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Working Paper

Determinants and consequences of the unification of dual-class shares

ECB Working Paper, No. 465

Provided in Cooperation with:

European Central Bank (ECB)

Suggested Citation: Pajuste, Anete (2005) : Determinants and consequences of the unification of dual-class shares, ECB Working Paper, No. 465, European Central Bank (ECB), Frankfurt a. M.

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EUROPEAN CENTRAL BANK

WORKING PAPER SERIES

NO. 465 / MARCH 2005

**DETERMINANTS AND
CONSEQUENCES OF THE
UNIFICATION OF
DUAL-CLASS SHARES**

by Anete Pajuste



EUROPEAN CENTRAL BANK



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WORKING PAPER SERIES

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DETERMINANTS AND CONSEQUENCES OF THE UNIFICATION OF DUAL-CLASS SHARES¹

by Anete Pajuste²

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¹ I would like to thank Clas Bergström, Mike Burkart, Mara Faccio, Mariassunta Giannetti, Robin Greenwood, Reint Gropp, Philipp Hartmann, Yrjö Koskinen, Rafael La Porta, Andrei Simonov, Jeremy Stein, Philip Vermeulen, and especially Andrei Shleifer and Luigi Zingales for helpful comments. I also thank the seminar participants at the Aarhus University, Amsterdam University, Universidad Carlos III, Stockholm School of Economics, Tilburg University, European Central Bank, and the 10th Georgia Tech International Finance Conference for useful discussion. Anna Aleksandrova, Jonas Jokstys, and Gatis Visnevskis provided excellent research assistance. I am grateful to Craig Doidge and Stefano Mengoli for sharing their data sets. The financial support from Handelsbankens Forskningsstiftelse is gratefully acknowledged. Substantial part of this research was carried out during my internship in the European Central Bank. All eventual errors are mine.

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ISSN 1561-0810 (print)
ISSN 1725-2806 (online)

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Abstract

This paper explores the reasons why an increasing number of firms in continental Europe are unifying their shares into a single class, and analyzes the consequences of this restructuring. Interestingly, recent changes in corporate governance environment have created a situation when the reasons that once caused the introduction of dual-class shares, i.e., the need to issue new equity and to defend firm from a possible takeover, are the same that now motivate firms to switch back to one share-one vote. Meanwhile, higher value of control rights (e.g., high separation between control and cash flow rights) significantly reduces the likelihood of unification. Finally, the data show that firm value increases after the unification.

JEL Classification: G32; G34

Key words: corporate governance; dual-class shares; one share-one vote

Non-technical summary

The term *dual-class shares* means that the firm has more than one share class with different voting rights attached to them. This structure allows shareholders to achieve a controlling position by investing unproportionally low share of capital. For example, one investor may own 20 percent of the share capital, but control 50 percent of the voting rights. Such an asymmetry between cash flow and voting rights can create a negative effect when those in control have incentives to divert corporate resources at the expense of other shareholders. As a result, corporate valuation can decrease, cost of capital increase, and a firm can face investment constraints (La Porta et al. (1997, 2002), and Claessens et al. (2002)). On the other hand, there is a fair amount of theoretical and empirical evidence showing that, under certain conditions, dual-class share structure can benefit shareholders (DeAngelo and DeAngelo (1985), Fischel (1987), Burkart et al. (1998), and Dimitrov and Jain (2003)).

There is extensive literature (e.g., Partch (1987), Jarrel and Poulsen (1988), and Millon-Cornett and Vetsuypens (1989)) documenting the effects of *introduction* of dual-class structures. However, recently there is an increasing tendency for firms to give up the multiple classes of shares. The literature on this recent type of restructuring has so far been limited. This paper contributes to it by exploring the firms' incentives to unify the shares with different voting rights into a single share class, as well as the consequences of this restructuring.

Theoretical arguments for unification are as follows. Firms with weaker shareholder protection have lower valuations because investors take into account that some of the profits can be diverted (Shleifer and Wolfenzon (2002)). The market participants tend to believe that the profit diversion can be more prevalent in dual-class firms than in single-class firms; therefore they pay less for the former. The unification is hence a way to increase the firm's market valuation by committing to reduce the potential profit diversion, increasing liquidity, and improving investor recognition by making shares available to a wider pool of investors.

The paper presents empirical evidence using data from 493 publicly traded firms in seven European countries (Denmark, Finland, Germany, Italy, Norway, Sweden, and Switzerland) where dual-class share structures are widely used. The results show that firms that are dependent on new equity capital, make more acquisitions of other companies, and have a controlling shareholder with lower private benefits of control are more likely to unify their shares. The interpretation of these results is that low share value is not much of a concern – the minority shareholders pay a fair price taking into account the potential profit diversion – unless firm wants to do any transactions with stock.

As a consequence of the unification, the market value and sales growth of the firm goes up if compared to the firm *itself* before the unification. Meanwhile, comparing firms with similar growth opportunities, the firms that unify their shares experience higher market value, but no difference in sales growth compared to *other* dual-class firms. These results imply that the dual-class share structure *per se* does not preclude firms from growth unless the firms depend on equity capital. In this context, the paper gives some implications for the recent policy debate on whether dual-class share structures should be forbidden. The answer is *no*. The evidence shows that firms that depend on equity capital will sooner or later be forced by the market to unify their shares.

Introduction

Firms with dual-class shares¹ are rather common in Europe (Faccio and Lang (2002)), and in many countries around the world, including the United States. A growing literature emphasizes that the asymmetry between cash flow and voting rights created by dual-class ownership allows the controlling parties to receive a disproportionate amount of corporate benefits, the so called private benefits² (Grossman and Hart (1988) and Harris and Raviv (1988)). As a result, corporate valuation can decrease, cost of capital increase, and a firm may face investment constraints (La Porta et al. (1997, 2002), Claessens et al. (2002), and Cronqvist and Nilsson (2003)). On the other hand, there is a fair amount of theoretical and empirical work showing that, under certain conditions, dual-class shares can benefit shareholders (DeAngelo and DeAngelo (1985), Fischel (1987), Burkart et al. (1998), and Dimitrov and Jain (2003)).

Shleifer and Wolfenzon (2002) show theoretically that firms with weaker shareholder protection have lower valuations because investors take into account that some of the profits can be diverted. If market participants believe that profit diversion is more prevalent in dual-class firms than in single-class firms, they will pay less for the former. We call it dual-class “equilibrium”: controlling shareholders enjoy the private benefits, and minority shareholders pay for what they get – the expected cash flow after the extraction of such private benefits. This begs the question of why, suddenly, some dual-class companies choose to deviate from this equilibrium.

This paper studies the determinants of the decision to unify the shares with different voting rights (high voting shares and low voting shares) into a single share class. Throughout the paper, I refer to this event as the *unification*. The factors driving the probability of unification are inferred both from ex-ante and ex-post characteristics of the companies that unified their shares. The main prediction is that the goal of the unification is to take advantage of an increased market value. The market value is expected to increase after the unification for several reasons. First, the unification is a commitment to reduce the potential profit diversion. Second, the liquidity should

go up with improved firm-level corporate governance (Brockman and Chung (2003)). Finally, the unification can improve investor recognition. Shares become available to a wider pool of investors, which according to Merton (1987) improves the share value.

The determinants of the unification are explored using a panel data set of 493 publicly traded firms in seven European countries (Denmark, Finland, Germany, Italy, Norway, Sweden, and Switzerland) where dual-class share structures are widely used. A total of 108 of the firms unified the dual-class shares in the period 1996-2002. I call these firms the *event group*. The other 385 firms remained dual-class within the same period. I call these firms the *control group*.

Using different model specifications, the results strongly confirm the hypotheses that the firms that are dependent on new equity capital, make more acquisitions of other companies, and have a controlling shareholder with lower private benefits of control are more likely to unify their shares. The interpretation of these results is that low share value is not much of a concern – the minority shareholders pay a fair price taking into account the potential expropriation – unless the firm wants to do any transactions with stock. The likelihood of the unification decreases substantially if the firm's controlling shareholder enjoys high private benefits of control. I show that all the variables that proxy for the level of private benefits have the expected signs and are significant. In particular, the event firms are characterized by: a) a smaller difference between the votes and cash flow rights held by the largest shareholder, b) a more frequent presence of a financial investor, and c) a higher number of firms cross-listed in the U.S. With low private benefits for the incumbent, the dual-class share system imposes a risk that a raider with high private benefits may appear and cheaply acquire control. I present some evidence that the unification can be a way to prevent such takeovers.

The prediction that the unification is intended to increase the market value of a firm can be tested alternatively from the ex-post consequences of the unification. The results suggest that firms indeed reach their goal of increasing the market value, and the effect is rather persistent. The difference between the firm's market-to-book ratio and the respective average ratio of single

class firms in the same industry jumps from around -0.5 to 0 in the year of the unification. In other words, the ex-dual-class firm achieves the same value as an average single-class firm in the industry. The paper presents interesting evidence that a firm that unifies its dual-class shares experiences increased market value and sales growth after the unification compared to the firm *itself* before the unification. However, comparing firms with similar growth opportunities, the event firms experience higher market values and lower leverage, but no difference in sales growth compared to *other* dual-class firms. This result suggests that the dual-class share structure *per se* does not preclude firms from growth unless the firms depend on equity capital.

This paper relates to a broader literature on dual-class shares: the value of control measured by the voting premium (Bergström and Rydqvist (1990, 1992), Nenova (2003), etc.), the IPO under-pricing in dual-class firms (Smart and Zutter (2003)), the dual-class share introductions, the switch from a single to dual-class share structure (e.g., Partch (1987), Jarrel and Poulsen (1988), Millon-Cornett and Vetsuypens (1989)), and the effect of certain policy changes on dual-class firms (Smith and Amoako-Adu (1995), Robinson et al. (1996), Hoffmann-Burchardi (1999), Bennedsen and Nielsen (2002), and Berglöf and Burkart (2003)).

In the existing literature, a fair amount of effort has already been spent documenting the effects of introduction of dual-class structures. However, with firms shedding the multiple classes of shares in recent years, it is useful to understand the incentives to do so, as well as the consequences. This paper addresses those goals. Three closely related studies that consider the unification of shares in a single country are Amoako-Adu and Smith (2001) for Canada, Hauser and Lauterbach (2003) for Israel, and Dittmann and Ulbricht (2003) for Germany. This paper differs from previous studies in several respects. It is the first cross-country study. A larger sample used in this paper allows to find more precise matches for the event firms, and to detect the differences in firm characteristics. Most importantly, this study explores not only the determinants of the unification but also the ex-post consequences of it. To my knowledge, this is

the first paper that explores firm characteristics after the unification, and explicitly documents the effect on firm valuation beyond a short term announcement effect.

The paper proceeds as follows. Section I presents related literature, anecdotal evidence, and institutional background concerning the unification of shares. Section II introduces the hypotheses and empirical model. Data and summary statistics are provided in Section III. Section IV analyzes the ex-ante determinants of the unification decision. Section V studies the ex-post consequences of the unification, and Section VI concludes.

I. Evidence on the unification of dual-class shares

In this section, I present the empirical evidence on dual-class share structures and the anecdotal evidence on why companies do the unification. I also discuss recent institutional changes affecting the firms with dual-class share structure.

A. Related literature

Before presenting the evidence on the unification of dual-class shares, it is instructive to discuss the opposite event, namely the introduction of dual-class shares. The major reasons for introducing the dual-class share structure are to prevent the dilution of control and to provide an effective defense against hostile takeover (e.g., Partch (1987) and Smith and Amoako-Adu (1991)). Even though these reasons raise concerns about adverse wealth effects, it has been shown that market reaction to introduction of dual-class shares is not necessarily negative (Partch (1987) and Millon-Cornett and Vetsuypens (1989)). Grossman and Hart (1988) show theoretically that deviations from one share-one vote may sometimes increase market value if both incumbent and rival have substantial private benefits, and the party with high private benefits also has high security benefits. In this case, minority shareholders are better off if dividend rights and voting rights are separated because the winning party in a takeover has to pay also for the expected private benefits. Instead, when private benefits of either incumbent or rival

are small, Grossman and Hart (1988) show that one share-one vote is generally optimal. Burkart et al. (1998) present a model in which the presence of takeover costs creates a trade-off between a higher likelihood of tender offers and more efficient tender offers. They show that the dual-class share system is optimal if the benefits of a higher likelihood of tender offers outweigh the costs of less efficient tender offers.

As opposed to the introduction of dual-class shares, the switch to one share-one vote is a relatively recent phenomenon. Three related empirical papers consider the abolition of dual-class share structure. Amoako-Adu and Smith (2001) find that the most common factors leading 56 firms on the Toronto Stock Exchange to eliminate dual-class equity were to meet the terms of a debt restructuring agreement, to facilitate the sale of a control block, and to increase institutional appeal for stock prior to a seasoned offering. These factors are derived from the statements made by the companies. Using data on 67 Israeli stock unifications, Hauser and Lauterbach (2003) estimate the value of voting rights from compensation paid on high voting shares for giving up some of the votes. All the Israeli unifications soared after the Tel-Aviv Stock Exchange introduced a new regulation (in 1989) which banned new issues of low voting shares. With this regulation, firms that wanted to raise new equity were effectively forced to unify the dual-class shares. Using data on 31 unification of shares in Germany, Dittmann and Ulbricht (2003) find that a company is more likely to abolish the dual-class structure if the expected future growth is high, if the firm is large, or if the largest block of voting shares is small. They find that the reaction of non-voting shares to the announcement of share unification is significantly positive, the reaction of voting shares is weakly positive, and the reaction of the full market capitalization is significantly positive.

Ironically, one of the main reasons (found in all the three previous studies) why dual-class companies are unifying their share structure is to pave the way for new equity issues, which is the same as one of the reasons why companies introduced a multiple share structure to begin with (Partch (1987) and Amoako-Adu and Smith (2001)). What has changed in the period from



mid 80s to late 90s? One of the factors is the change in *fashion*. In 1984, the New York Stock Exchange (NYSE) undertook a revaluation of its policy (introduced in 1957) not to list companies with dual-class share structure. The discrimination of dual-class shares on NYSE ceased to exist in 1986.³ This step improved the marketability of dual-class shares. The increased reorganizations of corporate voting rights was also common in response to the takeover boom of the 1980s. In recent years, the fashion has arguably changed. In the aftermath of Enron and other corporate governance scandals, anything that can potentially increase the managerial entrenchment becomes suspicious. The popularity of dual-class shares, one of the most obvious and visible tools for increasing managerial (or large shareholder) entrenchment, has been adversely affected. As a result, the companies that need to approach the investors for new capital are the ones that cannot afford to be *out of fashion*.

B. Anecdotal evidence

An obvious question arises of what companies themselves say about the unification, why they do it. Table I presents a brief summary of statements made by several of the companies that unified their shares. The table shows that companies believe that the unification would increase share value and liquidity, augment investor recognition, allow to pay for acquisitions using stock, support growth, enhance financial flexibility, and defend takeover. The last argument (made by *Nokia*), to defend takeover, again is the same as one of the main arguments why dual-class shares were introduced. *Nokia* (before the unification) had developed into a company with dispersed ownership structure and high foreign investor presence, with presumably low private benefits for incumbents. In this situation, allowing an outside rival with high private benefits to acquire control cheaply can have negative wealth effects (Grossman and Hart (1988)).

The arguments for increasing investor recognition can be (subjectively) divided into “rational” and “not-so-rational” ones. The rational arguments, for example, (16) and (17), state

that the dual-class shares are not available to certain investor groups (in particular, investment funds) due to legal restrictions. The arguments summarized under “not-so-rational” ones suggest that the company believes that the investor base is lower because the dual-class firms are not familiar to certain investor groups (mostly, foreign investors), which “do not understand this division of shares”. Statement (20) is very close to the idea that investors tend to invest in certain categories of shares (Barberis and Shleifer (2003)). In this case, the company believes that there is a disadvantage of being in the “Not Luxus category with two share classes”.

Statement (20) points towards the competition for capital story. When there is an increasing number of single-class shares around, a dual-class firm can find it more difficult to attract investors. This statement corroborates the view that the companies that are looking for new equity capital have to follow the market trends.

C. Institutional changes

Even though in neither of the sample countries the unification of shares has been compulsory, there have been certain changes in corporate governance legislation in the sample period (1996-2002). Panel B of Table II shows that the number of newly listed dual-class shares has decreased substantially in the recent years, which indirectly puts pressure on existing dual-class companies. What can explain this downturn?

According to Grossman and Hart (1988), dual-class shares may be optimal if both incumbent and raider have high private benefits of control, otherwise, one share-one vote is optimal. In recent years, there have been numerous legal reforms aimed at improving investor protection (see Appendix A). The legal reforms have evidently reshaped the type of potential buyers in takeovers, and hence reduced the optimality of dual-class share system.

Shares with low voting rights in many countries (e.g., Germany and Italy) carry preferential dividend rights. With decreasing bank loan interest rates, a minimum dividend of e.g.

5% of the par value of low voting shares may have become too expensive to maintain. This imposes additional cost on the dual-class share structure. In many countries, particularly in Europe, the regulations impose that a rights offering method⁴ is the default method of a seasoned equity offering (other methods may require almost unanimous approval from all the share classes). Continuing to pay high preferential dividend on newly issued low voting shares or giving the holders of low voting shares a right to buy high voting shares might become too costly.

Several countries have restricted the inclusion of non-voting shares in the major stock indices. For example, DAX and M-DAX in Germany and MIB30 and MIDEX in Italy, since recent, allow only voting shares to be included in the index. For liquidity reasons, this puts dual-class companies at a disadvantage. Most of the “new markets” introduced in the recent years, such as *Neuer Markt* in Germany and *Nuovo Mercato* in Italy, forbid the listing of non-voting shares. This restriction has clearly reduced the popularity of dual-class shares among “new economy” companies.

D. Summary

The costs of dual-class share structure have increased in the recent years due to investor focus on better corporate governance practices. The previous empirical results and anecdotal evidence suggests that the unification can increase the market value of a firm. The increasing costs of dual-class share structure put a considerable burden on companies that need to raise new equity capital and hence care about their share price, liquidity, and investor recognition.

II. Hypotheses and empirical model

In this section, I present a more formal discussion on what are the advantages and disadvantages of the unification from a controlling shareholder’s perspective. It is implicitly assumed that the controlling shareholder or a manager acting in the interests of this shareholder is

the main decision maker. To approve the unification, it has to be individually rational for the main decision maker.

A. Hypotheses

Theoretically, the total market value of a company should increase after the unification because the cost of capital decreases due to higher *liquidity*, wider *investor base*, and lower *risk of expropriation*. Previous research has shown that liquidity is significantly positively affected by investor protection (Brockman and Chung (2003)), hence the liquidity should increase after the unification. Higher liquidity should reduce the firm's cost of capital and increase its market value (e.g., Amihud and Mendelson (1986)). There is evidence that companies may have a narrower investor base when outside investors feel less protected (Giannetti and Simonov (2004)). There are also legal restrictions precluding certain institutional investors of holding dual-class shares. The stocks of these companies can be undervalued because of the lack of risk sharing (Merton (1987)). It has been shown both theoretically and empirically that the risk of expropriation (entrenchment) is higher in firms that separate ownership from control (Shleifer and Wolfenzon (2002) and Claessens et al. (2002)), in particular so if the private benefits of an outside rival in a takeover are substantially lower than the private benefits of an incumbent (Grossman and Hart (1988)).⁵ As a result, the market value of dual-class firms can be lower than that of similar single-class firms.⁶

Although the market value of the firm is expected to increase after the unification, it does not mean that all the parties gain equally and would accept the unification. The market value represents only the security benefits, while we know that the controlling shareholder can receive also private benefits of control, which can decrease substantially after the unification. Moreover, the wealth effects on high and low voting shares can be different. The two classes of shares can differ with respect to dividends, liquidity, and voting rights. In some firms (e.g., as set by law in Germany and Italy) low voting shares receive preferential dividends. Typically, high voting

shares are less liquid than low voting shares (see e.g. Nenova (2003)), because large part of these shares can be hold in a block and not traded or these shares are not listed at all. The valuations of high and low voting shares differ if there is some value attached to the voting rights. The value of voting rights may represent the expected premium that an outside raider may offer to acquire control over firm's decisions (Lease, McConnell, and Mikkelson (1983), Stulz (1988), and DeAngelo and DeAngelo (1985)). When there is a takeover attempt, a higher price may be paid for a high voting share because it carries more votes. As a result, after the unification, low voting shares gain voting rights and loose preferential dividends (if there are any), while high voting shares can gain on dividends (as their dividends are not any more subordinated to low voting shares) and liquidity, but loose on voting rights. Previous evidence shows that the share price on low voting shares increases more than on high voting shares when a company announces the unification (Dittmann and Ulbricht (2003)). Further on, I assume that the price of low voting shares (for simplicity, they are non-voting shares) increases, while the price of voting shares decreases after the unification. This is a more restrictive case which makes it harder for the controlling shareholder to accept the unification.

For simplicity, I consider unifications without any compensation for high voting shareholders, i.e., where all the shares are converted into shares with one vote per share. As a result, after the unification high voting shareholders have the same fraction of cash flow rights, but lower fraction of votes than before the unification. In practice, only 9 firms in my sample (predominantly in Italy and Norway) compensate the loss of voting rights with additional stocks or cash.⁷ The compensation would arguably make the unification more attractive to the controlling shareholders, but it can face strong opposition from the low voting shareholders. Moreover, the decision about the compensation is of a second-order after the proposal to unify the shares has been made.⁸

Consider a simple example. Assume the share capital of a firm consists of 50 voting shares (one vote per share) and 50 non-voting shares, with controlling shareholder holding 20

voting shares and 20 non-voting shares. This means that the controlling shareholder has 40% of votes ($20/50$) and 40% of cash flow rights ($(20+20)/(50+50)$). Also assume that the price of one voting share before the unification (P^v) is 1.10, the price of one non-voting share (P^{nv}) is 0.90, and the price of a unified (single) share after the unification (P^u) is 1.05. Given these assumptions, the unification would increase the controlling shareholder's security benefits by $(20+20)*1.05 - (20*1.10 + 20*0.90) = 2$. If the decrease in private benefits is lower than 2, the controlling shareholder is better off by unifying the shares. Now assume that the controlling shareholder holds the same 20 voting shares, but none of the non-voting shares, in other words, 40% of votes and 20% of cash flow rights. The unification is clearly value decreasing for the controlling shareholder as the security benefits decrease by 1. Thus, we obtain

Hypothesis 1: *The likelihood of unification should increase if the controlling shareholder has a smaller difference between control and cash flow rights.*

The likelihood of unification should also increase if the expected decrease in private benefits after the unification is low. Since measuring the expected decrease in private benefits is difficult, we can assume that the loss of private benefits after the unification should be lower if the controlling shareholder had low private benefits to start with. Consistent with the anecdotal evidence in the previous section, low private benefits of the incumbent also suggest that the unification can be used as a tool to defend a takeover by a rider with high private benefits. If the benefits of more efficient tender offers outweigh the costs of lower likelihood of tender offers, the unification is optimal (Burkart et al. (1998)). Overall, these arguments suggest

Hypothesis 2: *The likelihood of unification should increase if the private benefits accruing to the controlling shareholder are low.*

Measuring private benefits of control is not trivial. In addition to the difference between control and cash flow rights, one of the proxies used in the previous studies is the type of the controlling shareholder. Financial investors can have lower incentives for private benefit extraction (see e.g., McConnell and Servaes (1990)), and hence increase the likelihood of unification. Reese and

Weisbach (2002) and Doidge (2003) argue that cross-listing in the U.S. is a bonding mechanism that improves the protection afforded to minority investors and decreases the private benefits of control.⁹ Following this reasoning, we should expect that the dual-class firms which are cross-listed in the U.S., other things equal, are more likely to unify their shares.

The importance of security benefits becomes important if the controlling shareholder plans to sell the shares, and if the new shareholder has lower private benefits of control, in which case the full value of control benefits can not be retrieved. If this is the case, we should expect to see a change of controlling shareholder after the unification.

Hypothesis 3: *The controlling shareholder's cash-flow stake should decrease substantially after the unification.*

Following the discussion in the previous section, we argued that the market sentiment towards dual-class shares is particularly important for firms that need to raise new equity capital. Let us consider this argument from the controlling shareholder's perspective. Keeping all the other assumptions intact, assume that the controlling shareholder has 30 voting shares and 10 non-voting shares (60% of votes, and 40% of equity). Without a need to issue new equity, the unification would not be accepted because the controlling shareholder's security benefits are 42 under both current and proposed share structure. Considering there is even a very small decrease in private benefits, the unification is value destroying. Now assume there is a positive net present value (NPV) project that needs to be financed with equity. The project requires investment of 20, which would increase the security benefits by 30. This can be regarded as a new investment project within a company or an acquisition of another company.

If the firm issues new equity through a rights offering under the current share structure, each shareholder receives the rights to acquire new shares proportional to his existing stake and existing share price. The security value to the controlling shareholder is equal to the current security value (42) plus the net benefit from new investment project (3.6), which gives the total value of 45.6. The net benefit from new investment is less than 4 ($=0.4*NPV$) because the

benefits of the new project are shared according to the equity participation while the costs are shared according to the current market price of the shares. Since the controlling shareholder has more voting than non-voting shares, his share of project costs is higher than on average.

Alternatively, if the share unification is carried out before the new equity issue, the security value to the controlling shareholder would be 42 ($=40*1.05$) plus 4 ($=0.4*10$), which is 46. If the change in private benefits after the unification is lower than 0.4, the controlling shareholder is better off by unifying the dual-class shares before issuing new shares. Thus I propose

Hypothesis 4: *The likelihood of unification should increase if the firm plans to issue new equity.*

Hypothesis 5: *The likelihood of unification should increase if the firm plans to make acquisitions of other companies.*

Hypothesis 4 is related to Ehrhardt and Nowak (2002) who find that the firms that issued dual-class shares at the IPO stage are less likely to return to capital markets for seasoned equity offerings. In addition to positive market reaction due to reasons mentioned before, the firms with planned new equity issues can gain from positive publicity around the unification event. The switch to one share-one vote is boldly regarded as a step towards improved corporate governance, and typically gets significant media attention.¹⁰

Firms with better growth opportunities, in general, should have higher incentives to unify the shares. Even if a firm is not issuing new equity right after the unification, it may need to raise substantial amount of capital for investments and expansion in the future. Simplifying the share structure can make the process easier. Moreover, firms with higher growth opportunities (combined with lower financial flexibility) are more likely to become takeover targets. Hence,

Hypothesis 6: *The likelihood of unification should be higher in firms with high growth opportunities.*

Hypothesis 7: *We should observe increased investment activity and sales growth after the unification.*

B. Empirical design

Here, I present the main model specifications for testing the predictions about the probability of unification and the likely consequences of it. Alternative model specifications and robustness checks are left for Section IV and V.

To test the hypotheses concerning the likelihood of unification (ex-ante effects), I estimate a pooled probit model controlling for year and country effects:

$$Pr(Unify_{it}=1) = F(\mathbf{a}Z_{it}), \quad (1)$$

where $Unify_{it}$ is a variable that equals one if the company i switched to a single-class share system in year t and zero if it remained dual-class in this year (a firm is dropped from the sample after it unifies the shares), $F(.)$ is the cumulative distribution function of a standard normal variable, and Z_{it} is a vector of explanatory variables.

The consequences of unification (ex-post effects) are tested using fixed-effects regressions in which the effect of unification is captured by dummy variables for the year of the unification and the three subsequent years (as in Pagano et al. (1998)):

$$y_{it} = a + UNI_t + UNI_{t-1} + UNI_{t-2} + UNI_{t-3} + u_i + d_t + e_{it}, \quad (2)$$

where y_{it} is the variable of interest (e.g., SALES GROWTH) in firm i in year t , u_i and d_t are respectively a firm-specific and calendar year-specific effect, UNI_{t-j} are dummy variables equal to one if year $t-j$ was the year of the unification. In this model, a firm before the unification is used as a control for itself after the unification.

III. Data

A. Sample

The main sample for empirical investigation consists of 493 companies in seven European countries (Denmark, Finland, Germany, Italy, Norway, Sweden, and Switzerland). The sample covers all European countries in which dual-class firms are frequent (see Nenova (2003)).

The seven European countries use different types of dual-class shares (see Appendix A), but the basic principle is the same: one share class gives higher voting rights than the other thus allowing separation between cash flow ownership and control. In all the sample countries, both share classes are treated equally for tax purposes, i.e., there is no tax advantage on low voting shares as, for example, is the case of bank issued trust preferred stock in the U.S., and the low voting shares are not required to be convertible into high voting shares as it is the case in the Netherlands.

A sample firm complies with the following criteria: The firm is present in *Moody's/Mergent International Company Database* (1996-2002 Manuals), is not a commercial bank or credit institution (SIC codes 60 and 61), had a dual-class share structure at the end of 1995, and is still listed on the stock exchange at the end of 2002. The sample construction is presented in Panel A of Table III. Out of 601 firm that satisfied all the above criteria except the last one, for various reasons we drop 108 firms. Ten percent of firms were taken over or merged with another firm. The characteristics of these firms will be discussed in Section IV.C. Four percent of firms were delisted because the ownership became too concentrated (no or very little free float). Other four percent of firms were dropped due to data unavailability. It leaves us 493 firms (82%). Out of this sample, 108 firms (22%) now have single share class (*event* group), and 385 firms (78%) still have dual-class shares (*control* group). If we compare the number of unifications with the total initial dual-class firm sample (including the firms that dropped out during 1996-2002), the event group represents 18%. These numbers show that the unification is an important event among the dual-class shares and the market in whole.

Panel B of Table III tracks the initial sample of dual-class firms by country. The lowest unification activity has been in Sweden, where only five percent of the initial sample (7 out of 136 firms) switched to one share-one vote. In Denmark, the respective number is 11% (10 out of 88 firms). The highest unification activity has been in Norway, Germany, and Switzerland (30%, 29%, and 25%, respectively). It is interesting to note that Sweden and Denmark have the highest

fraction of mergers and takeovers among dual-class firms. In Sweden, 18% of the initial sample of dual-class firms (25 out of 136 firms) merged or were taken over during 1996-2002. Panel C of Table III shows that the number of unifications has been increasing over sample years: from 8 events per year in 1996 to 23 in 2000 and 2001. The highest number of unifications is observed in Germany (41 firm) and Switzerland (26 firms). Panel D of Table III shows the industry breakdown of the main sample of 493 companies. We observe that the highest number of dual-class firms is in Capital goods and Food and Tobacco industry (84 and 74 firms, respectively), while the lowest number is in Basic industry (4 firms). With the exception of Basic industry, the unifications are rather homogeneously spread across all the industry groups.

Panel A of Table II shows that the fraction of dual-class firms among all firms has decreased since 1995, but it is still substantial at the end of 2001. The largest fraction of dual-class firms is in Sweden (46%), and the lowest in Norway (7%) and Germany (11%). We should note that there are large and important market players among the dual-class firms. The event group consists of mainly large and medium size companies, including such famous names as, for example, ABB, Lufthansa, and Nokia. The control group includes, for example, BMW, Carlsberg, Ericsson, and Fiat.

Panel B of Table II presents evidence that the fraction of dual-class firms among newly listed domestic companies has been steadily decreasing from 22% in 1996 to only 4% in 2002. Sweden appears as a striking outlier; 71% of all new dual-class listings in seven sample countries during 1996-2002 happened in Sweden.

B. Summary statistics

Table IV contains summary statistics for 3451 firm-years: 493 companies and seven years (1996-2002). The number of observations vary due to data availability constraints. The first group until the dividing line presents variables with annual data, while the second group shows

data that are assumed constant over sample years. All the variable definitions are provided in Appendix B.

The main data sources used in this study are as follows. Financial data is from *Worldscope*. Information on different share class characteristics (voting power, dividend rights, listing, etc.) comes from *Moody's/Mergent International Company Database*, *Datastream*, company annual reports, and *Lexis-Nexis*. Ownership data are from Faccio and Lang (2002), Sunding and Sundqvist (1995-2001), and company annual reports. Data source for acquisitions is *Securities Data Corporation Platinum* database.

Panel A of Table IV shows that the median firm in the whole sample has a market-to-book (MTB) ratio of 1.53, an industry adjusted market-to-book ratio of -0.98 , a size (log of sales) of 5.54, capital expenditures of 19% of net property, plant, and equipment, and annual sales growth of 6%. In terms of ownership structure, the median firm in the sample has the largest shareholder with 44% of votes (control) and 25% of cash flow rights (ownership). Forty percent of all firms have only one of the share classes listed on the stock exchange, 11% of firms have their shares cross-listed in the U.S., 41% of firms have a family as the largest shareholder, and 11% of firms have a financial institution as the largest shareholder.

In Panel B and Panel C of Table IV, the summary statistics are presented separately for the event group, and the control group. In Panel B, the statistical significance of the univariate analysis between the event group and the control group variables is shown. The firms that switched to a single share class compared to other dual-class firms are characterized by higher market-to-book ratios, larger size, higher number and size of new equity issues, and higher number of acquisitions.

IV. Ex-ante determinants of unification

In this section, the firm characteristics which increase the likelihood of unification are estimated. First, the results using the main model specification (pooled probit) are presented. Second, alternative methods are used as a robustness check. Finally, I present the evidence from takeovers of dual-class firms. All variables are defined in Appendix B.

A. Main model

Table V reports the maximum likelihood estimates of the probit model, as well as the standard errors, using a fully robust variance-matrix estimator that allows for within-cluster (firm) correlation and heteroskedasticity. The robust estimator assumes for no particular kind of within-cluster correlation nor a particular form of heteroskedasticity. This specification relaxes the independence assumption required by the probit estimator to being just the independence between the clusters (firms). This specification yields very similar results to random-effects regression (not reported), which controls for possible unobserved firm-specific effects.

The variables that measure the equity issuance and acquisitions activity are contemporaneous because they proxy for the planned new equity issues and acquisitions. The reverse causality (from unification to new equity issues and acquisitions) is ruled out, because typically these decisions take time. It is not plausible to assume that the firm made a unification, observed a share price increase, and immediately (within a few months) decided to issue new equity and to make acquisitions. It is quite common that the decisions about new equity issue and unification are taken at the same annual (or extraordinary) meeting. The variables measuring firm size and growth opportunities are lagged one year in order to measure the situation before the unification. The variables that proxy for the private benefits of control are fixed; they measure the situation before the unification in the event firms and the average situation in the control firms in the period 1996-2002.¹¹

We hypothesized that the need to raise new equity and make acquisitions of other companies increases the likelihood of unification. The results reported in Table V strongly confirm these predictions. Regression (1) shows that the probability of unification significantly increases in the years when firm plans to issue new equity. A planned new equity issue raises the probability of unification by 2.6% a year. Regression (2) reports that the size of new equity issue proceeds scaled by book value of equity significantly increases the likelihood of unification. A one standard deviation increase in EQUITY ISSUE PROCEEDS/ EQUITY raises the probability of unification by 0.7% a year. Regression (3) reports the results of the acquisitions effect. The data does not allow us to distinguish between the acquisitions with cash and stock. Higher acquisitions activity is expected to measure the fact that the firm may want to use stock in at least some of the acquisitions. A one standard deviation increase in ACQUISITIONS/ SIZE raises the likelihood of unification by 0.6% a year. In Regression (4) both, equity issues and acquisitions, effects are included in one model. The estimates remain highly significant.

All the regressions in Table V show that SIZE, which controls for firm size, has a negative (but insignificant) effect on the probability of unification. Since smaller firms tend to be more likely takeover targets (e.g., Powell (1999)), this gives a weak evidence to the unification as a takeover defense story. INDUSTRY MTB which is a proxy for future growth opportunities has a positive relation with the probability of unification, as predicted. However, the growth opportunities are significant (at the 10% level) only if the firm is not planning to issue new equity in the nearest future. Regression (5) shows the results when an interaction term between EQUITY ISSUE DUMMY and INDUSTRY MTB is included. The positive and significant coefficient on INDUSTRY MTB means that among firms that do not plan to issue equity in the nearest future, the presence of growth opportunities raises the likelihood of unification. When firm plans to issue new equity and make acquisitions, INDUSTRY MTB has little additional explanatory power.

All the proxies for the value of control and private benefits are significant and have the predicted signs. A higher difference between control rights and cash flow rights (CONTROL

MINUS OWNERSHIP) significantly reduces the likelihood of unification. A one standard deviation decrease in CONTROL MINUS OWNERSHIP increases the probability of unification by 0.8% a year. If the largest shareholder is a financial investor, the probability of unification increases by 2.3% a year. This result can mean that the financial investors have lower incentives for private benefit extraction. Alternatively, the financial investors are more concerned about the stock price of the companies they have invested in, as their performance is measured by the return on investment made. As predicted, the U.S. cross-listing is positively related to the likelihood of unification. If US CROSS-LISTING DUMMY changes from zero to one, the odds of unification increase by 2.6% a year. We do not differentiate between Level 1, 2, 3 and Rule 144A ADRs, but most of them are traded as Level 2 and Level 3 (capital raising issues that trade on the NYSE or NASDAQ). There are 19 cross-listed firms among the event group. All but 4 of them were cross-listed before the unification, 2 tapped the US market in the same year as the unification took place (a couple of months after it), and 2 firms cross-listed in the US one and two years after the unification. Coding these 4 firms as not cross-listed slightly reduces the significance of this variable (to the 10% level).

Several alternative specifications are tested (not reported). The separation between ownership and control can be alternatively measured by a dummy variable that takes a value of one if the difference between the fraction of control and the fraction of ownership held by the largest shareholder is above the median separation in firms where control and ownership differ (CONTROL EXCEEDS OWNERSHIP, HIGH).¹² This variable has a significant negative effect (at the 5% level) on the likelihood of unification. If the controlling shareholder moves from high separation of ownership and control to low separation, the likelihood of unification raises by 1.7% a year. If we include industry dummies instead of INDUSTRY MTB, the results on equity issues and acquisitions, as well as on private benefits proxies do not change. Firm MTB is not significant when INDUSTRY MTB is included. This means that the positive effect of firm's MTB is driven by industry growth opportunities. Past SALES GROWTH and past CAPEX (as

proxies for growth opportunities) are not significant, suggesting that the event firms are associated with high expected growth rather than high current growth. Excluding financial industry (SIC 62-67) does not change the results. Excluding years of lower unification activity (1996 and 1997) does not change the results. The proxies for firm's equity dependence as suggested by Kaplan and Zingales (1997), LEVERAGE, CASH FLOW/ ASSETS, CASH BALANCE/ ASSETS, CASH DIVIDENDS/ ASSETS, are not significant. These variables have only indirect effect on unification as they have some power in explaining the likelihood of new equity issues. A firm with higher leverage and lower cash resources is not more likely to unify unless it actually plans to issue new equity.

One may argue that preferred stock (with preferential dividend) is introduced for different reasons than pure multiple voting stock (with equal dividend rights). All regressions were re-run separately for firms that have preferential dividend on low voting shares and for firms that do not have them. The main results remain unchanged suggesting that firms with preferred stock for the purposes of this study (as well as for many previous studies) bear similar characteristics to other dual-class firms.

B. Alternative model specifications

B.1. Unobserved firm effects

The pooled probit ignores the possible effect of unobserved firm-specific factors which might be correlated with the explanatory variables. For example, majority owner's family tradition to keep control might affect the resistance to issue new equity, the wish to keep higher separation between votes and equity, as well as the resistance to abandon dual-class shares. To control for these unobserved firm-specific effects, we also estimate fixed effects logit model (not reported). The advantage of this model is that it is possible to obtain a consistent estimator without any assumptions about how the unobserved firm effects are related to the explanatory variables. The disadvantage though is that we can only include the variables that vary over time at

least for some firms. All the signs on the main time-varying variables, EQUITY ISSUE DUMMY, EQUITY ISSUE PROCEEDS/ EQUITY, ACQUISITIONS/ SIZE, and INDUSTRY MTB, remain as predicted. The new equity issues lose significance (p-value is 0.2), acquisitions remain significant (at the 1% level), and industry growth opportunities are significant (at the 5% level), too.

B.2. Cross-sectional analysis

Table VI presents the results of a *probit model* on the probability to unify dual-class shares using average (cross-sectional) data on 493 firms. This model specification asks the question: What are the *average* characteristics of firms that unify their shares? In this model, the equity issue and acquisitions variables are averaged over all the sample years 1996-2002 to measure the average equity issuance and acquisitions activity in this period, while SIZE and INDUSTRY MTB are averaged over two years prior to the unification for event firms, and over 1994-2001 for control firms. This way of averaging attempts to capture the situation in the dual class firms prior to a potential unification. The results are largely the same if the averaging for event firms is done over 1994 to one year prior to the unification. One variable is added if compared to the previous specifications, namely a dummy variable that takes a value of one if there has been at least one new equity issue in period 1996-2002. The average of EQUITY ISSUE (ADJUSTED) DUMMY is used instead of simple EQUITY ISSUE DUMMY to avoid overstating equity issuance activity if the firm does not report the proceeds from new equity issues in years when there have been no issues.

The results in Table VI largely confirm my previous findings. If a firm has made a seasoned equity offering at least once during 1996-2002, the probability of unification in this period increases by 15%. A one standard deviation increase in EQUITY ISSUE PROCEEDS/ EQUITY (AVERAGE) raises the likelihood of unification by 3%, and a one standard deviation

increase in ACQUISITIONS/ SIZE (AVERAGE) by 4%. INDUSTRY MTB is highly significant, too (at the 1% level), a one standard deviation increase in this variable raises the likelihood of unification by 8%. Separation between ownership and control remains negative and highly significant. The effect of financial investor and U.S. cross-listing is positive but less significant. The results suggest that the firms that unified their shares in 1996-2002 were on average more active in issuing new equity and had substantially higher growth opportunities than other dual-class firms.

B.3. Continuous endogenous explanatory variables test

A source of concern both in cross-sectional model and panel data is that the equity issue and acquisitions variables are endogenous. It is difficult to find a good instrument for these variables to carry out the instrumental variables models or a bivariate probit. As a robustness, I perform a test of endogeneity using continuous endogenous explanatory variables method (described in Wooldridge (2002)) treating EQUITY ISSUE DUMMY (AVERAGE) as an endogenous variable (not reported). I use LEVERAGE (AVERAGE) as an instrument for equity issues. Leverage is clearly correlated with new equity issues. High leverage is one of the reasons why companies need to approach equity markets, and there is no evidence why it should be directly correlated with the unification decision. However, we can only rely on the results of this test if we believe that the average leverage is exogenous (one can argue that it is hard to change leverage quickly and dramatically). If one disagrees with this assumption, the following test does not make sense. So, for those who believe... In the first step, average EQUITY ISSUE DUMMY is regressed on INDUSTRY MTB, LEVERAGE, SIZE, and country dummies. Indeed, LEVERAGE has a significant positive impact on the new equity issues, and so does INDUSTRY MTB. In the second step, probit regression is estimated including the residuals from the first-step regression. The t -statistic on the residuals is a direct test of the null hypothesis of endogeneity of

equity issues variable. The t -statistic is 0.68 (not significant). The average EQUITY ISSUE DUMMY remains significant.

B.4. Matching sample

One way to deal with the problem of endogeneity of equity issues and acquisitions variables is to construct a matching sample of firms, where the matching is based on the most likely suspects for endogeneity. I match firms on size, industry and market-to-book, and check whether there is still substantial difference in new equity issues and acquisitions (and other variables) between the event group and the control group.

The combination of Loughran and Ritter (1997) and Barber and Lyon (1997) matching algorithms is used to find the closest match for each event firm. The firms are matched on industry, size (log of sales), and MTB ratios. All 493 main sample dual-class firms are divided into 108 groups: 12 industries¹³ times 3 size categories times 3 MTB categories. MTB data at the end of the year preceding the unification is missing for 7 event firms, which are therefore excluded. The closest match for 101 event firm is found based on firm characteristics at the end of the year preceding the unification.

Panel A of Table VII reports the comparison of means of different variables in the two matched groups three, two, and one year prior to the unification. The table reports the t -Statistic of testing the equality of means. The results are largely the same if we use the z -Statistic testing the equality of distributions between the event firms and control firms using the Wilcoxon matched-pairs signed-rank test. The results provide strong support for the hypothesis that the value of control (private benefits) is lower in firms that decide to unify the shares. In particular, CONTROL MINUS OWNERSHIP and CONTROL EXCEEDS OWNERSHIP, HIGH is significantly lower (at the 1% level) in the event firms than in the control firms. There are more firms with preferential dividends on low voting shares among event firms. Removing the preferential dividend makes the unification more attractive for the controlling shareholders (and

other high voting shareholders). VOTING PREMIUM three, two, and one year prior to the unification is significantly lower in the event companies but this is purely the effect of preferential dividends. Zingales (1995) and Nenova (2003) have shown that dividend preference for low voting shares reduces the voting premium. In firms with equal dividend rights to high and low voting shares, there is no significant difference in voting premium.

The comparison between the matching sample strongly corroborates the finding that the firms that issue new equity and make acquisitions are the ones that are more likely to unify their shares (see Panel B of Table VII). The difference between the equity issue and acquisitions variables in year zero (the unification year) is statistically significant. Thirty six percent of event firms issued equity compared to only 19% of the matched control firms, and average ACQUISITIONS/ SIZE was 0.23 in the event firms compared to 0.11 in the matched control firms.

The results show that the INDUSTRY ADJUSTED MTB prior to the unification is consistently higher in the event firms, but the difference is not significant. The event firms appear to pay lower cash dividends prior to the unification. Also cash flow is lower and the leverage higher (not significant). One of the explanations for this pattern is the Kaplan and Zingales (1997) equity dependence story, namely that the cash constraints raise the need for new equity capital and hence the likelihood of unification. Keeping growth opportunities constant, the event firms are the ones that are more dependent on equity capital.

C. Evidence from takeovers of dual-class firms

To address the hypothesis that the unification can be a method to defend a takeover, I explore the characteristics of dual-class firms that were taken over during the period 1996-2002. Panel B of Table III shows that 63 of firms that had dual-class shares at the end of 1995 were taken over or merged. About half of them were taken over by (or merged with) single-class

companies, and the other half by dual-class companies. As we argued before, acquiring control in a dual-class company is cheaper than in a single-class company because the raider can buy high voting shares. Moreover, there can be a hostile takeover if the high voting shares are not closely held by the controlling shareholder.

Forty percent of all the dual-class takeovers happened in Sweden. For this and for data availability reasons I look deeper into these 25 companies. I find that 62% of all the companies that were taken over had “widely held” dual-class shares, i.e. the high voting shares (A shares) were distributed among many shareholders. Among the seven firms that unified their shares in Sweden, all but one firm had widely held high voting shares, suggesting that these firms were potential takeover targets. Among the firms that stayed dual-class throughout the sample period (in Sweden) less than half (49%) of them had widely held high voting shares. Combined with the fact that all but one of the unification firms had a financial investor as the largest shareholder (a proxy for low private benefits of control), this evidence suggests that firms can choose to unify their shares to prevent a value destroying takeover by a raider with high private benefits of control.

D. Summary

Using different model specifications, the results strongly confirm the hypotheses that the firms that are dependent on new equity capital, make more acquisitions of other companies, and have a controlling shareholder with lower private benefits of control are more likely to unify their shares. Evidence from Sweden suggests that the unification can be done to prevent a takeover, i.e. to make the control rights more expensive.

V. Ex-post consequences of unification

In this section two methods are used to estimate the possible consequences of the unification. The change in ownership after the unification is also discussed here.

A. Main model

The consequences of unification are estimated using fixed-effects regressions in which the effect of unification is captured by dummy variables for the year of the unification and the three subsequent years (see Section II.B.). The different variables can be affected not only by the unification decision but by some fundamental changes in the firm. To control for these fundamental effects, we include the most applicable control variables. The estimates of other variables (not reported) are discussed where appropriate.

Table VIII presents the results. The *INDUSTRY ADJUSTED MTB* increases significantly in the year of the unification and the two consecutive years. The joint test shows that the sum of the coefficients for the two years after the unification is significantly positive (at the 1% level). The result remains significant when we control for lagged sales growth and return on equity. The result holds also when we include only firms that issued equity in the same year as the unification. This finding provides evidence that firms actually reach their goal of increasing the share value by switching to one share-one vote.

LEVERAGE decreases significantly in the first and second year after the unification. *CAPEX* increases in all years following the unification, but the effect is not significant. *SALES GROWTH* increases significantly following the unification. The joint test shows that the sum of coefficients for the two and three years after the unification is significantly positive (at the 5% level). The effect on operating performance is mixed; there is no change in *ROA*, while *ROE* slightly decreases (not significant). *CASH FLOW/ ASSETS*, *CASH BALANCE/ ASSETS*, and *CASH DIVIDENDS/ ASSETS* all increase after the unification, but the result is slightly significant only for cash dividends.

EQUITY ISSUE PROCEEDS/ EQUITY and *ACQUISITIONS/ SIZE* remain positive in the year of the unification. The equity issues decrease in the year following the unification (not

significant). The result suggests that if a firm has decided to issue new equity, the equity issue is timed together with the unification to mask the negative signal of a SEO. Previous research has shown that the SEOs are followed by lower market valuations (Loughran and Ritter (1995) and Levis (1995)) and performance (Loughran and Ritter (1997)). The unification, in turn, creates a positive publicity of improving corporate governance. In firms that issued equity in the unification year, INDUSTRY ADJUSTED MTB increases following the unification, suggesting that the positive signal of the unification is stronger than the negative signal of a SEO.

B. Robustness check: matching sample

Following the matching on industry, size, and MTB introduced in Section IV.B., we compare the financial ratios in the event group and the matched control group one to three years after the unification. The results are presented in Panel B of Table VII.

The comparison of means between the event firms and the matched control firms corroborates the result of increased market valuation after the unification. INDUSTRY ADJUSTED MTB in the event firms is higher in all three years after the unification. The difference is the highest in the year following the unification. Interestingly, the sign of the variable changes: average INDUSTRY ADJUSTED MTB becomes positive for the event firms in the first and second year after the unification, while it remains negative for the control firms. The result confirms that the firms succeed to increase the market value by unifying their shares.

Operating performance (ROA and ROE) in the years following the unification tends to be lower in the event group, but the result is not significant. The results on CAPEX and SALES GROWTH are mixed and not significant. Interestingly, once we keep growth opportunities fixed, the firms that unified their shares are not growing faster and investing more than similar firms that have kept the dual-class share structure. LEVERAGE is lower in the event group following the unification. We may observe that the difference arises because of increased leverage in the control group and slightly decreased leverage in the event group. Given the fact that the control

firms are the closest matches by growth opportunities, it can be interpreted that the event firms have chosen to finance the growth with equity, while the control firms with debt.

C. Ownership changes

Table IX summarizes the changes in ownership structure after the unification in 71 event firm (where the data were available). This summary attempts to shed some light on the hypothesis that the unification is more likely if the controlling shareholder is planning to sell his stake, i.e., is eager to increase the security benefits.

Panel A of Table IX shows that the controlling shareholder (before the unification) does not have a block of shares (10% of total stock) after the unification in 28% of cases (20 out of 71 firm). It is a weak support to the hypothesis that the controlling shareholder's willingness to sell out may be one of the reasons for unification. However, in most of the cases (66%), the controlling shareholder keeps some control by holding at least 10% of total stock. Therefore, it is hard to argue that the controlling shareholder's willingness to sell his stake is one of the main drivers for the unification.

In Panel B of Table IX, we observe that on average the controlling shareholder's voting power decreases from 39% to 23%, while the equity stake stays virtually the same. The decrease in voting power is mainly the consequence of the unification (the alignment of control and ownership stakes) rather than from selling the shares.

D. Summary

A firm that unifies its dual-class shares experiences increased market value and sales growth after the unification if compared to the firm *itself* before the unification. Comparing firms with similar growth opportunities, firms that unify the shares experience higher market values and lower leverage, but no difference in sales growth if compared to *other* dual-class firms. This

result suggests that dual-class share structure *per se* does not preclude firms from growth unless they depend on equity capital. The hypothesis that the controlling shareholder sells his shares after the unification is not confirmed in my data.

VI. Conclusion

This paper argues that the unification of dual-class shares is carried out with an aim to increase the firm's market value and reduce the cost of new equity financing. The data shows that firms that unify their dual-class shares are more active in issuing new equities, make more acquisitions, and have higher industry growth opportunities – the firm characteristics that are associated with substantial gains from higher firm value. The results hold after including various controls and are robust to different methodologies. Further, the ex-post analysis of the unification shows that the firms reach their goal. The average market-to-book ratios that are constantly lower in dual-class firms jump to the average level of single-class firms in the same industry right after the unification.

An important precondition for the unification to happen is the approval by the controlling shareholder(s). I find that higher value of control rights significantly reduces the probability of unification. In particular, the firms that unified their shares have lower separation between voting rights and cash flow rights, higher presence of financial investors, and higher frequency of cross-listing in the U.S. This evidence is also consistent with the hypothesis that the unification is a way to prevent a takeover by a raider with high private benefits.

This paper supports the view that the dual-class shares are temporary structures kept until the point when the firm needs new equity capital for further expansion and growth (Amoako-Adu and Smith (2001)). For some firms it may take few years, for others it may never happen. By comparing dual-class firms with ex-ante similar growth opportunities, the results show that there is no difference in ex-post sales growth and capital expenditure between the firms that unified shares and those that stayed dual-class. There is a difference, however, in how the two groups

finance growth. The ones that unify are more equity capital dependent, and find it optimal to boost the share value. The ones that stay dual-class, finance growth with retained earnings or debt, and may not be concerned that the share price is lower than that of single-class firms in the industry. In sum, the paper suggests that all dual-class firms should *not* be forced by law to switch to one share-one vote. The firms that need to approach equity markets for capital will sooner or later be forced by the market to unify their shares.

Appendix A.

Voting arrangements

Country	Most common voting arrangement	Most characteristic switch	Regulatory and other issues related to dual-class shares
Denmark	High voting shares have 10 times the voting rights of low voting shares.	Abandoning multiple voting right shares.	One of the recommendations by the Nørby Committee's (which was set up in March 2001) report on Corporate Governance in Denmark is: "It is recommended that there is proportionality between capital investments and voting rights and that the board refrains from countering takeover bids on its own". The Copenhagen Stock Exchange has recommended the listed companies to relate to the Nørby Committee's recommendations for good corporate governance in their annual reports and accounts.
Finland	High voting shares have 10-20 times the voting rights of low voting shares.	Abandoning multiple voting right shares.	The change in the Companies Act (in effect from 1 September 1997) stipulates that a 2/3 majority is required in every share class for certain important corporate decisions to be made. This change effectively increased the capital needed to secure control.
Germany	Ordinary shares have one vote. Preference shares are nonvoting. Maximum allowable non-voting preference share capital is one half. Law prescribes a priority dividend for preference shares.	Changing preference shares into ordinary shares.	Stock market index compilers have been urging companies to standardize shares through abolishing preference shares in order to make indices more transparent and accurate. Following the re-evaluation of the Dax and M-Dax indices on June, 2002, only one type of share is permitted for inclusion in the index (i.e., either ordinary or preference share of the company). Preference shares are not allowed to be listed on Neuer Markt (established in 1997).
Italy	Ordinary shares have one vote. Savings shares are nonvoting. Non voting (and limited voting) capital may not exceed 50% of stock capital. Nonvoting shares (savings shares) are entitled to a minimum dividend equal to 5% of the par value.	Abandoning (non-voting right) savings shares and limited voting right shares.	In 1998, legal protection for investors was improved with the so called Draghi's law. If evaluated in terms of the index of shareholder protection developed by La Porta et al. (1998), the impact of this law was an improvement in shareholder protection from 1 to 5. The threshold to call a shareholder meeting was reduced to 10%. The loopholes in the takeover law were corrected. Minority shareholders were given more rights to voice their opinions. See Aganin and Volpin (2003). Only ordinary shares are allowed to be listed on Nuovo Mercato (established in 1999).
Norway	A shares have one vote. B shares are nonvoting. Special government permission required for issuing dual-class shares.	Abandoning multiple voting right shares.	Eierforum is an informal group that represents the largest institutional investors in Norway. The group has produced guidelines for good shareholder accountability, which suggest that "The board should positively encourage all activities which strengthen liquidity in the company's shares, and should ensure that such activities are based on the principle of one share-one vote."
Sweden	High voting shares have 10 times the voting rights of low voting shares.	Abandoning multiple voting right shares.	There have been proposals since long to change the law that allows the differentiation between voting power of A and B shares. Since 1997, shares can be issued only at a maximum ratio of 1:10 votes (previously, up to 1:1000 was allowed).
Switzerland	Each share has one vote, but different classes are allowed to have different nominal value, i.e., in principle, different voting power.	Changing bearer shares (inhaber) into registered (namen), single nominal value shares.	The current trend toward converting bearer shares into registered shares has mainly two sources: an increasing awareness of the importance of investor relations and technological developments enabling companies to handle extensive shareholder registers in electronic form.

Appendix B.

Variable definitions

Variable	Description
Main sample:	Firms that a) are included in <i>Moody's/ Mergent International Companies</i> Manuals 1996-2002, b) are not commercial banks or credit institutions (two-digit SIC code 60 and 61), c) had a dual-class share structure at the end of 1995, d) at least one share class was listed at the end of 1995, e) are still listed on the stock exchange at the end of 2002, and...
Event group	... f) have only one share class at the end of 2002 (i.e., that unified share classes in the period 1996-2002).
Control group	... f) still have dual-class share structure at the end of 2002.
Unification year	The year when firm's shareholders approved the switch from dual-class to single-class shares.
Annual data:	Annual data for 1994-2002 is collected. All variables (unless specified otherwise) are Winsorized at the 1 st and 99 th percentile. <i>Source: Worldscope</i> (unless specified otherwise).
Industry MTB	Average market-to-book ratio of single-class firms in the respective industry. Industry is classified by the SIC two-digit code. All market-to-book ratios are Winsorized at the 1 st and 99 th percentile prior to taking industry averages. The pool of all single share class firms in the sample countries is taken from <i>Worldscope</i> August-2003 disk.
MTB	Firm's market value of equity over book value of equity.
Industry adjusted MTB	MTB minus Industry MTB.
Size	Natural logarithm of firm's sales.
ROA	Earnings before interest, taxes and depreciation (EBITDA) over total assets.
ROE	Net income over book value of shareholder's equity.
Leverage	Total debt over total capital (debt plus shareholder's equity).
CAPEX	Capital expenditures over one-year lagged net property, plant and equipment.
Cash flow/ Assets	Operating cash flow over one-year lagged total assets.
Cash balance/ Assets	Cash and cash equivalents (in the balance sheet) over total assets.
Cash dividends/ Assets	Total cash dividends distributed to shareholders over one-year lagged total assets.
Sales growth	The annual rate of growth of sales.
Voting premium	Price of high voting share minus Price of low voting share divided by Price of low voting share. The annual voting premium is obtained by averaging monthly voting premiums. <i>Source: Datastream.</i>
Voting premium (no pref. dividend)	Voting premium conditional on equal dividend rights to high and low voting shares.
Equity issue dummy	Equals one if the company issued new equity in that year; and zero if net equity issue proceeds are zero. (When net equity issue proceeds are not reported in the cash flow statement, the dummy variable is coded as <i>missing</i> .)
Equity issue (adjusted) dummy	Equals one if the company issued new equity in that year; and zero otherwise. (When net equity issue proceeds are not reported in the cash flow statement, the dummy variable is coded as <i>zero</i> .)
Equity issue proceeds/ Equity	Net equity issue proceeds (from the cash flow statement) over shareholder's equity at the end of previous year.
Acquisitions/ Size	Number of new firms acquired in a given year over firm size (log of sales). Repeated purchases, i.e., increasing existing ownership stake are not counted. <i>Source: SDC Platinum.</i>

Appendix B (Continued)

Fixed data:	
US cross-listing dummy	Equals one if company's shares (at least one class) is cross-listed in the US at the end of 1995 through an ADR (American Depository Receipt) program (not differentiating between various types of listing). <i>Sources: Datastream, Moody's/ Mergent Manuals.</i>
Both shares listed dummy	Equals one if all shares with different voting rights are listed on the stock exchange; and zero otherwise. <i>Sources: Datastream, Moody's/ Mergent Manuals.</i>
Dividend dummy	Equals one if low voting shares received higher dividend than high voting shares in at least one year during 1990 and 2001. Equals one half if low voting shares have a minimum dividend requirement set in the bylaws, but in practice both shares have received the same dividend since 1990 (e.g., because the dividend was above the minimum required). Equals zero if both shares have equal dividend rights. <i>Sources: Moody's/ Mergent Manuals, Datastream, annual reports, Lexis-Nexis.</i>
Ownership data:	
	For control group, the ownership data come from Faccio and Lang (2002), from the annual reports and <i>Worldscope</i> (for Denmark, which is not covered in Faccio and Lang). Faccio and Lang data is from 1996 for Germany, Italy, and Switzerland; from 1998 - for Sweden and Norway; and from 1999 - for Finland. For event group, the ownership data come from the annual reports one year prior to the unification, <i>Worldscope</i> , or <i>Lexis-Nexis</i> . The ownership data after the unification for event firms come from the annual reports and <i>Lexis-Nexis</i> .
Control	Fraction of the firm's voting rights owned by the largest shareholder (ranked by votes).
Ownership	Fraction of the firm's capital (cash flow) rights owned by the largest shareholder (ranked by votes).
Control minus Ownership	The difference between control rights and cash flow rights.
Control exceeds Ownership, high	Equals one if control rights (Control) are higher than cash flow rights (Ownership), and if this separation is higher than the median separation in corporations where control and ownership differ, and zero otherwise.
Family owner dummy	Equals one if the largest shareholder (ranked by votes) is a family (a private person or individuals with the same surname or a family trust); and zero otherwise.
Financial investor dummy	Equals one if the largest shareholder (ranked by votes) is a financial institution; and zero otherwise.

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Table I

WHY UNIFY?	#	Statements by companies and analysts (about the unification)
Increase LIQUIDITY	(1)	- ... enhance the liquidity of shares (ABB).
	(2)	- ... resolve the problem concerning the liquidity of the shares (Amer Group).
	(3)	- ... the amalgamation of shares has increased the level of trading in the company's shares (Rieber & Son).
	(4)	- ... improve demand in international capital markets. ...we expect increased share liquidity (Sudzucker).
	(5)	- ... will further increase the liquidity of Company's shares (MLP).
	(6)	- ... improve liquidity (HERLITZ).
	(7)	- ... improved stock liquidity (Recordati).
Increase SHARE VALUE	(8)	- ... positive impact on shareholder value... the share value is expected to increase (HERLITZ).
	(9)	- ... the company will raise its capital over the next three years. "... we would prefer our share price to look better" [this was said 3 month before the unification] (FAG).
	(10)	- ... improved market capitalization (Recordati).
	(11)	- ... placement of Company's shares [right after the unification] was considered to be a success given the recent weakness of international markets and considering that during May some 70 initial public offerings were cancelled (Finmeccanica).
INVESTOR RECOGNITION ("rational")	(12)	- ...make it easier for outside investors to invest in the company. ...a strong European investor would strengthen the company's position (DSV).
	(13)	- ...attract a wider spread of domestic and foreign shareholders (PUMA).
	(14)	- ... will satisfy Italian and foreign institutional investors (COFIDE).
	(15)	- ... increase interest in Company's shares in the US (Amer Group).
	(16)	- ... making shares more attractive particularly to institutional investors (MLP).
(17)	- ... the group will boost the interest of foreign investors in Company's shares to internationalize the shareholder structure. ... also enables investment funds to then invest in Company's shares (Gerry Weber).	
INVESTOR RECOGNITION ("not-so-rational")	(18)	- ...making the stock more attractive to international investors. Yet, while SAP's three founders, including the co- chief executive and supervisory board chairman, dilute their voting rights, effective control stays in their hands. (SAP).
	(19)	- In international capital markets one share-one vote system dominates. The non-voting preference shares are widely unknown abroad, and are losing importance also in Germany (Sudzucker).
	(20)	- The stock market – particularly, the foreign investors – do not understand this division of shares, and better buy clear and simple value. It is "downright grotesque" that Herlitz remains in this "Not Luxus" category with two share classes, while renowned companies (Fielmann, Metro, and Lufthansa) are abandoning preference shares. When one reads the stock quotes in the newspaper, Herlitz is soon to be the only company with two share classes. (HERLITZ).
Pay for ACQUISITIONS using stock	(21)	- It is very difficult to pay for a US acquisition with shares if your management owns a majority of the voting rights. (Merrill Lynch analyst)
	(22)	- ...could increase its leeway to pay for acquisitions with shares (SAP).
	(23)	- ... this will allow to handle acquisitions and strategic alliances by using shares in addition to debt financing (ABB).
	(24)	- German capital market law restricts preference shares that can be issued in proportion to ordinary shares, making it difficult for a company to increase its capital for an acquisition.
Support GROWTH	(25)	- ...establishing basis for new, profitable growth (KVAERNER).
	(26)	- ... will have increased freedom in procuring additional capital. Company is currently in a dynamic emergence phase (ASCOM).
	(27)	- ... CEO expects the dynamic growth of the Company (Disetronic Holding).
	(28)	- ... create good basis for the future international growth of the Company (MLP).
	(29)	- ... to support future growth (Recordati).
FINANCIAL FLEXIBILITY	(30)	- ... enhance financial flexibility (ABB).
	(31)	- ... to be able to act flexibly (ASCOM).
	(32)	- ... augment considerably Company's financial flexibility (Olivetti).
DEFEND TAKE-OVER	(33)	- ... the move has been seen as a tactical maneuver meant to defend the Company against foreign attempts to take over. With the power shares gone, a 10 per cent vote in Nokia would now cost SEK 73bn (NOKIA).

Sources: Lexis-Nexis, company home-pages.

Table II

Dual-class firms in percent of total listed firms and domestic newly listed companies

Panel A shows the number of total firms (excluding banks and credit institutions, SIC2 60 and 61) and firms with dual-class shares available in *Moody's/ Mergent International Companies* 1996 (for end of 1995 data) and 2002 (for end of 2001 data) Manuals. Panel B shows the fraction of dual-class firms as percent of all domestic newly listed companies in each year from 1996 to 2002. The number of new dual-class listings is given in parentheses. The data for all countries but Germany come from the stock exchange web-sites and *Datastream*. The data for Germany was kindly provided by Olaf Ehrhardt.

Panel A: Fraction of dual-class firms in total listed firms, 1995 vs. 2001							
	Total firms, end 1995	Dual firms, end 1995	Fraction of dual firms, end 1995	Total firms, end 2001	Dual firms, end 2001	Fraction of dual firms, end 2001	Percentage change in fraction (2001 vs. 1995)
Denmark	124	74	59.7%	123	45	36.6%	-39%
Finland	66	30	45.5%	92	22	23.9%	-47%
Germany	345	84	24.3%	740	85	11.5%	-53%
Italy	156	64	41.0%	81	28	34.6%	-16%
Norway	71	17	23.9%	121	9	7.4%	-69%
Sweden	142	87	61.3%	203	94	46.3%	-24%
Switzerland	197	92	46.7%	235	62	26.4%	-44%
Total	1101	452	41.1%	1595	345	21.6%	-47%

Panel B: Fraction (number) of dual-class firms in domestic newly listed companies, 1996-2002							
	1996	1997	1998	1999	2000	2001	2002
Denmark	33% (2)	20% (1)	23% (3)	17% (1)	14% (1)	0% (0)	0% (0)
Finland	0% (0)	33% (4)	25% (3)	11% (3)	0% (0)	11% (1)	0% (0)
Germany	5% (1)	6% (2)	0% (0)	1% (1)	0% (0)	0% (0)	0% (0)
Italy	0% (0)	15% (2)	5% (1)	6% (2)	0% (0)	0% (0)	0% (0)
Norway	10% (2)	4% (2)	4% (1)	0% (0)	0% (0)	8% (1)	0% (0)
Sweden	59% (10)	42% (21)	50% (16)	45% (21)	28% (16)	32% (6)	29% (2)
Switzerland	50% (3)	8% (1)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
Average	22% (18)	18% (33)	15% (24)	11% (28)	6% (17)	7% (8)	4% (2)

Table III
Sample characteristics

Panel A describes the procedure of constructing the main sample of 493 companies used in this paper. In Panel B, sample construction is subdivided by country. Panel C shows the distribution of number of companies that switched from dual-class to single-class shares in the period from 1996 to 2002, by years and countries. Panel D shows the sample of firms subdivided by twelve industry groups.

Panel A: Sample construction		
601	100%	Dual class firms (excluding banks and credit institutions, SIC2 60 and 61) available in Moody's/ Mergent manuals (1996-2002) which were listed on the stock exchange at the end of 1995.
- 63	10%	Merged or taken over during 1996-2002.
- 22	4%	Delisted by stock exchange order or voluntarily (because of too little free float) during 1996-2002.
- 7	1%	Delisted, not clear why.
- 8	1%	Not traceable.
- 8	1%	Data not available in <i>Worldscope</i> .
493	82%	Main sample. The firms that were still listed on the stock exchange at the end of 2002.
out of which:		
108	18%	Firms that unified their shares in 1996-2002 (event group).
385	64%	Firms that stayed dual-class throughout 1996-2002 (control group).

Panel B: Sample construction by country						
	Event	Control	Merged or T/O	Delisted	Other	Total
Denmark	10	55	14	6	3	88
Finland	6	30	4	1	1	42
Germany	41	88	9	2	1	141
Italy	12	45	3	8	1	69
Norway	6	9	2	3	-	20
Sweden	7	99	25	3	2	136
Switzerland	26	59	6	6	8	105
Total	108	385	63	29	16	601

Panel C: Unifications by country and year								
	1996	1997	1998	1999	2000	2001	2002	Total
Denmark	-	1	1	1	1	2	4	10
Finland	-	1	1	3	-	1	-	6
Germany	6	1	7	7	9	8	3	41
Italy	-	1	1	2	3	2	3	12
Norway	-	-	-	1	1	4	-	6
Sweden	-	-	1	-	3	2	1	7
Switzerland	2	3	6	3	6	4	2	26
Total	8	7	17	17	23	23	13	108

Panel D: Main sample by industry			
Industry	Firms (main sample)	Number of unifications	Unifications (in %)
Basic industry	4	0	0.0%
Capital goods	84	15	17.9%
Construction	52	9	17.3%
Consumer durables	29	9	31.0%
Financial/ real estate	36	4	11.1%
Food and tobacco	74	21	28.4%
Leisure	28	8	28.6%
Petroleum	21	6	28.6%
Services	38	6	15.8%
Textiles and trade	41	11	26.8%
Transportation	22	3	13.6%
Utilities	64	16	25.0%
Total	493	108	21.9%

Table IV**Summary statistics**

In Panel A, the summary statistics refer to the firm-years of the whole sample of 493 companies, in Panel B – to the firm-years of companies that unified their shares in 1996-2002, and in Panel C – to the firm-years of companies that stayed dual-class throughout 1996-2002. *T*-Statistics and (two-sided) significance levels of testing the equality of means between the event group and the control group are presented. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels. Appendix B provides definitions for the variables.

Variable	Mean	Median	Std. Dev.	Min	Max	Obs.	<i>t</i> -statistic	Sig.
Panel A: The Whole Sample								
Industry MTB	2.93	2.80	1.33	0.74	13.86	3438		
MTB	2.43	1.53	2.91	0.27	28.26	3020		
Industry adjusted MTB	-0.57	-0.98	2.76	-12.49	25.10	3007		
Size	5.50	5.54	0.95	0.48	7.96	3145		
ROA	0.05	0.05	0.10	-0.61	0.50	3070		
ROE	0.09	0.10	0.28	-1.93	1.87	3039		
Leverage	0.25	0.24	0.18	0.00	0.82	3146		
CAPEX	0.33	0.19	0.54	0.00	4.39	2964		
Cash flow/ Assets	0.07	0.07	0.09	-0.59	0.39	2686		
Cash balance/ Assets	0.12	0.08	0.13	0.00	0.84	3149		
Cash dividends/ Assets	0.02	0.01	0.02	0.00	0.20	3078		
Sales growth	0.10	0.06	0.28	-0.50	1.32	3065		
Voting premium	0.16	0.05	0.33	-0.88	1.60	1186		
Equity issue dummy	0.23	0.00	0.42	0.00	1.00	2554		
Equity issue (adjusted) dummy	0.17	0.00	0.37	0.00	1.00	3451		
Equity issue proceeds/ Equity	0.06	0.00	0.25	0.00	1.84	2535		
Acquisitions/ Size	0.11	0.00	0.21	0.00	1.10	3145		
US cross-listing dummy	0.11	0.00	0.31	0.00	1.00	493		
Both shares listed dummy	0.60	1.00	0.49	0.00	1.00	467		
Dividend dummy	0.42	0.00	0.48	0.00	1.00	354		
Control	0.45	0.44	0.24	0.00	1.00	399		
Ownership	0.29	0.25	0.22	0.00	1.00	385		
Control minus Ownership	0.15	0.12	0.14	-0.40	0.67	384		
Control exceeds Ownership, high	0.43	0.00	0.50	0.00	1.00	384		
Family owner dummy	0.44	0.00	0.50	0.00	1.00	400		
Financial investor dummy	0.11	0.00	0.31	0.00	1.00	400		
Panel B: Event group								
Industry MTB	3.03	2.83	1.35	0.74	9.76	744	2.400	**
MTB	2.97	1.87	3.43	0.33	28.26	680	5.524	***
Industry adjusted MTB	-0.25	-0.82	2.99	-8.31	23.82	668	3.408	***
Size	5.63	5.70	0.92	2.29	7.50	700	3.899	***
ROA	0.05	0.05	0.10	-0.61	0.50	688	1.159	
ROE	0.09	0.12	0.33	-1.93	1.87	680	0.403	
Leverage	0.25	0.24	0.18	0.00	0.82	701	0.107	
CAPEX	0.34	0.20	0.54	0.00	4.39	668	0.567	
Cash flow/ Assets	0.07	0.07	0.09	-0.38	0.39	615	1.669	*
Cash balance/ Assets	0.13	0.08	0.13	0.00	0.84	701	0.208	
Cash dividends/ Assets	0.02	0.01	0.02	0.00	0.17	685	0.402	
Sales growth	0.12	0.07	0.30	-0.50	1.32	687	1.321	

Table IV (Continued)

Variable	Mean	Median	Std. Dev.	Min	Max	Obs.	t-statistic	Sig.
Panel B: Event group								
Voting premium	0.14	0.07	0.29	-0.63	1.49	207	-0.821	
Equity issue dummy	0.29	0.00	0.45	0.00	1.00	593	4.447	***
Equity issue (adjusted) dummy	0.23	0.00	0.42	0.00	1.00	756	5.214	***
Equity issue proceeds/ Equity	0.10	0.00	0.33	0.00	1.84	588	3.986	***
Acquisitions/ Size	0.14	0.00	0.24	0.00	1.10	700	4.181	***
US cross-listing dummy	0.18	0.00	0.38	0.00	1.00	108	2.712	***
Both shares listed dummy	0.65	1.00	0.48	0.00	1.00	106	1.227	
Dividend dummy	0.52	0.50	0.47	0.00	1.00	94	2.334	**
Control	0.40	0.36	0.23	0.06	0.99	97	-2.217	**
Ownership	0.26	0.22	0.19	0.00	0.93	83	-1.526	
Control minus Ownership	0.12	0.09	0.12	0.00	0.48	82	-2.363	**
Control exceeds Ownership, high	0.29	0.00	0.46	0.00	1.00	82	-2.848	***
Family owner dummy	0.39	0.00	0.49	0.00	1.00	98	-1.255	
Financial investor dummy	0.19	0.00	0.40	0.00	1.00	98	3.341	***
Panel C: Control group								
Industry MTB	2.90	2.79	1.33	0.75	13.86	2694		
MTB	2.27	1.44	2.73	0.27	28.26	2340		
Industry adjusted MTB	-0.67	-1.04	2.69	-12.49	25.10	2339		
Size	5.47	5.49	0.96	0.48	7.96	2445		
ROA	0.05	0.05	0.10	-0.61	0.50	2382		
ROE	0.09	0.10	0.27	-1.93	1.87	2359		
Leverage	0.25	0.24	0.18	0.00	0.82	2445		
CAPEX	0.33	0.19	0.54	0.00	4.39	2296		
Cash flow/ Assets	0.06	0.07	0.09	-0.59	0.39	2071		
Cash balance/ Assets	0.12	0.08	0.13	0.00	0.84	2448		
Cash dividends/ Assets	0.02	0.01	0.02	0.00	0.20	2393		
Sales growth	0.10	0.06	0.27	-0.50	1.32	2378		
Voting premium	0.16	0.04	0.34	-0.88	1.60	979		
Equity issue dummy	0.20	0.00	0.40	0.00	1.00	1961		
Equity issue (adjusted) dummy	0.15	0.00	0.36	0.00	1.00	2695		
Equity issue proceeds/ Equity	0.05	0.00	0.22	0.00	1.84	1947		
Acquisitions/ Size	0.10	0.00	0.20	0.00	1.10	2445		
US cross-listing dummy	0.09	0.00	0.28	0.00	1.00	385		
Both shares listed dummy	0.58	1.00	0.49	0.00	1.00	361		
Dividend dummy	0.38	0.00	0.48	0.00	1.00	260		
Control	0.46	0.48	0.24	0.00	1.00	302		
Ownership	0.30	0.26	0.23	0.00	1.00	302		
Control minus Ownership	0.16	0.15	0.14	-0.40	0.67	302		
Control exceeds Ownership, high	0.47	0.00	0.50	0.00	1.00	302		
Family owner dummy	0.46	0.00	0.50	0.00	1.00	302		
Financial investor dummy	0.08	0.00	0.27	0.00	1.00	302		

Table V

Ex-ante determinants of the unification (pooled probit)

The effect of the variables listed on the probability to unify dual-class shares is estimated by a pooled probit model:

$$Prob(Unify_{it}=1) = F(X_{it}a),$$

where $Unify_{it}$ is a variable that equals 1 if company i switched to a single-class share system in year t and 0 if it remained dual-class in this year (a firm is dropped from the sample after it unifies the shares), $F(.)$ is the cumulative distribution function of a standard normal variable, a is a vector of coefficients, and X_{it} is a vector of explanatory variables (listed in the first column) observed for firm i in year t . The estimation method is maximum likelihood. EQUITY ISSUE DUMMY, EQUITY ISSUE PROCEEDS/ EQUITY, and ACQUISITIONS/ SIZE are contemporaneous. SIZE and INDUSTRY MTB are lagged one year. CONTROL MINUS OWNERSHIP, FINANCIAL INVESTOR DUMMY and US CROSS-LISTING DUMMY are fixed over years (ownership data for the control firms is from 1996-1999, and for the event firms one or few years before the unification). Detailed definitions for the variables are provided in Appendix B. The regressions also include a constant term, year dummies, and country dummies (not reported). Robust standard errors are in parentheses. The errors are corrected for clustering at the firm level: independence of errors between clusters (firms) is assumed, but the independence assumption is relaxed for within-cluster (firm) errors. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels.

Variable	(1)	(2)	(3)	(4)	(5)
Equity issue dummy	0.387*** (0.134)			0.380*** (0.134)	0.674** (0.314)
Equity issue proceeds/ Equity		0.479*** (0.185)			
Acquisitions/ Size			0.544** (0.234)	0.495** (0.252)	
Equity issue dummy * Industry MTB					-0.087 (0.083)
Size	-0.094 (0.077)	-0.061 (0.077)	-0.053 (0.064)	-0.135* (0.078)	-0.097 (0.077)
Industry MTB	0.073 (0.045)	0.066 (0.046)	0.043 (0.039)	0.058 (0.046)	0.113* (0.059)
Control minus Ownership	-0.981** (0.445)	-0.993** (0.447)	-0.992** (0.425)	-1.030** (0.453)	-0.996** (0.447)
Financial investor dummy	0.327* (0.173)	0.376** (0.173)	0.345** (0.165)	0.326* (0.174)	0.332* (0.172)
US cross-listing dummy	0.368** (0.175)	0.422** (0.171)	0.357** (0.172)	0.331* (0.180)	0.380** (0.174)
No. of observations	1841	1841	2233	1838	1841
Pseudo-R ²	0.117	0.113	0.103	0.124	0.119

Table VI

Ex-ante determinants of the unification (averages)

The effect of the variables listed on the probability to unify dual-class shares is estimated by a probit model:

$$Prob(Unify_i=1) = F(X_i a)$$

where $Unify_i$ is a variable that equals 1 if company i switched to a single-class share system in period 1996-2002 and 0 if it remained dual-class in this period, $F(.)$ is the cumulative distribution function of a standard normal variable, a is a vector of coefficients, and X_i is a vector of explanatory variables (listed in the first column) observed for firm i . The estimation method is maximum likelihood. In this specification, the focus is on cross-sectional variation between the main sample of firms. AT LEAST ONE EQUITY ISSUE, DUMMY is a dummy variable that takes a value of 1 if the firm has had at least one new equity issue in period 1996-2002. EQUITY ISSUE (ADJUSTED) DUMMY, EQUITY ISSUE PROCEEDS/EQUITY, and ACQUISITIONS/ SIZE are averaged over 1996-2002. SIZE and INDUSTRY MTB are averaged over 1994 to 2001 for control group, and over two years prior to the unification for the event group. Detailed definitions for the variables are provided in Appendix B. The regressions also include a constant term, and country dummies (not reported). Robust standard errors are in parentheses *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels.

Variable	(1)	(2)	(3)	(4)	(5)
At least one equity issue, dummy	0.625*** (0.172)				
Equity issue (adjusted) dummy (average)		0.876*** (0.320)			0.842*** (0.321)
Equity issue proceeds/ Equity (average)			0.359* (0.198)		
Acquisitions/ Size (average)				0.767 (0.566)	0.590 (0.575)
Size (average)	-0.005 (0.093)	0.016 (0.095)	0.041 (0.105)	0.024 (0.1)	-0.016 (0.102)
Industry MTB (average)	0.280*** (0.082)	0.261*** (0.080)	0.269*** (0.084)	0.255*** (0.080)	0.252*** (0.081)
Control minus Ownership	-1.489** (0.615)	-1.522** (0.606)	-1.687*** (0.623)	-1.593*** (0.604)	-1.521** (0.608)
Financial investor dummy	0.380 (0.25)	0.439* (0.253)	0.539** (0.262)	0.478* (0.251)	0.449* (0.251)
US cross-listing dummy	0.360 (0.249)	0.311 (0.259)	0.461* (0.252)	0.382 (0.255)	0.265 (0.262)
No. of observations	378	378	352	378	378
Pseudo-R ²	0.179	0.163	0.157	0.150	0.166

Table VII

Comparison of variables: event firms vs. matching control firms

The table reports mean ratios for 101 event firms which unified their shares in 1996-2002. Matching control firms are chosen by matching each event firm with a dual-class firm using the following algorithm. All 493 event and control firms are divided into 108 groups: 12 industry groups (as defined by Campbell (1996)) times 3 size categories times 3 market-to-book (MTB) categories. Size and MTB categories are *High* (75th percentile and upward), *Medium* (25th to 75th percentile), and *Low* (25th percentile and downward). If there are more than one dual-class firm in the same group, the firm with the closest MTB is chosen. If there is no matching firms in the same group (there are 3 such cases), the firm from the same industry with the closest MTB ratio from the next closest size category is taken. T-Statistics and (two-sided) significance levels of testing the equality of means between the event group and the matched control group are presented. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels. Appendix B provides definitions for the variables.

Panel A: Ex-ante effects									
Year relative to unification	Event group means			Control group means			T-Statistic		
	-3	-2	-1	-3	-2	-1	-3	-2	-1
Industry MTB	3.17	3.43	3.34	3.19	3.28	3.21	-0.11	0.76	0.63
MTB	2.80	3.11	3.03	2.45	2.54	2.41	0.97	1.39	1.41
Industry adjusted MTB	-0.49	-0.43	-0.56	-0.77	-0.76	-0.80	0.80	0.89	0.63
Size	5.58	5.58	5.62	5.56	5.48	5.47	0.13	0.78	1.17
ROA	0.05	0.06	0.07	0.06	0.07	0.06	-1.30	-0.82	0.62
ROE	0.10	0.09	0.13	0.13	0.14	0.14	-0.79	-1.13	-0.21
Leverage	0.27	0.26	0.25	0.27	0.25	0.24	0.22	0.50	0.52
CAPEX	0.32	0.35	0.31	0.34	0.34	0.30	-0.17	0.13	0.05
Cash flow/ Assets	0.07	0.07	0.07	0.07	0.08	0.07	-0.56	-0.99	-0.26
Cash balance/ Assets	0.11	0.12	0.13	0.11	0.12	0.11	0.08	-0.29	1.34
Cash dividends/ Assets	0.01	0.01	0.02	0.02	0.02	0.02	-2.35**	-1.53	-1.93*
Sales growth	0.10	0.10	0.11	0.14	0.12	0.11	-0.88	-0.50	-0.09
Voting premium	0.06	0.06	0.04	0.17	0.16	0.19	-1.86*	-1.75*	-2.68***
Voting premium (no pref. dividend)	0.04	0.05	0.06	0.06	0.06	0.06	-0.59	-0.09	0.23
Equity issue dummy	0.30	0.28	0.30	0.25	0.27	0.21	0.60	0.15	1.40
Equity issue (adjusted) dummy	0.21	0.22	0.26	0.17	0.22	0.18	0.72	0.00	1.36
Equity issue proceeds/ Equity	0.09	0.09	0.16	0.05	0.04	0.06	0.77	1.34	1.72*
Acquisitions/ Size	0.14	0.11	0.13	0.07	0.09	0.11	1.82*	0.50	0.64
		Mean	Obs.		Mean	Obs.		T-Statistic	
US cross-listing dummy		0.18	101		0.12	101		1.19	
Both shares listed dummy		0.63	100		0.65	99		-0.24	
Dividend dummy		0.53	88		0.31	78		3.02***	
Control		0.40	91		0.40	81		-0.20	
Ownership		0.26	78		0.23	81		1.07	
Control minus Ownership		0.12	77		0.18	81		-2.98***	
Control exceeds Ownership, high		0.29	77		0.63	81		-4.59***	
Family owner dummy		0.39	92		0.42	81		-0.38	
Financial investor dummy		0.17	92		0.17	81		0.02	

Panel B: Ex-post effects												
Year relative to unification	Event group means				Control group means				T-Statistic			
	0	+1	+2	+3	0	+1	+2	+3	0	+1	+2	+3
Industry MTB	3.00	2.76	2.69	2.83	3.00	2.95	2.76	2.67	0.01	-0.80	-0.36	0.53
MTB	3.08	3.40	2.86	2.77	2.58	2.40	2.29	1.88	0.89	1.67*	1.21	2.06**
Industry adjusted MTB	-0.04	0.42	0.05	-0.07	-0.45	-0.64	-0.61	-0.79	0.79	2.01**	1.35	1.48
Size	5.64	5.62	5.62	5.64	5.50	5.43	5.49	5.60	1.09	1.34	0.83	0.23
ROA	0.06	0.04	0.05	0.05	0.06	0.05	0.06	0.06	-0.41	-0.34	-0.42	-0.29
ROE	0.09	0.06	0.09	0.11	0.11	0.09	0.10	0.11	-0.52	-0.54	-0.22	-0.07
Leverage	0.26	0.24	0.24	0.23	0.25	0.29	0.29	0.28	0.17	-1.78*	-1.73*	-1.11
CAPEX	0.32	0.30	0.36	0.24	0.29	0.24	0.33	0.27	0.47	0.97	0.25	-0.37
Cash flow/ Assets	0.07	0.07	0.07	0.07	0.07	0.07	0.06	0.08	-0.09	0.36	0.68	-0.70
Cash balance/ Assets	0.13	0.14	0.14	0.13	0.11	0.12	0.11	0.10	1.55	0.77	1.35	1.05
Cash dividends/ Assets	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	-1.38	-0.65	0.57	0.55
Sales growth	0.09	0.11	0.14	0.11	0.08	0.09	0.15	0.18	0.37	0.51	-0.15	-1.00
Equity issue dummy	0.36	0.24	0.23	0.26	0.19	0.13	0.18	0.24	2.66***	1.74*	0.62	0.20
Equity issue (adjusted) dummy	0.32	0.19	0.18	0.22	0.16	0.11	0.15	0.20	2.68***	1.46	0.46	0.26
Equity issue proceeds/ Equity	0.15	0.05	0.13	0.01	0.06	0.06	0.08	0.01	2.04**	-0.14	0.70	-0.69
Acquisitions/ Size	0.23	0.25	0.17	0.15	0.11	0.12	0.14	0.14	1.53	1.21	0.57	0.13

Table VIII

Ex-post effects of the unification

For each of the variables listed the following specification is estimated:

$$y_{it} = \alpha + \text{UNI}_{it} + \text{UNI}_{i,t-1} + \text{UNI}_{i,t-2} + \text{UNI}_{i,t-3} + u_i + d_t + \theta_t$$

where u_i and d_t are respectively a firm-specific and calendar year-specific effect, $\text{UNI}_{i,t-j}$ are dummy variables equal to one if year $t-j$ was the year of the unification. By using a fixed effect model each company before the unification is used as a control variables. The table only reports the coefficients on the unification and postunification dummy variables. Standard errors are reported in the parentheses. The second to last column reports the p -value of the hypothesis that the sum of the coefficients of Year-1 and Year-2 dummies are equal to zero. The last column reports the p -value of the hypothesis that the sum of the coefficients of all the three postunification dummies is equal to zero. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels. Appendix B provides definitions for the variables.

	Year 0	Year -1	Year -2	Year -3	F-test (2 years)	F-test (3 years)
MTB	0.252 (0.335)	0.034 (0.359)	-0.146 (0.399)	-0.420 (0.423)	0.807	0.776
Industry adjusted MTB	0.632** (0.318)	0.843** (0.340)	0.473 (0.379)	-0.328 (0.402)	0.031	0.258
Size	0.015 (0.026)	0.028 (0.028)	-0.016 (0.032)	0.031 (0.033)	0.977	0.909
ROA	0.010 (0.014)	-0.006 (0.015)	0.005 (0.017)	-0.010 (0.018)	0.901	0.669
ROE	-0.010 (0.038)	-0.049 (0.039)	-0.024 (0.044)	-0.008 (0.046)	0.295	0.513
Leverage	0.000 (0.013)	-0.031** (0.014)	-0.034** (0.015)	0.011 (0.016)	0.009	0.033
CAPEX	0.053 (0.062)	0.019 (0.067)	0.115 (0.074)	0.000 (0.079)	0.265	0.438
Cash flow/ Assets	0.001 (0.011)	0.008 (0.011)	0.006 (0.013)	0.002 (0.013)	0.472	0.566
Cash balance/ Assets	0.009 (0.010)	0.011 (0.011)	0.003 (0.012)	-0.005 (0.013)	0.485	0.742
Cash dividends/ Assets	-0.004 (0.003)	0.003 (0.003)	0.006* (0.003)	0.001 (0.003)	0.108	0.182
Sales growth	0.046 (0.041)	0.082* (0.044)	0.079 (0.050)	0.085* (0.052)	0.040	0.027
Equity issue proceeds/ Equity	0.017 (0.039)	-0.067 (0.042)	0.035 (0.046)	-0.095 (0.048)	0.619	0.211
Acquisitions/ Size	0.069** (0.029)	0.043 (0.031)	0.026 (0.035)	-0.003 (0.036)	0.212	0.399

Table IX**Ownership changes after the unification**

The table shows the ownership dynamics for 71 firm that unified the dual-class shares in 1996-2002. Panel A presents a summary of the changes in the largest shareholder's voting power after the unification. The largest shareholder is defined as the shareholder with the highest number of votes before the unification. Panel B shows the average (and median) change in the largest shareholder's voting power after the unification.

Panel A		
Largest shareholder's (by votes, before unification) action:	Number of firms	Percent of firms
Keep or acquire majority control (more than 50% of votes)	13	18.3%
Lose majority control, but keep a block (more than 10% of votes)	4	5.6%
Lose majority control completely (less than 10% of votes)	6	8.5%
Keep control in 10%-50% range (before and after)	30	42.3%
Lose a block from 10%-50% range to less than 10% of votes	14	19.7%
Dispersed, less than 10% of votes (before and after)	4	5.6%
	71	100.0%

Panel B		
	Mean	Median
Largest shareholder's fraction of votes <i>before</i> unification, %	38.7	34.1
Largest shareholder's fraction of equity <i>before</i> unification, %	25.0	19.1
Largest shareholder's fraction of votes and equity <i>after</i> unification, %	22.8	21.3
Largest shareholder's change in votes (after minus before), %	-15.9	-12.8
Largest shareholder's change in votes, relative to votes held before	-41%	-38%

¹ Throughout the paper, *dual-class shares* means that the firm has more than one share class (except American Depository Receipts) with different voting rights. There can be more than two share classes, but all the analysis can be easily generalized to such cases.

² Examples of such benefits are the power to elect the board members and the CEO, the power to build business empires, the ability to consume perquisites at the expense of the firm, and the ability to transfer assets to private corporate entities. Alternatively, Holmen and Högfeldt (2003) claim that in Sweden private benefits of control are arising from status, prestige, and social recognition, which are not value destroying.

³ See “Big Board Agrees to Let Companies List More Than One Class of Stock”, *The Wall Street Journal*, July 7, 1986).

⁴ In a rights offering, current shareholders are given short-term options, “rights”, to purchase new shares on a pro rata basis, at a certain exercise price, until a certain expiration date.

⁵ One should note that dual-class shares is just one of the ways to create separation between ownership and control. There are also pyramids and cross-holdings (Bebchuk et al. (2000)). However, dual-class shares is the most common method in Europe. From Faccio and Lang (2002) data set we can estimate that on average 32% of firms in the seven countries used in this study have dual-class shares, compared with 20% of firms using pyramids, and 2% cross-holdings.

⁶ This difference in market values is found also in my sample, see Section III.

⁷ Excluding these firms from my sample does not change the results.

⁸ There are exceptions, however. In Swedish company Ericsson, the talks on the issue of the compensation for high voting shareholders have taken nearly two years, and have seriously hindered the acceptance of the reform that would cut the difference in voting rights on high and low voting shares from 1,000-to-one to 10-to-one (*Financial Times*, February 19, 2004).

⁹ There is, however, a countervailing argument by Siegel (2003), who suggests that cross-listing in the U.S. is a reputational bonding rather than a legal bonding. When it comes to implementation, American governance rules affecting U.S. listed foreign firms are much stricter in formal writing than in practice.

¹⁰ This argument is closely related to Demers and Lewellen (2003) who find that there are marketing benefits associated with IPO under-pricing.

¹¹ This is due to lack of data. Collecting past ownership data for 493 firms from 7 countries over 7 years is not very feasible.

¹² This variable has been used previously by Claessens et al. (2002).

¹³ The SIC codes are combined into 12 larger industry groups following Campbell (1996): Basic industry (SIC 10, 12, 14, 24, 26, 28, 33), Capital goods (SIC 34-35, 38), Construction (SIC 15-17, 32, 52), Consumer durables (SIC 25, 30, 36, 37, 39, 50, 55, 57), Financial/ real estate (excluding banks) (SIC 62-69), Food and tobacco (SIC 1, 20, 21, 54), Leisure (SIC 27, 58, 70, 78-79), Petroleum (SIC 13, 29), Services (SIC 72-73, 75-76, 80, 82, 87, 89), Textiles and trade (SIC 22-23, 31, 51, 53, 56, 59), Transportation (SIC 40-42, 44-45, 47), and Utilities (SIC 46, 48, 49).

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