Do Voting Rights Affect Institutional Investment Decisions? Evidence from Dual-Class Firms*

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Abstract

We examine whether, and to what extent, shareholder voting rights affect institutional investment decisions. Our analysis compares institutional investment in dual-class firms, where multiple share classes carrying differential voting rights allow insiders to control the firm and leave outside investors with little or no control rights, to that in single-class firms, where each share carries one vote. We find that institutional ownership in dual-class firms is significantly lower than that in single-class firms after controlling for other determinants of institutional investment. Although institutions of all types hold less of the shares of dual-class firms, this avoidance is more pronounced for long-term investors with strong fiduciary responsibilities than for short-term investors with weak fiduciary duties. Following the unification of dual-class shares into a single-class, institutional investors increase their shareholdings in the unifying firm. Overall, our results suggest that voting rights are an important determinant of institutional investment decisions.

Keywords: corporate governance, dual-class firms, institutional investors, ownership structure, unification, voting rights
JEL Classification: G11; G32

"A dual class stock structure, which carries unequal voting rights, is antithetical to the fair and fundamental principle of a 'one-share, one-vote' system and has no place in today's marketplace. Control of a corporation should come from owning a majority of shares, not owning special shares with special rights."

William D. Crist (former President of CalPERS Board of Administration)

What determines variation in institutional ownership across firms has received a great deal of attention in empirical research. While previous work has shown that institutional investment is related to certain firm and stock characteristics, it is only recently that researchers have started to explore how corporate governance mechanisms affect institutional investment. Given that institutions are the largest class of investors in U.S. stock market, understanding whether and how firms' corporate governance attributes affect their investment decisions is of great importance for the design of corporate governance.

In this paper, we empirically study institutional investor preferences for the stock of firms with an extreme form of governance—dual-class shares—where different share classes carry differential voting rights.[1] Since insiders of dual-class firms hold the majority of the shares with superior voting power, they are able to control the firm without holding large equity stakes and are largely isolated from external control pressures such as takeover threats. In general, outside investors can only purchase the shares with inferior voting rights. Gompers, Ishii, and Metrick (2006) document that in more than 70% of the dual-class firms the shares with superior voting power are not traded. In cases where super-voting shares are traded, these shares are largely held by

[1] Dual-class firms constitute about 6% of all firms and 8% of the total market capitalization in U.S. (Gompers, Ishii, and Metrick (2006)). There is also an increasing trend in dual-class IPOs, which account for 9% of all IPOs in 2005 as opposed to 4.5% in 1995 based on data from SDC.

insiders. As a result, in dual-class firms outside investors have limited control rights even when their fractional ownership may give them substantial cash-flow rights.[2] In stark contrast, in single-class firms each share carries one vote and thus outside investors' cash-flow and control rights are identical.

Although important institutional investors often publicly voice their concerns about dual-class structures (see the quote above), *a priori* it is unclear whether the lack of voting rights to outside shareholders of dual-class firms should affect institutional investment decisions. On the one hand, dual-class share structures may not significantly affect institutional investment due to their chasing of past returns and prior studies show no significant difference in performance between dual- and single-class firms. Moreover, U.S. possesses the best practice in security laws and corporate governance mechanisms and it is unlikely that outside shareholders of dual-class firms can be expropriated. On the other hand, institutions may hold less of the shares of dual-class firms due to the constraints arising from their prudence standards, career concerns of portfolio managers, or their reduced ability to intervene. Hence, our analysis of institutional investment in dual-class firms sheds light on whether voting rights, which are arguably the most important type of shareholder rights (La Porta et al. (1997), and Gompers et al. (2006)), influence institutional investment decisions.

For both single-class and dual-class firms, we define institutional ownership as institutional investors' dollar investment in the firm's equity as a percentage of the firm's total market value of equity. We first explore whether institutional investment differs across single-class and dual-class firms. These cross-sectional tests show that aggregate

[2] Gompers et al. (2006) document that outside investors in dual-class firms hold about 60% of the cash-flow rights but only 40% of the voting rights.

institutional ownership in dual-class firms is about four percentage points lower than that in single-class firms, after controlling for a host of factors that affect institutional investment in stocks. Although institutions of all types have lower ownership in dual-class firms than in single-class firms, the magnitude of the effect of a firm's dual-class status on institutional holdings varies across types. The effect is strongest for the group of long-term investors with important fiduciary responsibilities that are usually the most active in corporate governance, and it is weakest for short-term investors with low fiduciary responsibilities that are least likely to engage in shareholder activism.

We then use the time-series variation in firms' dual-class status to examine how the unification of dual-class structures into a single-class affects institutional investment. Our analysis shows that, relative to a control group of dual-class firms that do not unify their share classes, dual-class firms that unify their share classes experience a significant increase in institutional ownership. Moreover, all types of institutional investors increase their equity holdings in the unifying firms.

Our paper contributes to the literature in following ways. First, previous work finds that U.S. institutional investment is related to stock and firm characteristics as well as the quality of governance practices (for example, Del Guercio (1996), Gompers and Metrick (2001), and Bushee, Carter, and Gerakos (2007)). We add to this literature by showing that U.S. institutions invest substantially less in domestic firms with dual-class structures, where outside shareholders have little or no voting rights, even when the country-level investor protection and security laws are well developed.

Second, there is mixed evidence on whether dual-class arrangements hurt or increase firm value (for example, Mikkelson and Partch (1994), and Dimitrov and Jain

(2006)). We add to this literature by showing that dual-class arrangements are associated with a diminished presence of institutional investors. Since institutions are the largest participant in the stock market, our findings suggest that the lack of shareholder voting rights may compromise dual-class firms' access to equity financing.

The paper is organized as follows. In Section I we review the related literature, discuss the conceptual framework, and outline our empirical tests. In Section II we describe our sample formation and define variables. In Section III we examine whether dual-class structures affect institutional ownership. We implement additional investigation in Section IV and conclude in Section V.

I. Literature Review and Our Approach

In this section, we discuss how our investigation is related to prior work, develop the conceptual framework, and outline our empirical tests.

A. Related Literature

A.1. Determinants of institutional ownership

Our paper fits within the growing literature that relates U.S. institutional investment in domestic companies to stock and firm characteristics, such as Del Guercio (1996), Badrinath, Kale, and Ryan (1996), Falkenstein (1996), Gompers and Metrick (2001), Coval and Moskowitz (1999, 2001), Bennett, Sias, and Starks (2003), and Grinstein and Michaely (2005), among others. It is most closely related to a couple of recent studies that examine the relation between institutional investment and corporate governance. Bushee and Noe (2000) find that firms with higher disclosure ratings have

greater institutional ownership. Bushee et al. (2007) show that institutional investors tend to invest more in U.S. firms with good board characteristics, but are largely indifferent to the Gompers et al.'s (2003) Governance-index.

Our study is also related to the literature on how corporate governance affects the "home bias" in U.S. investors' portfolio decisions. For example, Dahlquist et al. (2003), Leuz, Lins, and Warnock (2005), and Kho, Stulz, and Warnock (2006)) show that U.S. investors' portfolios under-weigh the stocks of foreign companies that are poorly governed. In addition, Aggarwal, Klapper, and Wysocki (2005) find that U.S. mutual funds invest more in emerging markets with stronger country-level shareholder rights, legal frameworks, and accounting standards, as well as in those firms with better accounting disclosure.

More broadly, our work is also related to international and cross-country studies of the relation between institutional investment and governance attributes. In their study of Swedish firms, Giannetti and Simonov (2006) conclude that the majority of investors, including institutional investors, are reluctant to invest in companies with weak corporate governance. In a cross-country study, Giannetti and Koskinen (2007) show that institutional investors based in countries with poorer investor protection invest more abroad, and put greater portfolio weights in countries with better investor protection.

A.2. Dual-class firms

Our study is also closely related to the literature on dual-class firms. Much of the literature examines whether dual-class arrangements hurt shareholder value, and the evidence is far from conclusive. Some authors argue that dual-class structures protect private control benefits (Smart and Zutter (2003)), and that the separation of ownership

and control leads to value losses (Mikkelson and Partch (1994), and Claessens et al. (2002)). Others including Fama and Jensen (1983) and DeAngelo and DeAngelo (1985) contend that dual-class firms are not necessarily poorly-managed because of the strong family involvement in these firms. Partch (1987), Cornett and Vetsuypens (1989), Lehn, Netter, and Poulsen (1990), Denis and Denis (1994), and Dimitrov and Jain (2006) provide evidence that dual-class structures do not destroy shareholder wealth. More recently, Gompers et al. (2006) explore the determinants of dual-class status and the performance consequences of differential voting and cash-flow rights. They conclude that firm value is increasing in insiders' cash-flow rights and decreasing in insiders' voting rights.

B. The Conceptual Framework

A priori, it is unclear whether the lack of voting rights to shareholders in dual-class firms should affect institutional investment decisions. On the one hand, there are several reasons suggesting that dual-class share structures may not significantly affect institutional investment. First, previous research has shown that institutional investment decisions are mainly driven by past stock returns (Badrinath and Wahal (2002), and Nofsinger and Sias (1999)), and the empirical evidence on performance differences between dual- and single-class firms is largely inconclusive (Partch (1987), Cornett and Vetsuypens (1989), Lehn et al. (1990), Denis and Denis (1994), Böhmer, Sanger, and Varshney (1996), and Dimitrov and Jain (2006)).

Second, U.S. possesses the most stringent security laws to protect shareholder rights and sets the highest standard on corporate governance practices (La Porta et al.

(1997), and Giannetti and Koskinen (2007)). There is no evidence that minority or outside shareholders in U.S. are expropriated.

Third, while some important institutional investors publicly voice their concerns about dual-class structures, the extent to which such voting arrangements may affect their investment decisions is not obvious. For example, institutions cannot avoid stocks that are part of major market indices, and some stocks may be important for portfolio diversification.

Thus, the above discussion suggests that institutional ownership in single-class firms might not significantly differ from that in dual-class firms.

On the other hand, there are also arguments for why institutional managers may not want to invest in the stock of dual-class companies, and thus exhibit a stronger preference for the stock of single-class firms than do individual investors. First, unlike individual investors, institutional managers are subject to "prudence" standards that constrain their investment decisions (Del Guercio (1996)). To the extent that courts enforcing "prudent man" laws may perceive investment in dual-class to entail a low level of prudence, institutions may avoid these stocks to minimize their exposure to legal liabilities.

Second, given the negative view of dual-class structures shared by many important institutional investors,[3] portfolio managers may avoid investing in dual-class stocks due to career concerns. This is because in periods of lack-luster performance, it is difficult for a portfolio manager to demonstrate the soundness of her judgment to invest in dual-class firms. Thus, a manager of a poorly performing portfolio with a larger weight

[3] Influential institutional investors, such as CalPERS and TIAA-CREF, as well as governance rating and proxy voting services, all publicly denounce the dual-class structure.

on the stock of dual-class companies may be more likely to be dismissed than a manager whose portfolio places little weight on dual-class firms (see Badrinath, Gay, and Kale (1989) for a broader discussion of this issue). In contrast, individual investors' human capital is independent of the performance of their investment portfolios.

Third, institutions may prefer the stock of single-class firms to that of dual-class firms so that they could use the voting power conveyed by their large stakes to influence corporate decisions,[4] especially when institutional selling of poorly performing stocks could be costly due to the potentially large impact on stock prices. In contrast, because of the high costs of direct action associated with their small stakes, individual investors in general are not actively involved in corporate governance and thus may place little value on voting rights.

The above reasoning suggests that institutions might choose to hold less of the stock of dual-class firms, which in turn implies that individual investors would choose to hold more of the shares of those firms.[5]

Given the conflicting views discussed here, whether institutional investors care about voting rights and thus avoid the stock of companies with dual-class share structures, and to what extent, remain open empirical questions.

[4] See the evidence on shareholder activism in Smith (1996), Carleton, Nelson, and Weisbach (1998), and Karpoff (1998).

[5] This would occur even when both individual and institutional investors may have some preference for the stock of single-class firms to that of dual-class firms. This is because the share price of a dual-class firm will not fully discount the lack of voting rights to outside shareholders, precisely because the equilibrium stock price reflects the demand of institutional and individual investors with *heterogeneous* valuations of the stock of dual-class firms. Thus, at the equilibrium stock price, institutional investors with a lower valuation will hold less of the shares of dual-class firms than individual investors with a higher valuation (see Giannetti and Koskinen (2007) for a discussion of this issue).

C. Outline of Our Tests

Our first set of tests exploits the cross-sectional variation in firms' dual-class status. Using a sample of dual-class firms and the universe of single-class firms as the control group, we explore whether aggregate ownership by institutions differs across single-class and dual-class firms. We also examine whether the relation between firms' dual-class status and institutional ownership differs by type of institution.

Our second set of tests takes advantage of the time-series variation in firms' dual-class status to examine how the unification of dual-classes into a single-class affects institutional ownership. We examine how institutional ownership changes after dual-class firms unify their multiple share classes into a single-class, relative to a control group of dual-class firms that maintain their multiple share class structure.

II. Our Sample and Variable Definition

To form our sample, we start with the merged CRSP-Compustat universe for the period 1995-2002. We focus on this period because we can accurately identify the dual-class firms each year using the data collected and generously made available to us by Gompers et al. (2006). These data, which we download from Andrew Metrick's website, is the most comprehensive U.S. dual-class dataset available. To our initial sample we then merge institutional investors' holdings data from the Thomson Financial's CDA/Spectrum Database,[6] stock market data from CRSP, accounting data from Compustat, and analyst coverage data from IBES. Our final sample consists of 603 dual-

[6] Under rule 13(f) of the 1978 amendment to the Securities and Exchange Act of 1934, all institutions with greater than $100 million of equity securities under discretionary management are required to report their holdings quarterly. Common-stock positions greater than 10,000 shares or $200,000 must be disclosed.

class firms (2,651 firm-year observations) and 7,737 single-class firms (34,704 firm-year observations) for the period 1995-2002.[7]

Our key variable of interest is institutional ownership in dual-class and single-class firms. In single-class firms there is no difference between cash-flow and voting rights. Hence, institutional ownership can be measured as the fraction of shares outstanding held by institutions or equivalently as the ratio of dollar value of institutional investment to firm equity value. In dual-class firms, however, each share class carries differential cash-flow and voting rights and thus institutional ownership of cash-flow rights and of voting rights are different. We are interested in studying whether the level of institutional investment differs across single-class and dual-class firms, thus the proper measure of institutional investment for dual-class firms is the dollar value of institutional investment in the firm as a percentage of firm equity value.

For both dual-class and single-class firms, we define institutional ownership *(IO)* as the fraction of a firm's equity value held by institutions measured in percentages. More precisely, institutional ownership in firm i with n different share classes outstanding (indexed by j) is constructed as follows:

$$IO_i = \sum_{j=1}^{n} P_j s_{ji} \Big/ \sum_{j=1}^{n} P_j so_{ji}, \qquad (1)$$

where s_{ji} is the number of class j shares held by institutional investors in firm i, so_{ji} is the total number of class j shares outstanding in firm i, and P_{ji} is the class j share price of firm i. Note that institutional ownership in single-class firms is simply the fraction of

[7] While dual-class structures tend to concentrate in some industries, such as alcoholic beverages, printing and publishing, and telecommunications, they are not necessarily an industry-specific phenomenon. In fact, dual-class firms are present in 41 of the 48 Fama-French industries.

shares outstanding held by institutions (n = 1). For dual-class firms with all classes of shares traded, we obtain the share price P_{ji} from CRSP. For dual-class firms with non-traded superior-voting classes, we follow Gompers et al. (2006) by assuming that the non-traded superior-voting shares have the same price as the traded inferior-voting shares (i.e., a zero voting premium).

Panel A of Table I reports the mean and median institutional shareholdings (*IO*) across dual-class firms and the universe of single-class firms, for both the aggregate of institutional investors and by type of institution. The five types of institutions based on CDA/Spectrum's classification are: bank trust departments, insurance companies, investment companies, independent investment advisors, and others. The institutions in this last group are a mix of ESOPs, university endowments, foundations, and private and public pension funds.

Insert Table I here

The table shows that total institutional ownership is slightly higher in dual-class firms than in single-class firms, both at the mean and median, and the differences are statistically significant. The same pattern holds for the median holdings of all five types of institutions. The mean institutional ownership in dual-class firms is higher for bank trust departments, investment companies, and independent investment advisors, but lower for insurance companies and other institutional investors. Overall, the univariate tests do not reveal economically significant differences in the institutional ownership of single- versus dual-class firms. However, univariate statistics may mask the true relation between firms' dual-class status and institutional investment, especially if there are large differences in industry representation as well as in firm and stock characteristics across the two groups that are not controlled for.

In Panel B we further compare institutional ownership in our sample of dual-class firms to that in a sample of single-class firms matched by industry and firm size. By matching each dual-class firm to a single-class firm of similar size in the same Fama-French industry, we remove some of the important differences in single- and dual-class firms that affect institutional investment. This approach unveils that the mean (median) aggregate institutional ownership in dual-class firms is about 3.4 (3.1) percentage points lower than that in similar single-class firms of the same industry. This difference is statistically significant at the 1% level. Institutions of every type hold less of the shares in dual-class firms than they do in similar single-class firms. Thus, the evidence in Panel B suggests that after controlling for industry membership and firm size, institutional ownership in dual-class firms is lower than in single-class firms.

In our multivariate analysis, we use institutional ownership (*IO*) as the dependent variable. Our key test variable is a firm's dual-class status, the *Dual* dummy, which equals one if the firm has multiple share classes, and zero otherwise. Our control variables comprise firm and stock characteristics that previous research has shown to determine institutional investment. Market capitalization, *Mktcap,* is defined as the dollar value of all share classes at the end of the year, in millions of 2002 dollars. The annual return on the firm's stock, *Return*, is defined as the value-weighted average of the returns across traded classes over the year. The dividend yield, *Divyield,* is defined as the ratio of total dividend payout to stock price. The volatility of stock returns, *Retvol,* is defined as the value-weighted average of the stock return volatility across traded classes using monthly stock returns over the prior year. The share turnover ratio, *Turnover*, is defined as the value-weighted average of the ratio of the trading volume to the number of shares

outstanding at the end of the previous year across all traded classes. The market-to-book ratio, *M/B*, is defined as the market value of assets divided by book value of assets. Financial leverage, *Leverage*, is computed as the ratio of total debt to the market value of assets. Firm age, *Firmage*, is defined as the number of years since the firm first appears in CRSP. Share price, *Price*, is defined as the value-weighted average of the stock price across traded classes at the end of the year, in 2002 dollars. S&P 500 membership, *S&P500,* is a dummy equal to one if the firm is in the S&P 500 Index, and zero otherwise. Analyst coverage, *#Analysts*, is defined as the number of IBES analysts covering the firm. Firm age, S&P 500 membership, and analyst coverage are proxies for aggregate information and/or the cost of information collection.[8] Share price and turnover capture transaction costs. Table II presents summary statistics for these variables.

Insert Table II here

It is clear that firm and stock characteristics differ substantially between dual-class and single-class firms, except for stock returns and firm age. The median market capitalization of dual-class firms is significantly larger than that of single-class firms, while the average market capitalization of single-class firms is significantly larger than that of dual-class firms. The average dividend yield of dual-class firms is larger than that of single-class firms. Dual-class firms appear to have significantly lower return volatility, lower turnover, lower market-to-book ratios, higher leverage, higher share price, lower likelihoods of being part of the S&P 500 Index, and lower analyst coverage. Thus, results in Table II suggest that, in addition to controlling for industry membership and firm size, it is important that we control for an extensive list of potential determinants of institutional investment in our multivariate analysis.

[8] For example, older stocks have a more established reputation and thus less estimation uncertainty of the riskiness of the stock. S&P 500 membership adds visibility to the stock. Greater analyst following serves as a proxy for the recent amount of useful information on the firm.

III. Institutional Investment in Dual-Class Firms

Before proceeding with our multivariate analysis, we examine the correlation between our right-hand-side variables. Table III shows that the extent of correlation among most pairs of variables raises little concern for multicollinearity in our regression analysis. There are, however, a few moderate correlations in the order of 0.30-0.40 (for example, between dividend yield and firm age) with a maximum of 0.52 between analyst coverage and the S&P 500 membership dummy. We note that results from our multivariate analysis are robust to different specifications that exclude some of the right-hand-side variables in each of the moderately correlated pairs.

Insert Table III here

Throughout our regression analysis, we control for industry effects using 48 Fama-French industry dummies. This approach ensures that what identifies our estimated coefficients is the cross-sectional variation in dual-class status within firms in the same industry, thus removing any time-invariant industry specific characteristics that may drive the results. In addition, we include year dummies to control for changing market conditions or trends that may affect institutional investment over time. To assess the statistical significance of our results, we use Rogers' (1993) robust standard errors that adjust for the clustering of observations at the firm level by assuming that observations are independent across firms but not within firms.

A. Aggregate Institutional Investment in Dual- Versus Single-Class Firms

To explore whether voting rights are an important consideration in institutional investment decisions, we regress institutional ownership (*IO*) on the dual-class status dummy (*Dual*), and the set of firm and stock characteristics defined above. The coefficient on *Dual* captures the difference in institutional holdings of dual- versus single-class firms, after controlling for other differences across these two types of firms. If voting rights have no effect on institutional investment decisions, we expect the coefficient on *Dual* to be insignificantly different from zero. We expect the coefficient to be negative if the lack of voting rights discourage institutional investment. Table IV reports the results.

Insert Table IV here

In Panel A, we estimate pooled OLS regressions with clustered standard errors. Across all four specifications, we find a negative and statistically significant coefficient on the *Dual* dummy. The magnitude of the effect is not only statistically significant, but also economically important. The estimates in column (4), where all control variables are included, imply that aggregate institutional ownership in dual-class firms is 3.8 percentage points lower than that in single-class firms. Given that the average fractional holding of institutional investors across all firms in the sample is about 34 percentage points over our sample period, this difference is economically significant: institutional ownership is 11% lower in dual-class firms than in single-class firms. Thus, we find evidence that institutional investors tend to invest less in dual-class firms. In terms of the control variables, most of our findings conform with prior studies: institutions invest more in larger firms, firms with lower prior year returns, lower dividend-yields, lower

return volatility, higher turnover, lower market-to-book ratios, higher leverage, higher stock prices, and greater analyst coverage.

Panel B reports the results from Fama-Macbeth regressions with Newey-West standard errors based on five lags. All regressions include the same control variables as in Panel A. We omit reporting coefficients on the control variables for brevity. We note that the results on the effect of dual-class status on institutional investment are similar to those under the pooled OLS specifications.

Roughly one-third of the dual-class firms in our sample have multiple traded classes. When shares with inferior voting power as well as those with superior voting power are traded, institutional investors can in principle purchase some of the superior-voting shares. However, this is uncommon since the firm's insiders usually hold the superior-voting shares even when they are traded (Gompers et al. (2006)). Nonetheless, it is possible that institutional investors may seek to purchase such shares to obtain a voice in corporate matters. As a result, dual-class firms with both classes traded may be relatively more attractive to institutional investors than those where only the ordinary shares with little or no voting power are traded. To explore this possibility, we repeat our analysis of the effect of dual-class status on institutional ownership by excluding dual-class firms where both classes are traded. Panel C reports the results.

We find that the negative effect of dual-class status on institutional ownership is stronger in this sub-sample: institutional ownership in dual-class firms with non-traded superior-voting shares is about 4.8 percentage points lower than in single-class firms (Column (4)). Thus, the evidence is consistent with the view that institutional investors

choose to hold even less of the shares of dual-class firms when the superior-voting shares are not traded as they find it impossible to exert any influences.

Since ownership by institutions and ownership by individuals must add up to 100%, an equally valid interpretation of our results is that the aggregate ownership by individual investors is higher in dual-class firms than in single-class firms. Thus, any potential explanation of our results must not only explain why the stock of dual-class firms is less attractive to institutional investors, but also why these securities are relatively less attractive to institutional investors than to individual investors. As discussed in Section I.B, institutional managers may place a lower value on the stock of dual-class firms than do individual investors due to their fiduciary duties, career concerns, and their ability to intervene. Thus, individual investors are willing to hold a larger fraction of a dual-class firm's equity while institutional investors are willing to hold a smaller fraction.

To summarize, the collective evidence from Table IV suggests that the aggregate institutional holdings in dual-class firms are significantly lower than those in single-class firms, after accounting for other factors that affect institutional investment. These results provide strong evidence that shareholder voting rights do affect institutional investment decisions, despite the fact that U.S. has the most stringent corporate governance requirements and offers the greatest protection to shareholders. The aggregation of institutional holdings, however, may mask important heterogeneity across different types of institutional investors (Brickley, Lease, and Smith (1988), Del Guercio (1996), and Woidtke (2002)). We next explore whether voting rights affect the investment decisions of different types of institutions in different ways.

B. Institutional Investment in Dual- Versus Single-Class Firms by Type of Institution

Differences in institutional investment across types of institutions may arise as a result of differences in their fiduciary responsibilities, investment horizon, objectives or styles. Also, different types of investors may have different assessments of shareholder voting rights depending on whether they are more or less likely to engage in shareholder activism.

Investment companies and independent investment advisors are usually short-term investors that rebalance their portfolios often, have low levels of fiduciary responsibility, and do not engage in shareholder activism. Thus, these investors are likely to be the least sensitive to voting rights. On the other hand, long-term investors with strong fiduciary responsibilities that are more likely to engage in shareholder activism, such as pension plans and university foundation endowments, are likely to be highly sensitive to shareholder voting rights. It is less clear whether voting rights should matter in the investment decisions of bank trust departments and insurance companies. Both types of institutions are long-term investors, and bank trust departments further have strong fiduciary duties, suggesting that shareholder voting rights should matter in their investment decisions. However, both types of institutions also have important potential business relations with the firms they invest in, and thus may not use their voting rights against management. This suggests that voting rights might be of little value to them.

To investigate whether a firm's dual-class status affects institutional investment differently across different institution types, we regress institutional ownership by each

type of institutions on *Dual* and the same control variables considered in Table IV. Table V presents the institutional ownership regressions by type of institution.

Insert Table V here

Panel A reports the pooled OLS regressions with clustered standard errors, while Panel B reports the results using the Fama-Macbeth regressions with Newey-West standard errors based on five lags. The table shows that all types of institutional investors appear to invest less in dual-class firms. The results are similar across different estimation methods, except for bank trust departments where the coefficient on the *Dual* dummy is negative under both specifications but only statistically significant using the Fama-MacBeth procedure.

As before, for each institution type, the coefficient on *Dual* captures the difference in institutional holdings of dual- versus single-class firms, after controlling for firm and stock characteristics. To assess the economic magnitude of these differences and the relative importance across investor types, we normalize the coefficient on *Dual* reported in Panel B by the average ownership in single-class firms by each institution type (from Panel A, Table I). This calculation shows that bank trust departments have ownership stakes in dual-class firms that are 7.3% lower than in single-class firms. The measure is about 17.4% for insurance companies, 10.3% for investment companies, 11.1% for independent investment advisors, and 17.5% for the pool of other investor types. Thus, the group of other investors, which includes the most important shareholder activists, together with insurance companies, are the types of investors with the lowest (relative) investment in dual-class firms, followed by independent investment advisors, investment companies, and bank trust departments.

As discussed earlier, we cannot rule out that institutional investors may seek to intervene in corporate matters by purchasing shares with superior voting power when such shares are traded. In Panel C we repeat our pooled OLS regression analysis of the effect of dual-class status on institutional ownership by excluding dual-class firms where both classes are traded. As before, standard errors are clustered at the firm level. We find that, for each type of institution, the negative effect of dual-class status on institutional ownership is statistically significant and stronger in this sub-sample than that reported in Panel A.

To summarize, we find that institutional investors tend to invest less in the stock of dual-class firms, and that the effect of firms' dual-class status on their investment decisions is largely independent of institutional manager types. Our results suggest that voting rights are an important consideration for institutional investors when making their portfolio decisions, and that those with more stringent fiduciary responsibilities and longer investment horizons, as well as those more commonly associated with shareholder activism, are more sensitive to the lack of voting rights in dual-class firms.

C. Changes in Institutional Ownership Following Unification

To shed further light on whether a firm's dual-class status affects institutional investment decisions, in this sub-section we examine how the unification of a dual-class structure into a single-class affects institutional investment.

The sample for our unification analysis includes both dual-class firms that remain so for the entire sample period and those that abandon their dual-class structures up to

one year after the unification. The sample contains 79 unification events and 2,114 firm-year observations. We examine changes in institutional ownership following the elimination of dual-class structures, using the remaining (non-unifying) dual-class firms as the control group. In this way, our analysis captures the changes in institutional ownership due to unification, over and above changes motivated by reasons that are common across dual-class firms.

In Panel A of Table VI we regress the change in the level of institutional ownership *(ΔIO)* from year *t* to *t+1* (i.e., $\Delta IO = IO_{t+1} - IO_t$) on the *Unify* dummy, which is equal to one if the firm abandons its dual-class structure in year *t*, and zero otherwise. The standard errors of the coefficients are clustered at the firm level. The control variables are identical to those previously defined. As an additional control, we include *ΔShouts*, the percentage change in the total number of shares outstanding from year *t* to year *t+1*. This variable captures any new equity issues or repurchases following the unification that may affect the change in institutional ownership. It also controls for any effect that the exchange of shares as a result of the unification may have on institutional ownership.

Insert Table VI here

Following the unification of a dual-class structure into a single-class, there is a large increase in the institutional ownership of the unifying firms over and above the change in institutional ownership experienced by the control group of non-unifying dual-class firms. The unification is associated with an 11.5 percentage points increase in total institutional ownership (see column (1) of Panel A). Compared to the pre-unification

fractional ownership by institutions (almost 35 percentage points), this implies a 32.8% increase.

The analysis by type of institution in columns (2)-(6) of Panel A shows that, following the unification of a dual-class structure, all types of institutional investors significantly increase their holdings in the unifying firms relative to the control group of non-unifying dual-class firms. In addition, the increase in institutional holdings of the unifying firms is economically significant. Compared to the pre-unification fractional ownership, the estimates in Panel A imply a 30.4% increase for bank trust departments, 53.1% for insurance companies, 44.8% for investment companies, 23.9% for independent investment advisors, and 42.6% for other institutional investors. These findings suggest that most institutional investors are seriously concerned about the poor corporate governance in dual-class firms, and that they significantly increase their investment after the dual-class structure is removed.

It is possible that our dependent variable, *ΔIO,* and thus our inference reported in Panel A, may be contaminated by the mechanics of the unification process. As part of the process the superior-voting shares are exchanged for shares of the surviving class. As a result, both the total number of shares outstanding (the denominator of *IO*) and the number of shares held by institutional investors (the numerator of *IO*) could be affected.

One occasion for the mis-measurement of the numerator of *IO* to occur is due to institutional investors' holding of superior-voting shares that are exchanged for common shares. This problem would be minimized in firms where the superior-voting shares are not traded and thus institutional holdings of these shares are likely to be negligible. Thus, in Panel B we repeat our analysis on the sub-sample of dual-class firms where only the

ordinary shares are traded. The results remain statistically significant and qualitatively similar to those reported in Panel A.

Our inference might also be affected due to the change in the number of shares outstanding that affects the denominator of our institutional ownership measure (*IO*). To explore this issue, we construct a new variable, %*ΔIIShrs*, defined as the percentage change in the number of shares held by institutional investors, and use it in place of *ΔIO* as the dependent variable.[9] Since %*ΔIIShrs* does not require the number of shares outstanding for its calculation, the results reported in Panel A, Table VII will not be affected by any change in the total number of shares outstanding due to unification. The results suggest that institutions of all types increase their shareholdings post unification.

Insert Table VII here

In Panel B, Table VII we repeat the analysis using %*ΔIIShrs* as the dependent variable but limit the sample to dual-class firms where only the ordinary shares are traded. In this case, the mechanics of the unification cannot affect our inference at all: the dependent variable %*ΔIIShrs* is not affected by the change in the total number of shares outstanding, and institutional investors do not participate in the share exchange because they hold none or little non-traded superior-voting shares prior to the unification. Again, our main inferences based on results in Panel B, Table VII remain unchanged.

To summarize, we find that unifications are followed by large increases in institutional ownership, and the mechanics of the unification process are unlikely to drive

[9] The number of observations is smaller in Table VII than that in Table VI because the variable %*ΔIIShrs* is not defined when institutional ownership in year *t* is zero. The results are similar if the dependent variable is defined as the absolute change in the number of shares held by institutional investors (# shares held by institutions in year *t+1* minus # shares held by institutions in year *t*).

our results. Thus, the evidence from unifications is consistent with our previous evidence suggesting that institutional investors do care about voting rights in making their investment decisions.

V. Robustness Checks

We report some additional investigation in this section.

A. Using an Alternative Sample Based on a Matching Procedure

The analysis reported in Tables IV and V compares institutional ownership in dual-class firms to that in the universe of single-class firms. As a robustness check, we repeat our analysis on the sample based on the matching procedure discussed in Section II, where we match each dual-class firm in our sample to a single-class firm based on 48 Fama-French industry and total assets. Table VIII reports the multivariate regression analysis using *IO* as the dependent variable. Panel A reports the pooled OLS regressions with clustered standard errors, and Panel B reports the coefficients from the Fama-MacBeth regressions with Newey-West standard errors based on five lags.

Insert Table VIII about here

The OLS results show that aggregate institutional ownership is about 4.3 percentage points lower in dual-class firms than in single-class firms (column (1) of Panel A), and this difference falls to 3.7 percentage points using the Fama-MacBeth procedure (column (1) of Panel B). Both panels show a uniform negative effect of dual-class status on institutional ownership by type (columns (2)-(6)). Overall, the results are

statistically significant and of similar magnitude to those reported in Tables IV and V that use the universe of single-class firms as the control group.

B. Institutional Ownership under Alternative Assumptions

When the shares with superior voting rights in dual-class firms are not traded, the calculation of our institutional ownership variable (*IO*) assumes that these shares have the same price as the traded ordinary shares (i.e., a zero voting premium). To the extent that institutions hold very few of the superior-voting shares, the assumption of a positive voting premium would have little effect on the numerator of our *IO* measure (the estimated value of institutional holdings in the firm). However, a higher voting premium will likely increase the denominator (the market value of firm equity), and as a result would reduce our measure of institutional ownership (*IO*) for dual-class firms with non-traded superior-voting shares.

Zingales (1995) shows that the mean (median) premium for the superior-voting class relative to the inferior-voting class is 10% (3%), so we explore different assumptions on the voting premium in our main analysis. In Table IX we report the regression results using alternative assumptions for the voting premium.

Insert Table IX about here

In Panel A we assume a 5% voting premium in the calculation of *IO* and in Panel B we assume a 10% voting premium. The tables show that, consistent with our conjecture, the higher voting premium is associated with a larger negative effect of *Dual* on *IO*. Recall that the estimates in column (4) of Table IV imply that institutional ownership is 3.8 percentage points lower in dual-class firms than in single-class firms.

Results in Table IX show that this difference is 4.2 percentage points when the voting premium is assumed to be 5% (column (1) of Panel A), and 4.6 percentage points when the premium is assumed to be 10% (column (1) of Panel B). We find similarly larger effects by type of institution.

C. Insider Ownership

Dual-class firms are often family firms, where insiders typically hold a large fraction of the outstanding shares. Moreover, boards of dual-class firms might be dominated by insiders. Thus, it is possible that institutional ownership is systematically lower in dual-class firms simply because higher insider ownership reduces the fraction of shares available for outside investors to purchase. To explore this possibility, we match our data with ISS/IRRC data on the equity ownership of corporate executives and members of the board. Although this merge substantially reduces our sample size, we repeat our analysis in Table IV after controlling for insider ownership, *InsiderOwn*, defined as the percentage of the firm's equity held by insiders (executives and directors). The results are reported in Table X.

Insert Table X about here

We find that even after controlling for insider ownership, the negative effect of dual-class status on institutional ownership remains statistically significant. The magnitude of the effect of *Dual* on *IO* is larger in this smaller sample (about 8.9 percentage points as shown in column (4)). Consistent with our expectations, higher insider ownership is associated with lower institutional investment. We conclude that the

lower institutional ownership in dual-class firms is not due to the higher insider ownership in those firms.

VI. Conclusions

We find that institutional ownership in dual-class firms is substantially lower than that in comparable single-class firms, and this result holds for all types of institutions. This difference in investment is more pronounced for long-term investors with strong fiduciary responsibilities than for short-term investors with low levels of fiduciary responsibility. In addition, following the unification of dual-class structures, institutions substantially increase their investment in the new single-class firms. We conclude that the vast majority of institutional investors do avoid investing in the stock of dual-class firms. Moreover, this avoidance is economically significant.

Overall, we show that the lack of shareholder voting rights in dual-class firms is an important factor in institutions' portfolio decisions, suggesting that a firm's corporate governance attributes matter for institutional investment. In addition, although dual-class share structures may have some benefits for firms, such as allowing management to focus on long-term value without worrying about potential takeovers, our study suggests that they may also compromise firms' access to equity capital by discouraging investment by institutional investors.

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Table I
Institutional Ownership in Single-Class Versus Dual-Class Firms

The sample contains 7,737 single-class firms with a total of 34,704 firm-year observations and 603 dual-class firms with a total of 2,651 firm-year observations for the period 1995-2002. Institutional ownership is defined as institutional investors' dollar investment in the firm's equity as a percentage of the firm's total market value of equity. We report mean values and median values in parentheses below. The last column reports the p-value for t-tests of the difference in means and Wilcoxon rank-sum tests for the difference in medians (in parentheses). Panel A reports institutional ownership in single-class and dual-class firms in our sample. Panel B reports institutional ownership in dual-class firms and in a control sample of single-class firms matched by 48 Fama-French industry and total assets.

Panel A. Institutional Ownership – Full Sample

	Single-Class	Dual-Class	Difference	P-value
Institutional ownership	33.93	34.97	1.04	0.064
	(29.57)	(33.96)	(4.39)	(0.000)
Bank trust departments	4.35	4.72	0.37	0.000
	(2.14)	(2.94)	(0.80)	(0.000)
Insurance companies	2.29	2.28	-0.01	0.890
	(0.71)	(1.24)	(0.53)	(0.000)
Investment companies	8.24	8.45	0.21	0.290
	(4.07)	(6.09)	(2.02)	(0.000)
Independent investment advisors	16.19	16.89	0.70	0.013
	(13.96)	(15.39)	(1.43)	(0.000)
Other institutional investors	2.91	2.66	-0.25	0.006
	(0.88)	(1.31)	(0.43)	(0.000)

Panel B. Institutional Ownership – Matched Sample

	Single-Class	Dual-Class	Difference	P-value
Institutional ownership	38.36	34.97	-3.39	0.000
	(37.09)	(33.96)	(-3.13)	0.000
Bank trust departments	4.88	4.72	-0.16	0.169
	(3.03)	(2.94)	(-0.09)	0.481
Insurance companies	2.73	2.28	-0.45	0.000
	(1.27)	(1.24)	(-0.03)	0.312
Investment companies	9.07	8.45	-0.62	0.008
	(6.13)	(6.09)	(-0.04)	0.270
Independent investment advisors	18.56	16.89	-1.67	0.000
	(17.40)	(15.39)	(-2.01)	0.002
Other institutional investors	3.17	2.66	-0.51	0.000
	(1.57)	(1.31)	(-0.26)	0.513

Table II
Sample Characteristics

The sample contains 7,737 single-class firms with a total of 34,704 firm-year observations and 603 dual-class firms with a total of 2,651 firm-year observations for the period 1995-2002. We report mean values and median values in parentheses below. The last column reports the p-value for t-tests of the difference in means and Wilcoxon rank-sum tests for the difference in medians (in parentheses). *Mktcap* is market capitalization, defined as the dollar value of all share classes at the end of the year (in millions of 2002 dollars); *Return* is the annual return on the firm's stock, defined as the value-weighted average of the returns across traded classes over the year; *Divyield* is the dividend yield, defined as the ratio of total dividend payout to stock price; *Retvol* is the volatility of stock returns, defined as the value-weighted average of the stock return volatility across traded classes using monthly stock returns over the prior year; *Turnover* is the share turnover ratio, defined as the value-weighted average of the ratio of the trading volume to the number of shares outstanding at the end of the previous year across all traded classes; *M/B* is the market-to-book ratio, defined as the market value of assets divided by book value of assets; *Leverage* is financial leverage, defined as the ratio of total debt to the market value of assets; *Firmage* is firm age, defined as the number of years since the firm first appears in CRSP; *Price* is the share price, defined as the value-weighted average of the stock price across traded classes at the end of the year (in 2002 dollars); *S&P500* is an S&P 500 membership dummy, which equals one if the firm is in the S&P 500 Index, and zero otherwise; *#Analysts* is analyst coverage, defined as the number of IBES analysts covering the firm.

	Single-Class	Dual-Class	Difference	P-value
Mktcap (market capitalization)	2508.61	1913.14	-595.47	0.041
	(157.53)	(332.23)	(174.70)	(0.000)
Return (annual return)	0.22	0.19	-0.03	0.299
	(0.03)	(0.04)	(0.01)	(0.051)
Divyield (dividend yield)	0.70	0.82	0.12	0.000
	(0.00)	(0.00)	(0.00)	-
Retvol (return volatility)	0.61	0.50	-0.11	0.000
	(0.51)	(0.42)	(-0.09)	(0.000)
Turnover (shares turnover)	16.79	10.97	-5.82	0.000
	(9.44)	(6.07)	(-3.37)	(0.000)
M/B (market-to-book)	1.90	1.50	-0.40	0.000
	(1.14)	(1.03)	(-0.11)	(0.000)
Leverage (financial leverage)	0.23	0.29	0.06	0.000
	(0.15)	(0.22)	(0.07)	(0.000)
Firmage (age since listing)	13.45	13.72	0.27	0.361
	(8.00)	(9.00)	(1.00)	(0.007)
Price (share price)	21.13	183.54	162.41	0.000
	(11.11)	(16.92)	(5.81)	(0.000)
S&P500 (S&P500 membership)	0.09	0.07	-0.02	0.010
	(0.00)	(0.00)	(0.00)	-
#Analysts (analyst coverage)	1.56	1.44	-0.12	0.013
	(0.58)	(0.67)	(0.09)	(0.002)

Table III
Correlation Matrix

The sample contains 7,737 single-class firms with a total of 34,704 firm-year observations and 603 dual-class firms with a total of 2,651 firm-year observations for the period 1995-2002. This table reports pairwise correlations among the right-hand-side variables used in our multivariate analysis. *Dual* is the dual-class status dummy, which equals one if the firm has multiple share classes, and zero otherwise; *Mktcap* is market capitalization, defined as the dollar value of all share classes at the end of the year (in millions of 2002 dollars); *Return* is the annual return on the firm's stock, defined as the value-weighted average of the returns across traded classes over the year; *Divyield* is the dividend yield, defined as the ratio of total dividend payout to stock price; *Retvol* is the volatility of stock returns, defined as the value-weighted average of the stock return volatility across traded classes using monthly stock returns over the prior year; *Turnover* is the share turnover ratio, defined as the value-weighted average of the ratio of the trading volume to the number of shares outstanding at the end of the previous year across all traded classes; *M/B* is the market-to-book ratio, defined as the market value of assets divided by book value of assets; *Leverage* is financial leverage, defined as the ratio of total debt to the market value of assets; *Firmage* is firm age, defined as the number of years since the firm first appears in CRSP; *Price* is the share price, defined as the value-weighted average of the stock price across traded classes at the end of the year (in 2002 dollars); *S&P500* is an S&P 500 membership dummy, which equals one if the firm is in the S&P 500 Index, and zero otherwise; *#Analysts* is analyst coverage, defined as the number of IBES analysts covering the firm. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

	Dual	Mktcap	Return	Divyield	Retvol	Turnover	M/B	Leverage	Firmage	Price	S&P500
Mktcap	0.002										
Return	-0.002	0.022***									
Divyield	0.025***	0.060***	-0.012**								
Retvol	-0.063***	-0.089***	0.009*	-0.272***							
Turnover	-0.050***	0.013***	0.108***	-0.106***	0.234***						
M/B	-0.042***	0.061***	-0.055***	-0.126***	0.206***	0.232***					
Leverage	0.068***	-0.026***	0.029***	0.191***	-0.123***	-0.145***	-0.293***				
Firmage	0.022***	0.230***	-0.010**	0.387***	-0.272***	-0.115***	-0.130***	0.157***			
Price	0.045***	0.104***	0.005	-0.002	-0.019***	-0.004	-0.004	-0.009*	0.017***		
S&P500	-0.008	0.384***	0.007	0.155***	-0.157***	0.035***	0.026***	0.001	0.367***	0.006	
#Analysts	-0.008	0.368***	-0.016***	0.058***	-0.127***	0.194***	0.086***	-0.059***	0.237***	0.005***	0.518***

Table IV
The Effect of Dual-Class Status on Institutional Ownership

The sample contains 7,737 single-class firms with a total of 34,704 firm-year observations and 603 dual-class firms with a total of 2,651 firm-year observations for the period 1995-2002. This table reports regressions of institutional ownership *(IO)* on dual-class status *(Dual)* and lagged control variables. Institutional ownership, *IO*, is defined as institutional investors' dollar investment in the firm's equity as a percentage of the firm's total market value of equity (non-traded superior-voting shares are assume to have the same price as the traded inferior-voting shares); *Dual* is the dual-class status dummy, which equals one if the firm has multiple share classes, and zero otherwise; *Mktcap* is market capitalization, defined as the dollar value of all share classes at the end of the year (in millions of 2002 dollars); *Return* is the annual return on the firm's stock, defined as the value-weighted average of the returns across traded classes over the year; *Divyield* is the dividend yield, defined as the ratio of total dividend payout to stock price; *Retvol* is the volatility of stock returns, defined as the value-weighted average of the stock return volatility across traded classes using monthly stock returns over the prior year; *Turnover* is the share turnover ratio, defined as the value-weighted average of the ratio of the trading volume to the number of shares outstanding at the end of the previous year across all traded classes; *M/B* is the market-to-book ratio, defined as the market value of assets divided by book value of assets; *Leverage* is financial leverage, defined as the ratio of total debt to the market value of assets; *Firmage* is firm age, defined as the number of years since the firm first appears in CRSP; *Price* is the share price, defined as the value-weighted average of the stock price across traded classes at the end of the year (in 2002 dollars); *S&P500* is an S&P 500 membership dummy, which equals one if the firm is in the S&P 500 Index, and zero otherwise; *#Analysts* is analyst coverage, defined as the number of IBES analysts covering the firm. Panel A reports the coefficients from pooled OLS regressions which include year dummies and 48 Fama-French industry dummies. The standard errors are adjusted for the clustering of observations at the firm level. Panel B reports the coefficients on the dual-class status dummy from Fama-MacBeth regressions with Newey-West standard errors based on five lags. Panel C reports the coefficients on the dual-class status dummy using a sub-sample where dual-class firms with both share classes traded are excluded. In all panels, we omit the coefficients on the 48 Fama-French industry dummies and the year dummies. P-values are given in brackets. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

Panel A. Pooled OLS Regressions with Clustered Standard Errors

	(1)	(2)	(3)	(4)
Dual	-2.687***	-2.542***	-3.887***	-3.790***
	[0.002]	[0.003]	[0.000]	[0.000]
Ln(Mktcap)	8.430***	7.927***	5.124***	4.771***
	[0.000]	[0.000]	[0.000]	[0.000]
Return	-1.164***	-1.268***	-2.256***	-2.184***
	[0.000]	[0.000]	[0.000]	[0.000]
Divyield	-1.196***	-1.261***	-1.580***	-1.557***
	[0.000]	[0.000]	[0.000]	[0.000]
Retvol		-5.825***	-1.797***	-1.770***
		[0.000]	[0.000]	[0.000]
Turnover		0.091***	0.104***	0.100***
		[0.000]	[0.000]	[0.000]
M/B			-0.790***	-0.784***
			[0.000]	[0.000]
Leverage			4.231***	4.250***
			[0.000]	[0.000]
Firmage			0.039*	0.039*
			[0.053]	[0.058]
Ln(Price)			6.447***	6.626***
			[0.000]	[0.000]
S&P500				-0.588
				[0.598]
#Analysts				0.417**
				[0.025]
Intercept	-70.440***	-62.953***	-46.378***	-43.088***
	[0.000]	[0.000]	[0.000]	[0.000]
# of obs.	37355	37355	37355	37355
Adjusted R^2	0.453	0.464	0.494	0.495

Panel B. Fama-MacBeth Regressions with Newey-West Standard Errors

	(1)	(2)	(3)	(4)
Dual	-2.658***	-2.392***	-3.857***	-3.830***
	[0.000]	[0.001]	[0.000]	[0.000]
All columns include the same control variables as in Panel A and 48 Fama-French industry dummies				
# of obs.	37355	37355	37355	37355

Panel C. Pooled OLS Regressions Using a Sub-Sample Where Dual-Class Firms with Both Share Classes Traded Are Excluded

	(1)	(2)	(3)	(4)
Dual	-3.722***	-3.558***	-4.900***	-4.827***
	[0.000]	[0.000]	[0.000]	[0.000]
All columns include the same control variables as in Panel A, year dummies, and 48 Fama-French industry dummies				
# of obs.	36623	36623	36623	36623
Adjusted R^2	0.455	0.465	0.497	0.497

Table V
The Effect of Dual-Class Status on Institutional Ownership by Type of Institution

The sample contains 7,737 single-class firms with a total of 34,704 firm-year observations and 603 dual-class firms with a total of 2,651 firm-year observations for the period 1995-2002. This table reports regressions of institutional ownership *(IO)* by type of institution on dual-class status *(Dual)* and lagged control variables. Institutional ownership, *IO*, is defined as institutional investors' dollar investment in the firm's equity as a percentage of the firm's total market value of equity (non-traded superior-voting shares are assume to have the same price as the traded inferior-voting shares); *Dual* is the dual-class status dummy, which equals one if the firm has multiple share classes, and zero otherwise; *Mktcap* is market capitalization, defined as the dollar value of all share classes at the end of the year (in millions of 2002 dollars); *Return* is the annual return on the firm's stock, defined as the value-weighted average of the returns across traded classes over the year; *Divyield* is the dividend yield, defined as the ratio of total dividend payout to stock price; *Retvol* is the volatility of stock returns, defined as the value-weighted average of the stock return volatility across traded classes using monthly stock returns over the prior year; *Turnover* is the share turnover ratio, defined as the value-weighted average of the ratio of the trading volume to the number of shares outstanding at the end of the previous year across all traded classes; *M/B* is the market-to-book ratio, defined as the market value of assets divided by book value of assets; *Leverage* is financial leverage, defined as the ratio of total debt to the market value of assets; *Firmage* is firm age, defined as the number of years since the firm first appears in CRSP; *Price* is the share price, defined as the value-weighted average of the stock price across traded classes at the end of the year (in 2002 dollars); *S&P500* is an S&P 500 membership dummy, which equals one if the firm is in the S&P 500 Index, and zero otherwise; *#Analysts* is analyst coverage, defined as the number of IBES analysts covering the firm. Panel A reports the coefficients from pooled OLS regressions which include year dummies and 48 Fama-French industry dummies. The standard errors are adjusted for the clustering of observations at the firm level. Panel B reports the coefficients on the dual-class status dummy from Fama-MacBeth regressions with Newey-West standard errors based on five lags. Panel C reports the coefficients on the dual-class status dummy using a sub-sample where dual-class firms with both share classes traded are excluded. In all panels, we omit the coefficients on the 48 Fama-French industry dummies and the year dummies. P-values are given in brackets. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

Panel A. Pooled OLS Regressions with Clustered Standard Errors

	(1) Banks trust departments	(2) Insurance companies	(3) Investment companies	(4) Independent investment advisors	(5) Other institutional investors
Dual	-0.283	-0.403***	-0.862***	-1.807***	-0.472***
	[0.309]	[0.005]	[0.004]	[0.000]	[0.000]
Ln(Mktcap)	0.838***	0.612***	1.267***	1.371***	0.677***
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Return	-0.289***	-0.179***	-0.607***	-0.907***	-0.211***
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Divyield	0.071*	-0.108***	-0.493***	-0.885***	-0.149***
	[0.079]	[0.000]	[0.000]	[0.000]	[0.000]
Retvol	-0.169***	-0.147***	-0.468***	-1.114***	0.139**
	[0.005]	[0.005]	[0.000]	[0.000]	[0.033]
Turnover	0.006***	0.005***	0.038***	0.045***	0.008***
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
M/B	-0.076***	-0.037***	-0.154***	-0.422***	-0.097***
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Leverage	0.257	0.836***	0.450	2.749***	0.006
	[0.269]	[0.000]	[0.137]	[0.000]	[0.971]
Firmage	0.041***	0.006	-0.014*	0.002	0.004
	[0.000]	[0.116]	[0.067]	[0.876]	[0.257]
Ln(Price)	0.491***	0.216***	1.903***	3.968***	0.091*
	[0.000]	[0.001]	[0.000]	[0.000]	[0.096]
S&P500	2.262***	0.349*	2.109***	-4.713***	-0.615***
	[0.000]	[0.070]	[0.000]	[0.000]	[0.001]
#Analysts	0.063*	0.034	0.518***	-0.220***	0.019
	[0.057]	[0.227]	[0.000]	[0.006]	[0.458]
Intercept	-7.624***	-5.710***	-13.023***	-10.060***	-6.692***
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
# of obs.	37355	37355	37355	37355	37355
Adjusted R^2	0.354	0.174	0.421	0.296	0.237

Panel B. Fama-MacBeth Regressions with Newey-West Standard Errors

	(1) Banks trust departments	(2) Insurance companies	(3) Investment companies	(4) Independent investment advisors	(5) Other institutional investors
Dual	-0.319***	-0.398***	-0.848***	-1.792***	-0.509***
	[0.001]	[0.000]	[0.000]	[0.006]	[0.013]
All columns include the same control variables as in Panel A and 48 Fama-French industry dummies					
# of obs.	37355	37355	37355	37355	37355

Panel C. Pooled OLS Regressions Using a Sub-Sample Where Dual-Class Firms with Both Share Classes Traded Are Excluded

	(1) Banks trust departments	(2) Insurance companies	(3) Investment companies	(4) Independent investment advisors	(5) Other institutional investors
Dual	-0.861***	-0.610***	-1.201***	-1.695***	-0.492***
	[0.000]	[0.000]	[0.001]	[0.004]	[0.000]
All columns include the same control variables as in Panel A, year dummies, and 48 Fama-French industry dummies					
# of obs.	36623	36623	36623	36623	36623
Adjusted R^2	0.368	0.175	0.422	0.298	0.237

Table VI
Changes in Institutional Ownership Following Unification

The sample consists of dual-class firms that abandon their dual-class structure up to one year after the unification and dual-class firms during the entire sample period. There are 79 unification events. This table reports the results of OLS regressions of the change in the level of institutional ownership. The dependent variable is the change in institutional ownership *ΔIO*, defined as *IO* in year *t+1* minus *IO* in year *t*, where *IO* is institutional investors' dollar investment in the firm's equity as a percentage of the firm's total market value of equity (non-traded superior-voting shares are assume to have the same price as the traded inferior-voting shares). *Unify* is the unification dummy, which equals one if the firm abandons its dual-class structure in year *t*, and zero otherwise. *ΔShouts* is the percentage change in the number of shares outstanding from year *t* to year *t+1*. The rest of control variables are measured in year *t*. *Mktcap* is market capitalization, defined as the dollar value of all share classes at the end of the year (in millions of 2002 dollars); *Return* is the annual return on the firm's stock, defined as the value-weighted average of the returns across traded classes over the year; *Divyield* is the dividend yield, defined as the ratio of total dividend payout to stock price; *Retvol* is the volatility of stock returns, defined as the value-weighted average of the stock return volatility across traded classes using monthly stock returns over the prior year; *Turnover* is the share turnover ratio, defined as the value-weighted average of the ratio of the trading volume to the number of shares outstanding at the end of the previous year across all traded classes; *M/B* is the market-to-book ratio, defined as the market value of assets divided by book value of assets; *Leverage* is financial leverage, defined as the ratio of total debt to the market value of assets; *Firmage* is firm age, defined as the number of years since the firm first appears in CRSP; *Price* is the share price, defined as the value-weighted average of the stock price across traded classes at the end of the year (in 2002 dollars); S&P500 is an S&P 500 membership dummy, which equals one if the firm is in the S&P 500 Index, and zero otherwise; #Analysts is analyst coverage, defined as the number of IBES analysts covering the firm. In Panel A reports the coefficients from regressions of *ΔIO* on *Unify* and the control variables. Panel B reports the coefficients on the unification dummy using a sub-sample of dual-class firms with only the ordinary classes traded. In both panels, all regressions include year and 48 Fama-French industry dummies (not reported), and adjust for the clustering of observations at the firm level. P-values are given in brackets. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

Panel A. OLS Regressions with Clustered Standard Errors

	(1) Total Institutional Ownership	(2) Banks trust departments	(3) Insurance companies	(4) Investment companies	(5) Independent investment advisors	(6) Other institutional investors
Unify	11.466***	1.437***	1.210***	3.783***	4.042***	1.132***
	[0.000]	[0.006]	[0.005]	[0.000]	[0.000]	[0.005]
ΔShouts	0.887	0.018	0.605***	-0.020	0.402	-0.073
	[0.331]	[0.933]	[0.003]	[0.967]	[0.392]	[0.742]
Ln(Mktcap)	0.343	0.006	-0.078	0.077	0.258*	0.100**
	[0.132]	[0.917]	[0.226]	[0.460]	[0.055]	[0.041]
Return	1.708***	0.154**	0.186***	0.699***	0.602***	0.078
	[0.000]	[0.034]	[0.000]	[0.000]	[0.006]	[0.335]
Divyield	0.157	0.020	0.055	0.107	0.026	-0.049**
	[0.377]	[0.509]	[0.221]	[0.241]	[0.746]	[0.031]
Retvol	1.564**	0.199	0.115	0.677**	0.667	-0.068
	[0.022]	[0.245]	[0.433]	[0.047]	[0.103]	[0.793]
Turnover	-0.006	0.006	-0.001	-0.015	-0.011	0.014***
	[0.848]	[0.219]	[0.800]	[0.312]	[0.408]	[0.007]
M/B	0.010	0.030	0.020	0.186*	-0.165	-0.070
	[0.968]	[0.647]	[0.740]	[0.090]	[0.125]	[0.117]
Leverage	-0.397	-0.047	-0.143	-0.839**	0.316	0.294
	[0.673]	[0.824]	[0.423]	[0.040]	[0.553]	[0.224]
Firmage	-0.028	0.004	0.003	-0.016*	-0.020**	0.003
	[0.173]	[0.315]	[0.645]	[0.058]	[0.050]	[0.396]
Ln(Price)	1.318***	0.126	0.133**	0.534***	0.417*	0.081
	[0.005]	[0.124]	[0.017]	[0.005]	[0.056]	[0.366]
S&P500	-1.018	-0.076	0.075	0.788*	-1.627***	-0.234
	[0.234]	[0.692]	[0.683]	[0.080]	[0.000]	[0.176]
#Analysts	-0.098	0.028	0.006	-0.119	0.015	-0.024
	[0.605]	[0.454]	[0.876]	[0.265]	[0.876]	[0.388]
Intercept	-8.621***	-0.489	0.217	-2.138**	-5.789***	-0.173
	[0.000]	[0.400]	[0.728]	[0.039]	[0.000]]	[0.740]
# of obs.	2114	2114	2114	2114	2114	2114
Adjusted R^2	0.135	0.035	0.023	0.089	0.082	0.073

Panel B. OLS Regressions Using a Sub-Sample with Only Ordinary Shares Traded

	(1) Total Institutional Ownership	(2) Banks trust departments	(3) Insurance companies	(4) Investment companies	(5) Independent investment advisors	(6) Other institutional investors
Unify	17.428***	1.738**	1.921***	4.706***	7.657***	1.422**
	[0.000]	[0.013]	[0.001]	[0.001]	[0.000]	[0.029]
All columns include the same control variables as in Panel A, year dummies, and 48 Fama-French industry dummies						
# of obs.	1521	1521	1521	1521	1521	1521
Adjusted R^2	0.169	0.069	0.036	0.124	0.117	0.089

Table VII
Changes in the Number of Shares Held by Institutional Investors Following Unification

The sample consists of dual-class firms that abandon their dual-class structure up to one year after the unification and dual-class firms during the entire sample period. There are 79 unification events. This table reports the results of OLS regressions of the change in the number of shares held by institutional investors. The dependent variable is the percentage change in the number of shares held by institutional investors *%ΔIIShrs,* defined as the change in the number of shares held by institutional investors from year *t* to year *t+1* divided by the number of shares held by institutions in year *t* . *Unify* is the unification dummy, which equals one if the firm abandons its dual-class structure in year *t*, and zero otherwise. *ΔShouts* is the percentage change in the number of shares outstanding from year *t* to year *t+1*. The rest of control variables are measured in year *t*. *Mktcap* is market capitalization, defined as the dollar value of all share classes at the end of the year (in millions of 2002 dollars); *Return* is the annual return on the firm's stock, defined as the value-weighted average of the returns across traded classes over the year; *Divyield* is the dividend yield, defined as the ratio of total dividend payout to stock price; *Retvol* is the volatility of stock returns, defined as the value-weighted average of the stock return volatility across traded classes using monthly stock returns over the prior year; *Turnover* is the share turnover ratio, defined as the value-weighted average of the ratio of the trading volume to the number of shares outstanding at the end of the previous year across all traded classes; *M/B* is the market-to-book ratio, defined as the market value of assets divided by book value of assets; *Leverage* is financial leverage, defined as the ratio of total debt to the market value of assets; *Firmage* is firm age, defined as the number of years since the firm first appears in CRSP; *Price* is the share price, defined as the value-weighted average of the stock price across traded classes at the end of the year (in 2002 dollars); *S&P500* is an S&P 500 membership dummy, which equals one if the firm is in the S&P 500 Index, and zero otherwise; *#Analysts* is analyst coverage, defined as the number of IBES analysts covering the firm. All regressions include year and 48 Fama-French industry dummies, and adjust for the clustering of observations at the firm level. The control variables are omitted for brevity. Panel A reports the coefficients on the unification dummy. Panel B reports the coefficients on the unification dummy using a sub-sample of dual-class firms with only the ordinary classes traded. P-values are given in brackets. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

Panel A. OLS Regressions with Clustered Standard Errors

	(1) Total Institutional Ownership	(2) Banks trust departments	(3) Insurance companies	(4) Investment companies	(5) Independent investment advisors	(6) Other institutional investors
Unify	0.314***	0.389***	0.303	0.433***	0.175*	0.358***
	[0.001]	[0.006]	[0.113]	[0.000]	[0.082]	[0.009]
All columns include the same control variables as in Panel A, Table VI, year dummies, and 48 Fama-French industry dummies						
# of obs.	2078	1955	1649	1807	2039	1614
Adjusted R^2	0.315	0.180	0.125	0.184	0.265	0.162

Panel B. OLS Regressions Using a Sub-Sample with Only Ordinary Shares Traded

	(1) Total Institutional Ownership	(2) Banks trust departments	(3) Insurance companies	(4) Investment companies	(5) Independent investment advisors	(6) Other institutional investors
Unify	0.629***	0.592***	0.849***	0.618***	0.447***	0.682***
	[0.000]	[0.004]	[0.006]	[0.003]	[0.009]	[0.002]
All columns include the same control variables as in Panel A, Table VI, year dummies, and 48 Fama-French industry dummies						
# of obs.	1500	1400	1193	1314	1472	1182
Adjusted R^2	0.351	0.225	0.135	0.214	0.300	0.188

Table VIII
The Effect of Dual-Class Status on Institutional Ownership Using a Matched Sample

The sample contains 603 dual-class firms and an equal number of single-class firms for the period 1995-2002. The single-class control group is obtained by matching the dual-class firms in our sample based on 48 Fama-French industry and total assets. This table reports regressions of institutional ownership *(IO)* and institutional ownership by type of institution on dual-class status *(Dual)* and lagged control variables. Institutional ownership, *IO*, is defined as institutional investors' dollar investment in the firm's equity as a percentage of the firm's total market value of equity (non-traded superior-voting shares are assume to have the same price as the traded inferior-voting shares); *Dual* is the dual-class status dummy, which equals one if the firm has multiple share classes, and zero otherwise; *Mktcap* is market capitalization, defined as the dollar value of all share classes at the end of the year (in millions of 2002 dollars); *Return* is the annual return on the firm's stock, defined as the value-weighted average of the returns across traded classes over the year; *Divyield* is the dividend yield, defined as the ratio of total dividend payout to stock price; *Retvol* is the volatility of stock returns, defined as the value-weighted average of the stock return volatility across traded classes using monthly stock returns over the prior year; *Turnover* is the share turnover ratio, defined as the value-weighted average of the ratio of the trading volume to the number of shares outstanding at the end of the previous year across all traded classes; *M/B* is the market-to-book ratio, defined as the market value of assets divided by book value of assets; *Leverage* is financial leverage, defined as the ratio of total debt to the market value of assets; *Firmage* is firm age, defined as the number of years since the firm first appears in CRSP; *Price* is the share price, defined as the value-weighted average of the stock price across traded classes at the end of the year (in 2002 dollars); *S&P500* is an S&P 500 membership dummy, which equals one if the firm is in the S&P 500 Index, and zero otherwise; *#Analysts* is analyst coverage, defined as the number of IBES analysts covering the firm. The control variables are omitted for brevity. Panel A reports the coefficients on the dual-class status dummy from pooled OLS regressions which include year dummies and 48 Fama-French industry dummies. The standard errors are adjusted for the clustering of observations at the firm level. Panel B reports the coefficients on the dual-class status dummy from Fama-MacBeth regressions with Newey-West standard errors based on five lags. P-values are given in brackets. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

Panel A. Pooled OLS Regressions with Clustered Standard Errors

	(1) Total Institutional Ownership	(2) Banks trust departments	(3) Insurance companies	(4) Investment companies	(5) Independent investment advisors	(6) Other institutional investors
Dual	-4.287***	-0.257	-0.518***	-0.704*	-2.335***	-0.514***
	[0.000]	[0.396]	[0.006]	[0.053]	[0.000]	[0.000]
All columns include the same control variables as in Panel A, Table IV, year dummies, and 48 Fama-French industry dummies						
# of obs.	5302	5302	5302	5302	5302	5302
Adjusted R^2	0.406	0.246	0.139	0.349	0.257	0.268

Panel B. Fama-MacBeth Regressions with Newey-West Standard Errors

	(1) Total Institutional Ownership	(2) Banks trust departments	(3) Insurance companies	(4) Investment companies	(5) Independent investment advisors	(6) Other institutional investors
Dual	-3.683***	-0.235*	-0.484***	-0.484***	-2.001***	-0.517***
	[0.000]	[0.001]	[0.000]	[0.003]	[0.006]	[0.015]
All columns include the same control variables as in Panel A, Table IV and 48 Fama-French industry dummies						
# of obs.	5302	5302	5302	5302	5302	5302

Table IX
The Effect of Dual-Class Status on Institutional Ownership Under Different Assumptions for the Voting Premium

The sample contains 7,737 single-class firms with a total of 34,704 firm-year observations and 603 dual-class firms with a total of 2,651 firm-year observations for the period 1995-2002. This table reports pooled OLS regressions of institutional ownership *(IO)* and institutional ownership by type of institution on dual-class status *(Dual)* and lagged control variables. *Dual* is the dual-class status dummy, which equals one if the firm has multiple share classes, and zero otherwise; *Mktcap* is market capitalization, defined as the dollar value of all share classes at the end of the year (in millions of 2002 dollars); *Return* is the annual return on the firm's stock, defined as the value-weighted average of the returns across traded classes over the year; *Divyield* is the dividend yield, defined as the ratio of total dividend payout to stock price; *Retvol* is the volatility of stock returns, defined as the value-weighted average of the stock return volatility across traded classes using monthly stock returns over the prior year; *Turnover* is the share turnover ratio, defined as the value-weighted average of the ratio of the trading volume to the number of shares outstanding at the end of the previous year across all traded classes; *M/B* is the market-to-book ratio, defined as the market value of assets divided by book value of assets; *Leverage* is financial leverage, defined as the ratio of total debt to the market value of assets; *Firmage* is firm age, defined as the number of years since the firm first appears in CRSP; *Price* is the share price, defined as the value-weighted average of the stock price across traded classes at the end of the year (in 2002 dollars); *S&P500* is an S&P 500 membership dummy, which equals one if the firm is in the S&P 500 Index, and zero otherwise; *#Analysts* is analyst coverage, defined as the number of IBES analysts covering the firm. All regressions include year and 48 Fama-French industry dummies, and adjust for the clustering of observations at the firm level. The coefficients on the control variables are omitted for brevity. The control variables are omitted for brevity and we only report the coefficients on the dual-class status dummy. In Panel A, institutional ownership is defined as institutional investors' dollar investment in the firm's equity as a percentage of the firm's total market value of equity (non-traded superior-voting shares are assumed to have a price that is 5% higher than the price of traded inferior-voting shares). In Panel B, institutional ownership is defined as institutional investors' dollar investment in the firm's equity as a percentage of the firm's total market value of equity (non-traded superior-voting shares are assumed to have a price that is 10% higher than the price of traded inferior-voting shares). P-values are given in brackets. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

Panel A. Using 5% Voting Premium to Compute IO

	(1) Total Institutional Ownership	(2) Banks trust departments	(3) Insurance companies	(4) Investment companies	(5) Independent investment advisors	(6) Other institutional investors
Dual	-4.186***	-0.330	-0.430***	-0.961***	-2.004***	-0.500***
	[0.000]	[0.236]	[0.003]	[0.001]	[0.000]	[0.000]
All columns include the same control variables as in Panel A, Table IV, year dummies, and 48 Fama-French industry dummies						
# of obs.	37355	37355	37355	37355	37355	37355
Adjusted R^2	0.494	0.354	0.174	0.420	0.295	0.237

Panel B. Using 10% Voting Premium to Compute IO

	(1) Total Institutional Ownership	(2) Banks trust departments	(3) Insurance companies	(4) Investment companies	(5) Independent investment advisors	(6) Other institutional investors
Dual	-4.573***	-0.376	-0.457***	-1.058***	-2.197***	-0.527***
	[0.000]	[0.178]	[0.002]	[0.000]	[0.000]	[0.000]
All columns include the same control variables as in Panel A, Table IV, year dummies, and 48 Fama-French industry dummies						
# of obs.	37355	37355	37355	37355	37355	37355
Adjusted R^2	0.494	0.353	0.174	0.420	0.295	0.237

Table X
The Effect of Dual-Class Status on Institutional Ownership Controlling for Insider Ownership

The sample is a sub-sample of our full sample due to data requirement on insider ownership. This table reports pooled OLS regressions of institutional ownership *(IO)* on dual-class status *(Dual)* and lagged control variables. Institutional ownership, *IO*, is defined as institutional investors' dollar investment in the firm's equity as a percentage of the firm's total market value of equity (non-traded superior-voting shares are assume to have the same price as the traded inferior-voting shares). *Dual* is the dual-class status dummy, which equals one if the firm has multiple share classes, and zero otherwise. *InsiderOwn* is the percentage of the firm's equity held by insiders. All other control variables are the same as in Panel A, Table IV, and are omitted for brevity. *Mktcap* is market capitalization, defined as the dollar value of all share classes at the end of the year (in millions of 2002 dollars); *Return* is the annual return on the firm's stock, defined as the value-weighted average of the returns across traded classes over the year; *Divyield* is the dividend yield, defined as the ratio of total dividend payout to stock price; *Retvol* is the volatility of stock returns, defined as the value-weighted average of the stock return volatility across traded classes using monthly stock returns over the prior year; *Turnover* is the share turnover ratio, defined as the value-weighted average of the ratio of the trading volume to the number of shares outstanding at the end of the previous year across all traded classes; *M/B* is the market-to-book ratio, defined as the market value of assets divided by book value of assets; *Leverage* is financial leverage, defined as the ratio of total debt to the market value of assets; *Firmage* is firm age, defined as the number of years since the firm first appears in CRSP; *Price* is the share price, defined as the value-weighted average of the stock price across traded classes at the end of the year (in 2002 dollars); *S&P500* is an S&P 500 membership dummy, which equals one if the firm is in the S&P 500 Index, and zero otherwise; *#Analysts* is analyst coverage, defined as the number of IBES analysts covering the firm. All regressions include year and 48 Fama-French industry dummies, and adjust for the clustering of observations at the firm level. P-values are given in brackets. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

	(1)	(2)	(3)	(4)
Dual	-7.565***	-7.574***	-8.816***	-8.881***
	[0.000]	[0.000]	[0.000]	[0.000]
InsiderOwn	-0.445***	-0.437***	-0.441***	-0.441***
	[0.000]	[0.000]	[0.000]	[0.000]
All columns include the same control variables as in Panel A, Table IV, year dummies, and 48 Fama-French industry dummies				
# of obs.	13146	13146	13146	13146
Adjusted R^2	0.423	0.435	0.504	0.504