Agency versus Hold-up: On the Impact of Binding Say-on-Pay on Shareholder Value *

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May 15, 2012

Abstract

We investigate the effects, on stock prices, of a step towards a law giving shareholders *binding* say-on-pay. Shareholders reacted negatively on average. We document that where shareholders can expect greater alignment benefits through binding say-on-pay, their reactions were relatively more positive. However, additional evidence also supports the idea that shareholders may prefer to have limits on their own power in order to maintain managerial incentives for extra-contractual, firm-specific investments. Thus, a trade-off characterizes the shareholder value implications of binding say-on-pay: shareholder power reduces agency costs, but accentuates hold-up problems.

*This research was supported by the Swiss National Science Foundation, the NCCR FINRISK, the Swiss Finance Institute, and the Research Priority Program "Finance and Financial Markets" of the University of Zurich. We thank PricewaterhouseCoopers (especially Robert Kuipers and Remo Schmid) for providing compensation data and sharing insight into the compensation practices at Swiss companies. We thank Josefine Böhm, Fabian Forrer and Oliver Schrempp for research assistance. Our thanks go to seminar participants at NHH Bergen, WHU, the University of Innsbruck, the Conference on Financial Regulation in Uncertain Times in Lugano, the Conference of the Swiss Society for Financial Market Research in Zurich, the Campus for Finance Conference, and to Jay Cai, Michel Habib, Alexandra Niessen-Rünzi, Per Östberg, Fausto Panunzi, Tatjana-Xenia Puhan and Ekkehart Wenger for comments, to Egon Franck, Hans-Ueli Vogt, and Rolf Watter for discussions of the implications of the say-on-pay initiative, and to Thomas Minder for a conversation about the demands of his say-on-pay initiative.

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In this paper, we assess the stock market reaction to the announcement of a prospective change in Swiss law that would considerably increase the power of shareholders by subjecting executive and board compensation to a *binding* shareholder vote. 70% of Swiss public corporations responded with negative abnormal stock returns to this event, an at first surprising result: Many shareholders seem to dislike the additional power they would obtain. Closer inspection reveals that the variation of reactions of shareholders reflects the benefits and costs of binding say-on-pay in their respective companies. Alignment benefits can explain part of the stock price reactions, but we also provide significant evidence that shareholders worry about the distortion of executives' extra-contractual incentives. Our central finding is, therefore, that shareholders tend to face a trade-off between agency and hold-up when it comes to the role of shareholder power for shareholder value.

Understanding the advantages and disadvantages of shareholder power is not only a long-standing academic question, but also an issue of significant policy relevance. Several recent proposals in the U.S. and elsewhere consider enhancing the power of shareholders. Among these, the question of how (and if at all) to design say-on-pay regulation is particularly topical. In the U.S., a first proposal by Representative Barney Frank to provide shareholders with an advisory vote on executive compensation passed the House in 2007. While it was never picked up by the Senate, a similar proposal later became part of the "Dodd-Frank Wall Street Reform and Consumer Protection Act" of 2010. As a result thereof, the SEC adopted a rule in January 2011 that requires an *advisory* shareholder vote on executive compensation at least once every three years. However, proposals for binding say-on-pay rules have also been brought forward, and proposals to further strengthen shareholder power are likely to

keep appearing.[1] In Europe, the European Commission has been issuing recommendations in connection with directors' remuneration ever since 2004 (see European Commission (2010) for a review), and in 2011 it released an updated Green Paper on Corporate Governance in which it specifically raised the question if the remuneration policy and report should be subject to a mandatory shareholders' vote, whether advisory or binding.[2] A large number of countries is considering or has implemented a (partially) binding say-on-pay rule.[3]

The popular attitude towards shareholder power tends to be "more is better." While the public discussion often implicitly assumes that benefits and costs are identical across firms, we explicitly investigate cross-sectional differences between firms to obtain insights into the channels through which an increase in shareholder power may transmit to shareholder value. We test three sets of hypotheses.

First, say-on-pay may be costly to implement, and it may be disruptive and interfere with firm management. Regulation of the process of determining executive compensation may distract the management from managing the firm. Moreover, critics worry that the shareholder's initiatives will be divisive or driven by special interests of extremely small shareholder groups. Thus, *Hypothesis 1* states that reactions to binding say-on-pay are more positive in firms where these implementation and interference costs are low.

Second, say-on-pay may better align shareholder and manager interests and improve

[1] For example, the Excessive Pay Shareholder Approval Act (May 2009) would have required a shareholder approval rate of 60% if an individual executive received more than 100 times the average salary within a firm.

[2] European Commission (2011), Section 1.4 with questions (9) and (10).

[3] For example, Belgium, the Czech Republic, Denmark, Finland, France, Hungary, Latvia, the Netherlands, Norway, Portugal, and Sweden have introduced laws that require say-on-pay votes with partially binding elements.

governance and performance. Allowing shareholders to have a say in executive pay may help to reduce the agency costs between executives, directors and shareholders, resulting in more efficient compensation contracts and thus add value to the firm. To avoid the embarrassment of a low approval vote on executive compensation, management may be more willing to start dialogues with shareholders and listen to their concerns. *Hypothesis 2*, therefore, states that reactions to binding say-on-pay are more positive in firms where alignment is currently poor.

These first two channels, alignment benefits and interference costs, partially feature in existing work on advisory say-on-pay. In this respect, we extend the existing literature by conducting the first empirical analysis of reactions to *binding* say-on-pay.[4]

Third, there is an indirect cost of shareholder power that has, for lack of appropriate empirical settings, received little empirical attention so far, but that has long been proposed in the theoretical literature on optimal shareholder rights and managerial discretion (see in particular Burkart, Gromb, and Panunzi (1997), Blair and Stout (1999), and Stout (2003)). While having more power allows shareholders to reduce the agency costs, there is a countervailing effect: Other stakeholders who make specific investments in the firm fear that too powerful shareholders might "hold them up." Shareholders recognize that ultimately their own "piece of the pie" will be smaller when such specific investments are not made. In the present case, the new regulation leads to situations in which shareholders vote on bonuses

[4]For work covering various aspects of say-on-pay see, e.g., Bainbridge (2008), Bebchuk and Fried (2004), Cai and Walkling (2011), Davis (2007), Deane (2007), Ertimur, Ferri, and Muslu (2011), Ertimur, Ferri, and Oesch (2012), Ertimur, Ferri, and Stubben (2010), Greenstone, Oyer, and Vissing-Jorgensen (2006), Grundfest (1993), Larcker, Ormazabal, and Taylor (2011), Lo (2003), Thomas and Cotter (2007), and Thomas, Palmiter, and Cotter (2012). Conyon and Sadler (2009) and Ferri and Maber (2012) look at the impact of legislation on executive pay and shareholder activism outside the U.S. On shareholder activism more generally see Gillan and Starks (2000) and Gillan and Starks (2007).

for management effort and performance in the elapsed year. More generally, contracting becomes more complicated and uncertain. If CEOs expect that they will not receive the full returns on their firm-specific investments, their incentives to engage in such investments are diminished. Anticipating the fall in firm value, shareholders bid down the stock price. *Hypothesis 3*, therefore, states that reactions to binding say-on-pay are more negative in firms where specific investments by CEOs are more difficult or more important to secure.

To test these three hypotheses, we use what we believe to be a particularly clean experiment that recently occurred in Switzerland. On February 26, 2008, it became public that more than 100'000 Swiss voters had signed the "Fat-Cat-Initiative" ("Anti-Rip-Off-Initiative," *"Abzocker-Initiative"*), a law proposal whose central element is the introduction of binding say-on-pay for shareholders of all publicly traded firms. This meant that the proposed bill was set for a popular vote with obligatory adjustments to the Swiss constitution in case of a positive outcome.

We evaluate the stock market reactions to this announcement. Importantly, the announcement that enough public support in favor of the initiative was gathered to enforce a national vote came suddenly and was hardly predictable. This setting is exceptional, especially compared to the standard parliamentary vote setting where the date of the vote as well as the distribution of power in favor or against the issue is usually known in advance. Moreover, the Swiss stock market is highly liquid and open to domestic and foreign investors, allowing for information to be reflected in market prices efficiently.[5]

[5]The market capitalization of Switzerland (SIX Swiss Exchange) at the end of February 2008 was US$ 1'264 billion, equal to 2.21% of the world-wide market capitalization. Averaging over the past ten years, SIX Swiss Exchange ranks 10th highest in terms of market capitalization worldwide (World Federation of Exchanges 2010).

We find that there was wide variation in the stock price reactions with 70% of firms reacting abnormally negatively. The largest one hundred stocks displayed an equal-weighted average cumulative abnormal return during the three day event window of -1.88%.

Consistent with *Hypothesis 1*, larger companies were economically less affected than smaller firms. Arguably, larger organizations are better prepared and face lower relative costs in coping with the new law. Also, companies with significant foreign assets experienced a lower abnormal reduction in market value, consistent with the notion that they are able to move operations to less stringent regulatory environments. There was a (weak) tendency for firms with highly concentrated ownership and those with highly dispersed ownership to see less dramatic valuation decreases.

Hypothesis 2, regarding the alignment benefits of binding say-on-pay, also receives support. Firms which outperformed size- or risk-based benchmarks in the past experienced particularly substantial abnormal stock price drops, while poor performers reacted relatively more positively. Also, the stock prices of firms that paid their CEOs amounts close to the estimated normal salary tended to drop the most during the event, whereas firms where abnormal executive pay was either highly positive or negative only moved slightly.

As a novelty in the empirical literature on shareholder rights legislation, we consider various tests of the idea that enhancing shareholder power may worsen hold-up problems and distort firm-specific investment incentives of CEOs (*Hypothesis 3*). This is particularly accentuated in firms where CEOs have opportunities and incentives to invest in general human capital and thus improve their outside options or where a high volatility in the line of business makes contracting difficult in general. While there is no obvious direct measure

of the intensity of the hold-up problem, we propose three (largely uncorrelated) groups of proxies: *First*, shareholders of firms that use only cash bonuses – which, unlike equity-based compensation programs, would be subject to an ex post shareholder vote, for example, when the board wishes to reward extraordinary performance in the previous year – may worry about a distortion of the ex ante incentives for executives. *Second*, shareholders of firms with younger CEOs and those with CEOs of a shorter tenure at the respective firm are likely to worry more that CEOs will have diminished incentives to make firm-specific investments; these CEOs would be more inclined to improve or exercise their outside options. *Third*, shareholders of firms with higher uncertainty concerning their annual sales or costs will find it more difficult to contract with management efficiently as more contingencies would have to be planned for, which is difficult under the new regime. Supporting the prediction of *Hypothesis 3*, we find that stock price declines were more pronounced in these three groups of firms.[6]

This paper contributes to the literature on the empirical effects of shareholder power on shareholder value. In the context of say-on-pay, Cai and Walkling (2011) first recognized the potential of evaluating shareholder reactions to say-on-pay using an event study. They find neutral to slightly positive stock market effects of *advisory* say-on-pay, with positive outcomes in firms that paid their CEOs large excess compensation.[7] In the more general literature on shareholder power, Larcker, Ormazabal, and Taylor (2011) document negative

[6]Other theoretical models predicting limits on optimal shareholder control include Allen, Carletti, and Marquez (2009) and Cohn and Rajan (2011). We discuss later the extent to which the evidence can be partially explained by these models.

[7]In a laboratory experiment, Göx, Imhof, and Kunz (2010) show that while advisory say-on-pay votes do not distort investment decisions, binding rules do so and may thus impair shareholder value.

market reactions to legal developments that suggest higher probabilities of governance and executive pay regulation. By contrast, Becker, Bergstresser, and Subramanian (2012) and Cohn, Gillan, and Hartzell (2011) find that developments suggesting a possible increased proxy access for shareholders in the future resulted in positive stock price reactions for firms where shareholders were more likely to take advantage of that access. Cuñat, Gine, and Guadalupe (2012) establish that when shareholders choose to adopt a provision that shifts power to them, this causes a positive shareholder value effect; this effect is stronger, for example, in firms with more antitakeover provisions.

Our analysis adds to this existing work by offering a combination of several features: *First*, it focuses on binding say-on-pay. This allows us to study an important policy alternative to advisory say-on-pay, offers an opportunity to consider *Hypothesis 3*, and provides a sharper test of *Hypotheses 1 and 2* as alignment benefits and interference costs are likely to appear more distinctly in this more stringent regime. *Second*, it uses a particularly clean event. The announcement of the initiative's success is surprising, and we also find that the various subsamples (for example, firms with young CEOs vs. those with older CEOs) exhibited parallel trends in abnormal returns *before* the event, emphasizing the causal impact of the event. *Third*, we consider jointly a broad range of factors that explain stock price reactions. The main innovation is that we document that shareholders appear to consider a trade-off: They welcome binding say-on-pay because it helps them reign in agency costs, but they also anticipate hold-up problems when they have too much power.

I. Legislative setting and the binding say-on-pay initiative

To provide a better understanding of the setting in which the event study is conducted, we first describe the political environment that surrounds it. Second, we describe the major demands of the binding say-on-pay initiative.

A. Legislation process

The Swiss political system knows two common ways of enacting new laws (see Klöti, Knoepfel, Kriesi, Linder, Papadopoulos, and Sciarini (2007) for a more detailed summary of the Swiss system). One way is through a consensus decision between parliament and senate. The second way is through the public itself, by means of an initiative which can be started by every Swiss citizen. If an initiative receives the backing of at least 100'000 Swiss citizens (about 2% of the electorate of around 5'000'000) within 18 months, it must be put on the agenda for a national vote. In case the public vote supports the initiative, it will turn into an amendment to the Swiss constitution. (Switzerland has a lively tradition of direct democracy. See, for example, Frey (1994).)

We consider the so-called "*Abzocker-Initiative*" ("Anti-Rip-Off-Initiative," "Fat-Cat-Initiative"). This initiative was launched by entrepreneur Mr. Thomas Minder. On February 26, 2008, the announcement was made that the threshold of 100'000 signatures in favor of the initiative had been collected. (We discuss the media coverage below.) Unlike many initiatives that are rather a general call for action to parliament and senate than original proposals to turn into law, the present initiative had a clear program that it aimed at turning into

legislation. It offered a specific text to be adopted as law, discussed in the next section. Due to the unfavorable public mood concerning management compensation, the initiative stood, at the time of its public announcement, a strong chance of successfully passing a national vote quickly. We consider these circumstances as serious enough to catch the attention of the stock market participants. Nonetheless, the fact that the initiative only represents a step towards a possible law implies that by studying stock market reactions to the initiative we likely underestimate the true economic impact it would have upon enactment.[8]

B. Content of the initiative

The initiative affects all public Swiss limited liability companies. It requires a *binding* annual vote on total compensation for the board of directors (BOD), the executive board (EB) as well as the advisory council. The shareholders vote ex ante on the total amount of the different compensations packages of each body, as proposed by the firm's board, and furthermore have the right to vote ex post on all compensation that is paid in excess of what has been approved at the previous general assembly. For example, shareholders may approve an equity plan (where the amount approved is determined according to some valuation model) and a bonus pool for management for the coming year. To the extent that the board of directors wishes to hand out bonuses covered by this bonus pool, no additional vote is necessary ex post. However, at the end of the year, if the board of directors wishes to grant higher bonuses, the difference needs to be approved ex post. In either case, contracts with new management would be conditional on their pay packages being approved at the next general assembly,

[8]Political discussions have delayed a vote on the initiative, but this does not take away from the fact that ex ante the probability of the initiative passing into law quickly was substantial.

with obviously high uncertainty for management and the board. (One interpretation of the initiative is that if the incoming management's compensation package is similar to the leaving manager's package, the previously approved package may be used for the incoming management as well.)

In case shareholders do not accept any compensation proposal at the annual meeting, management has to schedule a new assembly to vote on a revised proposal; this is an arguably very expensive outcome that hurts the company's reputation. To avoid the latter, a firm's board has to ensure ex ante that its proposals will be supported by a majority of shareholders. This tight interaction with shareholders is a resource-consuming, ongoing process.

Moreover, the initiative closes all known loopholes to keep remuneration proposals from annual votes. For example, it prohibits companies to delegate a firm's management to a foreign company.

Furthermore, the relative composition of the variable, performance-related pay to the BOD and the EB as well as other benefits (loans, pension benefits, etc.) need to be set in the firm's articles of association and can only be altered through a vote of the general assembly. The initiative also prohibits any kind of termination pay or advance payments to the BOD or EB. Other requirements pertain to the election modes of the BOD and the compensation committee.

In short, the initiative implies a significantly more intense effort to strengthen shareholder power within the firm than advisory say-on-pay laws in some other countries.[9]

[9] The full text of the initiative can be found in Appendix A.

II. Empirical strategy and data

A. Event study

We follow standard practices (Kolari and Pynnönen, 2010; Kothari and Warner, 2007; MacKinlay, 1997). Based on the event described in the next section, we define an event window that spans ±1 day around the event-day. For the length of the estimation-window, we choose the well-established duration of 250 trading days ending two days before the event.

To calculate abnormal returns (AR), we apply the commonly used market model:[10]

$$R_{i,t} = \alpha_i + \beta_i R_{m,t} + \epsilon_{i,t}. \tag{1}$$

The difference between the effectively observed return ($R_{i,t}$) and the predicted normal return ($\widehat{R_{i,t}}$), estimated by using Equation (1) is the *abnormal return*, and *cumulative abnormal returns* (CARs) are the sum of the abnormal returns in the event window. In Equation (1), $R_{i,t}$ is the risk-free rate adjusted return of company i on day t ($r_{i,t} - r_{f,t}$), $\epsilon_{i,t}$ is a zero-mean disturbance term and α_i a stock specific constant. We also need to choose $R_{m,t}$, the daily risk-free adjusted return of the market at date t. For the main analysis, we follow the most widely used approach in event studies, using a national market index, the Swiss Performance Index (SPI). Thus, β_i is the sensitivity measure of stock i to movements of the SPI. We alternatively take the view of a globally integrated market and conduct our analysis using the Dow Jones Global Total Stock Market Index as the market return. All our results hold

[10] In short-run event studies, the gains from employing multifactor models for event studies are limited. See, for example, the discussion in MacKinlay (1997), p. 18.

(both qualitatively and quantitatively) when assessed with a global benchmark.

When comparing mean CARs of portfolios formed based on relevant characteristics of interest, for the main presentation, we use the resulting CAR-variance to draw interference.[11] We also employ an adjustment to the Boehmer, Musumeci, and Poulsen (1991) test statistic, proposed by Kolari and Pynnönen (2010).[12] By taking into account the average sample cross-correlation of abnormal returns in the test-specific variance, they show that their adjusted test statistic not only stays robust in case of an event-induced variance increase, but also to event-time clustering.[13] (For details, see Appendix B.)

Finally, we further follow proposals by Campbell, Cowan, and Salotti (2010) and Kolari and Pynnönen (2010) and complement the parametric tests mentioned above with a non-parametric test, in our case the generalized sign test (Corrado and Zivney, 1992). The generalized version of the sign test was calibrated according to the binomial distribution of positive and negative abnormal returns, either of single stocks or in case of portfolios of all stocks within a portfolio, during the estimation window. Campbell, Cowan, and Salotti

[11] When testing the impact of legislative events on a cross-section of companies, event-time clustering (a common event window for companies) can potentially complicate inference because it implies a violation of the assumption of independence of abnormal returns in the cross-section of analyzed firms (Bernard, 1987). However, even for our basic testing procedure, this problem is typically much attenuated in studies like ours that use very short event windows in connection with daily return data (see, for example, Kothari and Warner (2007)).

[12] Both test statistics account for event-time clustering by using scaled cumulative abnormal returns (SCARs), as suggested by Patell (1976). Scaled abnormal returns reduce noise by weighting abnormal returns by the inverse of their standard deviation and hence make it more likely to detect the true statistical significance of the data. The test proposed by Boehmer, Musumeci, and Poulsen (1991) not only takes into account event induced variance changes, but also has better properties vis-a-vis the standard test to deal with event time clustering.

[13] As with all test-statistics based on SCARs, the authors point out that it is important to only consider SCARs to detect statistical significance of abnormal returns, but to rely on standard CARs for the interpretation of economic effects. Hence, when comparing the difference in reaction between various portfolios, we rely on the measures of basic CARs.

(2010) show that this test generally performs better compared to parametric tests as it does not rely on assumptions regarding correlations (and is, as such, free from the clustering issue), yet has a drawback in case the event induced variance change is large. Since the variance increase in our sample is only 30% instead of the doubling assumed in their test environment, we believe that the generalized sign test is a reliable complement to the parametric tests.

B. Event

In every event study, the crucial point is to carefully examine and define the date at which the event to be analyzed took place. We conducted a national keyword-search in the vast news-database of LexisNexis for the time period of July 2006 to March 2010, the timeline during which the initiative has been developing.

The main results of this search are collected in Table I, and we discuss them briefly here. The initiative was initially mentioned in the first week of August 2006, officially verified in mid-October 2006, and the collection of signatures started on the last day of October 2006. As these first three steps all carried a lot of uncertainty about the outcome and implication of the initiative, it seems very unlikely that they had a significant impact on the stock market.

TABLE I ABOUT HERE

The event we focus on in this paper, taking place on February 26, 2008, was the announcement that the threshold of 100'000 signatures in favor of the initiative had been collected. The news was released shortly before mid-day and communicated widely through various channels, i.e., radio, television, news networks, etc. This was also picked up internationally; for example, after having posted the announcement by the Swiss News Agency (SDA) in

German in the early afternoon, *Bloomberg* further reported on the initiative's success in the late afternoon in English under the heading "*Swiss May Vote to Expand Shareholder Rights Over Executive Pay.*" The coverage was further extended on the following day by the print media. The timing of this event was hardly predictable for market participants since there was no publicly available signatures count. According to different sources of the Swiss press, the announcement was chosen to be released right before the reporting season of the largest Swiss corporations started. By doing so, the driver of the initiative, Mr. Minder, aimed at increasing the pressure on companies to voluntarily introduce advisory votes. This is another indication that the news release was new to the market, as this strategy could not have had the hoped-for impact otherwise.

We screened the data during the event window for possible confounding events, considering the same media as in the main event search. One noteworthy event occured on February 24, 2008, when a corporate tax reform (the "*Unternehmenssteuerreform II*") was accepted in a referendum by the Swiss electorate. We argue in the robustness section that this event, if at all, is likely to lead to a positive bias in the estimated abnormal returns. An additional search for other national and international news during the time frame of the event yielded no further relevant confounding event. Particular events that potentially impact single firms specifically (e.g., earnings announcements), were controlled for separately. Overall, we expect that any statistically significant abnormal return during this period can be attributed to the initiative.

For the estimation-window, we also searched for news in connection to the initiative that may potentially lead to a biased event window return estimator. For our event, we could not

identify significant news content that was directly connected to the legislation. We comment on one possible confounding event in the robustness section.

C. Data

Our initial sample covers all the companies that were listed in the Swiss Performance Index (SPI), the index of the overall Swiss market, during the event window. For the main analysis, we focus on the one hundred largest companies. Information is more quickly reflected in stock prices for large firms (Hong, Lim, and Stein, 2000; Hou and Moskowitz, 2005; Peng, 2005) and data more widely available. However, our results largely also hold in the full sample of 225 stocks. Some additional results we find in the expanded sample are reported in the robustness section.

To calculate firm-level stock returns, we use daily closing prices of the SPI constituent companies from the Thomson Reuters Datastream database. We screen the data following the recommendations of Ince and Porter (2006).

The free-float adjusted market value (*Market Capitalization* in what follows), the total market value of the SPI companies,[14] other price data for the Swiss Performance Index (which we used to calculate the market return), trading volume, sales volume, cost of goods sold (COGS), the SPI size-segment indices (each SPI stock is assigned to either the small-size, medium-size, or large-size stock index), and the long-term Swiss government bond rate (a proxy for the risk-free interest rate) are also collected from Thomson Reuters Datastream. *Abnormal Trading Volume* is the difference between trading volume in the event window and

[14] In four cases where free-float adjusted market value was not available, we used total market value instead.

the median trading volume of the respective firm in the previous year, taken as a percentage of the the median trading volume of the respective firm in the previous year. *Sales Volatility* (*COGS Volatility*) measures the standard deviation of a firm's sales (COGS) during the window of 2002 - 2007 and scales it by the average annual sales (for both variables) of the company during the same period. The scaling is necessary to account for the overall size of the firm. Return data for the SPI size-segment subindices are used to obtain each stock's size-index adjusted one-year performance (*Relative Performance*). Furthermore, we use weekly stock returns to calculate a risk adjusted performance measure, *CAPM Alpha*. CAPM Alpha is the residual from a one-year predicted return, based on a two year, quarterly rolling CAPM model return estimate, and the observed annual stock return.

Data on the firm's *Leverage*, measured as total debt to total assets, a CEO's *Tenure* at the current firm, and the *CEO Age* are obtained from Bloomberg.

Compensation data for 2007 is from PricewaterhouseCoopers (2008) for the largest 48 companies and expanded to the full sample by hand-collection.[15] Companies also document the *Cash Incentives*, which is the portion of variable compensation conveyed in cash (and not in equity).

In the spirit of Bebchuk, Cremers, and Peyer (2011), we calculate abnormal compensation as difference between total compensation paid and remuneration granted by the average comparable firm (*Abnormal CEO Compensation* and *Abnormal Board Compensation*). The

[15]Most companies provide company reports in the period January - March of the following year. As such, at the end of February 2008, strictly speaking, information on compensation in all companies in 2007 may not yet have been publicly available. Reliable compensation data for 2006 is not available for Switzerland, however. The Transparency Act requiring firms to disclose compensation data in detail came into force only in 2007.

parameters for the prediction of normal compensation are estimated separately for CEOs and board members to account for their different status inside the firm with respect to remuneration. For CEOs, the prediction of the normal wage is based on the log of market capitalization, *ln(MCap)*, and on the one year, size-index adjusted firm performance, with a further control for executive turnover, *Months*, the number of months an executive worked in the firm during 2007, as well as *Dual*, a binary indicator stating whether the CEO holds the position as chairman of the board at the same time:[16]

$$ln(\text{Comp})_i = \beta_0 + \beta_1 ln(\text{MCap})_i + \beta_2 \text{Relative Performance}_i + \beta_3 \text{Months}_i + \beta_4 \text{Dual}_i + \epsilon_i. \quad (2)$$

Based on the coefficient estimate from Equation (2), we predict total normal compensation for each executive. Abnormal compensation is then defined as the gap between predicted normal and effectively paid compensation. To construct the portfolios used in Table IV, individual abnormal compensation is aggregated by firm.

We also hand-collect, from firms' annual reports, the fraction of *Management Shareholdings* in the firm, a firm's *Foreign Assets*, whether a firm has a *Staggered Board*, and which election procedure of board members a company employs (*Single Election* votes vs. in-corpore). The variable *Largest Shareholder* captures the percentage of equity owned by the largest shareholder. A binary indicator variable *Company Event* is equal to one if a firm communicated its 2007 figures to the media within five days around the event window.

[16]The analysis was also conducted with further controls, such as industry fixed effects or leverage of the firm. Including these and other further variables did not improve the precision of the estimates which is why we include only the variables with the most explanatory power. For board members, we use the same approach but control for the number of members on the board, *Board Size*, instead of *Dual*.

The summary statistics for the most important variables are collected in Table II. Due to the sometimes limited availability of certain data, the working sample is smaller for some parts of the analysis. Correlations are in Table III. We note that the correlations of the variables of interest in the sample are overall very low.

TABLES II AND III ABOUT HERE

III. Results

A. Average Effects

An overview of the distribution of the individual three-day cumulative abnormal returns (CARs) for the full sample is provided in Figure 1. Notably, 70% of CARs were negative. The equal-weighted portfolio of all stocks in the Swiss Performance Index showed an average abnormal return of -1.49%; see the top of Table IV. The average CAR of the largest 100 stocks, on which our cross-sectional analysis focuses, was -1.88%.

FIGURE 1 ABOUT HERE

The development of the average cumulative abnormal return around the event date is depicted in Figure 2. On each of the three relevant days (the day before the event, the event day, and the day after the event), considerable negative abnormal returns were realized on average. In the days before and after the event window, cumulative abnormal returns remained fairly stable.

FIGURE 2 ABOUT HERE

The same pattern, both in terms of the cross-sectional variation and the overall average, also holds when using the Dow Jones Global Total Stock Market Index as the market portfolio. Here, the equal-weighted average CAR for the largest 100 stocks was -1.49%.[17] The effects are large, especially taking into account that the successful initiative alone does not guarantee that the proposal will ultimately become law.

We next turn to the question: What explains the variation in CARs across firms? To answer this question, we use two approaches:

(1) We compare mean CARs across portfolios formed according to firm characteristics of interest. These results are in Table IV. Panels A.1 to A.3 deal with the compliance cost argument (*Hypothesis 1*). Panels B.1 to B.5 study whether variation in CARs can be explained by variation in alignment benefits (*Hypothesis 2*). Panels C.1 to C.5 concern the idea that binding say-on-pay may imply a distortion of firm-specific investment incentives (*Hypothesis 3*). This approach has the benefit that we can make use of the maximum number of observations for each variable.

(2) We run regressions with CARs as the dependent variable, which allows us to hold certain important control variables constant. Baseline results for each variable of interest are in Table V, while Table VI contains regressions with a larger set of control variables (which somewhat reduces the number of observations). Fortunately, our variables of interest are not highly correlated (cf. Table III). As such, it is not surprising, but still reassuring, that the results we find in the portfolio analysis in Table IV carry over to the regression results in Tables V and VI.

[17] It is a pure coincidence that this average is similar, up to two decimals, to the average abnormal return of the 225 SPI stocks stated above.

TABLES IV, V and VI ABOUT HERE

Additionally, in subsection E. we document that the various portfolios we compare – for example, those with high expected alignment benefits and those with low expected alignment benefits – exhibit parallel trends in the time period *before* the event.

B. Hypothesis 1 – Direct interference costs

As a *first* proxy for direct compliance costs, we use company size. Many of the very large Swiss firms had already introduced advisory say-on-pay in 2007, thus gaining experience with how to engage shareholders in this matter.[18] Furthermore, it seems reasonable to assume that fixed costs associated with binding say-on-pay will weigh less for the largest firms.[19]

Panel A.1 of Table IV shows that below-median sized firms had significant negative abnormal returns.[20] The results in Tables V and 6 confirm that we generally obtain a strongly positive relationship between firm size and CARs throughout.

A *second* proxy for interference costs is the percentage of assets a firm holds abroad. Firms that are more mobile in switching operations could move headquarters to countries where regulation is less strict. We would, therefore, expect firms with a higher asset mobility

[18] Another indicator for this increased awareness of large firms is their significantly higher percentages of executive and board positions that have to be confirmed through individual elections.

[19] For example, large firms generally already have an established public relation department that is in constant contact with shareholders. The fixed costs may also be more subtle in the form of an increased effort by management to keep off large investors who aim at exchanging leading executive and board positions.

[20] Furthermore, these results become even more pronounced if we value-weight the firms within each quartile. This size effect becomes even stronger if the sample is split along the lines of the SIX Swiss stock exchange size definitions. On average, the 20 largest firms in terms of market capitalization (the firms comprising the SMI index) only dropped by 0.31% while the average company in the medium-size index (the top 100 excluding the top 20 firms) had a cumulative abnormal return of -2.28%.

to relocate in order to keep talent and be unaffected by the law. Indeed, Panel A.2 of Table IV and column (2) of Table V provide support in favor of this hypothesis.[21]

A *third* measure of direct interference costs is the percentage the largest single shareholder holds in a company. If there is only one shareholder with majority voting power, it is very unlikely that the new say-on-pay regulation will change anything in the corporate governance structure of this company. If say-on-pay were value-enhancing for such a firm, it would have already been implemented by the majority shareholder. Absent this majority shareholder, uncertainty prevails due to a lack of commitment ability of shareholders, leading to higher interference costs of say-on-pay. Panel A.3 of Table IV provides only modest empirical evidence in favor of this idea. Firms where a single shareholder owns a stake of 50% or more indeed tend to drop significantly less than firms with a more disperse shareholder base.[22] But the most dispersed firms also experience a smaller drop than the middle quartile firms. This suggests that firms with a dispersed shareholder structure may benefit from the enhanced opportunities for shareholders to express their collective opinion on management pay. However, these differences are not generally statistically significant, neither in the non-parametric tests nor in the regression analysis.[23]

[21] Firm size and foreign assets are highly positively correlated (see Table III), which is why in the regressions in Tables V and VI we generally only include firm size.

[22] That there is a negative reaction of the largest holdings quartile at all may be be due to the fact that the marginal shareholders, who determine the traded share price, are minority shareholders who are, under the initiative's plans, even more exposed to the power of the majority shareholder.

[23] Only data of large shareholdings, above 5%, are comprehensively available in the year of the analysis. In particular, since the activist shareholders that are known to wield significant power in Switzerland, for example, Ethos Fund, rarely hold more than 5% of a company, we cannot conduct tests, in the spirit of those of Cohn, Gillan, and Hartzell (2011), regarding whether reactions of firms with activist shareholders are more positive. In untabulated results, we find that firms' reactions did not vary significantly with the concentration of shareholdings among the group of large shareholders.

C. Hypothesis 2 – Alignment benefits

First, if management is not working in the interest of shareholders, firm-specific stock performance is likely to be poor. According to the hypothesis that binding say-on-pay helps improve alignment of managerial with shareholder interests, we should observe that firms with poor performance in the past benefit more from say-on-pay than those with the best performance.

In line with this prediction, the results in Panel B.1 of Table IV display a negative relationship between the one year relative performance and the cumulative abnormal return. Firms that had beaten the market on average over the past year generally dropped more than underperforming shares. As shown in Panel B.2 of Table IV, we find similar results for the risk-adjusted performance measure (CAPM alpha). In column (4) in Table V and in all regressions of Table VI, we find a strongly negative relation between past performance and the reaction to the binding say-on-pay initiative. (The results hold for both performance measures, but for expositional reasons are only shown for one.) These findings confirm that, indeed, binding say-on-pay is relatively more attractive for shareholders of firms that have performed poorly than for those that have performed well. As such, these results are in line with the alignment hypothesis.

Second, a central point of interest is variation in share price reactions depending on the current pay level.[24] Due to a multitude of factors determining the absolute level of compensation, we focus on a standardized pay measure which is abnormal compensation. One

[24]Ertimur, Ferri and Muslu (2011) document that in the U.S. activists target firms with high CEO pay, but voting support is high and subsequent pay changes occur only at firms with excess CEO pay.

interpretation of this measure is that, if a company overpays or underpays its management, it suggests poor governance.

We find that the middle 50% of firms in terms of abnormal CEO compensation on average lost in excess of a full percentage point more than the two corner quartiles, with the corner quartiles not showing a positive effect, see Panel B.3 in Table IV. This result, even though economically relevant, is not statistically significant on a regular level. However, when we control for the noise coming from firms that communicate their 2007 figures to the media around the event (c.f. subsection G.), the difference is statistically significant (untabulated; the middle two quartiles drop 1.72% more than the corner quartiles, t-statistic of 1.81).

To capture the non-monotonic relationship in the regression framework, we control for abnormal compensation with a linear and a squared term. As Tables V and VI show, the point estimates are of the expected sign, but not always significant. In untabulated regressions, we find very similar results for abnormal board compensation.

It is interesting to note some differences to the U.S. experience. When advisory say-on-pay became more likely to turn into law in the U.S., those firms with the highest abnormal pay benefited substantially, while the other companies reacted relatively neutrally (Cai and Walkling, 2011). The evidence from Switzerland instead tends to suggest that the market perceives firms currently operating with abnormal compensation close to 0 as being potentially forced to adjust to individually inefficient corporate policies.

Third, a direct measure of alignment may also be found in the fraction of management shareholdings. The results in Panel B.4 of Table IV suggest that firms with very little and very high managerial ownership fared relatively better than those with ownership that

approximated the median. This could reflect two effects: First, firms with very low ownership benefit from better alignment, which outweighs most of the interference costs of binding say-on-pay; second, firms with very high ownership do not benefit much, but also have very low compliance costs because managers and shareholders are often identical. However, in the regression setup, we find that firms with higher management shareholdings tended to have more positive CARs, suggesting that between the small alignment benefits and small interference costs, the former dominated. (Using binary indicators for the various quartiles or quadratic terms does not yield significant results.)

Fourth, in more highly levered companies, shareholders have a higher incentive to take asset risk, i.e., to engage in asset substitution (Jensen and Meckling, 1976). However, in such companies, CEOs may also be more reluctant to take risk because bankruptcy is very costly for a CEO in terms of reputation. Therefore, in highly levered firms, shareholders wish to grant higher incentives to take risk (Coles, Daniel, and Naveen, 2006). This is more easily done when shareholders have more power. In particular, from the shareholders' point of view, the board of directors may not sufficiently take the shareholders' preferences into account because the board, if it is acting according to the requirements of Swiss corporate law, is acting as a steward for the whole firm (i.e., including other stakeholders, in particular, bondholders). From this perspective, having a more direct say-on-pay may be good news, in particular for shareholders of highly levered companies, due to better risk-taking alignment. An alternative hypothesis is that shareholders may benefit more in firms with low leverage because in these firms the agency costs of free cash flow are higher.

Panel B.5 in Table IV, column (7) in Table V, and to a less significant extent Table VI

show that CARs are more negative for firms with low leverage. This finding suggests that the risk-taking alignment benefits effect is stronger than the agency costs of free cash flow benefits effect.

D. Hypothesis 3 – Distortion of extra-contractual investment incentives

Burkart, Gromb, and Panunzi (1997), Blair and Stout (1999), and Stout (2003), among others, develop the idea that shareholders may prefer not to be too powerful because with greater power comes a greater temptation to ex post expropriate those stakeholders that have made firm-specific investments. Burkart, Gromb, and Panunzi (1997) study optimal shareholder ownership dispersion; Blair and Stout (1999) and Stout (2003) deal with the relationship between the board and shareholders. Although their research does not explicitly cover the pay-setting process, their basic intuition extends to the present case, and we consider three arguments for why shareholders worry to a different extent about their CEOs' incentives to engage in firm-specific human capital investments.

First, consider the pay structure. As explained in Section I.B, the time-line of how executive pay will be set according to the proposed law leads to potential distortions: Compensation packages (and, in particular, potential bonus pools) are agreed upon at the beginning of the year. If the board wishes to award extra bonuses after a year (which is especially the case if unanticipated effort and performance by management in the elapsed year were high), a new shareholder vote would have to be held at the next shareholder meeting. This is almost a prototypical case of the hold-up problem: Ex post, shareholders have little incentive to

approve the awards.[25] The CEO, in turn, may anticipate this problem and, therefore, not make the firm-specific investments that maximize firm and shareholder value. Importantly, we expect the resulting distortions to be greatest where executives are mostly compensated with cash bonuses. (According to the initiative, equity-plans need to be implemented in the articles of incorporation and from then on are simply executed.) Consistent with this prediction, Panel C.1 of Table IV shows that the CARs were particularly negative in firms that only use cash bonuses as variable compensation.

Second, the time horizon of the manager plays a role. Younger CEOs have a relatively higher incentive, under binding say-on-pay rules, to invest in general skills rather than firm-specific skills than older CEOs because young CEOs wish to retain their option to secure a different position. Consistent with this argument, we find that firms with young CEOs reacted much more negatively to the say-on-pay initiative than those with older CEOs; see Panel C.2 of Table IV.

Relatedly, CEOs who have had a long tenure at the respective company are likely to already have acquired substantial firm-specific knowledge. By contrast, CEOs who have only relatively recently joined the company face the choice whether to engage in firm-specific or general human capital investments, i.e., whether to fully contribute to their current firm's fortunes or whether to at least partially work on their outside options. In Panel C.3 of Table IV we find that shareholders of firms with CEOs in the shortest tenure quartile were more worried about the value consequences of binding say-on-pay: CARs were about 1.75

[25] In particular, the shareholders' incentives are considerably smaller than the board's: Boards of Swiss companies are explicitly charged to act for the benefit of the overall corporation. Also, their benefits from expropriating management are significantly lower than the shareholders'.

percentage points lower in this quartile than in the other three quartiles, though the difference is statistically not highly significant.

Third, where uncertainty is high, it is more difficult to contract on all possible contingencies. Therefore, incompleteness of contracts becomes a major concern. The binding say-on-pay initiative may further exacerbate the ensuing hold-up problem. In line with this argument, Panels C.4 and C.5 of Table IV show that stock prices of firms with higher-than-median demand or cost uncertainty exhibited stronger abnormal declines.

All these results are confirmed in the regression analysis, both when including the variables individually and when including them jointly and with other controls. Interestingly, in Table VI, the explanatory power of the regression increases substantially from left to right. In column (1), which includes direct compliance costs and alignment benefits, the R^2 is 0.33; in column (5), which also includes measures of the importance of extra-contractual investment incentives, the R^2 is 0.43.

The central result revealed in Table VI is a so far empirically unexplored trade-off: The overall reaction of shareholders to enhanced power not only reflects the trade-off between alignment benefits and compliance costs, but also a trade-off between alignment benefits and a worsening of the hold-up problem.

We note that some of the findings related to our proxies for the difficulty of sustaining firm-specific investment can also be explained by other theories. Specifically, in the model of Cohn and Rajan (2011) reputational concerns make managers reluctant to implement strategy changes. According to their hypothesis 1, board strength is optimally greater when the manager is young, but is invariant to age when reputational concerns do not matter

anymore to the manager. This is consistent with the observation in Panel C.2 of Table IV. The Cohn and Rajan (2011) model can also be interpreted to rationalize the result regarding tenure in Panel C.3. Allen, Carletti, and Marquez (2009) provide a model in which overall firm value depends on the governance orientation of the firm (shareholder vs. stakeholder) and the main risk a company faces (demand vs. marginal cost uncertainty). Their central result is silent on the impact of changes in a firm's risk on the relative attractiveness of the two governance models. However, based on their predictions for shareholder vs. stakeholder firms, it can be shown that, for a certain parameter range, higher demand uncertainty and higher marginal cost uncertainty imply a smaller positive effect of a stronger shareholder value orientation. (These calculations are available on request.) Thus, in that range, their model is consistent with the findings in Panels C.4 and C.5 of Table IV.

Overall, it may well be that multiple forces are at work that drive the empirical facts we observe. Nonetheless, the extra-contractual investments framework is attractive because it provides a "brittle hypothesis:" It is a single model that makes several different predictions that could easily be wrong. Recall also from Table III that the various factors for which it correctly makes predictions are almost uncorrelated empirically (except, of course, age and tenure, and demand and cost uncertainty, respectively). None of the three independent predictions – regarding pay structure, time horizon of the manager, and uncertainty – is rejected in the data. Moreover, neither of the alternative theories predict the finding regarding the ratio of variable compensation paid in cash. In sum, these considerations lead us to view the extra-contractual investments framework as particularly useful for adding to our understanding of shareholder reactions to enhanced shareholder power.

E. Parallel trends of CARs before the event

By considering cross-sectional variation of abnormal returns during the event window, we have established that firms exhibited different reactions to the initiative. It is conceivable, however, that firms already exhibited different pre-event trends. This could lead to erroneous inferences.

We examine this issue in Figure 3. We plot the daily level of cumulative abnormal returns during a window of 20 days (four trading weeks) before and 20 days after event. For presentational reasons, we choose two portfolio splits each for *Hypothesis 2* and for *Hypothesis 3*, but very similar results obtain also for the other sample splits.

FIGURE 3 ABOUT HERE

As can be seen, in all cases, cumulative abnormal returns of the two respective portfolios (for example, the portfolio with younger CEOs and the portfolio of firms with older CEOs) behaved very similarly *before* the event window. In fact, a t-test does not reject the hypothesis that the average trends of cumulative abnormal returns in the respective two portfolios before the event are equal.[26]

The similar *pre*-event trends are comforting and suggest that the sharp divergence of CARs *at* the event window was caused by the event.

[26]Very similar observations hold when expanding the pre-event window to 30 days. An additional perspective is offered by testing, on each individual day, for the equality of the mean of abnormal returns in one portfolio (say, firms with younger CEOs) and the mean of abnormal returns in the other portfolio (say, firms with older CEOs). Out of 19 tested days, at most two days show significantly different abnormal returns for any of the considered variables. All these results are available on request.

F. Other governance variables

Finally, we consider cross-sectional variation according to various general governance quality attributes. These include a control for whether a firm has a CEO-chairman, whether it uses staggered boards, and a measure of the election procedure (single vs. in corpore) of board members.

None of these variables is significantly associated with CARs, and they also do not interact with the previously discussed controls which all retain their original significance level (not shown). The insignificance of the findings for the governance variables is interesting in itself, especially in the light of significant findings for other firm characteristics: In particular, the results suggest that the market reacted specifically to the proposed say-on-pay rules (and not to some other, far less publicized, elements of the initiative, which concerned the election procedure of directors, for example), and did not interpret the initiative as a more generic push towards features often regarded as reflecting good governance.

G. Additional results and robustness

This section discusses several sets of additional results and robustness checks. *First*, we comment on the results for two control variables we considered in our regression analysis. Some firms announced their earnings around the event window, potentially affecting our results. The directional effect on the cumulative abnormal return is not clear, but test statistics including these firms are likely to be underestimated as announcements increase the sample's standard deviation. To investigate this effect, we defined a binary indicator variable showing whether a firm announced its 2007 results within five days of the event

window. (Announcement effects usually fade quickly, making our choice of a five-day window a rather prudent one.) As seen in Tables V and VI, firms that announced their results in this window generally had more positive abnormal returns.[27]

Our regressions also show that CARs tended to be particularly negative where there was an abnormally large volume of trading, arguably driven by information processing by shareholders regarding the say-on-pay initiative's progress. We interpret this finding as reassuring evidence for the event's significance.

Second, our main analysis has focused on large firms where liquidity is high and shareholders arguably react quickly to news. However, we confirm that the results generally are very similar in the full 225 company sample, comprising the entire SPI.[28]

Third, we winsorized the event window CARs at the 5%-level to check for robustness against outliers. We find that the our main results stay unchanged.

Fourth, we assessed the robustness of our results in the light of two events, one in the event window, the other in the estimation window.

As for the former, on Sunday February 24, 2008, the Swiss electorate accepted, in a referendum, a corporate tax reform (the "*Unternehmenssteuerreform II*"). The major points of the reform were aimed at supporting partnerships and small family businesses. A few elements were relevant for holding companies or owners with large stakes in individual firms,

[27]Omitting the firms with earnings announcements did not materially affect the results. Indeed, by excluding these firms, we reduce noise and hence improve the precision of our estimates. As mentioned above, for abnormal CEO compensation we now also find a statistically significant difference between the middle and the corner portfolios in the regressions equivalent to those in Table V.

[28]We find an additional noteworthy result in the expanded sample. The very smallest firms experienced less negative abnormal returns than the median-sized firms, in line with the idea that the very smallest companies are unlikely to be vulnerable to excessive shareholder-activism as the major shareholders are usually tightly involved in the firm's business.

but have very limited impact on the regular firm listed on the SPI. (Financials did not react differently to the initiative than other firms.) Finally, the tax reform would allow companies to repay invested capital (including agios) tax-free, essentially allowing them to pay a special kind of dividend free of tax for the recipient. This rule change did not at all feature in the public discussion leading up to the vote, and few market participants seem to have understood the potential benefits of this new regulation. To the extent that the benefits were priced in, we would be underestimating the negative overall effect of the say-on-pay initiative.

As for the possible confounding event in the estimation window, on February 10, 2008, a single newspaper released a short article claiming a successful end to the initiative's signatures collection. However, this claim was not officially confirmed, but rather discarded by an interview with the initiative's manager on the topic in the very same paper and day. Indeed, we found no abnormal reaction of the SPI stocks around this date. Shortening the estimation window so that it ends on February 7, 2008, also does not change the results.

IV. Conclusion

The present study uses an arguably clean event to identify the channels through which binding say-on-pay impacts shareholder value. The legislative setting and the event is specific to Switzerland, and the price we pay for using a rather unique event is that the sample size available to us is limited. Yet, we believe that the empirical analysis uncovers interesting patterns which can inform the ongoing policy discussions on shareholder power in general

and say-on-pay in particular.[29]

The proposed introduction of a stringent *binding* say-on-pay law was on average greeted fairly skeptically by the very group it is supposed to give more rights, namely shareholders. At first sight, the fact that shareholders reacted on average negatively to an enhancement of their power could be taken as evidence of Carl Fürstenberg's famous conjecture of "shareholder stupidity."[30] Careful analysis of the cross-sectional variation in reactions shows, by contrast, that the evidence is instead consistent with the view that shareholders rationally anticipate that say-on-pay has benefits and costs for them, and that they react most negatively where the costs are likely to outweigh the benefits. Specifically, we find support for three hypotheses. *First*, where interference and compliance costs are arguably higher, the reactions were more negative. *Second*, the shareholders of those firms who can reasonably hope for positive alignment effects of binding say-on-pay reacted more positively.

Third, we believe that this is one of the first papers to empirically support the argument, so far mostly presented in theoretical discussions, that it may be in the best interests of shareholders *not* to maximize their power. Rather, shareholders may do well to cede control to directors (as they do under advisory say-on-pay, compared to binding say-on-pay) because this is likely to enhance incentives for executives to make extra-contractual, firm-specific investments that ultimately also benefit shareholders. We find that shareholders of firms where this effect arguably plays a bigger role reacted more negatively to the binding say-on-

[29] Our study focuses on the impact of say-on-pay for shareholders. Some recent reforms in the compensation area also aim to benefit other stakeholders or also society at large (for example, by limiting external effects due to poorly designed compensation systems). The analysis here is silent on these issues.

[30] The German banker Carl Fürstenberg quipped: *"Shareholders are stupid and impertinent. Stupid because they give their money to somebody else without effective control over what that person is doing with it and impertinent because they ask for a dividend as a reward for their stupidity."*

pay initiative.

The evidence hence reveals an important trade-off: Enhancing shareholder power – in the case of this paper, through binding say-on-pay – can ameliorate the classical agency problem between shareholders and managers, but can worsen the hold-up problem.

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A Initiative

The initiative proposes a concrete legal text. Specifically, it reads:

"The federal constitution of April 18, 1999 is amended as follows:

Art. 95 Par. 3 (new): To protect the economy, private property and the shareholders and in the spirit of sustainable corporate management, this law regulates Swiss companies, listed nationally and internationally, according to the following principles: a) The general assembly votes annually on the total compensation (monetary and in-kind) of the board of directors, the executive board, and the advisory board. It elects annually the chairman of the board and, individually, the members of the board, the members of the compensation committee, and the independent vote representative. Pension funds vote in the interest of the insured and disclose their voting behavior. Shareholders can use electronic / distance voting. There is no proxy voting by company representatives or depository institutions. b) The board of directors and the executive board receive no severance or any other payment upon their leaving the firm, no advance compensation, no bonus payments in the case of firm acquisitions / divestures, and no additional consulting or employment contract by another company of the group. Executive management cannot be delegated to another firm. c) The articles of association contain provisions for the amounts of credit, loans, and retirement pensions to corporate executives and board members, their performance and share / participation plans, and the maximum number of external mandates as well as the duration of their employment contracts. d) Violation of these provisions is punishable by a jail sentence of up to three years and a fine of up to six times annual compensation."

B Supplementary Appendix: Methodology

We use OLS-regressions to estimate the parameters of the market model for each stock during the length of the estimation-window (250 trading days). Based on the parameter estimates ($\widehat{\alpha_i}$ and $\widehat{\beta_i}$), we predict stock i's normal return for day t during the event window:

$$\widehat{R_{i,t}} = \widehat{\alpha}_i + \widehat{\beta}_i(R_{m,t}).$$

The difference between the predicted normal return on the event-day and the effectively observed return of the stock is the abnormal return (AR_i) of stock i:

$$\widehat{AR_{i,t}} = R_{i,t} - \widehat{R_{i,t}}. \tag{3}$$

The cumulative abnormal return (CAR_i) of stock i is the sum of the abnormal returns during the event window of length T:

$$\widehat{CAR_i}(0,T) = \sum_{t=0}^{T} \widehat{AR_{i,t}}.$$

To test for the statistical significance of the abnormal return we use two approaches. The first, standard approach, proceeds as follows: Under the H_0-Hypothesis of no effect, the abnormal return during the event window is normally distributed with zero mean:

$$H_0 : \widehat{AR_i} \sim N(0, \sigma_i^2(\widehat{AR_i})),$$

where $\sigma_i^2(\widehat{AR_i})$ is the variance of each stock i's abnormal return during the event window. Thus, the standard deviation of the cumulative abnormal returns in the event window is

$$\sigma_i(\widehat{CAR_i(0,T)}) = \sqrt{T}\sigma_i(\widehat{AR_i}).$$

The test statistic for the cumulative abnormal return of a single stock is:

$$t_{\widehat{CAR_{i,T}}} = \frac{\widehat{CAR_i(0,T)}}{\sigma_i(\widehat{CAR_i(0,T)})} \sim N(0,1). \tag{4}$$

We applied sample standard deviations (thus being more conservative than with population standard deviations). To test for an overall impact of the initiative within different percentiles of a portfolio, the CARs are aggregated over the cross-section of N stocks:

$$\widehat{\overline{CAR}}(0,T) = \frac{1}{N}\sum_{i=1}^{N} \widehat{CAR_i(0,T)},$$

with the variance according to:

$$\sigma^2_{\widehat{\overline{CAR}(0,T)}} = \frac{1}{N^2}\sum_{i=1}^{N} \sigma_i^2(\widehat{CAR_i(0,T)}). \tag{5}$$

This yields the following test statistic:

$$t_{\widehat{\overline{CAR}_{0,T}}} = \frac{\widehat{\overline{CAR(0,T)}}}{\sigma_{\widehat{\overline{CAR}(0,T)}}} \sim N(0,1). \tag{6}$$

Our second approach uses the adjusted Boehmer, Musumeci, and Poulsen (1991) test statistic, as proposed by Kolari and Pynnönen (2010), KP-test in what follows. First, we scale the individual cumulative abnormal return of each stock by its estimation precision and adjust for potential changes in variance between the estimation and the event window (cf. Patell (1976)):

$$SCAR_i(0,T) = \frac{CAR_i(0,T)}{\sqrt{T}\sigma_{i,Estimation}(\widehat{AR_i})\sqrt{1+d_t}}. \tag{7}$$

Precision is measured by $\sigma_{i,Estimation}(\widehat{AR_i})$, a stock's abnormal return standard deviation during the estimation window. d_t is a correction term that accounts for a potential increase

in variance due to the fact that the estimation and the event window do not overlap:

$$d_t = \frac{1}{\tau} + \frac{\sigma_i^2(\widehat{AR_i})}{\sigma_{i,Estimation}^2(\widehat{AR_i})},$$

with τ being the number of days in the estimation window.

In a second step, we look at the cross-section of stocks in the portfolio and adjust for their contemporaneous cross-correlation in abnormal returns. Due to the previous scaling of the abnormal returns, all stocks have the same abnormal return variance $\sigma_i = \sigma_j = \sigma_{SCAR(0,T)}^2$. Hence, the mean variance of the portfolio can be written as:

$$\overline{\sigma}_{SCAR(0,T)}^2 = \sigma_{SCAR(0,T)}^2 \cdot \left(\frac{1}{N} + \frac{1}{N} \sum_{i=1}^{N} \sum_{j \neq i} \rho_{i,j} \right) = \frac{\sigma_{SCAR(0,T)}^2}{N} (1 + (N-1)\overline{\rho}), \tag{8}$$

where $\rho_{i,j}$ is the contemporaneous, within portfolio cross-correlation of the estimation-window abnormal returns of stocks i and j while $\overline{\rho}$ is the average abnormal return cross-correlation of all stocks in a portfolio. From (8) it becomes evident that by not adjusting for the stocks abnormal return correlation, the portfolio's variance is biased. As we find generally a positive abnormal return correlation between stocks in a portfolio the bias will be downwards and lead to a test-statistic that is too high. Finally, the KP-test-statistic for the average scaled portfolio return ($\overline{SCAR}(0,T)$) is:

$$t_{KP} = \frac{\overline{SCAR}(0,T)}{\overline{\sigma}_{SCAR(0,T)}^2}. \tag{9}$$

Figure 1. Individual cumulative abnormal returns around the event day

This graph shows the individual, non-winsorized cumulative abnormal returns (CAR) of the largest 100 firms in the Swiss Performance Index (SPI) in the event window. Abnormal returns are calculated with the market model and are sorted by size of the cumulative abnormal returns along the horizontal axis. The event-window covers the time span between a day prior and a day after February 26, 2008. On this day, it was publicly announced that the critical threshold of 100'000 signatures in favor of an initiative demanding binding say-on-pay in Switzerland had been collected. This requires the government to eventually hold a national ballot on whether the initiative should become constitutional law.

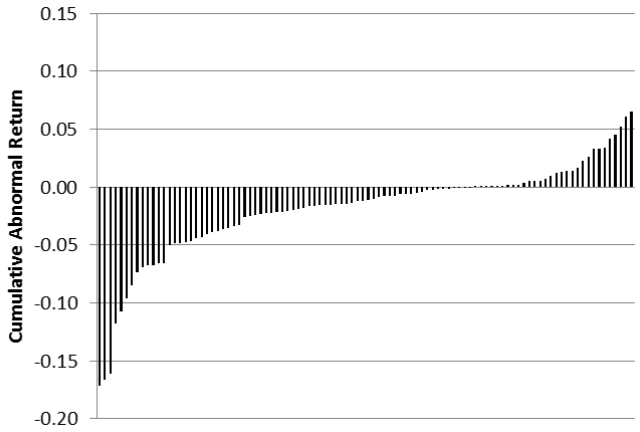


Figure 2. Average cumulative abnormal returns around the event day

This graph shows the average cumulative abnormal returns for the largest 100 firms in the Swiss Performance Index (SPI) over time. Cumulation of the abnormal returns starts at t=-6. The vertical axis represents the average level of the cumulative abnormal return while the horizontal axis is measured in days relative to the event (t=0). The event window is marked by square brackets on the horizontal axis. Abnormal returns are calculated with the market model. The event window, [-1,+1], shows a cumulative abnormal return of -1.49%. This cumulative abnormal return is the sum of the daily abnormal returns on day t=-1 (-0.61%), t=0 (-0.28%) and t=1 (-0.60%).

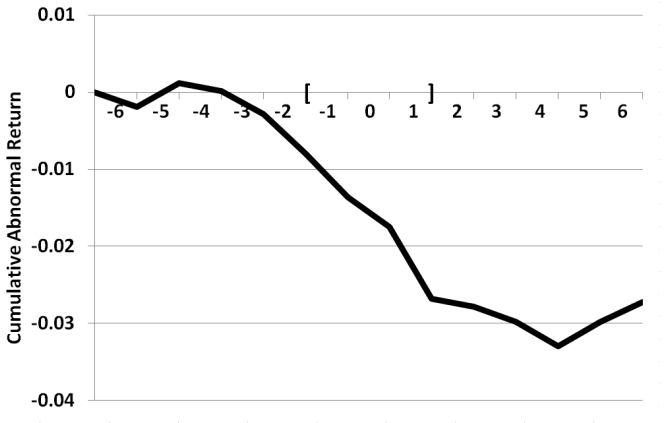
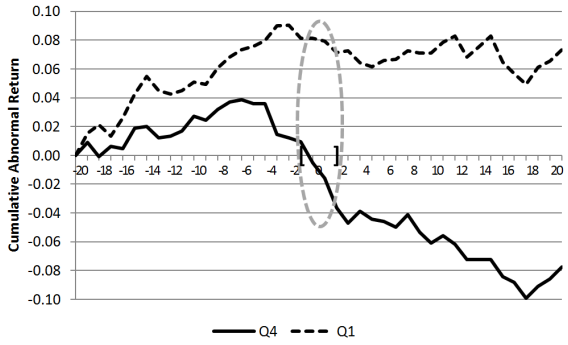
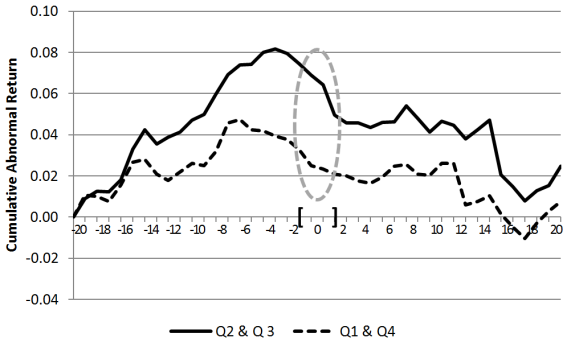


Figure 3. Trends of cumulative abnormal returns of subsamples around the event

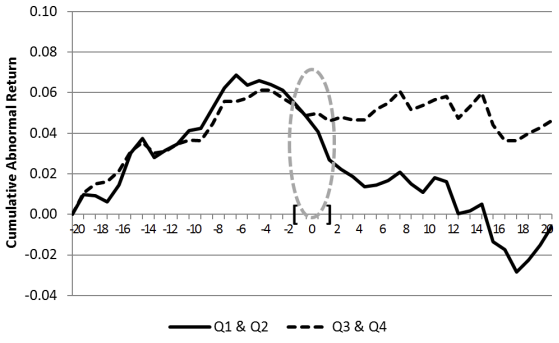
Panels (a) to (d) show the daily level of cumulative abnormal returns for selected sample splits of the largest 100 stocks in the Swiss Performance Index during the 40 day window [-20,+20] around the event. Cumulation of the abnormal returns starts at t=-20. The vertical axis represents the daily level of the cumulative abnormal return while the horizontal axis is measured in days relative to the event (t=0). The event window is marked by square brackets on the horizontal axis. Abnormal returns are calculated with the market model. *Panel (a)* shows the fourth (solid) and first (dotted) quartile of the sample in terms of the performance of a stock relative to the relevant size index. *Panel (b)* depicts the middle (solid) and corner (dotted) quartiles of the sample split according to abnormal CEO compensation. *Panel (c)* splits the sample according to the CEO's age in below median (solid) and above median (dotted) age. *Panel (d)* splits the sample according to the CEO's bonus structure into cash-only incentive (solid) and mixed incentive payments (dotted).



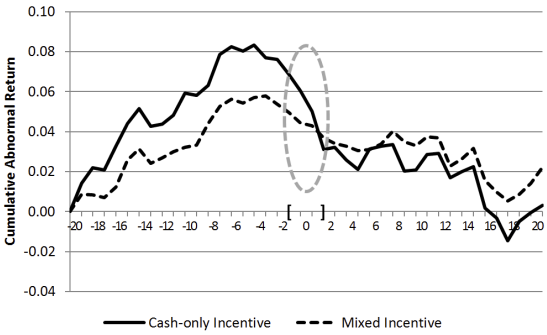
(a) Relative Performance



(b) Abnormal CEO Compensation



(c) CEO Age



(d) Cash Incentive Share

Table I. Timeline of say-on-pay legislative efforts in Switzerland

Date	**Legislative events**	**Possible confounding events**
July 31 - August 6, 2006	A "Sonntags-Zeitung" article (08/06/2006) mentions that Trybol owner Thomas Minder has submitted the wording of the text of his "Fat-Cat-Initiative" that week.	a) On 08/03/2006 the European Central Bank (ECB) raised its interest rate by a quarter point to 3% as anticipated by analysts. Bank of England (BoE) surprisingly raising its interest rate by the same margin to 4.75%. b) The oil price was under turmoil that week because of war in Lebanon and uncertainty of the severeness of the Caribbean hurricane "Chris." c) Announcement of a below expectations net increase in employment in the US leading to believe that The Federal Reserve will not change interest rates after 17 increases in a row.
October 17, 2006	The Federal Chancellery verifies the initiative complies with legal requirements.	On 10/18/2006 the Federal Council of Switzerland had announced it entrusted five known experts the task to establish a federal audit supervisory authority.
October 31, 2006	Thomas Minder begins collecting signatures for a federal initiative.	Economic Committee of the National Assembly agrees to establish a Swiss Financial Market Supervisory Authority (FINMA) with 14 to 4 votes.
February 26, 2008 = Event	**Initiative committee submits the required 100'000 signatures.**	On 02/24/2008, a corporate tax reform lowering taxation of certain special types of dividend payments is accepted by the Swiss electorate.
April 2, 2008	The Federal Chancellery verifies the initiative as valid.	On 04/02/2008 the Swiss Market Index (SMI) gains 1.4% due to the extraordinary increases of the shares of the two major banks and in Tokyo the Nikkei reports a plus of 4.2%.
December 5, 2008	The Federal Council of Switzerland advises to reject the initiative and makes a so-called indirect counterproposal with an addition to the ongoing revision of the Swiss Code of Obligations.	On 12/05/2008 the Swiss Market Index (SMI) loses partially more than 3% and closes minus 2.09%. The German Stock Index (DAX) even loses 4%.
May 12, 2009	Judiciary committee of the Council of States tightens the indirect counterproposal and accommodates to the demands of the initiative committee.	No relevant confounding event found.
June 11, 2009	Council of States finishes debate over details of the counterproposal which is now less tight than the proposed form of the judiciary committee. The issue now returns to the national council.	The Associated Press reports that the US budget deficit has ascended to a new high in May and is expected to peak at the record high of 1.84 trillion dollar at the end of the fiscal year.

Table II. Summary statistics for the main sample

This table displays summary statistics for the largest 100 firms in the Swiss Performance Index (SPI). Market Capitalization measures the market value of the free float on event day closing. Event Window Stock Return is the overall stock return during the three day event window. Relative Performance measures the gap between the observed stock return and the return of the size-appropriate index over a one year period prior to the event. CAPM Alpha measures the gap between the observed stock return and an estimated stock return based on CAPM for the year prior to the event. Foreign Assets measure the percentage of total assets a firm holds outside Switzerland. Sales Volatility is a firm's ratio of the standard deviation of sales to the average sales over the last five years. COGS Volatility is a firm's ratio of the standard deviation of cost of goods sold (COGS) to the average sales over the last five years. Leverage is measured as total debt to total capital. Company Event is a binary indicator equal to one if the firm communicated past year's accounting figures during a 10 day window around the event window. Abnormal Trading Volume is the difference between trading volume in the event window and the median trading volume of the respective firm in the previous year, taken as a percentage of the median trading volume of the respective firm in the previous year. Total CEO/Board Compensation is the sum of base and variable pay for the year 2007. CEO Cash Incentive Share is the share of a CEO's variable remuneration in 2007 that is paid in cash. Abnormal CEO/Board Compensation is measured as the difference between paid compensation and estimated normal compensation in terms of firm size and performance. All statistics for the board are reported including its Chairman. CEO Tenure is the number of years a CEO has been with the current company. Largest Shareholder is the share the largest single shareholder holds in the firm. Management Shareholdings is the percentage of equity held by the management and board. Dual is a control for CEO-Chairs. Staggered Board is a binary indicator equal to one if the board is staggered. Single Election is a binary indicator equal to one if board members have to be elected one-by-one.

Variable	Mean	Std. Dev.	Min.	Max.	N
Firm Characteristics					
Market Capitalization (in Mio. CHF)	9'876.37	29'097.26	113.00	196'044.91	100
Event Window Stock Return (%)	1.71	4.33	-15.28	11.29	100
Relative Performance (in annual %)	11.32	69.48	-62.27	622.53	99
CAPM Alpha (in annual %)	-21.92	26.21	-72.03	99.55	91
Foreign Assets (in % of total assets)	40.68	30.49	0	98.50	96
Sales Volatility (%)	27.50	28.06	2.37	150.50	100
COGS Volatility (%)	23.19	53.03	0.66	388.41	76
Leverage (debt to total capital in %)	32.41	25.05	0	95.34	99
Company Event (binary indicator)	0.20	0.40	0	1	100
Abnormal Trading Volume (in %)	59.11	157.10	-65.39	967.40	100
Compensation					
CEO Total (in Mio. CHF)	4.25	4.49	0.48	22.28	91
CEO Variable (in Mio. CHF)	2.75	3.82	0	20.05	88
CEO Cash Incentive Share (in %)	57.47	34.50	0	100.00	97
CEO Abnormal (in Mio. CHF)	0.71	2.68	-2.67	11.61	85
Board Total (in Mio. CHF)	2.99	3.90	0.19	25.41	88
Board Abnormal (in Mio. CHF)	0.59	1.89	-1.10	11.29	88
CEO Attributes					
CEO Age (years)	53.51	7.69	37.00	82.00	97
CEO Tenure (years)	9.64	8.02	0.49	39.58	95
Governance					
Largest Shareholder (in %)	27.40	23.14	0	99.40	100
Management Shareholdings (in %)	13.10	20.62	0	70.30	99
Dual (binary indicator)	0.15	0.36	0	1	88
Staggered Board (binary indicator)	0.59	0.50	0	1	92
Single Election (binary indicator)	0.56	0.50	0	1	91

Table III. Correlations of explanatory variables

This table displays correlations of the explanatory variables for the largest 100 firms in the Swiss Performance Index (SPI). Variables are defined in Table II.

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
ln(Market Capitalization)	1.00														
Foreign Assets	0.53	1.00													
Largest Shareholder	-0.29	-0.33	1.00												
Relative Performance	-0.02	-0.04	-0.08	1.00											
CAPM Alpha	-0.12	-0.18	0.11	0.95	1.00										
Abnormal CEO Comp.	0.05	0.21	0.16	-0.05	-0.11	1.00									
Abnormal Board Comp.	0.17	0.15	0.23	-0.06	-0.12	0.16	1.00								
Management Shareholdings	-0.11	-0.05	0.37	-0.05	-0.04	0.27	-0.01	1.00							
Leverage	0.03	-0.02	0.27	-0.20	-0.11	0.10	0.26	-0.24	1.00						
CEO Cash Incentive Share	-0.41	-0.37	0.12	0.01	0.27	-0.31	0.04	0.05	-0.07	1.00					
CEO Age	0.24	0.19	0.04	-0.12	-0.13	0.08	-0.01	0.21	-0.07	-0.12	1.00				
CEO Tenure	0.12	-0.08	0.16	-0.07	-0.02	0.02	-0.07	0.18	0.01	0.00	0.32	1.00			
Sales Volatility	-0.25	-0.17	0.04	0.07	-0.09	0.21	-0.06	0.23	-0.07	-0.09	-0.07	-0.04	1.00		
COGS Volatility	-0.25	-0.24	0.05	0.01	-0.03	0.11	0.02	0.05	0.06	-0.08	-0.03	-0.04	0.77	1.00	
Abnormal Trading Volume	-0.08	0.17	-0.00	0.08	0.34	0.07	-0.11	0.02	-0.02	-0.00	-0.04	-0.00	0.08	-0.01	1.00

Table IV. Market reaction to binding say-on-pay, analysis by portfolio-splits

This table displays cumulative abnormal returns (CAR) during the three day event window in quartile sorts for the variables of interest which we describe in Table II. *All firms:* Average cumulative abnormal return of the Top 100 as well as all stocks in the Swiss Performance Index. *Panel A* concerns *Hypothesis 1*, regarding compliance and interference costs. *Panel B* concerns *Hypothesis 2*, regarding alignment benefits. *Panel C* concerns *Hypothesis 3*, regarding distortion of extra-contractual investment incentives. The last line of each panel tests for differences between portfolios of interest. For example, Panel A.1 tests for a difference between firms with above-median market capitalization and firms with below-median market capitalization. Q1 is the bottom quartile, Q4 is the top quartile; these two quartiles are the corner quartiles. Q2 and Q3 are the middle quartiles. Stocks within quartiles are equal-weighted. Variable of interest (VOI) corresponds to the quartile average of the variable defined in the title of each panel. The t-statistic is calculated based on the variance of the unadjusted CARs as described in Appendix B. KP is the test statistic obtained by conducting the adjusted Boehmer, Musumeci, and Poulsen (1991) test as proposed by Kolari and Pynnönen (2010). % neg is the share of negative CAR-stocks in the respective portfolio. The stars mark the level of significance based on the generalized sign test with levels: * 0.10, ** 0.05, *** 0.01.

All Firms

	Obs.	CAR	t-value	KP	% neg
Top 100	100	-1.88%	4.53	2.13	70.00%***
SPI full	225	-1.49%	5.90	2.57	69.78%***

Panel A.1: Market Capitalization (Mio. CHF)

Quartile	Obs.	VOI	CAR	t-value	KP	% neg
1 Lowest	25	360	-2.41%	2.96	2.06	80.00%**
2	25	706	-3.80%	3.25	2.37	84.00%***
3	25	2'222	-0.86%	1.59	1.57	64.00%
4 Highest	25	36'217	-0.47%	0.95	1.23	52.00%
Median Split			-2.43%	3.04		

Panel A.2: Foreign Assets (%)

Quartile	Obs.	VOI	CAR	t-value	KP	% neg
1 Lowest	24	2.9%	-2.48%	3.21	2.77	91.67%***
2	24	27.2%	-2.64%	3.16	2.46	75.00%**
3	24	50.1%	-2.42%	2.47	1.76	66.67%
4 Highest	24	82.5%	-0.43%	0.57	0.54	50.00%
Q4 - Rest			2.08%	2.28		

Panel A.3: Largest Shareholder (%)

Quartile	Obs.	VOI	CAR	t-value	KP	% neg
1 Lowest	26	3.5%	-1.41%	1.62	1.31	50.00%
2	24	13.3%	-2.60%	2.31	1.84	75.00%**
3	25	32.8%	-2.11%	3.22	3.17	84.00%***
4 Highest	25	60.5%	-1.46%	2.32	1.56	72.00%**
Corner - Middle Quartiles			0.91%	1.10		

Panel B.1: Relative Performance (%)

Quartile	Obs.	VOI	CAR	t-value	KP	% neg
1 Lowest	25	-26.6%	-0.97%	1.08	0.57	60.00%
2	25	-6.0%	-0.60%	1.03	1.15	52.00%
3	25	8.7%	-1.68%	3.71	2.62	80.00%***
4 Highest	24	71.6%	-4.61%	4.31	4.24	91.67%***
Q4 -Q1			-3.64%	2.61		

Panel B.2: CAPM Alpha (%)

Quartile	Obs.	VOI	CAR	t-value	KP	% neg
1 Lowest	23	-48.3%	-0.26%	0.40	0.32	47.83%
2	23	-31.4%	-0.90%	1.51	1.13	60.87%
3	23	-17.7%	-1.14%	2.38	2.13	73.91%**
4 Highest	22	11.1%	-4.06%	4.30	4.37	95.45%***
Q4 - Q1			-3.80%	3.35		

Panel B.3: Abnormal CEO Compensation (Mio. CHF)

Quartile	Obs.	VOI	CAR	t-value	KP	% neg
1 Lowest	22	-1.16	-0.88%	1.81	1.70	68.18%
2	21	-0.67	-2.57%	2.51	1.90	76.19%**
3	21	0.21	-2.38%	2.11	1.66	66.67%
4 Highest	21	3.97	-1.51%	1.65	1.64	61.90%
Corner - Middle Quartiles			1.29%	1.43		

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Panel B.4: Management Shareholdings (%)

Quartile	Obs.	VOI	CAR (%)	t-value	KP	% neg
1 Lowest	28	0.2%	-1.23%	2.59	2.01	64.29%
2	22	0.6%	-1.30%	1.97	1.45	72.73%*
3	25	7.2%	-3.89%	3.47	2.66	80.00%**
4 Highest	24	45.7%	-1.20%	1.32	1.24	66.67%
Median Split			1.31%	1.56		

Panel B.5: Leverage (%)

Quartile	Obs.	VOI	CAR (%)	t-value	KP	% neg
1 Lowest	25	4.0%	-3.70%	3.94	3.26	92.00%***
2	25	20.4%	-1.56%	1.80	1.26	64.00%
3	25	39.3%	-1.10%	1.25	1.13	48.00%
4 Highest	24	67.3%	1.36%	2.77	2.05	79.17%**
Q4 - Q1			2.34%	2.20		

Panel C.1: CEO Cash Incentive Share (%)

Quartile	Obs.	VOI	CAR	t-value	KP	% neg
1 Lowest	25	12.7%	-1.20%	1.33	1.66	68.00%
2	24	43.1%	-1.60%	2.49	1.49	54.17%
3	23	74.8%	-0.98%	1.06	1.05	65.22%
4 Highest	25	100.0%	-3.74%	4.39	3.52	92.00%***
Q4 - Rest			-2.48%	2.54		

Panel C.2: CEO Age (years)

Quantile	N	VOI	CAR	t-stat	KP	% neg
1 Lowest	27	44.7	-2.73%	3.12	2.20	81.48%**
2	27	51.8	-2.89%	2.88	2.08	70.37%**
3	20	56 .0	-0.91%	1.35	1.60	65.00%
4 Highest	23	63.7	-0.64%	1.05	1.26	60.87%
Median Split			2.05%	2.57		

Panel C.3: CEO Tenure (years)

Quartile	Obs.	VOI	CAR	t-value	KP	% neg
1 Lowest	24	2.4	-3.16%	3.51	2.96	83.33%***
2	25	6.0	-1.63%	1.84	0.72	60.00%
3	23	9.5	-1.56%	1.41	1.76	60.87%
4 Highest	23	21.3	-1.02%	2.36	1.55	73.91%*
Q1 - Rest			-1.75%	1.71		

Panel C.4: Sales Volatility (%)

Quartile	Obs.	VOI	CAR	t-value	KP	% neg
1 Lowest	25	6.8%	-0.23%	0.73	0.64	60.00%
2	25	14.7%	-1.48%	2.30	2.20	76.00%**
3	25	24.8%	-1.95%	2.85	1.86	68.00%
4 Highest	25	63.7%	-3.88%	3.08	2.36	76.00%**
Median Split			-1.74%	2.24		

Panel C.5: COGS Volatility (%)

Quartile	Obs.	VOI	CAR	t-value	KP	% neg
1 Lowest	19	4.0%	0.37%	0.62	0.13	42.11%
2	19	8.1%	-2.20%	3.40	2.54	78.95%***
3	19	14.2%	-1.26%	1.51	1.31	73.68%*
4 Highest	19	66.4%	-4.15%	3.35	2.63	84.21%***
Median Split			-1.79%	1.96		

Table V. Market reaction to binding say-on-pay, regression analysis I

Regressions in this table are based on the largest 100 firms in the Swiss Performance Index (SPI). The dependent variable is the cumulative abnormal return during the three day event window. The explanatory variables are defined in Table II. Variables appended by quartile specifications are indicator variables with the indicator equal to one for the quartile stated. For example, Foreign Assets (Q4) is a binary indicator equal to one if the firm's Foreign Assets are in the top quartile. The other variables are measured in levels. t-values are calculated based on robust standard errors and reported in brackets, with significance levels: * 0.10, ** 0.05, *** 0.01.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
ln(Market Capitalization)	0.005**	0.005**	0.005**	0.006***	0.004**	0.006***	0.005***	0.004*	0.004**	0.005**	0.004**	0.002
	(2.58)	(2.10)	(2.49)	(3.26)	(2.00)	(3.11)	(2.88)	(1.90)	(2.02)	(2.44)	(2.13)	(1.08)
Foreign Assets (Q4)		0.015										
		(1.62)										
Largest Shareholder (Q2&Q3)			-0.001									
			(-0.12)									
Relative Performance				-0.025***								
				(-7.22)								
Abnormal CEO Comp.					-0.003							
					(-1.17)							
(Abnormal CEO Comp.)^2					0.001*							
					(1.67)							
Management Shareholdings						0.045***						
						(3.14)						
Low Leverage (Q1)							-0.020**					
							(-2.21)					
Cash-only Incentive (Q4)								-0.019**				
								(-2.12)				
Young CEO (Median)									-0.016**			
									(-2.08)			
Short Tenure CEO (Q1)										-0.013		
										(-1.58)		
Sales Volatility (Q3&Q4)											-0.017**	
											(-2.38)	
COGS Volatility (Q3&Q4)												-0.013
												(-1.62)
Company Event	0.025**	0.026**	0.025**	0.021**	0.021*	0.027**	0.022**	0.024**	0.025**	0.025**	0.027**	0.035***
	(2.34)	(2.51)	(2.32)	(2.10)	(1.96)	(2.58)	(2.13)	(2.20)	(2.33)	(2.36)	(2.49)	(3.16)
Abnormal Trading Volume	-0.007*	-0.007*	-0.007*	-0.006	-0.006	-0.007*	-0.007*	-0.007*	-0.007*	-0.007*	-0.006	-0.009***
	(-1.69)	(-1.74)	(-1.67)	(-1.44)	(-1.13)	(-1.79)	(-1.75)	(-1.75)	(-1.77)	(-1.73)	(-1.63)	(-2.71)
Constant	-0.057***	-0.059***	-0.057***	-0.060***	-0.054***	-0.069***	-0.054***	-0.042**	-0.041**	-0.053***	-0.042***	-0.030
	(-3.46)	(-3.40)	(-3.08)	(-4.06)	(-2.88)	(-4.12)	(-3.69)	(-2.47)	(-2.40)	(-2.96)	(-2.67)	(-1.55)
Observations	100	96	100	99	85	99	99	97	97	95	100	76
Adjusted R^2	0.151	0.188	0.142	0.340	0.107	0.199	0.201	0.180	0.176	0.162	0.185	0.267

Table VI. Market reaction to binding say-on-pay, regression analysis II

Note: Regressions in this table are based on the largest 100 firms in the Swiss Performance Index (SPI). The dependent variable is the cumulative abnormal return during the three day event window. The explanatory variables are defined in Table II. Variables appended by quartile specifications are indicator variables with the indicator equal to one for the quartile stated. For example, Young CEO (Q1&Q2) is a binary indicator equal to one if the CEO is of below median age. t-values are calculated based on robust standard errors and reported in brackets, with significance levels: * 0.10, ** 0.05, *** 0.01.

	(1)	(2)	(3)	(4)	(5)
ln(Market Capitalization)	0.005**	0.004*	0.004*	0.004*	0.001
	(2.30)	(1.86)	(1.69)	(1.90)	(0.50)
Relative Performance	-0.023***	-0.023***	-0.022***	-0.021***	-0.019***
	(-5.78)	(-6.41)	(-5.50)	(-5.54)	(-5.72)
Abnormal CEO Compensation	-0.003	-0.004	-0.004	-0.003	-0.004*
	(-1.29)	(-1.50)	(-1.55)	(-1.25)	(-1.72)
(Abnormal CEO Compensation)^2	0.000	0.000	0.001*	0.000	0.001*
	(1.28)	(1.43)	(1.74)	(1.37)	(1.92)
Management Shareholdings	0.043**	0.047**	0.039**	0.058***	0.059***
	(2.30)	(2.51)	(2.16)	(2.85)	(2.95)
Leverage	0.018	0.020	0.017	0.014	0.016
	(0.95)	(1.11)	(0.91)	(0.81)	(0.94)
Cash-only Incentive (Q4)		-0.017*			-0.019**
		(-1.95)			(-2.24)
Young CEO (Q1&Q2)			-0.014*		-0.012*
			(-1.80)		(-1.73)
Sales Volatility (Q3&Q4)				-0.023***	-0.024***
				(-2.83)	(-3.06)
Company Event	0.016	0.015	0.016	0.020*	0.018*
	(1.57)	(1.45)	(1.56)	(1.91)	(1.84)
Abnormal Trading Volume	-0.005	-0.006	-0.005	-0.005	-0.006
	(-1.10)	(-1.26)	(-1.20)	(-1.12)	(-1.42)
Constant	-0.067***	-0.053**	-0.048**	-0.047**	-0.014
	(-2.72)	(-2.50)	(-2.01)	(-2.21)	(-0.68)
Observations	84	84	84	84	84
Adjusted R-squared	0.327	0.348	0.343	0.388	0.433