

ESSAYS ON THE U.S. DUAL-CLASS SHARE STRUCTURE

by

JASON W. HOWELL

(Under the direction of Jeffrey M. Netter)

ABSTRACT

In the first essay, I provide a broad overview of the dual-class stock structure in the United States. Also, I introduce the largest sample of United States dual-class firms, consisting of 1,096 firms and 8,245 firm years over the 20 year period 1988-2007. Rather than simply a literature review, I examine the history of the structure from the early 1920s to its prevalence in 2007. Also, I examine the implementation methods and capitalization structures used by dual-class firms. I examine and compare certain characteristics of dual-class firms to single class firms and briefly discuss the means firms use to exit the structure. Lastly, I survey other control methods, such as pyramid structures and cross-ownership, and I review the financial economic theories surrounding the dual-class structure. In the second essay, I examine a sample 61 American dual-class firms who unify their share structure. I use the sample to distinguish between the value recovery and optimal structure hypotheses. In line with both hypotheses, I find a positive and significant market reaction to the elimination of the dual class structure. In support of the optimal structure hypotheses, I find unifying firms are inherently different than those who remain dual class. Using a probit analysis, I find unifying firms are more likely to have lower control wedges, higher leverage and capital expenditures, and higher levels of illiquidity. As further evidence against the value recovery hypothesis, I find no significant change in firm value and conflicting operating performance results after the elimination of the structure. Also, I find unifying firms are no more likely to be acquired

or taken private than their dual class counterparts. In addition, I add to the literature by demonstrating a significant increase in liquidity for American firms who leave the dual class structure.

INDEX WORDS: Corporate Governance, One-Share/One-Vote, Dual-Class, Unifications, Private Benefits of Control

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CHAPTER 1

THE U.S. DUAL-CLASS SHARE STRUCTURE

1.1 INTRODUCTION

In a typical public corporation, all shareholders are provided identical voting and cash flow rights. For example, each holder of Microsoft Corporation's stock is allowed one vote for each share she owns. In addition, each shareholder has residual cash flow rights to the firm and can receive dividends. As such, shareholders are separated by the number of shares each owns; however, the proportion of voting and cash flow rights is always proportional to the amount invested in the firm. A shareholder who buys 10,000 shares of Microsoft stock has invested 10 times more capital in the firm than the individual who purchases only 1,000 shares. Since each share has identical voting and cash flow rights, the holder of 10,000 shares also has 10 times more voting power.

This is not the case in a firm with two classes of stock. In a dual-class stock firm, the investor who purchases 10,000 shares may have the same voting rights as the holder of only 1,000 shares. Voting and cash flow rights can be different based on the class of shares held. For example, Google has two classes of stock. Class A shareholders are eligible to vote in all corporate matters; however, they only have one vote per share, whereas class B shareholders have ten votes per share. This allows the holders of class B shares to have control of the firm while holding a much smaller cash flow stake. In the case of Google, co-founders Sergey Brin and Larry Page hold zero Class A stock and 77.3% of class B shares. So although they only own an 18.3% cash flow stake, their class B holdings give them control of the firm with a 58.3% voting stake.¹

¹Google, Inc., March 24, 2009 Form DEF 14A, via Edgar.

In this paper, I provide a broad overview of the dual-class structure in the United States and introduce the largest sample of United States dual-class firms collected to date. In section 1.2, I examine the history of the dual-class structure, from the first implementation of non-voting stock in 1898 to its use in 2007. In section 1.3, I examine the various methods firms use to implement the dual-class structure, including methods used prior to SEC rule 19C-4. Section 1.4 looks at the variety and frequency of the myriad voting and dividend policies used under a dual-class capitalization. Section 1.5 looks at the general characteristics of firms who use the structure. Section 1.6 looks at means firms use to exit the structure and section 1.7 looks at alternative methods firms use to maintain control. Section 1.8 looks at the financial economic theory underlying the structure and section 1.9 concludes.

1.2 HISTORY

The unbundling of cash flow and voting rights dates back to the turn of the twentieth century. Up until then, issues of both common and preferred stock were given full voting rights. It was not until 1898 when the International Silver Company authorized twenty million shares that non-voting stock was first issued. The authorization was for nine million preferred and eleven million non-voting common shares. Later in 1902, the common stock was given the right to vote; however, it was given only one vote for every two shares owned (Stevens 1926). The non-voting stock issued by International Silver Company opened the door for firms to begin unbundling cash flow and voting rights between common and preferred stock.

In the 1920s, firms began to issue two classes of common stock giving only one class the right to vote. As an example, in 1925 Dodge Brothers issued 1.5 million shares of class A non-voting stock, while the control of the firm was held by the investment bank of Dillon, Read, and Company who owned 250,001 shares of class B voting stock. The public's purchase of the class A stock, bonds, and preferred stock totalled \$130 million while the investment

bank's controlling investment was a mere \$2.25 million (Seligman 1986). By the year 1926, at least 183 other firms had issued both class A and class B stock (Dewing 1953).²

Stock issues such as those by Dodge Brothers, Industrial Rayon Corporation, A&W Root Beer, and Fox Theaters led Harvard University Professor William Ripley to speak publicly about "the years of the Split Common Stock and Vanishing Stockholder."³ His initial address in October 1925 to the Academy of Political Science in New York City led to articles in the *New York Times*, *Nation*, *Atlantic Monthly*, and to his book, *Main Street and Wall Street*, published in 1927. Ripley's railings against these "management shares" are summarized in the following quote: "Yet the plan [dual class system] bears every appearance of a bald and outrageous theft of the last title of responsibility for management of the actual owners by those who are setting up these latest financial erections. Isn't it the prettiest case ever known of having a cake and eating it too?" (Ripley 1927).

Along with Mr. Ripley's public speaking, scholarly articles were written by Adolf Berle (Berle Jr 1926) and W.H.S. Stevens (Stevens 1926) addressing the one-share, one-vote controversy. Mr. Ripley's condemnation of the structure received widespread attention and the public outcry led to the first disapproval by the New York Stock Exchange (NYSE) to an issue of non-voting common stock on January 18, 1926. After the disapproval the NYSE issued the following statement: "Without at this time attempting to formulate a definite policy...the Committee...will give careful thought to the matter of voting control." The outcry also led President Calvin Coolidge to invite Ripley to personally discuss the issue. The February 17, 1926 *New York Times* headline read "President studies non-voting stocks: He confers with professor Ripley to learn if federal action is advisable."

After the first disapproval and statement in 1926, the NYSE prohibited the issuance of non-voting securities, although they did not formally announce the prohibition until 1940.

²I need to look into this further because the data shows 288 firms who issued two classes from 1927-1932 when the NYSE prohibition was in place. I'm having trouble locating the papers Dewing cites.

³Ripley, "From Main Street to Wall Street," 87 *Atlantic Monthly* 94 (1926).

Between 1926 and 1985, the NYSE stock exchange kept to its prohibition with a few exceptions like Ford Motor Company. Ford Motor Company was able to get around the prohibition by issuing a class with inferior voting rights rather than no voting rights. The firm's class B stock, which was held by the Ford family kept 40% voting power, while the class A stock was given the remaining 60%. This allowed the family to go public while retaining control with only 5.1% equity. Similar proportional voting structures were used in other firms such as J.M. Smucker and American Family. Due to the strict adherence to their policy, Seligman (1988) found only 10 NYSE firms with dual-class share structures in 1985.

Other exchanges were not as strict with their voting policies. The American Stock Exchange (AMEX) did not implement a non-voting prohibition until 1972. In 1976, Wang Laboratories was unable to list on the New York Stock Exchange due to its proposed dual-class capitalization; however, the American Stock Exchange reviewed the application and allowed the listing. This led to the AMEX issuing a policy statement on dual-class issues (disproportionate voting rights). The key points of the statement were: 1) the limited voting class must have the ability to elect at least 25% of the board, 2) the voting ratio should not be greater than 10 to 1 in favor of the superior voting class, 3) no additional stock could be issued which diluted the limited voting shareholders stake, 4) superior voting rights would be lost if the number of shares fell below a certain percentage, and 5) dividend preference was strongly recommended for limited voting stock. The policy became known as the "Wang formula." Due to their relaxed policies on the dual-class structure, Seligman (1988) estimated approximately 7% (60 of 785) AMEX firms were dual-class in 1985, up from 37 in 1976.⁴

During the 1980s, the dual-class structure became a primary mechanism to prevent hostile takeover bids. Since most firms had only a single class of stock, they implemented the dual-class structure through various recapitalization techniques. As an example, General Cinema Corporation performed a dual-class recapitalization by offering to exchange each common share for a new class B share with ten votes each. The new class B share was not publicly

⁴Seligman (1988) also found 110 of 4101 NASDAQ companies were dual-class in 1985.

traded and received lower dividends than the common stock. In addition, the class B shares were convertible to common shares but could only be transferred or sold among family entities. As another condition, the class B shares only received 10 votes each if more than 15% of the company's common stock is held by shareholders working in concert and if anyone other than board members were to nominate directors.⁵ While the recapitalization required shareholder approval, the company president's family owned approximately 29% of the common shares and the measure passed.⁶ With the structure setup in this manner, the minority shareholders found it in their best interest to remain in the common share so they could receive the higher dividend and maintain liquidity. This allowed the family to use the new capitalization as an effective anti-takeover device.

In order to remain competitive with the American Stock Exchange (AMEX) and the National Association of Securities Dealers (NASD) (who had no such restriction), an NYSE subcommittee submitted a proposal in January 1985 to relax their voting policies and allow securities with disparate voting rights to be listed as long as they met certain conditions. Under pressure from Congress, all three exchanges then worked on a uniform policy. After these negotiations broke down, the NYSE issued a new standard "requiring a company proposing to recapitalize to obtain approval of the plan by a majority of its publicly held shares, as well as a majority of its independent directors."⁷

With all three exchanges now permitting dual-class structures, the structure's use increased and in 1988 336 firms, or 6.7% of publicly listed used the structure (see Table 1.1). With the relaxed policies and increased use, a new call came from Congress for regulation against the implementation of the structures. In a letter to the SEC chairman, Representative John D. Dingell, the chairman of the House Energy and Commerce Committee, stated the "commission has the authority to mandate a one-share, one-vote rule" and that "it is

⁵"General Cinema board seeks new stock class to discourage suitors", *Wall Street Journal*, November 14, 1984.

⁶"General Cinema Corp. begins exchange offer for new class B stock", *Wall Street Journal*, January 2, 1985.

⁷"Big board ends equal vote rule", *New York Times*, July 4, 1986.

time to move forward with sound and appropriate safeguards.”⁸ In his law review article on dual-class structure, Seligman (1986) states “disproportionate voting stock is the corporate law equivalent to price-fixing” and that “the SEC or Congress should proscribe dual class capitalizations for the largest business corporations.”

As the discussion moved forward another view emerged. Rather than prohibit dual-class structures all together, the focus became dual-class recapitalizations where existing shareholders are effectively coerced into giving up their voting rights. In a *New York Times* article, Steven Greenhouse asks “If management controls 55% percent of the stock and pushes through unequal voting, is that fair to other stockholders?”⁹ Following this reasoning, Gilson (1987) examines the dual-class structure and leveraged buyouts as substitutes and concludes “a resolution-prohibition of dual class transactions but not dual class capital structures becomes apparent. That resolution would leave intact the benefits of the dual class capital structure, while still preventing any dominant shareholder group from using dual class transactions [recapitalizations] to coerce a firm’s public shareholders.” This new approach led to the proposal of rule 19C-4 by the SEC.

On July 7, 1988, the Securities and Exchange Commission voted 4 to 1 to implement rule 19C-4 (see Appendix A for the full text of rule 19C-4). Under the rule, the SEC prohibited self-regulatory organizations from listing and trading the stocks of any company that issued new shares carrying more than one vote per share, but it allowed companies to issue shares with less than one vote per share and permitted those with unequal voting rights to still be traded. As soon as the new rule was passed, questions were raised as to whether the SEC had the legal authority to enforce such policies on self regulating organizations such as the NYSE and NASD. On June 12, 1990, a three judge panel of the United States Court of Appeals for the District of Columbia Circuit unanimously ruled the SEC had exceeded its authority.

Despite the court’s rejection of 19C-4, the NASD proceeded with implementing a 19C-4 type rule allowing firms to introduce inferior voting shares during initial public offerings

⁸“Unequal stock class opposed”, *New York Times*, May 24, 1988.

⁹“Unequal votings rights in stock”, *New York Times*, March 19, 1985.

but barring firms from reducing existing shareholders' voting rights.¹⁰ The NASD joined the NYSE who had already voluntarily issued a policy implementing the 19C-4 rule. In June 1991, the AMEX moved to restrict its policy similar to the 19C-4 rule, with the exception that inferior voting shares could be created if approved by two-thirds of the stockholders and a majority of non-insiders.¹¹

In December 1993, SEC Chairman Arthur Levitt Jr. suggested all U.S. markets implement a uniform policy regarding voting rights.¹² In line with Mr. Levitt's suggestion, the AMEX and NASD shortly thereafter approved a uniform policy which was followed by the NYSE in May of 1994. The voting policy (see Appendix B for full text) allows companies to be listed who have dual classes of stock and sets no restrictions on voting rights for new public offerings of stock. However, it bars companies from taking steps to reduce their existing shareholders' voting rights through such actions as "the adoption of time phased voting plans, the adoption of capped voting rights plans, the issuance of super voting stock, or the issuance of stock with voting rights less than the per share voting rights of the existing common stock through an exchange offer."

Despite the exchanges developing a uniform policy and preventing coercion through dual-class recapitalizations, the structure still receives criticism. The critics call for a one-share, one vote standard and point to the anti-takeover property of the structure, the risk of entrenchment, and potential expropriation of minority shareholders. They contend insiders with control will take on bad projects, reject sound takeover offers, or just not run the firm effectively. In 2004 when Google went public with the dual-class structure, Bob Monks, shareholder activist, stated "It is stupid to have two classes of stock. I think they have been badly advised."¹³ Charles Elson, director of the John L. Weinberg Center for corporate governance

¹⁰"NASD plans a one-share, one-vote rule", *Wall Street Journal*, June 21, 1990.

¹¹"AMEX files plan for holders' votes on classes of stock", *Wall Street Journal*, June 13, 1991.

¹²"NYSE approves shareholder voting rights policy", *Dow Jones News Service*, May 5, 1994.

¹³Foremski, London, and Waters, "Google and the establishment set to clash", *Financial Times*, May 1, 2004.

at the University of Delaware, added “I think it is a terrible mistake. Any time you separate ownership from control there is trouble down the line.”¹⁴

In recent years, institutions, unions, and blockholders have led shareholder proposals to eliminate the structure and move to one vote per share. For example, in 2007 John Chevedden led a proposal to remove the dual-class structure at Ford Motor Company. In the proposal he states “Dual-class stock companies like Ford take shareholder money but do not let shareholders have an equal voice in their company’s management. Without a voice, shareholders cannot hold management accountable. Shareholders who finance our company should be able to hold our management accountable.”¹⁵ The initiative was opposed by the board, yet garnered support from 27% of shareholders.¹⁶ Similar proposals have been rejected recently at firms such as the New York Times, Google, Emmis, and Sotheby’s.

Although the structure has received criticism since the 1920s and the risk of hostile takeovers have dramatically declined since the 1980s, approximately 7.4% of publicly traded firms still choose to use the dual-class structure, including firms such as Google, News Corporation, and Blockbuster (see Table 1.1).

1.3 IMPLEMENTATION METHODS

There are a number of methods firms can use to implement the dual-class share structure. Before the SEC introduced rule 19C-4, companies commonly introduced the dual-class structure through a recapitalization. A common method firms used to recapitalize was through the use of a “dividend sweetener.” With this method, a firm with one class, creates a new class with less voting power but with higher dividends. The firm then gives existing shareholders the option to convert to the new inferior voting class with higher dividends. For minority shareholders, who do not have enough shares to affect decisions, it is in their best interests

¹⁴Foremski, London, and Waters, “Google and the establishment set to clash”, *Financial Times*, May 1, 2004.

¹⁵Ford Motor Company, April 5, 2007 Form DEF 14A, via Edgar.

¹⁶Stoll, “Ford shareholders take swipe at family voting power”, *Dow Jones Newswires*, May 10, 2007.

to move to the newly formed restrictive voting class to take advantage of the dividend preference and leaves blockholders holding the superior voting shares, allowing them to maintain control of the firm. For example in 1984, BDM International offered its shareholders 1.1 shares of new class A stock for each existing share. The class A stock would receive 15% higher dividends but would only receive 0.10 votes per share and could only elect 25% of the board members. The shares that were not swapped were converted to class B shares which had full voting rights and could vote on 75% of the board. In addition, the firm announced prior to the conversion that the class B shares would be delisted after the conversion. This added more pressure to minority shareholders to convert to class A.¹⁷

The “dividend sweetener” method was also used in combination with a two for one stock swap. In 1988, Concord Fabrics’ shareholders ratified a plan to issue a class A share and a class B share for each share owned. The class A shares were promised a higher dividend rate and liquidation value, but were only given one vote per share. Class B shares were given ten votes per share. The Weinstein family owned 62% of the stock so it was in their best interests to hold the class B shares, while it was in minority shareholders best interests to sell their class B shares for class A shares.¹⁸ This structure allowed Concord Fabrics to effectively segregate voting power from minority shareholders.

Another method specifically restricted in rule 19C-4 was the use of time phased voting plans. With this method, shareholders were segregated and voting rights distributed based on the length of time the shareholders owned the stock. In 1985, the shareholders of J.M. Smucker Company passed a proposal that gave shareholders 10 votes per share on the condition they had held the share continuously for at least four years. Using this method, the company attempted to get around the NYSE’s dual-class restriction because it did not create two classes of stock but two classes of holders.¹⁹

¹⁷“BDM extends offer to swap new stock issue for common”, *Wall Street Journal*, January 24, 1984.

¹⁸“Shareholders ratify measure creating 2 classes of stock”, *Wall Street Journal*, April 5, 1988.

¹⁹“J.M. Smucker Co. holders consider anti-takeover step”, *Wall Street Journal*, August 1, 1985.

Since SEC rule 19C-4 and the changes in SRO rules, most firms choose to implement the dual-class structure during their initial public offering. In these cases, the management of the firm desires to retain control while also accessing the capital markets to fund positive NPV projects. Smart and Zutter (2008) find 9.6% of 2,622 initial public offerings are done with dual classes of stock during 1990 to 1998. Recent examples of firms who have implemented the structure at their IPO are Google and Rosetta Stone Software.

In some cases the dual class structure is implemented during a spinoff to minimize a tax burden. Before 1998, a Morris Trust enabled a firm to receive favorable tax treatment if they retained 80% of the voting rights of the new firm in a spinoff. For example, in 1997 Hughes Electric was spun off from General Motors and merged with Raytheon. In order to obtain special tax treatment, General Motors had to retain 80% of the voting power in the new firm. This was accomplished by the new firm issuing two classes of stock that allowed General Motors to retain 80% of the voting rights.²⁰

Firms also move to the dual class structure by issuing a stock dividend. For example, on June 12, 1994 Cherry Corporation converted its existing common shares to class B voting shares and four days later the board of directors authorized a stock dividend of one class A non-voting share for each class B share owned. The stock dividend occurred on July 11, 1994 and the next day the firm filed form S-2 to issue additional class A non-voting shares. The new issue concluded on August 19, 1994 and the firm received \$33 million in net proceeds.²¹ By using this method of implementation, the original shareholders maintained control of the firm while at the same time accessing new capital for the firm. Other examples of firms who moved to the dual class structure using this method are Dow Jones & Co, Times Mirror Company, CMI Corporation, and Baker Corporation.

²⁰“For some companies, $A+B=1$.” CFO.com. February 13, 2001.

²¹Cherry Corp., February 28, 1995 Form 10-k (filed May 22, 1995), via Edgar.

1.4 CAPITALIZATION STRUCTURES

While the most common dual-class structure is a 10:1 voting ratio with two classes of stock, firms unbundle voting and cash flow rights in many different ways. In this section, I discuss the various voting, dividend, and convertibility clauses firms use within the dual-class umbrella.

Firms who unbundle cash flow and voting rights are typically referred to as dual-class firms, although it does not necessarily mean the firm has only two classes of stock. Gompers, Ishii, and Metrick (2008), find 28 firms with more than two classes of stock in their eight year sample from 1995 to 2002, this includes at least six firms with four classes of stock. For example Comcast Corporation has three classes of stock: class A with one vote per share, class B with 15 votes per share, and class A special with no voting rights.²² Radio One and Univision Communications are examples of firms with four classes of stock.

Gompers, Ishii, and Metrick (2008) find the most common voting structure setup is the 10:1 voting ratio.²³ Approximately 36% of dual class firms use the 10:1 voting ratio, where the superior voting class receives 10 votes per share and the inferior voting class receives only 1 vote per share. Examples include Google, American Greetings, and Dow Jones. 15% of dual class firms use a voting ratio higher than 10:1. For example, the class A shares of Boca Resorts, a firm controlled by Wayne Heizunga, are entitled to one vote each, while the class B shares are entitled to 10,000 votes each.²⁴ A more modest example is the Coca-Cola Bottling Company where the class B shares are entitled to 20 votes each.²⁵ For 18% of dual-class firms, the voting ratio is less than 10:1. For example, Blockbuster's class B stock is entitled to two votes per share, while the class A stock is entitled to one.²⁶ The remaining 31% of dual-class firms, use proportional voting for directors. In these cases, both classes have one vote per share but the inferior voting class can only elect a minority of the

²²Comcast Corp., December 31, 2008 Form 10-k (filed February 20, 2009), via Edgar.

²³I use the 2002 data for percentages.

²⁴Boca Resorts, June 30, 2004 Form 10-K, (filed September 13, 2004), via Edgar.

²⁵Coca-Cola Bottling Company, December 28, 2008 Form 10-K, (filed March 13, 2009), via Edgar.

²⁶Blockbuster, Inc., January 6, 2008 Form 10-K, (filed March 6, 2008), via Edgar.

directors (typically 25%). An example is the Washington Post. Their minority voting class, class A, is entitled to only vote on 30% of the board of directors.²⁷

Since dual-class firms are unbundling both cash flow and voting rights, not only do they use various voting structures but they may also have disproportionate dividend policies. In the 1980's, the minority voting class was commonly given higher dividends as a conversion sweetener; however, since most firms now become dual class at the initial public offering this is no longer the case. Gompers, Ishii, and Metrick (2008) finds only 13% of dual-class firms give the inferior voting class a higher dividend. The Hershey Company is an example of one of the 13% whose inferior voting class is entitled to a higher dividend. Since their dual-class structure implementation in 1984, the Hershey Company has given inferior voting shareholders a 10% higher dividend than class B superior voting shareholders.²⁸ According to Gompers, Ishii, and Metrick (2008), approximately 86% of dual-class firms pay equal dividends to superior and inferior voting classes. A very small minority of 1% (five firms) actually give the superior class a higher dividend than the inferior class.

Each dual-class firm has at least two classes of stock authorized and issued; however, generally only the restricted voting class is traded publicly. Gompers, Ishii, and Metrick (2008) find that both classes are traded publicly only 15% of the time. Take Google and the New York Times for example, only the restricted voting class is traded publicly; however, Berkshire Hathaway trades both class A and B publicly. Since 85% of dual-class firms trade only one class publicly, oftentimes the bylaws allow superior vote holders to convert their superior voting shares one-to-one for inferior voting shares. This allows superior voting shareholders to maintain liquidity. In addition, many firms setup automatic conversion features if a certain threshold of superior voting shares are converted. For example, if class B holdings fall below 10% they will automatically convert to class A.

²⁷Washington Post, December 28, 2008 Form 10-K, (filed February 26, 2009), via Edgar.

²⁸Hershey Company, December 31, 2008 Form 10-K, (filed February 20, 2009), via Edgar.

1.5 DUAL-CLASS FIRM CHARACTERISTICS

Since only about 7% of firms use the dual-class structure, which firms use the dual-class structure? Are there any unique characteristics about the firms who choose the structure? In this section, I examine dual-class firm characteristics and where applicable how they compare to single class firms.

In the 1970s, Seligman (1986) finds the American Stock Exchange had the least restrictive policy towards dual-class firms and therefore had the highest percentage of dual-class firms (approximately 7%). In addition, he found the NYSE had the least number of dual-class firms due to its restrictive voting rights policy. However since SEC rule 19C-4 was introduced in 1988, the NYSE has increasingly picked up dual-class firms (see Table 1.2). In 2007, I find 11.5% of firms on the New York Stock Exchange have dual class structures, while only 5.1% of AMEX and 5.5% of NASDAQ firms use the structure.

With the implementation of rule 19C-4, firms were restricted in the manner in which they could become dual-class. Since investors knew beforehand what they were buying there were no restrictions placed on initial public offerings. As such, an increasing number of firms now use the dual-class structure at their IPO. Smart and Zutter (2003) examine dual class initial public offerings from 1990 to 1998, and find an increase in the use of the structure. They find between 1994 and 1998, 11% of all firms used the dual-class structure and these 11% made up 33% of the IPO market capitalization.

The dual-class structure separates cash flow and voting rights between stockholders. Thus, the dual-class structure allows for insiders to hold a large percentage of voting rights, while minimizing their cash flow stake. In the case of Google, this wedge between voting and cash flow rights is approximately 40% (58.3% voting, 18.3% cash flow). However, according to the evidence the wedge is not always so large. Gompers, Ishii, and Metrick (2008) find insiders hold on average 60% of voting rights and 40% of cash-flow rights. They find that in only one-third of dual class firms do the insiders maintain a majority of voting rights but do not hold a majority of cash flow rights.

The dual-class structure allows insiders to keep control of the corporation, and based on theory, we should find the dual-class structure in industries in which there are significant benefits to maintaining control. According to Demsetz and Lehn (1985), the amenity potential of a firm's output is one determinant that could lead to increased control or ownership concentration. In line with this, I find a clustering of dual-class firms in the communications and publishing industries (see Table 1.3). In addition, I find the business services, food and kindred products, and chemicals industries have a high number of dual-class firms.

On average, dual-class firms are larger and more highly leveraged than single class firms. Table 1.4 shows the medians for single and dual-class firms for the years 1988, 1992, 1996, 2000, 2004, and 2007. Measured by assets, dual-class firms are significantly larger than single class firms and the difference in size has risen over the years. Also, dual-class firms have significantly larger debt-to-asset ratios than single class firms. Once again, the difference has been significant since 1988 and they hold more than twice the leverage of single class firms in 2007. These results are in line with previous studies such as Gompers, Ishii, and Metrick (2008). Gompers, Ishii, and Metrick (2008) examine dual class and single class firms in 2000 and finds dual class firms to have average mean assets of \$3.1 billion while the single class mean is only \$2.1 billion. In addition, they find dual class firms have on average 35% higher leverage.

In addition to size and leverage, Table 1.4 shows dual-class firms have significantly lower research and development to sales ratios, higher return-to-assets ratios, and significantly lower Tobin's q. Although the analysis is simply univariate, the Tobin's q result does correspond to previous research that shows the dual-class structure has a negative effect on firm value as measured by Tobin's q (Gompers, Ishii, and Metrick (2008) and Claessens, Djankov, Fan, and Lang (2002)). The significant difference in the return-to-assets ratio in 2000, 2004, and 2007 is contrary to previous research on the accounting returns (Smart, Thirumalai, and Zutter (2008)) who find no significant difference in accounting returns between dual and single class firms.

Gompers, Ishii, and Metrick (2008) examine the determinants of dual-class status. They find the most powerful determinant of the dual-class structure is whether a person's name appears in the name of the firm at the initial public offering. They also find four other determinants: whether the firm is in a media industry, the number and size of firms in the same metropolitan area, and the sales of the firm compared to others going public in the same industry.

1.6 EXITING THE STRUCTURE

The dual-class structure is implemented in various ways and is also eliminated in various ways. Firms leave the structure during mergers, acquisitions, and during bankruptcy but they also eliminate the structure in other means.

A common policy implemented with a dual-class structure is the condition that if the voting class drops to a certain percentage of the total number of shares voting for the company then the superior voting shares will automatically convert to inferior voting shares. At Zebra Technologies they had a dual class structure with the standard 10:1 voting ratio, with class B getting 10 votes. Only class A shares traded publicly and shareholders could exchange B for A (1 for 1) at their option. The certificate of incorporation stated that if the outstanding shares of Zebra class B stock cease to represent 10% of the total number of shares, then the Class shares would automatically convert to class A. On July 1, 2003 the class B shares dropped below 10% and the subsequent class B shares were automatically converted, eliminating the dual class structure at the company.²⁹

Some firms exit the dual class structure when the majority shareholder sales or exchanges their superior voting shares. In 2005, the Taubman family exchanged their 14 million shares of Sotheby's class B (superior voting) stock for \$168 million in cash and 7.1 million Class A shares. The family did not own all of the class B shares (approximately 4 million held by others); however, the firm had a clause that if the voting power of the class B shares fell below

²⁹Zebra Technologies, December 31, 2003 Form 10-K, (filed February 27, 2004), via Edgar.

50% they would automatically be converted to class A shares. When the Taubman family converted their shares, the threshold was passed and the dual-class structure was eliminated. According to the company, they believe “the simplified share structure will enhance share liquidity and increase the Company’s strategic and financing flexibility.”³⁰

In some cases, firms exit the dual-class structure by moving to the standard single class structure through a shareholder proposal. This is commonly referred to as a unification. Howell (2009) finds 61 dual-class firms unified their share classes during the years 1992-2006. In most cases, the board meets and examines the costs and benefits of moving to a single class structure. Once approved by the board, the proposal is put to a shareholder vote. The most common conversion rate is for both superior and inferior voting shares to receive one share of the new common stock.

GameStop Corporation performed a unification in February 2007. GameStop’s dual-class structure consisted of Class A shares with one vote per share and class B shares with ten votes per share. Both share classes were traded publicly; however, the class B shares were not convertible to class A shares.³¹ In the simplification of the share structure each class B shareholder received a class A share.³² In the firm’s proxy statement, they state “the Board has determined that it is in the best interests of the Company and its stockholders to convert the class B common stock into class A common stock to simplify its capital structure, improve corporate governance by reducing the appearance of being a closely-held company, reduce the expenses and confusion associated with maintaining two separate classes of common stock and improve liquidity and trading volume of outstanding shares.”³³

³⁰Sotheby’s Holdings Inc., December 31, 2005 Form 10-K, (filed March 16, 2006), via Edgar.

³¹In their proxy statement, they had approximately 46 million shares of class A stock held by 61 stockholders of record, and approximately 30 million shares of class B stock held by 1,363 stockholders. The class B stock made up 39.4% of the cash-flow rights and 86.7% of the voting rights.

³²GameStop Corporation, February 2, 2008 Form 10-K, (filed April 2, 2008), via Edgar.

³³GameStop Corporation, December 29, 2006, Form DEF 14A, via Edgar.

1.7 ALTERNATIVE CONTROL MECHANISMS

The dual class structure allows a firm's blockholders to maintain control of the firm through voting rights while holding less cash-flow rights than would be required to typically keep control. This type of mechanism is referred to as a controlling minority structure (CMS). Other controlling minority structures are pyramids and cross ownership.

With a pyramid structure, a controlling stake is held in a holding company, which in turn holds a controlling stake in another firm. For example, a controlling stakeholder holds a 50% plus one stake in company A and company A holds a 50% plus one stake in company B, then the controlling stakeholder maintains control of company B with only a 25% equity stake in the firm. This pyramid can continue for multiple levels and can reach multiple firms. For example, La Porta, Lopez-de Silanes, and Shleifer (1999) show how the Wallenberg family, in Sweden, controls ABB, the fourth largest firm in Sweden by market capitalization by only holding a 5% cash flow stake. Pyramid structures are not frequently used in the United States; however, they are commonly used in countries outside of the United States.

Another alternative to maintain control is cross-ownership. Cross-ownership occurs when a firm owns portions of other firms in which it does business. In this way, the management group can maintain tight control of the firm through its relationships with its other companies. In the United States, cross-ownership is not used as frequently, due to legal restrictions. For example, there is currently a restriction on newspaper-broadcast cross-ownership, which the FCC attempted to eliminate but Congress nullified.

One way the dual class structure allows insiders to maintain control is by its effective anti-takeover property. With the dual class structure in place, it makes for an effective anti-takeover mechanism by allowing the controlling group to veto any takeover proposals. Other anti-takeover mechanisms that are used include poison pills and leveraged buyouts. A poison pill seeks to dissuade buyers by implementing detrimental plans if taken over. For example, a shareholder rights plan is a type of poison pill that will dilute the bidder's ownership percentage if a takeover occurs. The dilution occurs by automatically increasing the previous

shareholders shares. A leveraged buyout occurs when a management group takes a firm private by using debt.

1.8 FINANCIAL ECONOMIC THEORY

In the United States, firms typically have a single class of common stock. An owner of this common stock holds a right to a proportion of the residual cash flows of the firm based on his/her proportion of ownership. Since the stockholder has a right to these residual cash flows, he/she has incentive to ensure there will in fact be residual cash flows. In other words, it is in the stockholder's best interest to ensure the firm satisfies obligations to stakeholders and provides a desirable product, while at the same time minimizing cost and thus maximizing residual cash flows. It is for this reason that the residual claimants are given the ability to monitor the firm through the use of voting (Alchian and Demsetz 1972).

With the bundling of cash flow and voting rights, the stockholder is given a mechanism to affect residual cash flows. However, how and when are residual cash flows paid? They are paid through dividends and at the liquidation of the firm. While dividends may be paid every quarter (if they are paid at all), liquidation cash flow payments only occur when it is necessary for the firm to liquidate. So for the residual claimant, their rights must go beyond cash flow and voting rights, they must have the right to sell their claim (Alchian and Demsetz 1972).

Under a single class structure, residual claimants have all three rights, the right to cash flows, voting, and selling, and these rights are equal among all stockholders based on their proportion of stock ownership. In a firm with a dual class structure, voting rights and cash flow rights are segregated based on the class of share owned by the stockholder. One class may have ten votes per share, while the other class may have one or even no votes per share. By deviating from the standard one-share, one-vote structure, firms lose the binding link between cash flows and monitoring, and can restrict the shareholder from receiving full value for his or her share.

This separation of cash flow and voting rights leads to an exacerbation of the problems associated with the separation of ownership and control in firms with a single class structure. As ownership dispersion increases those who own the firm tend to be different than those who control the firm (managers). This separation leads to conflicts between the agent (manager) and the principal (owner) and agency costs are incurred (Berle and Means (1932), Jensen and Meckling (1976)). Since the agent does not have a cash flow stake, he/she has no inherent desire to maximize residual cash flows and takes actions to secure their positions.

In a similar manner, firms with a dual class structure have a separation between those with voting control and those with cash flow rights. This leads to conflicts of interests and agency costs (Masulis, Wang, and Xie (2008)). Those with voting control seek to retain their control through entrenchment. At the same time, they have less interest in the cash flows of the firm, therefore they are more likely to expropriate other shareholders (those with cash flow rights). On the other hand, shareholders with cash flow rights seek to maximize the value of these cash flows without regard to the control of the firm. Thus leading them many times to be in direct conflict with voting control holders on issues such as mergers, takeovers, and directors.

With the agency problems associated with ownership dispersion, why allow it in the first place? During a firm's growth cycle, there reaches some point in time where the firm's available capital, either through retained earnings or the firm's owners, is not sufficient to finance future growth. It then becomes necessary for the firm to reach out to the capital markets, through the use of debt and external equity. In the same way, firms choose to issue restricted voting equity so they may retain control of the firm while also raising capital to finance future projects. Also, a firm's owners may have sufficient capital to finance future growth but may choose to withhold funds so they can diversify their investments.

According to DeAngelo and DeAngelo (1985), the dual class structure is an "intermediate organizational structure which fits somewhere between the polar cases of the dispersed-ownership public corporation and the closely held firm." With this intermediate organiza-

tional structure, the dual class structure faces agency problems not only between owners and managers, but between owners of voting and cash flow rights. This leads to trade-offs between the benefits of control and monitoring and the costs of entrenchment and expropriation.

1.8.1 EMPIRICAL FINDINGS

With the trade-offs facing firms using the dual-class structure, the first question is how does the structure affect shareholders. Does the implementation of the structure lead to a decrease in stock price due to the structure's entrenchment and expropriation properties or do stockholders view the structure as just simply a mechanism the firms uses to fund growth? Partch (1987) examines 44 U.S. recapitalizations between 1962 and 1984 and determines there is no significant change in shareholder wealth due to the dual class structure's implementation. Jarrell and Poulsen (1988) extend the U.S. sample to 94 firms and finds significant negative abnormal returns (-0.82%) for firms recapitalizing. In the most comprehensive study to date, Dimitrov and Jain (2006) use a sample of 178 recapitalizations from 1979 to 1998 and find a slightly positive three-day abnormal return (-0.06%) that is not significant.

The dual-class structure introduces new "agency problems" into the firm by separating ownership between superior voting and inferior voting holders. Masulis, Wang, and Xie (2008) finds four specific areas where the separation of voting and cash-flow rights incur costs at the expense of inferior voting shareholders.³⁴ Based on these additional costs, we would assume firm performance would be worse at dual-class firms when compared to single class firms. However, some evidence points to an increase in performance after the implementation of the structure. Lehn, Netter, and Poulsen (1990) find positive industry-adjusted operating performance for firms who recapitalized between 1978 and 1987. Also, Dimitrov and Jain (2006) find holders of dual-class stock firms earn an average abnormal return of 23.11% in the four years following recapitalization.

³⁴These are corporate cash valued less to outside stockholders, CEOs receive higher compensation, managers are more likely to make value-destroying acquisitions, and capital expenditures contribute less to shareholder value.

However, in studies using Tobin's Q as a proxy for firm value results tend to show a negative affect of firm value as the wedge between voting and cash flow rights increases. Based on a sample of U.S. dual-class firms between 1995 and 2002, Gompers, Ishii, and Metrick (2008) find firm value is positively associated with insiders' cash-flow rights and negatively related to insiders' voting rights when using single-stage regressions. In addition, they find firm value negatively associated with the wedge between voting and cash flow rights. When they control for endogeneity, estimates are similar to the single-stage regressions; however, the significance is lower. Similarly, Villalonga and Amit (2006) find control enhancing mechanisms, such as dual-classes, pyramids, and cross-ownership, have a negative and significant effect on firm value for S & P 500 firms during 1994 to 2000. Consistent with this result, Villalonga and Amit (2008) find the wedge between voting and cash-flow rights is negatively associated with firm value for family firms; however, the result is not significant.

The empirical evidence to date shows that U.S. dual-class firms who unify their share classes have positive announcement effects. Smart, Thirumalai, and Zutter (2008) examine the unification announcement effects of 37 firms who chose to unify their share classes. They find a positive and significant five-day announcement effect of 2.7%. Consistent with Smart, Thirumalai, and Zutter (2008), Howell (2009) examines 61 unification events between 1992 and 2006 finds a positive and significant announcement effect for restricted voting and shares (1.85%) and a total significant effect of 2.23% when including both restricted and superior voting classes.

1.8.2 STRUCTURE USED TO EXAMINE THEORIES

Since the dual-class structure provides an "extreme form" of corporate governance (Gompers, Ishii, and Metrick 2008). The structure provides a suitable testing ground for many theories and ideas in corporate finance.

Barclay and Holderness (1989) introduce the idea that if all shareholders receive benefits directly proportional to their ownership stake, sales of large blocks of stock should be priced

at the same price as smaller sales of stock. They hypothesize that large blocks would trade at a premium if there are “private benefits” that accrue to these large blockholders. They examine 63 block trades and find an average premium of 20% which questions the assumption that all stockholders are homogeneous and benefits are proportional to ownership. They attribute this premium large blockholders of private benefits of control. Zingales (1994) and Zingales (1995) uses the unique property of dual-class shares to expand the research on private benefits of control. In essence the premium that superior voting shares receive over inferior voting shares is made up at least partly by the private benefits of control that accrue to superior vote holders. Based on this technique, studies such as Doidge (2004) and Nenova (2003) examine the value of a vote and private benefits of control across countries.

Are institutional investors concerned about corporate governance within a firm or do they simply chase past returns? Li, Ortiz-Molina, and Zhao (2008) examine institutional investment in dual-class firms and find that institutional investment is significantly lower in dual-class firms than in the standard single-class firm. Also, they find institutional investment increases when dual-class firms unify their share classes. This evidence demonstrates that a firm’s corporate governance matters affects the decisions of institutional investors.

1.9 CONCLUSION

The dual-class structure allows the separation of voting and cash-flow rights among owners. It allows blockholders to maintain control while accessing the external equity market, but can lead to expropriation of minority shareholders and entrenchment. Although the structure has faced opposition over the years, from Mr. Ripley in the 1920s to SEC Rule 19C-4 in the late 1980s, the structure continues to be used in 7.4% of publicly traded firms in the United States and has proven to be a viable corporate governance structure.

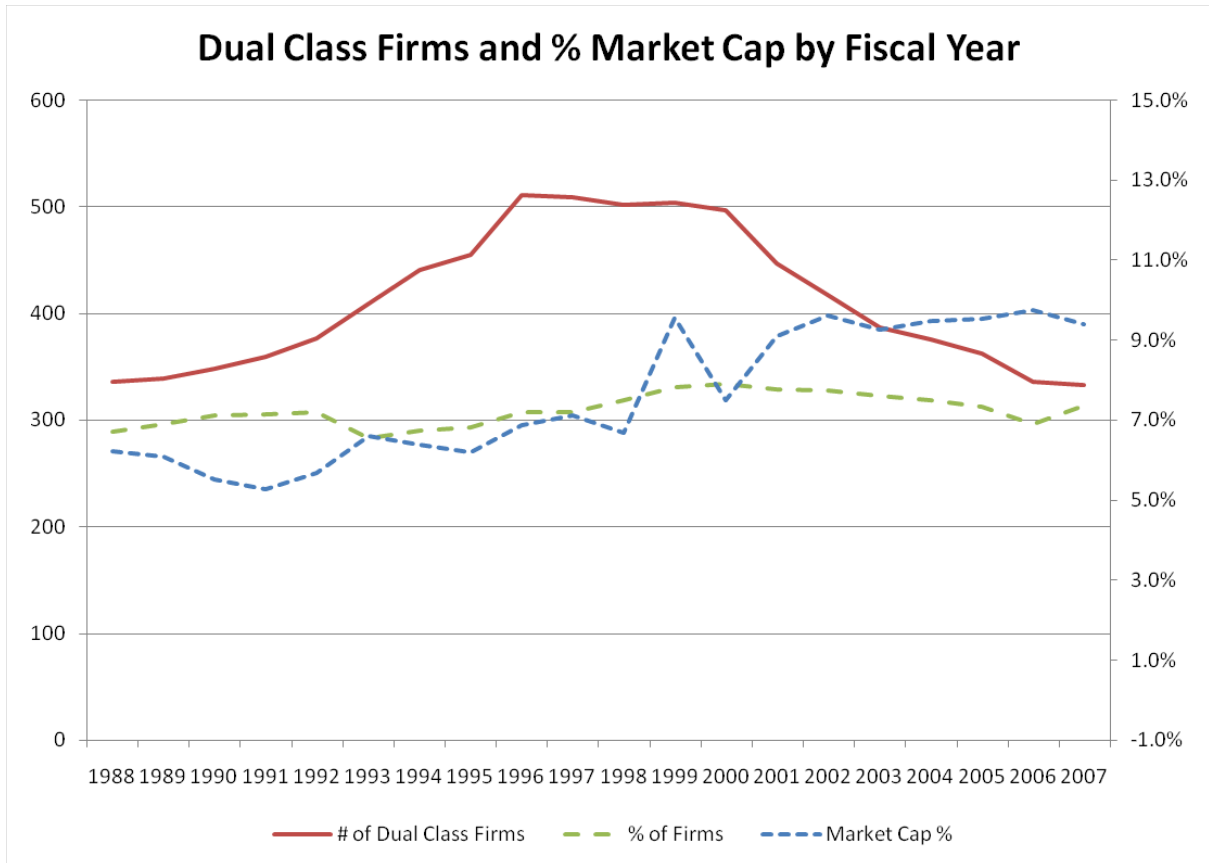


Figure 1.1: Dual Class Firms and % Market Capitalization by Year (1988-2007)

Table 1.1: Number of Dual Class Firms and % Market Capitalization by Year

This table shows the number of firms by fiscal year. Dual-class firms are identified by the process described in Appendix C. Market capitalization figures are based on the closing fiscal year price (PRCCF) and number of common shares outstanding (CSHO) reported by CRSP/Compustat. For dual class firms, the number of common shares outstanding is based on the sum of all classes. Data comes from the CRSP/Compustat Fundamentals Annual database.

Year	Number of Firms			Market Capitalization (Billions)		
	All	Dual Class	Percentage	All	Dual Class	Percentage
1988	5,013	336	6.7%	\$ 2,427	\$ 150	6.2%
1989	4,911	339	6.9%	\$ 2,926	\$ 178	6.1%
1990	4,893	348	7.1%	\$ 2,721	\$ 150	5.5%
1991	5,030	359	7.1%	\$ 3,589	\$ 189	5.3%
1992	5,250	377	7.2%	\$ 3,990	\$ 227	5.7%
1993	6,256	409	6.5%	\$ 4,605	\$ 304	6.6%
1994	6,555	441	6.7%	\$ 4,568	\$ 291	6.4%
1995	6,685	455	6.8%	\$ 6,170	\$ 382	6.2%
1996	7,112	511	7.2%	\$ 7,517	\$ 517	6.9%
1997	7,079	509	7.2%	\$ 9,926	\$ 705	7.1%
1998	6,697	502	7.5%	\$ 11,958	\$ 797	6.7%
1999	6,461	504	7.8%	\$ 15,018	\$ 1,435	9.6%
2000	6,298	497	7.9%	\$ 14,961	\$ 1,122	7.5%
2001	5,760	447	7.8%	\$ 12,691	\$ 1,154	9.1%
2002	5,399	417	7.7%	\$ 10,037	\$ 965	9.6%
2003	5,096	387	7.6%	\$ 12,850	\$ 1,190	9.3%
2004	5,025	376	7.5%	\$ 14,330	\$ 1,360	9.5%
2005	4,945	362	7.3%	\$ 14,836	\$ 1,415	9.5%
2006	4,871	336	6.9%	\$ 16,493	\$ 1,608	9.8%
2007	4,530	333	7.4%	\$ 16,686	\$ 1,566	9.4%
Total	113,866	8,245	7.2%			
Firms	13,971	1,096	7.8%			

Table 1.2: Percentage of Dual Class Firms by Exchange

This table shows the percentage of firms in each exchange that are dual class. Dual-class firms are identified by the process described in Appendix C. For example in 2000, 12.3% of all NYSE firms had dual classes of stock. The firm's exchange is identified by the exchange (EXCHG) code in the CRSP/Compustat Fundamentals Annual database.

Year	NYSE	AMEX	NASDAQ	OTC
1988	6.7%	11.1%	7.5%	5.1%
1989	6.9%	11.7%	7.1%	5.7%
1990	7.5%	12.5%	6.7%	5.9%
1991	7.9%	12.0%	7.4%	5.0%
1992	8.2%	11.2%	7.3%	5.0%
1993	8.0%	10.0%	6.1%	4.9%
1994	8.1%	11.0%	6.1%	5.3%
1995	8.4%	10.6%	6.2%	5.4%
1996	10.0%	9.6%	6.2%	5.6%
1997	10.3%	9.3%	6.1%	5.6%
1998	11.0%	8.7%	6.1%	6.0%
1999	12.1%	8.6%	6.1%	6.4%
2000	12.3%	8.7%	6.3%	6.4%
2001	11.9%	8.9%	6.1%	6.3%
2002	11.9%	7.8%	6.0%	6.2%
2003	11.5%	7.6%	5.8%	6.3%
2004	11.4%	7.1%	5.7%	5.9%
2005	11.4%	6.3%	5.6%	4.9%
2006	11.2%	5.6%	5.2%	3.9%
2007	11.5%	5.1%	5.5%	5.6%

Table 1.3: Dual Class Firms by Industry and Year

This table shows the number of dual class firms in each two-digit SIC code in the years 1988, 1992, 1996, 2000, 2004, and 2007. Dual-class firms are identified by the process described in Appendix C. Data comes from the CRSP/Compustat Fundamentals Annual database.

SIC	Description	1988	1992	1996	2000	2004	2007
01	Agricultural Production - Crops	2	3	2	3	2	
02	Agricultural Production Livestock and Animal Specialties			1	1	1	1
07	Agricultural Services	1					
10	Metal Mining	1	3	3	2	1	
12	Coal Mining				1		
13	Oil and Gas Extraction	8	12	7	8	7	13
14	Mining and Quarrying Of Nonmetallic Minerals, Except Fuels				1	1	1
15	Building Construction - General Contractors and Operative Builders	3	5	7	5	3	3
16	Heavy Construction Other Than Building Construction - Contractors	2	1	1			
17	Construction - Special Trade Contractors	3	3	3	3	2	1
20	Food and Kindred Products	22	19	23	21	19	17
21	Tobacco Products			2			
22	Textile Mill Products	9	10	7	7	3	3
23	Apparel and Other Finished Products Made From Fabrics and Similar Materials	3	2	4	6	5	4
24	Lumber and Wood Products, Except Furniture	1	2	2	2	1	1
25	Furniture and Fixtures	3	4	4	5	4	3
26	Paper and Allied Products	3	3	5	4	2	2
27	Printing, Publishing and Allied Industries	20	26	24	18	17	15
28	Chemicals and Allied Products	21	20	24	22	16	15
29	Petroleum Refining and Related Industries	2	2	2			
30	Rubber and Miscellaneous Plastics Products	4	7	7	7	6	2
31	Leather and Leather Products	2	3	5	5	5	4
32	Stone, Clay, Glass and Concrete Products	3	2	2	2	1	1
33	Primary Metal Industries	3	3	9	8	1	2
34	Fabricated Metal Products, Except Machinery and Transportation Equipment	4	3	8	7	7	4
35	Industrial and Commercial Machinery and Computer Equipment	15	18	25	17	12	9
36	Electronic and Other Electrical Equipment and Components, Except Computer Equipment	25	26	28	27	19	16
37	Transportation Equipment	9	9	13	12	9	7
38	Measuring, Analysing, Controlling Instruments; Photographic, Medical & Optical Goods; Watches & Clocks	16	16	15	10	6	6
39	Miscellaneous Manufacturing Industries	5	5	6	5	5	5
40	Railroad Transportation			2	3	2	1
41	Local and Suburban Transit and Interurban Highway Passenger Transportation						1
42	Motor Freight Transportation and Warehousing		1	5	6	6	2
44	Water Transportation			1		1	2
45	Transportation By Air	2	1	3	1	1	1
46	Pipelines, Except Natural Gas					2	2
47	Transportation Services	1	1	1	2	1	2
48	Communications	29	31	60	70	52	44
49	Electric, Gas and Sanitary Services	7	8	6	7	5	7
50	Wholesale Trade - Durable Goods	8	6	14	12	11	9
51	Wholesale Trade - Nondurable Goods	7	6	9	8	4	4
52	Building Materials, Hardware, Garden Supply and Mobile Home Dealers			2	1		
53	General Merchandise Stores	3	5	5	4	4	3
54	Food Stores	8	11	11	6	3	2
55	Automotive Dealers and Gasoline Service Stations			3	5	5	4
56	Apparel and Accessory Stores	3	4	8	6	5	5
57	Home Furniture, Furnishings and Equipment Stores	2	2	2	1	2	1
58	Eating and Drinking Places	3	5	5	2	4	3
59	Miscellaneous Retail	4	10	14	13	7	7
60	Depository Institutions	8	7	14	13	9	10
61	Nondepository Credit Institutions	1	5	8	5	4	5
62	Security and Commodity Brokers, Dealers, Exchanges and Services	5	5	4	14	12	14
63	Insurance Carriers	10	11	14	9	12	10
64	Insurance Agents, Brokers and Service	2	3	4	5	3	2
65	Real Estate	3	1	2	2	4	3
67	Holding and Other Investment Offices	2	3	5	4	2	3
70	Hotels, Rooming Houses, Camps and Other Lodging Places		1	2	3	4	
72	Personal Services		2	4	3	2	1
73	Business Services	16	15	27	44	30	28
75	Automotive Repair, Services and Parking			3	2		
76	Miscellaneous Repair Services			1			
78	Motion Pictures	9	8	8	10	6	6
79	Amusement and Recreation Services	3	3	6	10	8	6
80	Health Services	4	10	4	3	3	4
82	Educational Services	1	1	2	4	2	1
83	Social Services						1
87	Engineering, Accounting, Research, Management and Related Services	4	3	9	7	4	3
99	Nonclassifiable Establishments	1	1	4	3	1	1
		336	377	511	497	376	333

Table 1.4: Medians for Single and Dual Class Firms by Year

This table shows the medians, difference in medians, and the p-value for single and dual class firms in the years 1998, 1992, 1996, 2000, 2004, and 2007. Dual-class firms are identified by the process described in Appendix C. Data comes from the CRSP/Compustat Fundamentals Annual database.

	1988	1992	1996	2000	2004	2007
Assets						
Dual Class	139.5	204.3	265.5	537.0	739.5	984.1
Single Class	55.3	71.7	108.6	188.6	311.9	483.7
Difference	84.2	132.6	156.9	348.4	427.6	500.5
<i>p-value</i>	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001
Debt / Assets						
Dual Class	19.5%	17.8%	17.2%	16.8%	15.9%	17.4%
Single Class	12.7%	9.4%	6.7%	6.7%	7.5%	8.3%
Difference	6.9%	8.3%	10.6%	10.1%	8.4%	9.1%
<i>p-value</i>	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001
Sales Growth						
Dual Class	11.4%	5.8%	12.1%	11.8%	9.1%	7.7%
Single Class	11.5%	7.3%	12.3%	12.8%	10.2%	9.0%
Difference	-0.1%	-1.5%	-0.2%	-0.9%	-1.1%	-1.3%
<i>p-value</i>	0.9895	0.1473	0.6845	0.9369	0.3086	0.0885
Tobin's q						
Dual Class	1.28	1.32	1.38	1.17	1.41	1.40
Single Class	1.23	1.42	1.63	1.30	1.71	1.60
Difference	0.05	-0.09	-0.24	-0.13	-0.30	-0.20
<i>p-value</i>	0.7997	0.0008	<.0001	<.0001	<.0001	<.0001
Return on Assets						
Dual Class	3.08%	2.48%	2.81%	1.72%	3.16%	2.81%
Single Class	2.41%	2.40%	2.03%	0.92%	1.81%	1.92%
Difference	0.67%	0.08%	0.78%	0.80%	1.35%	0.89%
<i>p-value</i>	0.0806	0.2189	0.0593	0.0002	0.0072	0.0897
Capital Expenditures / PPE						
Dual Class	14.2%	10.5%	13.7%	13.0%	7.7%	10.5%
Single Class	12.2%	10.6%	15.2%	14.7%	9.1%	11.5%
Difference	2.0%	-0.1%	-1.5%	-1.7%	-1.3%	-1.0%
<i>p-value</i>	0.0338	0.2959	0.0649	0.241	0.0154	0.2502
R&D / Sales						
Dual Class	2.61%	1.75%	1.58%	1.57%	1.64%	1.59%
Single Class	3.51%	3.42%	4.68%	8.43%	7.26%	6.84%
Difference	-0.91%	-1.67%	-3.10%	-6.86%	-5.62%	-5.26%
<i>p-value</i>	0.2027	<.0001	<.0001	<.0001	<.0001	<.0001

CHAPTER 2

NO MORE SHARE CLASSES: A STUDY OF U.S. DUAL-CLASS STOCK UNIFICATIONS

2.1 INTRODUCTION

In a firm with a single class of common stock, conflicts of interests arise due to the separation of ownership and control between the owner-manager of the firm and its outside stockholders (Jensen and Meckling 1976). The owner-manager may shirk his responsibility to outside stockholders by exerting less than maximum effort or by reaping pecuniary or non-pecuniary benefits that are not in the best interests of outside stockholders. On the other hand, outside stockholders may not monitor the firm, free riding on others. In order to mitigate the shirking which arises from both parties due to the separation of ownership and control, Alchian and Demsetz (1972) suggest owners maintain a bundle of five key rights and with those rights transfer decision making/monitoring authority to a smaller group, the board of directors. These five key rights are the right to residual cash flows, the right to alter the membership of the board of directors (voting rights), the right to observe input behavior, the right to be the central party common to all contracts with inputs, and the right to sell these rights. In the typical single class stock structure, each share of stock holds the same right to residual cash-flows and voting. However, under a dual class stock structure, these two key ownership rights are unbundled. In some cases, one class may hold complete control of the voting rights, whereas in others they may hold a disproportionate share of the vote. For example, Google's dual class structure consist of approximately 237 million class A shares, each with the right to one vote, and approximately 77 million class B shares, each with the right to ten votes.¹

¹From Google's 2008 Proxy statement (DEF-14A).

So while the class B shares hold only 25% of the cash-flow rights, they hold 76% of the voting rights.

This unbundling of cash flow and voting rights further exacerbates the separation of ownership and control problem. In a single class firm, there is a trade-off between increased incentives which arise from ownership concentration (Jensen and Meckling (1976), Schleifer and Vishny (1997)) and the risk of entrenchment (Stulz (1988), Morck, Shleifer, and Vishny (1988)). In a dual class firm, the trade-offs are more obvious and extreme. Those with control may become entrenched while at the same time have lower incentives due to reduced cash-flow ownership (Claessens et al. (2002), Gompers, Ishii, and Metrick (2008)). This provides those in control with increased opportunities to exploit (Gilson (1987)) and extract private benefits from minority shareholders (Barclay and Holderness (1989), Nenova (2003)). The dual class structure also acts as an effective antitakeover mechanism, preventing minority shareholders from reaping sizable takeover premiums (Seligman (1986), Jarrell and Poulsen (1988), Gompers, Ishii, and Metrick (2008)). In line with the entrenchment and private benefits extraction theories, studies have found negative announcement effects at the implementation of the dual class structure (Jarrell and Poulsen (1988)), negative operating performance after the implementation of the structure (Mikkelson and Partch (1984)), and negative firm value effects due to the structure (Gompers, Ishii, and Metrick (2008), and citeasnounvillalonga:ffc).

On the other hand, the structure allows those with controlling interest and limited funds to retain control while also accessing the equity markets for additional financing (DeAngelo and DeAngelo (1985)). This may be especially beneficial for firms who require large amounts of organization-specific human capital, whose projects are difficult for outsiders to value due to high levels of information asymmetry, or for firms with high amenity potential, like media outlets (Demsetz and Lehn (1985)). In line with this research, studies have found positive announcement effects to the implementation of the structure (Partch (1987), Ang and Megginson (1989), Cornett and Vetsuypens (1989)), positive industry-adjusted operating performance after the structure's implementation (Lehn, Netter, and Poulsen (1990)), and

positive long-term abnormal stock performance following the implementation (Dimitrov and Jain (2006)).

Despite the mixed empirical results, many in the investment community voice their discontent with the dual class structure. Gary Hawton, chief executive of Meritus Mutual Funds, states “It’s difficult for a board to say that they are being responsive to the needs of all shareholders when they appear to bow down to the needs of the shareholder with the multiple votes.”² While discussing the pricing of Google’s IPO, Peter Chapman, senior vice-president of TIAA-Cref, stated “there should be a substantial discount for corporate governance deficiencies. This [dual class] structure effectively disenfranchises outside shareholders.”³

While the dual class structure potentially allows a family or institution to maintain control of the firm indefinitely, there are occasions where dual class firms eliminate the disparate voting rights and move to one vote per share. This recapitalization to a single share class is commonly referred to as a “unification” in the literature.⁴ In this paper, I add to the literature by using 61 American dual class share unifications to distinguish between the value recovery and optimal structure hypotheses. Under the value recovery hypotheses, a firm eliminates its dual class structure because the structure has reduced firm value (Villalong and Amit (2008), and Gompers, Ishii, and Metrick (2008)) and has hampered operating performance (Mikkelsen and Partch (1984)). Under the optimal structure hypothesis, a firm eliminates its dual class structure because the firm has become inherently different from other dual class firms.

The rest of the paper is organized as follows. In Section 2, I review the extant literature on unifications and layout the predictions of the value recovery and optimal structure hypotheses. In Section 3, I discuss the unification sample, the control sample, and the matching procedure. In section 4, I review the results and Section 5 concludes.

²“Dual class shares breed resentment”, *Canadian Press*, May 30, 2005.

³“U.S. Fund Criticizes Google’s IPO Structure”, *Financial Times*, Simon London, May 4, 2004.

⁴In this study, the term ‘recapitalization’ refers to the introduction of a dual class stock structure, while a ‘unification’ refers to the elimination of a dual class stock structure.

2.2 UNIFICATIONS: EXTANT LITERATURE AND HYPOTHESES

Like the 1920s, dual class firms are again receiving pressure to eliminate their unequal voting policies.⁵ Institutional investors, unions, and large minority shareholders are calling on dual class firms to move to one vote per share. The *New York Times* has been under pressure from institutions, such as Morgan Stanley, to eliminate its dual class structure. Google, whose recent IPO was one of the most anticipated in recent history, is criticized in the press for having a dual class structure and was ranked lower than all S&P 500 firms for its corporate governance structure by Institutional Shareholder Services.⁶ The dual class structure of Dow Jones received criticism during the takeover bid by Rupert Murdoch because of the control left in the hands of the Bancrofts, who held approximately 64% of the voting power and only 25% of the cash-flow rights.

Since 1992, at least 61 American dual class firms have chosen to eliminate their dual class stock structures and move to one-vote per share.⁷ In a typical unification, each restricted and superior voting share is exchanged for one share of the new common stock. In some cases, the superior voting shares are exchanged at a higher rate than the restricted voting shares.⁸ For example, the superior voting shares (SVS) of Readers' Digest Association received 1.22 shares of the new common stock, whereas the restricted voting shares (RVS) received only 1 share each. A special stockholder meeting is usually held after receiving board approval and a proxy statement is issued outlining details of the planned unification. In addition, the proxy usually outlines reasons why the firm is eliminating the structure. The two most common reasons are to eliminate potential investor confusion (including calculation of market capitalization), and to increase the investor base and liquidity of the firm's shares. As an

⁵"Our Company Right or Wrong - Family Capitalism", *The Economist*, March 17, 2007.
"Class Struggle", *CFO Magazine*, Andrew Osterland, October 1, 2001.

⁶Dow Jones Newswires - Google lands at bottom of ISS Governance Ranking, August 23, 2004.

⁷In this study I do not include firms which moved to one share class automatically based on a conversion of superior voting shares or a minimum threshold.

⁸This occurs in approximately 20% of the sample

example, see Appendix A which outlines the time-line and key information in regards to a unification at E-Z-EM.

The removal of the dual class structure leads to interesting questions. Since there are private benefits from control, why would the majority vote holders be willing to give up control in moving to one vote per share? If there are mixed results for the dual class implementation announcement, what is the stock market's reaction to the unification announcement? Considering dual class studies such as Dimitrov and Jain (2006), Lehn, Netter, and Poulsen (1990), and Gompers, Ishii, and Metrick (2008), does the unification have an effect on firm value and performance?

citeseerx.ist.psu.edu/viewdoc/summary?doi=10.1.1.1.1.1.1, and Smart, Thirumali, and Zutter (2008) examine total announcement effects (market capitalization) and find positive abnormal returns around the announcement date.⁹ Dittman and Ulbricht (2008) examine the returns for the share classes, separately and jointly, and find positive announcement returns of 5% (RVS) and 2.5% (SVS) for the two-day event window (-1 to 0). In this study, I extend the literature by separately examining the RVS and SVS announcement returns for American dual class unifications.

Hauser and Lauterbach (2001) examine the price of vote in Israeli unification, while Bigelli, Mehrotra, and Rau (2008) look at 46 Italian unifications and suggests majority shareholders take advantage of minority shareholders during the unification. Dittman and Ulbricht (2008) also find ownership structure and changes in liquidity explain a significant portion of the cross-sectional variation in abnormal returns. Ehrhardt, Kuklinski, and Nowak (2005) find an increase in share liquidity for German firms after the unification. In this study, I extend the literature by examining how the unification affects share liquidity in American firms.

Maury and Pajuste (2007) observe 105 European unifications to examine the determinants and consequences of unifications. They find that firms with smaller wedges (voting - cash flow rights), higher presence of financial investors, and higher frequency of cross-listing are more

⁹Ang and Megginson's (1989) result may not be significant. The result is found in the text of the paper and the significance is never discussed.

apt to unify their shares. In this study, I perform the first American analysis of determinants and consequences of unifications. For further detail on the prior literature, refer to Table 2.1.

The following two subsections outline the predictions of the value recovery and optimal structure hypotheses.

2.2.1 VALUE RECOVERY HYPOTHESIS

With a dual class structure in place, a family member or a member of management may effectively maintain control of the firm while owning a small percentage of the ownership rights. This concentration of control gives the holder the power to effectively veto any potential takeover or threat to management. Seligman (1986) states “Few takeover defenses are more likely to be successful than dual class capitalization.” In fact, it was during the active takeover market of the 1980s that the structure became more common. While the structure guards against takeovers, it also prevents minority shareholders from reaping the benefits of an average takeover premium of approximately 16-20%.¹⁰ Jarrell and Poulsen (1988) examine 94 dual class recapitalizations and find a significantly negative abnormal return around the announcement of a dual class recapitalization. They attribute this result to the dual class structures’ anti-takeover property.

In addition, this entrenchment allows the holder to influence decisions and exert control in firms which would not be possible without the dual class structure. Barclay and Holderness (1989) document these private benefits of control by examining premiums assigned in sales of large blocks of stock. Masulis, Wang, and Xie (2008) identify four sources of extraction of benefits in dual class firms that lead to depressed firm value. In a study of U.S. dual-class firms, Gompers, Ishii, and Metrick (2008) find firm value decreases as the wedge between control and cash-flow rights increases and citeasnounvillalonga:ffc find the dual class structure has a negative impact on family firm values (industry-adjusted Tobin’s Q).

Based on the value recovery hypothesis, I expect:

¹⁰Andrade, Mitchell, and Stafford (2001) and Boone and Mulherin (2007)

- a positive stock price reaction to the unification announcement due to the removal of the anti-takeover mechanism and the potential reduction in extraction of private benefits of control (Masulis, Wang, and Xie (2008) and Gompers, Ishii, and Metrick (2008))
- an increase in firm value and operating performance after the unification due to the reduction in extraction of private benefits of control and the removal of the dual class structure (Masulis, Wang, and Xie (2008), Gompers, Ishii, and Metrick (2008), and citeasnounvillalonga:ffc).

2.2.2 OPTIMAL STRUCTURE HYPOTHESIS

The single class stock structure does not optimally fit the needs of every firm. In some firms, the dual class structure allows management to make long-term investment decisions without risk of scrutiny from outside monitors who have insufficient information. The structure allows control to remain among the family or control group, while allowing for the inflow of additional capital to finance positive net present value projects. DeAngelo and DeAngelo (1985) suggest the dual class structure is an “intermediate organizational form.” Certain firms which require a certain level of control but who need additional external funding to finance positive net present value projects may find the dual class structure optimal. In other words, there are specific firm characteristics that optimally align the dual class structure with the needs of the firm. In fact, when comparing firms who introduced a dual class structure to firms who use leveraged buyouts, Lehn, Netter, and Poulsen (1990) find the firms that recapitalize with dual classes have greater growth opportunities and routinely access the equity markets after the recapitalization.

During a firm’s life cycle, firm characteristics can shift and the same firm who found the dual class structure optimal at one point in time may later find the single share structure to be optimal. In these cases, the company may decide it is in the best interest for shareholders

if the company unifies its existing two classes of stock. In effect, the costs of maintaining control has now exceeded the benefits of retaining that control.

Under the optimal structure hypothesis, I expect:

- a positive initial stock price reaction to the unification announcement because the unification is the result of the unexpected move toward optimality
- to find firm characteristics that are consistent among unifying firms and which set them apart from non-unifying firms

2.3 DATA AND SAMPLE DESCRIPTION

I identify 61 dual class class unifications by searching *Lexis-Nexis*, *Factiva*, and firm proxy statements.¹¹ I use search terms such as “dual class” and “single class of common stock” to identify unifications. For the announcement date, I use the earliest article which discusses a unification or potential unification. If an announcement article cannot be found, I use the filing date of the first proxy statement that discusses the unification. I also collect share class data and unification details by examining articles and proxy statements. Table 2.2 lists the unifications by year and exchange. The unifications are evenly distributed between years 1992-2006 with a maximum of 9 in 1999. The majority of the sample firms are listed on the NYSE (25), followed by Nasdaq (30), AMEX (5) and one over-the-counter. For each unification, stock price data is collected for both the restricted and superior voting shares (if traded publicly) from the Center for Research in Security Prices (CRSP). Accounting information is collected from Compustat. Table 2.3 lists the number of unifications by two-digit SIC code. The unifications are distributed across 35 two-digit SIC codes, with a maximum of six unifications in the instrument and insurance carrier industries.

Table 2.4 lists statistical data on the unifications. For firms with both shares trading publicly, the percentage market capitalization consisting of superior voting shares is 41.6%,

¹¹A few proxy statements lists the names of other firms who have conducted unifications.

with a high of 81.7% and a low of 3.0%. The voting premium for superior voting shares the day before the unification announcement averages 3.2%; however the range varies dramatically from a maximum of 31.4% to a minimum of -9.4%. On average, the dual class structure is in place 8.7 years before unification and it takes an average of 90 days for the unification to be implemented after the announcement.¹² Table 2.5 lists summary statistics for the sample of firms in the study and their matched dual class counterparts. The medians are similar across variables with the exception of shareholders. Unifying firms have a median of 2.3 million shareholders while the matched dual class firms have a median of 0.6 million shareholders.

2.3.1 UNIVERSE OF DUAL CLASS FIRMS

For comparison, I identify a sample of dual class firms who did not unify their shares. The most comprehensive dual class database to-date is the database created by Gompers, Ishii, and Metrick (2008). Their sample comes from combining dual class data from Securities Data Corporation (SDC), Compustat, the Center for Research in Security Prices (CRSP) and the Investor Responsibility Research Center (IRRC). The sample runs from 1995-2002 and consists of 734 firms and 3,600 firm-years.

Because their database covers only years 1995-2002, it limits the ability to use their database for matching the sample. As a solution, I have refined the CRSP-Compustat share algorithm used by Gompers, Ishii, and Metrick (2008) and Zhang (2002) so that the time frame may be extended while also limiting the pool of candidate firms. In their algorithm they identify potential dual class firms if the difference in common shares outstanding between the two databases is greater than 1%. This results in a candidate pool of more than 8,700 firms and 25,000 firm-years for the time frame 1976-2005. By refining the algorithm to include filters which consider other stock measures and reporting errors in the CRSP and Compustat data files, the revised algorithm reduces the pool of candidates by 45% to 2,770 firms and 13,580 firm-years at the same 1% level of difference.

¹²Of the 61 firms, 28 were dual class at IPO, 26 recapitalized to dual class, and 7 became dual class through a dividend or spinoff.

For this study, I raise the threshold from 1% to 5% to further guarantee the firms which the algorithm finds are in fact dual class. Using the algorithm and the increased threshold, I identify 1,558 potential dual class firms and 8,780 firm-years for the period 1976-2006. Table 5 shows the number of candidate firms by year along with a comparison of the firms identified by Gompers, Ishii, and Metrick (2008). To test the revised algorithm, I compare the candidate pool to the unifying firms in the study. The algorithm correctly identifies 50 out of 61 (82%) of the sample as dual class firms. As a further test of the algorithm, I examine the 97 dual class firms identified in Table 9 of Jarrell and Poulsen (1988). I was able to locate 84 of these firms in Compustat and 68 (81%) are identified using the algorithm.

2.3.2 MATCHING PROCEDURE

To compare the performance of unifying dual class firms to those who do not unify, I follow Barber and Lyon (1996) and match on pre-event performance and industry. Using the control sample, I first identify all firms with the same two-digit SIC code. Then I identify all firms with plus or minus 10% return on assets (income before extraordinary items divided by book value of assets) in the fiscal year prior to the unification are chosen. Lastly, I choose the firm with performance closest to the unifying firm. Where no match is available, I filter firms first on one-digit SIC code and then return on assets. If there is still no match available, I simply match firms on return on assets, regardless of the firm's industry. Once this procedure is complete, I use firm proxy statements to verify the selected matching firms are indeed dual class firms.

2.4 RESULTS

2.4.1 UNIFICATION ANNOUNCEMENT EVENT STUDY

Both the value recovery and optimal structure hypotheses predict a positive announcement to the unification of the dual class structure; however, studies such as Dimitrov and Jain (2006) find the dual class structure to be a value enhancing corporate initiative. If the structure is

value enhancing, then the removal of the structure may be a value decreasing event and lead to a negative announcement effect. Using an event study analysis, I examine the unification announcement effect to determine whether the results confirm the predictions of the value recovery and optimal structure hypotheses.

From the sample of 61 unification announcements, I eliminate all unifications with conflicting events on the announcement date. For example, J.M. Smucker Company announced on May 16, 2000 it would seek shareholder approval for a unification; however, the firm simultaneously presented downward earnings guidance. After removing unifications with conflicting events, 36 announcements remain. To analyze the unification announcement effect, I perform a standard event study analysis of the 36 announcements. I separately perform the analysis on the restricted (RVS) and superior (SVS) voting shares. I use the market model with the CRSP value-weighted market portfolio as the market proxy and days -250 to -6 as the estimation period. As a robustness check, I also calculate net-of-market returns using the CRSP value-weighted portfolio as a proxy for expected return. I examine the three-day (-1 to +1) and five-day (-2 to +2) event windows to be consistent with previous studies.

Panel A of Table 2.7 contains the event study results for the restricted voting shares. Of the 36 remaining announcements, the restricted voting share trades publicly in 32 firms. At the announcement, the restricted voting shares have a three-day (-1 to +1) abnormal return of 1.64%, significant at the 10% level. The three-day abnormal return is positive in 21 of the 32 firms and the net-of-market results confirm the results of the market model. For the five-day event window (-2 to +2), the abnormal return increases to 1.85%, significant at the 10% level. In the extant literature, two studies examine the unification announcement effect separately for restricted and superior voting shares. Bigelli, Mehrota, and Rau (2008) find three-day and five-day abnormal returns of 11.67% and 12.50% respectively for non-voting shares in Italian unifications and Dittman and Ulbricht (2008) find a two-day (-1 to 0) abnormal return of 5.2% for non-voting shares in German unifications.

Panel B of Table 2.7 contains the results for the superior voting shares. Superior voting shares trade publicly in 26 of the 36 announcements. The three-day (-1 to +1) abnormal return for the superior voting shares is 1.15% and insignificant at the 10% level; however, 15 of the 26 are positive. For the five-day event window (-2 to +2), the abnormal return increases to 1.73% and is not significant. The net-of-market return is 2.54% and significant at the 10% level. Dittman and Ulbricht (2008) find a similar two-day (-1 to 0) abnormal return of 2.5% for voting (superior) shares. In contrast, Bigelli, Mehrota, and Rau (2008) find negative and significant abnormal returns of -1.56% (-1 to +1) and -1.94% (-2 to +2).

In order to examine the total announcement effect, I examine market capitalization. The market capitalization results are shown in Panel C of Table 2.7. For the 36 firms, the total three-day (-1 to +1) abnormal return is 1.30% and insignificant. The five-day (-2 to +2) abnormal return is 2.23% and significant at the 5% level. In their German study, Dittman and Ulbricht (2008) find a two-day (-1 to 0) abnormal return of 3.3% and Bigelli, Mehrota, and Rau (2008) find an insignificant five-day (-2 to +2) return of 0.08% in their Italian study.¹³ Similar to my result, Smart, Thirumalai, and Zutter (2008) find a significant five-day abnormal return of 2.7% for market capitalization in a study of 37 American unifications.¹⁴

Both the value recovery and optimal structure hypotheses predict a positive announcement effect to the elimination of the dual class structure. Based on the results of the event study, I conclude there is a positive announcement effect to the unification and therefore find support for both the value recovery and optimal structure hypotheses.

¹³In a British study, Ang and Megginson (1989) examine six unifications and find a mean two-day (-1 to 0) return of 0.65% (tests for significance are not reported).

¹⁴Smart, Thirumalai, and Zutter (2008) examine dual class initial public offerings from 1990 to 1998. They find 37 unifications in their sample; however, no unifications are eliminated based on conflicting events.

2.4.2 LIQUIDITY ANALYSIS

A common reason given in firm proxy statements for unifying the dual class structure is the expected increase in share liquidity (Maury and Pajuste (2007)).¹⁵ This reasoning implies the dual class structure decreases share liquidity. Kim, Lin, Singh, and Yu (2007) confirm this by finding increases in effective spreads and price impacts for both superior and restricted voting shares after the dual class recapitalization. These increases in illiquidity can lead to higher expected returns/cost of capital (Amihud and Mendelson (1986)). Based on Kim et al. (2007) and firms commonly giving increased liquidity as a reason to unify their share classes, I expect to find an increase in liquidity after the dual class unification.

To test this hypothesis, I use the bid-ask spread and Amihud (2002) measure. For each measure, I examine the 50, 100, and 250-day window before the unification announcement and the 50, 100, and 250-day window after the implementation of the single class structure. The pre-announcement windows end on day -5, with day zero being the announcement day, and the post-implementation windows begin on day 5, with day zero being the the first day the single class is traded. Firms with share prices less than \$5 are excluded.

Table 2.8 outlines the results of the liquidity analysis. Using the Amihud (2002) measure of illiquidity, I find consistent reductions in the means and medians for both restricted and superior voting shares across all time windows. For example, the pre-announcement mean 50-day Amihud measure for restricted voting shares is 1.367×10^{-6} and drops to 0.467×10^{-6} after implementation. The increase in liquidity is significant for both the restricted and superior voting share windows. For the bid-ask spread, I find similar results. There is a significant reduction in illiquidity across both classes for all time windows. For example, the pre-announcement 100-day bid-ask spread for superior voting shares is 3.21% and drops to 1.69% after the implementation.

The results of the liquidity analysis show firms who unify their dual share classes significantly increase the liquidity of their stock and confirms why companies commonly use

¹⁵See Appendix A - Sample Unification

liquidity as an explanation when moving to a single class of stock. In the same vein, Li, Ortiz-Molina, and Zhao (2008) find institutional investment increases after the unification and Dittman and Ulbricht (2008) find liquidity helps explain the variation in abnormal returns during the unification announcement. Also, Ehrhardt, Kuklinski, and Nowak (2005) find a significant reduction in bid-ask spreads following German unifications.

2.4.3 UNIFICATION DETERMINANTS

To distinguish between the value recovery and optimal structure hypotheses, I conduct a probit analysis to examine the determinants of the choice to unify share classes. The primary data sample used in the probit analysis comes from Gompers, Ishii, and Metrick (2008) (GIM). Their dataset provides complete share class information (voting rights, dividend rights, volume, and permnos) for dual class firms from 1995 to 2002.¹⁶ Of the 61 unifications included in the study, 33 are located in the GIM dataset. Firms who unify their share classes are assigned a one for the dependent variable in the year prior to their unification and then drop out of the sample.

The following variables are included in the analysis:

Control wedge is the difference between the voting (control) percentage and cash-flow (ownership) percentage owned by the officers and directors of the firm. The control wedge measures the size of the separation between voting and ownership rights in the firm. Gompers, Ishii, and Metrick (2008) find firm value (Tobin's Q) decreases as the control wedge increases. Masulis, Wang, and Xie (2008) find evidence managers of dual class firms with greater control wedges are more likely to extract private benefits of control. Maury and Pajuste (2007) find dual class firms with smaller control wedges are more likely to unify their share classes. *Control percentage* and *ownership percentage* are the individual components of control wedge. Based on prior literature, such as Gompers, Ishii, and Metrick (2008) and Maury and Pajuste

¹⁶This information has not been collected for the universe of potential dual class firms discussed in section 3.1.

(2007), I expect dual class firms with lower control percentages to be more likely to unify their share classes.

Capital expenditures are the amount of capital expenditures divided by the previous year's net property, plant, and equipment. I use capital expenditures as a proxy for growth in the firm. Lehn, Netter, and Poulsen (1990) find firms who move to the dual class structure have higher capital expenditures than those who have a leveraged buyout.

Net income is the firm's income before extraordinary items divided by sales. Claessens et al. (2002) suggest the expropriation of minority shareholders and extraction of private benefits of control increase with the dual class structure. Masulis, Wang, and Xie (2008) identify four methods in which dual class managers are able to extract private benefits of control from restricted vote holders. Thus, I include net income to examine the effects of private benefit extraction prior to the unification.

Equity issue proceeds measures the net equity proceeds divided by total shareholder's equity. Maury and Pajuste (2007) find dual class firms who unify have higher equity issuance in the fiscal year before unification than do non-unifying dual class firms. On the other hand, Amoako-Adu and Smith (2001) identify "increase investor appeal prior to seasoned offering" as one of the most common reasons given why dual class firms on the Toronto Stock Exchange choose to unify their classes of stock, which may imply firms delay equity issuance until after the unification.

Amihud measure is the 250-day weighted average of the Amihud (2002) measure of illiquidity. Firms commonly claim increasing liquidity as a reason for eliminating the dual class structure. The illiquidity of the firm's shares can increase the cost of capital (Amihud and Mendelson (1986)). Kim et al. (2007) find share liquidity decreases at the introduction of the dual class structure and in the previous section I find a significant increase in share liquidity after the implementation of the single class structure.

Leverage and *firm size* are also included and firm size is measured as the natural logarithm of the book value of assets. Year dummies are included in the analysis and standard errors are corrected for heteroskedasticity.

Table 2.9 outlines the results of the probit analysis. Because of data limitations, the final sample includes 1,639 firm years and 27 unifications. Model 1 and 2 are similar except the control wedge is separated between control (voting) and ownership in Model 2. The control wedge in Model 1 is negative and significant at the 5% level and corresponds to previous literature (Maury and Pajuste (2007), Dittman and Ulbricht (2008), and Ehrhardt, Kuklinski, and Nowak (2005)). In Model 2, the wedge is separated and the control percentage is negative and significant at the 5% level while the ownership percentage is positive but not significant. These results show dual class firms with smaller wedges and less voting control are more likely to unify their share classes.

In Models 1 and 2, the Amihud (2002) measure is positive and significant at the 1% level. In the previous section, I show an increase in share liquidity after the unification and Kim et al. (2007) shows the dual class structure reduces share liquidity. The probit analysis shows dual class firms with higher illiquidity are more likely to unify their share classes.

For net income, I find an insignificant relationship in both models, so firms who unify are no more likely to have better or worse earnings than those who remain dual class. This implies firms who unify have no more or less private benefit extraction than non-unifying dual class firms. For both models, equity issues are insignificant. This contrasts with findings by Maury and Pajuste (2007) and Ehrhardt, Kuklinski, and Nowak (2005) who find dual class firms with more equity issues are more likely to unify.

In Model 1 and 2, capital expenditures are positive and significant at the 5% level. These results are evidence dual class firms who are investing more in property, plant, and equipment are more likely to unify their share classes. In addition, the leverage variable is positive and significant for both models, implying dual class firms with higher leverage are more likely to unify their share classes.

In summary, the probit analysis finds firms with smaller control wedges, and higher illiquidity, capital expenditures, and leverage are more likely to unify their share classes. I find these results to be in line with the optimal structure hypothesis, which predicts there are key characteristics in unifying firms, such as high illiquidity, capital expenditures, and leverage, that distinguishes them from other dual class firms and leads them to unify their share classes.

2.4.4 FIRM VALUE AND OPERATING PERFORMANCE POST-UNIFICATION

In order to further test the value recovery and optimal structure hypothesis, I use the following specification (Pagano, Panetta, and Zingales 1998) to examine firm value, performance, and other firm characteristics after the unification:

$$y_{it} = \alpha + \sum_{j=0}^3 \beta_j UNI_{t-j} + \beta_4 UNI_{t-n} + u_i + d_t + \epsilon_{it}$$

where u_i and d_t are firm-specific and fiscal-year specific effects. UNI_{t-j} are dummy variables equal to one if year $t - j$ was the unification year, UNI_{t-n} is a dummy variable equal to one if the unification took place more than three years before. By using a fixed-effects model, I use each company before the unification as a control for itself after the unification. Table 2.10 outlines the results.

The first six rows of Table 2.10 show the post-unification yearly effects on Tobin's Q. For all three measurements, there is not a significant change in any one year and the accumulated F -test for years zero to two is insignificant as well. These results contrast those found in Maury and Pajuste (2007), who find a positive and significant increase in industry-adjusted market-to-book in year 0 and +1. In addition, the results contrast studies that show the dual class structure has a negative effect on firm value, such as Gompers, Ishii, and Metrick (2008) and citeasnounvillalonga:ffc.

For operating performance, the return on assets results are all insignificant. Unadjusted net income to sales is insignificant for all years. The dual matched net income results show a significant increase in year two and the three year F -test rejects the null of no change. The

industry-adjusted figures are significant in year zero and two and the F -test reject the null of no change for the year zero to two time frame.

I also examine other variables after the unification. Net stock issuance is negative in years zero and one and insignificant for the three year test period. On the other hand, leverage is positive and significant in years one and two, as well as the F -test. Taken together, these results show that unifying firms are not issuing new equity after unification. Sales growth is negative in all years except year three and the F -test is significant at the 5% level. In contrast, Maury and Pajuste (2007) find a positive and significant increase in sales growth after the unification.

In summary, the results show no significant change in firm value and conflicting results about operating performance after the unification. These results show no evidence of a recovery in value or performance by the elimination of any private benefits of control and are evidence against the value recovery hypothesis.

2.4.5 FIRM EVENTS AFTER UNIFICATION

Amoako-Adu and Smith (2001) cite “facilitate sale of control block” as one of the most common reasons Canadian firms eliminate their dual class structure. So, as an alternative hypothesis, firms may leave the dual class structure simply to allow the control holder to sell out. In order to test this hypothesis among American dual class firms, I use Compustat, Hoover’s, and Factiva to examine the current status of unifying firms and their matched counterparts. If a firm has merged or gone bankrupt, I obtain the date of the transaction. Using this information, I examine post-unification firm events (control changes). Table 2.11 reports the results of the analysis. For all time periods, there is no significant difference between the frequency of mergers/acquisitions in unifying and non-unifying firms. For example after three years, 85% of the matched firms remain publicly traded and 83% of the unifying firms remain so. In a similar manner, Maury and Pajuste (2007) analyze ownership changes post-unification and find the unification of the dual class structure does not lead

to an exit by the controlling shareholder. I find this evidence does not support the “sale of control block” hypothesis since non-unifying firms are just as likely to undergo control changes as are unifying dual class firms.

2.5 CONCLUSION

The dual class structure allows for a separation between two of the key rights Alchian and Demsetz (1972) identified as necessary for owners of a modern corporation. This separation of voting and cash-flow rights has again become an important issue in the investment community as evidenced by firms such as the New York Times, Google, and Dow Jones. In this study, I use 61 American dual class unifications to distinguish between the value recovery and optimal structure hypotheses. In line with both hypotheses, I find a positive and significant market reaction to the elimination of the dual class structure. I also add to the literature by demonstrating a significant increase in liquidity for American firms who leave the dual class structure. To separate the hypotheses, I perform a probit analysis and find unifying firms have lower control wedges, higher leverage and capital expenditures, and higher levels of illiquidity. As further evidence against the value recovery hypothesis, I find no significant change in firm value and conflicting operating performance results after the elimination of the structure. In addition, I find unifying firms are no more likely to be acquired or taken private than their dual class counterparts.

Table 2.1: Dual Class Unification Studies

Study	Sample Description	Sample Period	Sample Size	Other Info
Ang and Megginson (1989)	British Firms	1955-1982	6	Find excess returns in announcement month are insignificant, but do find a significant -23.45% cumulative excess return during the 12 months after announcement.
Amoako-Adu and Smith (2001)	Canadian Firms	1979-1998	56	Examine the reasons why firms unify stock classes. The three most common reasons are (1) unification required as part of debt restructuring, (2) facilitate sale of control block, and (3) increase investor appeal prior to seasoned offering.
Hauser and Lauterbach (2004)	Israeli Firms	1990-2000	84	Examine the price of vote. Find the price of vote increases with the percentage vote lost by the majority shareholders, is higher in family-controlled firms, decreases with institutional investor holdings, and is similar to the price of vote implicit in the market prices of stocks.
Ehrhardt, Kuklinski, and Nowak (2005)	German Firms	1997-2003	43	Find the unification of dual class shares to be strictly shareholder value increasing. Find dual class firms reduce cost of capital through the unification due to increases in firm value as well as reductions in bid-ask spreads.
Maury and Pajuste (2007)	Continental Europe	1996-2002	108	Examines the determinants and consequences of unifications. Finds firms that unify have lower separation between voting and cash flow rights, higher presence of financial investors, and higher frequency of cross-listing in the U.S. Find no difference in ex-post sales growth and capital expenditures between unifying firms and those that remained dual class.
Bigelli, Mehrotra, and Rau (2008)	Italian Firms	1974-2005	46	Find majority shareholders hedge or take advantage of unifications by engaging in activities months before the unification decision. Find the price of voting shares dropped from -4.26% to -10.41% at unification announcement.
Dittman & Ulbricht (2008)	German Firms	1990-2001	29	Find ownership structure and changes in liquidity explain a significant part of the cross-sectional variation in abnormal returns. Also, they find firms are more likely to unify when the controlling shareholder loses little voting power and the firm is financially constrained. Often, firms issue additional shares after the unification.
Li, Ortiz-Molina and Zhao (2008)	American Firms	1995-2002	79	Examine institutional ownership in dual class firms. Find institutional ownership is significantly lower in dual class firms than in single-class firms. Following unification, they find institutional investors increase their shareholdings.
Smart, Thirumali, and Zutter (2008)	American Firms	1990-1998	37	Find significantly positive eleven day (-5to +5) abnormal return of 5.2%.

Table 2.2: Distribution of unification announcements by year and exchange
 This table reports the distribution of unification announcements by year and exchange of a sample of 61 dual class firms that moved to a single class of common stock during the 1992-2006 time period. Unifications were identified by examining news articles from *Lexis-Nexis* and *Factiva*.

Observations by year of announcement		Observations by exchange listing			
Year	Announcements	NYSE	NASDAQ	AMEX	OTC
1992	4	1	3		
1993	3		2		1
1994					
1995	2	1	1		
1996	4		2	2	
1997	2	1	1		
1998	5	1	4		
1999	9	1	6	2	
2000	6	3	3		
2001	5	4	1		
2002	6	3	2	1	
2003	7	4	3		
2004	2	2			
2005	4	2	2		
2006	2	2			
Total	61	25	30	5	1

Table 2.3: Number of unifications by two-digit SIC code

This table illustrates the two digit SIC code industry distribution for the 61 unifications identified in this study. Unifications were identified by examining news articles from *Lexis-Nexis* and *Factiva*.

SIC Code	Industry Description	No. of Unifications
10	Metal Mining	1
13	Oil and Gas Extraction	4
15	Building Construction	2
20	Food and Kindred Products	1
26	Paper and Allied Products	1
27	Printing and Publishing	1
28	Chemicals and Allied Products	1
29	Petroleum Refining And Related Industries	1
32	Stone, Clay, Glass, And Concrete Products	1
33	Primary Metal Industries	1
34	Fabricated Metal Products	1
35	Industrial Machinery And Equipment	2
36	Electronic And Other Electrical Equipment	4
37	Transportation Equipment	1
38	Instruments and Related Products	6
40	Railroad Transportation	1
41	Local And Suburban Transportation	1
42	Motor Freight Transportation and Warehousing	1
45	Transportation By Air	1
48	Communications	1
50	Wholesale Trade-durable Goods	2
51	Wholesale Trade-non-durable Goods	1
54	Food Stores	1
58	Eating And Drinking Places	2
59	Miscellaneous Retail	2
60	Depository Institutions	2
62	Security And Commodity Brokers	1
63	Insurance Carriers	6
65	Real Estate	1
67	Holding And Other Investment Offices	1
73	Business Services	3
78	Motion Pictures	1
80	Health Services	1
82	Educational Services	1
87	Engineering and Management Services	3

Table 2.4: Unification Statistics

This table presents relevant data on unifications. Panel A presents descriptive statistics on various unification information. *SVS % of market capitalization* is the percentage of market capitalization from superior voting shares on the day prior to the unification announcement for firms with both classes trading publicly. *SVS Price Premium* or voting premium is the superior voting share price premium on the day before the announcement and is calculated as follows:

$$\frac{P_{SVS,-1} - P_{RVS,-1}}{P_{RVS,-1}}$$

Length dual structure in place is the number of years the dual class stock structure was in place before the unification announcement. *Time to implementation* is the number of days between the unification announcement until the single class of stock began to trade. Panel B lists the trading arrangement for the unification firms. Data comes from CRSP, Compustat, and firm proxies.

Panel A: Unification Data

	Obs	Mean	Median	Standard Deviation	Max.	Min.
SVS % of Market Capitalization	39	41.6%	45.5%	19.5%	81.7%	3.0%
SVS Price Premium (Voting Premium)	39	3.2%	0.0%	9.4%	31.4%	-9.4%
Length Dual Structure in Place (Years)	61	8.7	7.1	6.4	32.9	0.1
Time to Implementation (Days)	61	90	77	70	393	0

Panel B: Pre-Unification Trading

	Obs
Both Share Classes Trade Publicly	39
Only Superior Voting Shares Trade Publicly	5
Only Restricted Voting Shares Trade Publicly	17
Total	61

Table 2.5: Summary Statistics

This table presents descriptive statistics for 61 unifying firms and their matched counterparts for the fiscal year prior to the unification announcement. Accounting data comes from Compustat. *Total assets* is the total assets of the firm in millions (data6). *Sales* is the company's sales (data12). *Leverage* is long-term debt (data9) divided by the firm's total assets (data6). *Research and development* is the firm's research and development expenses (data46) divided by the firm's sales (data12). *Return on assets* is the firm's income before extraordinary items (data18) divided by the firm's total book value of assets (data6). *Net income* is the firm's income before extraordinary items (data18) divided by the firm's sales (data12). *Return on equity* is the firm's income before extraordinary items (data18) divided by the firm's book value of equity (data11). *Tobin's Q* is defined as the ratio of the firm's market value to the firm's asset replacement cost. Market value is proxied by the market value of common shares outstanding (data25*data199) plus preferred stock (data10) plus debt (data9+data5). Replacement cost is proxied by the book value of assets (data6). *Sales growth* is the current year's sales less the previous year's sales divided by the previous year's sales. *Capital expenditures* is the firm's capital expenditures from the statement of cash flows (data128) divided by the previous year's net property, plant, and equipment (data8). *Cash* is the firm's cash and short-term investments (data1) divided by the firm's assets (data6). *CEO Pay* is the CEO's total pay in millions (TDC1 taken from Execucomp). *Employees* is the number of firm employees in thousands (data29). *Stockholders* is the number of stockholders in millions (data100).

Control firms come from a dual class firm dataset identified by using CRSP and Compustat. Firms are first matched on two-digit SIC code and $\pm 10\%$ return on assets. If no match is available, firms are matched based on one-digit SIC code and $\pm 10\%$ return on assets. If there is still no match available, firms are matched on return on assets.

	Sample Firms			Control Firms			Wilcoxon Test Statistic
	N	Mean	Median	N	Mean	Median	
Total assets (\$000,000)	61	2,027.6	431.7	61	1,928.3	412.4	(0.59)
Sales (\$000,000)	61	2,028.7	321.6	61	1,266.2	216.2	(1.23)
Leverage	61	20.1%	18.5%	61	18.1%	13.7%	(0.85)
Research and development	23	8.8%	3.5%	24	6.8%	1.7%	0.89
Return on assets	61	-3.0%	2.4%	61	-2.0%	2.2%	(0.01)
Net Income	61	-5.5%	4.1%	60	-11.8%	4.7%	0.44
Return on equity	61	-6.3%	8.7%	61	-368.4%	8.0%	(0.12)
Tobin's Q	51	1.89	1.36	51	1.77	1.21	(0.28)
Sales growth	61	16.0%	7.8%	61	18.1%	9.1%	0.10
Capital expenditures	57	34.1%	17.8%	58	44.6%	17.2%	(0.50)
Cash	61	15.4%	7.5%	61	14.1%	6.2%	(1.09)
CEO Pay (Millions)	25	4,516.8	2,061.2	15	7,471.7	2,146.7	(0.11)
Employees (Thousands)	59	10.4	1.7	58	5.1	1.2	(0.97)
Stockholders (Millions)	59	91.0	2.3	57	7.5	0.6	(3.41)***

Table 2.6: Universe of Potential Dual Class Firms

This table demonstrates the number of potential dual class firms identified by the algorithm. It also presents the number of firms identified as dual class by Gompers, Ishii, and Metrick (2008).

Year	Algorithm	GIM (2008)
1976	55	
1977	80	
1978	78	
1979	78	
1980	93	
1981	95	
1982	106	
1983	140	
1984	168	
1985	200	
1986	266	
1987	342	
1988	373	
1989	349	
1990	377	
1991	393	
1992	358	
1993	343	
1994	366	
1995	382	400
1996	420	444
1997	483	485
1998	535	504
1999	512	489
2000	439	482
2001	370	434
2002	332	362
2003	307	
2004	272	
2005	258	
2006	210	

Table 2.7: Unification Event Study Results

This table outlines the event study results of the unification of dual class shares. The market model is estimated using CRSP's value-weighted market portfolio as the market proxy and days -250 to -6 as the estimation period. The net of market method also uses CRSP's value-weighted market portfolio as the market proxy. The change in market capitalization was calculated as follows:

$$\frac{(P_{RVS,+t} * SHRS_{RVS,+t}) + (P_{SVS,+t} * SHRS_{SVS,+t})}{(P_{RVS,-t} * SHRS_{RVS,-t}) + (P_{SVS,-t} * SHRS_{SVS,-t})} - 1$$

where P is price, $SHRS$ is shares outstanding, RVS represents the restricted voting class and SVS the superior voting class, $+t$ is the end of the event window and $-t$ is the beginning of the event window. If only one share class trades publicly, the change in market capitalization is based solely on the one publicly traded class. Panel A lists the event study results for the restricted voting share class. Panel B lists the event study results for the superior voting share class. Panel C shows the change in total market capitalization (restricted and superior voting shares) for the specified event window. *, **, and *** denote the results are significantly different from zero at the 10%, 5%, and 1% levels, respectively.

Panel A: Restricted Voting Shares

Window	N	Market Model				Net of Market			
		Mean CAR	p-value	Median CAR	% Positive	Mean CAR	p-value	Median CAR	% Positive
-1 to +1	32	1.64%*	0.075	0.60%	66%	2.21%**	0.031	0.48%	56%
-2 to +2	32	1.85%*	0.097	1.95%	63%	2.56%**	0.022	2.33%	66%

Panel B: Superior Voting Shares

Window	N	Market Model				Net of Market			
		Mean CAR	p-value	Median CAR	% Positive	Mean CAR	p-value	Median CAR	% Positive
-1 to +1	26	1.15%	0.375	0.70%	58%	1.81%	0.143	1.65%	62%
-2 to +2	26	1.73%	0.263	1.74%	58%	2.54%*	0.079	2.69%	65%

Panel C: Change in Total Market Capitalization

Window	N	Mean	p-value	Median	%
		Change		Change	Positive
-1 to +1	36	1.30%	0.146	0.60%	58%
-2 to +2	36	2.23%**	0.013	1.85%	69%

Table 2.8: Liquidity Around Unification

This table shows the liquidity of shares for unifying firms before the unification announcement and after the implementation of the unification. Data is collected from CRSP. Firms with share prices less than \$5 are excluded. The examination windows prior to the unification announcement ends on day -5 and the window for after the implementation begins on day +5. For the Wilcoxon test statistic both the RVS and SVS liquidity measures are compared to the same post implementation measure. Panel A outlines the Amihud (2002) measure of illiquidity.

$$\text{Amihud's Measure} = \frac{|\text{daily return}|}{\text{dollar trading volume}}$$

Amihud measures are 10^{-6} . Panel B outlines the bid-ask spread. *, **, and *** denote the results are significantly different from zero at the 10%, 5%, and 1% levels, respectively.

Window	Class	Prior to Announcement				Post Implementation				Wilcoxon Test Statistic
		N	Mean	Median	Std Dev	N	Mean	Median	Std Dev	
<u>Panel A: Amihud Measure</u>										
50 days	RVS	41	1.367	0.059	4.297	46	0.467	0.010	1.454	2.01**
	SVS	37	1.383	0.070	2.704					2.56**
100 days	RVS	41	1.225	0.061	3.137	46	0.584	0.011	1.791	2.10**
	SVS	37	1.459	0.109	3.182					2.66***
250 days	RVS	44	1.049	0.089	2.188	49	0.648	0.017	2.089	2.26**
	SVS	37	1.456	0.106	3.091					2.48**
<u>Panel B: Bid-Ask Spread</u>										
50 days	RVS	41	3.00%	1.94%	3.86%	46	1.69%	0.90%	2.37%	2.13**
	SVS	36	3.44%	2.06%	3.46%					3.16***
100 days	RVS	41	3.20%	1.76%	4.22%	46	1.69%	0.92%	2.44%	2.32**
	SVS	36	3.21%	2.00%	3.23%					3.28***
250 days	RVS	44	3.08%	2.12%	3.44%	49	1.86%	1.13%	2.58%	2.55**
	SVS	36	3.27%	2.40%	3.22%					3.25***

Table 2.9: Unification Determinants

Probit models of the determinants of the decision to unify share classes. The primary dataset is based on Gompers, Ishii, and Metrick (GIM) (2008). Accounting data is from Compustat and runs from 1995 - 2002. Firms who unify their share classes are assigned a one for the dependent variable in the year prior to their unification and then drop out of the sample. Independent variables are as follows: *Control wedge* is the difference between the voting percentage and cash-flow percentage owned by the officers and directors of the firm. *Control percentage* is the percent of the vote the officers and directors of the firm control. *Ownership percentage* is the percent of the total shares of the firm owned by the officers and directors of the firm. *Amihud Measure* is the firm's 250-day weighted-average (between RVS and SVS) Amihud measure. *Net income* is the firm's earnings (data18) divided by sales (data12). *Equity issues* is the firm equity issue proceeds (data108-data115) divided by the book value of equity (data11). *Capital expenditures* are the firm's capital expenditures (data128) divided by lagged net property, plant, and equipment (data8). *Leverage* is the sum of long-term (data9) and current debt (data5) divided by the book value of assets (data6). *Firm size* is the natural logarithm of the book value of assets (data6). Financial variables are winsorized at the 1st and 99th percentiles. z-test statistics are reported in parenthesis below the coefficient estimates. Standard errors are corrected for heteroskedasticity. *, **, and *** denote the results are significantly different from zero at the 10%, 5%, and 1% levels, respectively.

Model	1	2
Control Wedge	-1.422** (2.50)	
Control Percentage		-1.370*** (2.68)
Ownership Percentage		0.782 (1.06)
Amihud Measure	0.058*** (2.63)	0.065*** (2.89)
Net Income	0.519 (1.12)	0.501 (1.21)
Equity Issues	-0.032 (0.20)	-0.032 (0.22)
Capital Expenditures	0.344** (2.46)	0.354** (2.50)
Leverage	0.640** (2.27)	0.691** (2.41)
Firm Size	0.050 (0.83)	0.035 (0.59)
Log-Likelihood	-125.05	-124.12
McFadden Pseudo R^2	9.2%	9.8%
No. of Observations	1,639	1,639

Table 2.10: Post-Unification Analysis

For each of the variables listed I estimate the following specification:

$$y_{it} = \alpha + \sum_{j=0}^3 \beta_j UNI_{t-j} + \beta_4 UNI_{t-n} + u_i + d_t + \epsilon_{it}$$

where u_i and d_t are firm-specific and fiscal-year specific effects. UNI_{t-j} are dummy variables equal to one if year $t - j$ was the unification year, UNI_{t-n} is a dummy variable equal to one if the unification took place more than three years before. By using a fixed effects model I am using each company before the unification as a control for itself after the unification. The table only reports the coefficients on the UNI dummy variables. *Tobin's Q* is defined as the ratio of the firm's market value to the firm's asset replacement cost. Market value is proxied by the market value of common shares outstanding (data25*data199) plus preferred stock (data10) plus debt (data9+data5). Replacement cost is proxied by the book value of assets (data6). *Return on assets* is the firm's income (data18) divided by the book value of assets (data6). *Net income* is the firm's income before extraordinary items (data18) divided by the firm's sales (data12). *Capital expenditures* is the capital expenditures divided by last year's net property, plant, and equipment. *Sales growth* is the percentage change in sales (data6) from the previous year. *Leverage* is long-term debt (data9) divided by the firm's total assets (data6). *Net stock issuance* is the net of stock sales (data108) and stock purchases (data115) divided by the previous year's stockholder equity (data11). *Payout* is dividends (data21) divided by earnings (data18). Financial variables are winsorized at the 1st and 99th percentiles. Heteroskedasticity robust standard errors are reported in parenthesis. *, **, and *** denote the results are significantly different from zero at the 10%, 5%, and 1% levels, respectively. The second to the last column reports the p -value of an F -test of the hypothesis that the sum of the coefficients for dummies for year zero to two are equal to zero. The last column reports the p -value of an F -test of the hypothesis that the sum of the coefficients of all post-unification dummies are equal to zero.

Variable	Firm Years	Year 0	Year +1	Year +2	Year +3	Year >3	F -test Years 0-2
Tobin's Q	596	0.134 (0.161)	0.021 (0.163)	0.085 (0.169)	0.089 (0.206)	0.134 (0.204)	0.550
Dual Matched Tobin's Q	550	0.195 (0.191)	-0.014 (0.181)	-0.038 (0.198)	-0.054 (0.245)	-0.019 (0.242)	0.757
Industry Adjusted Tobin's Q	596	0.115 (0.177)	-0.059 (0.168)	-0.020 (0.172)	-0.021 (0.208)	-0.003 (0.204)	0.929
Return on Assets	730	-0.005 (0.017)	-0.005 (0.019)	-0.013 (0.017)	-0.024 (0.022)	-0.043 (0.028)	0.590
Dual Matched Return on Assets	690	0.008 (0.020)	0.014 (0.022)	0.005 (0.020)	-0.002 (0.024)	-0.026 (0.030)	0.592
Ind Adjusted Return on Assets	730	0.005 (0.017)	0.008 (0.018)	0.011 (0.017)	-0.011 (0.021)	-0.035 (0.027)	0.582
Net Income	730	0.033 (0.030)	0.029 (0.031)	0.023 (0.029)	0.023 (0.033)	0.023 (0.046)	0.246
Dual Matched Net Income	690	0.121 (0.099)	0.123 (0.084)	0.264* (0.158)	0.151 (0.100)	0.132 (0.139)	0.057*
Industry Adjusted Net Income	730	0.057* (0.033)	0.048 (0.032)	0.059* (0.032)	0.028 (0.034)	0.008 (0.044)	0.034**
Capital Expenditures	674	-0.025 (0.038)	-0.062 (0.052)	-0.069 (0.050)	-0.043 (0.060)	-0.064 (0.504)	0.146
Sales Growth	710	-0.052 (0.039)	-0.094* (0.052)	-0.125* (0.073)	0.000 (0.076)	-0.065 (0.065)	0.034**
Leverage	728	0.028 (0.019)	0.042* (0.022)	0.080** (0.029)	0.038 (0.028)	0.066 (0.030)	0.004***
Net Stock Issuance	628	-0.008 (0.242)	-0.111 (0.196)	0.182 (0.340)	0.217 (0.365)	0.099 (0.226)	0.921
Payout	726	-0.007 (0.052)	-0.015 (0.038)	0.075 (0.063)	-0.038 (0.058)	-0.048 (0.062)	0.657

Table 2.11: Firm events post-unification

This table illustrates the frequency in which major firm events occur for the 61 unifying firms and their matched dual class counterparts. Panel A outlines the major firm events for those firms who unified their share classes. For example within 5 years of the unification, 33% of firms had been merged, acquired, or taken private. Panel B outlines the major firm events which occurred for the matching dual class firms. Year 0 corresponds to the year the sample firm unified. Data comes from Compustat, Hoover's, and Factiva

Panel A: Unifying Firms

	+1 year		+3 years		+5 years		+7 years		+10 years	
	N	%	N	%	N	%	N	%	N	%
Remain publicly traded	59	97%	45	83%	31	67%	18	53%	9	60%
Merger/Acquisition/Private	2	3%	9	17%	15	33%	16	47%	6	40%
Bankrupt										
Total	61		54		46		34		15	

Panel B: Matched Dual-Class Firms

	+1 year		+3 years		+5 years		+7 years		+10 years	
	N	%	N	%	N	%	N	%	N	%
Remain publicly traded	55	90%	46	85%	33	72%	17	50%	8	53%
Merger/Acquisition/Private	6	10%	8	15%	12	26%	13	38%	4	27%
Bankrupt					1	2%	4	12%	3	20%
Total	61		54		46		34		15	

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APPENDIX A

SEC RULE 19C-4

Rule 19c-4 – Governing Certain Listing or Authorization Determinations by National Securities Exchanges and Associations

(a) The rules of each exchange shall provide as follows: No rule, stated policy, practice, or interpretation of this exchange shall permit the listing, or the continuance of the listing, of any common stock or other equity security of a domestic issuer, if the issuer of such security issues any class of security, or takes other corporate action, with the effect of nullifying, restricting or disparately reducing the per share voting rights of holders of an outstanding class or classes of common stock of such issuer registered pursuant to Section 12 of the Act.

(b) The rules of each association shall provide as follows: No rule, stated policy, practice, or interpretation of this association shall permit the authorization for quotation and/or transaction reporting through an automated inter-dealer quotation system ("authorization"), or the continuance of authorization, of any common stock or other equity security of a domestic issuer, if the issuer of such security issues any class of security, or takes other corporate action, with the effect of nullifying, restricting, or disparately reducing the per share voting rights of holders of an outstanding class or classes of common stock of such issuer registered pursuant to Section 12 of the Act.

(c) For the purposes of paragraphs (a) and (b) of this section, the following shall be presumed to have the effect of nullifying, restricting, or disparately reducing the per share voting rights of an outstanding class or classes of common stock:

1. Corporate action to impose any restriction on the voting power of shares of the common stock of the issuer held by a beneficial or record holder based on the number of shares held by such beneficial or record holder;

2. Corporate action to impose any restriction on the voting power of shares of the common stock of the issuer held by a beneficial or record holder based on the length of time such shares have been held by such beneficial or record holder;
3. Any issuance of securities through an exchange offer by the issuer for shares of an outstanding class of the common stock of the issuer, in which the securities issued have voting rights greater than or less than the per share voting rights of any outstanding class of the common stock of the issuer.
4. Any issuance of securities pursuant to a stock dividend, or any other type of distribution of stock, in which the securities issued have voting rights greater than the per share voting rights of any outstanding class of the common stock of the issuer.

(d) For the purpose of paragraphs (a) and (b) of this section, the following, standing alone, shall be presumed not to have the effect of nullifying, restricting, or disparately reducing the per share voting rights of holders of an outstanding class or classes of common stock:

1. The issuance of securities pursuant to an initial registered public offering;
2. The issuance of any class of securities, through a registered public offering, with voting rights not greater than the per share voting rights of any outstanding class of the common stock of the issuer;
3. The issuance of any class of securities to effect a bona fide merger or acquisition, with voting rights not greater than the per share voting rights of any outstanding class of the common stock of the issuer.
4. Corporate action taken pursuant to state law requiring a state's domestic corporation to condition the voting rights of a beneficial or record holder of a specified threshold percentage of the corporation's voting stock on the approval of the corporation's independent shareholders.

(e) Definitions. The following terms shall have the following meanings for purposes of this section, and the rules of each exchange and association shall include such definitions for the purposes of the prohibition in paragraphs (a) and (b), respectively, of this section:

1. The term "Act" shall mean the Securities Exchange Act of 1934, as amended.
 2. The term "common stock" shall include any security of an issuer designated as common stock and any security of an issuer, however designated, which, by statute or by its terms, is a common stock (e.g., a security which entitles the holders thereof to vote generally on matters submitted to the issuer's security holders for a vote).
 3. The term "equity security" shall include any equity security defined as such pursuant to Rule 3a11-1 under the Act.
 4. The term "domestic issuer" shall mean an issuer that is not a "foreign private issuer" as defined in Rule 3b-4 under the Act .
 5. The term "security" shall include any security defined as such pursuant to Section 3(a)(10) of the Act, but shall exclude any class of security having a preference or priority over the issuer's common stock as to dividends, interest payments, redemption or payments in liquidation, if the voting rights of such securities only become effective as a result of specified events, not relating to an acquisition of the common stock of the issuer, which reasonably can be expected to jeopardize the issuer's financial ability to meet its payment obligations to the holders of that class of securities.
 6. The term "exchange" shall mean a national securities exchange, registered as such with the Securities and Exchange Commission pursuant to Section 6 of the Act, which makes transaction reports available pursuant to Rule 242.601 of this chapter; and
 7. The term "association" shall mean a national securities association registered as such with the Securities and Exchange Commission pursuant to Section 15A of the Act.
- (f) An exchange or association may adopt a rule, stated policy, practice, or interpretation, subject to the procedures specified by Section 19(b) of the Act, specifying what types of securities issuances and other corporate actions are covered by, or excluded from, the prohibition in paragraphs (a) and (b) of this section, respectively, if such rule, stated policy, practice, or interpretation is consistent

with the protection of investors and the public interest, and otherwise in furtherance of the purposes of the Act and this section.

APPENDIX B

SECTION 313.00 OF THE NYSE LISTED COMPANY MANUAL

313.00 Voting Rights

(A) Voting Rights Policy

On May 5, 1994, the Exchange's Board of Directors voted to modify the Exchange's Voting Rights Policy, which had been based on former SEC Rule 19c-4. The Policy is more flexible than Rule 19c-4. Accordingly, the Exchange will continue to permit corporate actions or issuances by listed companies that would have been permitted under Rule 19c-4, as well as other actions or issuances that are not inconsistent with the new Policy. In evaluating such other actions or issuances, the Exchange will consider, among other things, the economics of such actions or issuances and the voting rights being granted. The Exchange's interpretations under the Policy will be flexible, recognizing that both the capital markets and the circumstances and needs of listed companies change over time. The text of the Exchange's Voting Rights Policy is as follows:

Voting rights of existing shareholders of publicly traded common stock registered under Section 12 of the Exchange Act cannot be disparately reduced or restricted through any corporate action or issuance. Examples of such corporate action or issuance include, but are not limited to, the adoption of time phased voting plans, the adoption of capped voting rights plans, the issuance of super voting stock, or the issuance of stock with voting rights less than the per share voting rights of the existing common stock through an exchange offer.

(B) Non-Voting Common Stock

The Exchange's voting rights policy permits the listing of the voting common stock of a company which also has outstanding a non-voting common stock as well as the listing of non-voting common stock. However, certain safeguards must be provided to holders of a listed non-voting common stock: (1) Any class of non-voting common stock that is listed on the Exchange must meet all

original listing standards. The rights of the holders of the non-voting common stock should, except for voting rights, be substantially the same as those of the holders of the company's voting common stock. (2) Although the holders of shares of listed non-voting common stock are not entitled to vote generally on matters submitted for shareholder action, holders of any listed non-voting common stock must receive all communications, including proxy material, sent generally to the holders of the voting securities of the listed company.

(C) Preferred Stock, Minimum Voting Rights Required

Preferred stock, voting as a class, should have the right to elect a minimum of two directors upon default of the equivalent of six quarterly dividends. The right to elect directors should accrue regardless of whether defaulted dividends occurred in consecutive periods.

The right to elect directors should remain in effect until cumulative dividends have been paid in full or until non-cumulative dividends have been paid regularly for at least a year. The preferred stock quorum should be low enough to ensure that the right to elect directors can be exercised as soon as it accrues. In no event should the quorum exceed the percentage required for a quorum of the common stock required for the election of directors. The Exchange prefers that no quorum requirement be fixed in respect to the right of a preferred stock, voting as a class, to elect directors when dividends are in default.

The Exchange recommends that preferred stock should have minimum voting rights even if the preferred stock is not listed.

Increase in Authorized Amount or Creation of a Pari Passu Issue—

- An increase in the authorized amount of a class of preferred stock or the creation of a pari passu issue should be approved by a majority of the holders of the outstanding shares of the class or classes to be affected. The Board of Directors may increase the authorized amount of a series or create an additional series ranking pari passu without a vote by the existing series if shareholders authorized such action by the Board of Directors at the time the class of preferred stock was created.

Creation of a Senior Issue—

- Creation of a senior equity security should require approval of at least two-thirds of the outstanding preferred shares. The Board of Directors may create a senior series without a vote by the existing series if shareholders authorized such action by the Board of Directors at the time of the existing series of preferred stock was created.
- A vote by an existing class of preferred stock is not required for the creation of a senior issue if the existing class has previously received adequate notice of redemption to occur within 90 days. However, the vote of the existing class should not be denied if all or part of the existing issue is being retired with proceeds from the sale of the new stock.

Alteration of Existing Provisions—

- Approval by the holders of at least two-thirds of the outstanding shares of a preferred stock should be required for adoption of any charter or by-law amendment that would materially affect existing terms of the preferred stock.
- If all series of a class of preferred stock are not equally affected by the proposed changes, there should be a two-thirds approval of the class and a two-thirds approval of the series that will have a diminished status.
- The charter should not hinder the shareholders' right to alter the terms of a preferred stock by limiting modification to specific items, e.g., interest rate, redemption price.

SUPPLEMENTARY MATERIAL

.10 Companies with Dual Class Structures —

The restriction against the issuance of super voting stock is primarily intended to apply to the issuance of a new class of stock, and companies with existing dual class capital structures would generally be permitted to issue additional shares of the existing super voting stock without conflict with this Policy.

.20 Consultation with the Exchange —

Violation of the Exchange's Voting Rights Policy could result in the loss of an Issuer's Exchange

market or public trading market. The Policy can apply to a variety of corporate actions and securities issuances, not just super voting or so-called "time phase" voting common stock. While the Policy will continue to permit actions previously permitted under Rule 19c-4, it is extremely important that listed companies communicate their intentions to their Exchange representatives as early as possible before taking any action or committing to take any action that may be inconsistent with the Policy. The Exchange urges listed companies not to assume, without first discussing the matter with the Exchange staff, that a particular issuance of common or preferred stock or the taking of some other corporate action will necessarily be consistent with the Policy. It is suggested that copies of preliminary proxy or other material concerning matters subject to the Policy be furnished to the Exchange for review prior to formal filing.

.30 Review of Past Voting Rights Activities —

In reviewing an application for initial listing on the Exchange, the Exchange will review the issuer's past corporate actions to determine whether another self-regulatory organization ("SRO") has found any of the issuer's actions to have been a violation or evasion of the SRO's voting rights policy. Based on such review, the Exchange may take any appropriate action, including the denial of the listing or the placing of restrictions on such listing. The Exchange will also review whether an issuer seeking initial listing on the Exchange has requested a ruling or interpretation from another SRO regarding the application of that SRO's voting rights policy with respect to a proposed transaction. If so, the Exchange will consider that fact in determining its response to any ruling or interpretation that the issuer may request on the same or similar transaction.

.40 Non-U.S. Companies —

The Exchange will accept any action or issuance relating to the voting rights structure of a non-U.S. company that is in compliance with the Exchange's requirements for domestic companies or that is not prohibited by the company's home country law.

APPENDIX C

SAMPLE OF DUAL CLASS FIRMS

In order to find a comprehensive sample of dual class firms, I first pull all firm years from the CRSP/Compustat Merged Fundamental Annuals database for fiscal years 1988 to 2007. I apply four criteria to the sample: 1) revenues or assets of at least one dollar, 2) sic code is not equal to 6798, 3) the firm is American, and 4) the firm's stock trades on the NYSE, AMEX, NASDAQ, or over-the-counter (Exchange (EXCHG) codes 11, 12, 13, 14, and 19). This results in a sample of 13,971 firms and 113,866 firm years.

Using the full sample of 113,866 firm years, I test each firm year against a series of five dual class tests:

Compustat class test - Firms with "CL A" or "CL B" in the company name field pass the Compustat class test.

Center for Research Prices class code test (CRSP code test) - A firm which has a share class code in the shrcd field passes the CRSP code test.

Securities Data Corporation test (SDC test) - I pull all multiple class issues (both IPO and SEO - a total of 1,444) from SDC (01/01/1980 to 12/31/2007). A firm passes the SDC test if the fiscal year end date is after the issue date listed in SDC.

IPO test- I use the list of initial public offerings by dual-class firms from Jay Ritter's IPO website (Smart and Zutter collected most of the data). The list contains 570 firms who went public between (01/01/1980 to 12/31/2007). A firm passes the IPO test if the fiscal year end date is after the issue date identified by Ritter.

CRSP/Compustat shares outstanding test - CRSP and Compustat both maintain records on the number of shares outstanding; however, CRSP's shares outstanding figure is

based on a specific share class, whereas Compustat's shares outstanding figure is based on a total of all shares outstanding (all classes included). By comparing the shares outstanding, dual class firms may be identified. This method was first used by Zhang(2008) and has also been used by Gompers, Ishii, and Metrick(2008). A firm passes the CRSP/Compustat shares outstanding test if it meets a 1% threshold and certain frequency criteria (to eliminate random errors).

If the firm passes any one of the test in any firm year, I classify the firms as potentially dual-class. Once the firm is identified as a potential dual class firm, all of its firm years are included in the test sample. The resulting test sample is made up of 3,410 firms and 27,738 firm years.

From this test sample, I examine annual filings with the Securities and Exchange Commission to determine if and when the firm had a dual-class stock structure. The final sample consists of 1,096 firms which use the dual class structure and 8,245 firm years.

APPENDIX D

SAMPLE UNIFICATION

This appendix presents information regarding a dual class unification at E-Z-EM (AMEX:EZM). Information comes from news articles on *Factiva* or *Lexis-Nexis* and firm proxies.

Unification Timeline

Dual class recapitalization announcement	September 29, 1992
Class B (EZM.B - non-voting) shares begin trading	October 27, 1992
Board begins to examine unification options	October 2001
A committee of outside directors begin to evaluate unification	May 6, 2002
Board recommends unification	July 9, 2002
Announcement of the proposed unification by press release	July 10, 2002
Proxy statement mailed discussing unification	September 13, 2002
Unification approved by shareholders	October 15, 2002
New common stock share begins trading	October 22, 2002

Dual class structure details:

Class A Common Stock Terms:

- Voting: One vote per share. 66% affirmative vote of Class A shares actually voted required for any amendment of the certificate of incorporation, reduction of capital, merger with and into one or more corporations, sale, transfer, pledge, etc. of substantially all of the Company's property or assets, or liquidation, dissolution or winding up of the Company.
- Dividends: May receive cash dividends equal to or less than dividends paid on Class B common stock. May receive stock dividends either in the form of Class A or Class B common stock.

Class B Common Stock Terms:

- Voting: No vote.
- Dividends: May receive cash dividends equal to or greater than dividends paid on Class A common stock. May receive stock dividends only in the form of Class B common stock.
- Conversion: May be converted into Class A common stock on a one-for-one basis if either
 - the Class A or Class B shares are excluded from quotation on the AMEX due to the dual class structure, or
 - the number of outstanding shares of Class A common stock falls below 10% of total number of shares of all classes of outstanding E-Z-EM common stock.

Why was the structure implemented?

In their 2002 annual proxy, E-Z-EM gives the following reasons why the dual class structure was originally implemented:

- to allow E-Z-EM to issue equity securities in connection with acquisitions and to raise equity capital or to issue convertible debt or convertible preferred stock as a means to finance future growth without diluting the voting power of the Company's existing stockholders;
- to allow E-Z-EM to grant equity-based compensation awards without diluting the voting power of the Company's existing stockholders;
- to allow the existing holders of E-Z-EM common shares to sell or otherwise dispose of common shares while maintaining their voting positions; and
- to reduce the risk of an unsolicited takeover attempt that might not be in the best interests of the Company and its stockholders.

Why was the structure being discarded?

Also in their 2002 annual proxy, E-Z-EM states the elimination of the structure is expected to:

- eliminate potential investor confusion and additional administrative expenses caused by our dual class capital structure,
- eliminate any negative impact on the market price of shares that we believe results from the dual class structure,
- potentially increase our investor base and the liquidity, trading volume and trading efficiencies of our common shares,
- potentially increase our ability to use stock as an acquisition currency, and
- potentially enhance our ability to attract analyst coverage and investments by mutual funds and other types of investors that do not purchase non-voting securities.

Shares outstanding and control block:

As of the record date for their 2002 annual meeting, E-Z-EM had approximately 4,001,341 shares of (voting) Class A common stock outstanding, and 5,990,974 shares of (non-voting) Class B common stock outstanding. The Stern and Meyers families held approximately 64% of the voting Class A stock and 52% of the non-voting Class B common stock.

Who can vote for the unification proposal?

Only Class A shareholders have the right to vote for the unification proposal.¹

Unification Details:

In E-Z-EM's unification, each share of Class A common stock and each share of Class B common stock was converted into one share of new common stock. In E-Z-EM's case, the company actually did a recapitalization merger with a wholly-owned subsidiary to effect the unification.

¹Sometimes both classes are allowed to vote for the proposals.