

# **Voluntary Dual Class Share Unifications - a Mixed Bag of Governance Improvements and Shareholder Expropriation**

by

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We study 121 voluntary dual class share unification in Europe during 1996-2009, and uncover a mixed tale of governance improvements and shareholder expropriation. Corporate governance improvement is attained by abolishing the wedge between ownership and voting rights and by significantly decreasing controlling shareholders' voting power. Shareholder expropriation occurs when some controlling shareholders exploit the unification hype to sell part or all of their holdings at inflated prices. On average, the corporate governance positive valuation effects prevail, and voluntary unifications are accompanied by a statistically and economically significant increase of Q.

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## **Abstract**

We study 121 voluntary dual class share unification in Europe during 1996-2009, and uncover a mixed tale of governance improvements and shareholder expropriation. Corporate governance improvement is attained by abolishing the wedge between ownership and voting rights and by significantly decreasing controlling shareholders' voting power. Shareholder expropriation occurs when some controlling shareholders exploit the unification hype to sell part or all of their holdings at inflated prices. On average, the corporate governance positive valuation effects prevail, and voluntary unifications are accompanied by a statistically and economically significant increase of Q.

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*Keywords:* Corporate Governance improvements; Dual class shares; Shareholder expropriation

## 1. Introduction

One focal point of the worldwide corporate governance agenda of scholars, regulators and the general public is the wedge between ownership and control. When the control capacity exceeds ownership rights (e.g. the CEO in a diverse-ownership firm, or the controlling shareholder in a closely-held firm) some abuses of the excessive control power can be anticipated.

In this research we narrow our attention to publically traded closely-held firms, where controlling shareholders (an individual, family or few business partners) hold a large proportion of firm's vote, effectively controlling firm's decision making. Such companies are prevalent in most economies outside the U.S. and U.K.<sup>1</sup> Notably, in these firms controlling shareholders often attain  $\alpha\%$  of firm's vote by investing less than  $\alpha\%$  of firm's equity value. This wedge between equity and voting rights is attained via various pyramidal business structures or by dual-class share issuance.

Bebchuk, Kraakman and Triantis (2000) criticize these "wedge" equity structures, on the ground that the wedge affords lower equity holdings by controlling shareholders, effectively reducing the cost of private benefits consumption by the controlling shareholders. This cost reduction encourages the control group to further exploit public shareholders and further increase its private benefits consumption.

Our paper focuses on a particular wedge structure - dual class shares. Firms adopting the dual class equity structure offer two classes of common shares: high- and low-voting power shares. In dual class share firms it is common that the controlling owner, family or coalition, holds primarily high-vote shares, while the public hoards the cheaper low-vote shares. This holding structure not only affords the control group to secure control at the lowest investment. It also generates a wedge between

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<sup>1</sup> See, however, Holderness (2009) on the abundance of family firms in the U.S.

ownership and control (vote) rights, as the control group ends up with high vote proportion and lower equity proportions.

The remedy to the severe potential agency problems present in dual class share firms is dual class share unification. In a dual class share unification all company shares are transformed into "one share one vote". Unifications do not only eliminate the wedge between vote and ownership. They also dilute the voting power of controlling shareholders (whose high-vote shares lose their excess voting rights), weakening controlling shareholders control over the firm. Harris and Raviv (1988) discuss the optimality of the "one share one vote" structure in the context of control contests and "outside" market discipline.

The European Union has debated extensively a potential mandatory "one share one vote" law, but did not adopt it also because commissioned studies (Burkart and Lee, 2008, and Adams and Ferreira, 2008) conclude that the theoretical and empirical justification for such a regulation is weak. In reality, however, one observes a worldwide tide in voluntary unifications (unifications initiated by the firms themselves). For example, Maury and Pajuste (2011) report that between 1996 and 2002 the fraction of dual class firms in 7 European countries has decreased from 43% to 29% (of exchange-traded firms).<sup>2</sup> It appears that public opinion pressure stepped in, substituting for irresolute official legislation.

Our first task in this study is to examine the long-term relative valuation (Tobin's Q) effects of voluntary dual class share unifications. Given the clear corporate governance improvements upon unification and given public's continuous support of it, can we resolve the mixed results in previous research and provide

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<sup>2</sup> We have further monitored the fraction of dual class firms in these countries, and found that by 2012 end the fraction of dual class firms has decreased to 16%.

convincing evidence that unifications increase shareholders value? Why did previous studies yield inconclusive results, and what obscures the positive corporate governance effects of unifications?

A recent study (Bigelli, Mehrotra, and Rau, 2011) suggests that unifications might also have a "dark" side. Bigelli et al. offer the cynical proposition that some unifications are schemes to transfer more wealth from the public to the controlling shareholders' pockets. They show that in cases where controlling shareholders can profit from unifications without any compensation, such unifications are more likely.

We elaborate and significantly extend the suspicious approach of Bigelli et al. (2011) by examining changes in controlling shareholders holdings following the unifications. We observe a significant temporary pointed peak in relative stock valuation (Tobin's Q) in the year after the unification, and find that many controlling shareholders dilute (and sometimes even sell all) their holdings during the "over-valuation" period in stock prices. Diluting and selling shares at inflated prices increases controlling shareholders wealth and can be considered an act of financial tunneling.

Such financial tunneling acts, when they occur, have negative valuation effects that may offset the positive valuation impact of corporate governance improvements, and may weaken or mask the fundamental positive effect of unification on firm valuation. Indeed, when we exclude cases where controlling shareholders sold shares in the unification year and in the year afterwards, we unveil large and statistically significant Tobin's Q gains to unifying firms. This finding illustrates that unifications per-se are beneficiary for public shareholders, most probably because of the corporate governance improvements accompanying them.

We further examine the cases where controlling shareholders sold shares upon the unification (SOLD firms). Consistent with the expropriation hypothesis, SOLD firms experience a significant post-unification loss, and this loss is particularly large when controlling shareholders sold all their holdings. It appears that when the unification induced public hype is excessive and market price becomes inflated, controlling shareholders are tempted to exploit the situation and sell shares, and the more they sell the stronger is the subsequent market valuation drop.

Section 2 provides a concise background on dual class shares and unifications, and develops our hypotheses. Section 3 describes the sample and data. Sections 4 and 5 report our results, and Section 6 concludes.

## **2. Voluntary Unifications**

### **2.1. Some Background on Dual Class Shares and Unifications**

A considerable proportion of publically traded firms around the world have a dual class equity structure, namely offer two classes of common shares that differ in their voting rights. In short we will refer to these shares as high- and low-voting rights shares. About 10% of the U.S. traded firms and 24% of the European traded firms have the dual class share structure (Gompers et al., 2010, and Bennedsen and Nielsen, 2010).

The dual class structure has some clear advantages at the initial fast-growth stages of firm's life cycle, where entrepreneurs' uninterrupted leadership is important for firm's success (see, for example, recent years IPOs of low-vote shares by Google, LinkedIn, Facebook and Groupon). Accordingly, studies such as Bauguess et al. (2007) and Dimitrov and Jain (2006) record positive stock price reactions to dual class share capitalizations.

However, as firm matures, the unpleasant side of the dual class structure is exposed. The dual class structure typically results in a gap between controlling shareholders' control (=voting) and equity (=dividend) rights. Rationally, controlling shareholders concentrate their holdings in high-vote shares because such a concentration affords them to secure their rule over the firm at the lowest possible own investment. (On the other side, small public shareholders prefer low-vote shares that sometimes even offer higher dividends than the high-vote shares.) Consequently, "wedge" companies, where controlling shareholders' proportion in firm's vote exceeds their equity proportion, emerge. These "wedge" structures are in Bebchuk et al. (2000) view the worse form of corporate governance, as they exacerbate all controlling shareholders' agency problems. With a relatively low equity proportion, the cost to a controlling shareholder of a 1\$ private benefits consumption is reduced or becomes relatively low; hence the controlling shareholder is tempted to consume more private benefits at the expense of the public shareholders.

In a rational world, the disadvantage of mature dual class firms is widely recognized by public investors. In Europe, Bennedsen and Nielsen (2010) show that the dual class structure discounts firm market value by about 20% on average, a deeper discount than that affected by alternative structures (e.g. pyramids) that also generate disproportionate vote and equity holdings. Perhaps also expected, Amoako-Adu and Smith (2001) record shareholders' disputes inside Canadian dual class firms. The Bebchuk et al. (2000) view on dual class shares appears consistent with the data.

The negative investor attitude towards mature dual class firms convinced some of the controlling shareholders to abort this equity structure. In the recent two decades unifications of dual class shares became trendy. In unifications all classes of shares are converted into "one share one vote". Rarely, compensation is offered to the

superior-vote shareholders (for the loss in vote transpired upon them when equating all share classes' voting power). However, typically, the unification is voluntary and without any compensation.<sup>3</sup>

Existing literature discusses the possible reasons for voluntary dual class share unifications. Maury and Pajuste (2011) refer to the difficulty of mature dual class firms in raising additional capital. They show theoretically that when future growth opportunities are attractive, it is worthwhile for controlling shareholders to give up the extra private benefits afforded by the dual class structure, in return for the abundant extra cash flows promised by the attractive investment opportunity. Maury et al. (2011) further report that in their European sample, about 41% of the unifying firms issued equity following the unification. This suggests that alleviating external equity financing obstacles may be an important reason for dual class share unifications.

Lauterbach and Pajuste (2012) argue that the increase in negative sentiment (negative media and public opinion) on dual class shares in the last two decades increased the cost of the dual class structure in the eyes of controlling shareholders. Thus, for some firms, costs exceeded benefits and the dual class structure was voluntarily abolished. Based on media articles, Lauterbach et al. (2012) construct a yearly anti-dual-class sentiment index and show that the number of voluntary unifications and the level of the anti-dual class sentiment are positively correlated.

Betzer, Bongard and Goergen (2012) advance the index membership motive for dual class share unifications. They show that firms in Germany that were about to drop from a prestigious index unified their dual class shares, thus increasing the

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<sup>3</sup> Interesting studies of non-voluntary unifications exist and examine Israel where a law practically forced dual class share unifications. Hauser and Lauterbach (2004) estimate the price of vote implicit in the compensation received upon such unifications, and Lauterbach and Yafeh (2010) show how the controlling shareholders regain most of their lost voting power in the years following the non-voluntary, regulation-induced unification.



market value of their unified share free-float and remaining in the index. Unifications may also enhance share liquidity by eliminating the trade fragmentation that exists when both share classes are publically traded.

The common denominator of the above motives is that they elucidate the positive aspects of unifications. Unifications should increase firm's market value because they facilitate capital raising, improve the firm's public image, and enhance firm's stock liquidity. The elimination of the wedge between ownership and vote percentage of controlling shareholders and the typical reduction in controlling shareholders' vote, tends to trim private benefits and increase public shareholders (=market) share in firm's total value.

Negative aspects of mature firms' dual class share unifications are scarce. Bigelli, Mehrotra and Rau (2011) call attention to the fact that in voluntary unifications without compensation public investors who hold the high-vote share are hurt because they do not receive compensation for the loss of their share's vote superiority – they lose the price premium of the high-vote share. In fact, in unifications without compensation, some wealth is transferred from the high-vote to the low-vote shareholders.

Bigelli et al. (2011) further suggest that since controlling shareholders are the initiators of unifications it is likely that they gain from it. They report several cases of low-vote share purchases by controlling shareholders prior to the unification. (Similar evidence is reported in Lauterbach and Yafeh, 2011.) Hence, there appears to be some rather weak support for the intriguing view that the pre-unification trading activity of controlling shareholders, when it exists, serves to expropriate the small group of public investors whose holdings are tilted towards the high-vote shares.

## 2.2. A New Expropriation Hypothesis

We identify another expropriation opportunity, possibly of much larger scope and impact than that discussed above. In the first year after the unification the market value of unifying firm's equity skyrockets – see Maury and Pajuste (2011) Table 6 and Lauterbach and Yafeh (2011) Table 6. However, after the peak in year +1, i.e., in the later post-unification years, Tobin's Q and Market to Book value of equity gradually decline. Apparently, the unification generated a public euphoria that induced a peak in firm's market valuation in year +1 (where year 0 is the unification calendar year). Voluntary unifications were probably perceived as an important corporate governance reform, and as a landmark change in the attitude of the firm and its controlling shareholders towards small public shareholders. Thus, public investors apparently overreacted and bid up unifying firms' stock prices too sharply.

We argue that controlling shareholders face an equity tunneling opportunity in the year after the unification when firm value apparently overshoots. Diluting their shareholdings close to the peak prices may enrich controlling shareholders considerably. Controlling shareholders presumably know that their firm's share price is not worth its year +1 market price, hence they may decide to sell some of their shares to public investors at inflated prices. This expropriates wealth from the public and transfers it to controlling shareholders. Upon realizing the true (exploitive) nature of the firm's controlling shareholders, the long term firm valuation declines.

Alternatively, controlling shareholders may elect to sell control over the firm to another control group close to the peak year +1 price, expropriating the new controlling shareholders. Such a sale may hurt simple investors as well because the new control group can try to justify its high purchase price by increasing its private benefits extraction from the firm.

Given the above discussion we propose

*The expropriation hypothesis*: Unifications where controlling shareholders sell part or all of their shares up to a year after the unification involve some expropriation and generate lower long-term valuation gains.

The expropriation hypothesis is novel and has not been tested before. It continues the skeptic view of Bigelli et al. (2011) on some dual class share unifications. The original controlling shareholders supposedly know that the unification-induced price of their firm's share is above its fair value, and utilize this mispricing to cash on, at the expense of minority shareholders and others. In the long-run, after prices reverse to their true values, minority shareholders and others who have bought shares from the original controlling shareholders at the inflated post-unification prices, lose.

It is possible to radicalize the arguments and claim that controlling shareholders pre-conceived the post-unification sale of shares and expropriation. However, we cannot offer a test for the proposition that expropriation was pre-meditated. Thus, we leave it intact.

### 2.3. The Refined Corporate Governance Improvement Hypothesis

The common hypothesis in unification research is that unifications promote corporate governance by eliminating the wedge between controlling shareholders' percentage in vote and percentage in equity and by decreasing controlling shareholders vote. All these should cut private benefits and increase firm's market valuation.

Nevertheless, existing research documents mixed results and inconclusive evidence on the valuation effects of dual class share unifications, casting doubt about the validity and importance of the corporate governance improvement hypothesis. For

example, Lauterbach et al. (2011) find a statistically insignificant long-term increase in Q following dual class share unifications. Maury et al. (2011) report a slight statistically insignificant long-term increase in the industry-adjusted Market to Book value ratio of unifying firms' equity. Dittman et al. (2007) and Smart et al. (2008) document a significantly positive stock price reaction to unification announcements while Biggeli et al. (2011) find a small 0-0.5% mean total capitalization response to unification announcements. Adams and Ferreira (2008) in an extensive literature review conclude that "The fact that such studies often disagree with each other indicates that value effects of events that change the proportionality of ownership are very hard to identify empirically" (ibid, p. 84).

We argue that our new expropriation hypothesis might help resolve the inconclusive evidence of existing tests of the corporate governance improvement hypothesis. The mixed evidence in past research might emanate from the negative valuation effect of the expropriation hypothesis, which obscures the positive valuation effect of the corporate governance improvement hypothesis. If so, a refined "corporate governance improvement" hypothesis can be proposed:

*The refined corporate governance improvement hypothesis:* Unifications where controlling shareholders do not sell part or all of their shares after the unification improve firm's corporate governance and increase firm's market valuation.

According to the above hypothesis, when we exclude cases suspect of expropriation (cases where controlling shareholders dilute their holdings), only the corporate governance improvement effect remains and market valuation should increase. Essentially, by excluding cases where both expropriation and governance improvements are at work, we achieve a "clean" corporate governance improvement subsample, where we should observe a clear increase in unifying firms market

valuation. This should finally settle the debate about the value relevance of corporate governance improvements.

### **3. Sample and Data**

We start with a sample of dual class shares and dual class share unifications in Europe, assembled by Maury and Pajuste (2011). Maury et al. (2011) focus on seven Western European countries: Denmark, Finland, Germany, Italy, Norway, Sweden and Switzerland, where dual class share firms represented (on 1995) more than 20% of listed firms. They identify 109 unification events during 1996-2002 and 384 dual class firms that did not unify their shares during that period and can serve as control for unifying firms. We extend the sample till 2009, and find 153 unifications (and 340 non-unifying firms) in the 1996-2009 period. This is our raw initial sample.

A central goal of the study is to observe the long-run effects of unifications. Naturally, the long term (three years at least after the unification) perspective that we require, contracts our sample further. During that post-unification period, 14 of the 153 unifying firms were delisted, and for 18 more firms we are missing ownership data or financial data on crucial dates.<sup>4</sup> This leaves us with 121 unifying firms for the empirical work. Similarly, out of our 340 dual-class control firms, we exclude 140 delisted firms and 10 firms that unified their dual class shares during 2009-2012. Thus, the control sample in our empirical work comprises 190 firms with complete data throughout 1994-2012.

For each of the 311 sample firm we collect from Datastream yearly data on total assets, book value of equity, market value of equity, and return on assets (ROA). These data serve for sample description and for the computation of Tobin's Q (the

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<sup>4</sup> Almost all of these 18 firms are no longer listed, thus we could not find ownership and/or financial data for them.

valuation variable in our empirical analysis). All key variables are defined in the Appendix. Notably, all the data in our sample are end of calendar-year data.

In addition, for the 121 unifying firm we collect data on the vote of the largest shareholder from the end of calendar year -2 to the end of calendar year +7 (where year 0 is the unification calendar year); and for the 190 non-unifying (control) firms we compile data on the largest shareholder holdings in 1994-2012. Faccio and Lang (2002) suggest the largest shareholder holdings as the metric for control group holdings in Europe. The data sources are firms' annual reports, Porssitieto by Gunhard Kock (for Finland), Hoppenstedt Aktienfuhrer (for Germany), Sundin and Sundqvist (for Sweden), WorldScope and Lexis-Nexis.

## **4. Corporate Governance and Valuation Gains upon Unification**

### **4.1. General Descriptive Statistics on Unifying and Non-unifying Firms**

Table 1 presents some descriptive statistics for our 121 unifying and 190 non-unifying (control) firms' sample. On the eve of the unification, unifying firms appear somewhat smaller and less profitable, yet of higher relative market valuation (Tobin's Q) than non-unifying firms. On average, unifying firms' controlling shareholders appear to have lower holdings – 46.9% of vote, compared to 52.3% of vote in non-unifying firms. Perhaps most interesting, the dual class share unification diluted the controlling shareholders vote by about a fifth - at the end of the unification year the controlling shareholders vote was 36.9%, on average.

(Insert Table 1 about here)

Panel B of Table 1 provides some demographic information on the unifying firms. Unification rates are relatively high between 1998 and 2001, with a peak of 18

unifications on 2001. Our sample comprises 42 German, 35 Scandinavian, 30 Swiss and 14 Italian unifications.

#### 4.2. The Vote Loss of Controlling Shareholders

Table 2 and Figure 1 describe the mean vote of the largest shareholder from two years before to seven years after the unification year (year 0), for both unifying and non-unifying firms. The methodology employed follows closely Lauterbach and Yafeh (2011). Notably, because of our initial requirement for seven years post unification data (similar to Lauterbach and Yafeh, 2011), sample size shrinks to 84 unifications in 1996-2005.

(Insert Table 2 and Figure 1 about here)

Lauterbach and Yafeh (2011) who studied "forced" by law unifications in Israel, observe: 1) a pre-unification increase in vote of controlling shareholders (ex-ante preparation for their unification-induced vote dilution); and 2) a post-unification gradual yet partial "recovery" in the voting power of controlling shareholders. In contrast, in our "voluntary" European unifications, such phenomena are not observed. On average, in Table 2, controlling shareholders vote did not increase prior to the unification, and controlling shareholders' vote loss persists, i.e., is not reversed in the post-unification years.

The lack of a post-unification reversal on average in our European unifications sample is not surprising given the voluntary nature of these unifications. In any case, the absence of vote reversal is an important findings of our study as it illustrates the difference between "regulatory forced" unifications and "voluntary" unifications. Evidently, persuading firms to "voluntary" improve their corporate governance yields more persistent governance improvements than forcing them to do so.

Panel B of Table 2 further analyzes the vote of controlling shareholders in unifying firms. Two years before the unification, the mean vote of the largest shareholder in unifying firms is 4.4% lower than that of non-unifying firms, and seven years after the unification it is 17.4% lower. This 13% widening of the gap suggests that our best estimate of the eventual unification-induced vote loss of controlling shareholders in unifying firms is about 13%. Formal t-tests clarify that the mean 13% long-term vote loss of controlling shareholders is highly statistically significant, and that controlling shareholders eventually lost vote in about 68% of the unifying firms.

The demise of disproportionality (wedge between ownership and vote proportions) and the eventual considerable vote loss of controlling shareholders suggest a non-trivial corporate governance improvement in unifying firms. The next subsection examines whether or not there is a parallel increase in firm valuation.

#### 4.3. Relative Valuation (Tobin's Q) Effects of Unifications

Table 3 and Figure 2 portray the evolution of unifying and non-unifying firms' industry-adjusted mean Tobin's Q from the end of year -2 to the end of year +7 relative to the unification year (year 0). Industry adjustment is based on two-digits SIC code, and before the industry-adjustment, Tobin's Q is winsorized each calendar year at the 5<sup>th</sup> and 95<sup>th</sup> percentile, using the whole universe of dual- and single-class firms in our seven sample countries.

In Figure 2 we observe that unifying firms had higher relative valuations (Q) than non-unifying firms, and that their relative valuation advantage increased by year +7, with a temporary peak on year +1. (Interestingly, a similar peak in year 1 appears also in Figure 5 of Lauterbach and Yafeh, 2011.) To sharpen the Q picture, we offer Figure 3 that depicts the difference between unifying and non-unifying firms' Qs. On



year end -2 unifying firms have a 0.08 higher mean Q than non-unifying firms; on year end +1 the gap widens to 0.38; and on year end +7 it sets on 0.23. It appears that unification increases the relative market valuation of the firm by about 0.15.

(Insert Table 3, Figure 2 and Figure 3 about here)

The relative valuation gain of unifying firms appears economically significant. However, the Q relative advance of 0.15 is only weakly statistically significant (p-value of 0.054 in a one-sided test) – see Table 3 Panel B. We employ a one-sided test as the corporate governance improvement hypothesis suggests that the alternative hypothesis is that Tobin's Q increases.

One way to strengthen the statistical inference power is to increase sample size. In Figures 1 and 3 we observe that the unification impact on vote and Q stabilize after year 3 (the lines level off). It appears that for voluntary unification three years post-unification period is sufficient for assessing the long-term impact.

Relaxing the post-unification period requirements to three years increases our sample size to 121 unifications (in 1996-2009) and has almost no impact on our overall period total-effect estimates. For example, the average vote loss of unifying firms controlling shareholders in years -2 through +3 is 11.2% in our extended sample (vs. 13% in Panel B of Table 2), and the mean relative Q gain of controlling shareholders in years -2 through +3 is 0.165 in our extended sample (compared to 0.152 in Panel B of Table 3). Nevertheless, as expected, increasing the sample sharpens inference power, and the mean long-term relative Q gain of unifying firms becomes statistically significant at the 5% level (p-value of 0.012 compared to a p-value of 0.054 in the 84 unifications sample). Because of this increased power we employ the 121 unification sample henceforth.

Bennedsen and Nielsen (2010) estimate that dual class structures depress Q by 0.26 compared to firms with one share one vote. Thus, our estimated 0.16 long term Q gain in unifying firms is modest and might suggest that dual class share unifications only partly resolve the unique agency problems of dual class firms. Interestingly, the initial (year +1) relative valuation (Q) gain of 0.25 of our 121 unifying firm sample almost matches the Q discount that Bennedsen et al. (2010) document in European dual class firms. Thus, perhaps the initial (year 1) overshooting of average Q in unifying firms is due to an initial hope that the unifications would resolve all unique agency problems of dual class firms, a hope that in the long-term was proven as over-optimistic.

## **5. Tests of the Refined Governance Improvement and Expropriation Hypotheses**

The main innovations of the study are its two hypotheses: the refined corporate governance improvement hypothesis and the new expropriation hypothesis.

### 5.1. Tests of the Expropriation Hypothesis

#### 5.1.1. Exploring the overreaction surrounding unifications

The opportunity to expropriate simple minority shareholders arises because of the overshooting in market valuation in the vicinity of unifications. In Figure 2, the mean Q shows a clear pattern. It increased gradually from year end -2 onwards, reaching a pointed peak at year end +1; then it declines in years 2 and 3, after which it stabilizes. The sharp peak on year +1 suggests a market valuation overshooting, possibly triggered by public over-enthusiasm about the firm's voluntary corporate governance reform.

Table 4 examines the short-term valuation peak. Panel A reports  $\Delta Q(-1,1)$  - the increase in unifying firms' industry-adjusted Q between the end of year -2 and the end of year +1 minus the corresponding contemporaneous change in non-unifying firms industry-adjusted Q. Unifying firms' short-term valuation increase,  $\Delta Q(-1,1)$ , is 0.25 on average, economically impressive and statistically significant at the 1% level.

(Insert Table 4 about here)

Panel B of Table 4 examines our proposition that this peak is a result of overreaction. In a rational world, overreaction should be moderated and vanish over time as investors learn about their mistakes. Such a phenomenon is indeed manifested in Panel B results. In the first subperiod (1996-1999) the mean  $\Delta Q(-1,1)$  is a relatively large 0.39, and it is largely reversed in years 2-7, as evidenced by the mean  $\Delta Q(2,3)$  of -0.27. In contrast, in the second subperiod (2000-2002), the mean  $\Delta Q(-1,1)$  is 0.19 while the mean  $\Delta Q(2,3)$  is -0.03, i.e., in the second subperiod the overshooting and reversal are rather minute. In the third subperiod (2003-2005) we observe an initial under-reaction with a mean  $\Delta Q(-1,1)$  of 0.13 and a mean  $\Delta Q(2,3)$  of 0.11. Finally, in 2006-2009 there is almost no initial overshooting as the mean  $\Delta Q(2,3)$  is -0.01 only.

The lack of value overshooting on average from the second subperiod (year 2000) onwards suggests that in the earliest subperiod investors misconceived voluntary unifications to be much bigger corporate governance reforms than they really were, hence they overreacted to unifications. It is also important to note that despite the lack of overshooting on average in the later subperiods, it is still probable that some specific firms did over-react to unifications even after year 2000.

### 5.1.2. Long-term valuation effects of possible expropriation attempts

Any overreaction in firm value tempts controlling shareholders to exploit it. Controlling shareholders, with their superior understanding of the exact meaning of the corporate governance reform (unification) they (controlling shareholders) initiated, might perceive the public overreaction as an opportunity to sell or dilute their holdings at inflated prices. If controlling shareholders dilute their holdings, there could be a public-investor disappointment (or disillusion), emanating from the realization that the exploitive nature of firm's controlling shareholders has not changed following the unification. Such investors' disillusion should lower the unification-induced long-term valuation gains. In sum, the expropriation hypothesis proposes that in firms where controlling shareholder sold part or all of their holdings in the post-unification period, the overall period (years -1 through 3) valuation gains and the post unification valuation gains (years 2 and 3) would be low relative to the corresponding valuation gains of firms where controlling shareholders did not sell shares.

Table 5 documents the valuation gains of unifying firms for the overall sample and for two complementary subsamples: firms where controlling shareholders sold part or all of their shares in the unification year or the calendar year that followed it (marked by SOLD) and firms where they did not sell any shares (KEPT) during that time window. We look for selling activity by controlling shareholders only on years 0 and 1 because these are the years adjacent to the unification and any selling activity in these years is probably more strongly related to (or triggered by) the unification itself.

In Table 5 the valuation gains of unifying firms are presented in three windows. First,  $\Delta Q(-1,1)$ , the change in unifying firms industry-adjusted Tobin's Q (in year -1 through year +1 relative to the unification year) minus the corresponding

contemporaneous change in the industry-adjusted Tobin's Q of non-unifying firms.<sup>5</sup> This is a measure of the initial response to unification, including the possible initial overreaction. Similarly,  $\Delta Q(2,3)$  represents the overreaction correction period, and  $\Delta Q(-1,3)$  estimates the overall long-term valuation response.

(Insert Table 5 and Figure 4 about here)

In Panel A we observe different patterns of response for KEPT and SOLD firms. KEPT firms have a positive initial response to unification, and they continue to appreciate in the "correction" period as well. Their overall period mean  $\Delta(-1,3)$  is positive (0.286) and statistically significant at the 1% level. In contrast, SOLD firms have a relatively high mean initial response (that is almost double that of KEPT firms), yet in the correction period, after controlling shareholders dilute their holdings, almost all of the initial gains evaporate. The overall period valuation gains of SOLD unifying firms are close to nil on average and are statistically insignificant. The strikingly different valuation response patterns of SOLD and KEPT firms are clearly depicted on Figure 4.

The evidence in Panel A favors the expropriation hypothesis, as SOLD firms suffer from severe valuation declines in the "correction" period and have lower overall-period responses (compared to KEPT firms). Formal tests of the expropriation hypothesis are summarized at the bottom of Panel A which reports p-values for the conservative  $H_0$  hypothesis that the mean valuation gain of SOLD firms equals the mean valuation gains of KEPT firms. (The alternative hypothesis is the expropriation hypothesis, i.e. that the mean valuation gain of SOLD firms is lower.) The tests appear to unequivocally support the expropriation hypothesis. Consistent with the

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<sup>5</sup> Note that  $\Delta Q(-1,1)$  covers a three years period including the calendar year preceding the unification year, the unification year (year 0), and the year that followed it.

expropriation hypothesis, both  $\Delta Q(2,3)$  and  $\Delta Q(-1,3)$  of KEPT firms are significantly higher than those of SOLD firms (at the 5% significance level). Focusing on SOLD firms, it appears that the market lost trust in these companies, where controlling shareholders exploited the peak stock prices to dilute their holdings. Hence, all unification gains dissipated.

Panel B narrows the view to SOLD firms, differentiating between firms where controlling shareholders sold all their shares (SOLD-all firms) and firms where controlling shareholders just diluted their holdings (SOLD-part firms). Interestingly, in SOLD-part firms we do not observe the initial over-reaction and the subsequent reversal. Nevertheless, the mean overall period Q gains of SOLD-part firms remains statistically insignificant and economically small (0.07) relative to the parallel mean Q gains of KEPT firms (0.29 - see Panel A). This suggests that whenever controlling shareholders dilute holdings, their selling casts a shadow on firm's market value.

The SOLD-all subsample in Panel B demonstrates a sharp inverted-V pattern. The mean initial Q gain is large (0.49) and the mean reversal in Q (-0.50) is equally huge. Overall, in firms where controlling shareholders exited their firms (SOLD-all to new controlling shareholders) the mean firm valuation slightly drops. It could be asked why does firm valuation drop in the "correction" period (years 2 and 3) given that the "exploitive" selling controlling shareholders exit the firm. This could manifest market's suspicion (realization?) that the new controlling shareholders are going to extract large private benefits from the firm they bought. Indeed, if the new controlling shareholders bought the firm at peak prices (i.e., were exploited by old controlling shareholders) they may try to justify the high price they paid by consuming relatively high private benefits in the future.

Given the support of the exploitation hypothesis in Table 5 tests, it is intriguing to address the more important hypothesis of this study – the hypothesis that unifications are corporate government improvements that enhance company market value. This hypothesis failed to gain support in previous research.

## 5.2. Tests of the Refined Corporate Governance Improvement Hypothesis

Table 5 affords examination of our refined corporate governance improvement hypothesis, stating that in cases where controlling shareholders' trading (or expropriation) is not an issue, dual class share unifications tend to enhance firm's market value. The subsample in Table 5 that is presumably clean of expropriation acts is that of KEPT firms (=unifying firms where controlling shareholders did not dilute their holdings). Our refined corporate governance improvement hypothesis thus proposes that in KEPT firms we would observe valuation gains.

The KEPT firms' evidence in Panel A of Table 5 supports the corporate governance improvement hypothesis. In KEPT firms the overall period mean increase in relative Q is economically impressive (about 0.29) and statistically significant at the 1% level. Further, KEPT firms appreciate on average both in the initial period and in the "correction" period, i.e., market appears to exhibit no remorse at the KEPT firms' initial appreciation.

Overall, the KEPT firms mean Q appreciation of 0.29 resembles the 0.26 mean Q discount of European dual class share companies (Bennedsen et al., 2010). Hence, the impression is that dual class firms that voluntary gave up their dual class equity structure (and where there were no confounding events such as selling by controlling shareholders), recovered their entire dual class discount.

### 5.3. Further Discussion of the Expropriation Hypothesis

One can argue against our expropriation hypothesis that selling shares and diluting holdings at peak prices is a natural act of a rational trader, and that all our evidence suggests is that controlling shareholders are rational traders. Controlling shareholders should not be blamed. They were not eluded by the unification hype, and like any other cold-minded and rational investor sold shares at the unjustified peak prices adjacent to the unifications. This is quite a plausible alternative.

However, in our opinion, the fact that the long-term valuation response,  $\Delta Q(-1,3)$ , of KEPT firms is positive and significantly higher than that of SOLD firms appears to undermine the rational trading hypothesis. The rational selling alternative hypothesis has difficulties explaining why and how rational (overreaction-induced) selling by controlling shareholders depresses the long-term value of the firm. This is because in the long-run overreactions disappear, hence, under the rational selling alternative hypothesis, the overall period valuation gains of SOLD and KEPT firms should be equal.

In sum, we argue that without our expropriation hypothesis the significantly lower long-term overall response of SOLD firms (compared to KEPT firms) is puzzling. The expropriation hypothesis appears more consistent with the evidence, as it suggests that public investors lose some trust in controlling shareholders that dilute holdings at peak prices, justly or unjustly viewing these acts as financial tunneling. Apparently, the fear from further "exploitation" by controlling shareholders depresses SOLD firm's long-term market value.



## 6. Summary and Conclusions

Dual-class share unifications offer corporate governance improvements - they eliminate the wedge between voting and equity rights and typically reduce controlling shareholders' voting power. Thus, if corporate governance improvements are valuable, firm's market value should increase. Previous studies failed to demonstrate significant long-term valuation gains of unifications. Thus, our finding that voluntary dual-class share unifications significantly increase firms' long-term market valuation appears important.

We overcome the weak results of previous research by filtering out cases where the positive valuation effects of unification are mixed with some negative effects. Some unifications are accompanied by public investors' enthusiasm and lead to considerable firm valuation overreaction in the vicinity of the unification. Such overreactions tempt controlling shareholders to dilute their holdings at peak prices. The holdings' dilutions at peak prices may be viewed as natural acts of trading by rational controlling shareholders. Nevertheless, they may also be acts of financial tunneling, whereby controlling shareholders exploit their superior (private) information about their firms to expropriate the public, i.e., sell shares at inflated prices.

We examine the expropriation hypothesis and find that it is consistent with the data. Basically, we show that the mean long term (from two years before to three years after the unification) valuation gain is significantly larger for firms where controlling shareholders did not exploit the unification hype to sell their shares. Firms where controlling shareholders sold shares in the period surrounding the unification experience no long-term valuation gains on average, leaving the impression that their

positive governance improvement valuation effects are completely offset by the negative repercussions of the selling (expropriation) by controlling shareholders.

In the purged sample, consisting only of unifying firms where controlling shareholders did not dilute their holdings in the vicinity of the unification, we find economically and statistically significant positive long-term valuation gains. Apparently, dual class share unifications per-se have a positive effect on long-term firm valuation. In fact, when we examine the overall sample of unifying firms (before excluding firms where controlling shareholders diluted their holdings), we also find a positive long-term valuation gain. This suggests that in general, and despite of the suspected expropriation activity, voluntary dual class share unifications are beneficial for the public and should be encouraged.

As usual, we are far from exhausting the research questions. Replication of our results in non-European samples is important, and further examination of our new expropriation hypothesis is warranted. Hence, the ritual call for further research is definitely reiterated.

## **Appendix: Definition of the main variables in the empirical analysis**

Tobin's Q is the book value of assets plus the market value of equity minus the book value of equity, all divided by the book value of assets. Tobin's Q is winsorized each calendar year at the 5<sup>th</sup> and 95<sup>th</sup> percentile, using the whole universe of dual- and single-class firms in the seven sample countries. Source: Datastream.

Industry adjusted Q is calculated as the difference between firm's Tobin's Q and the mean single-class firms' Tobin's Q in the same industry (using the two-digits SIC code).

DeltaQ(y,z) is the change in unifying firms industry-adjusted Q from the start of calendar year y to the end of calendar year z relative to the unification year minus the corresponding contemporaneous change in non-unifying firms industry-adjusted Q. The calendar year of the unification is coded as year 0.

SOLD/KEPT subsamples. Firms where controlling shareholders sold part or all of their shares in the unification year or the calendar year that followed it are marked by SOLD; and firms where they did not sell any shares are marked by KEPT. Two firms where controlling shareholders did not sell any shares but a seasoned equity offering (in years 0 or 1) diluted their holdings by more than 1 percent are also defined as SOLD.

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**Table 1**  
**Sample descriptive statistics**

In Panel A sample statistics for unifying firms are calculated at the end of the calendar year preceding the unification, except for post-unification Q and voting power, which are calculated at the end of the unification year. For the control sample of non-unifying firms, we first compute yearly means and medians, and then derive weighted statistics, where the weights correspond to the percent of unifications in each year. Tobin's Q is the book value of assets minus the book value of equity plus the market value of equity, all divided by the book value of assets. Voting rights before unification are the percent of total voting rights held by the largest shareholder at end of the year preceding the unification (or year -2 if year -1 data are missing). Voting rights after unification are the percent of total voting rights held by the largest shareholder at the end of the unification year. Loss of voting power is the difference between the voting rights before and after the unification. Panel B reports the frequency of unifications by country and year.

*Panel A: Descriptive statistics of unifying and non-unifying firms*

	Unifying firms (n=121)		Non-unifying firms (n=190)	
	Mean	Median	Mean	Median
<u>Firm characteristics</u>				
Total assets (in million USD)	1 888	583	5 204	472
% Return on assets (ROA)	3.62	4.95	5.02	5.26
Tobin's Q before unification	1.63	1.24	1.47	1.17
Tobin's Q after unification	1.66	1.31	1.44	1.15
<u>Controlling shareholder</u>				
Voting rights before unification (year -1)	46.9%	48.9%	52.3%	51.3%
Voting rights after unification (year 0)	36.9%	30.4%	52.2%	51.4%
Loss of voting power (-1,0)	10.0%	6.6%		

*Panel B: Share unifications by year and country*

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Total
Den			1		1	1					2	1	1	1	8
Fin		1	1	3						1	1	1	2	2	12
Ger	5	1	6	7	6	8	2	1	1	3			2		42
Ita		1	1	1	2	3	3	1	1			1			14
Nor				1	1	2									4
Swe			1		2	2	1	2	1	1			1		11
Swi	1	3	6	2	3	2	2	5	2	3		1			30
Tot	6	6	16	14	15	18	8	9	5	8	3	4	6	3	121

**Table 2****Controlling shareholder's voting power before and after share unifications**

The numbers in the table are computed as follows. First, we compute for the control sample (190 non-unifying firms) the average voting rights of the controlling shareholders (in percent) in each of the years 1994-2012. Then, each specific unifying firm is compared with the corresponding (same calendar year) average control sample statistic. For example, if company Z unified its dual class shares in 1998, then: 1) 1998 is defined as year zero; 2) data on firm Z's controlling shareholders' voting rights are collected from 1996 (year -2) through 2006 (year 7); and 3) a corresponding control vector of 10 observations is constructed. In this control vector, against (or for comparison with) firm Z's year -2 percentage vote, we put the average control firms' percentage vote in 1996, etc...

*Panel A: Mean voting rights of the controlling shareholder relative to the unification year*

	Year relative to the unification									
	-2	-1	0	1	2	3	4	5	6	7
The mean % vote of controlling shareholder in 84 unifying firms	48.2	46.4	35.3	33.3	33.1	35.3	35.9	35.4	35.0	34.4
The mean % vote of controlling shareholder in non-unifying firms (control sample)	52.7	52.4	52.2	52.1	52.0	52.0	51.9	51.8	51.8	51.8

*Panel B: Long-term changes in relative voting power for 84 unifying firms*

Mean difference in controlling shareholders' voting power between unifying and non-unifying firms before unification (end of year -2) <sup>a</sup>	-4.4%
Mean difference in controlling shareholders' voting power between unifying and non-unifying firms at the end of year +7	-17.4%
Increase in the voting power difference between pre-unification and year 7 (= the eventual post-unification relative vote decrease in unifying firms)	13.0%
<i>p-value</i> of the above post-unification relative vote increase	0.000
Proportion of unifying firms with a negative relative change in controlling shareholders' voting power	67.9%
<i>p-value</i> of above proportion (null: proportion is 0.5)	0.001

<sup>a</sup> For 3 firms we use year -1 data because year -2 data are unavailable.



**Table 3**  
**Tobin's Q around dual class share unifications**

Tobin's Q is the book value of assets plus the market value of equity minus the book value of equity, all divided by the book value of assets. Industry adjusted Q is calculated as the difference between firm's Tobin's Q and the mean single-class firms' Tobin's Q in the same industry (using the two-digits SIC code).

The following procedure is used for constructing the table. First, we compute for the control sample (190 non-unifying firms) the average industry-adjusted Tobin's Q in each of the years 1994-2009. Then, each unifying firm industry-adjusted Q is compared with the corresponding (same calendar year) average industry-adjusted Tobin's Q of the control sample. For example, if company Z unified its dual class shares in 1998, then: 1) 1998 is defined as year 0; 2) firm Z's Tobin's Q is collected from 1996 (year -2) through 2005 (year +7); and 3) a corresponding control vector of 10 observations is constructed. In this control vector, against (or for comparison with) firm Z's year -2 industry-adjusted Tobin's Q, we put the average control sample industry-adjusted Q in 1996, etc...

*Panel A: Mean industry-adjusted Tobin's Q surrounding the unification year*

	Year relative to the unification									
	-2	-1	0	1	2	3	4	5	6	7
Mean Industry-adjusted Tobin's Q of 84 unifying firms	-0.08	0.08	0.13	0.21	0.15	0.12	0.14	0.13	0.14	0.11
Mean Industry-adjusted Tobin's Q of non-unifying firms (control sample)	-0.16	-0.18	-0.18	-0.17	-0.17	-0.15	-0.15	-0.13	-0.14	-0.12

*Panel B: Long-term changes in relative industry-adjusted Tobin's Q for 84 unifying firms*

Mean difference in industry-adjusted Tobin's Q between unifying and non-unifying firms before the unification (end of year -2)	0.084
Mean difference in industry-adjusted Tobin's Q between unifying and non-unifying firms at the end of year +7	0.236
Increase in the relative industry-adjusted Tobin's Q between pre-unification and year 7	0.152
<i>p-value</i> of the above relative industry-adjusted Tobin's Q increase	0.054
Proportion of unifying firms with a positive change in relative industry-adjusted Tobin's Q	58.3%
<i>p-value</i> of above proportion (null: proportion is 0.5)	0.078

**Table 4**  
**Short-term overreaction in public response to unifications**

Tobin's Q is the book value of assets plus the market value of equity minus the book value of equity, all divided by the book value of assets. Industry adjusted Q is calculated as the difference between firm's Tobin's Q and the mean single-class firms' Tobin's Q in the same industry (using the two-digits SIC code).  $\Delta Q(y,z)$  is the change in unifying firms industry-adjusted Q from the start of calendar year y to the end of calendar year z relative to the unification year minus the corresponding contemporaneous change in non-unifying firms industry-adjusted Q. The calendar year of the unification is coded as year 0. In Panel A p-values are for one-sided tests and in Panel B p-values are for two-sided tests.

*Panel A: Short-term overreaction in relative industry-adjusted Tobin's Q for 121 unifying firms*

Mean difference in industry-adjusted Tobin's Q between unifying and non-unifying firms before unification (end of year -2)	0.012
Mean difference in industry-adjusted Tobin's Q between unifying and non-unifying firms after unification (end of year 1)	0.260
Increase in the relative industry-adjusted Tobin's Q between pre-unification and year 1	0.248
<i>p-value</i> of the above post-unification relative industry-adjusted Tobin's Q increase	0.002
Proportion of unifying firms with a positive change in relative industry-adjusted Tobin's Q	58.7%
<i>p-value</i> of above proportion (null: proportion is 0.5)	0.034

*Panel B: Moderation of the overreaction over time*

Unification date	# of obs.	DeltaQ(-1,1)		DeltaQ(2,3)		
		Mean	Proportion positive	# of obs.	Mean	Proportion positive
1996-2009	121	0.248 (0.004)	58.7% (0.069)	121	-0.083 (0.298)	47.9% (0.716)
1996-1999	42	0.391 (0.035)	64.3% (0.088)	42	-0.269 (0.207)	45.2% (0.644)
2000-2002	41	0.193 (0.127)	61.0% (0.211)	41	-0.026 (0.733)	48.8% (1.000)
2003-2005	22	0.129 (0.393)	40.9% (0.523)	22	0.112 (0.211)	54.5% (0.832)
2006-2009	16	0.175 (0.437)	62.5% (0.454)	16	-0.010 (0.810)	43.8% (0.804)

**Table 5****Tests of the Expropriation and Refined Governance Improvement Hypotheses**

This table documents the valuation gains of unifying firms for the overall sample (“All”) and for two subsamples: firms where controlling shareholders sold part or all of their shares in the unification year or in the year that followed it (marked by SOLD), and firms where they did not sell any shares during that period (marked by KEPT). Tobin’s Q is the book value of assets plus the market value of equity minus the book value of equity, all divided by the book value of assets. Industry adjusted Q is calculated as the difference between firm’s Tobin’s Q and the mean single-class firms’ Tobin’s Q in the same industry (using the two-digits SIC code). DeltaQ(y,z) is the change in unifying firms industry-adjusted Q from the start of calendar year y to the end of calendar year z relative to the unification year minus the corresponding contemporaneous change in non-unifying firms industry-adjusted Q. The calendar year of the unification is coded as year 0. The p-values appear in parentheses, and are for two-sided tests, except for those on the last column and on the bottom row that are for one-sided tests.

*Panel A: Relative industry-adjusted Tobin’s Q response - SOLD vs. KEPT unifying firms*

		Initial response DeltaQ(-1,1)	Correction period DeltaQ(2,3)	Overall period DeltaQ(-1,3)
	# of obs.	Mean	Mean	Mean
All firms	121	0.248 (0.004)	-0.083 (0.298)	0.165 (0.012)
KEPT firms	65	0.197 (0.036)	0.089 (0.277)	0.286 (0.003)
SOLD firms	56	0.307 (0.044)	-0.283 (0.048)	0.024 (0.407)
KEPT>SOLD (p-value)		(0.740)	(0.010)	(0.035)

*Panel B: Relative industry-adjusted Tobin’s Q response – SOLD-PART vs. SOLD-ALL unifying firms*

		Initial response DeltaQ(-1,1)	Correction period DeltaQ(2,3)	Overall period DeltaQ(-1,3)
	# of obs.	Mean	Mean	Mean
SOLD firms	56	0.307 (0.044)	-0.283 (0.048)	0.024 (0.407)
Sold-part	24	0.062 (0.691)	0.011 (0.884)	0.072 (0.330)
Sold-all	32	0.491 (0.041)	-0.504 (0.039)	-0.013 (0.460)
PART>ALL (p-value)		(0.922)	(0.035)	(0.338)

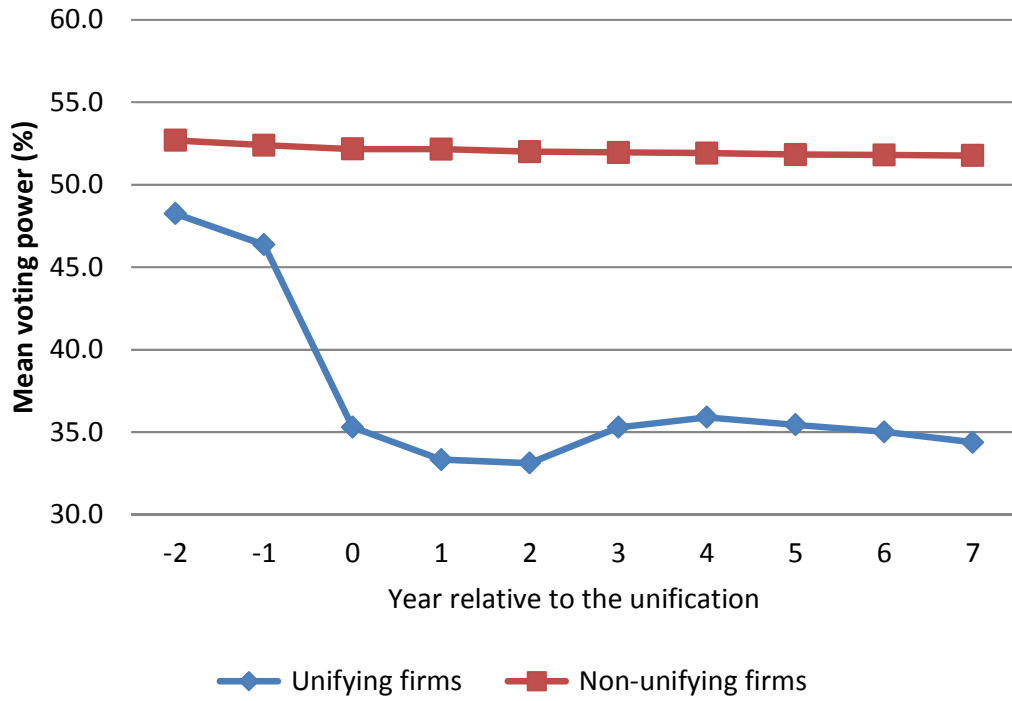


Fig.1. Mean voting power of the largest shareholder around the unification calendar year (year 0).

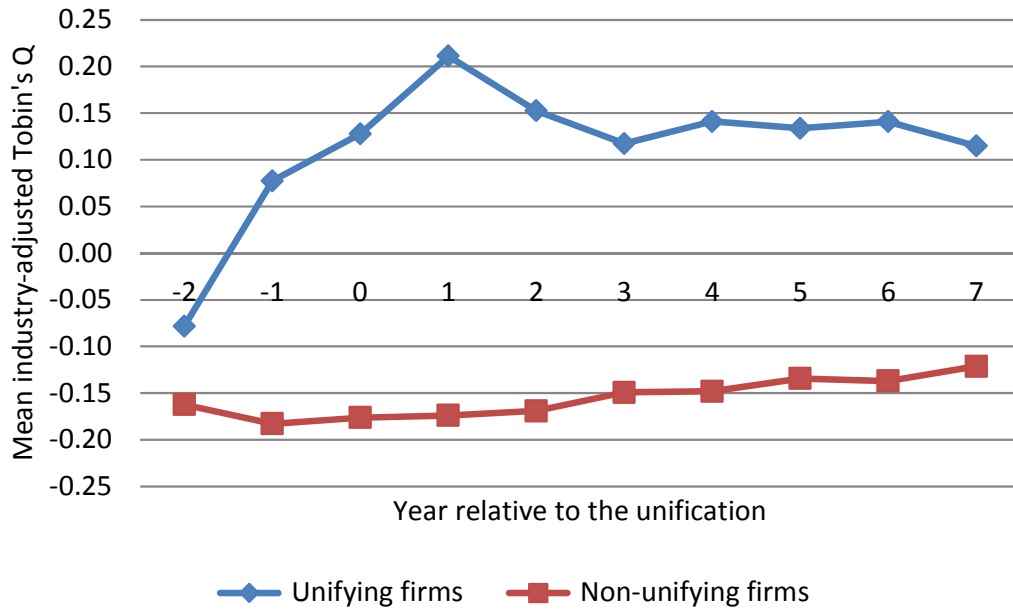


Fig.2. Mean industry-adjusted Tobin's Q around the unification calendar year (year 0).

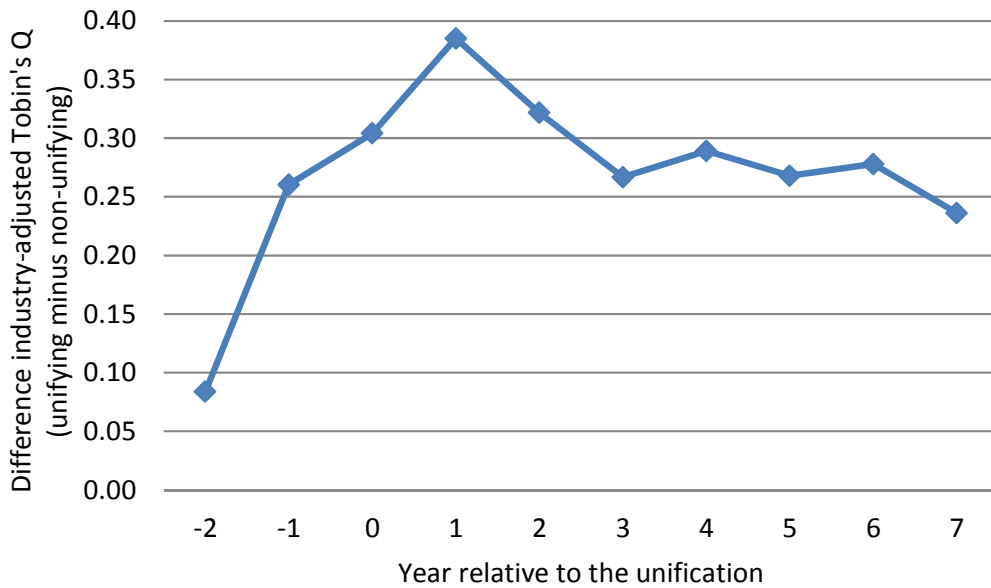


Fig.3. Mean difference in industry-adjusted Tobin's Q between unifying and non-unifying (control) firms around the unification calendar year (year 0).

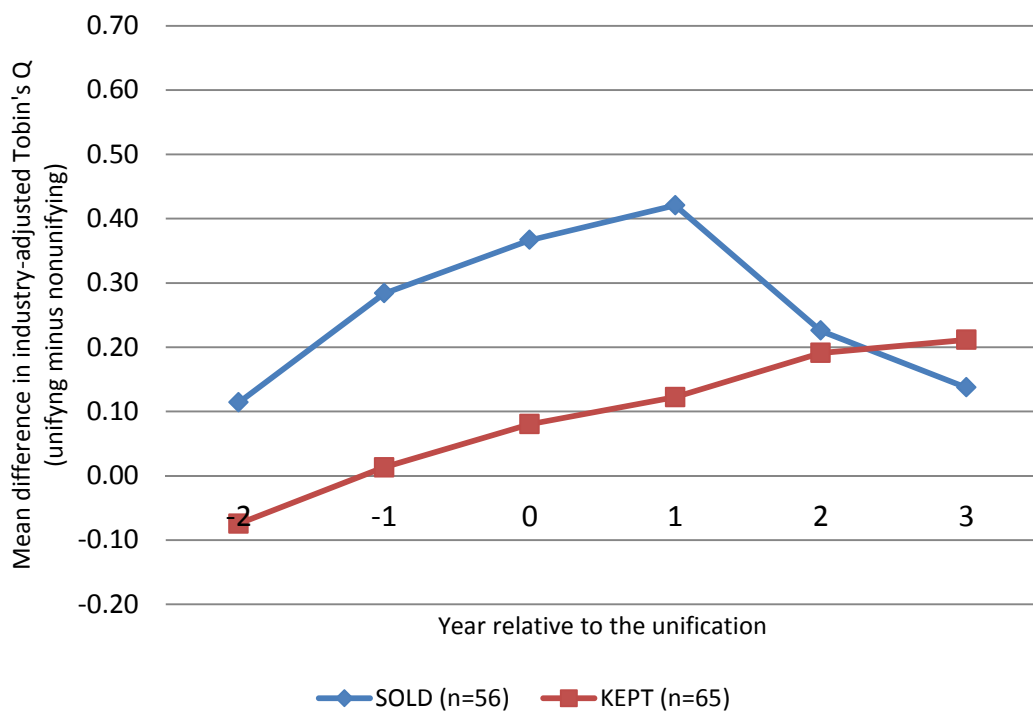


Fig.4. Mean difference in industry-adjusted Tobin's Q between unifying and non-unifying (control) firms by SOLD/KEPT category.