Protecting minority investors: Listed versus unlisted firms

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Abstract

When firms go public, controlling shareholders have to give up some control to attract new investors. This paper examines whether listed and unlisted firms differ in their care for minority investors. We focus on board characteristics such as tasks, structure, independence, size, and meeting frequency, but also examine disclosure and compensation policies. Overall, the results confirm the expected difference. They also suggest, however, that firms do not adopt measures to improve corporate governance mainly to benefit shareholders. In listed firms, external pressure from the law and corporate governance codes is the main inducement for these changes.

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Protecting minority investors: Listed versus unlisted firms

1. Introduction

This paper compares listed and unlisted firms and asks whether listed firms structure their corporate governance to better protect minority shareholders and to raise capital from the public capital markets. In our comparison, we examine the disclosure policies of the largest firms in Switzerland. And, since boards appear to play an important role in the governance of corporate organizations, we study board characteristics such as tasks, formal structure, composition, terms, meeting frequency, and compensation. Finally, we inquire into the reasons firms adopt measures to improve corporate governance.[1]

According to La Porta, Lopez-de-Silanes, and Shleifer (1998), the problem of minority protection is fairly acute in countries outside the United States, since firms in those countries are often controlled by blockholders. In Switzerland, in particular, protecting minority investors has been the motivation driving the corporate governance discussion and the revisions of corporate legislation during the past fifteen years.

Our investigation is ultimately related to the decision to go public. In making that decision, the controlling shareholders compare marginal benefits and costs. The marginal benefits include the opportunity to dispose of shares in a more liquid market, risk diversification (Bodnaruk, Kandel, Massa, and Simonov, 2006), gains from market timing (Pagano, Panetta, and Zingales, 1998), and a lower cost of capital.[2] They also include the ability to tap new sources of capital, reputational advantages (Brau and Fawcett, 2006), and increased flexibility in designing performance-based compensation (Schulze, Lubatkin, Dino, and Buchholz, 2001). The marginal costs include giving up private benefits of control (Zingales, 1995, Benninga, Helmantel, and Sarig, 2005) and the costs of listing. There is disagreement, however, about whether going public increases managerial discretion and whether that has adverse effects.[3]

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[1] Listed firms that wish to raise capital can further protect minority shareholders by cross-listing on exchanges that subject them to stricter securities laws (Stulz, 1999; Pagano, Roell, and Zechner, 2002; Reese and Weisbach, 2002). We are interested here in comparing listed and unlisted firms.

[2] For example, Pagano, Panetta, and Zingales (1998) document that independent companies experience a reduction in the cost of bank credit after the IPO, possibly because of the improved information or the stronger bargaining position. For the relation between market values and liquidity, see, among others, Amihud and Mendelson (1986), Brennan and Subrahmanyam (1996), Amihud (2002), and Loderer and Roth (2004).

[3] Bhide (1993) argues that liquid markets impede control and thereby induce (or exacerbate) conflicts of interest between shareholders and managers. In contrast, according to Maug (1998), liquid markets favor monitoring by enabling investors to more cheaply compile significant blocks of

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In their study of 38 countries, Kim and Weisbach (2005) conclude that firms go public mainly to raise capital for investment purposes and to repay debt. Swiss firms seem to have the same motivation. The ability to liquidate the stake of the controlling shareholders is also critical. There were 144 IPOs between 1986 and 2006 in Switzerland. The data available for 107 of them show that a median 26 percent of the total proceeds raised in the IPO went to corporate insiders. In the process, their voting stake declined from a median 100 percent to 52 percent. Hence, liquidation is substantial.[4]

Whatever they might be, the benefits of going public hinge on being able to raise money in the public markets. These benefits are related not only to the IPO, but also to any subsequent rounds of financing. According to Kim and Weisbach (2005), firms that issue primary shares are also more likely to engage in subsequent seasoned stock offerings. Consequently, it would seem that listed firms have to find ways to attract new investors. Presumably, that requires giving them better protection than that available while the company is privately held. Unlisted firms have little incentive to disclose information to the general public. They also have fewer reasons to grant boards of directors, and the outsiders thereon, real decision power and to see to it that they can work effectively. And, given that they are closely held, they are under less pressure to think about formal ways to align the interests of directors with those of shareholders.

Our study should contribute to the literature in three ways. First, in comparing board characteristics, we focus on dimensions of corporate governance that have not received much attention so far (for a survey, see, among others, John and Senbet, 1997, and Hermalin and Weisbach, 2003). Second, we are able to say something about unlisted firms. We know fairly little about these firms (Zingales, 2000),[5] let alone about their boards (Hermalin and Weisbach, 2003). And third, by relying on a survey, we are able to ask direct questions about the motivation for corporate govern-

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votes (Kyle and Vila, 1991, reason along similar lines). Boot, Gopalan, and Thakor (2003 and 2006) think the same way, but contend that, in a world of asymmetric information and unpredictable investor bases, the accumulation of voting blocks to reign in managers can be detrimental. Increased outside control can also discourage valuable firm-specific investments by managers (Burkart, Gromb, and Panunzi, 1997), or managerial effort (Adams, 2001).

[4] This contrasts with the evidence reported in Pagano, Panetta, and Zingales (1998). Initial owners in Italy divest only 6 percent of the amount they hold in the company at the time of the IPO (and 1.3 percent more in the three subsequent years).

[5] The literature, however, has begun closing this gap. See, for example, Cole and Mehran (2006).

ance decisions and policies, something that can only be assessed indirectly with commonly available data.

What makes our data set particularly attractive is that we surveyed people in the organizations with the necessary answers, namely, chairmen of the board (COBs). And surveying corporate Switzerland is not necessarily a restriction, since Swiss companies include global players such as ABB, Credit Suisse, Novartis, Roche, Syngenta, and UBS. In 1999, Swiss equity market capitalization was the ninth largest in the world, and the fifth largest in Europe.

The evidence is generally consistent with the hypothesis that listed firms do more for investors than unlisted firms do. They disclose more and better even when not required to. And they opt for board design, composition, processes, and incentives that are consistent with the need to give investors at large more protection. The boards of unlisted firms are different in this respect, but they are in no way without real functions. Listed firms appear to have better governance, especially if they have more pressing financing needs. They also do more to improve corporate governance. The puzzling observation, however, is that neither listed nor unlisted firms make changes in corporate governance mainly to benefit shareholders at large. Listed firms seem to do so especially because of external pressure from the law and corporate governance codes and, to some extent, in response to the media. There is little evidence that the costs of these changes generally exceed the benefits. In fact, most COBs claim that corporate governance could be further improved.

The remainder of the paper is organized as follows. The next section presents the experiment in more detail. Section 3 discusses the data and their source. Section 4 compares the disclosure practices of listed and unlisted firms. Section 5 contrasts board characteristics. Finally, Section 6 draws conclusions.

2. The experiment

There is little that unlisted firms have to disclose under Swiss law, and little that they disclose voluntarily. The law requires them to file only the following items with the commercial register: (a) name, place, and date of incorporation; (b) purpose; (c) corporate charter; (d) number of shares outstanding, par value, and restrictions on transferability of shares; and (e) names of directors.

Most unlisted firms are controlled by investors who sit on their boards and are therefore able to monitor operations very closely and to centralize decision power. In these firms, the board might therefore have no real function or decision authority separate from that of the controlling shareholders. Casual observations suggest that the board might simply be there because the law prescribes its existence and functions.[6]

All of this is possible, we hypothesize, because unlisted firms have limited financial needs. If they want to raise money from the general public on favorable terms, however, firms have to attract investors. That means: (a) becoming more transparent; (b) choosing organizational structures and instituting processes that protect investors from expropriation by the controlling shareholders and management; and (c) providing managers and directors with the appropriate incentives. We will test these predictions in the empirical section of the paper. That analysis will be complemented by an investigation of companies' possible motivations for adopting measures to improve corporate governance. We inquire whether they want to benefit shareholders at large.

In principle, we should compare firms before listing and afterward and see whether our predictions apply. Unfortunately, we only have data about a cross-section of listed and unlisted firms, and little information about the listed firms when they went public. Hence, we will compare listed and unlisted firms and control for various confounding effects.[7] In a similar experiment, Gertner and Kaplan (1996) examine the board structure of firms that undergo a reverse leveraged buyout. For comparable reasons, however, they investigate the years immediately after the IPO. Also Baker and Gompers (2001) perform a study of the boards of firms that go public. Still, they do not compare pre- and post-IPO board characteristics, but rather board characteristics of venture- and nonventure-capital-backed firms.

One difficulty in carrying out our experiment arises because we are looking at various dimensions of corporate governance. Many of those dimensions could be the result of deliberate optimization on the part of the firms being examined,[8] although

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[6]   Bennedsen (2002), however, investigates a sample of more than 23,000 closely held corporations which are not required by law to have a board, and finds two reasons for board establishment: a governance motive (mitigating agency conflicts between managers and owners) and a distributive motive (mitigating the conflicts of interest between controlling and minority stockholders).

[7]   All unlisted firms in our sample would meet the listing requirements of the Swiss Stock Exchange's local segment.

[8]   See also Hermalin and Weisbach (2003).

that assumption could be questioned.[9] The problem is, we do not know of any paper that formally models these decisions. In the absence of explicit models, we will therefore focus on what is essentially the reduced form of such hypothetical models, and examine whether being listed affects the equilibrium characteristics of interest (for example, their board structure and composition). Since the listing status of a firm could correlate with a number of exogenous variables in the hypothetical model, we will control for such variables—for example, larger firms are more likely to be listed than smaller ones.

Formally, suppose there are M structural equations and M endogenous variables, represented by the vector y_t, that describe the process and structure of corporate governance.[10] Also, suppose there are K exogenous variables, as summarized by the vector x_t. The structural form of the model is

$$y_t'\Gamma + x_t'B = \varepsilon_t',$$

where Γ and B are parameter matrices, and ε_t is a vector of uncorrelated disturbances randomly drawn from an M-variate distribution with zero expected values and finite variance-covariance matrix. Assuming Γ is nonsingular, we can write the reduced form of the model as

$$y_t' = -x_t'B\Gamma^{-1} + \varepsilon_t'\Gamma^{-1} = x_t'\Pi + v_t' \ .$$

What we are interested in is not the estimation of the structural equations but rather parts of the reduced equations. Specifically, we want to know the coefficient of listing status in some of the reduced equations of interest. Given our assumptions, OLS will provide best linear unbiased estimates of that coefficient. Note that estimation of the structural equations is also possible when the governance characteristics of interest are not the result of deliberate maximization or are out of equilibrium.

Of course, the listing decision per se is also endogenous (see, among others, Zingales, 1995, Pagano and Roell, 1998, and Boot, Gopalan, and Thakor, 2003, 2006a, 2006b) in the sense that it depends on many of the variables that define corporate

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[9]   As it turns out, 56 percent of the COBs in our survey claim to maximize shareholder value. Of these, however, 67 percent profess to also seek the maximization of stakeholder value and 57 percent want to remain independent. Taking their statements at face value, it is therefore not clear what purpose COBs ultimately pursue (see also Joerg, Loderer, Roth, and Waelchli, 2006).

[10]   See Greene (2000), 658-660.

governance and simultaneously affects them. However, we are not investigating the listing decision per se but rather comparing firms that are listed with firms that are not. Consequently, we can treat listing status as exogenous. To see why, let us look at the relation between listing and inside ownership. We have seen that the controlling shareholders could go public because their stake in the firm is too large. At the same time, however, the decision to go public affects the number of shares controlling shareholders want to keep. Hence, ownership structure is an endogenous variable in the IPO decision (see, for example, Pagano and Roell, 1998). But once the firm has gone public, inside ownership will have adjusted to the level desired by the corporate insider and the only relation we can observe is the one that goes from listing status to ownership. Hence, listing status is an exogenous variable.

Another difficulty in testing our predictions is that listed firms have to make some of the changes we are postulating by law or to meet the SWX Swiss Exchange's (SWX) mandatory guidelines. In and of itself, this does not contradict what we are saying, since the law and the exchange's guidelines are ostensibly meant to protect minority investors. Yet we cannot be sure. The law could be there to protect incumbent firms against their young competitors. The main thrust of our investigation will therefore focus on aspects of corporate governance that firms can adopt voluntarily.

3. Sample characteristics

The data on board characteristics come from a survey conducted in 2003, when we sent a questionnaire to the COBs of the 1,102 largest firms headquartered in Switzerland.[11] Those firms included 176 companies listed on the SWX accounting for 97.8 percent of the exchange's total market capitalization. A total of 271 usable questionnaires were returned, for a response rate of roughly 25 percent. The breakdown of the sample is 73 SWX-listed firms (response rate of 41 percent, representing 66 percent of the exchange's total market capitalization), 10 firms listed on foreign exchanges, 3 firms traded on the OTC market, and 185 unlisted firms (response rate of 21 percent). The sample therefore includes 86 firms that we denote as listed, and 185 unlisted firms. We also use data on disclosure practices. Some of these data are from a search of corporate Web sites, and some from the annual issues of *Aktienführer der Schweiz*, a publication of the biweekly newspaper *Finanz und Wirtschaft*.

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[11]   This directory is from the publication "Top 2002 / Die grössten Unternehmen in der Schweiz," printed by Handelszeitung, a business weekly.

Table 1 displays descriptive sample statistics. Listed firms are a median 8 years younger than unlisted firms (49 years versus 57). Moreover, they employ significantly more people—the median listed firm has almost 30 times as many employees as the median unlisted firm, namely, 8,000 versus 300. Listed firms are also much larger in terms of share capital—USD 64 million compared with USD 3 million, assuming an exchange rate of CHF 1.3 to the USD.[12] There are, however, fairly large firms among our unlisted firms as well—in fact, 21 percent of them employ more than 1,000 people.

Table 2 goes back to the econometric discussion of the hypothetical corporate governance model, and investigates the relation between the listing status of a firm and a set of exogenous variables that would seem to be correlated with that status. The investigation takes the form of a logit regression. The dependent variable (bLISTED) is a binary variable equal to 1 if the company is listed and equal to 0 otherwise.[13] We find that listing is highly positively correlated with the log transformation of share capital (LNSIZE), the number of firm employees (EMPLOYEESCAT),[14] firm age (AGE), and a binary variable that identifies high-tech firms (bHI-TECH).[15] Listing appears to be uncorrelated, however, at customary levels of significance with a binary variable that identifies firms in the banking or insurance industry (bFINAN-CIAL). We will have to remember these regularities when investigating the impact of listing in the reduced forms of the governance characteristics of interest and include these variables in our analysis.

By construction, listed firms should tend to be less closely held. Also, if we assume that the original shareholders give up some effective control with the IPO, we expect majority shareholders of listed firms to sit less frequently on the board or to be less frequently part of the management team. In many respects, Table 3 confirms these predictions.[16] The largest shareholder of a listed firm holds a median 24 percent of the votes (compared with 70 percent in unlisted firms). And aggregate blockholdings (defined as holdings larger than 5 percent) make up a median 45 percent of the

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[12]   See Joerg, Loderer, Roth, and Waelchli (2006).
[13]   A letter ‹b› in front of a given acronym identifies all binary variables in the analysis.
[14]   EMPLOYEESCAT is an ordinal variable that measures the number of employees a firm has. The variable ranges from one (less than 10 employees) to 8 (more than 1'000 employees).
[15]   (bHI-TECH; the variable equals 1 if the firm belongs to the chemical/pharmaceutical, medtech, technology/information systems, or telecommunication industry; the variable equals 0 otherwise).
[16]   In interpreting the table, one should bear in mind that we focus on the fractions of votes controlled by any one party, not the fraction of equity per se.

votes in listed firms (compared with 100 percent in unlisted firms). The table also shows that blockholders in listed firms are neither managers nor directors, since the board and management control only a median 1.0 percent of the votes each. Unlisted firms are different, at least in terms of directors' shareholdings. Directors as a group hold a median 75 percent of the votes, whereas managers hold nothing.

In Table 4, we repeat the analysis of ownership in a multivariate context. We regress the four ownership measures we have just discussed against listing status and its set of correlated variables observed in column 3 of Table 2. Since we will be using this specification fairly frequently in the subsequent analysis, we refer to it as the standard specification. To avoid the problem of a dependent variable constrained between 0 and 1, we measure ownership as the relative deviation from the sample median. The analysis is performed with OLS and confirms what we found in the preceding table. Listing status (bLISTED) has a negative and significant coefficient with confidence 0.99 in all regressions except for management holdings, where the confidence is 0.90.[17] Hence it would seem that ownership concentration falls significantly after listing. This effect is unrelated to firm size. In fact, firm size has no effect, except on management and board ownership, where it is negative and significant.

4. Disclosure

Listed firms are required by law to make various pieces of information publicly available, including their financial statements. In comparison, as we have seen, unlisted firms are not required to disclose much of anything. As an example, Schleuniger AG, an international unlisted machine manufacturer specialized in high-precision wire and cable processing, recently called a "balance-sheet press conference." At the conference, it only disclosed data about its sales. Comparing the disclosure policy of listed and unlisted firms can therefore be a problem, because it may be difficult to assess what listed firms would have disclosed had they not been forced to do so by law.

To get around this problem, we focus on voluntary disclosure. We first investigate the information provided by the corporate Web sites of listed and unlisted firms. Second, we examine the accounting standards listed firms use in preparing their financial statements. We ask whether listed firms choose more demanding standards

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[17] Unless otherwise specified, statistical significance is with confidence 0.95 in a two-sided test.

than those required by law. Third, because listed firms did not have to disclose their ownership structure in the past, we examine whether and how listed firms revealed that information before being forced to do so by law. Finally, we examine whether firms that need more money reveal more.

Some of these tests have limited power because they focus on communication channels that might not be regarded as very important (corporate Web sites) or rely on data that are not fully replicable (that is the case, as explained later with the last test). Still, taken together, they should enable us to assess whether listed firms voluntarily disclose more information.

4.1 Comparison of corporate Web sites

Table 5 shows the results of our analysis of corporate Web sites. The investigation covers all firms in our sample. We expect listed firms to provide significantly more information, and the results seem to bear out this prediction. All listed firms and an overwhelming majority of the unlisted ones (91 percent) have corporate Web sites. On them, unlisted firms provide only very scant financial information. Forty-seven percent do not provide any such information, 15 percent disclose only last year's sales, 12 percent provide data about sales or earnings during the past three years, and only 25 percent publish full balance sheet or income statement. In comparison, almost all listed firms (90 percent) post their full balance sheets and income statements on the Web. The differences are statistically significant. Moreover, about 91 percent of all listed firms make the annual report available and 57 percent display their organizational chart. Significantly fewer unlisted firms do so. Barely 25 percent include their annual reports and fewer than that show their organizational charts.

Listed firms therefore reveal more on their Web sites than unlisted ones do. This is consistent with the argument that they want to be more transparent. One could argue that, since unlisted firms are smaller, they also have fewer resources to dedicate to their corporate Web sites. The problem with this argument is that, if a company has a Web site (which most unlisted firms do), the marginal costs of posting items such as a balance sheet or an organizational chart are negligible.

4.2 Accounting standards

In 2002, the SWX decided that, starting with fiscal year 2005, listed firms would have to use internationally accepted standards in the presentation of their financial statements.[18] Until then, firms could choose among IFRS, US GAAP, or Swiss GAAP FER. Compared with internationally accepted standards, Swiss GAAP FER is more ambiguous and makes cross-sectional comparisons more difficult. From a financial standpoint, however, it is the most convenient standard. Yet, even before the SWX decision, the majority of listed firms used IFRS or US GAAP. This supports the hypothesis that listed firms want to disclose more information to investors.

To document this claim, we inquired what accounting standards were used by firms traded on the SWX in 2001, the year before the exchange introduced its new regulation.

Accounting standards	2001
IFRS	154 (52.0%)
US GAAP	14 (4.7%)
Swiss GAAP FER	97 (32.8%)
Bank-specific regulatory standards	20 (6.8%)
SWX-specific standards	3 (1.0%)
Other	8 (2.7%)
Total	296 (100.0%)

Of the 296 firms that traded on the SWX in 2001, 154 used IFRS for their financial statements, 14 used US GAAP, and only 97 used Swiss GAAP FER. Excluding banks and other special cases that had their own regulation, 63 percent[19] of all listed firms therefore adhered to stricter standards than those required by law. Some of these firms were traded on foreign exchanges and were therefore forced to adopt IFRS (31 firms) or US GAAP (7 firms). Even taking these cases into account, however, 57 percent[20] of the companies listed on the SWX that were free to choose adopted stan-

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[18] Actually, the requirement applies to firms listed in the main segment. Local caps, real estate companies, and investment companies can use other standards.

[19] $(154+14)/(154+14+97) = 0.63$.

[20] $(154-31+14-7)/(154-31+14-7+97) = 0.57$.

dards that improve comparability. This is consistent with the hypothesis that listed firms want to be attractive investment opportunities.

4.3 Disclosure of information on shareholder structure

The third step in our analysis is to ask whether listed firms provide information about their ownership structure. It would seem that new investors would want to have that information before buying shares. We inquire whether firms reveal the identity of their individual blockholders and the fraction of votes they control. Until the new corporate law of July 1992, this disclosure was discretionary. We therefore examine the 325 firms that were listed on the SWX in 1990, two years before the new law came into effect, and ask what information they released.[21] Back then, almost no unlisted firm voluntarily publicized information about its major investors—and few do so now.

We find that 70 percent of listed firms voluntarily disclosed ownership information (not shown). The firms that did not provide that information typically revealed the name of the blockholder (or group of blockholders) without quantifying the stake. Most of them (78 percent) had a majority shareholder and about 30 percent were family firms.

The evidence therefore supports the contention that firms disclose investment-relevant information even when doing so is not compulsory. What is puzzling is that the vast majority of these firms do not reveal information about the ownership at the time of the IPO. Specifically, we examined the prospectuses of all the firms that went public between 1983 and 1992. Only 4 (8 percent) reveal the identity and the stakes of current blockholders. Combined with what we just found, this means that, before the new corporate law went into effect, listed firms did inform investors about their ownership structure, but only after the IPO. This is at the very least puzzling and inconsistent with the hypothesis of greater disclosure.

4.4 Disclosure quality and growth

As a final step in our investigation of disclosure practices, we ask whether firms that depend more on outside capital markets are more transparent. To find out, we

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21   At the time, there were four former main exchanges in Switzerland, namely in Zürich, Basel, Geneva, and Lausanne.

look for a correlation between the company-specific transparency[22] and expected-growth ratings[23] issued by the biweekly newspaper *Finanz–und–Wirtschaft* for firms listed on the SWX. Our hypothesis is that firms that grow faster need more money, and firms that need more money have to be more transparent. Panel A in Table 6 shows that the transparency ratings range from a minimum of 1 to a maximum of 7.[24] The median rating is 5. Panel B reports the results of an ordered logit regression of transparency ratings against determining factors. The analysis is restricted to the 73 sample firms that are listed on the SWX (of the 86 listed firms in the sample, 10 are listed on foreign exchanges and 3 trade on the OTC market).[25] Since transparency ratings could conceivably be one of the endogenous characteristics of corporate governance, we start with a regression specification that could correspond to the reduced form of the hypothetical corporate governance model discussed in Section 2. We therefore use the standard regression specification (except for the listing variable itself, since we are investigating only listed companies here).

Our estimates show that transparency is unrelated to firm size and age, and that it does not improve for firms in the financial sector (column 1 of the table). The fact that financials are not more transparent than other firms is a little surprising, since transparency and trust would seem to be positively correlated, and the business of both banks and insurance companies is trust-related. The explanation could be that some financial intermediaries are controlled by the state. Hence, reputation might not be crucial. The coefficient of high-tech firms, however, is positive and significant, which indicates that these firms are more transparent, possibly because of the more complex nature of their products.

In column (2) of the table, we add *Finanz-und-Wirtschaft*'s measure of expected growth (FuWI-GROWTH) to the regression arguments. As predicted, its coefficient is positive and significant with confidence much higher than 0.99. Firms that grow more are more transparent. The significance of the remaining coefficients is unaf-

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[22] This rating measures the "level of disclosure," and depends on such aspects as consolidation of accounts in accordance with internationally recognized standards, continuity, details of any deviations from internationally accepted norms, clearly formulated strategies, and transparent company structures.

[23] The criteria for this rating include cash flow growth, operating profit over the last four financial years, estimated earnings performance for the current and next financial years, long-term growth prospects, continuity of growth, etc.

[24] Actually, the ratings are C (lowest), C+, B–, B, B+, A–, and A (highest). We replace letter grades with numerical grades.

[25] Since *Finanz–und–Wirtschaft* does not issue a rating for one of our sample firms, the number of observations in Table 6 is reduced to 72.

fected. Finally, in column (3) we examine whether transparency is related to the stake of the largest shareholder (LARGESTVOTE), and whether it is different in family firms (identified by the binary variable bFAMILY)[26] or in firms where blockholders are board members (the corresponding binary variable is bSHAREHOLDER).[27] The assumption is that these additional variables are exogenous. They all have insignificant coefficients, except for the coefficient of bFAMILY, which is positive and marginally significant with 0.90 confidence. The latter result is in contradiction to Anderson and Reeb (2006), who report that 70 percent of the least transparent firms in the Russell 3000 are family firms. The coefficients of the remaining variables, including the coefficient of growth rating, are essentially unchanged.

Overall, this section provides evidence consistent with the claim that listed firms are voluntarily more transparent. Their Web sites are more informative, they generally use stricter accounting standards than required, and they willingly reveal their ownership structure (although, paradoxically, not at the time of their IPOs). Moreover, they seem to disclose more when they need more money. In what follows, we investigate whether they also structure their boards to attract minority investors.

5. Board characteristics and activities

There are no provisions in the law or in the SWX's regulations concerning board structure.[28] Discretionary guidelines are issued by the Swiss Code of Best Practice (SCBP).[29] Hence we can test whether the boards of listed firms better protect minority shareholders. We begin with a review of the tasks that COBs assign to their boards. Section 5.2 discusses board size. Section 5.3 examines board composition (that is, director reputation, board independence, and CEO-COB duality). Section 5.4 deals with the term of directors and Section 5.5 studies board meeting frequency. Section 5.6 investigates the number and type of board committees and Section 5.7 the form of director compensation. Section 5.8 takes a look at board monitoring activities

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[26]   There is no consensus in the literature on the definition of family firms. Anderson and Reeb (2004) and Villalonga and Amit (2004) define family firms as companies in which members of the founding family are either shareholders or board members. Since we have no data on family ownership, we apply only the board-membership criterion. Family firms are therefore defined as firms that have at least one member of the founding family on the board.

[27]   We assume that the additional variables LARGESTVOTE, bSHAREHOLDER, and bFAMILY are exogenous.

[28]   Discretionary guidelines are issued by the Swiss Code of Best Practice.

[29]   The code is issued by Economiesuisse, the business organization with the most member firms (30,000) in Switzerland.

and Section 5.9 asks what boards do to improve corporate governance and why. Finally, Section 5.10 asks how COBs judge the quality of corporate governance in their firms, and whether that assessment is better in listed firms and in firms that go more often to the capital markets.

5.1 Board tasks

According to the literature, the three main functions boards fulfill are advising managers about business strategy (see, among others, Fama and Jensen, 1983), monitoring managerial performance (see, among others, Fama, 1980, Hermalin and Weisbach, 1998, Monks and Minow, 2000, Adams, 2001), and looking after the interests of stakeholders (Adams, 2003). In Section 3, we have seen that unlisted firms are closely held and that blockholders usually sit on their boards. Even though the law puts boards formally in charge of strategy definition and monitoring, the blockholders will want to carry out some of those activities themselves. If so, the boards of unlisted firms will tend to be more like rubber-stamp assemblies than effective organizations.[30] In contrast, having given up some control, the original blockholders in listed firms have to find ways to raise money from outside investors. That would seem to require boards with actual (as opposed to simply formal) responsibilities.

To find out whether this is true, we ask the COBs in our sample to indicate the activities that their boards are responsible for and to specify the importance of those activities on a scale of 1 to 4 (with 1 being the lowest score). The activities range from strategy definition and supervision to negotiation with business partners and company representation. To test the difference between listed and unlisted firms, we perform a multivariate logit analysis. Table 7 reports the z-value of the coefficient of listing status in a multivariate ordered logit regression. The dependent variable is the COB's rating for a given task, whereas the independent variables are those in our standard regression specification.

The results indicate that the boards of listed firms are more involved in strategy design and in replacing managers and directors and less responsible for operations. Specifically, the boards of listed firms are significantly more engaged in the definition of the firm's strategy, in the appointment and dismissal of managers, and in the nomination of new directors. They are also more occupied with the relations with key in-

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[30]   According to Becht, Bolton, and Roell (2004) this is also the case in listed firms with dispersed ownership.

vestors. There is no difference, however, when it comes to monitoring strategy implementation or the firm's financial situation (both activities have high priority in either type of firm, consistent with Adams, 2003). Moreover, the boards of unlisted firms more often take on operational duties such as key-account management.

Overall, we find some of the predicted differences in board activities, but the boards of unlisted firms seem to have important responsibilities, too.

5.2 Board size

Being a publicly traded company would seem to complicate board activities because the firm has to interact much more intensively with capital markets. Among other things, listed firms have compliance issues to deal with, they have to address delicate disclosure questions, they have to resolve difficult liability questions, and they have to protect minority investors. This complexity requires more resources and, possibly, larger boards. Of course, small boards would seem to be more efficient and to make it more difficult for directors to free ride (Lipton and Lorsch, 1992; Jensen, 1993).[31] The net effect is an empirical issue. Gertner and Kaplan (1996) examine reverse-leveraged buyouts on the assumption that LBO specialists have strong incentives to maximize shareholder value. They document that boards in reverse LBOs are smaller than in control firms. Since listed firms have comparatively stronger incentives to care for shareholders at large, we look for evidence of smaller boards there.

Contrary to this prediction, Panel A of Table 8 tells us that the median board size in listed firms is 6, significantly larger than the 5 measured in unlisted firms (the average numbers are 7 and 5, respectively).[32] The boards of Swiss firms seem to be smaller than those observed in other countries, possibly because Swiss firms are also smaller. In 2000, in the U.S., for example, Lehn, Patro, and Zhao (2004) report a median board size of 11.

Observed board size, however, does not necessarily correspond to optimal board size. Panel B therefore asks COBs to indicate what board size would be optimal for their firms and computes the deviation of actual from optimal board size. The median

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[31]   Yermak (1994) and Eisenberg, Sundgren, and Wells (1998), find that smaller boards are associated with higher firm value. See, however, also Bennedsen, Kongsted, and Nielsen (2006).
[32]   For a comparison, Loderer and Peyer (2002) document a median board size in SWX firms of 9 in 1980 and 7 in 1995. Hence, board size in listed firms seems to have fallen over time.

(and average) deviation is zero in both listed and unlisted firms. Hence, in both listed and unlisted firms, board size appears to be optimal.

Panel C investigates the impact of listing status on board size in a multivariate-regression context. The dependent variable is the relative deviation of actual board size from the sample median. Column (1) displays the results for our standard regression specification. The results of the univariate analysis do not hold up in a multivariate context. Unlike what we saw in Panel A, listing is unrelated to board size (the coefficient of the binary variable bLISTED is statistically zero). Board size, however, is correlated with firm size, and it is larger for financials (possibly to make collusion among directors more difficult; see also Hermalin and Weisbach, 2003). Column (2) expands the regression specification by adding the fraction of votes controlled by the largest blockholder (LARGESTVOTE), and the two binary variables (bSHAREMAX and bINDMAX) that capture the purpose that the company supposedly pursues. LARGESTVOTE has a negative and significant coefficient, suggesting that the controlling blockholder prefers smaller boards to run the firm. Also, bSHAREMAX has no significant impact on board size. In contrast, firms in which the COB tries to maintain independence tend to select larger boards (bINDMAX has a positive and significant coefficient). We obtain essentially the same results when replicating the analysis using the relative deviation of optimal board size as the dependent variable.

5.3 Board composition

We have seen that the boards of listed firms have somewhat wider responsibilities than those of unlisted firms. To be attractive to minority investors, however, listed firms also have to fill the board seats with the appropriate individuals. What follows investigates that issue.

There are only very loose legal guidelines concerning actual board composition. Corporate law says only that the majority of directors have to be Swiss citizens (exceptions are possible), that all directors must own at least one share of stock, and that the board must have at least one member (three members are necessary at the time of incorporation). If not stated otherwise in the corporate charter, directors serve for a term of three years.

Specific rules for the composition and the organization of the board are in the SCBP. That includes the recommendation that the majority of the board consist of

nonexecutives and that firms separate the titles of CEO and COB. Yet these guidelines are discretionary. In fact, Nestlé's Peter Brabeck and Novartis's Daniel Vasella both hold the dual positions of CEO and COB. Unlike what happens in the U.K., firms that do not comply with the code do not even have to explain why.

This section examines the criteria used in selecting directors and inquires who has the power to nominate directors. It also tries to assess the abilities of directors. and it studies board independence as well as the cases of COB and CEO duality.

5.3.1 Criteria for nominating directors

If boards are meant to be a helpful support and an effective check on management, its members should be selected on the basis of what they can contribute. Some might be good advisers, some good monitors. Others might be able to certify superior product and service quality, and others yet might have large networks and business contacts (Mace, 1986). We begin by asking the COBs to indicate possible reasons why firms nominate a given director. If boards play a bigger role in listed firms, we would expect those firms to focus more on the abilities, skills, and reputation of the potential candidates. The data in Table 9, however, provide only marginal support for this prediction. The only skill or ability that differentiates the directors of listed firms from the others is their industry knowledge. In contrast, there is no difference in leadership skills, networking ability, or fame. The statistical tests are based on a multivariate logit analysis in which the binary dependent variable equals 1 if a given reason is pertinent and 0 otherwise. We use the standard regression specification. Column (3) in the table shows the z-value of the coefficient of listing status in that regression.

Directors are also nominated at times because of their business ties with the firm—they might be important customers, lenders, or suppliers. Listed firms are less likely to have directors who are important customers and more likely to have directors associated with important lenders. They are also less likely to have blockholders on their boards. A possible interpretation is that it might be more difficult for blockholders to reap private benefits of control if they are not board members. Consequently, keeping blockholders off the board could make firms more attractive to minority investors.

5.3.2 Director reputation

If superior talents are scarce, we would expect the directors of listed firms to simultaneously sit on multiple boards. We therefore test whether seat accumulation (or "overboarding")[33] by individual directors is more widespread in listed firms.

Table 10 compares seat accumulation, defined as the fraction of directors with at least one directorship in another company. The median fraction of directors with more than one seat is 80 percent in listed firms and 71 percent in unlisted ones. The difference, however, is statistically insignificant at customary levels of confidence. The statistical test is based on the z-value of the coefficient of listing status in an OLS regression of relative seat accumulation against determining factors. Relative seat accumulation is measured as the percentage deviation of a firm's seat accumulation from the sample median, divided by that sample median. The regression specification is the standard one.

5.3.3 Stakeholders with influence on director nomination

We next ask the COBs who has the power to nominate directors in their firms. They can rate the influence of various parties on a scale of 1 to 4, with 1 being the weakest influence. To cater to minority shareholders and guarantee separation of powers, listed firms should avoid giving nominating authority to management. Also, to signal limited consumption of private benefits of control, it might make sense to diminish blockholders' ability to influence the composition of boards of directors.

The results give these conjectures some support (Table 11). We compare the average influence of various parties inside and outside the firm, including investors, customers, suppliers, and unions. The statistical test used in this comparison relies on the the z-value of the coefficient of listing status in a multivariate ordered logit regression. The dependent variable is the nominating authority of a given party. The regression specification is the standard one.

The first difference we notice is that the party with the greatest influence on the nomination of directors in listed firms is the board, whereas in unlisted ones it is blockholders. This corresponds to what we expected. Second, insiders such as the CEO, management, or the employees have less to say in listed firms, but the differ-

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[33]   The term comes from the U.S. and reflects the belief that seat accumulation reduces the effectiveness of directors by reducing the time they can dedicate to any one of their mandates. Consistent with that, seat accumulation is negatively related to firm value (Loderer and Peyer, 2002).

ence is not significant. And third, institutional investors carry more nominating weight in listed firms. No difference can be found with respect to debtholders, customers, suppliers, or unions.

5.3.4 Board independence

To protect minority interests from the self-serving activities of majority shareholders and managers, the boards of listed firms should include more independent directors, defined as individuals without business ties to or a managerial job in the firm during the past three years (Fama and Jensen, 1983, Weisbach, 1988, Jensen, 1993).[34] Table 12 analyzes whether that is true. Consistent with the prediction, the fraction of independent directors on the board of listed firms is a median 82 percent, significantly more than the 57 percent observed in unlisted firms (Panel A of the table).[35] The proportion of firms with a fraction of independent directors larger than 50 percent is also significantly larger in listed firms (89 versus 64 percent). And managers make up a median 20 percent of the board of unlisted firms, but they have a median presence of zero in listed firms.

Panel B conducts a multivariate analysis of board independence to confirm these findings. Shown there are the estimates of an OLS multivariate regression analysis of relative board independence against possible determining factors. Relative board independence is defined as the fraction of independent board members minus the sample median, divided by that median. Column (1) reports the coefficient estimates for our standard specification. They confirm the univariate finding that listed firms have significantly more independent boards (the coefficient of bLISTED is positive and significant with confidence better than 0.95). Independence is also more pronounced in larger and older firms and in firms in the financial industry (the coefficients of LNSIZE, AGE, and bFINANCIAL are positive and significant). In column (2) we modify the regression specification by testing for the impact of the stake of the largest shareholder (LARGESTVOTE). Its coefficient is negative and significant, indicating that a larger stake reduces board independence.[36] One possible interpretation could be

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[34] According to Bhagat and Black (2000), however, there is no clear relation between board independence and firm performance.

[35] In spite of the intense discussion in the media and the pressure by regulators, board independence in listed firms in Switzerland is still about where it was during the past fifteen years or so (Loderer and Peyer, 2002).

[36] We assume that the variable LARGESTVOTE is exogenous.

that controlling stakeholders are reluctant to allow board independence, since that would complicate control. The remaining variables maintain the sign and significance of their coefficients.

5.3.5 CEO-COB and CEO-director dualities

The practice of CEO-COB duality differs significantly across countries (Dalton and Kesner, 1987, Dahya, McConnell, and Travlos, 2002) and is fairly controversial. Whereas the media, shareholder activists, and regulators seem to have concluded that it is bad corporate governance to have the same person serve as the CEO and the COB of a company, the evidence does not seem to bear this out (Brickley, Coles, and Jarrell, 1997). We look for differences in duality between listed and unlisted firms. If this phenomenon does indeed create agency problems between blockholders and minority shareholders, we would expect listed firms to be less frequently associated with this practice. The evidence, however, suggests that dualities are the same in listed and unlisted firms (Table 13).

Panel A of the table tells us that the fraction of firms with CEO-COB duality is 20 percent in listed and 28 percent in unlisted firms; the difference is statistically indistinguishable from zero at customary levels of confidence. Hence, CEO-COB duality is fairly diffused but appears to be unrelated to listing. The panel also investigates another duality, namely how often the CEO is simultaneously a director (not necessarily the COB). This occurs in 40 percent of the listed firms and 51 percent of the unlisted ones. This difference is statistically significant with 0.90 confidence. We haven't controlled, however, for potentially confounding effects, which is why we perform a multivariate analysis of duality.

Panel B estimates a logit regression of CEO-COB duality against determining factors. This analysis is then replicated to explore the phenomenon of CEO-director duality. Let us begin with an analysis of CEO-COB duality with our standard regression specification (column 1). The dependent variable equals 1 if the CEO simultaneously serves as the COB and 0 otherwise. The results confirm that listing status is unrelated to CEO-COB duality (the coefficient of bLISTED is insignificantly different from zero at customary levels of confidence). This type of duality, however, occurs less frequently in larger firms (the coefficient of LNSIZE is negative and marginally significant) and in financial firms (the coefficient of bFINANCIAL is negative and also

marginally significant). Larger firms may be too complex, in general, for any one person to play the roles of CEO and COB simultaneously. And duality may be less frequent in financials because Swiss banking law prevents senior executives from sitting on the boards of banks.

Column (2) extends the regression arguments with the binary variables that measure the presence of founding family members or of shareholders on the board of directors (bFAMILY and bSHAREHOLDER, respectively), and the stake of the largest shareholder (LARGESTVOTE). [37] This addition does not change any of the results we have just discussed. Of the three new variables, bSHAREHOLDER is the only one that has a significant coefficient. Its positive sign could signify that CEO-COB duality is acceptable when blockholders sit on the board and can control the CEO. Finally, in column (3) we want to know what corporate goal CEO-COB duality is consistent with. We therefore add two new binary variables to the regression—bSHAREMAX equals 1 when the COB claims to maximize shareholder value and 0 otherwise; bINDMAX equals 1 when the COB claims that the company's purpose is to maintain independence and 0 otherwise. Of these two new variables, bSHARE-MAX has a negative coefficient with 0.99 confidence. This suggests that, in the eyes of the COBs, CEO-COB duality is inconsistent with shareholder value maximization. The previous results remain unchanged.

In column (4), we study CEO-director duality. We therefore replace the dependent variable with a binary variable that equals 1 in firms where the COB is a board member (possibly but not necessarily the chairman) and 0 otherwise. The regression specification is that of column (3). The significant relation to listing status observed in Panel A goes away. Listed firms have the same incidence of CEO-director duality as unlisted firms. The only two variables with a significant coefficient are firm size and the binary variable that identifies firms in the financial industry. Both variables have a negative coefficient. In the case of firm size, it could be that large firms are generally too complex for any one CEO to also sit on the board. And in the case of financial firms, the negative coefficient is probably once again a reflection of the provision in banking law that prevents bank managers from serving on the banks' boards.

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[37]   We assume that the variable LARGESTVOTE is exogenous.

5.4 Board term

Unless the corporate charter specifies otherwise, the law requires a term of three years; the legal maximum is six. Corporate charters, however, generally set limits on the time directors can serve. One possible reason is that markets change over time and require up-to-date skills and knowledge from board members. Directors must therefore be replaceable. The question is how long the terms should be. Longer terms encourage directors to invest time and gain important firm-specific information. However, they also make control contests more difficult, which could lead to entrenchment. Whether longer terms benefit minority shareholders is therefore unclear, so we cannot predict what board term we should expect if listed firms wanted to protect minority investors.

Panel A of Table 14 shows a board term of three years in 64 percent of the listed firms; the remaining firms are about equally split between shorter and longer terms. Three years is also the most common term in unlisted firms (46 percent of the cases). Yet there are many more cases of terms shorter than three years in unlisted firms (37 vs. 17 percent). These differences, however, are not significant at customary levels of confidence. The test is based on the z-value of the coefficient of listing status in an ordered logistic regression of board term against determining factors. The regression specification is the standard one.

5.5 Meeting frequency

Listed and unlisted firms could also differ in how often their boards meet. If board meetings in listed firms have a real purpose, one could expect meeting frequency to be higher in listed firms. Panel A of Table 15, which compares meeting frequencies, seems to support this contention. Most listed firms (51 percent) meet between six and eight times a year, whereas 50 percent of the unlisted firms meet between three and five times. The panel also shows the meeting frequency that would be optimal in the eyes of the COB. As one can see, there is no substantial difference between actual and optimal meeting frequency.

Panel B repeats the comparison in a multivariate context. We perform the analysis with a multivariate ordered logit regression of meeting frequency in our standard regression specification. Accordingly, optimal meeting frequency is marginally higher in listed firms (the coefficient of bLISTED is significantly positive with 0.90

confidence). Meeting frequency is also higher in larger and older firms, as well as in firms in the financial and high-tech industries (the coefficients of LNSIZE, AGE, bFINANCIAL, and bHI-TECH are all positive and significant with confidence of at least 0.90). We obtain the same results when repeating the analysis for the optimal meeting frequency.

5.6 Board committees

If the boards of listed firms have to take on more responsibilities, they should be structured to allow specialization and more efficient work. Table 16 confirms this prediction by showing that listed firms have formal board committees more often than unlisted firms do. Panel A shows the fraction of firms with audit, compensation, and nominating committees. The vast majority of listed firms have an audit and a compensation committee regardless of size. Many have also a nominating committee. Board committees exist in unlisted firms, too, but much less frequently, especially in small firms.

Panel B performs logit regressions for each type of committee. The dependent binary variable equals 1 if the firm has the committee in question and 0 otherwise. Since firms with one committee are more likely to have other committees as well, the individual regressions should not be interpreted as independent investigations. We use our standard regression specification augmented by the size of the largest shareholder's stake.[38] The results confirm our prediction even in a multivariate context: Listed firms are significantly more likely to have all three types of board committees (the coefficient associated with the binary variable bLISTED is positive and significant with confidence better than 0.99). Board committees are also more frequent among large firms (the coefficient associated with LNSIZE is positive and significant). Their existence, however, is inversely related to the size of the largest shareholder's stake in the firm (the coefficient of LARGESTVOTE is negative and significant in all three regressions). This suggests that controlling shareholders tend to make decisions on their own and do not need boards with formal organizational structures. The remaining arguments in the regression have coefficients that are insignificantly different from zero.

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[38]   We assume that the variable LARGESTVOTE is exogenous.

The evidence therefore supports the hypothesis that the boards of listed firms have a more important role to play than those of unlisted firms and are structured accordingly. True, the popularity of board committees in listed firms could also reflect the recommendations of the SCBP. As pointed out above, however, those recommendations are not binding.

5.7 Incentives: Director compensation contracts

Listing and the associated need to protect minority investors would seem to have an impact on the level as well as the composition of executive and director compensation contracts. The level could increase to reimburse the executives and directors of publicly traded firms for the increased media exposure they have to endure (on the relation between the press and executive compensation, see Core, Guay, and Larcker, 2005). It is also possible that listed firms are comparably less able than closely held firms to give managers credible, informal job guarantees. Total managerial compensation might therefore be higher to compensate managers for the shorter tenure.

Listed firms, however, should also rely on different compensation packages for their managers and directors. Since going public is associated with more diffuse ownership, listed firms are confronted with a greater problem of separation of ownership and control (Berle and Means, 1932). To solve that problem, they may structure the compensation packages of managers and directors in ways that are formally related to performance—thereby introducing incentive mechanisms that replace the direct monitoring of the controlling shareholders. Consistent with that, Mehran (1995) reports that, among listed firms, those with smaller stakes in the hands of insiders or outside blockholders rely more heavily on equity-based compensation. Similarly, Ke, Petroni, and Saffiedine (1999) find that accounting-based incentive pay contracts are more frequent among publicly held than among privately held companies. And Mayers and Smith (1992) report that executive compensation in mutual life insurance companies is less sensitive to firm performance than that in stock insurers.

We examine whether, consistent with the above arguments, the compensation of directors in listed firms is more variable than that in unlisted firms.[39] As it turns out, there does not seem to be a difference (Panel A of Table 17). Eighteen percent of

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[39] There is evidence in the literature that directors react to monetary incentives. Adams and Ferreira (2004), for example, report that a modest fee per meeting seems to reduce the attendance problem.

listed firms pay their directors on a variable basis, compared with 14 percent of unlisted firms. The difference is insignificant at customary levels. There are, however, various potentially confounding effects, including firm size and industry. Panel B therefore conducts a multivariate logit regression to isolate the impact of listing status on director compensation. The binary dependent variable equals 1 if the firm has variable forms of director compensation and 0 otherwise. We use essentially the same regression specification as in Table 16. Under this conditional analysis, we find that listed firms are more likely to pay their directors on a variable basis (column 1), as are firms with shareholders on the board and older firms. In contrast, variable forms of director compensation are inversely correlated with firm size. These results remain unchanged when we expand the specification by adding the two binary variables that control for the purpose of the corporation (column 2). Listed firms are still marginally more likely to choose variable forms of compensation for their directors.

5.8 Board monitoring activities

The preceding sections tell us that the boards of listed firms have characteristics that differ from those of unlisted firms. Board independence, for example, seems to be more pronounced in listed firms. We have also seen that the boards of listed firms may have different incentives, since a larger part of their compensation is contingent. This section suggests that there are also differences in what boards actually do. If boards play a more important role in listed firms because of the absence of a controlling shareholder, they should also be more active. We focus on their monitoring activities. To assess them, we ask the COBs to rate how intensely their boards monitor both the CEO and the COB using a scale ranging from 1 (lowest) to 4 (highest). On the basis of what we have just said, we expect monitoring intensity to be greater in listed firms.

Panel A of Table 18 provides descriptive statistics for monitoring activities in the full sample. Most boards monitor their CEO either with great (almost 70 percent of the cases) or high intensity (18 percent of the cases). In contrast, the monitoring intensity for the COBs is almost evenly spread across the rating scale. For example, 27 percent of the firms supervise the COB with great care, but roughly as many (28 percent) do not seem to engage in that activity at all.

We then use an ordered logistic regression to compare the monitoring habits of boards in listed and unlisted firms. The estimates in Panel B tell us that the boards of listed firms pay significantly more attention to what the CEO and the COB do. Column (1) of the panel refers to the monitoring of the CEO. The specification is the one we used in the last column of Table 17 (the standard specification yields the same results). As one can see, the boards of listed firms keep a closer eye on their CEO (bLISTED has a positive and significant coefficient). The only other variable with a significant coefficient is the binary variable bINDMAX, which indicates that firms that want to remain independent monitor their CEOs more thoroughly. The same conclusions apply when we examine the supervision of the COB (column 2). Listed firms watch their COB more closely, and so do the firms that want to remain independent. Unlike what we have seen in the case of CEO supervision, COB supervision is inversely correlated with the size of the stake of the largest shareholder. These could be situations in which the largest shareholder is also the COB.

5.9 Motives for adopting measures that improve corporate governance

We have talked about board tasks and structures and discussed board compensation and activities. We have noticed differences between listed and unlisted firms, which we ascribe to the desire to attract investors. The next-to-last step in our analysis is to figure out why firms do anything about corporate governance to begin with. To find an answer, we showed COBs a list of possible changes to "improve corporate governance" and asked them to indicate the ones they had adopted in the recent past and why.

Table 19 lists these measures. They include: (a) changes in board size; (b) the creation of board committees; (c) the addition of field experts to the board; (d) an increase in board independence; (e) new compensation schemes for directors and managers; (f) stricter control of directors and managers; (g) better information disclosure; and (h) the unification of multiple share classes. Listed firms appear to be more active corporate governance reformers. They adopt a median number of four changes, compared with two for unlisted firms. In particular, they create board committees and increase transparency significantly more often than unlisted firms.

Taken by itself, this does not mean that listed firms are more concerned about corporate governance, since changes do not say much about where corporate governance

stands to begin with. What we would like to find out, however, is the motivation of COBs. Are they reluctant champions of corporate governance who make changes only when forced by the law, the media, and active shareholders? Or do they take the initiative and deliberately try to benefit shareholders at large?

For an answer, we turn to Table 20. The table asks the COBs in our sample to rate five possible reasons for the measures adopted to improve corporate governance with a score from 1 (lowest) to 4 (highest). The five possible reasons are: (a) compliance with exchange rules; (b) compliance with corporate governance codes; (c) pressure from the media; (d) pressure from shareholders; and (e) benefiting shareholders (the initiative for the changes lies with the firm). We sort firms by whether they are listed. For each group of firms we then compute average scores. As one can see, listed firms have reformed corporate governance mainly for compliance purposes rather than to benefit shareholders, and they have done so much more frequently than unlisted firms have. The average score assigned to compliance with exchange rules is 3.3 in listed firms, compared with 1.2 in unlisted ones; that given to compliance with codes is 3.4 in listed firms and 1.9 in unlisted ones; and that given to the attempt to benefit shareholders at large is 2.9 in listed and 2.2 in unlisted firms. Except for the last motivation, these differences are significant based on the z-value of the coefficient of listing status in a multivariate ordered logit regression. We estimate a regression for each rationale separately. The dependent variable is the actual score a particular rationale received, and the regression specification is the standard one. The two remaining motivations for corporate governance changes receive fairly low scores in both samples of firms. Pressure from the media is rated an average 2.3 in listed versus 1.6 in unlisted firms. And pressure from shareholders does even worse, as it gets an average 1.6 in listed firms and a 1.7 in unlisted ones. Both differences are significant with 0.90 confidence or better according to our significance test.

Measures to improve corporate governance consequently do not seem to originate mainly in a conscious policy to benefit shareholders. Rather, they seem to come about because of external pressure, but not pressure from shareholders. Moreover, the five reasons we investigate weigh significantly more heavily with listed firms. Of course, our logic assumes that the benefits of these measures exceed their costs, because otherwise shareholder-value maximizing boards would have good reasons not to initiate them. Our logic, however, is probably correct. If these changes do not make sense economically, they would be actively opposed by shareholder-value

maximizing boards and discussed extensively in the media (especially the changes that require shareholder approval). We are not aware of cases where that has happened. In fact, there is little evidence that corporate governance has already reached an optimal stage. When asked whether there is still room for improvement, more than 50 percent of the COBs in our sample firms agree or strongly agree, regardless of whether the firm is listed.

In a further attempt to tie the target of shareholder-value maximization to changes in corporate governance, we estimate multivariate logit regressions of each individual action undertaken to improve corporate governance against the five possible reasons for its adoption. We do so for listed and unlisted firms separately (not shown). For listed firms, benefiting shareholders is not a statistically significant motivation, except for measures meant to increase board independence (p-value = 0.94) and steps taken to unify multiple share classes (p-value = 0.94). For unlisted firms, benefiting shareholders is never a significant motivation. This confirms the impression that shareholder value maximization is not the main force driving corporate governance reform.

5.10 Quality of corporate governance

The last step in our analysis is to ask COBs to assess the quality of corporate governance in their companies. We want to know whether that assessment is more positive in listed firms, since they are the ones with the greater incentives to protect shareholders at large. By the same logic, we want to know whether firms that go to the capital market more often also have the better corporate governance.

The results are shown in Table 21. Panel A breaks down the COB ratings by whether the firm is listed. The resulting two-way table yields a significant measure of association. The COBs of listed firms rate their corporate governance more favorably. In particular, 87 percent agree or strongly agree that the quality of corporate governance in their companies is above average. This compares with 74 percent in unlisted firms.

Panel B shows the results of an ordered logistic regression of COB ratings against determining factors. Column (1) refers to the standard regression specification. Even though the pseudo R^2 of 5 percent suggests the explanatory power of the regression is limited, the estimates imply that listing status has a positive and significant coefficient also in a multivariate context (the coefficient of the variable bLISTED is positive and

significant with 0.95 confidence). Financial firms seem to have better corporate governance as well, possibly because they depend more than other firms on the public capital markets. Somewhat surprisingly, however, firms with higher book values of equity have worse corporate governance, whereas firms with more employees have better governance. A larger number of employees might require better governance.

Column (2) of the panel adds a variable (SEO) that measures the number of seasoned stock offerings by each sample firm during the five years preceding the sample year (2003) and the two years thereafter. The rationale is that companies with more pressing (and predictable) financial needs have stronger incentives to institute good governance. As it turns out, seasoned stock offerings are not very frequent among our sample firms (although more frequent than what we observe in the United States.). Twelve of the 86 listed firms have one seasoned stock offering during the time under analysis, and eight have two (not shown). The estimates support the claim that more frequent issuers have better governance. Specifically, the coefficient of the variable SEO is positive and significant with confidence of almost 0.95. The coefficients of all the other arguments in the regression maintain their sign and significance. Listed firms, in particular, are still associated with better governance.

6. Conclusions

This paper compares corporate governance in listed and unlisted firms. Unlisted firms are generally controlled by stockholders who sit on their companies' boards. This situation often changes when firms go public. To be able to raise funds in the public markets, controlling stockholders have to give up some control. At the same time, they have to guarantee investors against expropriation by majority stockholders or managers. We therefore expect corporate governance to play a more important role in listed firms. We examine whether listed firms disclose more information. Also, we investigate whether they design the structure, choose the composition, and set up the processes of their boards with that purpose in mind. We also inquire whether they adopt corporate governance changes to ultimately benefit shareholders at large.

The results indicate that listed firms disclose more information. Their Web sites are more informative, they rely on accounting standards that are stricter than those required under the law, and they disclose more information than they have to. Moreover, the amount of information they disclose seems to correlate positively with the

amount of money they raise. In contrast, unlisted firms are very reluctant to reveal much of anything to the investor community.

Listed firms also assign real tasks and responsibilities to their boards (especially strategy definition and monitoring and replacement of management), they let them meet more often, they structure them with committees to make them more effective, and they give them variable compensation packages more often. The way their boards operate seems to respect the separation of powers, since: (a) they are substantially independent (and significantly more so than those of unlisted firms); (b) they closely monitor both the CEO and the COB (more closely than in unlisted firms); and (c) the nomination of directors lies with fellow board members (and not with block-holders, as in unlisted firms). There is also marginal evidence that the directors in listed firms are chosen more often on the basis of the knowledge they can contribute.

There is no difference, however, between listed and unlisted firms with respect to board size and term. Moreover, the instances of CEOs with a dual role as COBs are equally frequent. Even though the overall evidence is consistent with the hypothesis that listed firms take better care of investors at large, it also suggests that the boards of unlisted firms are more than rubber-stamp institutions. The boards of unlisted firms, for example: (a) are also fairly independent; (b) bear significant responsibility for defining and monitoring the firm's strategy; and (c) put considerable emphasis on the reputation and the networking abilities of their members.

Listed firms have better governance, according to their COBs, especially if they have more pressing financing needs. They also do more to improve corporate governance. The puzzling observation, however, is that neither listed nor unlisted firms adopt changes in corporate governance mainly to benefit shareholders at large. Listed firms seem to adopt changes primarily because of external pressure from the law and corporate governance codes (pressure from the media also plays some role). There is little evidence that the costs of these changes exceed the benefits. In fact, most COBs claim that corporate governance could be further improved.

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Table 1

Descriptive statistics

The table provides descriptive statistics for the total sample of firms as well as the subsamples of listed and unlisted firms. Age is the number of years since founding. Column (4) reports the statistics for mean–comparison t–tests and median comparison z–tests. The exception is the tests involving the number of firm employees, for which we report the likelihood–ratio chi–squared statistic. Column (5) shows the associated p–values for two–sided tests against zero. The data refer to Swiss firms in 2003.

	All firms	Listed firms	Unlisted firms	Test–statistics	p–values
	(1)	**(2)**	**(3)**	**(4)**	**(5)**
Number of firms	271	86	185		
Median company age	54	49	57	0.123	(0.726)
Firms with:					
fewer than 100 employees	22.14%	6.98%	29.19%	19.601***	(0.000)
between 100 and 199 employees	10.70%	3.49%	14.05%	8.172***	(0.004)
between 200 and 499 employees	19.93%	9.30%	24.86%	9.920***	(0.002)
between 500 and 999 employees	12.55%	15.12%	11.35%	0.738	(0.390)
more than 1,000 employees	34.69%	65.12%	20.54%	50.728***	(0.000)
Share capital (Millions of CHF)					
Average	85.89	230.28	18.76	−5.765***	(0.000)
Median	6.00	48.95	2.50	44.857***	(0.000)

Table 2
Listing status and correlated variables

The table investigates the relation between listing status and variables that would seem to be highly correlated with it. The investigation takes the form of a logit regression. The dependent variable is a binary variable equal to 1 if the company is listed and 0 otherwise. Each column reports the estimated regression coefficients for one particular specification and (in parentheses) the p–value for a test of difference from zero (two–sided test). The symbols ** and *** indicate statistical significance with confidence 0.95 and 0.99, respectively. The data refer to Swiss firms in 2003.

Independent variables	(1)	(2)	(3)
Constant	–2.236***	–5.196***	–5.782***
	(0.000)	(0.000)	(0.000)
LNSIZE	0.608***	0.543***	0.633***
	(0.000)	(0.000)	(0.000)
EMPLOYEESCAT		0.427***	0.406***
		(0.000)	(0.001)
AGE		0.005	0.008**
		(0.126)	(0.021)
bFINANCIAL			–0.214
			(0.683)
bHI-TECH			1.582***
			(0.001)
Number of observations	271	271	271
Pseudo R^2	0.2320	0.294	0.335
Likelihood ratio χ^2	78.61***	99.51***	113.30***
(p–value)	(0.000)	(0.000)	(0.000)

Variable definitions	
LNSIZE	Natural logarithm of the company's book value of equity
EMPLOYEESCAT	Ordinal variable that measures the number of employees a firm has. The variable ranges from 1 (less than 10 employees) to 8 (more than 1,000 employees)
AGE	Firm's age in years
bFINANCIAL	Binary variable equal to 1 if the firm is a bank or an insurance company, and equal to 0 otherwise
bHI-TECH	Binary variable equal to 1 if the firm belongs to one of the following industries: chemical/pharmaceutical, medtech, technology/information systems, or telecommunication; the variable equals 0 otherwise

Table 3

Distribution of votes: univariate analysis

The table shows the distribution of votes in the 271 sample firms by type of shareholder (largest share-holder, blockholders as a group, management, and board). Blockholders control more than 5 percent of total votes. Column (4) reports the statistics of mean–comparison t–tests and median comparison z–tests (with Yates' continuity correction). Column (5) shows the associated p–values for two–sided tests against zero. The data are from a 2003 survey of listed and unlisted firms in Switzerland.

	All firms	Listed firms	Unlisted firms	Test–statistics	p–values
	(1)	**(2)**	**(3)**	**(4)**	**(5)**
Largest shareholder					
Number of firms	271	86	185		
Average	55.41%	33.21%	65.72%	7.800***	(0.000)
Median	53.00%	23.50%	70.00%	28.192***	(0.000)
Fraction of votes $\geq$ 50%	61.25%	33.72%	74.05%	40.079***	(0.000)
Fraction of votes $\geq$ 66.67%	40.59%	11.63%	54.05%	48.959***	(0.000)
Blockholders as a group					
Number of firms	251	77	174		
Average	77.63%	48.08%	90.71%	12.947***	(0.000)
Median	97.00%	45.00%	100.00%	84.310***	(0.000)
Fraction of votes $\geq$ 50%	80.08%	48.05%	94.25%	67.475***	(0.000)
Fraction of votes $\geq$ 66.67%	72.91%	29.87%	91.95%	101.947***	(0.000)
Management					
Number of firms	259	78	181		
Average	19.76%	6.26%	25.57%	4.422***	(0.000)
Median	1.00%	1.00%	0.00%	0.407	(0.523)
Fraction of votes $\geq$ 50%	21.24%	5.13%	28.18%	21.032***	(0.000)
Fraction of votes $\geq$ 66.67%	14.29%	2.56%	19.34%	16.069***	(0.000)
Board					
Number of firms	260	79	181		
Average	45.28%	18.04%	57.18%	7.195***	(0.000)
Median	32.50%	1.00%	75.00%	35.203***	(0.000)
Fraction of votes $\geq$ 50%	47.69%	16.46%	61.33%	47.682***	(0.000)
Fraction of votes $\geq$ 66.67%	42.69%	10.13%	56.91%	55.606***	(0.000)

Table 4
Distribution of votes: multivariate analysis

The table compares the ownership structure of listed and unlisted firms. We investigate the possible determinants of the relative fraction of votes controlled by the largest shareholder, by blockholders as a group, by management, and by the board, respectively. The relative fraction is measured as the deviation from the corresponding median fraction in the sample firms, divided by that median fraction. Blockholders hold more than 5 percent of the shares outstanding. The analysis is performed with an OLS regression. Each column reports the estimated regression coefficients for one particular specification and (in parentheses) the p–value for a test of difference from zero (two–sided test). The symbols ** and *** indicate statistical significance with confidence 0.95 and 0.99, respectively. The data are from a 2003 survey of listed and unlisted firms in Switzerland.

| | Fraction of votes controlled by | | | |
Independent variables	Largest share-holder	Blockholders as a group	Management	Board
Constant	0.262***	–0.095**	28.043***	0.818***
	(0.005)	(0.032)	(0.000)	(0.000)
bLISTED	–0.566***	–0.400***	–8.505*	–0.807***
	(0.000)	(0.000)	(0.073)	(0.000)
LNSIZE	–0.006	–0.009	–4.119***	–0.136***
	(0.758)	(0.359)	(0.874)	(0.001)
AGE	–0.001	–0.001	0.006	0.001
	(0.318)	(0.192)	(0.874)	(0.556)
bFINANCIAL	–0.218**	–0.177***	–8.951	–0.608***
	(0.045)	(0.001)	(0.101)	(0.004)
bHI-TECH	–0.064	–0.023	1.081	–0.324*
	(0.514)	(0.6467)	(0.828)	(0.095)
bFAMILY	0.157**	0.108***	2.432	0.340**
	(0.041)	(0.006)	(0.528)	(0.024)
Number of observations	268	268	268	268
Adjusted R^2	0.198	0.302	0.145	0.265
Likelihood ratio χ^2	12.02***	24.67***	8.53***	17.06***
(p–value)	(0.000)	(0.000)	(0.000)	(0.000)

Variable definitions	
bLISTED	Binary variable equal to 1 if the company is listed, and equal to 0 otherwise
LNSIZE	Natural logarithm of the company's book value of equity
AGE	Firm's age in years
bFINANCIAL	Binary variable equal to 1 if the firm is a bank or an insurance company, and equal to 0 otherwise
bHI-TECH	Binary variable equal to 1 if the firm belongs to one of the following industries: chemical/pharmaceutical, medtech, technology/information systems, or telecommunication; the variable equals 0 otherwise
bFAMILY	Binary variable equal to 1 if the company is a family firm, and equal to 0 otherwise. Family firms have a member of the founding family on the board of directors.

Table 5

Information disclosed on corporate Web sites

The table reports descriptive statistics concerning the information reported on corporate Web sites. Comparison tests are χ^2 statistics. p-values are for two-sided tests of difference from zero. The symbol *** indicates statistical significance with confidence 0.99. The data are from a 2003 survey of listed and unlisted firms in Switzerland.

	All firms	Listed firms	Unlisted Firms	Comparison test	p-value
Number of observations	271	86	185		
Number of firms with Web site	255	86	169		
Percentage of firms with Web site	94.1%	100.0%	91.4%	7.905***	(0.005)
Financial Information:				107.611***	(0.000)
No financial information	32.94%	4.65%	47.34%		
Only last year's sales	11.76%	4.65%	15.38%		
Only earnings or sales in recent years	8.63%	1.16%	12.43%		
Full balance sheet or income statement	46.67%	89.53%	24.85%		
Corporate Information:					
Annual report	47.45%	90.70%	25.44%	107.912***	(0.000)
Organizational chart	34.90%	56.98%	23.67%	27.382***	(0.000)

Table 6

Disclosure policies of listed firms

The table investigates the disclosure policies of listed firms. Listed firms are those in the sample that trade on the SWX. Panel A reports descriptive statistics concerning the transparency rating assigned by the biweekly newspaper *Finanz und Wirtschaft*. Panel B provides an ordered logit regression of that transparency rating against determining factors. Each column reports the estimated regression coefficients for one particular specification and (in parentheses) the p–value for a test of difference from zero (two–sided test). The symbols *, **, and *** indicate statistical significance with confidence 0.90, 0.95, and 0.99, respectively. The data refer to Swiss firms in 2003. They include data from a 2003 survey of listed and unlisted firms.

Panel A: Transparency rating in listed firms (N = 72)

Possible rating	**1**	**2**	**3**	**4**	**5**	**6**	**7**
Rating frequencies	0%	1.4%	6.9%	13.9%	54.2%	19.4%	5.2%
Average Rating	4.95						
Median Rating	5						

Panel B: Transparency rating and determining factors

Independent variables	(1)	(2)	(3)
LNSIZE	0.071	0.074	0.052
	(0.518)	(0.507)	(0.649)
AGE	0.001	−0.001	0.001
	(0.839)	(0.906)	(0.783)
bFINANCIAL	0.277	0.881	1.015
	(0.712)	(0.244)	(0.196)
bHI-TECH	1.223**	1.282**	1.414**
	(0.026)	(0.024)	(0.015)
FuWI-GROWTH		1.044***	0.984***
		(0.000)	(0.000)
bFAMILY			0.968*
			(0.085)
bSHAREHOLDER			−0.308
			(0.580)
LARGESTVOTE			−1.249
			(0.283)
Number of observations	72	72	72
Likelihood ratio χ^2	5.77	23.51***	27.24***
(p–value)	(0.2168)	(0.000)	(0.000)

Variable definitions

FuWI-TRANSP	Index of transparency as reported by *Finanz und Wirtschaft*
LNSIZE	Natural logarithm of the company's book value of equity
bFINANCIAL	Binary variable equal to 1 if the firm is a bank or an insurance company, and equal to 0 otherwise
bHI-TECH	Binary variable equal to 1 if the firm belongs to one of the following industries: Chemical/pharmaceutical, medtech, technology/information systems, or telecommunication; the variable equals 0 otherwise
bFAMILY	Binary variable equal to 1 if the company is a family firm, and equal to 0 otherwise. Family firms have a member of the founding family on the board of directors
bSHAREHOLDER	Binary variable equal to 1 if a director is a member of the board because he is a shareholder, and equal to 0 otherwise
LARGESTVOTE	Fraction of voting rights controlled by the largest shareholder
FuWI-GROWTH	Index of growth as reported by *Finanz und Wirtschaft*

Table 7

Board tasks

The table investigates the tasks that boards are responsible for in the opinion of their COBs and looks for differences between listed and unlisted firms. The COBs rate the importance of each task listed in the table with scores between 1 and 4 (1 meaning lowest importance). Columns (1) and (2) report the average score for each task in listed and unlisted firms, respectively. Column (3) shows the z-value of the coefficient of listing status in a multivariate ordered logit regression. The dependent variable is the COB's rating for a given task. The regression arguments are those shown in column (3) of Table 2 (the standard specification). except we use the logarithmic transformation of firm age rather than firm age itself. Column (4) reports the p-value associated with the z-statistic. The symbols ** and *** indicate statistical significance with confidence 0.95 and 0.99, respectively. The data are from a 2003 survey of listed and unlisted firms in Switzerland.

	Average score in listed firms (1)	Average score in unlisted firms (2)	Multivariate z-value (3)	p–value (4)
Number of observations	85	168		
Defining strategy	3.767	3.768	1.92**	(0.055)
Monitoring the implementation of the strategy	3.860	3.775	0.87	(0.383)
Monitoring the financial situation	3.941	3.864	0.58	(0.562)
Appointing or dismissing managers	3.857	3.546	2.84***	(0.005)
Nominating new directors	3.841	3.427	4.01***	(0.000)
Setting targets for managers	3.465	3.368	1.17	(0.243)
Key-account management	1.613	1.964	−1.26	(0.208)
Managing relations with key investors	2.052	1.590	3.36***	(0.001)
Negotiating with business partners	1.513	2.135	−2.39**	(0.017)
Representing the company	2.500	2.640	−0.14	(0.889)

Table 8

Board size

The table compares the board size of listed and unlisted firms. Panel A presents descriptive statistics concerning board size. Panel B shows descriptive statistics for relative deviation from optimal board size in the eyes of the COB. Relative deviation is measured as (actual board size – optimal board size)/optimal board size. Panel C performs a multivariate OLS regression of the relative deviation of board size from the sample median. Each column in that panel reports the estimated regression coefficients for one particular specification and (in parentheses) the p–value for a test of difference from zero (two–sided test). The symbols *, **, and *** indicate statistical significance with confidence 0.90, 0.95, and 0.99, respectively. The data are from a 2003 survey of listed and unlisted firms in Switzerland.

Panel A: Board size in listed and unlisted firms

	All firms	Listed firms	Unlisted firms	Comparison test	p–value
Number of firms	271	86	185		
Average	5.73	6.90	5.19	–5.484***	(0.000)
Median	5.00	6.00	5.00	17.898***	(0.000)
Maximum	16.00	15.00	16.00		
Minimum	1.00	3.00	1.00		

Panel B: Relative deviation from optimal board size in the opinion of the COB

	All firms	Listed firms	Unlisted firms	Comparison test	p–value
Number of firms	262	84	178		
Average	0.031	–0.014	0.052	1.112	(0.265)
Median	0.000	0.000	0.000	0.079	(0.778)
Maximum	4.000	0.6667	4.000		
Minimum	–0.500	–0.500	–0.500		

Panel C: Board size and determining factors

Independent variables	(1)	(2)
Constant	–0.136**	–0.041
	(0.013)	(0.643)
bLISTED	–0.002	–0.002
	(0.973)	(0.973)
LNSIZE	0.111***	0.114***
	(0.000)	(0.000)
AGE	0.0003	0.0002
	(0.598)	(0.694)
bFINANCIAL	0.158**	0.123*
	(0.035)	(0.097)
bHI-TECH	0.003	0.004
	(0.969)	(0.949)
LARGESTVOTE		–0.238***
		(0.003)
bSHAREMAX		–0.003
		(0.946)
bINDMAX		0.119**
		(0.019)
Number of observations	271	270
Adjusted R^2	0.309	0.3402
Likelihood ratio χ^2	25.09***	18.33***
(p–value)	(0.000)	(0.021)

Table 8 (cont'd)

Variable definitions	
bLISTED	Binary variable equal to 1 if the company is listed, and equal to 0 otherwise
LNSIZE	Natural logarithm of the company's book value of equity
AGE	Firm's age in years
bFINANCIAL	Binary variable equal to 1 if the firm is a bank or an insurance company, and equal to 0 otherwise
bHI-TECH	Binary variable equal to 1 if the firm belongs to one of the following industries: Chemical/pharmaceutical, medtech, technology/information systems, or telecommunication; the variable equals 0 otherwise
LARGESTVOTE	Fraction of voting rights controlled by the largest shareholder
bSHAREMAX	Binary variable equal to 1 if the firm's COB says he wants to maximize shareholder value, and equal to 0 otherwise
bINDMAX	Binary variable equal to 1 if the COB indicates independence as the corporate goal, and equal to 0 otherwise

Table 9

Nominating criteria

The table reports the importance of various criteria in nominating directors. COBs are asked to state whether the reasons listed row-wise apply. Columns (1) and (2) report the proportion of COBs who claim that a given criterion is relevant in listed and unlisted firms, respectively. Column (3) shows the z-value of the coefficient of listing status in a multivariate logit regression. The dependent variable is a binary variable equal to 1 if a given reason is pertinent and 0 otherwise. The regression arguments are those shown in column (3) of Table 2 (the standard specification). The symbols *, **, and *** indicate statistical significance with confidence 0.90, 0.95, and 0.99, respectively. The data are from a 2003 survey of listed and unlisted firms in Switzerland.

	Listed firms N = 86 (1)	Unlisted firms N = 182 (2)	Multivariate z-value (3)	p–value (4)
Industry knowledge	90.70%	63.74%	2.89***	(0.004)
Leadership reputation	86.05%	74.73%	0.36	(0.721)
Good network	61.63%	58.24%	1.06	(0.287)
Individual's high profile	15.12%	23.08%	−1.05	(0.292)
Member of the founding family	32.46%	43.96%	−1.64	(0.101)
Important shareholder	60.47%	71.98%	−1.67*	(0.095)
Important lender	8.14%	3.30%	1.95*	(0.051)
Important customer	4.65%	9.89%	−2.52**	(0.012)
Important supplier	0.00%	1.65%	0.16	(0.873)
Employee representative	5.81%	7.14%	−0.32	(0.749)

Table 10

Seat accumulation

The table compares the seat accumulation of directors, defined as the fraction of directors with at least one directorship in another company. Columns (1)-(3) present average and median fractions. Column (4) shows the z-value of the coefficient of listing status in an OLS regression of relative seat accumulation against determining factors. Relative seat accumulation is measured as the percentage deviation of a firm's seat accumulation from the sample median, divided by that sample median. The regression arguments are those shown in column (3) of Table 2 (the standard specification). Column (5) reports the p-value associated with the z-statistic. The data are from a 2003 survey of listed and unlisted firms in Switzerland.

	All firms (1)	Listed firms (2)	Unlisted firms (3)	Multivariate z-value (4)	p–value (5)
Number of firms	247	80	167		
Average	70.27%	75.76%	67.63%	0.0002	(0.997)
Median	75.00%	80.00%	71.00%		

Table 11

Nominating authority

The table examines what influence various parties have in the nomination of new directors. The COBs rate the importance of each of the parties listed in the table with scores between 1 and 4 (1 being the least important). Columns (1) and (2) report the average score for each individual party in listed and unlisted firms, respectively. Column (3) shows the z-value of the coefficient of listing status in a multivariate ordered logit regression. The dependent variable is the COB's rating for a given task. The regression arguments are those shown in column (3) of Table 2 (the standard specification). Column (4) reports the p-value associated with the z-statistic. The symbol*** indicates statistical significance with confidence 0.99. The data are from a 2003 survey of listed and unlisted firms in Switzerland.

	Listed firms N = 86 (1)	Unlisted firms N = 182 (2)	Multivariate z-value (3)	p–value (4)
CEO	2.597	2.796	−0.33	(0.742)
Board	3.615	3.350	2.61***	(0.009)
Management	1.937	2.300	−0.05	(0.960)
Employees	1.167	1.240	−0.22	(0.827)
Blockholders	3.183	3.626	−2.82***	(0.005)
Institutional investors	1.559	1.175	2.95***	(0.003)
Debtholders	1.383	1.264	1.08	(0.281)
Customers	1.279	1.292	−1.12	(0.261)
Suppliers	1.066	1.047	0.13	(0.895)
Unions	1.105	1.129	−0.54	(0.586)

Table 12

Board independence

The table compares the board composition of listed and unlisted firms. Panel A presents descriptive statistics concerning the fraction of directors who are independent or managers, respectively. Panel B performs an OLS regression of relative board independence against determining factors. Relative board independence is measured as the relative deviation of a firm's fraction of independent directors from the median fraction of independent directors in the sample, divided by the median fraction of independent directors in the sample. Independent directors have had no economic ties to the firm or a managerial job in the firm during the past three years. Each column reports the estimated regression coefficients for one particular specification and (in parentheses) the p–value for a test of difference from zero (two–sided test). The symbols *, **, and *** indicate statistical significance with confidence 0.90, 0.95, and 0.99, respectively. The data are from a 2003 survey of listed and unlisted firms in Switzerland.

Panel A: Fraction of directors					
	All firms	**Listed firms**	**Unlisted firms**	**Comparison test**	**p–value**
Independent directors					
Number of firms	265	84	181		
Average	59.31%	76.45%	51.36%	−6.406***	(0.000)
Median	66.67%	80.00%	50.00%	24.019***	(0.000)
Proportion of firms with a fraction of independent directors larger than 50%	70.57%	89.29%	61.88%	23.366***	(0.000)
Managers					
Number of firms	269	85	184		
Average	20.55%	10.33%	25.27%	4.977***	(0.000)
Median	16.67%	0.00%	20.00%	18.225***	(0.000)
Proportion of firms with a fraction of managers larger than 50%	13.70%	2.35%	18.92%	17.339***	(0.000)

Table 12 (cont'd)

Panel B: Multivariate analysis of relative board independence

Independent variables	(1)	(2)
Constant	−0.327***	−0.169*
	(0.000)	(0.064)
bLISTED	0.297***	0.226***
	(0.000)	(0.006)
LNSIZE	0.049***	0.048***
	(0.002)	(0.002)
AGE	0.002**	0.001**
	(0.013)	(0.018)
bFINANCIAL	0.243***	0.214***
	(0.005)	(0.014)
bHI-TECH	−0.001	−0.009
	(0.987)	(0.906)
LARGESTVOTE		−0.221**
		(0.018)
Number of observations	265	265
Adjusted R^2	0.2089	0.223
F-statistic	14.94***	13.630***
(p-value)	(0.000)	(0.000)

Variable definitions	
bLISTED	Binary variable equal to 1 if the company is listed, and equal to 0 otherwise
LNSIZE	Natural logarithm of the company's book value of equity
AGE	Firm's age in years
bFINANCIAL	Binary variable equal to 1 if the firm is a bank or an insurance company, and equal to 0 otherwise
bHI-TECH	Binary variable equal to 1 if the firm belongs to one of the following industries: Chemical/pharmaceutical, medtech, technology/information systems, or telecommunication; the variable equals 0 otherwise
LARGESTVOTE	Fraction of voting rights controlled by the largest shareholder

Table 13

Joint CEO and COB positions

The table investigates joint CEO and COB (or joint CEO and director) positions in listed and unlisted firms. Panel A provides descriptive statistics. Panel B performs a logit analysis of a binary variable indicating the presence of a joint position against determining factors. Each column reports the estimated regression coefficients for one particular specification and (in parentheses) the p–value for a test of difference from zero (two–sided test). The symbols *, **, and *** indicate statistical significance with confidence 0.90, 0.95, and 0.99, respectively. The data are from a 2003 survey of listed and unlisted firms in Switzerland.

Panel A: descriptive statistics

	All firms	**Listed firms**	**Unlisted firms**	**Likelihood-ratio-χ^2**	**p–value**
Number of firms	271	86	185		
Fraction of firms in which the CEO is also the COB	25.09%	19.77%	27.57%	1.958	(0.162)
Fraction of firms in which the CEO is a director (including being the COB)	47.60%	39.53%	51.35%	3.307*	(0.069)

Panel B: multivariate analysis

	Joint CEO and COB positions			**Joint CEO and director positions**
Independent variables	(1)	(2)	(3)	(4)
Constant	−0.563* (0.062)	−1.089** (0.040)	−0.866 (0.138)	0.700 (0.890)
bLISTED	−0.074 (0.846)	−0.049 (0.905)	−0.019 (0.965)	−0.137 (0.713)
LNSIZE	−0.171** (0.028)	−0.171** (0.033)	−0.152* (0.060)	−0.196*** (0.007)
AGE	−0.002 (0.561)	−0.003 (0.441)	−0.002 (0.520)	−0.001 (0.762)
bFINANCIAL	−1.369** (0.030)	−1.131* (0.080)	−1.225* (0.063)	−1.794*** (0.001)
bHI-TECH	0.182 (0.620)	0.263 (0.482)	0.429 (0.267)	0.122 (0.733)
bFAMILY		0.374 (0.231)	0.324 (0.326)	0.125 (0.676)
bSHAREHOLDER		0.747** (0.045)	0.882** (0.021)	0.418 (0.178)
LARGESTVOTE		−0.346 (0.480)	−0.573 (0.262)	0.531 (0.228)
bSHAREMAX			−0.866*** (0.006)	−0.451 (0.107)
bINDMAX			0.338 (0.295)	0.049 (0.863)
Number of observations	271	268	267	267
Pseudo R2	0.058	0.083	0.110	0.126
Likelihood ratio χ^2 (p–value)	17.69*** (0.003)	25.12*** (0.002)	33.20*** (0.000)	46.56*** (0.000)

Table 13 (cont'd)

Variable definitions	
bLISTED	Binary variable equal to 1 if the company is listed, and equal to 0 otherwise
LNSIZE	Natural logarithm of the company's book value of equity
AGE	Firm's age in years
bFINANCIAL	Binary variable equal to 1 if the company belongs to the financial sector (banks and insurance companies), and equal to 0 otherwise
bHI-TECH	Binary variable equal to 1 if the firm belongs to one of the following industries: Chemical/pharmaceutical, medtech, technology/information systems, or telecommunication; the variable equals 0 otherwise
bFAMILY	Binary variable equal to 1 if the company is a family firm, and equal to 0 otherwise. Family firms have a member of the founding family on the board of directors
bSHAREHOLDER	Binary variable equal to 1 if a director is a member of the board because he is a shareholder, and equal to 0 otherwise
LARGESTVOTE	Fraction of voting rights controlled by the largest shareholder
bSHAREMAX	Binary variable equal to 1 if the COB says he wants to maximize shareholder value, and equal to 0 otherwise
bINDMAX	Binary variable equal to 1 if the COB indicates independence as the corporate goal, and equal to 0 otherwise

Table 14

Board term

The table compares the board terms of listed and unlisted firms. The statistical test relies on the z-value of the coefficient of listing status in an ordered logistic regression of board term against determining factors. The regression arguments are those shown in column (3) of Table 2 (the standard specification). The number in parentheses is the p-value associated with the z-statistic. The data are from a 2003 survey of listed and unlisted firms in Switzerland.

	Listed Firms	**Unlisted Firms**
Number of observations	86	183
Less than 3 years	17.44%	36.61%
3 years	63.95%	45.90%
4 years	15.12%	14.21%
5 years	2.33%	2.19%
More than 5 years	1.16%	1.09%
Multivariate z-value	0.54	
	(0.591)	

Table 15

Board meeting frequency

The table investigates board meeting frequency in listed and unlisted firms. Panel A shows descriptive statistics on actual and optimal meeting frequencies. Optimal meeting frequency is that stated by the firm's COB. Panel B performs a multivariate ordered logit regression of actual board meeting frequencies against determining factors. The columns report estimated regression coefficients and (in parentheses) the p–value for a test of difference from zero (two–sided test). The symbols * and *** indicate statistical significance with confidence 0.90 and 0.99, respectively. The data are from a 2003 survey of listed and unlisted firms in Switzerland.

Panel A: Descriptive statistics

	Listed Firms (73)		Unlisted Firms (198)	
	Actual Frequencies	**Optimal Frequencies**	**Actual Frequencies**	**Optimal Frequencies**
1 to 2 meetings per year	3.49%	4.81%	13.51%	13.56%
3 to 5 meetings per year	33.72%	37.34%	50.27%	51.40%
6 to 8 meetings per year	51.16%	54.21%	24.86%	30.50%
9 to 12 meetings per year	11.63%	3.61%	8.65%	4.52%
More than 12 meetings per year	0.00%	0.0%	2.70%	0.00%

Panel B: Multivariate analysis

Independent variables	Actual Meeting Frequency
bLISTED	0.511*
	(0.092)
LNSIZE	0.120*
	(0.077)
EMPLOYEESCAT	0.032
	(0.678)
AGE	0.007***
	(0.003)
bFINANCIAL	1.560***
	(0.000)
bHI-TECH	0.567*
	(0.072)
Number of observations	271
Pseudo R^2	0.070
F-statistic	47.86***
(p-value)	(0.000)

Variable definitions

bLISTED	Binary variable equal to 1 if the company is listed, and equal to 0 otherwise
LNSIZE	Natural logarithm of the company's book value of equity
EMPLOYEESCAT	Ordinal variable that measures the number of employees a firm has. The variable ranges from one (less than 10 employees) to 8 (more than 1,000 employees)
AGE	Firm's age in years
bFINANCIAL	Binary variable equal to 1 if the company belongs to the financial sector (banks and insurance companies), and equal to 0 otherwise
bHI-TECH	Binary variable equal to 1 if the firm belongs to one of the following industries: chemical/pharmaceutical, medtech, technology/information systems, or telecommunication; the variable equals 0 otherwise

Table 16
Board committees

The table investigates the frequency of board committees in listed and unlisted firms. We focus on the audit, compensation, and nominating committees. Panel A computes descriptive statistics concerning the existence of these committees when splitting the sample of firms into three size groups based on book value of equity. The reported test statistics are likelihood-ratio-χ^2s when comparing proportions of firms with committees (large vs. small firms); otherwise, when comparing actual numbers of committees (large vs. small firms), they are Kolmogorov–Smirnov z-values. Panel B performs a logit regression of the existence of each individual committee against determining factors. Each column reports the estimated regression coefficients for one particular specification and (in parentheses) the p–value for a test of difference from zero (two–sided test). The symbols ** and *** indicate statistical significance with confidence 0.95 and 0.99, respectively. The data are from a 2003 survey of listed and unlisted firms in Switzerland.

Panel A: Descriptive statistics	Small	Medium	Large	Statistic	p–Value
Listed Firms					
Number of observations	29	28	29		
Median share capital (Mio.)	5.00	48.95	281.00		
Fraction of firms with committee(s)	67.86%	82.14%	93.10%	6.225**	(0.044)
Audit committee	60.71%	78.57%	93.10%	9.155***	(0.010)
Compensation committee	57.14%	71.43%	79.31%	3.365	(0.186)
Nominating committee	32.14%	46.43%	68.97%	8.061**	(0.018)
Average number of committees	2.26	2.52	2.89	0.320	(0.136)
UnlistedFirms					
Number of observations	62	61	62		
Median share capital	0.60	2.50	21.50		
Fraction of firms with committee(s)	9.84%	26.23%	37.93%	13.799***	(0.001)
Audit committee	4.92%	16.39%	24.14%	9.714***	(0.008)
Compensation committee	6.56%	16.39%	20.69%	5.566*	(0.062)
Nominating committee	4.92%	6.56%	10.34%	1.333	(0.514)
Average number of committees	2.00	2.06	1.68	0.167	(0.999)

Table 16 (cont'd)

Panel B: Multivariate analysis

Independent variables	Existence of an audit committee (1)	Existence of a compen-sation committee (2)	Existence of a nominat-ing committee (3)
Constant	−1.093**	−1.373***	−2.153***
	(0.034)	(0.006)	(0.000)
bLISTED	1.955***	1.743***	1.565***
	(0.000)	(0.000)	(0.000)
LNSIZE	0.337***	0.257***	0.270***
	(0.001)	(0.004)	(0.006)
AGE	0.001	0.0002	0.0001
	(0.824)	(0.945)	(0.978)
bFINANCIAL	−0.361	−0.532	−0.253
	(0.476)	(0.281)	(0.634)
bHI-TECH	−0.018	0.070	0.037
	(0.921)	(0.871)	(0.937)
LARGESTVOTE	−1.917***	−1.156**	−1.292**
	(0.000)	(0.025)	(0.032)
Number of observations	265	265	265
Pseudo R2	0.375	0.284	0.274
Likelihood ratio χ^2	128.71***	94.32***	74.25***
(p–value)	(0.000)	(0.000)	(0.000)

Variable definitions

bLISTED	Binary variable equal to 1 if the company is listed, and equal to 0 otherwise
LNSIZE	Natural logarithm of the company's book value of equity
AGE	Firm's age in years
bFINANCIAL	Binary variable equal to 1 if the company belongs to the financial sector (banks and insurance companies), and equal to 0 otherwise
bHI-TECH	Binary variable equal to 1 if the firm belongs to one of the following industries: chemical/pharmaceutical, medtech, technology/information systems, or telecommu-nication; the variable equals 0 otherwise
LARGESTVOTE	Fraction of voting rights controlled by the largest shareholder

Table 17

Variable director compensation

The table studies how directors in listed and unlisted companies are compensated. Panel A reports descriptive statistics. Panel B shows the estimates of a multivariate logit regression. The dependent binary variable equals 1 if the compensation package for directors in the firm includes a bonus, options, or shares of stock; otherwise, the variable equals 0. Each column reports estimated regression coefficients for a particular specification and (in parentheses) the p–value for a test of difference from zero (two–sided test). The symbols *, **, and *** indicate statistical significance with confidence 0.90, 0.95, and 0.99, respectively. The data are from a 2003 survey of listed and unlisted firms in Switzerland.

Panel A: Descriptive statistics

	Listed 84	Unlisted 183
Fraction of firms with variable director compensation	17.86%	14.21%
Fraction of firms with fixed director compensation	82.14%	85.79%

Pearson $\chi^2 = 0.590$
p-value (0.442)

Panel B: Multivariate analysis

Independent variables	(1)	(2)
Constant	−3.038*** (0.000)	−3.352*** (0.000)
bLISTED	0.802* (0.088)	0.788* (0.094)
LNSIZE	−0.221** (0.020)	−0.234** (0.017)
AGE	0.007* (0.059)	0.007* (0.068)
bFINANCIAL	0.184 (0.748)	0.170 (0.768)
bHI-TECH	0.361 (0.426)	0.254 (0.580)
bFAMILY	−0.214 (0.578)	−0.307 (0.450)
bSHAREHOLDER	1.036** (0.028)	0.955** (0.044)
LARGESTVOTE	0.307 (0.606)	0.421 (0.484)
bSHAREMAX		0.547 (0.165)
bINDMAX		0.140 (0.715)
Number of observations	264	263
Pseudo R^2	0.076	0.084
Likelihood ratio χ^2 (p–value)	17.27** (0.027)	19.20** (0.038)

Table 17 (cont'd)

Variable definitions	
bLISTED	Binary variable equal to 1 if the company is listed, and equal to 0 otherwise
LNSIZE	Natural logarithm of the company's book value of equity
bFINANCIAL	Binary variable equal to 1 if the company belongs to the financial sector (banks and insurance companies), and equal to 0 otherwise
bHI-TECH	Binary variable equal to 1 if the firm belongs to one of the following industries: chemical/pharmaceutical, medtech, technology/information systems, or telecommunication; the variable equals 0 otherwise
bFAMILY	Binary variable equal to 1 if the company is a family firm, and equal to 0 otherwise. Family firms have a member of the founding family on the board of directors
bSHAREHOLDER	Binary variable equal to 1 if a director is a member of the board because he is a shareholder, and equal to 0 otherwise
LARGESTVOTE	Fraction of voting rights controlled by the largest shareholder
bSHAREMAX	Binary variable equal to 1 if the COB mentions shareholder value maximization as the corporate goal, and equal to 0 otherwise
bINDMAX	Binary variable equal to 1 if the COB indicates independence as the corporate goal, and equal to 0 otherwise.

Table 18

Board monitoring activities

The table investigates board monitoring activities. Panel A shows the intensity with which, in the opinion of the COB, the board monitors the COB and the CEO, respectively. Intensity is measured on a scale of 1 to 4 (with 4 being the highest). Panel B performs an ordered logistic regression of this intensity against determining factors. Each column reports the estimated regression coefficients for one particular specification and (in parentheses) the p–value for a test of difference from zero (two–sided test). The symbols *, **, and *** indicate statistical significance with confidence 0.90, 0.95, and 0.99, respectively. The data are from a 2003 survey of listed and unlisted firms in Switzerland.

Panel A: Descriptive statistics		
	Proportion of firms in which the board monitors the CEO	**Proportion of firms in which the board monitors the COB**
Intensity 1 (lowest)	2.9	28.0
Intensity 2	9.2	23.8
Intensity 3	18.0	20.9
Intensity 4 (highest)	69.9	27.2

Panel B: Multivariate analysis		
	The board monitors the CEO	**The board monitors the COB**
Independent variables	**(1)**	**(2)**
bLISTED	0.905**	0.672**
	(0.023)	(0.035)
LNSIZE	−0.078	−0.039
	(0.299)	(0.532)
AGE	−0.001	0.002
	(0.791)	(0.510)
bFINANCIAL	0.303	0.018
	(0.517)	(0.961)
bHI-TECH	−0.151	0.140
	(0.697)	(0.650)
bFAMILY	0.043	0.228
	(0.890)	(0.410)
bSHAREHOLDER	−0.497	−0.305
	(0.143)	(0.278)
LARGESTVOTE	0.064	−0.711*
	(0.885)	(0.066)
bSHAREMAX	0.458	−0.038
	(0.110)	(0.878)
bINDMAX	0.509*	0.775***
	(0.083)	(0.002)
Number of observations	254	241
Pseudo R^2	0.035	0.041
Likelihood ratio χ^2	15.27	26.93***
(p–value)	(0.122)	(0.003)

Table 18 (cont'd)

Variable definitions	
bLISTED	Binary variable equal to 1 if the company is listed, and equal to 0 otherwise
LNSIZE	Natural logarithm of the company's book value of equity
AGE	Firm's age in years
bFINANCIAL	Binary variable equal to 1 if the company belongs to the financial sector (banks and insurance companies), and equal to 0 otherwise
bFAMILY	Binary variable equal to 1 if the company is a family firm, and equal to 0 otherwise. Family firms have a member of the founding family on the board of directors
bHI-TECH	Binary variable equal to 1 if the firm belongs to one of the following industries: chemical/pharmaceutical, medtech, technology/information systems, or telecommunication; the variable equals 0 otherwise;
LARGESTVOTE	Fraction of voting rights controlled by the largest shareholder
bSHAREMAX	Binary variable equal to 1 if the COB mentions shareholder–value maximization as the corporate goal, and equal to 0 otherwise
bINDMAX	Binary variable equal to 1 if the COB indicates independence as the corporate goal, and equal to 0 otherwise

Table 19
Measures adopted to improve corporate governance

The table illustrates recent measures adopted to improve corporate governance in listed and unlisted firms. Columns (1)-(3) report the percentage of firms that have adopted a given measure. Column (4) shows the z-value of the coefficient of listing status in a multivariate logit regression. The dependent variable is a binary variable that equals 1 if the company under investigation has adopted a given change and equals 0 otherwise. The regression arguments are those shown in column (3) of Table 2 (the standard specification). Column (5) shows the probability value of the coefficient in question in a two-sided test of significance against zero. The symbol *** indicates statistical significance with 0.99 confidence. The data are from a 2003 survey of listed and unlisted firms in Switzerland.

Measures adopted to improve corporate governance	All firms (262)	Listed firms (84)	Unlisted firms (178)	Multivariate z-value	p-value
	(1)	(2)	(3)	(4)	(5)
Board size increase	12.21%	5.95%	15.17%	−1.34	(0.182)
Board size decrease	20.99%	23.81%	19.66%	−0.08	(0.934)
Creation of board committees	39.69%	70.24%	25.28%	3.81***	(0.000)
Adding experts to the board	33.21%	36.90%	31.46%	−0.45	(0.654)
Increasing board independence	27.48%	29.76%	26.40%	−0.73	(0.468)
New compensation schemes for managers and directors	23.28%	28.57%	20.79%	0.99	(0.324)
Stricter control of directors and managers	35.11%	41.67%	32.02%	−0.07	(0.943)
Better information disclosure, especially to shareholders	54.20%	73.81%	44.94%	3.19***	(0.001)
Unification of multiple share classes	17.18%	25.00%	13.48%	0.80	(0.426)
Number of measures adopted					
Average	2.6336	3.3571	2.2921	−4.503***	(0.000)
Median	2.0000	3.0000	2.0000	10.034***	(0.002)

Table 20

Reasons for changes in corporate governance

The table investigates possible reasons for the adoption of changes in corporate governance. COBs are asked to rate the importance of each reason from 1 (least important) to 4 (mostimportat). Columns (1) and (2) report average scores. Column (3) shows the z-value of the coefficient of listing status in a multivariate ordered logit regression. The dependent variable in that regression is the score assigned to a given reason. The regression arguments are those shown in column (3) of Table 2 (the standard specification). The symbols * and *** indicate statistical significance with confidence 0.90 and 0.99, respectively. The data are from a 2003 survey of listed and unlisted firms in Switzerland.

	Listed firms	Unlisted firms	Multivariate z-value	p-value
	(1)	**(2)**	**(3)**	**(4)**
Compliance with exchange rules	3.297	1.210	7.91***	(0.000)
Compliance with corporate governance codes	3.432	1.908	5.40***	(0.000)
Benefiting shareholders	2.905	2.242	1.31	(0.191)
Pressure from the media	2.297	1.610	2.94***	(0.003)
Pressure from shareholders	1.594	1.671	−1.90*	(0.057)

Table 21

Quality of corporate governance

The table asks COBs to assess whether the corporate governance in their firms is "above average." They can give answers that range from 1 (I strongly disagree) to 4 (I strongly agree). Panel A partitions the answers by whether the firm is listed. The number in parentheses is the p-value of the measure of association test. Panel B performs a multivariate ordered logistic regression of rating against determining factors. The columns report estimated regression coefficients and (in parentheses) the p–value for a test of difference from zero (two–sided test). The symbols *, **, and *** indicate statistical significance with confidence 0.90, 0.95, and 0.99, respectively. The data are from a 2003 survey of listed and unlisted firms in Switzerland.

Panel A: Univariate analysis		
"The quality of corporate governance in our company is above average"	Listed firms	Unlisted firms
4 (I strongly agree)	42.17%	23.78%
3	45.78%	50.00%
2	8.43%	24.39%
1 (I strongly disagree)	3.61%	1.83%
Total number of firms	83	164

Pearson $\chi^2 = 14.513$*** (0.002)

Panel B: Multivariate analysis		
Independent variables	(1)	(2)
bLISTED	0.764**	0.646**
	(0.018)	(0.049)
LNSIZE	–0.127*	–0.170**
	(0.070)	(0.021)
EMPLOYEESCAT	0.284***	0.285***
	(0.001)	(0.001)
AGE	–0.001	–0.001
	(0.661)	(0.726)
bFINANCIAL	1.054***	1.117***
	(0.007)	(0.005)
bHI-TECH	0.109	0.004
	(0.738)	(0.990)
bSEO		0.671*
		(0.059)
Number of observations	247	247
Pseudo R^2	0.045	0.052
Likelihood ratio χ^2	25.09***	28.83***
(p–value)	(0.000)	(0.000)

Table 21 (cont'd)

Variable definitions	
bLISTED	Binary variable equal to 1 if the company is listed, and equal to 0 otherwise
LNSIZE	Natural logarithm of the company's book value of equity
EMPLOYEESCAT	Ordinal variable that measures the number of employees a firm has. The variable ranges from one (fewer than 10 employees) to eight (more than 1,000 employees)
AGE	Firm's age in years
bFINANCIAL	Binary variable equal to 1 if the company belongs to the financial sector (banks and insurance companies), and equal to 0 otherwise
bHI-TECH	Binary variable equal to 1 if the firm belongs to one of the following industries: chemical/pharmaceutical, medtech, technology/information systems, or telecommunication; the variable equals 0 otherwise
bSEO	Number of seasoned stock offerings by the firm in the 1998-2003 and 2004-2005 periods

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The European Corporate Governance Institute has been established to improve *corporate governance through fostering independent scientific research and related activities.*

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