and capitalize on valuable investment opportunities. In other words, dual-class firms outperform single-class firms over the three years following the IPO issue, but the market growth's expectations, as reflected by the MB ratio, fail to capture this when matched by industry.

CHAPTER 7

RESULTS

7.1 Logistic Regression Results: Characterizing the IPO Common Equity Structure Choice.

This section analyzes the logistic model's ability to accurately predict the equity structure a firm chooses when it goes public. The equity choice regresses "1" if it is a dual-class IPO and "0" if it is not on variables representing the two dimensions that may affect the IPO equity choice decision. These include the degree of managerial discretion and acquisition likelihood as well as a set of control variables which have been identified as relevant in the related literature. The results generated by the regression analysis are presented in Table 7.

The three different logistic regression models that characterize the optimal IPO decision appear there. Model 1 includes all relevant variables identified in the literature with the exception of the market-to-book ratio, which is not observable for pre-event IPO firms. Hence, the market value of equity on the day of the IPO is divided by the book value of equity as reported in the first quarter following the IPO date. In a fairly efficient market, look-ahead values, such as this market-to-book computation, may represent unbiased estimates of investors' expectations at the time of the IPO issue.

Model 2 includes the market-to-book ratio and it excludes cash and equivalents because these may reflect the IPO proceeds in a more significant way than the firm's

cash position at the time of the IPO issue since cash is an ex-post variable in the data set.

Table 7
Logistic Regression Models and Determinants of Firm Types.

Size is measured by total assets, the figure reported in the first quarter following the IPO. ROE is calculated by dividing net income into stockholders' equity as reported in the first quarter following the IPO issue. Cash is the cash and short-term investments balances as reported in the same time period. MB ratio is calculated by dividing the market value of equity by the book value of the stockholders' equity.¹⁴ Leverage is determined by dividing long-term debt by total assets from the first quarter after the IPO issue. Cash flow is the operating profit before depreciation. Turnover is sales divided by total assets. The numbers in parenthesis below the estimated parameters are the standard margins of error.

Variables	Model 1 Size matched	Model 1 SIC matched	Model 2 Size matched	Model 2 SIC matched	Model 3 Size matched	Model 3 SIC matched
Size	-0.0017 [0.0014]	0.0006 [0.0026]	-0.0018 [0.0012]	-0.0015 [0.0020]	-0.00306** [0.0015]	-0.0009 [0.0027]
Turnover	0.6440 [0.5822]	0.2846 [0.8010]	0.2723 [0.5759]	0.3694 [0.8060]	0.4802 [0.5927]	0.3331 [0.8146]
Return on equity	0.0828 [0.2961]	-2.7421* [1.5557]	0.0508 [0.2985]	-2.9289** [1.6097]	0.0765 [0.2979]	-2.9114* [1.6106]
MB ratio			-0.3481*** [0.0945]	-0.2424** [0.1005]	-0.3906*** [0.0985]	-0.2293** [0.1091]
Leverage	0.4330 [0.6960]	0.6461 [1.0315]	-0.1256 [0.7171]	0.7356 [0.9045]	0.0151 [0.7282]	0.6492 [0.9469]
Cash	-0.0009 [0.0048]	-0.0085 [0.0061]			0.0085 [0.0056]	-0.0019 [0.0065]
Cash flow	0.0459* [0.0278]	0.0440 [0.0410]	0.0303 [0.0269]	0.0451 [0.0407]	0.0477 [0.0303]	0.0423 [0.0420]
Intercept	-0.1271 [0.2750]	-0.1054 [0.3752]	0.1884** [0.3490]	0.3864 [0.4399]	0.7402** [0.3548]	0.3893 [0.4398]
Model R-squared	0.0444	0.0806	0.1188	0.1071	0.1274	0.1113
Model Chi-square	10.44	12.01*	30.49***	16.44**	32.87***	17.04**
Prediction ability	0.5665	0.5833	0.6438	0.6389	0.6266	0.6250

* Significant at the 10% level. ** Significant at the 5% level. *** Significant at the 1% level.

Note that this is XB. Prob (Y = 1) is $1/(1+\text{Exp}(-XB))$, where Exp is $e = 2.71828$.

¹⁴ As a robustness check, the market-to-book ratio is calculated as the market value of common equity minus the book value of stockholders' equity plus the book value of assets, all divided by the book value of the stockholders' equity. No significant changes are generated in the prediction ability of the models. In fact, this new computation does not yield test statistics as powerful as the original formula described in Table 7.

Model 3 includes all seven variables. For every model, a logistic regression was run for both size and industry matching; consequently, there are six different regression equations in total.

In the absence of a market-to-book ratio (Model 1), the control group's regression results based on both industry and size are better specified and exhibit a more powerful predictive ability than the results based solely upon the size-matched control group. The SIC-matched model is significant at the 10% level and is correct 58% of the time. In other words, the model correctly identifies those firms that ultimately perform as dual-class IPO's. The size-matched sample, however, is not statistically significant. The SIC model's coefficient of determination is almost twice the size of the size-matched group's (8% versus 4.4%, respectively).

The return on equity variable is significant at the 10 percent level for this industry-matched control group. The negative coefficient of the return on equity variable suggests that issuing a dual-class IPO decreases with the firm's profitability, which is in agreement with Hypothesis 3: poor-profitability firms will tend to issue a dual-class IPO in order to protect themselves from an unwanted acquisition (Palepu, 1986). Furthermore, the fact that the size coefficient is negative also confirms Hypothesis 2, which states that the probability of issuing a dual-class IPO is decreasing in size. This result confirms those documented in Comment and Schwert, 1995 and Palepu, 1986.

In both equations of Model 1, there is a positive relationship between leverage and the probability of issuing a dual-class IPO, which coincides with Moyer, Rao and Sisneros', 1992, results though leverage is not found to be statistically significant.

Model 2 considers the MB ratio and leaves out the cash variable in an attempt to minimize the importance of the IPO's proceeds. The market's perceived growth opportunities radically increase the statistical significance of the models, which present a Chi-square significant at the 1 and 5% levels for size- and industry-matched groups, respectively. Model 2, when size-matched, as suggested by Barber and Lyon, 1996, provides the most powerful predictive ability of all six regression models with 64.38; however, if firm's growth opportunities do not appear, as shown in Model 1, the SIC-matching is the most powerful model. This suggests that when growth expectations are considered, the firm's size is more relevant when estimating the set of valuable investment opportunities, which is why size-matching becomes more important than industry differences in terms of the model's predictive ability.

The negative coefficient of the MB ratio conforms to Hypothesis 1, which states that firms without valuable investment opportunities will more likely issue a dual-class IPO because of agency considerations. The figure of the manager as a value-maximizing agent cannot be confirmed in Model 2 since the probability of issuing a dual-class IPO is decreasing in MB. This finding is in agreement with agency theory (Jensen and Meckling, 1976) because it presents the possibility for managers to expropriate in the absence of valuable investment opportunities. However, this result is

unexpected when we consider the descriptive statistics of the sample in Table 5 where dual-class firms exhibit much higher MB ratios than their single-class counterparts.

The MB ratio is significant at the 1% level for the size-matched sample and at the 5% level for the industry matched group. These results may indicate that the MB ratio is an important determinant of ownership structure as well as a proxy to look into the future expected performance of the firm.

On the other hand, the return on equity is significant (5% level) only when industry differences are considered. The profitability variable's negative result is also in accordance to agency theory, suggesting managerial entrenchment and isolation from the corporate control market.

The sic-matched regression from Model 2 is also well specified, showing a statistical significance level of 5% according to the Chi-square distribution. Model 3 is significant at the 1% and 5% levels for the size- and SIC-matched groups, respectively. Both models present a predictive ability just above 62%. All variables were considered for this model, and when the MB ratio was matched by size, it was significant at the 1% level while size was significant at the 5% level. The MB ratio proves to have a high explanatory power for in its absence, the statistical significance of the model falls by more than half (difference in chi-square between Models 3 and 1), and the predictive ability drops by almost ten percentage points. Under an agency theory framework, the sign of the MB ratio should be negative, and this is confirmed again in both equations of Model 3. However, this result is not in accordance with Böehmer,

Sanger and Varshney (1996), who state that firms issue dual-class IPO's in order to grant managers with managerial discretion that lead to more effective investment in value-creating projects. When size-matched, the coefficient of determination of Model 3 yields the highest explanatory power with a percentage of 12.74.

Leverage seems to have no impact on the common equity structure decision for an IPO firm; it does not have an explanatory power even when measured in alternative ways (e.g. total debt, debt to equity ratio, debt to total assets). Jung, Kim and Stulz (1996) also find leverage statistically insignificant; however, it does help for improving the model's specification. In other words, if the variable disappears, the explanatory power and statistical significance of the models drop, so it remains as a control variable.

When matched by industry in Model 3, size is no longer relevant and ROE becomes statistically significant at the 10% level, just as in Model 2. This may indicate that profitability is relevant for the IPO equity structure decision when considering industry differences into the equation model, indicating also that firms with negative profitability are more likely to issue a single-class IPO. Firms with negative returns fear an adverse market reaction if they issue a dual-class structure and their management is entrenched.

When size matched in Model 3, the results suggest that a positive profitability enhances the probability of a firm issuing a dual-class IPO while negative profitability predicts a dual-class IPO when industry differences are present. The profitability

variable becomes statistically significant only when it is matched by industry. Partch (1983) and Lease, McConnell and Mikkelsen (1983) found that dual-class recapitalization programs were preceded by positive monthly average returns.

The sign of the operating cash flow is positive for all models and leverage is also positive in all except Model 2 when it is size matched. This may suggest that both variables increase the probability of a firm's issuing a dual-class IPO. More cash flow means immediate payback in case of an acquisition while higher leverage may act as a deterrent for an acquisition attempt.

7.2 Can the IPO Equity Choice, Performance and Acquisition Likelihood

Variables of the Firm Explain Growth Opportunities as Predicted by the Market-to-Book Ratio?

In this section, an ordinary least squares regression model is used in order to measure how well the models' variables can explain the firm's growth opportunities as perceived by the market. The market-to-book variable is the dependent variable.

Because dual-class equity structures naturally place the firm under managerial entrenchment, the market may see this as a menace to the presence of agency costs at the expense of the incumbent shareholders since outside intervention is greatly limited by a dual-class ownership structure. In fact, two of the major reasons for issuing a dual-class IPO are to avoid relinquishing control of the firm and to protect the firm from an unwanted acquisition (Partch, 1987). Given such a degree of managerial

entrenchment, why then would the market be willing to invest in a dual-class IPO firm? Trustworthiness and the presence of valuable investment opportunities may be the answer if, as opposed to agency theory, the manager is a value-maximizing agent. Market reaction to the IPO, as characterized by market returns and other control variables, measures trustworthiness, and greater-than-one market-to-book ratios indicate growth opportunities.

The question is whether the equity choice in an IPO has a causal relationship to the perception of the stock exchange market in regards to the firm's valuable growth opportunities and its ability to pursue such opportunities. Table 8 shows the multiple regression results on all the sampled IPO's when matched by size. The results are striking. The explanatory power of the model is a little over 70 percent while size, ROE, cash, and the equity choice (EC) are statistically significant at the 1% level. The 3-year holding period return (HPR) is significant at the 5% level. Only the total asset turnover (TO) and the leverage ratio (long-term debt divided by total assets) are not significantly different from zero.

Table 8
Market-to-Book as a dependent variable
(size matched, all IPOs)

	Coef	Std Error	p-value
Size	-0.0051	0.0014	0.0003
ROE	0.7520	0.0984	0.0000
Lev	-0.3846	0.8257	0.6417
HPR	-0.2557	0.1069	0.0175
Cash	0.0443	0.0050	0.0000
TO	0.3919	0.6988	0.5753
EC	-1.2892	0.3435	0.0002
Intercept	2.5521	0.3743	0.0000
R-squared	0.7128		
F-ratio	89.3582		
Model p-value	0.0000		

As expected, size has a negative coefficient since smaller firms usually provide greater opportunities for growth. Also, MB ratio is increasing in the firm's profitability as measured by ROE. This suggests that the market expects valuable investment opportunities from a profitable firm; hence, this may not be supportive of agency theory (Jensen and Meckling, 1976), which presents management as an egotistical agent who pursues firm growth for personal incentives. Hence, size and ROE may be characteristics identified for successful dual-class IPO's since smaller and brighter firms will be more compelled to protect themselves from the market for corporate control. A positive firm profitability record will convey trust to the market about the value of future investment opportunities.

The negative coefficient of the equity choice binary variable (EC) is not expected and it seems to support agency theory because EC represents a decreasing probability of issuing a dual-class IPO at higher market-to-book ratios; this may suggest that firms with single-class IPO's could better explain valuable investment

opportunities in the firm. This result is not supported by the empirical evidence in Table 5, which shows a significantly superior MB ratio of dual-class IPO's over single-class IPO's when matched by size; however, with regard to industry differences, single-class IPO's present a slightly higher MB ratio than their counterparts (Table 6).

In Tables 9 and 10, the data show the MB ratio from the perspectives of only dual-class IPO's (Table 9) and only single-class IPO's (Table 10). The results suggest that dual-class IPO's have higher information content than single-class IPO's since their ability to explain the MB ratio is far superior (R-squared of 93.07% versus 36.35%).

Table 9
Market-to-Book as a dependent variable
(size matched, dual class IPOs)

	Coef	Std Error	p-value
Size	-0.0032	0.0012	0.0062
ROE	0.8133	0.0727	0.0000
Lev	0.1495	0.5646	0.7917
HPR	-0.1067	0.0895	0.2353
Cash	0.0193	0.0050	0.0002
TO	-0.0588	0.5286	0.9116
Intercept	1.6325	0.2680	0.0000
R-squared	0.9307		
F-ratio	275.3894		
Model p-value	0.0000		

Table 10
Market-to-Book as a dependent variable
(size matched, single class IPOs)

	Coef	Std Error	p-value
Size	-0.0048	0.0026	0.0641
ROE	0.1421	0.6272	0.8211
Lev	-2.4116	1.9613	0.2212
HPR	-0.2630	0.1866	0.1612
Cash	0.0505	0.0505	0.0000
TO	-0.0353	1.4622	0.9808
Intercept	2.6270	0.6501	0.0001
R-squared	0.3635		
F-ratio	11.7090		
Model p-value	0.0000		

Both models are statistically significant with a p-value of 0.0000 and high F tests. When the coefficient of determination is zero, F is automatically zero as well. Hence, the larger the R-squared, the larger the F-ratio's regression. These high F values show that the estimated regression models are statistically significant.

Next, the MB ratio is studied from the same set of independent variables as above, only this time the control groups are matched by industry (Tables 11 through 13). These models (Tables 11 and 12) clarified the MB ratio. On the other hand, the explanatory power of the single-class IPO's decreased from that of the size-matched control group (Table 13).

Table 11 indicates that the size and return on equity in addition to cash variables are highly significant. The negative size coefficient suggests that the market expects smaller firms to provide higher value from growth opportunities. Also, the more profitable the firm, the higher its perceived value derived from market

expectations. The MB ratio reflects this. The EC variable is also significant at 5% and indicates that single-class IPO's may lead to higher MB ratios.

Table 11
Market-to-Book as a dependent variable
(sic matched, all IPOs)

	Coef	Std Error	p-value
Size	-0.0084	0.0021	0.0001
ROE	0.8581	0.0956	0.0000
Lev	0.1841	0.8812	0.8348
HPR	-0.0734	0.0593	0.2176
Cash	0.0311	0.0053	0.0000
TO	-0.4233	0.6927	0.5421
EC	-0.7759	0.3401	0.0240
Intercept	2.9517	0.3735	0.0000
R-squared	0.8602		
F-ratio	130.1334		
Model p-value	0.0000		

Table 12 presents a regression model with an explanatory power just shy of 96%, a remarkable predicting ability of dual-class IPO's when matched by industry. Leverage as well as size and ROE remain significant at the 1% level. All independent variables have the same signs as in Table 11.

Table 12
Market-to-Book as a dependent variable
(sic, dual class IPOs)

	Coef	Std Error	p-value
Size	-0.0089	0.0020	0.0000
ROE	0.8400	0.0901	0.0000
Lev	2.0924	0.7436	0.0063
HPR	-0.0756	0.0538	0.1644
Cash	0.0442	0.0063	0.0000
TO	-0.2291	0.6641	0.7312
Intercept	1.5696	0.3340	0.0000
R-squared	0.9598		
F-ratio	282.1744		
Model p-value	0.0000		

The statistical significance of this regression model is high, with an F test over 280 and a p-value of zero. Table 13, on the other hand, shows a mere 30% coefficient of determination and an F test of slightly over 4. This table displays single-class IPO's, and only leverage and cash are significant, both at 5%. Hence, single-class IPO's cannot determine the expectation of valuable investment opportunities as well as dual-class IPO's can. Besides, profitability yields a negative coefficient, which implies an inverse relationship with the MB ratio.

Table 13
Market-to-Book as a dependent variable
(sic, single class IPOs)

	Coef	Std Error	p-value
Size	-0.0049	0.0040	0.2242
ROE	-1.4604	2.8429	0.6091
Lev	-5.0387	2.1104	0.0196
HPR	-0.0932	0.1159	0.4239
Cash	0.0196	8.5964	0.0259
TO	-0.5058	1.4845	0.7343
Intercept	3.5918	0.6153	0.0000
R-squared	0.2624		
F-ratio	4.2096		
Model p-value	0.0011		

This section leads to the conclusion that independent variables can determine a firm's set of valuable investment opportunities, including IPO equity structure choice, as the market-to-book ratio indicates. In addition, size and profitability are the most important determinants for the MB ratio. Also, the results suggest that dual-class IPO's are better able to explain the level of MB ratios than single-class IPO's can. Upon taking into account industry differences, the market may thus tend to follow those IPO's with common shares holding different voting rights.

A summary of the six models in tables 14 and 15 displays the contrasts among them. A firm's expected growth opportunities (MB ratio) are more comprehensible when industry differences are considered for the whole sample (86% versus 71% in tables 8 and 13, respectively).

The MB ratio for dual-class firms seems to have a superior explanatory power than that of single-class IPO's. The model is always more powerful when predicting MB ratio for dual-class IPO's than for their single-class counterparts. There is an indication that the market perceives firms issuing dual-class IPO's as having more valuable investment opportunities than single-class firms. This supports Hypothesis 1A, which states that value-maximizing agents with a set of positive-net present value investment opportunities issue dual-class IPO's (Jung, Kim and Stulz, 1996). In other words, when a firm has valuable growth opportunities, the managers' interests will be aligned with those of the shareholders. Thus, the agency costs of managerial discretion will decrease, and the value of the firm will increase.

Table 14 (Size matched)

	All IPO Sample		Dual-class IPOs		Single-class IPOs	
	Coef	Std Error	Coef	Std Error	Coef	Std Error
Size	-0.0051***	0.0014	-0.0032***	0.0012	-0.0048*	0.0026
ROE	0.7519***	0.0984	0.8133***	0.0727	0.1421	0.6272
Lev	-0.3846	0.8257	0.1495	0.5646	-2.4116	1.9613
HPR	-0.2556**	0.1069	-0.1067	0.0895	-0.2630	0.1866
Cash	0.0442***	0.0050	0.0193***	0.0050	0.0505***	0.0505
TO	0.3919	0.6988	-0.0588	0.5286	-0.0353	1.4622
EC	-1.2892***	0.3435				
Intercept	2.5521***	0.3743	1.6325***	0.2680	2.6270***	0.6501
R-squared	0.7128		0.9307		0.3635	
F-ratio	89.3582		275.3894		11.7090	
Model p-value	0.0000		0.0000		0.0000	
Table number	8		9		10	

Table 15 (Industry (SIC) matched)

	All IPO Sample		Dual-class IPOs		Single-class IPOs	
	Coef	Std Error	Coef	Std Error	Coef	Std Error
Size	-0.0083***	0.0021	-0.0089***	0.0020	-0.0049	0.0040
ROE	0.8581***	0.0956	0.8399***	0.0901	-1.4604	2.8429
Lev	0.1841	0.8812	2.0923***	0.7436	-5.0387**	2.1104
HPR	-0.0734	0.0593	-0.0756	0.0538	-0.0932	0.1159
Cash	0.0311***	0.0053	0.0442***	0.0063	0.0195**	8.5964
TO	-0.4233	0.6927	-0.2291	0.6641	-0.5058	1.4845
EC	-0.7758**	0.3401				
Intercept	2.9517***	0.3735	1.5695***	0.3340	3.5917***	0.6153
R-squared	0.8602		0.9598		0.2624	
F-ratio	130.1334		282.1744		4.2096	
Model p-value	0.0000		0.0000		0.0011	
Table number	11		12		13	

7.3 The Relationship between IPO Type, Holding Period Returns and ROE

Within the logistic model's predictions, there are firms that chose against type according to Model 3. They issued a dual-class IPO instead of a single-class IPO. As a test of the model's validity, firms that chose the IPO equity choice determined by the logistic model are compared with firms that chose against type to determine which have the better operating and market performance.

There are firms with valuable investment opportunities among those that issued dual-class IPO's. Agency cost theory indicates that if investors appropriately perceive the set of future investment opportunities for a firm and its need to raise funds for shareholder wealth maximization purposes, the firm will suffer the most negative market reaction when a dual-class IPO is not beneficial for the company.

Table 16 shows that the correlation coefficient for dual-class IPO's between type and holding period returns is positive and significant at the 1% level. The correlation for the whole sample is still positive but not statistically significant and much smaller than that of types (21.3% versus 5.4%, respectively). This suggests that when a positive MB ratio indicates that firms possess valuable growth opportunities, the logistic model predicts they should issue a dual-class IPO. In addition, the market rewards issuing with type. Therefore, there may be a specific set of firm characteristics that make it optimal for a firm to go public with common stock having different voting rights, and the market-to-book ratio is an important determinant of such a decision. In other words, the market rewards those firms that have the opportunity to increase

shareholder wealth and decide to do so by increasing management's control of the firm's decision-making process while at the same time relieving them from the pressures of the market for corporate control.

Table 16 demonstrates the relationship between IPO types and their accounting performance (ROE) when they are matched by size and include all seven variables (Model 3 from Table 7). Firm types and ROE are neither highly correlated nor statistically significant. When matched by industry, the market correlation is statistically insignificant as well.

Table 16

Market and operating performance correlations with IPO types

Firm type was obtained from Model 3 of Table 7 (size matched). HPRs are holding period returns for the 36 months following the IPO date and ROE is the return on equity computed by the end of the first quarter following the IPO date.

	Correlation between firm types and HPRs [p-values]	Correlation between all sampled IPOs and HPRs [p-values]
Coefficient	0.2134 [0.01]	0.0543 [0.38]
	Correlation between firm types and ROE [p-values]	Correlation between all sampled IPOs and ROE [p-values]
Coefficient	0.0366 [0.66]	0.0640 [0.69]

Table 17 provides the correlation estimates between an IPO's type and the IPO's 36-month holding period return for each type of IPO equity class.

Table 17
Correlations between IPO Types and HPRs
(p-values are provided in brackets)

Correlation of dual class_type & HPR	Correlation of single class_type & HPR
0.0342 [0.77]	0.3051 [0.01]

The correlation estimates for the single-class IPO's are positive (0.3051) and significant at the 1% level while the correlation coefficient between HPR and the dual-class IPO types, though positive, are not significant. For some single-class IPO's, then, the logistic model can better predict those firms that should issue a traditional one-vote-per share IPO than those that should issue a dual-class IPO since the holding period return is the market's reward for issuing in according with market expectations. In other words, it may be harder to pick those firms that are optimal for a dual-class common equity structure than those that are fit for going public with a single-class IPO.

Of the firms that, when size-matched, chose the equity structure that the model suggested, fewer than 45% had positive holding period returns for the 36 months following the IPO date. On the other hand, 40 percent of the IPO firms that acted according to the model had positive 3-year HPRs when the control group was industry-matched.

The empirical data did not support the hypothesis that firms that contradicted the equity structure of the IPO firm model would yield negative 3-year holding period returns.

CHAPTER 8

SUMMARY AND CONCLUSIONS, MANAGERIAL IMPLICATIONS AND FUTURE RESEARCH

8.1 SUMMARY AND CONCLUSIONS

The primary purpose of this study has been to build a regression model with the ability to predict whether a firm should go public with a dual-class or a single-class common equity structure. The literature yielded conflicting results regarding the value benefits of a dual-class IPO for the corporation; therefore, it was necessary to search for a set of financial characteristics that would allow a firm to issue a dual-class IPO. The inclusion of the CRSP-listed IPO's from 1990 to 2000 and the elimination of financial and utility firms were of service in conforming to the extant literature. The degree of managerial discretion (Jung, Kim and Stulz, 1996) and the firm's acquisition likelihood (Palepu, 1986) were the main determinants for the IPO equity structure choice. Results showed 65 % accuracy for the model's classification ability.

A second purpose has been to discover whether a dual-class IPO is a value enhancing or a value destroying initiative for the firm. Statistics from 18,864 firm-year observations indicate that dual-class IPO firms' returns outperformed those of single-class IPO's with regard to both three-year holding period returns and ROE terms. These results suggest that a dual-class IPO does not conform to managerial entrenchment purposes but rather to shareholder wealth maximization objectives. Therefore, voting power structure could be a significant determinant in the long-run

performance of initial public offerings. This is consistent with the findings of Dimitrov and Jain(2006), and Böehmer, Sanger and Varshney (1996).

Dual-class IPO's benefit more from allowing managers to pursue positive net present value investments than from increasing managerial discretion control.

According to an evaluation of the specification and power of tests for three logistic regression models under two different matching assumptions, those that were matched on size showed, on average, better predictive power and specification than the regression models that resulted from industry-difference matching.

In determining which main variables drive a firm to go public with a certain equity structure, Models 2 and 3 are statistically significant at the 1% level. These two models include the market-to-book variable, which represents market expectations and is therefore considered an unbiased market estimator of a firm's future expected performance. The statistical significance of the investment opportunities variable is confirmed by the MB ratio; it therefore plays a relevant role in the IPO's common equity choice. Firms with the highest valuable investment opportunities exhibited the highest stock returns when they issued a dual-class IPO.

Model 1, which did not include the market-to-book ratio, showed the weakest correct-classification power, just shy of 60%. This model also showed the lowest statistical significance of the three. The firms that contradicted the model did not consistently generate negative market returns; in fact, only a little over 40% of those that were congruent with the model yielded positive HPRs.

The fundamental financial variables in Tables 5 and 6 confirm the characteristics of a firm inclined to go public with a dual-class structure. The market perceives dual-class firms as having more investment opportunities. They also have lower amounts of cash, suggesting a lower managerial discretion and hence a lower potential threat for wealth expropriation. Finally, the return on equity figure indicates outstanding operating performance. Thus, the market is willing to buy an IPO that grants no voting power when the issue is backed up by efficient management along with positive growth opportunities.

The higher financial leverage presented by dual-class IPO's conveys a higher level of trust to the investment community by allowing an external control mechanism to limit the discretionary use on corporate free cash flow. This leads to a reduction of agency costs of managerial discretion (Jung, Kim and Stulz, 1996; Moyer, Rao and Sisneros, 1992).

Agency theory predicts an adverse reaction from the market for firms that issue dual-class IPO's. This study's empirical results are not consistent with agency theory; instead, they show that dual-class firms not only have high market-to-book ratios but also yield significantly higher market returns than single-class IPO's. The same holds true with respect to return on equity comparisons.

The MB ratio, while always statistically significant, has an estimated negative parameter (Table 7) in logistic regressions, suggesting that firms with higher MB ratios are less likely to issue a dual-class IPO. On the other hand, firms whose market values

are low compared to their book values are likely acquisition targets (Palepu, 1986), and this leads to an expected negative MB ratio. Hence, the same variable might have different signs depending on what is being measured: acquisition likelihood or the degree of managerial discretion. The prevalence of a negative result may suggest that dual-class IPO's are more a response to the fear of being taken over than a reflection of the firm's set of investment opportunities.

These results are not consistent with the notion that the one vote per share rule is economically optimal for a firm as Grossman and Hart (1988) and Harris and Raviv (1988) state. Dual-class firms outperformed their single-class counterparts in most of the tests.

8.2 MANAGERIAL IMPLICATIONS

The implications for management are various. A firm with a set of valuable growth opportunities should issue a dual-class IPO in order to fund such investments without relinquishing control of the firm, thereby eliminating the underinvestment problem without suffering a market punishment loss. Another implication is that dual-class IPO's may represent the best choice for entrepreneurs who take their firm public to fund long-run investment opportunities but do not want to lose control of the firm.

A final implication in the corporate financing arena is that common equity may be a better option because it can be issued with inferior or no voting rights without committing to a fixed cash flow claim as is the case with preferred stock. In the past,

preferred stock was a convenient source of financing since it represented a security without voting rights; therefore, there was no dilution of control. But preferred stock had a fixed claim on corporate cash flows though without the covenants and distressing conditions of corporate debt. Nowadays, a dual-class equity structure offers the option of issuing a financial security to raise equity capital with no voting rights and without fixed financial claims. This, as opposed to debt or preferred stock, is too good to ignore.

8.3 FUTURE RESEARCH

Further research should try to discover the change of net fixed assets in matched-type dual-class IPO firms in this study's econometric model and contrast these results with firms that issued against type. The idea is to discover whether firms issuing according to type grow more profitably than those that issue against type. In general, when investment opportunities increase, agency costs of a dual-class IPO should decrease because it is easier for shareholders' and managers' objectives to converge.

Another issue that could determine whether dual-class IPO's are conducted to entrench management is to analyze CEO turnover in relation to market returns and profitability after the IPO. A significant negative relationship between these two variables may confirm the managerial entrenchment hypothesis in accordance with agency theory.

The literature also studies a fair acquisition premium, arguing that value-maximizing agents favor a dual-class IPO to secure a fair acquisition premium for outside shareholders. An analysis of acquisition transactions in the post-IPO era of these firms might help to confirm this hypothesis or to deny the “fair premium” argument as a basis for a dual-class IPO. Reputation of the underwriters as well as pre- and post-IPO management compensation could also provide some insight into firms’ motives for issuing dual-class IPO’s.

Overall, dual-class IPO’s allow firms to capitalize on positive-net present value investment opportunities without diluting corporate control. This leads to profitable growth and enhances shareholder wealth in the corporation. Dual-class IPO firms offer more positive and larger holding period returns than single-class firms. This could lead us to believe that managers create a dual-class ownership structure for maximizing shareholder value objectives and not for managerial entrenchment purposes.

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