

The Value of Dual-Class Shares in Switzerland*

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Abstract

We analyse the effect of dual-class structures on shareholder value of Swiss companies. Switzerland presents an ideal setting for studying the deviations from the one share-one vote rule due to the traditional popularity of multiple share classes. After accounting for self-selection into dual or single share category, we find strong positive effect of dual-class shares on firm value. Analysis of acquisition activities reveals that dual-class firms do not perform worse in acquisitions; contrary to that, in the recent years or among firms with low and moderate market-to-book values the returns to acquisitions are improved due to the dual-class structure.

JEL Codes: G32, G34

Key words: Dual-class shares, Insider Ownership, Firm Value, Acquisitions.

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1. Introduction

The issue of the efficiency of a dual-class capital structure from the minority shareholders' perspective has been actively debated for more than a decade. The main question is whether the efficiency is improved in similar companies with a unified share structure, and whether the dual structure creates impediments to effective governance and value creation by facilitating the extraction of private benefits by corporate insiders at the expense of minority shareholders. The reported evidence is quite diverse; it covers distinct universes of companies and different time periods with main focus on U.S. data. A more dominant view in the literature is that the separation of control and cash flow rights distorts corporate governance and may lead to a deprivation of value at the expense of minority shareholders (Gompers, Ishii, and Metrick, 2008) and Masulis, Wang, and Xie, 2009). One caveat here is that samples of U.S. firms feature a fairly small proportion of companies with dual structure, which renders it to be an exceptional rather than standard corporate practice in the U.S. Studies conducted on other samples yielded overall inconclusive results (see an extensive review of empirical findings in Adams and Ferreira, 2008).

In our paper we show that in Switzerland dual-class structure improves the valuation of firms, once the sample selection is corrected, although least squares regression results show a negative association between valuation and dual-class status. Furthermore, the acquisition practices of dual-class firms improved over time and in the second part of our sample (2000-2008) were superior relative to those of single-class firms. We link this result to the improved corporate transparency requirements of the Swiss market in the 1990s, as well as to an overall traditional popularity of dual-class shares as a mean to keep long-term control over companies in Switzerland.

In the U.S. a wide range of corporate capital structure choices are available, so the dual capital structure appears to be just one of many alternative options for insiders who are inclined to keep tight control of the firms they established or took public (other measures vary from the state of incorporation – which determines the stringency of antitakeover laws –, to abundant control mechanisms in corporate by-laws, to ESOP and other employees participation schemes that effectively obstruct outsider control challenges over the company). Furthermore, the costs of keeping

such a structure in terms of less favorable access to credit and discount on issued securities might be substantial due to a negative attitude of institutional investors to the dual-class structure, thus straying most firms away from this alternative of financial architecture. Investors might plausibly perceive potential corporate governance weaknesses in such firms and require additional discount on dual firm debt and stock (see Giannetti and Simonov, 2006), which in turn affects capital structure choices. Thus, firms that opt for dual share in the U.S. are likely to differ considerably from other firms.

We constructed a dataset of 145 firms listed on SWX between 1992 and 2008, and tracked their acquisition activities. We collected suitable variables that allow us to properly model the selection of firms into dual and single share subsamples when estimating the effect of the dual-class on shareholder value. We found that failure to account for the endogenously driven sample selection leads to erroneous results: simple OLS regression estimates indicate a strong negative association between a dual share structure and firm value, measured as a ratio of market value of equity to its book value. Such findings should not lead to a conclusion that dual structure causes lower firm value: important systematic differences between dual and single-class firms need to be taken into account, and a simple OLS regression results can not be interpreted causally.

As Bertrand et al (2002) point out, when regressing efficacy of firms on the extent of cash flow rights of a controlling shareholder, “the [documented positive] cross-sectional relationship is not a test of tunneling since it could also result from differences in preexisting efficiency or any number of other unobservable factors.” When the sample selection is corrected for in our sample, the results change dramatically, and the dual structure has a positive impact on the firm value. The acquisition efficiency also improved significantly in dual-class firms over the sample period, indicating that after numerous improvements in reporting requirements took place, dual structures have been positively affecting acquisition policies in Switzerland.

Interestingly, recent works of Masulis, Wang and Xie (2009) and Gompers, Ishii and Metrick (2008) find parallel results in their OLS results and regressions accounting for sample selection and endogeneity issues (IV or Heckman two-stage regressions):

the effect of cash flow and voting rights separation is negative in both types of regressions, while in the latter study the effect of the dual class dummy itself is insignificant. Thus, their sample selection-corrected results are not materially different from simple OLS estimation, in which by assumption the dual structure is treated as being randomly allocated among firms.

This strong divergence with our estimation results may emphasize that dual structure firms that account for about 6% of all U.S. firms can be systematically different from the Swiss dual-class share firms that used to comprise almost a half of all firms listed in Switzerland in the early 1990s and still account for about a fifth of the market. On the other hand, it could also be that the instruments employed to correct the selection do not completely resolve the problems appearing due to the endogenous choice of capital structure (the point raised in Bennedsen and Nielsen, 2008). In this case, the reported negative effect is not due to the dual structure per se, but rather it manifests fundamental differences between these two sets of companies. The availability of valid instruments is a crucial issue, and the manageable sample size of firms listed in Switzerland allows us to collect relevant variables for correcting the sample selection problem.

Our results on valuation and acquisition practices among the two groups of firms demonstrate that criticism of the dual-class structure does not have strong grounds in the case of Switzerland, where reporting requirements and the overall level of investor protection have improved significantly in recent years, while the general business environment has traditionally attached high importance to such values as reliability and reputation. Thus, any policy that would aim to restrict the availability of multiple classes of shares in Switzerland would unlikely lead to the desired result of protecting the interests of minority shareholders.

This paper contributes to an extensive literature on cash flow and control rights separation, which delivers a wide range of conclusions regarding the effect of dual-class shares. Various studies show that deviations from the one share-one vote paradigm depress the firm value due to a less prudent use of excess cash, poorer executive compensation practices and a less effective market of external corporate control (Grossman and Hart, 1988, Harris and Raviv, 1988, Bebchuk, Kraakman and Triantis,

2000). By examining largest corporations in East Asia, Claessens et al (2002) show that firm value increases with the cash-flow ownership of the largest shareholder, but falls when its control rights exceed the cash-flow rights.

Gompers, Ishii, Metrick (2008) document that the separation of voting and cash flow rights creates an entrenchment problem and negatively affects the firm performance. At the same time, the abnormal returns between 1995 and 2003 on portfolios constructed of dual-class and single-class firms do not feature significant differences, showing that investors had possibly incorporated possible differences in performance into the stock price already before 1993. Masulis Wang, and Xie (2009) show that in the U.S. the divergence between cash and control rights leads to the loss of efficiency and possibly to a substantial value deprivation from dual-class firms. They document that the marginal value of cash is lower, excessive CEO pay is higher, acquisitions returns are worse and larger capital expenditures are valued less in firms with larger cash flow-control rights separation. It is worth noting that while the overall conclusion of these two papers hints at a low efficiency of a dual-class structure, most of their results are based on examining the gap between cash flow rights and control within the sample of dual-class firms only. In other words, their major results show that among dual-class firms, the efficiency is lowest in those with the highest separation between ownership and control of insiders. The main focus of our paper is evaluating the effect of the dual-class structure itself.

In order to understand the economic channel of a possible value loss effect in dual-class firms, we can refer to the papers analyzing the extraction of private benefits by insiders with superior voting rights. Numerous papers on tunneling provide such evidence on by describing the tunneling of resources from corporations in several countries. If a controlling shareholder has disproportionate control rights that exceed cash flow rights, the deprivation of value is often assured in environments with weak legal systems. For instance, Bertrand, Mehta, Mullainathan (2002) document a negative effect of disproportionate ownership in India on firm performance due to tunneling (dual-class ownership was not allowed there until recently; instead, pyramidal structures of indirect control were widespread). Cheung, Rau, and Stouraitis (2006) analyze similar expropriation practices in Hong Kong.

Several papers tried to analyze the effect of dual-class unifications on firm performance, and the reported evidence from various countries is quite inconclusive. For example, Smart, Thirumalai and Zutter (2007) find that unifications of dual shares in the U.S. lead to value gains, explaining this with weaker governance in dual-class firms. On the other hand, both the introduction and abolishment of dual shares result in positive stock price effect in the Ang and Megginson (1989) sample of firms listed at the London Stock Exchange. We must recognize that the decision to abolish the dual share structure - much like any other capital structure decision - is highly endogenous in that the decision-makers can strategically choose the moment to change the equity structure. They may choose to reorganize when the stock price reaction is expected to be most appreciative of the announcement. Moreover, in many cases the abolition of dual shares is a result of tensions between holders of superior and inferior shares, and the overall focus is on redistribution of control among insiders, while average wealth effect may be quite small.

We proceed with describing the peculiarities of the Swiss market and relevant regulations in Section 2. Then we develop our hypotheses in Section 3 and describe our data sample in Section 4. We report our results on valuation in Section 5 and the analysis of acquisition activities in Section 6. Finally, Section 7 concludes.

2. Swiss regulatory background

To understand why the Swiss environment can be fairly different, it is instructive to analyze the regulatory background of the Swiss corporate milieu. In the early 90s, the total assets of all dual-class firms were twice as large as the total assets of all single share firms. If there would appear to be notably more incidences of any sort of abuse related to misrepresentation and misreporting in dual-class firms, a natural equilibrium outcome would be that the regulators and market community would call upon the introduction of more stringent regulation and transparent corporate practices. Local corporate standards indeed experienced far-reaching advancements in the direction of more transparent and demanding rules, so that the contemporary Swiss requirements to listed companies are close to be as strict as the requirements

in the U.S.¹

Back in the beginning of the 90s, corporate executives and insiders could enjoy a fairly high level of freedom in accounting and reporting to shareholders and the market community. Before several important amendments were made to the Swiss Code of Obligations in the early 90s (accepted in 1992, mandatory for banks and financial companies from 1994 and for listed companies from 1996), there were the following weaknesses² in requirements to public corporations:

1. Swiss firms had an opportunity not to report their hidden cash reserves and thus could smooth their performance results over different years or spend that cash on discretionary projects of the managers, a practice that was shown to frequently harm the shareholder value.
2. Own shares didn't have to be reported, nor was it necessary to create a reserve for holdings of own shares.
3. The aggregation of financial statements of companies within a holding firm into consolidated accounts was not required; only the accounts of the controlling company were reported, thus the real business situation within a group of companies could have stayed unknown to the shareholders and often even to the board.
4. Crosswise set-off and pre netting of foreign currency liabilities were allowed.
5. Notes to the annual accounts were not required, so they were not used in common practice.

These flaws in regulation indisputably gave corporate insiders broad freedoms to misrepresent performance and manipulate accounting data, potentially endangering the interests of outside shareholders. AluSuisse and Von Roll were examples of companies that were reporting sound finances while concealing actual losses using hidden

¹Swiss listed companies are obliged to comply with IFRS or U.S. GAAP - much the same requirement as in the U.S. Yet, Swiss unlisted companies still enjoy fair amount of freedom, e.g., hidden reserves are still allowed and often used in case of unlisted companies, a practice which is prohibited in U.S. and international rules (according to the Swiss Institute of Comparative Law in Lausanne).

²See Peter Böckli, *Schweizer Aktienrecht*, 4. Aufl., Zürich 2009, §8 N 24-28.

reserves, which in the latter case brought the company to the brink of bankruptcy. Omni Holding was a noticeable example of fraudulent transactions and deception regarding its true business situation that triggered a major bankruptcy in 1991 and several billions of losses for its debt-holders. The company abused the loophole on dealings with share repurchases and bought almost half of its own shares without disclosing it, thus creating a misleading appearance of sound stock performance despite deteriorating finances.³ Given the weaknesses in regulation described above, the potential for abuse was presumably higher in firms with tight insider control, i.e. predominantly in firms with dual shares.

The lower initial transparency of Swiss corporations and the concentrated control resulting from dual-class structures were probably important triggers that provoked increased public attention and regulatory strictness on the Swiss market place. The dual structure has been heavily criticized since at least the 1930s; in 1936 the ban on dual class was the subject of the Swiss Nationalrat's (part of the Swiss Parliament) debate,⁴ and then again in 1991 (yet, in both cases the Parliament decided to keep this option for Swiss firms). As possibly an economic substitute for a potential ban of dual-class shares, the debate on the necessity of increased corporate transparency intensified in the early 90s: there were several votes in both parts of the Parliament regarding this issue, and while the majority supported increased transparency for public firms, there was a disagreement regarding the rules for non-listed firms.⁵

The financial market regulation has experienced numerous improvements since then, most notably the enacting of the True and Fair View principle⁶ and the introduction of more modern and stringent accounting rules in the Swiss Code of Oblig-

³See Appendix for further details.

⁴See Robert Goldschmidt, *Grundlagen des neuen Aktienrechts*, St. Gallen 1937, p. 79.

⁵We identified at least six votes held on this issue by the Nationalrat in 1985 (in *Amtliches Bulletin NR*), and found similar examples of discussions held in the *Ständerat* (the other part of the Swiss Parliament).

⁶In German "True and Fair View-Konzept". The listing rules demanded accounting according to the True and Fair View Principle starting from October 1996. See art. 8 para. 3 of the Swiss Stock Exchange Act (*Bundesgesetz vom 24. März 1995 über die Börsen und den Effektenhandel, BEHG*) and Peter Böckli, *Schweizer Aktienrecht*, 4. Aufl., Zürich 2009, §8 N 36.

ations. The latter obliged firms to provide consolidated reports,⁷ introduced notes to the annual accounts and rules on the disclosure of holdings of own shares and respective reserves, mandated reporting of clear offsetting links between the balance sheet and the profit and loss statement, and introduced the principle of first valuation by acquisition or production costs. Since 1996, the True and Fair View principle has effectively eliminated the practice of keeping hidden cash reserves on corporate books.⁸ Importantly, previous studies showed that detrimental use of excess cash was one of the key characteristics of dual share companies (Masulis et al 2009), which was revealed as lower valuation of each dollar of cash held, as well as poorer returns to acquisitions and capital expenditures by companies with more disproportionate insider voting rights, i.e. in dual-class stock companies.

Furthermore, the International Financial Reporting Standards (IFRS) became more prevalent in Switzerland. Since 2005 most listed companies in Switzerland⁹ are subject to IFRS requirements, but even prior to that the increasingly global investor community had been demanding the adoption of these standards: Nestl, Serono and ABB were among the first to adopt IFRS¹⁰ (called the International Accounting Standards or IAS prior to 2002), and this first phase of IAS adoption by large companies extended competitive pressure on other large and medium sized firms to adopt the international standards. The regulation of executive compensation also became more strictly regulated, with two accords of compensation transparency rules enacted in 2001 and 2004.

⁷Art. 663e OR 1991.

⁸Further advances included the following: the reporting became focused on serving primarily external investors, not the interests of the management; the auditor has to approve complete compliance; economic, not legal reality has priority (“substance over form” norm); the achievement of a True and fair view must not be restricted or made impossible by political decisions. See René Cotting and Max Boemle, True and Fair View-Konzept versus Fair Presentation, in: *Der Schweizer Treuhänder* (2000), p. 790.

⁹For auxiliary segments of the stock exchange the Swiss GAAP FER are obligatory. Such auxiliary segments are: local caps, real estate companies, investment companies as well as those emitters that only have listed bonds. Instead of the IFRS it is still possible to apply the U.S. GAAP. Peter Böckli, *Schweizer Aktienrecht*, 4. Aufl., Zürich 2009, §7 N 31.

¹⁰Ann-Kirstin Achleitner and Giorgio Behr, *International Accounting Standards - Ein Lehrbuch zur internationalen Rechnungslegung*, 3. Aufl., München 2003, p. 75.

We can argue that while in the U.S. the investors had the choice to “walk away” from approximately 6% of firms that were dual class, in Switzerland such an argument would have been less appropriate when about half of the companies were dual class, thus calling upon auxiliary regulatory norms rather than relying solely on market forces to foster corporate transparency. Arguably, such preemptive increase in regulatory stringency has fostered prudence at the market place and allowed Switzerland to avoid scandals similar to cases of Enron, WorldCom and Parmalat in the period following the reforms in financial regulation and accounting rules.¹¹ Presumably, the lack of transparency allowed some executives around the world to conceal financial problems at their companies and helped to keep suboptimal management. Freedom to manipulate with the corporate reporting and ability to hide resources and losses were the key factors that made these corporate abuses possible. While in the beginning of the 1990s, Swiss corporations had such freedoms coupled with a high degree of concentrated control (amid the popularity of dual-class stock), the regulatory changes dramatically increased the accountability of top managers for the resources under their control, which made a wide-scale misuse of the shareholder value significantly less possible in Switzerland.

The regulation of multiple share classes in Switzerland has a special peculiarity: the issuance of multiple types of shares with a different number of votes per share is not permitted (except for non-voting participation certificates). The disproportionate voting power can be achieved via issuing two classes of shares with equal voting rights, but different notional values. Dual-class firms typically have more expensive bearer shares and cheaper registered shares, where the latter generally give voting control to families or other insiders in excess of their cash flow rights. The highest notional value may not be more than ten times than the lowest. Most dual-class firms in the sample chose the maximum difference,¹² which is consistent with the U.S. samples of dual-class firms in Gompers et al (2008) and Smart and Zutter (2003), who have 1:10 voting rights divergence as the most frequent structure. Numerous firms used

¹¹See the appendix for a brief review of examples related to corporate fraud, hidden losses and derivative abuse in the international and Swiss practice.

¹²A notional difference of five times is another common, albeit less frequently observed alternative in our sample.

to have a limit on a maximum number of exercisable votes per shareholder or group of shareholders (most frequently at the level of five percent), as well as a ceiling on foreign ownership, although there was a general trend to abolish such restrictions in the 90s.

3. The economics of dual-class and hypotheses development

In order to understand the value consequences of having the dual-class structure, in this section we analyze how the dual-class affects the incentives of corporate insiders. We have to emphasize that cash flow and control separation in many cases is not the *aim* for introducing the dual share structure. Rather, many growing companies become too big for founders and other insiders to keep controlling equity stake. However, seizing majority control is often an undesirable prospect for insiders in the light of possible takeover challenges, increased control of outside investors, and other factors that potentially may lead to a change in the business model or the management team against the will of current insiders. The dual-class structure (along with other alternative mechanisms¹³) comes as an *instrument* allowing to raise outside capital without substantial loss of control. This allows the entrepreneurs to protect the business model of their firm, its philosophy¹⁴ and control against possible takeover attempts and short-term disturbances.¹⁵ From this perspective, the dual share struc-

¹³Although Gompers, Ishii, and Metrick (2008) remark that “the other forms of anti-takeover protection - poison pills, staggered boards, golden parachutes - are no match for the power of dual-class stock.”

¹⁴Google and Berkshire Hathaway are two stark examples of very successful companies that accessed public capital markets with dual-class structure. In both examples, the founders value control to a very high degree, while many investors seem to appreciate the positive effect of concentrated control by founders even in the presence of potential for insider benefits that such control typically entail. Contrary to the argument of disciplining effect of potential takeovers, many investors likely prefer protection that Google has from unsolicited takeovers from temporarily cash-rich rivals (e.g., Yahoo), that would be hypothetically possible following a period of Google’s poor performance and temporary share price decline.

¹⁵As a growing body of literature signifies, far from all takeovers serve disciplining role over underperforming managers. In fact, empire building and overconfidence are often the true reasons behind an acquisition decision; see Malmandier and Tate (2005) and Burkart and Panunzi (2007) among others.

ture is not primarily introduced as a way to achieve disproportionately high control rights over the firm, but rather it appears as a firm- and founder-specific outcome of its capital and voting design.

Along these lines, the one share-one vote literature emphasized a number of important positive effects of having dual-class shares. The dual-class structure helps entrepreneurs to raise capital without substantial takeover threats, thus allowing commitment to long-term investments. This effect solves the problem of managerial myopia, when insiders focus on short-term goals to preclude potential takeovers (Chemmanur and Jiao, 2006). An overall takeover threat may induce insiders to waste resources on perpetuating their position instead of managing corporations effectively. The dual structure allows an entrepreneur to raise capital without substantial takeover threats, a fear which, according to Boot, Gopalan and Thakor (2006), can make an entrepreneur reluctant to access public capital markets in the first place. Indeed, Smart and Zutter (2003) show that dual structure is chosen by entrepreneurs who value control in their firms following IPO.¹⁶

Furthermore, as Burkart and Lee (2008) argue, reallocation of effective control from insiders (concentrated holdings of dual shares) to managers (dispersed shareholder ownership) can actually exacerbate the associated agency problems. In particular, executives' incentives can be even more disconnected from value creation than those of insiders, who still hold substantial cash flow rights (albeit in a lesser amount than control rights) and often have a psychological connection to the fortune of the controlled company. Furthermore, the dual structure helps to overcome low diversification of insiders' personal wealth: with lower capital share in the firm insiders have better diversified portfolios, and thus closer risk-taking incentives with an outsider shareholder, who is free to broadly diversify the firm-specific risk in her portfolio.

We can formally split the positive and negative effects mentioned above into two economic channels. We let channel (A) aggregate the positive influence of concentrated control resulting from dual shares. We can list here the commitment to the

¹⁶Yet, investors may undersupply capital economy-wide amid high expropriation opportunities created by dual-class structures (see Morck et al 2005) - the threats that are presumably stronger in countries with a poorer shareholder protection.

success of the company (in many instances, the commitment of the founder or a related family, who may have strong reputational incentives), focus on long-term goals, more willingness of successful private firms to access public markets, and better alignment of corporate insiders as compared to managers with smaller equity stakes. On the other hand, channel (B) includes the negative effects of scope for deprivation of value and inefficient management. Two main factors here are potential tunneling of resources at the expense of outside shareholders as in Bertrand, Mehta, and Mulinathan (2002) and Cheung, Rau, and Stouraitis (2006), poorer effectiveness of the market for corporate control and weaker takeover discipline over inefficient managers as in Bebchuk, Kraakman, and Triantis (2000).

The sign of the net effect of channels (A) and (B) determines in each firm whether a dual-class structure causes better or poorer performance and valuation as compared to the same firm if it had unified shares. For instance, the results of Gompers, Ishii, and Metrick (2008) and Masulis, Wang, and Xie (2009) suggest that in their sample the net effect of higher cash flow-control separation is negative. In our paper, we test whether the net effect is positive, negative or is absent (in which case channels (A) and (B) nearly offset each other) by estimating the influence of the dual share on the firm valuation, as well as on the efficiency of acquisitions. We formulate our hypotheses correspondingly.

Hypothesis H1: *The net effect of dual-class ownership on the market-to-book value of equity is positive.*

Hypothesis H2: *The dual-class structure positively affects the outcomes of acquisitions as measured by the abnormal return at announcement.*

Presumably, we expect the variation in the magnitude of the net effect to differ across countries, depending on the quality of legal enforcement and investor protection, the value of reputation and discount factors. For example, the two mentioned studies on tunneling practices analyzed Mainland China and India, two environments in which both investor protection provisions and the value of reputation in repeated interactions are supposedly lower than in Switzerland, so we expect the net effect of dual shares to be on average higher (more positive or less negative) in countries like Switzerland than in those two markets.

As discussed above, the level of investor protection in Switzerland is comparable to the American one, so we should not expect channel (B) to be weaker in Switzerland than in the U.S. On the other hand, the positive effect of channel (A) potentially could be stronger in the Swiss environment, and specifically so for firms that have chosen to have dual-class structure. Among firms that keep multiple share structures over the sample period are Lindt&Sprüngli (premium chocolate manufacturer), Swatch Group (manufacturing various luxury brands of watches and jewelry, the largest watch manufacturer in the world), banks Vontobel, Sarasin and Rothschild (three listed banks with very reputable private banking businesses). We can reasonably expect that within this category of firms the value of long-term commitment and reputation may substantially outweigh the expected loss from lower takeover discipline or potential expropriation. On the other hand, among the firms that unified the share structure are much more high-tech oriented or machinery manufacturing companies, such as Von Roll, Logitech, Novartis, Cos Computers, Micronas, Schindler, Sulzer, Schweiter Technology, etc. The choice of capital structure among Swiss firms appears to be an important dimension of analysis and we treat this issue accordingly in the empirical part of this paper.

In section 5 we test the influence of dual shares on firm valuation, by constructing least squares regression in part 5.1 and also by taking into account that the choice of the share structure is an endogenous decision in part 5.2. In section 6 we evaluate how the quality of acquisitions measured by announcement return differs among dual and single-class firms. Our results show that in the Swiss market the net effect of dual shares is positive for firm valuation, not negative for acquisition returns and in fact is significantly positive in the second part of our sample, as well as among firms with low and moderate market-to-book values.

4. Data description

For our regression analysis, we start with all firms (excluding cantonal banks) that were listed on the Swiss market between 1994 and 2000. We collected accounting and share price data for these firms over 1992-2008 from Datastream. To collect

the information on the dual class variable¹⁷ we employed the information on the capital structure of Swiss firms in the dissertations of Max Gerster (Stimmrechtsaktien, Diss., Zürich 1997) and Carole Lea Gehrler (Statutarische Abwehrmassnahmen gegen Übernahmen, Diss., Zürich 2003), as well as footnotes in Datastream and annual issues of the Swiss Stock Guide.¹⁸ Further, we hand-collected the dates of stock unifications for all dual-class companies from the initial list that no longer have a dual share structure. We identified the capital structure for 145 firms listed at SWX¹⁹ during the 1990s. After collecting firm-specific accounting variables we have a sample of slightly below 2000 firm-year observations spanning the period from 1992 to 2008; from about 80 firms with complete available data in 1993 to about 140 firms in 2008. The availability of data for the firms in our sample is poor for 1992-1994 but is improving significantly after 1995. We conventionally replace Research and Development expense to be zero if the value of this variable is missing in Datastream.²⁰ The proportion of dual-class firms in our sample gradually decreases from 56% in 1994 and 46% in 1996 to 28% in 2003 and stays at about 22% in 2005 through to 2008.

To improve inference and validate identification in Heckman-style treatment effect estimation, we collected the following four variables employed as predictors of dual-class structures in our tests. First, following Masulis et al (2009) and Gompers et al (2008), we codified whether a firm’s name contains a *person’s name* (indicator variable that equals one if the company name contains any surname or family name). Second, the share of firms that concurrently have a dual-class structure (in a firm’s broadly defined industry) is used as an exogenous predictor of having a dual structure. We also studied the history of each firm in our sample to collect the variable age, where we followed the principle of sticking to the establishment year of the company described as the “core” enterprise if there were mergers or acquisitions with name changes.

¹⁷In fact, many firms used to have three classes of stocks before the 90s. Besides bearer and registered shares, participation certificates were often used (and continue to exist at some firms) as an extreme case of cash flow- and voting rights separation. We classify the firm as having dual class if it has more than one class of shares.

¹⁸The guide is published yearly by the leading Swiss financial newspaper “Finanz und Wirtschaft”

¹⁹The Swiss Stock Exchange; now “SIX” (following its restructuring in 2008).

²⁰Schmid and Zimmermann (2009) describe that most Swiss firms in their sample with missing R&D data indeed run types of business that tend to have insignificant R&D expense.

Finally, we searched the news wires to document the departures of executives and other influential insiders²¹ that we can classify as exogenously driven. We classified departures as exogenous if quoted due to demise, serious illness and retirement age; other types of departures would very likely be related to past or expected performance and thus would not suit as exogenous variables.²²

The requirements on instrument exclusion are not as strict for the Heckman-type estimation technique that we employ (as compared to the instrumental variable procedure), yet the exogeneity of dual class determinants is highly desirable in order not to rely solely on distributional assumptions needed for the Heckman estimation in the absence of exogenous predictors. For example, in line with Masulis et al (2009) and Gompers et al (2008), we argue that the variable *person name* should not have an impact on the efficiency of a firm, other than potentially influencing the decision of insiders (in this case, a family related to that name) to retain the control of the company via the dual share capital structure. In other words, this variable is exogenous to firm value, besides its influence on the valuation channeled through the incidence of having the dual-class structure.

Similarly, the *firm age* variable is linked to the decision to keep the firm under tight control using the dual-class structure, where the relation is hypothesized to be negative. As a firm becomes more mature, it also tends to have a weaker link with its initial creators simply due to the natural passage of time, as younger generations of owners will arguably have a diminished psychological attachment to the firm their ancestors established or used to own. At the same time, we expect the age to have little influence on the firm value, once the industry effect, profitability and share of industry sales are taken into account. As the OLS estimation results further show, age has indeed insignificant influence on the firm valuation in a multivariate regression setting, which gives further validity to the exclusion argument.

To address the second hypothesis on the efficiency of acquisition practices, we

²¹Insiders classified as influential if a manager or board member holds at least 20% of voting control (family shareholdings were also treated as being controlled by the insider).

²²Another variable often used to instrument for dual-class structure, media dummy, was not employed in our study, as no company in our sample can be classified as belonging to media sector (using SIC codes as in Gompers et al).

construct a sample of acquisitions announced by the firms in our sample in Switzerland in 1992-2008 as reported in the SDC database. We match acquisition data with accounting and stock price data from Datastream. There are only a few observations in 1992 and 1993, and the sample with completely available accounting data starts in 1994.

[Insert Table 1 Here]

To test whether the announcement return differs for dual and single-class firms, we employ the raw cumulative abnormal return (CAR) around the date of the acquisition announcement as a dependent variable.²³ The abnormal return is customary computed as a sum of stock returns in excess of the SMI index - over five days, starting with the return two trading day prior to the announcement.

We report the descriptive statistics in Table 1. Over the entire sample period, dual class firms are on average significantly smaller in size and industry share of sales, have somewhat smaller past sales growth (although the difference is insignificant), higher asset turnover and return on assets. The means of leverage (defined as long-term debt and current portion of long-term debt over assets) are similar, but single-class firms have notably higher long-term debt portion in their capital structure, which is explained by significantly higher short-term debt over assets ratio in dual-class firms. Industry-adjusted cash holdings and R&D expenditures are significantly lower at dual-class firms, while capital expenditures ratios and dividend payout do not differ significantly. These features hint at importance of industry and business structure for the choice of dual share structure. Single-class firms are on average five years younger and as expected have on average 10% less of closely held voting shares in their equity structure. Finally, abnormal returns at acquisitions are insignificantly higher for dual-class firms, which will be the focus of detailed analysis in section six. We proceed with reporting the results of testing our hypotheses in the next two sections.

²³We use a five day return window. Returns over periods of five days (rather than three) seem useful amid overall lower turnover of Swiss stocks, as witnessed in numerous days with stale prices each year for most stocks in the sample.

5. Estimating the impact of dual-class on firm valuation

We investigate the impact that the dual class structure has on a firm valuation, defined as market value of firm equity relative to its book value. We employ two versions of estimation: the baseline Ordinary Least Squares and the estimation that accounts for the sample-selection, the treatment effect Heckman model. The former implicitly assumes that the dual class structure is randomly allocated to different firms in the sample. Such an assumption regarding an important choice variable is commonly not valid in any social sciences setting, neither is it sufficiently sound in our case of choosing a capital structure, and thus the estimated coefficient has merely a descriptive interpretation of the association between firm value and the fact of having a dual structure. The OLS estimates cannot be interpreted as a causal relation (or as an impact of introducing a dual structure in a given firm onto the valuation). Such a conclusion would disregard the inherited differences that make some types of firms more inclined to adopt a dual-class structure than others.²⁴ Conversely, Heckman Treatment Effect estimation regression treats the choice of dual-class share as an endogenous choice variable, which is determined by firm-specific and industry-specific time-varying variables. In this case, the estimated coefficient of the dual-class dummy has a causal meaning: it quantifies the effect of having a dual-class structure on firm value.

5.1. Dual-class and valuation: OLS regression results

In the baseline regression, the dependent variable is market-to-book value of equity at the end of the accounting year. The explanatory variable of interest is the dummy of the dual-class. If the dual-class is abolished in a given year, we classify the firm as having unified shares in the respective year, for the anticipated effect of changes are likely to be incorporated into the year-end valuation. We employ the usual control variables to isolate the effect of firm-specific characteristics: leverage to capture the

²⁴Yet, in numerous corporate finance studies simple OLS-type regressions were prevalent until about one and a half decade ago. Not surprisingly policymakers and mass media also used simple performance comparisons between frequently incomparable groups of companies to yield policy recommendations or criticize various corporate actions, including the dual class shares. Progressively, the last two decades witnessed the widespread use of techniques that adjust for selection, which allows us to aim at documenting more accurate effect of the capital structure of our interest.

disciplining effect that periodic interest payments extend upon management, natural logarithm of assets to control for the firm size, share of industry sales to capture relative size on the market, earnings and assets turnover to capture efficiency, and age to control for maturity. The inclusion of these variables controls for the systematic differences in these dimensions and helps to estimate the clean OLS estimate for the dual class dummy. However, we should note that it does not solve the problem of the sample selection into dual vs. single-class, which is addressed in the next subsection.

[Insert Table 2 Here]

As presented in Table 2, the coefficient of the dual class dummy has a negative and significant estimate in the OLS regression indicating a negative correlation between a dual-class share structure and the firm value. As we discussed above, the coefficient from this regression should not be interpreted causally, and the underlying economic relation is yet to be estimated in a Heckman selection model. For now we conclude that firms that have dual-class also tend to be valued less.

Cash holdings relative to industry average have a positive relation with the valuation, which either demonstrates that stronger and more successful firms (with higher valuations) accumulate more cash from operations, or that the market perceives large cash holdings as a competitive advantage and a means to expand the market share. The latter explanation is in line with Fresard (2009), who finds that cash reserves allow firms to gain market share and succeed in a product market competition. However, this contrasts with a more traditional view that cash is used for discretionary purposes of management rather than for shareholder value maximization.

Coefficients on other variables have an intuitive interpretation. Leverage has a positive but insignificant effect on equity value, which seems to reflect the net effect of the main consequences of having higher leverage: the positive influence of financial discipline imposed on corporate management and the negative influence of potential distress costs due to higher risk of a leveraged firm. It may also reflect the tendency that higher leverage is observed in more mature firms that have more assets in place (that helps to take higher debt level using assets as collateral) and at the same time less growth opportunities, and thus a lower market-to-book value.

Larger firms (more assets) tend to have a lower valuation per dollar of book value; while a firm's competitive position in its industry (percentage of industry sales by the firm) improves its valuation. Profitable and more efficient firms have higher valuation: sales to assets ratio and lagged earnings are positively correlated with valuation. R&D expenditures are positively related to market value, reflecting that growth firms with higher research spending levels have a higher valuation.

5. 2. Heckman Treatment Effect Estimation with correction for sample selection

As noted in the previous section, the sample selection problem makes the interpretation of the dual dummy coefficient problematic, as the estimate likely is biased. The Heckman treatment effect estimation adjusts for the selection problem in two steps. In the first stage the probability of having a dual-class structure is determined in a probit regression, where a probability of having a dual-class structure is regressed on firm- and industry-specific characteristics. In order to improve the validity of the Heckman procedure, we need to have at least one valid instrument in the probit regression. The usual conditions in this case are that an instrument is sufficiently correlated with the dual class dummy and that it does not have a direct influence on the dependent variable of the second stage regression, the market-to-book value. As discussed above, the variables firm age, dummy for a person's name, share of dual-class firms in a broadly defined industry and exogenously driven departure are selected as instruments for this step.

The Inverse Mill's Ratio (IML) is obtained in the probit regression and then substituted into the second stage regression to correct for the sample selection. We employ two specifications of the first stage estimation, (i) with firm age, dummy of person's name and share of dual-class companies in a firm's industry,²⁵ corresponding to two middle columns in Table 3; and specification (ii) where we additionally include the dummy of the period following an exogenously driven departure as an excluded instrument (the last two columns in Table 3).

[Insert Table 3 Here]

²⁵The firm itself was excluded from calculating the share of other dual-class companies in a given firm's industry.

Column (2) of Table 3 presents the probit estimation of dual-class selection in specification (i). We observe that the dual structure is more likely in younger firms (negative relation to firm age), if a firm’s name contains a person’s name (although only marginally significant at a 10% level), and if the firm has more dual firms in its industry (dual share variable). Also, the R&D expense level is negatively associated with dual-class, indicating that the growth firms with higher level of R&D are generally less likely to have dual-class shares. All exogenous regressors (besides person’s name dummy) are significant at least at a 10% significance level, and the Wald test of independent equations rejects the no sample selection hypothesis at all conventional significance levels.

As follows from the Heckman estimation in column (1), the selection is indeed present: the Heckman selection term, IML, is negative indicating that firms that happen to be dual-class also tend to be selected - *ceteris paribus* - from the pool of companies with lower valuation. A partial explanation for the negative coefficient of the selection term comes from the fact that R&D-intensive firms generally tend to have a higher equity valuation, and at the same time are less likely to have a dual structure (as follows from our probit estimation column). This result is consistent with Villanoga and Amit’s (2006) findings that firms with higher Tobin’s Q - i.e. firms with more growth opportunities and less fixed assets in place - have a smaller likelihood of adopting dual-class shares. In the main regression, the dual share dummy coefficient has a causal interpretation: dual-class has a positive and significant impact on a firm value. In other words, the firms that are more likely to be in the dual-class group are *ex ante* inclined to be valued less, but having a dual-class structure improves their value. Other variables generally have similar signs to the OLS specification.

In specification (ii), the results stay qualitatively the same, as reported in columns (3) and (4). Here we add the PostDeparture dummy and a dummy of Departure.²⁶ Note that firms that experience a departure over the whole period, i.e. with the Departure dummy equal to one, are more likely to have dual shares. This is related to a higher incidence of detected departures in firms with higher concentrated control.

²⁶The departure dummy equals one for all firms that experienced an exogenously-driven departure of influential insiders during the whole sample period.

On the other hand, such firms are fundamentally different from firms with no influential insiders, so the Departure variable does not satisfy the exclusion requirement and thus we have to include it also in the main regression. Interestingly, it has a strong negative effect on the firm value, indicating that the pool of firms, from which we detected departures of influential insiders, are ex ante valued less, and this effect stays when the dual-class sample selection is accounting for using the IML variable.

The variables Dual Share and Post-Departure in column (4) are significant and have the expected signs, while Age and Person's name have the same signs as in specification (i), but lose statistical significance. The main result remains the same: the selection coefficient on the IML-correction variable is negative, but having a dual-class structure positively affects the valuation. This gives us ground to conclude that a simple OLS regression provides biased estimates of the dual-class influence on the firm value, and that the Heckman estimation provides reliable evidence regarding the influence of dual-class shares. Correction for the sample selection is necessary, as firms with different capital structures are different in their fundamental characteristics.

Thus, the main result is that in Switzerland a dual-class structure provides more benefits than drawbacks to the shareholder value, so that the net influence of positive long-term commitment effect and negative deprivation of value effect is positive. We suppose that in Switzerland it is probably a result of high degree of prudence and law-abidance that could in part be an equilibrium outcome in the economy with dominating dual-class structures and low transparency in the early 90s.

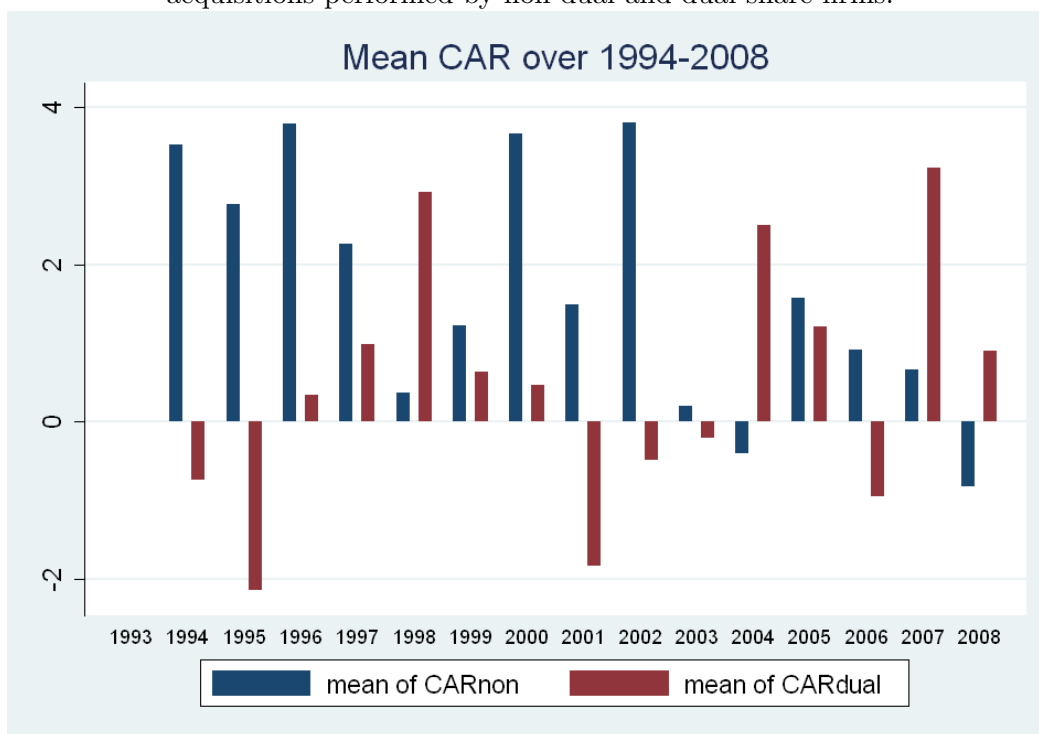
6. Efficiency of M&A transactions

In addition to the impact of the dual-class structure on a firm's valuation, we investigate whether growth via acquisitions has different patterns within subsamples of dual and single-class firms. The non-organic investment is an ideal setting to determine whether the net effect of long-term commitment and the private benefits problem improves the efficiency of acquisitions performed by dual-class firms relative to those performed by single-class firms. The stock market return around the acquisition announcement comes as a critical test of whether the investors believe that firm executives and majority shareholders indeed pursue a value-maximizing strategy.

According to the efficient market hypothesis, investors command their evaluation of a proposed acquisition value into the share price. If there is in fact a substantial concern that private interests are a dominating factor for the decision to acquire, the market is more likely to express its dissatisfaction by pushing the stock price down.

We start with a univariate analysis of abnormal returns to yield the first result regarding the difference in acquisitions' efficiency within the two groups of firms. We present the distribution of abnormal returns over the sample period of 1994 to 2008 in Figure 1. Each year, the first bar (in blue) represents the average cumulative abnormal returns (CAR) on acquisitions announced by firms with single share structure, and the second bar (in red) indicates the average CAR around acquisitions by dual-class firms. The distribution of returns varies a lot from year to year; the overall tendency before 2003 was that returns on acquisitions announced by dual share firms were inferior, while starting in 2004 CARs of dual-class firms were on average better compared to single share firms.

Figure 1. The distribution of average Cumulative Abnormal Returns among acquisitions performed by non-dual and dual share firms.



To assess the statistical significance of this trend, we split the sample period into

five equally split periods. We calculate the average returns over each period for dual and single-class firms, as well as the difference between the two groups, and report the results in Table 4. The intuition regarding Figure 1 is confirmed statistically: the difference between single and dual-class average returns is positive in the first period and negative in the last, both at a 10% significance level.

[Insert Table 4 Here]

These preliminary results show that the findings on acquisition quality in Masulis et al (2009) on the U.S. sample do not extend to the whole Swiss sample: by comparing average returns, we see that only in 1994-1996 the acquisitions of dual-class firms were significantly worse, while starting in 2004 the acquisitions announced by dual-class firms were on average better than those announced by single-class firms. As compared to the market-to-book value results of the previous chapter, the acquisition return analysis does not suffer the problem of non-random choice into a dual versus single share category. Rather, the comparison of returns between the two groups manifests the view of the market on the quality of acquisitions. So, assuming the market provides a correct assessment of the value consequences for each acquisition,²⁷ the comparison of returns can demonstrate which group of firms performs more valuable acquisitions (or less value-destructive ones - if we talk about the managerial overconfidence and empire building aspects behind acquisitions).

Before drawing conclusions regarding the M&A efficiency, we need to conduct multivariate tests to account for various firm-specific characteristics that were shown to be related to acquisition returns. Market-to-book value of equity proxies the value of marginal Q and captures the relative valuation of the firm. Overvaluation of stock may lead to managerial overconfidence resulting in sub-optimal acquisitions, so we additionally interact the market-to-book variable with the dual dummy variable. Also, overvaluation creates an incentive to optimally perform stock-financed acquisitions, which are more likely to have lower announcement returns. To address this issue, we exclude all-stock financed acquisitions as a robustness check. Further, we include

²⁷Or at least we require that a possible bias is not systematically different for dual and single class firms.

leverage to control for disciplining effect of debt in the capital structure, natural logarithm of assets to control for size, earnings and assets turnover to capture efficiency, and age. All accounting variables are as of the end of the year preceding the acquisition announcement. The results of CAR regressions are reported in Table 5. To address the change in the tendency that we observed in a univariate setting, we interact in regression (1) the dual dummy with the post-2000 dummy. Echoing our preliminary results, model (1) shows that in the first half of our sample the influence of dual-class on acquisitions is negative, although insignificant (the estimate has a p-value of about 15%); while in the second part, it is positive at a 10% significance level.

In model (2) the coefficients of interest are the dual class dummy and its interaction with the valuation measure MB (Dual_MB). As expected, a higher corporate valuation is associated with lower expected returns to acquisitions, which is consistent with the overconfidence hypothesis as in Malmendier and Tate (2005). Interestingly, this negative effect of overvaluation appears only in the dual-class subsample (the negative interaction term), which shows that in firms with high valuations, dual share results in lower announcement returns. Thus, high valuation by the market and concentration of voting power jointly exacerbate the problem of suboptimal investments by overconfident managers. On the other hand, the effect of long term commitment to the firm resulting from dual-class structure has a strong positive influence on returns to acquisitions announced by firms with low valuations. To assess the magnitude of the effect, we take the firm with an average market-to-book value (2.3), and we see that for such a firm the influence of dual class is positive ($8.22 - 2.99 * 2.3 = +1.32$). For a firm with below-average valuations, the influence of dual-class is higher, while for firms with a market-to-book value substantially above average (in the sample we have standard deviation of the market-to-book variable equal 1.90) the effect of dual-class is negative.

The latter result has interesting cross-sectional implications: it is not the high valuation or concentrated control resulting from a dual-class structures that lead to inferior acquisition decisions, but rather the combination of both. Higher valuation may create managerial overconfidence along the lines of Malmendier and Tate (2005),

while dual-class can help executives to avoid common control mechanisms and to relinquish their ambitions to acquire excessively. The alternative interpretation here would be that managers optimally acquire when the stock is overvalued, and the negative return results from the signalling effect. However, this alternative has a limited validity as the results on the sample without 100% stock-financed acquisitions (unreported for sake of brevity) are not qualitatively different.

As for the control variables, a high level of debt seems to improve the return to acquisitions due to monitoring role of bondholders that averts managers from making value-destroying acquisitions: the coefficient on Leverage is positive in both regressions, although it is marginally significant only in model (1). Asset turnover measured by the *Sales over assets* variable has a positive influence on acquisition returns, although insignificant in both regressions, indicating that acquisitions by firms that utilize assets more effectively are somewhat better appreciated.

In these acquisition return regressions, we observe an isolated outcome of a managerial decision to acquire another firm or business; so as we find that market reaction is more positive in one group of firms, it indicates that interests of shareholders are better pursued in this type of firms. While we observe the resulting net influence of the dual-class structure on acquisition returns, and not the structural mechanism that makes acquisitions by dual-class firms better (in the second half of our sample period or within companies with low and moderate valuations), we can only hypothesize as to why dual-class may improve the acquisition outcomes. As mentioned in the beginning of the paper, the dual-class shares help to preclude unsolicited takeovers and while the competitive pressure on firm executives weakens, so does the fear that the firm would be acquired, particularly, following a temporary decline in the market value of a firm.

Fear to be acquired was speculated to be one of the reasons why Swiss Life announced a bid for the German financial advisor AWD in 2007. In that case the acquirer had substantial excess cash from a sale of Banca Del Gottardo²⁸ and other

²⁸The total consideration was about CHF1.85 billion. See NZZ on 04.12.2007 “Kaufofferte der Swiss Life für den Finanzberater AWD” and on 29.08.2008 “Die Swiss Life verfehlt Ertragsziele deutlich”.

assets following a restructuring program, and this pile of liquidity in corporate accounts could attract aggressive bidders, while paying such an amount as a special dividend could involve tax complications for shareholders. Arguably, with dual-class such motivation would not be important and a potential acquisition would be evaluated on a stand-alone basis and not in the context of the urgent need to spend cash. The announcement of the bid for AWD was met with an about 5% decline in Swiss Life stock in a relatively flat market,²⁹ although cash-financed acquisitions are usually characterized with relatively better announcement returns than stock-based ones.

This example, while spotting only one of numerous aspects of the decision to acquire, has its own merit in that it shows how the dual structure can improve the acquisition outcomes by shifting focus of the executives on the long-term interests. And if the scope for the deprivation of value by insiders is limited due to a superior legal environment, as is the case in Switzerland, the net effect of the dual-class on acquisition returns becomes positive.

7. Conclusions

This article contributes to the extensive literature on dual-class shares and on the extraction of private benefits by corporate insiders. We argue that the net effect of the long-term commitment and potential for deprivation of value that dual-class can foster depends significantly on the level of corporate transparency and accountability, as well as on the value of reputation and repeated interactions between corporate insiders and outside investors.

By applying the sample selection techniques to our sample of Swiss firms with suitable instruments, we find that the dual-class, in fact, improves the valuation of firms, although the sample selection leads to a lower ex-ante valuation among firms that choose to deviate from the one share-one vote rule.

The comparison of acquisition outcomes between dual and single-class firms shows

²⁹ Subsequently, there were numerous negative comments regarding the success of this transaction. E.g., NZZ on 16.12.2009 wrote that everyone, even Swiss Life itself, agreed that price paid for AWD was unjustifiably high, and that part of Swiss Life team was against the acquisition (“AWD ist reif für eine negative Überraschung”). Along the same lines, on 12.01.2010 NZZ article commented that AWD purchase was a burdensome commitment (“Allianz soll auf die Swiss Life schießen”).

that, unlike previously found for North American data, the acquisitions by dual-class firms are generally perceived not worse than those by single-class firms, and, in fact, have higher announcement returns post-2000. The dual structure has positive effect, when combined with low or moderate valuation of equity, while among overvalued firms the effect of tight control resulting from dual shares is negative. The latter result also contributes to the literature on acquisitions by overconfident managers.

Our results allow us to conclude that policy recommendations suggesting to ban the option of issuing multiple share classes does not have much validity in environments with a high level of investor protection. At the same time, we can suggest that in countries with worse investor protection, improving corporate transparency and accountability may come as an appropriate substitute to eliminating the option of issuing dual-class shares and the capital structure flexibility that the dual share gives to entrepreneurs and firm owners.

Appendix

Corporate fraud and abuse: large-scale cases in Swiss and international practice

Perhaps the most relevant case in Swiss corporate practice was the bankruptcy of *Omni Holding*. Werner Kurt Rey made his name in 1976, when he acquired the majority of the venerable but loss-making Bally Shoe company and sold his stake soon later with a profit of around 30 million Swiss francs. After the “Bally-Coup” Rey established his company Omni-Holding as a financial empire. Subsequently, his investor and venture capitalist career progressed from that of an initiator of hostile take-overs to the role of a billionaire white knight in various international M&A deals ranging from real estate to engineering works, electronics, media and financial services, in which he himself served occasionally as a guarantor to institutional lenders. But in 1991, his financial empire crashed and Rey left debts of 2-3 billion Swiss francs. When accused of fraud, falsification of documents and fraudulent bankruptcy, Rey fled to the Bahamas, where he was arrested and then extradited to Switzerland in 1996. Rey was only sentenced for attempt of fraud at the expense of the Cantonal Bank of Bern and for fraudulent bankruptcy, as he decreased his private fortune to

the detriment of the creditors. Further proceedings were time-barred in 2007.³⁰

One of the most known accounting abuse in the international practice concerns Enron. Enron was an American energy company based in Houston, Texas. Before its bankruptcy in late 2001, Enron employed approximately 22,000 persons and was one of the world's leading electricity, natural gas, pulp and paper, and communications companies. At the end of 2001 it was revealed that its reported financial condition was sustained substantially by institutionalized, systematic, and creatively planned accounting fraud, known as the "Enron scandal". Enron has since become a popular symbol of wilful corporate fraud and corruption. The scandal also brought into question the accounting practices of many corporations throughout the United States,³¹ and was one of the important causes for the introduction of stringent rules on corporate and accounting accountability known as the Sarbanes-Oxley Act of 2002.

Another famous scandal related to corporate fraud concerns WorldCom. In 2002 a small team of internal auditors at WorldCom worked together, often at night and in secret, to investigate and unearth \$3.8 billion in fraud. Shortly thereafter, the company's audit committee and board of directors were notified of the fraud. The U.S. Securities and Exchange Commission launched an investigation on June 26, 2002 and by the end of 2003, it was estimated that the company's total assets had been inflated by around \$11 billion.³²

Parmalat is another example of accounting abuse and fraud. In 1997 Parmalat became significantly present in the global financial arena. Already by 2001, many of the new divisions were producing losses and the company financing relied extensively on the use of derivatives, apparently at least in part with the intention of hiding the extent of its losses and debt. In February 2003, Alberto Ferraris became CFO. Ferraris began to suspect that the company's total debt was more than double that on the balance sheet. Parmalat's Bank, Bank of America, released a document showing 3.95 billion euros in its subsidiary's bank account as a forgery. Prime Minister Silvio Berlusconi initiated a fraud investigation. Hundreds of thousands of investors lost their money and will never recover it. The company officially went bankrupt, though

³⁰See http://de.wikipedia.org/wiki/Werner.K._Rey; last visit on September, 22 2009.

³¹See <http://en.wikipedia.org/wiki/Enron>; last visit on August 31, 2009.

³²See <http://en.wikipedia.org/wiki/MCI.Worldcom>; last visit on August 31, 2009.

the Italian government used the legal mean “commissariamento” to save the trademark.³³

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Table 1: Comparative statistics of single and dual-class companies. Mean of each subsample and difference between two means are reported. Asset turnover is defined as ratio of sales to total assets.

Accounting and Performance	Comparison of means		
	Single Share	Dual Share	Difference
Total Assets, CHF mil.	20'301	5'558	14'743***
Industry sales share, %	0.19	0.06	0.12***
Sales growth, last 3 yrs	9.3	7.2	2.1
Asset turnover, %	87	96	-9***
ROA, 5 yr average, %	4.12	4.76	-0.55*
ROE, 5 yr average, %	8.9	8.6	0.3
Leverage as % of debt in TA	24.0	23.6	0.4
Long-term debt as % of TA	31.3	27.1	4.2***
Cash holdings, industry adj.	2.81	2.58	0.23***
CapEx, % of assets	18.9	11.1	7.8
R&D normalized to Sales, %	1.56	1.05	0.51***
Dividend Payout ratio, %	33.6	33.3	0.3
Age	78.9	73.7	5.2**
Closely held shares, %	40.3	50.1	-9.8***
CAR, 5 day window, %	0.37	0.67	0.31

Statistical significance from mean difference t-test is indicated as: * for at least 10% significance level, ** for 5% and *** for 1% or better.

Table 2: The Effect of Dual Class on Firm Valuation, OLS Estimation Results. Dependent variable: natural logarithm of one plus market to book value of equity. Earnings (one year lagged) and R&D expenditures are scaled by total assets. Leverage is defined as ratio of long-term debt and the current portion of long-term debt over total capital. Cash is cash and equivalents normalized by total cash of the firm's industry.

Dependent Variable:	Market-to-book value
Dual Class	-0.197** <i>-2.11</i>
Cash relative to ind. av.	0.133*** <i>3.34</i>
Assets	-0.11** <i>-2.35</i>
Earnings	0.72* <i>1.97</i>
R&D	0.16*** <i>2.83</i>
Sales over Assets	0.15** <i>2.32</i>
Sales share in firm's ind.	0.29*** <i>2.83</i>
Leverage	0.146 <i>0.52</i>
Firm age	-0.0009 <i>-0.98</i>

Significance is stated as: * for at least 10% significance level, ** for 5% and *** for 1% or better. Standard errors adjusted to clustering at firm level, corresponding t-values reported in *italic*. Constant term, year and industry dummy coefficients are suppressed for brevity.

Table 3: Dual Class and Firm Valuation: Heckman Treatment Effect Estimation. Dependent variables: natural logarithm of one plus market to book value of equity; in the first stage Probit: the dummy of having dual class shares. Earnings (one year lagged) and R&D are scaled to total assets. Leverage is defined as ratio of long-term debt and the current portion of long-term debt over total capital. Cash is cash and equivalents normalized by total cash of the firm's industry.

Variables	Treatment Effect (i)		Treatment Effect (ii)	
	(1)TE	(2)Probit	(3)TE	(4)Probit
Dual Class	0.72*** <i>3.48</i>		0.55** <i>2.09</i>	
Cash, ind. adj.	0.12*** <i>3.15</i>		0.13*** <i>3.19</i>	
Assets, log	-0.087* <i>-1.81</i>		-0.091* <i>-1.92</i>	
Earnings	0.83** <i>2.05</i>		0.80** <i>2.03</i>	
Sales share in firm's ind.	0.26** <i>2.48</i>		0.29*** <i>2.72</i>	
R&D	0.29*** <i>3.67</i>	-0.36*** <i>-3.58</i>	0.28*** <i>3.79</i>	-0.73*** <i>-2.96</i>
Sales over Assets	0.17** <i>2.26</i>	-0.73 <i>-0.61</i>	0.17** <i>2.13</i>	-0.79 <i>-0.61</i>
Leverage	0.149 <i>0.58</i>	-0.73 <i>-1.40</i>	0.167 <i>0.65</i>	-0.90 <i>-1.52</i>
Firm age		-0.035** <i>-2.06</i>		-0.004* <i>-1.95</i>
Person name		0.31 <i>1.60</i>		0.32 <i>1.48</i>
Dual Share, ind.		0.019** <i>2.33</i>		0.015* <i>2.18</i>
PostDeparture				-0.89*** <i>-3.57</i>
Departure			-0.60*** <i>-3.25</i>	2.09*** <i>8.41</i>
Heckman λ (IML)	-0.553*** $\sigma_\lambda=0.11$		-0.609*** $\sigma_\lambda=0.11$	
Wald test of ind. eq.	$\chi^2=8.33$ pval=0.004		$\chi^2=12.00$ pval=0.001	
Firm-year obs.	1735		1629	

Significance is stated as: * for at least 10% significance level, ** for 5% and *** for 1% or better. Standard errors adjusted to clustering at firm level, corresponding t-values reported in *italic*. Constant term, year and industry dummy coefficients are suppressed for brevity.

Table 4: Dual-Class and Acquisitions: Univariate Comparison of acquisition returns between non-dual and dual firms. Five day cumulative abnormal return around acquisition announcement. CAR computed as actual abnormal return with SMI index used as the benchmark.

Periods:	1994-96	1997-99	2000-02	2003-05	2006-08
(1) CAR non-d	2.93	2.90	1.99	0.59	-0.14
(2) CAR dual	-0.06	0.89	-0.69	0.27	1.83
# obs	16/23	50/38	80/32	83/30	61/25
$\Delta=(1)-(2)$	2.99%*	2.00%	2.68%	0.32%	-1.97%*

* denotes 10% significance level.

Table 5: Dual Class and Acquisition CAR: Regression Analysis. Dependent variable is five day cumulative abnormal return around acquisition announcement with SMI index as the benchmark. Post2000 is dummy variable equal to one for acquisitions performed in year 2000 and afterwards. Market-to-book denotes market valuation per dollar of book equity. Two interaction variables denote interaction of the Dual dummy with Post2000 dummy (inter_Dual_Post) and the Dual dummy with Market-to-book value (inter_Dual_MB). Earnings (one year lagged) and R&D expenditures are scaled by total assets. Leverage is defined as ratio of long-term debt and the current portion of long-term debt over total capital. Cash is cash and equivalents normalized by total cash of the firm's industry.

Variables	(1)	(2)
Dual Class	-2.55	8.22**
	<i>-1.48</i>	<i>2.35</i>
Post2000	-2.93	
	<i>-1.29</i>	
inter_Dual_Post	3.37*	
	<i>1.67</i>	
Market-to-Book	-2.05	1.24
	<i>-1.47</i>	<i>1.64</i>
inter_Dual_MB		-2.99**
		<i>-2.65</i>
Cash, ind. adj.	-0.102	0.04
	<i>-0.69</i>	<i>0.43</i>
Leverage	6.54*	8.90
	<i>1.75</i>	<i>1.57</i>
Assets, log	0.15	0.21
	<i>0.34</i>	<i>0.54</i>
Earnings	-1.85	-2.14
	<i>-1.17</i>	<i>-0.17</i>
Sales over Assets	0.57	0.56
	<i>1.47</i>	<i>1.33</i>
Firm age	-0.014	-0.01
	<i>-0.88</i>	<i>-0.45</i>
# Acquisitions	253	253

Significance is stated as: * for at least 10% significance level, ** for 5% and *** for 1% or better. Standard errors adjusted to clustering at firm level, corresponding t-values reported in *italic*. Constant term, year and industry dummy coefficients are suppressed for brevity.