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Recapitalization of one class of common stock into dual-class: Growth and long-run stock returns

Valentin Dimitrov[a], Prem C. Jain[b,*]

[a]*Rutgers Business School, Rutgers University, Newark, NJ 07102, USA*
[b]*McDonough School of Business, Georgetown University, Washington, DC 20057, USA*

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Abstract

We study a sample of 178 firms that changed from a one-share one-vote into a dual-class common stock structure during 1979–1998. We find that dual-class recapitalizations are shareholder value enhancing corporate initiatives. Using accounting data, Lehn et al. (1990) [Lehn, K., Netter, J., Poulsen, A., 1990. Consolidating corporate control: dual-class recapitalizations versus leveraged buyouts. Journal of Financial Economics 27, 557–580] provide evidence that dual-class recapitalizing firms grow faster than firms in a control group and undertake secondary equity offerings (SEOs) to finance growth. We show that growth is indeed beneficial to the shareholders. The stockholders, on average, earn significant positive abnormal returns of 23.11% in a period of 4 years following the announcement month. Furthermore, abnormal returns are even larger (52.61%) for the dual-class firms that issue equity. This evidence is especially supportive of the value enhancing hypothesis as it is contrary to the prevailing result that SEOs are generally followed by large negative returns. We do not find any evidence of managerial entrenchment.

JEL classification: G14; G31; G32; G34
Keywords: Dual-class structure; Corporate governance; Long-run performance

* Corresponding author. Tel.: +1 202 687 2260; fax: +1 202 687 4031.
E-mail address: pjain@msb.edu (P.C. Jain).

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1. Introduction

Dual-class recapitalizations allow managers of firms with one class of common stock to create a second class of common stock with limited or no voting rights. The finance literature presents several arguments suggesting that dual-class recapitalizations can be interpreted as either value enhancing or value destroying corporate initiatives. Consistent with the value enhancing hypothesis, Lehn et al. (1990) predict that firms with greater growth opportunities are likely to undertake dual-class recapitalizations. Consider, for example, the case when managers expect profitable growth in the future. Due to asymmetric information between the average market participant and the insiders, the stock price may not fully reflect the forthcoming good news. As a result, knowledgeable raiders may take control of the firm at an unreasonably low price. However, in the presence of a dual-class structure, the incumbent management can protect the current shareholders from such harm by a relatively smaller investment in the equity of the firm than it would be possible without a dual-class structure (e.g., Alchian and Demsetz, 1972). Several other arguments in favor of a dual-class structure have been presented in the literature.[1]

In contrast to the value enhancement hypothesis, dual-class structures may be motivated by managers' desire to use firm resources inefficiently. Managers with concentrated voting power without equivalent cash flow rights would find it less costly to consume firm resources such as excessive usage of corporate jets and plush offices. Demsetz (1983) and Fama and Jensen (1983) argue that entrenched managers may pursue objectives inconsistent with shareholder value maximization (entrenchment hypothesis). Similar arguments are frequently invoked in the popular press to criticize dual-class recapitalizations.[2] However, Comment and Schwert (1995) provide a large sample study on several potential entrenchment devices and conclude (p.6) that, "[O]ur evidence casts doubt on the view that anti-takeover measures are used primarily to entrench incumbent management". Consistent with Comment and Schwert (1995), Smart and Zutter (2003, p. 102) find that dual-class targets receive higher premiums. They consider it to be tentative evidence that dual-class ownership structures can benefit outside shareholders. Since the theoretical priors and the empirical evidence on entrenchment are not unequivocal, additional evidence on dual-class recapitalizations should help us better understand the role of dual-class structures and, by inference, that of other potential entrenchment mechanisms.[3]

Our main objective is to shed additional light to help distinguish between the value enhancement and the entrenchment hypotheses. Lehn et al. (1990) predict that dual-class

[1] DeAngelo and DeAngelo (1985) suggest that dual-class structures may encourage managers to make firm-specific investment in their human capital. It is difficult to obtain reliable evidence on human capital. However, Taylor and Whittred (1998) use predominantly qualitative data and state that "dual-class firms have a higher proportion of their value determined by the expected realization of growth options rather than assets in place".

[2] For example, CalPERS (a large pension fund with over $130 billion under management) criticized the proposed dual-class recapitalization by Tyson Foods as antithetical to the fair and fundamental principle of a one-share one-vote structure (*Dow Jones News Service*, April 21, 1999).

[3] While the one-share one-vote is the most common form of voting structure in practice, there is nothing fundamental about this practice that would suggest its optimality in all cases. For example, Grossman and Hart (1988) provide conditions under which one-share one-vote arrangements maximize the benefits to security holders in takeover situations. However, Burkart et al. (1997, 1998) show that one-share one-vote rules may discourage efficient takeovers once the incentives related to the bidders are also taken into account.

recapitalizing firms grow faster and engage in secondary equity offerings (SEOs) more frequently following recapitalizations. Their growth hypothesis suggests that dual-class recapitalizations are likely to be shareholder value enhancing initiatives. While Lehn et al. (1990) develop the growth hypothesis and present supporting evidence through accounting variables, they do not focus on stock returns. We focus on the shareholder value enhancing aspect of their hypothesis by examining long-run abnormal returns following dual-class recapitalizations. We also provide additional strong evidence in support of the growth hypothesis by examining long-run abnormal returns (and other variables) for two subsamples that are based on whether firms issue or do not issue new equity following the recapitalizations.

Prior research papers on dual-class have addressed several issues. We divide them into three sets and discuss their relation to our work. The first set consists of those studies that focus on examining firm value and ownership structure in the cross-section. For example, using a sample of 1301 firms in eight East Asian economies, Claessens et al. (2002) relate the market-to-book ratio of the firms to control rights and cash-flow rights. Gompers et al. (2004) similarly compare various characteristics of the dual-class and the single-class firms in the U.S. One main concern with these studies is that, in equilibrium, different types of ownership structures could be optimal. As Demsetz (1983), Denis and Denis (1994), and Demsetz and Villalonga (2001) point out, the ownership structure should be thought of as an endogenous outcome that reflects the influence of all shareholders. In particular, the market-to-book ratio could easily represent risk or other firm-specific characteristic (e.g., Fama and French, 1993) without any implications for valuation effects of the dual-class structure.[4] Since we focus on *change* in ownership structure, our study is distinct from the studies which relate ownership level to firm value in the cross-section. By focusing on change, we provide a more direct link between the effects of dual-class recapitalization on shareholder value.

In the second set of studies related to our work, several papers have documented a share price premium for the superior voting stock. Lease et al. (1983, 1984), Zingales (1995), Cox and Roden (2002) and others document that in the United States, superior voting shares trade at a small premium of about 3% to 8% above their inferior voting counterparts.[5] However, it is important to recognize that the presence of a voting premium does not imply that dual-class structures are suboptimal from the point of view of the holders of the inferior voting shares. The shareholders of the inferior voting class would also benefit if the dual-class structure induces the controlling managers to take profitable projects that they would

[4] Empirically, Danielson and Karpoff (1998) show that most publicly traded firms have complex governance structures. Thus, it is entirely likely that market-to-book or other variables may be associated with corporate governance characteristics (such as dual-class or poison pill) without any implication for causality. In a complex governance structure, one potential entrenchment mechanism may easily be countered by another one. Agrawal and Knoeber (1996) also show that univariate analyses linking firm performance and control mechanisms could lead to misleading results.

[5] The premium in other countries is generally larger. For evidence from other countries, see Zingales (1994), Rydqvist (1996), Gardiol et al. (1997), Nenova (2003), and Dyck and Zingales (2004). For uniformity of the corporate governance environment and for lack of data from other countries on dual-class recapitalizations, we study the U.S. firms only.

otherwise not take. The premium may simply be thought of as an optimal compensation mechanism to the controlling managers that is in the best interests of *all* shareholders.

Since the premium on the superior voting class of common stock in the United States is small, it appears that the dual-class mechanism is not used as an entrenchment device, at least not in the United States. The difference between the U.S. and other countries is also evident in the results presented by Doidge (2004). He shows that the dual-class premium declines as foreign companies list their shares for trading in the United States. His evidence also suggests that the entrenchment motivation in the U.S., if any, is certainly smaller than that in other countries.

The third set of studies comprises event studies examining the effects of dual-class recapitalization on shareholder wealth. The three prominent studies are those of Partch (1987), Jarrell and Poulsen (1988) and Cornett and Vetsuypens (1989). The event period abnormal returns in these studies are small and not always significant or of the same sign. The range of average abnormal returns is from −0.82% to 1.2%. The short-window event period results are inconclusive in supporting or rejecting any particular hypothesis. Researchers have been puzzled by the small market reaction to such an apparently important corporate ownership structure decision. There is at least one potential explanation that seems to fit the data. Note that changes from one-class to a dual-class structure are not very frequent. The sample sizes in the three aforementioned studies are 44, 94, and 70, respectively. Our study has 178 observations but still, it amounts to only nine announcements per year over the 20 years of our sample period. This suggests that the market clearly has had a limited experience with dual-class recapitalizations. Hence, even if the market reacts in an unbiased manner to the recapitalization announcements, the initial reactions have a high probability of being incorrect.

Lehn et al. (1990) focus on examining several financial characteristics of firms around dual-class recapitalizations. Most importantly, they predict and find that dual-class recapitalizing firms are high growth firms that are potentially in need of equity financing for growth. Two recent papers (Wu and Wang, in press; Attari and Banerjee, 2004) develop analytical models generalizing the arguments originally made by Lehn et al. (1990) and to some extent by Gilson (1987). In particular, if a firm foresees positive NPV investments that require new equity, the controlling shareholders may not take the new investments (underinvestment problem) if issuing equity threatens their control of the firm. However, a dual-class recapitalization would allow the firm to raise new equity while assuring that current managers maintain control of the firm.[6] It is worth emphasizing that even if dual-class recapitalizations are associated with growth, that evidence by itself is not conclusive as to whether such recapitalizations are undertaken for entrenchment or enhancing shareholder value. Growth and entrenchment are not necessarily incongruent as growth can be undertaken for hubris (Roll, 1986) or empire building, in which case growth would be harmful for current shareholders.

Since dual-class recapitalization events are not frequent, the short-window results are inconclusive, and the accounting-based measures suggest growth and improved perform-

[6] If the growth was expected to be financed primarily through debt, there would be no need for a dual-class recapitalization. In effect, as Lehn et al. (1990) point out, a leveraged buyout would be a better form of ownership structure in that case.

ance, we undertake a long-run study to provide more conclusive evidence on the effects of dual-class recapitalizations. A growing body of empirical research also suggests that it is important to examine long-run returns to capture the full effect of changes in corporate finance policies.[7] Overall, if the managerial objective behind dual-class recapitalizations is to increase shareholder wealth, we should also observe positive abnormal returns following the decision to create two classes of common stock. On the other hand, if the managerial objective is to consume excessive perquisites through entrenchment, we should observe negative abnormal returns. We follow this approach to distinguish between the shareholder value enhancement and the entrenchment hypotheses.

Beyond observing growth in sales, total assets and operating earnings, Lehn et al. (1990) also find that in the post-recapitalizing period, the frequency of secondary equity offerings (SEOs) is higher than normal. It is also well known that, on average, secondary equity offerings are followed by long-run negative abnormal returns (e.g., Loughran and Ritter, 1995). We divide the sample into two subgroups based on SEOs in the post-recapitalization period. If the sub-sample of the dual-class recapitalizing firms that engage in SEOs following recapitalizations experience long-run *positive* abnormal returns, the evidence would strongly support the shareholder value enhancement hypothesis.

We also provide additional supporting evidence using ROA (return on assets) and ROE (return on equity) ratios. Such an analysis can help determine the type of projects undertaken by the firms following dual-class recapitalizations. If dual-class recapitalizations are motivated by entrenchment, the quality of projects following the recapitalizations will worsen and operating performance will deteriorate. Prior studies on the effect of dual-class recapitalizations on operating performance have produced contradictory results. Mikkelson and Partch (1994) find that operating cash flows as a percentage of end-of-period assets deteriorate following dual-class recapitalizations. In contrast, Lehn et al. (1990) report that profit margins improve following dual-class recapitalizations. We revisit this issue using a significantly larger sample from a much longer period and focus on using ROE and ROA to measure accounting returns. We emphasize ROE and ROA as they are often thought of as the accounting counterparts to stock returns.

The summary of our empirical work is as follows. We attempt to find all dual-class recapitalization announcements during 1979–1998. The sample consists of 178 firms that announce the adoption of a dual-class structure. The firms in the sample, on average, exhibit concentrated shareholdings before the dual-class recapitalization. The biggest shareholder, on average, controls 39.44% of the outstanding shares prior to the dual-class recapitalization. This evidence is consistent with the idea that concentrated holding may be the optimal ownership structure for these firms. Thus, dual-class recapitalizations are not undertaken to initiate entrenchment. However, to finance growth, the managers may be setting the stage for raising equity without losing control. Were they to issue equity

[7] For a recent summary of evidence on long-run studies, see Daniel et al. (1998). Our research is not motivated by testing the market efficiency hypothesis although there is methodological similarity between our study and those motivated by testing market efficiency. Comment and Schwert (1995, p. 38) also suggest that in some cases (such as poison pills), the market may misestimate the eventual outcome effect by over- or underestimating benefits and costs. For proxy contests, Dodd and Warner (1983) and Mulherin and Poulsen (1998) examine and re-examine potential misestimates by the market. For examples of recent ownership structure related long-run studies, see Hertzel et al. (2002) and Krishnamurthy et al. (in press).

without a dual-class structure, the current controlling shareholders would dilute their voting rights and potentially lose control.

The short-window abnormal returns have been examined previously although our sample size is much larger. Consistent with prior research, the 3-day average abnormal return is essentially zero (0.06%). More importantly, we document that firms in the sample earn large and significant positive abnormal returns of 23.11% in a period of 4 years following the announcement month. The 1-, 2- and 3-year results are also statistically significant. Thus, dual-class recapitalizations are shareholder value enhancing decisions and they clearly do not hurt the current shareholders.

Consistent with the results in Lehn et al. (1990), we find that, on average, the firms in the sample experience significantly higher rates of growth in sales, assets, and operating income than the growth rates of their one-share one-vote competitors (firms matched by industry and size). Along with higher growth of the firms in the sample, the return on assets and the return on equity measures suggest that the growth is indeed profitable.

We divide the sample into two sub-samples of firms that issue equity and firms that do not issue equity after the dual-class recapitalizations. Similar to the findings of Lehn et al. (1990), about 40% of the firms issue shares of the inferior voting class during the 4-year period following the dual-class recapitalization. In contrast, only 9% of their competitors issue equity during the same period. Thus, managers, on average, seem to adopt dual-class structures in anticipation of future growth and the associated need for equity financing. We find that the firms that issue equity (SEOs) grow faster and earn larger abnormal returns (52.61%) than the firms that do not issue equity (2.99%). This is strong evidence in support of the shareholder value enhancement hypothesis because SEOs are generally thought to be followed by long-run negative abnormal returns.

The overall results tell the following story. Managers undertake dual-class recapitalizations anticipating future growth and also expecting that new growth might need equity financing. Of course, ex-post, not all dual-class recapitalizing firms experience high growth and go to the equity market. However, on average, managerial expectations are realized and the firms that go to the equity market are indeed those that grow faster and earn higher abnormal returns. There appears to be a clear link between dual-class recapitalizations and abnormal returns through growth and issuance of new equity.

The rest of the paper is organized as follows. In Section 2, we discuss the sources of data and present summary statistics. In Section 3, we present an analysis of changes in shareholdings around the adoption of dual-class structures. In Section 4, we present the announcement period and long-run stock market results. We analyze the stock issuance and growth rates of dual-class firms in Section 5. Section 6 contains the operating performance results. We present our conclusions in Section 7.

2. Data and summary statistics

2.1. Data

We collect data from several sources. The CRSP (Center for Research in Security Prices at the University of Chicago) tapes include data on firms that trade multiple

classes on the exchanges. Multiple classes of stock from the same firm share the first six digits on their CUSIPs. Thus, we start with stocks with the same first six digits but differing last two digits on their CUSIPs. We examine each such security in the Standard and Poor's (S&P) stock guide or other sources to confirm that the stock listed on CRSP is indeed a dual-class. In this process, we eliminate preferred stock, tracking stock and unit trusts.

Data from CRSP are not sufficient to identify all the dual-class firms; CRSP data would show only one stock under one CUSIP when only one class of stock is traded on an exchange. If the second class of stock is not traded, CRSP does not provide any indication of the existence of the second class of stock. We search the *Dow Jones News Wire* to collect all other dual-class related announcements to find firms that announced the adoption of a dual-class structure. This allows us to capture virtually all firms that changed from one class into two classes of common stock.

For each firm in our sample, we collect proxy statements filed with the Securities and Exchange Commission (SEC) for data on shareholdings by the biggest individual shareholder or shareholders with the same last name. We assume that the individuals with the same last name are from the same family. In this paper, 'biggest shareholder' implies the biggest shareholder and his or her family. For the majority of our firms, the biggest

Table 1
Distribution of dual-class announcements by year and exchange

Observations by year of announcement		Observations by exchange listing		
Year	Announcements	NYSE	AMEX	OTC
1979	1	0	0	1
1980	6	0	1	5
1981	4	0	3	1
1982	4	0	1	3
1983	16	2	8	6
1984	12	4	3	5
1985	20	4	5	11
1986	40	13	8	19
1987	26	14	4	8
1988	7	4	1	2
1989	3	1	0	2
1990	3	2	1	0
1991	4	1	0	3
1992	13	3	2	8
1993	3	1	0	2
1994	3	0	1	2
1995	3	1	0	2
1996	4	0	1	3
1997	3	0	0	3
1998	3	1	1	1
Total	178	51	40	87

This table reports the distribution of dual-class announcements by year and exchange of a sample of 178 firms that created a second class of common stock with limited voting rights during the 1979–1998 period. Dual-class recapitalizations are identified by examining the CRSP Monthly tapes, the Standard and Poor's Stock Reports, and news articles from the *Dow Jones Interactive Services*.

shareholder is also either the CEO or the chairman, or both. Hence we use the words 'biggest shareholder' and 'manager' interchangeably.

2.2. Descriptive statistics

Table 1 presents the sample distribution by the exchange where the firm's stock was traded at the time of the dual-class recapitalization announcement and by the year of the event. The most popular period is from 1983 to 1987. Prior to June 1984, the New York Stock Exchange (NYSE) usually did not list common stock of firms with dual-class structures. Starting in June 1984, the NYSE imposed a moratorium on its enforcement of the rule and in September 1986, it changed the rule itself. The developments around 1984 motivated firms not only on the NYSE but also on other exchanges to issue a second class of common stock.[8] For historical developments on this topic, see Gilson (1987), and Jarrell and Poulsen (1988). The discussion on the merits of the dual-class structure continues in both the academic papers and the popular press. From reading the websites of CalPERS and ISS (Institutional Shareholder Services), it appears that there is a stigma attached to dual-class ownership structures as they are not considered to be shareholder friendly. However, the recently announced dual-class structure at Google, Inc. along with the existing dual-class structure at some well-known shareholder friendly companies (e.g., Warren Buffett's Berkshire Hathaway) seems to have reduced the criticism of the dual-class structure in the popular press.

Table 2 presents summary statistics for firms in our sample.[9] We compare the characteristics of dual-class firms to those of their competitors. Throughout the paper, we use the term competitors consistently. The competitors are defined as the firms that have the same two-digit SIC code with assets between 70% and 130% of the assets of the sample firms at the end of the fiscal year ending closest in time and prior to the announcement date of the recapitalization. Given the relatively small size of the sample, we focus on medians and not on means even though the analysis of sample means leads to similar conclusions. The median total assets of $124.2 million indicate that dual-class firms are relatively small. The competitor size is similar by construction. The median book-to-market ratio of sample firms is 0.5378, which is significantly lower than the median book-to-market ratio of the competitors (0.6057). These numbers are consistent with the hypothesis that firms undertaking dual-class recapitalizations are likely to have higher growth rates. Over the 3 years before the recapitalization, dual-class firms have a median growth rate in operating income of 41.36% relative to only 31.58% for their competitors. The past growth rates in sales and assets are also higher for dual-class firms, although the differences are statistically insignificant. Dual-class firms are also more

[8] Another potential reason for the increased dual-class recapitalization activity in the mid 1980s may be related to takeover defense. However, there was no such increase in dual-class recapitalizations in the mid 1990s when the takeover activity increased substantially.

[9] The number of observations across variables is not identical because of unavailability of data on Compustat for sample firms or their competitors. In addition, five firms announced dual-class recapitalizations but did not subsequently issue a second class of stock. Our conclusions are the same whether we include those five firms in the sample or do not.

Table 2
Characteristics of firms adopting dual-class structures

Variable	Observations	Sample firms	Competitors	Difference
Total assets (in $MM)	163	124.2	121.3	2.8540
Book-to-market	163	0.5378	0.6057	−0.0679[b]
Past growth in sales	142	0.4061	0.3598	0.0463
Past growth in assets	143	0.4311	0.3758	0.0553
Past growth in operating income	138	0.4136	0.3158	0.0978[b]
ROA	161	0.1503	0.1395	0.0108
Debt/assets	160	0.2640	0.2534	0.0106

This table presents median characteristics of a sample of 178 firms that created a second class of common stock with limited voting rights during 1979–1998 relative to the median characteristics of their competitors. Dual-class recapitalizations are identified by examining the CRSP tapes, the Standard and Poor's Stock Reports, and news articles from the *Dow Jones Interactive Services*. The characteristics of competitors are defined as the median characteristics of firms in the same two-digit SIC code industry as the sample firms and with assets between 70% and 130% of the assets of the sample firms at the end of the fiscal year ending closest in time and prior to the announcement date of the recapitalization. Financial statements data are obtained from Compustat, and stock returns are obtained from CRSP. Values for each company are taken for the most recent fiscal year that ends prior to the announcement date of the dual-class recapitalization. The Compustat data items used are total assets (item 6), sales (item 12), ROA (return on assets) (operating income before depreciation (item 13)/total assets (item 6)), book-to-market ratio (book value of equity (item 60)/shares (item 54) times price (item 199)), and debt/assets (long-term debt+debt in current liabilities (items 9+34)/total assets (item 6)). Past growth is calculated over the three fiscal years ending prior to the dual-class recapitalization.

[b] Significantly different from the competitors at the 5% level, using the Wilcoxon two-sample test.

profitable than their competitors, however the difference is not significant. The return on assets (ROA) for dual-class firms is 15.03%, compared to 13.95% for the competition. We also examine the leverage of dual-class firms relative to that of their competitors and find no significant difference between the two sets of firms. Overall, the results in Table 2 suggest that at the time of recapitalization, dual-class firms are relatively high growth firms and are no less profitable than their competitors.

3. Changes in shareholdings of the biggest shareholder

Table 3 reports the percentage of equity and votes controlled by the biggest shareholder prior to and following the adoption of the dual-class structures. The percentage of equity (cash flow rights) held by the biggest shareholder is defined as the total number of both classes of shares held divided by the total number of both classes of shares outstanding, adjusted for conversion ratio, if necessary. The percentage of votes controlled is calculated similarly except that the weights are applied in accordance with the voting rights of the two classes of shares.

Data for Table 3 are collected from proxy statements filed with the Securities and Exchange Commission (SEC) and in some cases from the S&P Stock Reports. Ownership information prior to recapitalization is taken from the proxy statement closest in time and prior to the dual-class announcement. Ownership information following the recapitalization is obtained from the proxy statement with a date that is closest to the end of a 2-

Table 3
Ownership structure of firms adopting dual-class structures

Variable	Prior to the recapitalization	Following the recapitalization	
	Percentage of equity and votes controlled by the biggest shareholder	Percentage of equity controlled by the biggest shareholder	Percentage of votes controlled by the biggest shareholder
Mean	39.44%	34.80%	49.90%
Minimum	0.42%	0.43%	0.63%
Median	39.05%	34.22%	50.00%
Maximum	93.60%	77.79%	96.88%
Observations	168	173	165

This table reports the ownership structure of the sample of 178 firms that created a second class of common stock with limited voting rights during 1979–1998. Dual-class recapitalizations are identified by examining the CRSP tapes, the S&P Stock Reports, and news articles from the *Dow Jones Interactive Services*. Ownership data are obtained from company proxy statements filed with the Securities and Exchange Commission, and in some cases from the Standard and Poor's Stock Reports. Ownership information prior to the recapitalization is taken from the proxy statement closest in time and prior to the dual-class announcement. Ownership data following the recapitalization is obtained approximately 2 years following the dual-class announcement. *Percentage of equity and votes controlled by the biggest shareholder* is given by the number of shares controlled by the biggest shareholder before the recapitalization divided by the total number of shares outstanding. *Percentage of equity controlled by the biggest shareholder* is given by the sum of the number of shares of each class controlled by the biggest shareholder after the recapitalization divided by the total number of shares outstanding of the combined classes. *Percentage of votes controlled by the biggest shareholder* is given by the number of votes controlled by the biggest shareholder divided by the total number of votes available.

year period following the dual-class recapitalization. We choose a 2-year period because many of the proxy statements are released soon after the adoption of the dual-class structure and may not reflect the decisions of shareholders who did not have enough time to evaluate their portfolios and decide on the level of their holdings.

The biggest shareholder, on average, controls 39.44% (median of 39.05%) of the outstanding shares prior to a dual-class recapitalization. Clearly, most of these firms are closely held. Similar to the conclusions in DeAngelo and DeAngelo (1985) and Partch (1987), this finding shows that firms adopting dual-class structure are firms for which concentrated ownership is important even before the adoption of a dual-class structure.

Dual-class recapitalizations are usually implemented in a manner that allows current shareholders to exchange their shares for new shares of the superior voting class or the inferior voting class. There are two common incentives for shareholders to prefer the shares of the inferior class. First, firms frequently offer preferential dividends to the shares of the inferior class and, second, the shares of the inferior class are usually more liquid. The biggest shareholders usually choose to take the superior class of shares forgoing the above mentioned benefits. This process of conversion can take several months and, generally, there is no immediate change in ownership structure as the dual-class recapitalization is implemented. However, with time, the biggest shareholders are able to consolidate their voting rights without the corresponding increase in cash-flow rights. We find that there is a substantial increase in the voting power of the biggest shareholder as the average voting power goes up to 49.90% (median of 50.00%) even though the percentage of equity held by the biggest shareholder goes down slightly to 34.80% (median of 34.22%) from 39.44% (median of 39.05%). The small decline in the

percentage holding is not from selling shares but from an increase in the number of shares outstanding. We examine the proxy statements and find that there is essentially no selling of shares by the biggest shareholders. The mean (median) percentage of shares sold by the biggest shareholder is −1.92% (1.22%). Thus the decline in average holding (from 39.40% to 34.80%) is attributable to changes in shares outstanding.

Overall, given the high managerial ownership prior to the recapitalization, it is unlikely that the increase in control by itself is the main motive for the adoption of dual-class structures. The evidence that managers do not sell shares following the recapitalizations also does not square with the entrenchment hypothesis. In the next section we further differentiate between the entrenchment and the optimal ownership structure hypotheses by examining the stock-market performance of the firms adopting a dual-class structure.

4. Stock market results

Partch (1987), Jarrell and Poulsen (1988) and Cornett and Vetsuypens (1989) examine announcement period abnormal returns of dual-class recapitalizations. The magnitude of the announcement period abnormal returns is between −0.82% and 1.20%, which does not appear to be large. Although we also examine the announcement period results, our focus is on long-run returns. As mentioned earlier, it is important to examine the long-run results to understand the full significance of less frequent but important announcements such as dual-class recapitalizations. We first present the announcement period results followed by the long-run results.

4.1. Announcement period abnormal returns

Table 4 presents the results for the 3-day window around the announcement of dual-class recapitalizations. Our sample size of 178 is almost twice as large as that of any of the samples in previous studies. The narrow window results are not likely to be sensitive to the choice of the benchmark. We use the market (value-weighted CRSP index) as a measure of expected return. For the 3-day window (from day −1 to day +1), the average abnormal

Table 4
Announcement period stock returns of firms adopting dual-class structures

Daily period	Observations	Sample return	CRSP VW index	Excess return	*t*-Statistic	% Positive
−1 to 1	178	0.0043	0.0037	0.0006	0.12	44.9
−3 to 3	178	0.0153	0.0044	0.0109	1.70[c]	49.4

This table reports the announcement period returns for firms adopting dual-class structures during the 1979–1998 period. Dual-class recapitalizations are identified by examining the CRSP tapes, the Standard and Poor's Stock Reports, and news articles from the *Dow Jones Interactive Services*. Stock returns are obtained from the CRSP Daily Files. The daily period is relative to the announcement date of the recapitalization proposal. Firm returns and CRSP VW Index returns over a particular period are calculated by cumulating daily returns. The sample returns, the CRSP VW index returns, and the excess returns in the table represent sample averages. % Positive is the percentage of sample observation that have positive excess return relative to the CRSP VW index.

[c] Significantly different from zero at the 10% level based on a *T*-test.

return for the sample of 178 firms is essentially zero (0.06% with a t-statistic of 0.12). For the 7-day event window (from day −3 to day +3), the average abnormal return is 1.09%, which is statistical significant at the 10% level of significance. Overall, since the abnormal returns for the 7-day event window are marginally significant at the 10% level, the stock market, on average, views dual-class recapitalization announcements to be only mildly positive.

4.2. Long-run abnormal returns following dual-class recapitalizations

4.2.1. Statistical methodology

We follow the statistical methods of Lyon et al. (1999) to examine long-run buy-and-hold returns of the firms in our sample. In this approach, we compare returns on the portfolio of firms in our sample to 1000 pseudo-portfolios of matching firms. We define month 0 as the calendar month in which dual-class announcements are first made. The buy-and-hold return for a stock i for T months is computed as

$$R_{iT} = \prod_{t=1}^{T} (1 + r_{it}) - 1.0 \tag{1}$$

where r_{it} is the raw return (with dividends) on stock i for month t. The portfolio holding period return for T months is then the average over all n stocks in the sample and is given by

$$HPR_T = \frac{1}{n} \sum_{i=1}^{n} R_{iT}. \tag{2}$$

For each sample firm, 1000 matching firms are drawn, with replacement, from all firms that belong to the same market value, book-to-market, and momentum quintiles as the sample firm at the announcement month.[10] Market value quintiles are constructed using NYSE breakpoints to assure sufficient dispersion in size between quintiles. Book-to-market ratios are measured for the year prior to the dual-class announcement of the sample firms. Momentum quintiles are formed based on buy-and-hold returns over the year preceding the announcement of the dual-class recapitalizations. Using quintiles ensures that there are a reasonable number of stocks in each portfolio. We define abnormal holding period returns as the difference between the return on the sample of firms adopting a dual-class recapitalization and the average return on the 1000 matching portfolios. The reported p-values show the percentage of the 1000 matching portfolios that had a return greater than the return on the portfolio of dual-class firms.

4.2.2. Results for the overall sample

Table 5, Panel A compares the size, book-to-market, and momentum characteristics of dual-class firms and the universe of matching firms from which the 1000 matching portfolios are formed. We confirm that the characteristics of matching firms are similar to

[10] As a robustness test, we also create pseudo-portfolios of matching firms on the basis of market value alone and on the basis of market value and momentum. These alternative specifications produce similar abnormal returns.

Table 5
Long-run returns of firms adopting dual-class structures

Panel A: characteristics (medians) for the universe of matching firms

Variable	Sample firms	Matching firms	Difference[a]
Prior 12-month returns	0.4415	0.4440	−0.0025
Book-to-market	0.5671	0.6026	−0.0355
Market value equity (in $MM)	106.69	121.92	−15.23

Panel B: stock returns

Monthly period	Observations	Sample firms	Matching firms	Abnormal return	*p*-Value
1 to 12	178	0.1523	0.0984	0.0539	0.079
1 to 24	178	0.3457	0.2096	0.1361	0.024
1 to 36	178	0.4994	0.3462	0.1532	0.061
1 to 48	178	0.6701	0.4390	0.2311	0.044

This table reports the buy-and-hold returns of dual-class firms for the 4 years following the recapitalization announcement. Dual-class recapitalizations are identified by examining the CRSP tapes, the Standard and Poor's Stock Reports, and news articles from *the Dow Jones Interactive Services*. Stock returns are obtained from the CRSP Monthly files. The matching firms' returns show the average return over 1000 portfolios of firms matched to sample firms on the basis of market value, book-to-market, and momentum. For each sample firm, 1000 firms are drawn, with replacement, from all firms that belong to the same market value, book-to-market, and momentum quintile as the sample firm. Market value quintiles are constructed using NYSE breakpoints. Momentum quintiles are formed based on buy-and-hold returns over the year preceding the announcement of the dual-class recapitalization. Book-to-market quintiles are formed based on firms' book-to-market ratios closest in time and prior to the dual-class announcement of the sample firm as reported on Compustat. After 1000 matching firms are drawn for each sample firm, 1000 matching portfolios are formed. The *p*-values reported in the table show the fraction of the 1000 matching portfolios that had greater return than the return on the portfolio of firms adopting a dual-class structure. Panel A reports the median characteristics of potential matching firms relative to the median characteristics of sample firms. Panel B reports the average long-run stock return of sample firms and the average return on the portfolios of matching firms. The monthly period is measured relative to the month of the dual-class recapitalization (month 0).

[a] All differences are insignificant based on the Wilcoxon two-sample test.

those of firms adopting dual-class structures. Table 5, Panel B presents long-run abnormal results for the entire sample of 178 firms. We find that, on average, firms adopting dual-class recapitalizations outperform the matching portfolios by 5.39% in the first year following the month in which the announcement is made (month 0). The cumulative abnormal return is 23.11% for the 4-year period following the announcements. The results are statistically significant at 2% to 7% level of significance depending upon the length of the time period. The long-run results are consistent with the hypothesis that, on average, dual-class recapitalizations are shareholder value enhancing decisions. The results are not consistent with the hypothesis that dual-class recapitalizations are undertaken by management to entrench in poorly performing firms or to use company resources in an unproductive manner.[11]

[11] We do not include IPOs in our sample even when IPO firms have two classes of shares. IPOs are generally motivated by different reasons and the IPO long-run results are well documented. For studies on long-run performance followed by IPOs, see Ritter (1991), and for dual-class IPOs, see Boëhmer et al. (1996). The results in Boëhmer et al. (1996) are consistent with our results as they report that the dual-class IPOs do not perform as poorly as regular IPOs.

4.3. Calendar time abnormal returns

For robustness, as recommended by Fama (1998), we also use the following calendar time abnormal return (CTAR) model to estimate portfolio performance over a long-term:

$$R_{p,t} - R_{f,t} = a_p + b_p\left(R_{m,t} - R_{f,t}\right) + s_p \mathrm{SMB}_t + h_p \mathrm{HML}_t + e_{p,t}. \quad (3)$$

In this approach, originally developed by Fama and French (1993), the time-series regression coefficients control for several factors in a linear framework. Fama and French (1993) show that the three factors capture significant cross-sectional variation in portfolio returns. The three factors are given by returns to the market portfolio over the risk-free rate ($R_{m,t}-R_{f,t}$), returns to a size-mimicking portfolio (SMB_t) to capture the firm size effect, and the returns to a book-to-market-mimicking portfolio (HML_t) to capture the book-to-market effect. We define $R_{p,t}$ as the equally-weighted portfolio mean of the returns in month t of all firms that have announced a dual-class recapitalization in the previous 12 and 24 months.

The CTAR approach requires a substantial number of sample firms. Without a large sample, the number of firms in some months could be small and the results would be unreliable. In particular, in small samples the estimation will suffer from severe heteroskedasticity since the number of firms with returns in each month would vary substantially. Our sample consists of only 178 firms spread over 20 years. Thus, the heteroskedasticity problem could be severe. To address this issue, we follow the recommendations of Mitchell and Stafford (2000) and Hertzel et al. (2002). We empirically calibrate the intercept from the dual-class sample relative to the average intercept from 1000 random pseudo-portfolios of 178 firms each. We require that the randomly sampled firms are drawn from the same time periods as our dual-class firms. We then calculate the finite-sample critical values for the intercept using the empirical distribution of t-statistics from 1000 random samples. We estimate β^*, s^*, and t^* for each bootstrap sample, where β^* and s^* are the ordinary least squares coefficient and standard error estimates for the intercept, and t^* equals $(\beta^*-E(\beta))/s^*$, where $E(\beta)$ is the average ordinary least squares estimate over the 1000 random samples. The empirical distribution is then used to determine the finite-sample critical values. We reject the null of no abnormal performance if $|t|>z^*$, where t is the t-statistic for the event sample and z^* is the critical value from the empirical distribution of t-statistics.

For the 12-month rolling portfolios we find that the alpha of the dual-class sample is 0.75% higher than the average alpha of the 1000 random samples. Using the empirically generated critical values we reject the null of no abnormal performance at the 5% level (p-value of 0.041). The 0.75% monthly abnormal return translates into a yearly buy-and-hold abnormal return of 9.67%, which is somewhat larger than the corresponding number of 5.39% reported in Table 5. Thus, the results from the CTAR and the portfolio approach are consistent with one another.[12]

For the 24-month rolling portfolios, the monthly alpha for the dual-class sample is not significantly different from the average alpha of the 1000 random samples. However, as discussed by Loughran and Ritter (2000), the CTAR approach has substantially less power

[12] We used a variety of approaches to estimate alpha in Eq. (3) including the OLS. In all cases, for the 12-month portfolios, the alpha is statistically significant at the 5% level.

to detect abnormal performance relative to the buy-and-hold approach. We evaluate the power of the CTAR approach using 1000 random samples and find support for Loughran and Ritter's (2000) results. For the same event years and the same sample size as that of the dual-class recapitalizing firms, the CTAR approach rejects the null of no abnormal performance at the 5% significance level for alphas of 0.81% a month, which translates into 21.36% over 24 months. This is a very large hurdle for abnormal returns and, therefore, it appears that the power of the CTAR approach is low. For the firms in our sample, the average abnormal return over the 24-month period is 13.61% which is significant under the buy-and-hold approach (Table 5) but not under the CTAR approach. Overall, we conclude that there is strong evidence for significantly positive 12-month abnormal returns and somewhat weaker evidence for results beyond 1 year. In the next section we present even stronger results for the sub-sample of firms issuing equity.

5. Stock issuance, growth rates, and abnormal returns

In this section, we examine whether managers adopt dual-class structures to take advantage of anticipated future growth opportunities without losing control of their firms. In particular, we examine whether the frequency of equity issuances increases following dual-class recapitalizations. We examine future growth rates in sales, assets, and operating income. Furthermore, to establish a direct link between equity issues and growth, we also examine the growth rates and stock returns of dual-class recapitalizing firms that issue equity separately from the growth rates and stock returns of the firms that do not issue equity.

5.1. Equity issuances

Table 6 documents the frequency and magnitude of equity issuances by the sample firms in the years surrounding the dual-class recapitalization announcements. In the 2-year

Table 6
Equity issues of firms adopting dual-class structures

Yearly period	Sample firms issuing equity	Percentage of firms issuing equity		Median new equity as a fraction of beg. MV for issuing firms	
		Sample firms	Competitors	Sample firms	Competitors
−2 to −1	14	7.87%	8.59%	0.2287	0.2768
0 to 2	56	31.46%	5.82%	0.2369	0.2683
0 to 4	72	40.45%	8.81%	0.2600	0.3217

This table reports statistics on the equity issues of firms that created a second class of common stock with limited voting rights during the 1979–1998 period, relative to the equity issues of their competitors. Dual-class recapitalizations are identified by examining the CRSP tapes, the Standard and Poor's Stock Reports, and news articles from the *Dow Jones Interactive Services*. Competitors are firms in the same two-digit SIC code industry as the sample firms and with assets between 70% and 130% of the assets of the sample firms at the end of the fiscal year ending closest in time and prior to the announcement date of the recapitalization. Data on assets are obtained from Compustat. Data on equity issues is obtained from the SDC database, and is supplemented by news articles from *Dow Jones Interactive Services*. *MV* is the market value of the issuing firm as reported on the CRSP tapes at the beginning of the respective period. The yearly period is measured relative to the year of the dual-class recapitalization (year 0).

period prior to the announcements, 14 firms, or 7.87% of the sample, issued equity. This is slightly smaller than the 8.59% of the competitors issuing equity in the same period. Using data obtained from the SDC, we calculate that the probability of an equity issue by a firm in the economy in a 2-year period is 5.62%. Therefore, firms in our sample and their competitors tend to issue equity somewhat more frequently than the average firm in the economy in the period prior to the recapitalization.

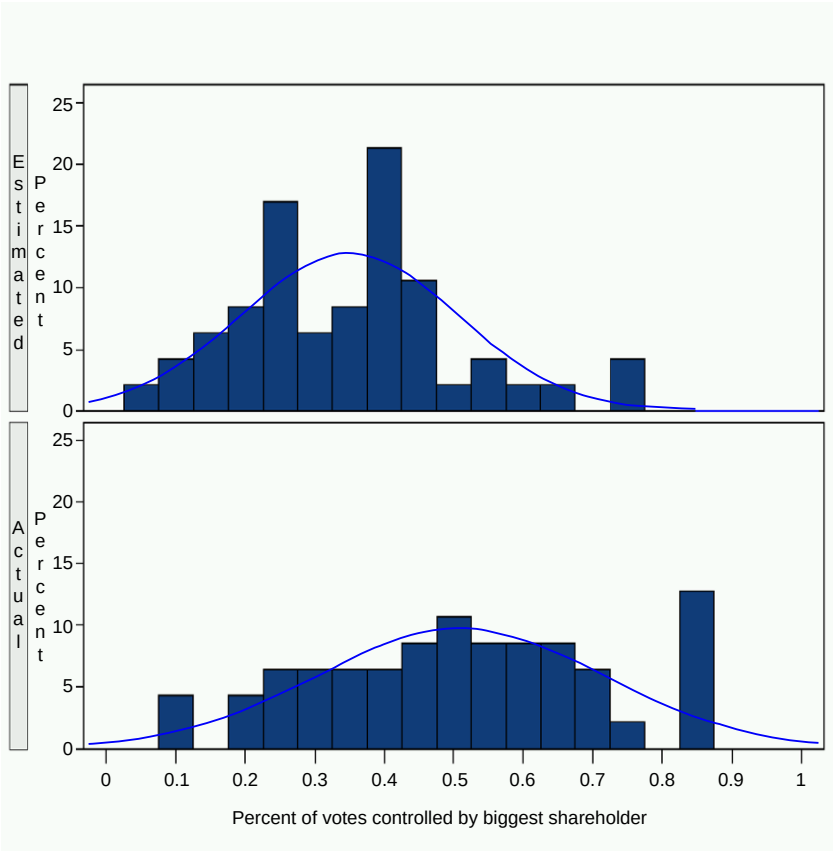

Fig. 1. Equity offerings, firms adopting dual-class structures, and voting control. The upper graph shows what the voting control of the biggest shareholder would have been had the sample firms issued equity without adopting dual-class structures. The lower graph reports the actual voting control of the biggest shareholder 2 years after the dual-class recapitalization. Dual-class recapitalizations are identified by examining the CRSP tapes, the S&P Stock Reports, and news articles from the *Dow Jones Interactive Services*. Ownership data are obtained from company proxy statements filed with the Securities and Exchange Commission, and in some cases from the Standard and Poor's Stock Reports. Ownership information prior to the recapitalization is taken from the proxy statement closest in time and prior to the dual-class announcement. Ownership data following the recapitalization is obtained approximately 2 years following the dual-class announcement. The estimated percent of votes controlled by the biggest shareholder equals the percentage of votes controlled prior to the recapitalization divided by one plus the percentage of new equity issued in the 2 years following the dual-class recapitalization.

Consistent with Lehn et al. (1990), the issuance of equity by the dual-class recapitalizing firms accelerates following the dual-class recapitalization. In the 2-year period following the recapitalization, 31.46% of the firms in the sample issue equity using the inferior voting class. By the fourth year the percentage of firms offering equity increases to 40.45%. The corresponding equity issuance frequencies for the competitors are significantly lower at 5.82% and 8.81%, respectively. The results are consistent with the hypothesis that, ex-ante, managers adopt dual-class structures to be able to issue equity after recapitalization. Ex-post, whether a firm issues new equity or does not issue new equity depends on whether the expected need for new equity is realized or not. However, the results suggest that the need for equity financing does indeed arise for a significant percentage of the firms in our sample.

Fig. 1 shows how successful dual-class recapitalizations are in maintaining managerial control despite additional equity issuances. Similar to the analysis in Table 3 for changes in ownership structure, we measure managerial control 2 years after the recapitalization. We have sufficient ownership and stock issuance data on 47 of the 56 dual-class firms that issue equity in the first 2 years following the adoption of the dual-class structure. The upper graph in Fig. 1 shows what the voting control of the biggest shareholder would have been had the company issued equity without first adopting a dual-class structure. The lower graph reports the actual voting control of the biggest shareholder 2 years after the recapitalization. We find that despite large equity issues by the firms in the sample, the biggest shareholders in 41 of the 47 firms have voting control above the 50% threshold after the recapitalization. However, if these firms had issued equity without the presence of a dual-class structure, the biggest shareholders would have more than 50% voting control in only 23 of the firms. We use the 50% threshold only as an illustration. In practice, effective control can often be accomplished with a smaller percentage of votes. Overall, the graphs reveal that without the dual-class recapitalizations, the new equity issues would have resulted in a substantial decline in voting control of the biggest shareholders for a large percentage of the firms.

5.2. Growth in sales, assets and operating income

Table 7 presents the growth rates of sales (Panel A), assets (Panel B), and operating income (Panel C) of the dual-class recapitalizing firms. We compare the post-recapitalization growth rates of the firms in the sample to the growth rates of their competitors (industry and size-matched firms as defined in Section 2.2). Panel A reports that for the sample of dual-class firms, the median growth rate in sales from year −1 to year 4 is 72.55%. This growth rate is significantly greater than the growth rate of 51.49% for their competitors. Panel B reveals similar results for growth in assets (93.06% versus 47.69%). Finally, the growth rate in operating income of 72.08% is also significantly higher than the corresponding growth rate of 50.01% for the competitors. Similar to the results in Lehn et al. (1990), we find that the dual-class recapitalizing firms, on average, grow substantially faster than their competitors.

We find a more direct link between the equity issuance of dual-class firms and their high growth rates. We separate our sample in two sub-samples based on whether a firm in the sample does or does not issue equity following the dual-class recapitalization. As documented earlier, 72 firms (40% of the sample) issue new equity in the 4-year period following the adoption of a dual-class structure. Table 8, Panel A reports

Table 7
Growth rates of firms adopting dual-class structures

Yearly period	Observations	Sample firms	Competitors	Difference
Panel A: growth in sales				
−1 to 0	158	0.1410	0.1092	0.0317[b]
−1 to 1	153	0.2769	0.2342	0.0428[b]
−1 to 2	144	0.4383	0.3657	0.0727[b]
−1 to 3	137	0.5638	0.4398	0.1239[a]
−1 to 4	131	0.7255	0.5149	0.2106[a]
Panel B: growth in assets				
−1 to 0	160	0.1528	0.0908	0.0620[a]
−1 to 1	154	0.3857	0.1829	0.2027[a]
−1 to 2	147	0.5344	0.2901	0.2443[a]
−1 to 3	140	0.7016	0.3899	0.3117[a]
−1 to 4	134	0.9306	0.4769	0.4537[a]
Panel C: growth in operating income				
−1 to 0	153	0.1481	0.1086	0.0395[c]
−1 to 1	148	0.3180	0.2383	0.0796[b]
−1 to 2	137	0.3322	0.3332	−0.0010
−1 to 3	130	0.5393	0.3534	0.1859[c]
−1 to 4	125	0.7208	0.5001	0.2207[b]

[a, b, c] Significantly different from zero at the 1%, 5%, or 10% level, respectively, using the Wilcoxon two-sample test.

This table reports the median growth rates of firms that created a second class of common stock with limited voting rights during the 1979–1998 period, relative to the median growth rate of their competitors. Dual-class recapitalizations are identified by examining the CRSP tapes, the Standard and Poor's Stock Reports, and news articles from the *Dow Jones Interactive Services*. The growth rate of competitors is defined as the median growth rate of firms in the same two-digit SIC code industry as the sample firms and with assets between 70% and 130% of the assets of the sample firms at the end of the fiscal year ending closest in time and prior to the announcement date of the recapitalization. Data are obtained from Compustat in the years of interest. The Compustat data items used are sales (item 12), assets (item 6), and operating income (operating income before depreciation (item 13)). The yearly period is measured relative to the year of the dual-class recapitalization (year 0).

the growth in operating income for the sub-sample of firms that issue equity following the dual-class recapitalization. Table 8, Panel B reports the growth rate in operating income for the sub-sample of firms that do not issue equity following the dual-class recapitalization.[13] The median growth rate in operating income for the firms issuing equity following the dual-class recapitalization is 130.46% (Panel A) from year −1 to year 4. This is more than twice the corresponding growth rate for their competitors (50.01%), and the difference is statistically significant. For the firms not issuing equity, the median growth rate is only 38.06% (Panel B). This is insignificantly different from their competitors' growth rate.

These results tell a simple but interesting story. Managers undertake dual-class recapitalizations anticipating future growth and also expecting that new growth may need equity financing. The dual-class recapitalization is akin to creating an option to issue

[13] The conclusions are similar for growth rate in sales or growth rate in assets.

Table 8
Growth rates in operating income of firms adopting dual-class structures, conditional on equity issues following the recapitalization

Yearly period	Observations	Sample firms	Competitors	Difference
Panel A: sample firms with equity issues				
−1 to 0	63	0.3106	0.1217	0.1888[a]
−1 to 1	60	0.6517	0.2175	0.4342[a]
−1 to 2	57	0.7887	0.2734	0.5154[a]
−1 to 3	55	1.1258	0.3243	0.8016[a]
−1 to 4	53	1.3046	0.5001	0.8045[a]
Panel B: sample firms without equity issues				
−1 to 0	90	0.0671	0.0893	−0.0222
−1 to 1	88	0.1742	0.2536	−0.0794
−1 to 2	80	0.2194	0.3607	−0.1413
−1 to 3	75	0.4129	0.4467	−0.0338
−1 to 4	72	0.3806	0.4817	−0.1011

This table reports the median growth rates in operating income of firms that created a second class of common stock with limited voting rights during the 1979–1998 period, conditional on ex-post equity issuances. Dual-class recapitalizations are identified by examining the CRSP tapes, the Standard and Poor's Stock Reports, and news articles from the *Dow Jones Interactive Services*. The growth rate of competitors is defined as the median growth rate of firms in the same two-digit SIC code industry as the sample firms and with assets between 70% and 130% of the assets of the sample firms at the end of the fiscal year ending closest in time and prior to the announcement date of the recapitalization. Data are obtained from Compustat in the years of interest. Operating income is defined as Compustat data item 13 (operating income before depreciation). Panel A presents the results for the sub-sample of firms that issued equity in the 4 years following the dual-class recapitalization. Panel B presents the results for the sub-sample of firms that did not issue equity. The yearly period is measured relative to the year of the dual-class recapitalization (year 0).

[a] Significantly different from zero at the 1% level, using the Wilcoxon two-sample test.

equity without losing control. Ex-post, not all dual-class recapitalizing firms experience high growth and go to the equity market (i.e., not all of them exercise the option). However, on average, managerial expectations are realized. On average, the growth is higher and the firms do raise new equity. Furthermore, the firms that go to the equity market are indeed those that grow faster. There appears to be a clear thread linking dual-class recapitalizations to issuance of new equity and growth.

5.3. Abnormal returns for firms issuing equity

We also examine long-run abnormal returns earned by the two sub-samples that are created on the basis of whether the firms issue or do not issue equity following the recapitalizations. We show that the issuance of new equity by these firms is indeed in the best interests of the shareholders. Table 9, Panel A reports the long-run returns of dual-class firms that issue equity during the 4-year period following the recapitalization. Table 9, Panel B reports the long-run returns of dual-class firms that do not issue equity in the 4-year period following the recapitalization. Firms that issue equity have a return of 91.23% over the 4 years following the recapitalization, compared to only 38.62% for their matching firms. The 1-, 2-, and 3-year differences are also large and significant. Thus, the

Table 9
Long-run return of firms adopting dual-class structures, conditional on equity issues following the recapitalization

Monthly period	Observations	Sample firms	Matching firms	Abnormal return	p-Value
Panel A: sample firms with equity offerings					
1 to 12	72	0.2567	0.1254	0.1313	0.018
1 to 24	72	0.4432	0.2122	0.2311	0.022
1 to 36	72	0.6261	0.2925	0.3337	0.004
1 to 48	72	0.9123	0.3862	0.5261	0.008
Panel B: sample firms without equity offerings					
1 to 12	106	0.0814	0.0819	−0.0005	0.501
1 to 24	106	0.2795	0.2061	0.0734	0.164
1 to 36	106	0.4133	0.3797	0.0335	0.362
1 to 48	106	0.5056	0.4757	0.0299	0.356

This table reports the buy-and-hold returns of firms that created a second class of common stock with limited voting rights during the 1979–1998 period, conditional on ex-post equity issuances. Dual-class recapitalizations are identified by examining the CRSP tapes, the Standard and Poor's Stock Reports, and news articles from the *Dow Jones Interactive Services*. Stock returns are obtained from the CRSP Monthly files. The matching firms' returns show the mean return over 1000 portfolios of firms matched to sample firms on the basis of market value, book-to-market, and momentum. For each sample firm, 1000 firms are drawn, with replacement, from all firms that belong to the same market value, book-to-market, and momentum quintile as the sample firm. Market value quintiles are constructed using NYSE breakpoints. Momentum quintiles are formed based on buy-and-hold returns over the year preceding the announcement of the dual-class recapitalization. Book-to-market quintiles are formed based on firms' book-to-market ratios closest in time and prior to the dual-class announcement of the sample firm as reported on COMPUSTAT. After 1000 matching firms are drawn for each sample firm, 1000 matching portfolios are formed. The p-values reported in the table show the fraction of the 1000 matching portfolios that had a greater return than the return on firms adopting a dual-class structure. Panel A reports the average long-run stock return of sample firms that issued equity subsequent to the dual-class recapitalization. Panel B reports the average long-run stock return of sample firms that did not issue equity following the recapitalization. The monthly period is measured relative to the month of the dual-class recapitalization (month 0).

firms that issue equity do so in the best interests of shareholders. Dual-class firms that do not issue equity following the recapitalization also do not perform poorly. They earn stock-returns that are similar to those of matching firms (50.56% versus 47.57%). A consistent story is that for the second subgroup of firms, the anticipated growth does not materialize and, therefore, they do not need to issue new equity and earn normal returns.

Taken together, the evidence on growth and equity issuance is consistent with the hypothesis that dual-class structures allow managers to finance new projects without losing their control. Managers of the dual-class recapitalizing firms anticipate the large growth potential and prepare to take these opportunities without losing control. When and if these growth opportunities are realized, the managers are able to raise equity by selling limited voting shares. They are thus able to grow their firms at a fast rate while at the same time maintaining control.

6. Operating performance results

The results in the previous sections show that firms in the sample, on average, exhibit significant long-run abnormal returns following recapitalization announcements. The

Table 10
Operating performance of firms adopting dual-class structures

Fiscal year	NOBS	Sample firms	Competitors	Difference
Panel A: ROA				
−1	161	0.1503	0.1395	0.0108
Event year (0)	159	0.1430	0.1351	0.0079
+1	153	0.1314	0.1310	0.0004
+2	142	0.1241	0.1285	−0.0044
+3	135	0.1230	0.1281	−0.0051
+4	129	0.1206	0.1225	−0.0019
Panel B: ROE				
−1	159	0.1428	0.1142	0.0286[a]
Event year (0)	156	0.1254	0.1077	0.0177[a]
+1	151	0.1226	0.1022	0.0204[c]
+2	137	0.1133	0.1058	0.0075[c]
+3	130	0.1094	0.0882	0.0213
+4	126	0.0824	0.0957	−0.0133

[a, c] Significantly different from zero at the 1% or 10% level, respectively, using the Wilcoxon two-sample test.

This table reports the median operating performance of the sample of 178 firms that created a second class of common stock with limited voting rights during the 1979–1998 period, relative to the median operating performance of their competitors. Dual-class recapitalizations are identified by examining the CRSP tapes, the Standard and Poor's Stock Reports, and news articles from the *Dow Jones Interactive Services*. The operating performance of competitors is defined as the median operating performance of firms in the same two-digit SIC code industry as the sample firms and with assets between 70% and 130% of the assets of the sample firms at the end of the fiscal year ending closest in time and prior to the announcement date of the recapitalization. Data are obtained from Compustat in the years of interest. The Compustat data items used are ROA (return on assets) (operating income before depreciation (item 13)/total assets (item 6)), and ROE (return on equity) (income before extraordinary items (item 123)/total common equity (item 60)).

firms, on average, also experience higher growth rates in sales, assets, and operating income. In this section we examine operating performance (return on assets and return on equity) around the dual-class recapitalization announcements.[14] If dual-class firms are growing sub-optimally, then we expect to find evidence that their profitability is lower than that of their competitors in the years following recapitalizations. On the other hand, if dual-class structures enable managers to undertake new projects without sacrificing profitability, we expect the profitability of the dual-class firms to be no less than the profitability of the control group.

Prior operating performance results in Mikkelson and Partch (1994) and Lehn et al. (1990) are somewhat conflicting. We revisit the operating performance analysis using a much larger sample spread over a longer time period. We use return on assets (ROA) and return on equity (ROE) to measure operating performance. ROA is defined at operating income divided by total assets, and ROE is defined as income before extraordinary items divided by common equity (ROE). The ROA measure reflects the performance of all

[14] Our analysis is also motivated by the results of Palia and Lichtenberg (1999) who find that managerial ownership changes are positively related to changes in productivity.

assets used by the firm while the ROE measure reflects the accounting return on common equity. For both measures, abnormal operating performance in year t is computed as the performance of the firm in the sample minus the median performance in year t of the firm's competitors.

Table 10, Panel A reports the operating performance results based on ROA and Panels B reports the results based on ROE. Firms adopting dual-class structures are slightly more profitable relative to their competitors in the year prior to the recapitalization. The difference between the median ROA of the firms in the sample and median ROA of their competitors is 0.0108, and the corresponding ROE difference is 0.0286. The difference based on the ROA measure is statistically insignificant but the difference based on the ROE measure is statistically significant at the 1% level. These results are consistent with Lehn et al. (1990) and Denis and Denis (1994) who argue that there is no evidence that majority-owned firms perform poorly. Following dual-class recapitalizations (years +1 to +4), both profitability measures suggest that there is essentially no difference between the operating performance of the dual-class firms and the operating performance of the competitors. Since the firms in the sample are able to grow as fast without a noticeable decline in profitability (while the competitors are not able to grow), the growth is shareholder value-enhancing. Note that it is not necessary for the profitability ratio to increase. So long as there is growth with the same level of profitability, overall profits would increase at the same rate as the growth rate. Overall, the results are consistent with the hypothesis that dual-class structures allow managers to take advantage of profitable growth opportunities (without a relative decline in underlying operating performance), which translate into healthy stock returns for the company's shareholders.[15]

7. Conclusions

A dual-class recapitalization or the creation of a second class of common stock with limited voting rights could be viewed as either a value enhancing or a value destroying decision. The value enhancing argument is that dual-class recapitalizations allow controlling shareholders to finance new projects with inferior voting equity without losing their control of the firm. On the other hand, concentrated control, relatively easily engendered through dual-class recapitalization, may allow managers to consume disproportionate amount of perquisites and reduce firm value. Prior event-study research (e.g., Partch, 1987; Jarrell and Poulsen, 1988; Cornett and Vetsuypens, 1989) has reported weak or insignificant abnormal returns around the recapitalization announcements. Because of an apparent lack of experience by market participants with such events, a study of the announcement period abnormal returns needs to be supplemented with additional evidence. Lehn et al. (1990) bypass the event study research methodology and

[15] We also examined the operating performance separately for firms that issued equity and for firms that did not issue equity following the dual-class recapitalization. The overall conclusions are unaffected as there is no significant difference between the operating performance of dual-class firms and their competitors (ROA or ROE) for either of the two subgroups.

use accounting data to show that dual-class recapitalizations are likely to be undertaken by firms with greater growth opportunities. Since the dual-class recapitalizations are not frequent, the short-window results are inconclusive, and the accounting-based measures suggest growth and improved performance, we undertake a long-run study to provide more conclusive evidence on the effects of dual-class recapitalizations. This methodology is especially suited for this sample as the short-window results are inconclusive.

We examine a sample of 178 firms that announced dual-class recapitalizations during 1979–1998. Firms announcing dual-class recapitalizations are characterized by concentrated ownership even before the adoption of a dual-class structure. Thus, dual-class recapitalizations are unlikely to be motivated by entrenchment. The evidence from stock returns shows that the current shareholders are not harmed and, instead, they earn significant abnormal returns following dual-class recapitalizations. The firms adopting dual-class recapitalizations, on average, outperform the matching portfolios by 23.11% in the 4-year period following the announcements.

The source of gains in shareholder value seems to be profitable future growth. In terms of sales, assets, and operating income, dual-class firms grow significantly faster than their competitors. We also find no evidence that the profitability (return on assets or return on equity) of the dual-class firms is lower than that of their competitors in the 4 years following the recapitalization. Overall, the evidence is consistent with the hypothesis that managers adopt dual-class structures to take advantage of anticipated valuable growth opportunities without losing control.

Lehn et al. (1990) show that in the post-recapitalizing periods dual-class firms issue equity (secondary equity offerings) more frequently. It is also well known that secondary equity offerings, on average, are followed by long-run negative abnormal returns (e.g., Loughran and Ritter, 1995). However, we find that the sub-sample of the dual-class recapitalizing firms that engage in SEOs following recapitalizations earn large and statistically significant long-run *positive* abnormal returns of 52.61%. This finding provides strong support for the shareholder value enhancement hypothesis.

Our results show that the corporate governance system in the U.S. is developed to such a degree that managers do not extract large private benefits from control through dual-class structures. Our results also go against the conventional wisdom often mentioned in the popular press that one-share one-vote is the ideal mechanism for the U.S. corporations. Presumably, such arguments ignore the possibility that shareholders accept restrictions of their rights to maximize their wealth. Corporations seem to undertake dual-class recapitalizations when they are beneficial to shareholders. Thus, any given mechanism should not be evaluated in isolation. We conclude that large managerial voting control without equivalent cash flow rights may be desirable in some circumstances.

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