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NON-MANDATORY SAY ON PAY VOTES AND AGM PARTICIPATION: EVIDENCE FROM GERMANY[#]

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Abstract. Since August 2009, German legislation allows for voluntary Say on Pay Votes (SoPV) during Annual General Meetings (AGMs). We examine 1,169 AGMs of all German listed firms with more than 10,000 agenda items over the period 2010 – 2013 to identify (1) determinants and approval rates of voluntary SoPV**s**, (2) the effect of voluntary SoPVs on AGM participation, and (3) the effect of SoP on executive compensation. Our data reveals that in the first four years of the voluntary say on pay regime every second firm in our sample has opted for having a SoPV. The propensity for a SoPV increases with firm size, abnormal executive compensation and free float of shares. Indeed, smaller firms with concentrated ownership do not only have a lower propensity for a SoPV, but also show a higher propensity to opt for only limited disclosure of executive compensation. Approval rates of SoPVs are lower than the approval rate for the average AGM agenda item and this effect is stronger in (i) widely held firms as well as in (ii) firms with abnormal executive compensation. Additionally, SoPVs actually can increase AGM participation; however, this result is particularly evident for widely held firms. Finally, we find stronger pay for performance elements within total executive compensation, particularly when the effect of executive compensation is lagged over the years following the vote. Overall, our results are consistent with the view that firms use voluntary SoPV to gain legitimation for executive remuneration policies in firms with low ownership concentration. This is enforced, where (small) shareholders consider executive compensation a part of the agency problem of listed firms, and where (small) shareholders consider SoPVs as a possibility to actively influence corporate decisions, with these decisions leading to a higher degree of alignment between executive management boards and shareholders.

Keywords: Corporate Governance, Executive Remuneration, Say on Pay, Annual General Meeting, Germany
JEL Classification: G30, G38, J30, J33

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1. Introduction

Executive remuneration practices in publicly listed firms is a topic of controversy debated by the public as well as firms' stakeholders since years (Murphy 2013, Economist 2015). Recently, a possible response to that (but also to more broadly defined corporate governance issues) considered by regulators worldwide is to increase shareholder engagement (Fairfax 2013, EuropeanCommission 2013). Accordingly, "Say on Pay" (SoP), i.e. direct voting of shareholders on executive compensation during the general annual meeting (AGM), has received significant attention over last years. First established in the UK in 2003, a number of countries have followed suit (Thomas and Elst 2014, Behrmann and Sassen 2015).

Public listing of equity comes along with a separation of ownership and control and thus with agency conflicts (Jensen and Meckling 1976). Indeed, around the world regulators thus have established standard mechanisms to mitigate these costs: Shareholders are invited to participate in AGMs and to elect non-executive directors that hire (and fire) executives. Non-executive directors negotiate with executives over their contracts and their compensation. Effectively, the idea is that shareholders elect delegate their power to non-executives, which then act on the behalf of shareholders. Taking this view, why should SoP be an efficient mechanism to solve potential agency issues related to executive compensation policies, given that the AGM elects the non-executive board members, which negotiate contracts with executive?

One view is that the non-executive director mechanism in effect replaces the initial principal-agent relation (shareholders vs. managers) by two principal-agent relations (shareholders vs. non-executives and non-executives vs. managers). Thus, again there are agency issues, in particular with regard to executive compensation policies (e.g. (Bebchuk and Fried 2003)). Another view is that there might be agency issues among the group of shareholders (e.g. (Shleifer and Vishny 1997)). With heterogeneity in shareholder interests, direct votes during the AGM may create incentives for (small) shareholders to engage more actively in AGMs and thus to more directly express their views on corporate policies. However, this also creates the threat of shareholder clientele issues and faces non-executive directors with probably incompatible interests of different shareholder groups.

With these conflicts in mind, there are many proponents of (mandatory) SoP votes during AGMs (for an overview see (Thomas, Palmiter and Cotter 2012)). However, while the idea of SoP seems appealing on the back of these arguments, effectively the governance mechanism is costly from the perspective of the firm (balancing the various shareholder interests, probably resulting in economically inefficient compromises) as well as from the perspective of (small) shareholders (the cost of collecting information and engaging in the AGM). Acknowledging that SoP votes come with costs and benefits, one potential regulatory option is to allow for voluntary SoP votes. Such a *voluntary SoP regime* would be efficient from the regulator's perspective, if three conditions are fulfilled:

(i) (some) shareholders consider managerial remuneration policies as a part of the agency problem of listed firms (as opposed to the outcome of a bargaining process at arm's length) with firms exposed to high agency costs opting for a voluntary SoP vote,

(ii) voluntary SoP votes will increase AGM participation of (small) shareholders, and

(iii) for firms precipitating a SoP vote, the process of aligning incentives will be assessed by the principals, and will therefore facilitate the alignment of interests between the management board and shareholders ultimately strengthening pay-for-performance

In this paper, we aim to contribute to that debate by studying (1) determinants and approval rates of voluntary SoP votes, as well as (2) the effect of voluntary SoP votes on AGM participation, and (3) the impact of SoP on executive compensation. Thereby, we take advantage of a regulatory change enacted in Germany. In August 2009, Germany implemented a voluntary SoP regime based on the EC-recommendation of 2004 targeting German incorporated, listed firms. The introduction provided firms with an institutionalized setting for granting shareholders the possibility to express their views on executive boards compensation systems in place.[1] We examine the results of this regulatory enactment by studying the occurrence and outcome of SoP votes as well as their impact on AGM participation. Therefore, we examine 1,169 Annual General Meetings (AGMs) of all German Prime Standard listed firms with close to 10,000 agenda items over the period 2010 – 2013. Over these four years of SoP history, we find that just over half of all firms in our sample have precipitated SoP votes at one of their AGMs. Overall, more than one in five AGMs included a SoP vote.

In our empirical study, we proceed in three steps. *First*, we follow previous studies (Rapp, Sperling and Wolff 2010, Drefahl and Pelger 2013, Eulerich, Kalinichenko and Theis 2014), conducting a (mainly cross sectional) analysis on the determinants of the propensity to grant shareholders SoP votes. At the same time, we analyse the determinants of the propensity to opt out of detailed executive compensation disclosure. In line with previous studies, we find increasing propensity for SoP with firm size and free float. Beyond this, we link the propensity for SoP to excess compensation and find that abnormal pay increases the propensity for a voluntary SoP vote. Not very surprisingly, we find reverse effects for the same specifications when explaining the limited disclosure opt out. We interpret these results as evidence suggesting that firms use voluntary SoP to gain legitimation for executive remuneration policies in firms with presumably high agency conflicts.

Second, we look at approval rates of SoP votes. In an ordinary least squares setting we find that ownership concentration is positively associated with approval rates.[2] In an AGM fixed effects specification, which we use to address potential selection issues, we find that approval rates for SoP votes are lower than for the AGM average agenda item. When we differentiate between firms with concentrated ownership and widely held firms, differences are much stronger in widely held firms. These results are consistent with

[1] Note that (currently) SoP votes in Germany are purely advisory, with no resulting legal obligation to take action for the supervisory board. Even though there are no direct legal implications, a negative vote outcome is assumed to have significant impact through negative reputation and publicity. As other countries implemented compulsory SoP votes, some of them binding, there is an ongoing debate about the design of SoP votes in Germany. In 2013 the United Kingdom introduced compulsory SoP votes (at least every three years) (Behrmann and Sassen 2015). While Germany failed to introduce compulsory SoP in 2013 (Velte 2014), the current government, nevertheless, included the intention to put compensation proposals of the supervisory board in front of shareholders in their coalition agreement (CDU, CSU and SPD 2013).

[2] Also comparable to prior findings, see (Rapp, Sperling and Wolff 2010, Drefahl and Pelger 2013)

the view that (small) shareholders consider executive compensation a part of the agency problem of listed firms.

Third, we study AGM participation rates. Using firm-fixed effects models, which allow for (constant) unobserved heterogeneity across firms, we find on average no evidence that AGM participation increases whenever the firm has scheduled a SoP vote. However, once we differentiate between firms with concentrated ownership and widely held firms, we find that in widely held firms AGM participation indeed increases with SoP votes. Our results indicate SoP can increase participation rates, but only for widely held firms, as in these firms (small) shareholders consider SoP votes as a possibility to actively influence corporate decisions.

Finally, we analyse if there is a lasting effect on the alignment of interests between the management board and shareholders. For this analysis we introduce new compensation data based on (Rapp and Wolff 2014) covering the years between 2006 to 2013. While the levels of total compensation remain little to unaltered by SoP votes, we do find an increase in the relative levels of share-based incentives within the total amount of executive compensation per person on the board.

Overall, our results are consistent with the view that firms use voluntary SoPV to gain legitimation for executive remuneration policies in firms with low ownership concentration, where (small) shareholders consider executive compensation a part of the agency problem of listed firms, and where (small) shareholders consider SoP votes as a possibility of actively influencing corporate decisions. While the discussion on the costs and benefits of SoP, its effect on executive compensation and the alignment of interest between management boards and shareholders will continue, our study adds to the discussion with insights into a broad data set and novel analyses. Specifically, it proposes a novel – less biased – way to look at SoP approval rates, suggests examining the impact of SoP votes on AGM participation rates, as well as analysing SoP and executive compensation.

The rest of the paper is structured as follows: Chapter 2 provides a theoretical background and elaborates the hypothesis to be analysed empirically. Chapter 3 describes the dataset underlying our empirical analysis, presents the variables used and reports descriptive analysis. In chapter 4, we then introduce our methodological approach and present the results of the analysis. The last part concludes with a summary of the results, provides an outlook and open questions.

2. SoP evolution, theoretical background and hypotheses

In this section, we will firstly provide an overview of the theoretical background on SoP, as well as a brief survey of the existing literature. Secondly, based on the existing theoretical context and status quo of the literature, we will develop our key hypotheses, as the foundation to our empirical work.

2.1. *SoP evolution, theoretical background and survey of existing SoP literature*

Over the last years, say on pay (SoP) has been given increased focus, as more legislation is passed, to provide investors with institutionalised means to vote, and thereby express their views, on executive compensation. In an international context SoP was first introduced in the United Kingdom in 2003 (UK 2002), requiring companies to file detailed remuneration reports and grant shareholders non-binding votes on the reports. Many other countries followed suit, including the Netherlands, Australia, Sweden and Norway. The United States adopted SoP in 2010 with the Dodd-Frank reform (D. F. Larcker, et al. 2012).

In view of those supporting SoP, the practice of submitting compensation plans to shareholder approval, increases the accountability of executives and management board members to shareholders. This view stems from the ideas of an executive management team acting at its own discretion, with interests not necessarily aligned with a widely dispersed group of public shareholders (Berle and Means 1932). Ideally, optimally designed contracts would help alleviate the inherent principal-agent conflicts, and incentivise the executive management to act in the interest of shareholders, maximising the firms' value (Jensen and Meckling 1976). However, when taking into account the "Managerial Power" approach, there are commentators, suggesting that (small) shareholders consider executive compensation a part of the agency problem of listed firms, as opposed the outcome of a bargaining process at arm's length (Bebchuk and Fried 2003, Bebchuk and Fried 2004). In this context, SoP provides shareholders with institutionalised means, on voicing their views on the executive compensation of their firm.

Comparing the different legislative models for SoP, the individual approach is influenced by the regulatory environment and local corporate governance functions. One of the key differences in corporate governance systems are the board structures (one tier vs. two-tiered board). The SoP models also vary significantly (Döll 2009, Behrmann and Sassen 2015). Differences are reflected in the substance of the vote, i.e. individual compensation packages vs. the compensation of the board or the matter put to vote (the compensation reports as opposed to the compensation system). Further distinctions are the frequency, whether the votes are legally mandated or held on a voluntary basis, and the votes' implications: is the vote outcome binding or purely advisory.

In Germany SoP was introduced in 2009.[3] The German corporate governance model with a two-tiered board structure foresees the development of the executive board compensation policy as well as individual compensation packages in the hand of the supervisory board. The SoP model introduced encourages corporations to hold non-binding votes on SoP. A vote can be precipitated by the executive board itself, on a voluntary basis, as well as on demand by certain shareholders.[4] The content of the vote is the complete

[3] The German Parliament enacted „Say-on-Pay" as part of the Act on the Appropriateness of Management Board Compensation (Gesetz zur Angemessenheit der Vorstandsvergütung) on the June 18th, 2009. On July 5th 2009 the second chamber of the German Parliament, the Deutscher Bundesrat, passed the law then published by legal gazette on July 31st. The law became effective on August 5th 2009 (BGBI 2009).

[4] For a shareholder to request a SoP vote, the demand must be delivered to the company at least 30 days prior to the shareholder meeting and the shareholder must hold at least one-twentieth of the share capital or represent and amount of the share capital corresponding to EUR 500,000. See German Stock Corporation Act (Aktiengesetz AktG), §122

compensation package of the members of the executive board, as the supervisory board has put in place. The law follows the EC-Recommendation of December 14, 2004 closely.[5]

As the legislative environment on SoP is changing rapidly, the United Kingdom introduced a binding SoP vote, mandatory at least every three years (Department for Business 2013) the debate has also reached other countries including Germany. The previous government had decided the introduction of a new law, making an annual SoP vote compulsory, but the introduction failed in the second chamber of parliament (Velte 2014). Also the current coalition of Christian Democrats and Social Democrats has set the goal to let the AGM vote on executive compensation in the future (CDU, CSU and SPD 2013). We therefore anticipate SoP to continue to gain in importance in the compensations setting process.

As SoP is a relatively new practice, the empirical analysis on the subject is only building. The introduction has however sparked a flurry of publications on various perspectives. One way to approach SoP is to analyse the market reaction when the introduction of a SoP regime is first introduced. In the UK, markets viewed the introduction of SoP positive, for firms with weak penalties for poor performance (Ferri and Maber 2009). Analogue to the UK in the US, the results for firms with high abnormal executive compensation and low pay-for-performance sensitivity are positive. However, the market reacts negatively to labour sponsored SoP vote requests and positively when they are defeated (Cai and Walkling 2011). Evidence in Germany implies a negative reaction to the introduction of SoP (Hitz and Müller-Bloch 2015). Results indicate firms are particularly affected if board members receive high abnormal remuneration, corroborating the perspectives from other countries that regulation can be beneficial for some, while potentially imposing inefficient contracts on others.

Other studies focus on what is driving shareholders to decline approval and their effect on executive compensation (Alissa 2009, Carter and Zamora 2009, Conyon and Sadler 2010, Ferri and Maber 2009). The results show, firms in the United Kingdom react to negative SoP vote outcomes by restructuring compensation practices and eliminating disputed compensation practices, reducing excessive compensation or even driving executives out of office. In a cross-country study (Correa and Lel 2014), CEO compensation levels are found be lower in countries with SoP laws, compared to CEO compensation levels in countries with no SoP laws, partly resulting from lower growth rates. In addition SoP, is associated with higher pay for performance sensitivity, a lower CEO pay gap (compared to the rest of the executive board), and a higher firm value.

A further point of debate is whether SoP should be made compulsory or if firms should be able to precipitate SoP votes on a voluntary basis. In an experimental setting, SoP is found to have positive impact on investor sentiment and trust (Bowlin, Christ and Griffin 2012). However, the effect is seen to be stronger, when SoP is precipitated on a voluntary basis.

[5] For a detailed overview of the introduction of SoP in Germany see (Vesper-Gräske 2013)

In Germany, so far the attention has been on which firms decide to precipitate a shareholder votes and the voting behaviour of shareholders. Initial research after the year of introduction found positive influences of ownership dispersion and media presence on the propensity to grant shareholders of Prime Standard[6] companies a SoP (Rapp, Sperling and Wolff 2010, Eulerich, Rapp and Wolff 2012). In a similar study, variable compensation is found to increase the likelihood for SoP and disapproval is likely for firms with transparent disclosure (Drefahl and Pelger 2013). In another more recent publication, four years of German SoP history are analysed, showing a persistent decline in SoP votes since introduction, along with the decline in approval rates. The propensity to grant SoP votes to shareholders is found to be a function of size and ownership dispersion (Eulerich, Kalinichenko and Theis 2014).

While we find a relatively broad literature base on executive compensation and its historical evolution (Schmidt and Schwalbach 2007, Rapp and Wolff 2010, Rapp and Wolff 2014, Edwards, Eggert and Weichenrieder 2009), few have conducted a thorough analysis on the relation between SoP and executive compensation. One approach looks at the compensation practices of the DAX 30 companies historically and over the introduction phase of SoP. The findings postulate supervisory boards anticipating the introduction of SoP by reducing executive compensation (Tröger and Walz 2014).

However, a conclusion on SoP is by no means reached. Whether the type of SoP regime, the level of shareholder influence (binding vs. non-binding votes), the content of the votes and naturally the impact of SoP on executive compensation, further evidence is needed. Especially as time progresses, more data will become available, providing additional empirical insights.

2.2. *Key hypotheses*

We will now present the hypotheses we test in our analysis, first looking at the propensity to precipitate SoP votes, moving to SoP and approval rates, and finally concluding the section with AGM participation and approval rates.

2.2.1. Hypotheses regarding the likelihood SoP votes being precipitated

Larger shareholders or blockholders have a substantial influence on the development of a firm and can therefore take on a control function as part of the governance structure of a company (Gillan 2006, Shleifer and Vishny 1997). As a result, it is much easier for the board to take the views of larger blockholders into account, when putting a compensation system in place. In contrast, when shareholder base is more dispersed, it will be more difficult for the supervisory board to engage with shareholders on their views of the appropriate compensation system. As a result, and based on previous findings (Rapp, Sperling and

[6] The German Prime Standard contains the most liquid stocks in Germany. Listing requirements are *inter alia* quarterly reporting of financial statements following international accounting standards and publication of ad-hoc news in English. We use the constituent list provided by the Deutsche Börse at year-end to track our sample firms.

Wolff 2010, Drefahl and Pelger 2013, Eulerich, Kalinichenko and Theis 2014), we would expect SoP votes to be more likely in larger firms with a more dispersed shareholder base (greater free float):

H1: *As Managerial power is expected to be larger in firms with less concentrated ownership and rent extraction potential is higher in large firms, the propensity of SoPV is increasing in firm size and free float of shares.*

In line with the managerial power view (Bebchuk and Fried 2003), having a high compensation system in place could provide a reputational issue for the firms. Nevertheless, not only reputation is at stake. The supervisory board is legally obliged to ensure the management is compensated "appropriately".[7] With this obligation, firms with relatively high compensation would be expected to have a higher inclination to bolster accountability via SoP votes. Accordingly, we formulate our second hypothesis:

H2: *As relative compensation increases, incentives to strengthen accountability rise, which lift the propensity for SoP votes*

2.2.2. Hypotheses regarding the outcome of SoP votes and approval rates

As posed in previous studies (Rapp, Sperling and Wolff 2010, Drefahl and Pelger 2013), we would expect concentrated ownership to have a positive influence on the outcome of SoP vote results. Already the larger amount of votes present at the AGM (as well as the above mentioned feedback mechanism between large shareholders and the supervisory board) suggest this. Granting a SoP vote provides shareholders, and in particular smaller shareholders, a unique opportunity to express their views on the existing executive compensation system. However, unlike with most other items on the AGM agenda, the outcome of SoP is not legally binding. A negative, or less positive, outcome will at the most have disciplining consequences to potentially powerful executives (Bebchuk and Fried 2003). As the power of executives increases, proxied by higher free float and measures for comparably high compensation, shareholders would be expected to step up to their control function and oppose executives. We therefore formulate our hypothesis SoP voting behaviour as follows:

H3: *With shareholders considering compensation of powerful executives as part of firms' inherent agency costs, SoP vote approval is decreasing in free float of shares and abnormal pay of executives.*

[7] Based on German Stock Corporation Act (AktG §87)

2.2.3. SoP and AGM participation

The AGM being a core element of the governance of public corporations with a dispersed shareholder base, the higher the potential to influence the development of the firm the more important the AGM will become. As the importance of the AGM will increase, the incentives for shareholders to participate will be rise. The introduction of SoP can be viewed precisely as increasing the AGMs relative importance in the Governance of the company, in particular with respect to governing executive compensation. As a result, we are inclined to test:

***H4**: With SoP votes allowing shareholders to express their views on executive compensation arrangements, SoP votes will increase AGM participation in widely held firms.*

2.2.4. SoP and executive compensation

As a key element of evaluating SoP from the regulatory perspective, is the question of the impact on executive compensation itself. While there are many factors influencing absolute executive compensation levels, we would expect to see an increased alignment of interests between the executive board and shareholders. A primary instrument to achieve this alignment of interests consist of providing a larger share of compensation equity/share based, thereby increasing the pay for performance sensitivity of total compensation to the performance of the firm. In this context we develop the following hypothesis:

***H5**: With SoP votes allowing shareholders to express their views on executive compensation arrangements, SoP votes will contribute to a further alignment of interests between executive boards and shareholders, leading to an increase in pay for performance sensitivity.*

3. Sample description and descriptive analysis

This section describes our sample, the variables and provides some descriptive analysis of SoP votes in three steps. *First*, Section 3.1 documents the sample construction process. *Next*, Section 3.2 introduces our main variables of interest (SoP vote, SoP approval, AGM participation, and Limited Disclosure and executive compensation and pay for performance sensitivity) and discusses their descriptive statistics. *Finally*, Section 3.3 presents firm characteristics, proxies of ownership structures and measures of abnormal pay.

3.1. Sample construction

In August 2009 the German government has enacted new legislation concerning executive remuneration (so-called "Gesetz zur Angemessenheit der Vorstandsvergütung" or "VorstAG"). This change in regulation, which might be translated by "Law for the Appropriateness of Management Board Compensation", now allows for voluntary SoP votes during Annual General Meetings (AGMs). Interested in these SoP

votes our sample covers AGMs of firms listed in the Prime Standard of the German stock market from August 2009 to 2013. In effect, our analysis thus provides evidence from the first four years of the regulation.

To derive our sample, we start from all Prime Standard constituents and proceed as illustrated in Table 1. Subtracting firms subject to foreign regulation (as indicated by a foreign ISIN code) and double listings (i.e. firms with two types of shares listed) we identify 1,215 relevant AGMs. While information is missing for 46 AGMs, we were able to collect detailed information for 1,169 AGMs over the sample period by thoroughly reading the minutes of these AGMs.

	2010	2011	2012	2013	Total
Prime standard listed	363	364	346	315	1,388
Double listing	19	19	17	15	70
Foreign ISIN	29	28	24	22	103
Missing AGMs	14	12	14	6	46
Observed AGMs	301	305	291	272	1,169

Notes: The table documents our sample selection process. We initially start by taking into account all prime standard firms listed in each year between 2010 and 2013. We remove all secondary listings (i.e. ordinary or preference shares) and ensure the firm is incorporated under German regulation by excluding all firms with foreign ISIN codes. 46 AGMs are not observed (due to missing information, mergers or the firm being closed down). This results in a total of 1,169 observed AGMs.

Source: Own preparation

Table 1: Sample selection process overview

3.2. *AGM participation, SoP votes, approval rates and executive compensation*

Reading the minutes of our sample AGMs, we code information on (i) AGM participation, (ii) the type of the various agenda items[8] and (iii) the approval rate for each agenda item. Overall, we collect information on 10,308 agenda items throughout our sample AGMs. This information allows us to study the occurrence of voluntary SoP votes, their approval rates, and the effect of SoP votes on AGM participation.

Firstly, we look at a binary variable *SoP vote* measuring whether a say on pay vote was held at the AGM. If a say on pay vote was held, the variable takes a 1, if the AGM agenda of the firm did not include a say on pay vote, the variable takes the value 0. Overall, we observe 239 SoP votes in our sample[9] of the total

[8] We use a categorisation with 17 agenda item groups: 1 Reporting for the financial year, 2 Appropriation of profits, 3 Approval of actions of the executive board, 4 Approval of actions of the supervisory board, 5 Mandating supervisory board members, 6 Man-dating of auditor, 7 Say-on-Pay, 8 Compensations system supervisory board, 9 Detailed executive compensation disclosure opt out, 10 Authorization of share buyback, 11 Authorized capital, 12 Conditional capital, 13 Capital increase, 14 Other, 15 Changes to articles of association, 16 Conditional capital for compensation purposes, 17 Liquidation of the corporation

[9] Three companies in 2010 (Stada Arzneimittel AG, Vossloh AG and Kloeckner & Co. SE) only update shareholders on the status quo of the boards' compensation system and specifically grant shareholders room for their opinion under a separate agenda item, without holding a vote. In 2011, Phoenix Solar intends to hold a say on pay vote, however no

1,169 AGMs, which corresponds to a SoP occurrence rate of some 20%. Considering that we have an (unbalanced) panel, it is interesting to take a firm perspective: We find every second firm has had a SoP vote during our sample period (170 out of 335 sample firms). Taking the time series perspective is also interesting: Some 13% (2%) of our sample firms have more than one (more than two) SoP votes during our sample period of four years. Moreover, along the time series dimension the distribution of SoP votes is uneven as illustrated in Table 2: The share of companies holding say on pay decisions is quite high in 2010 with 36.5%, but drops down to 23.6% in 2011. For 2012, just over one in ten companies held say on pay votes (11.7%) and the share of companies drops even further in 2013 to 8.5%.

	2010	2011	2012	2013	Total
Total observations	301	305	291	272	1,169
AGMs with SoP votes	110	72	34	23	239
Fraction of AGMs with SoP votes	36.5%	23.6%	11.7%	8.5%	20.4%

Notes: The table documents our sample of AGMs over time, the number of AGMs with say on pay votes, as well as the fraction of AGMs with SoP votes over time.

Source: Own preparation

Table 2: Overview of AGMS with say on pay votes

Beyond the fact, that German regulation allows for voluntary SoP votes there is another rather unique feature of executive compensation regulation in Germany. Acknowledging worldwide calls for more transparency of executive compensation practices, in August 2005 the German government enacted the Management Compensation Disclosure Act (so-called "Gesetz über die Offenlegung von Vorstandsvergütungen" or "VorstOG"), which forces firms to disclose detailed individualized information about remuneration of executives. However, the law allows firms (and their boards) to opt-out of the disclosure requirements: The board may propose the AGM to vote on a limited disclosure proposal and whenever more than three forth of the AGM vote in favour for this proposal, the firm does not have to disclose detailed information on executive remuneration within the next five years.

We identify firms that take advantage of this possibility to "opt-out" of detailed disclosure, by carefully examining the statements of compliance with the German Corporate Governance Code (GCGC). While a lot of research has covered voluntary information disclosure (Patelli and Prencipe 2007, Garcia-Meca and Sanchez-Ballesta 2010) as a source of investor protection, the German information disclosure opt-out possibility, presents the opposite setting. Rule 4.2.4 of the GCGC covers the essence of the legal disclosure requirements defined by the VorstAG. The results of this analysis are illustrated in Table 3, which also contrasts the firms with limited disclosure to firms with SoP votes.

results are provided for the agenda item. With these four AGMs, 243 AGMs would have included say on pay on the meeting agenda for the sample period.

		2010	2011	2012	2013	Total
Firms with SoP vote	Total observations	301	305	291	272	1,169
	Observations	110	72	34	23	239
	Fraction of firms	36.5%	23.6%	11.7%	8.5%	20.4%
Firms with limited disclosure	Total observations	296	300	288	268	1,152
	Observations	36	39	33	17	125
	Fraction of firms	12.2%	13.0%	11.5%	6.3%	10.9%
Firms with both	Total observations	296	300	288	268	1,152
	Observations	10	3	2	0	15
	Fraction of firms	3.4%	1.0%	0.7%	0.0%	1.3%

Notes: The table documents the distribution of firms with SoP votes and firms with limited disclosure of executive compensation practices in our sample.

Source: Own preparation

Table 3: Overview of firms with limited disclosure of executive remuneration policies

Two findings stand out. First, the number of firms with limited disclosure policy declines sharply over our sample period. While in 2010 12.2% of firms opted for limited disclosure, this figure goes down to 6.3% in 2013. Second, there is hardly any overlap. Indeed, in 2013 none of our sample firms opted for SoP and limited disclosure simultaneously.

Secondly, we look at the various agenda items. Overall, we identify 10,308 agenda items in our sample of 1,169 AGMs, i.e. nearly 9 agenda items per sample AGM. We categorize 17 agenda item groups[11]. For 9,324 of these agenda items[12] we are able to collect the approval rates, i.e. the voting outcome.[13] These approval rates are reported in Table 4. What is evident from looking at Table 4 is that the approval rate is very high on average. However, with the decline in SoP vote numbers, there also appears to be a decline in approval rates towards the end of the sample period.

		2010	2011	2012	2013	Total
All AGM agenda items	Observations	3,113	2,114	2,418	1,679	9,324
	Average approval rates	96.4%	95.7%	95.4%	96.4%	96.0%
SoP votes	Observations	110	72	34	23	239
	Average approval rates	92.9%	90.1%	90.1%	89.3%	91.3%
Other agenda items	Observations	3,003	2,042	2,384	1,656	9,085
	Average approval rates	96.5%	95.9%	95.5%	96.5%	96.1%

Notes: The table provides an overview of say on pay approval rates for firms with and without SoP votes, per year and in total.

[11] The 17 categories are: 1 Reporting for the financial year, 2 Appropriation of profits, 3 Approval of actions of the executive board, 4 Approval of actions of the supervisory board, 5 Mandating supervisory board members, 6 Mandating of auditor, 7 Say-on-Pay, 8 Compensations system supervisory board, 9 Detailed executive compensation disclosure opt out, 10 Authorization of share buyback, 11 Authorized capital, 12 Conditional capital, 13 Capital increase, 14 Other, 15 Changes to articles of association, 16 Conditional capital for compensation purposes, 17 Liquidation of the corporation

[12] Not every agenda item requires a vote, i.e. reporting for the financial year

[13] Four firms only included say on pay on the AGM agenda for discussion purposes (Stada Arzneimittel AG, Vossloh AG and Kloeckner & Co. SE) in 2010, without holding a say on pay vote as well as vote results missing in the case of Phoenix Solar AG in 2011, we end up with 217 say on pay vote results.

Table 4: Overview of say on pay vs. other votes and approval rates

Thirdly, we collect information on participation levels of AGMs. As illustrated in Table 5 the average participation rate is slightly above 60 percent and relatively stable over the sample period. Interestingly, AGM participation is generally lower in case of AGMs with SoP votes (with exception to 2012).

		2010	2011	2012	2013	Total
All AGMs	Observations	300	304	290	271	1,165
	Average participation rates	62.4%	62.3%	64.7%	62.4%	62.9%
AGMs with SoP	Observations	110	72	34	23	239
	Average participation rates	62.6%	59.4%	65.7%	59.5%	61.8%
AGMs w/o SoP	Observations	190	232	256	248	926
	Average participation rates	62.3%	63.2%	64.5%	62.7%	63.2%

Notes: The table provides an overview of average AGM attendance, per year and in total.

Table 5: Overview of AGM attendance rates

Finally, we expand the 2010 to 2013 sample used in the first part of the analysis with executive compensation data of Prime Standard companies reported in the years 2006 to 2013. The data obtained is based on previous studies (Rapp and Wolff 2014). We use the natural logarithm of average total executive compensation per person on the executive board, as well as the share of share based incentives within total compensation. The latter is our measure for Pay for performance sensitivity.

	N	mean	p25	p50	p75	sd	Mean (No SoP)	Mean (SoP)	Δ & Significance	T-Statistic
ln (Executive Compensation)	2,454	6.378	5.780	6.263	6.958	0.881	6.329	6.841	-0.512***	(-8.98)
Pay for performance sensitivity	2,449	0.082	0.000	0.000	0.123	0.147	0.077	0.126	-0.0488***	(-4.29)

Notes: The table provides an overview of descriptive statistics for the variables *ln (executive compensation)*, and *Pay for performance*. Stars denote statistical significance levels with * p<0.10, ** p<0.05, *** p<0.01.

Table 6: Overview of executive compensation and pay for performance sensitivity

3.3. Firm characteristics and control variables

In the empirical analysis, we aim to control for various firm characteristics. Accounting-based firm characteristics are gathered via Thomson Worldscope database. Using this database, we define variables to control for the following set of characteristics: firm size, capital structure, TobinsQ, operating performance, asset base as well as the firms' innovation capacity. For firm size (*Firm Size*) we use the natural logarithm of total revenues. Differences in capital structures are accounted for using the firms' leverage ratios as calculated by the share total debt to total assets (*Leverage*). For the valuation aspects, we calculate TobinsQ as the ratio of market value of assets to book value of assets (total assets plus market capitalisation less common equity, over total assets) (*TobinsQ*). As the operating performance measure, we compute a proxy

for the return on invested capital (ROIC), based on the operating income (Earnings Before Interest and Taxes) less the taxes paid in the relevant fiscal year over the firms total assets (*Operating Performance*). We hold constant for the firms' asset structure by deriving the total fixed assets to total assets ratios (*Fixed Assets*). Finally, innovation capacity measured by the research and development expenditure normalised by total assets (*RnD*). We furthermore assume research and development expenditure is equal to zero if data is not available.

To account for the different impact on corporate decision-making processes by the media status of the firm, we specify four *different media* presence levels. The key assumption is, the more prominent the index in which the firm is listed, the more media focus the firm will receive. The variable media presence therefore takes the value 0 for firms listed in the Prime Standard segment. However, if a firm is listed in an index, the variable takes on the value 1 for TecDAX, 2 for SDAX, 3 for MDAX and 4 for DAX membership.

We control for industry and time effects in all specifications, with the former based on the primary Standard Industry Classification (SIC) codes, providing 10 industry groups. The latter measure providing four dummies, one for each year of sample data. As there is no publicly available database on corporate governance variables in Germany, we use a unique database containing detailed hand collected information on corporate ownership. The database rests on information from the Hoppestedt Aktienführer, annual reports, the Lexis-Nexis database as well as press searches and investor relations department inquiries. Using this database, we measure the share ownership held by the largest three shareholders (whenever they exceed 5 percent) measured by *Blockholdings*. We further distinguish between insider and outsider ownership in the firm. We therefore form the variable *Inside ownership*, for any ownership associated with members of the management of the firm, *Outside ownership*, measuring share in ownership of the largest three block holders not part of the executive board.

Additionally we use compensation data based on the sample presented by Rapp & Wolff, 2014 to estimate *Exess Compensation* as a measure of abnormal pay. Using the natural log of executive compensation observed historically we estimate excess executive compensation for our sample of firms. We use a two-staged process, in which we first explain *Excess Compensation* using *Firm Size* as well as industry and year effects. In a second specification, we add *TobinsQ*, the firms *Operating Performance*, as dummy indicating if the compensation included stock based incentives, as well as *Blockholdings*.

In Table 7, we report summary statistics for the underlying data. The table displays the number of observations in the whole sample, as well as mean, median, the 25% and 75% quartiles and the variables' standard deviations. We also compute means for the group of firms holding say on pay votes and those that opted not to do so.

Variable	N	Mean	.25 quartile	Median	.75 quartile	SD	Mean (No SoP)	Mean (SoP)	Δ & Signifi-cance	T-Statistic
Firm size	1,162	12.887	11.337	12.706	14.285	2.342	12.604	13.980	-1.376***	(-7.78)
TobinsQ	1,161	1.443	0.989	1.160	1.527	0.869	1.438	1.464	-0.026	(-0.43)
Oper. Performance	1,157	0.024	0.015	0.048	0.078	0.147	0.023	0.025	-0.002	(-0.18)
Leverage	1,163	0.218	0.053	0.186	0.324	0.201	0.216	0.225	-0.010	(-0.69)
RnD Expenses	1,168	0.031	0.000	0.002	0.035	0.062	0.031	0.030	0.001	(0.2)
Fixed Assets	1,163	0.212	0.050	0.163	0.296	0.205	0.210	0.221	-0.012	(-0.78)
Blockholdings	1,156	0.462	0.285	0.460	0.627	0.224	0.478	0.400	0.0780***	(4.98)
Inside ownership	1,156	0.096	0.000	0.000	0.062	0.189	0.109	0.049	0.0597***	(5.36)
Outside blockholders	1,156	0.376	0.174	0.342	0.554	0.247	0.381	0.356	0.025	(1.5)
Media presence	1,168	1.273	0.000	0.500	3.000	1.461	1.072	2.054	-0.982***	(-8.94)
Excess compensation	1,123	-0.011	-0.341	-0.017	0.341	0.560	-0.040	0.097	-0.137***	(-3.54)
Excess compensation (extended)	1,109	-0.007	-0.331	0.000	0.319	0.521	-0.026	0.061	-0.0869*	(-2.39)

Notes: Table 6 reports summary statistics for the sample underlying the analysis. The sample consists of firms listed in the Prime Standard between 2010 and 2013. Firm size it the natural logarithm of the firms revenues. Leverage is the ratio of total debt to total assets. Operating performance measures the firms earnings from operations by calculating NOPAT over total assets as EBIT – taxes paid divided by total assets. Fixed Assets is the ratio of fixed assets to total assets for the year for which the AGM is held. RnD is the reported research and development expenditure normalised by total assets, and assumed to be zero if no numbers no research and development expenditure is reported. Media presence takes the value 0 for firms listed in the Prime Standard segment. However, if a firm is listed in an index, the variable takes on the value 1 for TecDAX, 2 for SDAX, 3 for MDAX and 4 for DAX membership. Blockownership represents the share of combined stakes of the largest three shareholders. Inside ownership measures the stake in the firm held by the management board and Outside ownership are the stakes of the largest three shareholders, not part of the management. All variables are based on the financial year immediately preceding the AGM. Accounting data is winsorised at a one percent level. Stars denote statistical significance levels with * p<0.10, ** p<0.05, *** p<0.01.

Table 7: Summary statistics of key explanatory variables used

Like prior findings (Rapp, Sperling and Wolff 2010), we find significant differences. What becomes apparent is, firms holding say on pay votes are typically larger, tend to have a larger amount of publicity as proxied by our media presence variable, and appear to have a less concentrated shareholder base (as measured by our *Blockownership* variable). The differences are all significant a 1% level.

4. Empirical results

This section presents our empirical analysis. We proceed in three steps. We start by analysing the propensity of SoP votes in Section 4.1. Next, we examine SoP approval rates in Section 4.2. Finally, we study the influence of SoP on AGM participation rates in Section 4.3. In each section, we describe the empirical design, present the results, as well as the robustness of the analyses.

4.1. Determinants of SoP Votes and Disclosure of Executive Remuneration Policies

In this section, we examine cross-sectional determinants of SoP votes and disclosure levels of executive remuneration policies.

4.1.1. Empirical design

To study the determinants of the propensity for SoP, we classify our sample of AGMs using the dummy variable SoP Vote indicating (with the value 1) that a vote took place at the AGM. Otherwise, the variable is equal to zero. We then use our firm characteristics, ownership proxies, as well as compensation metrics to calculate the probability of SoP taking place. Using Logit regression methods (Hoetker 2007, Stock and Watson 2007) our empirical model reads as follows:

Empirical Model 1:

$$\boldsymbol{Pr(SoP\ Vote_{it}) = f(Firm\ Characteristics_{it} + Ownership\ Proxies_{it} + Compensation\ Metric_{it})}$$

where i indicates firms and t refers to the time series. Thereby, firm characteristics comprise year and industry fixed effects, the latter based on the first digit SIC codes. Effectively, we assume firm specific, unobserved factors are largely captured by the firms' industry affiliation. We use robust standard errors to allow for heteroskedasticity (White 1980, Freedman 2006).

In a second step, analogue to *SoP vote*, we form a dummy indicating those firms limiting the disclosure of detailed management compensation information (*Limited disclosure*). Similar to the analysis of SoP Votes, we model the propensity to limit disclosure of management compensation information using firm characteristics, ownership proxies and compensation metrics using the following empirical model:

Empirical Model 2:

$$\boldsymbol{Pr(Limited\ Disclosure_{it})} \\ \boldsymbol{= f(Firm\ Characteristics_{it} + Ownership\ Proxies_{it} + Compensation\ Metric_{it})}$$

Again, we use industry and year fixed effects, assuming firm specific, unobserved factors are largely captured by firm industry affiliation. Robust standard errors allowing for heteroskedasticity are used for statistical inference.

4.1.2. Empirical results

The results of various versions of Empirical Model 1 are reported in Table 8. In an initial implementation of model (1), we regress SoP Vote on *Firm Size* and industry and year dummies. Next, we add in various steps other firm controls, ownership proxies, the proxy for media presence and our measures of abnormal pay.

Dependent variable	Say-on-Pay Voting (dummy)					
Method	Logit regression					
Standard errors	Robust	Robust	Robust	Robust	Robust	Robust
Firm size	0.301***	0.309***	0.223***	0.264***	0.262***	0.250***
	[7.80]	[7.74]	[3.18]	[3.62]	[3.60]	[3.43]
TobinsQ		0.151	0.097	0.056	0.123	0.132
		[1.54]	[0.93]	[0.49]	[1.13]	[1.21]
Oper. Performance		-0.124	-0.154	-0.173	-0.143	-0.041
		[-0.19]	[-0.24]	[-0.26]	[-0.21]	[-0.06]
Fixed Assets		0.412	0.293	0.209	0.21	0.175
		[0.86]	[0.60]	[0.43]	[0.43]	[0.36]
RnD Expenses		3.556**	3.335**	3.288**	3.291**	3.208**
		[2.36]	[2.24]	[2.14]	[2.15]	[2.07]
Blockholdings		-1.256***	-1.048***	-0.918**	-1.121***	
		[-3.31]	[-2.62]	[-2.24]	[-2.71]	
Inside ownership						-1.766***
						[-2.67]
Outside blockholders						-1.077***
						[-2.62]
Media presence			0.163	0.09	0.092	0.086
			[1.49]	[0.79]	[0.81]	[0.76]
Excess compensation				0.365**		
				[2.13]		
Excess compensation (extended)					0.359**	0.344**
					[2.11]	[1.99]
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,158	1,138	1,138	1,105	1,105	1,105
Pseudo R^2	0.158	0.175	0.177	0.178	0.178	0.18

Notes: Table 8 reports Logit estimates of our model (1) explaining the propensity to grant a SoP Vote to firms' shareholders. Our sample covers all firms listed in the prime standard between 2010 and 2013. SoP Vote measures whether a SoP Vote was granted at the AGM and is binary in nature. Across all models, the variable equals 1 if the firm grants a SoP Vote at the AGM. To accommodate for a binary dependent variable we use a Logit specification. Our main explanatory variables are *Blockholders, Inside-, and Outside Blockholder, Media presence, Excess compensation and Excess compensation (extended)*. In the analysis we use a set of firm characteristics (*Firm size, TobinsQ, Operating performance, Fixed Assets, RnD Expenses*, winsorised at a one percent level) as well as year and industry effects. The latter based on the first digit SIC code. Robust Z-statistics are reported in the parentheses below the coefficients, allowing for heteroskedasticity using the Huber/White sandwich estimator of variance (White 1980). Our goodness of fit measure is the pseudo R^2.

*, **, *** Significance is at the 0.10, 0.05, 0.01 level, respectively.

Source: Own preparation

Table 8: Determinants of the propensity to grant SoP Votes at AGMs

In line with the existing literature, e.g. (Rapp, Sperling and Wolff 2010), we find a highly significant positive influence of size on the propensity to grant investors a SoP Vote. Other firm characteristics are mostly insignificant.

In Specification 3 to 6, we add *Media presence* as an additional control. The idea is that higher media presence comes along with higher levels of public attention concerning executive compensation and thus increasing public pressure to gain legitimation for executive remuneration policies. However, media presence turns out to be significant only in Specification 3.

With respect to ownership, we find that *Blockholdings*, as well as *Inside Ownership* and *Outside Ownership*, are negatively associated with the propensity to grant SoP votes. This is, again, in line with prior literature on voluntary SoP votes in Germany, e.g. (Rapp, Sperling and Wolff 2010). We interpret this evidence as supportive for our first hypotheses (H1) stating that as managerial power is expected to be larger in firms with less concentrated ownership and rent extraction potential is higher in large firms, the propensity of

SoP vote is increasing in firm size and free float of shares. Furthermore, the results imply firms are prone to higher accountability for *Excess compensation.* This could point at the supervisory boards' efforts to get shareholders to sign off compensation packages that are above expected levels. In sum, our results are consistent with the view that firms use voluntary SoP votes to gain legitimation for executive remuneration policies.

Next, we examine what we consider somehow opposing the idea of SoP votes: limited disclosure of executive compensation policies. Therefore, we apply the same specifications as above to our proxy *Limited disclosure,* i.e. to Empirical Model 2. Results of this exercise are reported in Table 9.

Dependent variable	Limited disclosure of exec. compensation					
Method	Logit regression					
Standard errors	Robust	Robust	Robust	Robust	Robust	Robust
Firm size	-0.123***	-0.138**	-0.250***	-0.246***	-0.245***	-0.215**
	[-3.01]	[-2.44]	[-2.84]	[-2.69]	[-2.68]	[-2.35]
TobinsQ		0.219*	0.143	0.058	0.019	0.023
		[1.88]	[1.14]	[0.46]	[0.15]	[0.18]
Oper. Performance		1.574*	1.557*	3.119***	3.098***	2.962***
		[1.72]	[1.65]	[3.13]	[3.11]	[3.01]
Fixed Assets		-0.147	-0.231	-0.095	-0.096	0.033
		[-0.22]	[-0.35]	[-0.14]	[-0.14]	[0.05]
RnD Expenses		-2.698	-2.89	-1.536	-1.55	-1.599
		[-1.12]	[-1.21]	[-0.60]	[-0.61]	[-0.62]
Blockholdings		2.822***	3.119***	3.330***	3.448***	
		[5.84]	[5.92]	[5.80]	[6.00]	
Inside ownership						3.741***
						[5.76]
Outside blockholders						3.280***
						[5.68]
Media presence			0.221*	0.269*	0.267*	0.253*
			[1.68]	[1.90]	[1.90]	[1.79]
Excess compensation				-0.217		
				[-1.18]		
Excess compensation (extended)					-0.209	-0.164
					[-1.14]	[-0.89]
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1129	1113	1113	1086	1086	1086
Pseudo R^2	0.042	0.112	0.116	0.126	0.126	0.126

Notes: Table 8 reports Logit estimates of our model (2) explaining the propensity to opt out of disclosure of detailed management compensation. Our sample covers all firms listed in the Prime Standard between 2010 and 2013. Limited disclosure variable measures whether the firm reported non-compliance in its statement of conformity on the German Corporate Governance Code. Across all models, the variable equals 1 if the firm reported non-compliance. To accommodate for a binary dependent variable we use a Logit specification. Our main explanatory variables are *Blockholders*, *Inside-*, and *Outside Blockholder*, *Media presence*, *Excess compensation* and *Excess compensation (extended)*. In the analysis we use a set of firm characteristics (*Firm size, TobinsQ, Operating performance, Fixed Assets, RnD Expenses*, winsorised at a one percent level) as well as year and industry effects. The latter based on the first digit SIC code. Robust Z-statistics are reported in the parentheses below the coefficients, allowing for heteroskedasticity using the Huber/White sandwich estimator of variance (White, 1980). Our goodness of fit measure is the pseudo R2.

*, **, *** Significance is at the 0.10, 0.05, and 0.01 level, respectively.

Source: Own preparation

Table 9: Determinants of limited disclosure of executive compensation practices

Not very surprisingly, the coefficients of our key right hand side variables are pretty much opposite to the ones found when examining SoP votes. Indeed, while *firm size* is negatively associated with opaqueness of compensation practices, the association of ownership concentration is positive. These results are consistent with the view that boards of (small) firms with large, probably influential, blockholders aim to negotiate executive compensation contracts privately.

4.1.3. Robustness tests

In order to check the validity of our results, we challenge them in three (unreported) steps. *First*, we re-estimate the models using alternative *Firm size* variables, including the natural logarithm of market capitalisation and the natural logarithm of total assets. *Second*, we follow the main approach of the corporate governance literature and restrict the sample to non-financial and non-utility firms (i.e. we exclude firms classified by SIC codes between 6000 and 6999 as well as between 4900 and 4949). *Third*, we estimate the average marginal effects (at means). Our key results prove robust under all these additional tests.

4.2. Approval rates and SoP

Having studied the occurrence of voluntary SoP votes, we now examine approval rates of these votes.

4.2.1. Empirical design

A simple (and naive) analysis of SoP approval rates is to regress the voting outcome on variables of interest and controls, i.e. an empirical model as follows:

Empirical Model 3:

$$\boldsymbol{SoP\ Approval\ Rate_{it}} = \boldsymbol{f}(\boldsymbol{Firm\ Characteristics_{it}} + \boldsymbol{Ownership\ Proxies_{it}} + \boldsymbol{Compensation\ Metric_{it}})$$

Such a model would reveal information about the (cross-sectional) *association* between the voting outcome and the right hand side variables. In case of *voluntary* SoP votes (as in the case of German regulation) the challenge is limiting the sample for Empirical Model 3: Either the sample is defined as all AGMs with voluntary SoP votes (e.g. (Rapp, Sperling and Wolff 2010)). Alternatively, all AGMs are considered and a hypothetical SoP approval rate for AGMs without SoP vote is defined (e.g. (Tröger and Walz 2014)).

In any case, any association found using Empirical Model 3 is to be treated with caution due to endogeneity issues (Stock and Watson 2007). Indeed, any meaningful analysis of approval rates of *voluntary* SoP votes must deal with two issues. *First*, the occurrence of voluntary SoP votes is an endogenous choice by the board of the firm (see the analysis in Section 4.1). *Second*, participation in AGMs is probably an endogenous choice by shareholders (see the analysis in Section 4.3).

In our empirical analysis, we proceed in two steps. *First*, we run a cross-sectional version of Empirical Model 3. *Second*, we adopt a very different approach. Instead of studying the cross-sectional variation in SoP approval rates, we compare SoP approval rates with an AGM's average approval rate. By allowing for AGM fixed effects, we are able to address the two challenges described above. Specifically, allowing

for AGM fixed effects allows us to control for any unobserved heterogeneity between AGMs and to keep constant AGM participation. Thus, our second empirical model to study SoP vote approval rates reads as follows:

Empirical Model 4:

$$\boldsymbol{AGM\ Agenda\ Item\ Approval\ Rate_{itk} = f(SOP_{itk} + SOP_{itk} x\ Governance\ Proxies_{itk})}$$

where k indicates the various agenda items that require shareholders' approval and Governance Proxies will measure ownership concentration and *Excess AGM participation*.[14] We estimate versions of Empirical Model 4 on the sample of all AGMs, as well as on subsamples: AGMs of firms paying relatively high (low) executive compensations as measured by our variable *Excess Compensation (extended)*. Again as in the last models, we use robust standard errors that allow for heteroskedasticity for statistical inference (White, 1980; Freedman, 2006).

4.2.2. Explaining SoP approval rates

The results of the analysis on SoP approval rates are reported in Table 10.

[14] We estimate *Excess AGM Participation* as the residual of a regression explaining ln(AGM participation/(1- AGM participation)) by *Firm size*, *TobinsQ*, *Operating Performance*, *Media Presence*, *Blockholdings*, industry and year effects.

Dependent variable	Approval (in %)									
Sample	All AGMs with SoPV	All AGMs					AGMs of firms with (rel) high executive compen-sation		AGMs of firms with (rel) low executive compensation	
Methods	OLS	Fixed AGM effects model								
Standard errors	Robust	Robust	Robust	Robust	Robust	Robust	Robust	Robust	Robust	Robust
Say-on-Pay Voting		-5.467***	-3.219***	-0.608	-5.121***	-0.643	-5.705***	1.369	-5.143***	-2.746
		[-6.76]	[-4.06]	[-0.35]	[-4.51]	[-0.39]	[-5.51]	[0.64]	[-3.98]	[-1.00]
Firm size	-0.027									
	[-0.32]									
Media presence	-0.136									
	[-0.96]									
Blockholdings	2.794***									
	[5.06]									
SoP x Widely held firm			-3.288**							
			[-2.40]							
SoP x Free Float				-8.013**		-7.794**		-11.612**		-4.005
				[-2.33]		[-2.16]		[-2.56]		[-0.77]
SoP x Abnormal AGM participation (dummy)					-0.654	-0.238				
					[-0.40]	[-0.14]				
Year dummies	Yes	No	No	No	No	No	No	No	No	No
Observations	232	9,324	9,324	9,219	9,028	9,028	4,934	4,829	4,390	4,390
R^2	0.143	0.007	0.008	0.008	0.007	0.008	0.009	0.011	0.005	0.006

Notes: Table 9 reports OLS and AGM fixed effects estimates of our model (3) explaining the AGM approval rates. Our sample covers all firms listed in the Prime Standard between 2010 and 2013. For the 1,169 observed AGMs, we analyse 9,324 observed AGM agenda items with a voting outcome. We thereby measure approval as the sum of votes in favour of the AGM agenda item in question, over the total number of votes submitted. To account for any kind of heterogeneity between different AGMs in our sample we introduce AGM fixed effects. Our main explanatory variable is SoP, to determine the influence of SoP vote on the approval rate. We furthermore introduce a Widely Held dummy indicating whether the firms' three largest shareholders own less than 50% of all voting rights (taking on the value one if this is the case and zero otherwise, i.e. when the free float is less than fifty percent). Robust t-statistics are reported in the parentheses below the coefficients, allowing for heteroskedasticity using the Huber/White sandwich estimator of variance (White, 1980). Our goodness of fit measure is the R2.

*, **, *** Significance is at the 0.10, 0.05, and 0.01 level, respectively.

Source: Own preparation

Table 10: SoP approval rates, relative to other AGM agenda items

The first specification in Table 10 is a (mainly cross-sectional) OLS-version of Empirical Model 3: Based on the results of 232 SoP votes we find that SoP approval rates are positively associated with ownership concentration as measured by *Blockholdings*. This finding, which is in line with prior literature (e.g. (Rapp, Sperling and Wolff 2010)), is consistent with the view that large shareholders, which often have an intimate relationship with the supervisory board, influence board decisions already prior to AGMs.

The other specifications of Table 10 are versions of Empirical Model 4: Specification 2 documents that SoP votes have lower approval rates than the average AGM agenda item. Specification 3 and 4 suggest that this is particularly true for firms with high free float. Indeed, Specification 4 documents that the difference between SoP votes and the average AGM agenda item is negligible for firms with zero free float, while it is significant for firms with high levels of free float. Specification 5 and 6 suggest that the approval rate for SoP votes is negatively (although insignificantly) affected by abnormal AGM participation. Finally, Specification 7 to 10 document that SoP approval rates are relatively lower (less negative) when the firm pays

high (low) executive compensation. Also, Specification 8 and 10 document that the level of free float is particularly influential in case of (abnormally) high executive pay.

Overall, our results suggest that (small) shareholders raise their voice in SoP votes expressing their view on executive remuneration policies: As a result, this means that – in line with Bebchuck & Fried (2003) – (small) shareholders consider executive compensation a part of the agency problem of listed firms (instead of the outcome of a bargaining process at arm's length).

4.2.3. Robustness

In order to check the validity of our results, we challenge them by a battery of robustness tests. Our key results prove robust under all these additional tests. We proceed in three steps. *First*, we compare the outcome of SoP votes with approval rates of various selected types of agenda items. Instead of comparing SoP approval with the AGMs' average approval rate, we use "Approval of actions of the supervisory board" and "Mandating of auditors". Compare with Table 14 in the appendix. *Second*, even though we believe the AGM fixed effects specification is the best way to counter firm heterogeneity and potential endogeneity concerns[15], we run a Heckman selection model. For this, we estimate the propensity for SoP to obtain the inverse mills ratio, which in the second step regression is not significant. We therefore postulate that there is no selection bias associated with the SoP approval rates. The results confirms our view on AGM fixed effects representing the best-fitted specification. Compare with Table 15 in the appendix. *Thirdly*, we re-estimate the models using an alternative endogenous variable. Instead of using Approval Rate in percent we use the natural logarithm of the ratio Approval Rate in % /(100 - Approval Rate in %).

4.3. SoP and AGM participation

Having studied the occurrence of voluntary SoP votes and their approval rates, we examine AGM participation and SoP votes.

4.3.1. Empirical design

Aiming to understand *AGM participation*, and the association with SoP votes, we use AGM participation rates as reported in the firms AGM voting result summaries as dependent variable. This measure is derived by taking votes present at the AGM, over the total number of votes eligible to participate. As a second measure of participation, to circumvent any potential zero/one restriction of the *AGM participation* variable, we derive *AGM participation (adj)* by taking the natural logarithm of *AGM participation* over AGM absence (AGM absence representing the eligible votes reported not to be present at the AGM). Due to large blockowners participation being relatively consistent and independent of the decision whether a SoP vote

[15] With SoP representing an endogenous choice, using AGM fixed effects, we only compare SoP approval with other agenda items also effected by the endogenous choice

has been precipitated, we follow the literature (Elst 2011) we introduce *Small holder participation (SHP)* as a third measure. We calculate *SHP* by subtracting *Blockownership* from *AGM participation* and then normalise this number by the total amount of shares held by small shareholders, so that the variable reads: *SHP* = (*AGM Participation – Blockownership)/ (1-Blockownership)*. We use the 1,169 observed AGMs of German Prime Standard listed companies from 2010 up to 2013. As exogenous variables we use the *SoP vote* dummy, *Excess compensation (extended)*, *Blockownership*, *Media presence*, as well as firm controls (*Firm size*, *TobinsQ*, *Operating Performance*). Additionally we interact *SoP vote* with *Blockownership*. This yields the following model:

Empirical Model 5:

$$\boldsymbol{AGM\ Participation_{it}} = \boldsymbol{f}(\boldsymbol{SOP_{it}} + \boldsymbol{SOP_{it}x\ Ownership\ Proxies_{it}} + \boldsymbol{Ownership\ Proxies_{it}} + \boldsymbol{Firm\ Characteristics_{it}})$$

To allow for (constant) unobserved heterogeneity across firms, we use a firm fixed effects model. Additionally we introduce year dummies. Also in this model, we use robust standard errors to allow for heteroskedasticity (White 1980, Freedman 2006)

4.3.2. AGM Participation and SoP votes

We now report the results of our analysis of AGM participation and SoP approval rates of our Empirical Model 5. In our first specification, looking at *AGM participation*, regressed on *SoP vote* and *Blockholdings*, we find, as expected, a positive impact of the presence of large shareholders on the participation rate. No significant higher participation rates for AGMs with SoP votes on the agenda. However, once we interact *SoP vote* and *Blockholdings* and thereby filter out interrelations between *SoP vote* and *Blockownership*, we report slightly higher participation (at a five percent significance level). This result remains relatively constant when we control for firm characteristics and *Excess compensation (extended)*. In a further specification, we use *AGM participation (adj)* as the dependent variable, to circumvent any potential zero/one restrictions of AGM participation. The regression confirms the results of the previous specifications. Finally we introduce a final specification using *Small holder participation (SHP)* as explained above, for which a higher influence and significance of SoP is registered.

Dependent variable	AGM participation				AGM partic-ipation (adj)	AGM SHP
Method	Fixed effects					
Standard errors	Robust	Robust	Robust	Robust	Robust	
Firm size			0.012	0.008	0.049	-0.133
			[1.00]	[0.59]	[0.69]	[-1.62]
TobinsQ			0.017***	0.013**	0.093**	0.181**
			[2.64]	[2.12]	[2.24]	[2.11]
Oper. Performance			0.074***	0.065**	0.341**	0.453***
			[2.80]	[2.32]	[2.19]	[2.94]
Media presence			0.001	0.000	-0.025	-0.038
			[0.14]	[-0.04]	[-0.56]	[-0.88]
Say-on-Pay Voting (dummy)	0.007	0.030**	0.030**	0.022*	0.157**	0.394***
	[0.88]	[2.04]	[2.02]	[1.67]	[2.06]	[2.66]
SoP x Blockholdings		-0.056*	-0.055*	-0.043	-0.380**	-0.994**
		[-1.96]	[-1.87]	[-1.56]	[-2.25]	[-2.52]
Blockholdings	0.224***	0.233***	0.228***	0.203***	1.275***	-2.309***
	[4.68]	[4.80]	[4.60]	[4.18]	[3.35]	[-5.10]
Excess compensation (extended)				0.006	0.044	-0.016
				[0.63]	[0.80]	[-0.15]
Firm effects	Yes	Yes	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1154	1154	1140	1108	1100	1100
R^2	0.063	0.066	0.084	0.068	0.088	0.098

Notes: Table 10 reports firm fixed effects estimates of our model (5) explaining AGM participation rates. Our sample covers all firms listed in the Prime Standard between 2010 and 2013, providing 1,169 observed AGMs. To account for any kind of heterogeneity between different firms in our sample we introduce firm fixed effects. Our main explanatory variable is *AGM participation*, *AGM participation (adj)* to circumvent and zero / one restriction, and as a final measure Small holder participation *SHP*. As exogenous variables, we use *SoP vote (dummy)*, *Blockholdings*, *Excess compensation (extended)* and *Media Presence*. In addition, we interact *SoP vote* with *Blockholdings*. Robust t-statistics are reported in the parentheses below the coefficients, allowing for heteroskedasticity using the Huber/White sandwich estimator of variance (White, 1980). Our goodness of fit measure is R2.

*, **, *** Significance is at the 0.10, 0.05, and 0.01 level, respectively.

Source: Own preparation

Table 11: AGM participation and SoP votes

We interpret our results, as a confirmation of our hypothesis (H2). The possibility of expressing a view on SoP at the AGM appears to increase AGM participation, once the existence of larger shareholders and the interrelations between *SoP vote* and *Blockownership* are accounted for. Firms with higher free float are likely to have higher AGM participation rates at their AGMs suggesting that (small) shareholders consider SoP votes as a possibility to actively influence corporate decisions. Participation appears to be particularly impacted when isolating small holder participation (our final specification with *SHP* as dependent variable), from *Blockowner* participation.

4.3.3. Robustness tests

To counter endogenous selection concerns, we also estimate a selection model. Using treatreg, we again estimate the propensity for SoP in a first step. As an exogenous proxy we use *Media presence* in a first step, alongside other independent variables also used in the second step. In the second step, we use the estimated outcomes for SoP, to examine the effect of SoP on AGM Participation. The results are reported in Table 16 in the appendix. Our initial firm fixed effects specification is confirmed, with SoP remaining positive and highly significant. The results are furthermore robust to alternative *Firm size*, ownership and compensation proxies. Additional sample restrictions either for financial firms (SIC codes between 6000

and 6999) or financial firms and utility firms (SIC codes between 6000 to 6999 and 4900 to 4949) confirm our results.

4.4. SoP and AGM participation

With these additional insights on the precipitation of SoP, SoP approval and the influence of SoP, we will now examine SoP and executive compensation in a final analysis.

4.4.1. Empirical design

Aiming to understand if the regulatory enactments in Germany influence SoP, we now utilize the compensation data drawn from previous studies (Rapp and Wolff 2014). The data includes information on executive compensation of Prime Standard firms reported in the years 2006 to 2013. While conducting the analysis, it is useful to keep in mind that the regulatory change in Germany allows for a precipitation of SoP votes on a voluntary basis and leaves the outcome entirely non-binding. Therefore the voting outcomes / and potentially bad voting outcomes, are merely a reputational influence on the decision makers, in the German case the supervisory board in charge of the compensation process.

In a first step, we use the natural logarithm of total compensation per person as dependent variable and then switch to the relative share within total compensation of share based incentives. The latter variable provides the degree of pay-for-performance in total executive compensation. We use this measure as a proxy for the alignment of the executive board members and shareholders. To explain our compensation measure we use Share-based-Incentives - *SBI (dummy)*, a dummy suggesting whether management receives share based incentives, as well as firm characteristics.

Empirical Model 6:

$$\boldsymbol{Executive\ Compensation_{it} = f(SOP_{it} + SBI_{it} + Firm\ Characteristics_{it})}$$

To allow for (constant) unobserved heterogeneity across firms, we use a firm fixed effects model. Additionally we introduce year dummies. Also in this model, we use robust standard errors to allow for heteroskedasticity (White 1980, Freedman 2006).

4.4.2. AGM Participation and SoP votes

We now report the results of our analysis of executive compensation and SoP approval rates of our Empirical Model 6. In our first specification, looking at the logarithm of total executive compensation per person – *Exec. Comp (ln)*, regressed on *SoP vote* (including three of its lags) as well as firm controls, we do not see any significant and lasting impact on compensation. However, a positive impact on the pay for performance sensitivity of compensation is visible. This effect becomes stronger when we allow SoP to feed through via lags in the

years post holding the vote, which implies that the effect SoP has on executive compensation is delayed. This result remains relatively constant when we control for firm characteristics.

Dependent Variable	Exec Comp (ln)	Pay for per-formance sensitivity	Pay for per-formance sensitivity	Pay for per-formance sensitivity	Pay for per-formance sensitivity
Model			Firm Fixed Effects		
Standard errors	Robust	Robust	Robust	Robust	Robust
Say-on-Pay Voting (dummy)		0.018			
		[1.54]			
SoP with one lags			0.018*		
			[1.79]		
SoP with two lags				0.019*	
				[1.81]	
SoP with three lags	0.053				0.025**
	[1.57]				[2.05]
Firm size	0.230***	0.023**	0.023**	0.023**	0.023**
	[4.92]	[2.29]	[2.28]	[2.29]	[2.29]
TobinsQ	0.057***	0.007	0.007	0.007	0.007
	[2.93]	[0.91]	[0.90]	[0.88]	[0.88]
Oper. Performance	0.345***	0.01	0.011	0.01	0.01
	[3.09]	[0.39]	[0.39]	[0.37]	[0.38]
Stock-based incentives (dummy)	-0.056**				
	[-1.98]				
Blockholdings	-0.114	-0.012	-0.013	-0.012	-0.011
	[-1.41]	[-0.48]	[-0.50]	[-0.46]	[-0.43]
Leverage	0.049	-0.028	-0.027	-0.028	-0.028
	[0.22]	[-0.63]	[-0.62]	[-0.64]	[-0.64]
Year dummies	Yes	Yes	Yes	Yes	Yes
Observations	2396	2396	2396	2396	2396
R^2	0.285	0.013	0.013	0.014	0.015

Notes: Table 12 reports firm fixed effects estimates of our model (6) explaining total executive compensation and pay for performance sensitivity. Our sample covers all firms listed in the Prime Standard between 2006 and 2013, providing 2,396 observed AGMs. We thereby use the natural log of executive compensation per board member and share based incentives as a fraction of total compensation as dependent variables. Our main explanatory variable is *SoP voti ng (dummy)*, later expanded with its own (up to three) lags. Further exogenous variables we use are *SBI (dummy)*, *Blockholdings* and firm controls. Robust t-statistics are reported in the parentheses below the coefficients, allowing for heteroskedasticity using the Huber/White sandwich estimator of variance (White, 1980). Our goodness of fit measure is R2.

*, **, *** Significance is at the 0.10, 0.05, and 0.01 level, respectively.

Source: Own preparation

Table 12: Executive compensation and SoP votes

4.4.3. Robustness tests

The results are robust to alternative Firm size, ownership and compensation proxies. Additional sample restrictions either for financial firms (SIC codes between 6000 and 6999) or financial firms and utility firms (SIC codes between 6000 to 6999 and 4900 to 4949) confirm our results.

5. Conclusion and outlook

Since the introduction of SoP in the United Kingdom, the SoP environment has changed fast and the debate around granting shareholders a SoP continues. Taking advantage of a regulatory change in Germany in 2010, institutionalising voluntary, non-binding SoP votes, we examine the determinants of SoP votes, the approval rates of SoPV, and the effect of SoPV on AGM participation. Our sample covers 1,169 AGMs of all German Prime Standard listed firms with more than 10,000 agenda items over the period 2010 to 2013. We find that, on a cross sectional perspective, SoP votes were held just over half of our sample firms. Looking over the four years of SoP history, 20% of our sample AGMs contained SoP votes.

Following previous studies (Rapp, Sperling and Wolff 2010, Drefahl and Pelger 2013, Eulerich, Kalinichenko and Theis 2014), we conduct a cross sectional analysis on the determinants of the propensity to grant shareholders SoP votes. We find the propensity for a SoP vote increases with firm size, abnormal executive compensation and free float of shares. Indeed, smaller firms with concentrated ownership do not only have a lower propensity for a SoP vote, but also show a higher propensity to opt for only limited disclosure of executive compensation. This finding indicates that SoP in Germany does encourage executives to seek legitimacy from their shareholders for compensation packages, especially if they are in an environment prone to excessive managerial power.

With respect to approval rates of SoP votes, we find approval rates of SoP votes are lower than the approval rate for the average AGM agenda item, in particular for firms with a dispersed shareholder base. This effect is increasing in (i) free float as well as for (ii) firms with abnormal executive compensation. As expected, the existence of blockholders counteracts this tendency, most likely due to coordination between supervisory board and blockholders prior to granting a vote. We interpret this result as shareholders making use of the possibility to express their views on the executive compensation systems in place.

With regard to the effect on AGM participation, we find that SoP votes actually can increase AGM participation, however, only with widely held firms. This finding puts a new perspective on SoP, as it implies shareholders engagement with firms is increased via SoP.

Finally, our analysis on executive compensation and SoP covers compensation data from 2006 to 2013. While we cannot find any impact on total compensation levels, our insights suggests that the voluntary SoP regime in Germany has strengthened pay for performance elements in executive compensation.

Overall, our results are consistent with the view that firms use voluntary SoP votes to gain legitimation for executive remuneration policies in firms with low ownership concentration, where (small) shareholders consider executive compensation a part of the agency problem of listed firms, and where (small) shareholders considers SoP votes as a possibility to actively influence corporate decisions. While the debate on the costs and benefits of SoP will continue, our study enriches the discussion with insights into a broad set of data and novel analysis. The fundamental analysis conducted in previous studies is extended, providing a less biased idea of SoP approval rates, SoP impact on shareholder engagement through participation rates at AGMs and showing how SoP impacts executive compensation by strengthening pay for performance.

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7. Appendix

A Variable descriptions

Variable type	Variable name	Description	Source
Dependent variable			
	Say-on-Pay Vote Dummy	Binary variable, which is equal to 1 in case the AGM Agenda includes a vote on the compensation package of the executive board	AGM invitation/voting result summaries
	SoP Approval	Approval as the actually reported approval rate (yes votes / total votes) for the relevant AGM agenda item	AGM voting result summaries
	AGM Participation	Approval as the actually reported participation rate (present votes / total eligible votes) for the AGM	AGM voting result summaries
	Limited Disclosure	We create a dummy variable, indicating 1 for those firms, which according their declaration of conformity with the German Corporate Governance Code are non-compliant with rule 4.2.4 (detailed disclosure of executive compensation)	Declarations of conformity
Company characteristics			
	Firm Size	Firm size based on the natural log of consolidated revenues (winsorised at 1%)	Thomson Financials
	TobinsQ	TobinsQ, market value of the firm's assets over their replacement costs, proxied as reported total assets + market capitalization – common equity as a ratio of total assets (winsorised at 1%)	Thomson Financials, own calculation
	Leverage	Leverage, based on the reported total debt relative to reported total assets (winsorised at 1%)	Thomson Financials, own calculation
	Operating Performance	Operating Performance is computed as earnings from operations (EBIT) les the paid taxes as a percentage of total assets (winsorised at 1%)	Thomson Financials, own calculation
	Fixed Assets	FA / TA represents fixed assets as a ratio of total assets (winsorised at 1%)	Thomson Financials, own calculation
	RnD	RnD is based on the reported research and development figures as a ratio of total assets. RnD is assumed zero, if no numbers are reported (winsorised at 1%)	Thomson Financials

Ownership and governance variables			
	Blockholdings	Blockholdings represent the percentage of voting rights held by the largest three shareholders in the company	Hoppenstedt Aktienführer, other databases, press
	Inside Ownership	Inside ownership represents the percentage of voting rights held by the members of the management board in the company	Hoppenstedt Aktienführer, other databases, press
	Outside Ownership	Outside ownership represents the percentage of voting rights held by the three largest shareholders not part of the management board of the company	Hoppenstedt Aktienführer, other databases, press
	Widely Held	Widely Held dummy indicates that the three largest shareholders own less than 50% of the firms' shares	Hoppenstedt Aktienführer, other data-bases, press, own calculation
	Excess Executive Compensation	We predict Excess Executive Compensation using *Firm Size*	Executive Compensation Data
	Excess Executive Compensation (extended)	We predict Excess Executive Compensation (extended) using *Firm Size*, *TobinsQ*, *Operating Performance*, a dummy indicating whether executives received stock based incentives, and *Blockholdings*	Executive Compensation Data
	Media presence	Media presence is proxied via index inclusion in the relevant DAX family index. The variable takes a 4 for DAX membership, 3 for MDAX membership, 2 for SDAX membership, 1 for TecDAX membership and 0 for all Prime Standard listed companies not included in one of the DAX family indices	Deutsche Börse, own calculation
Other variables			
	Type of agenda item dummy	We identify 17 different agenda item categories[16]	AGM invitation/voting result summaries
	Industry dummies	Industry dummies are included according the first digit SIC code	Thomson Financial

Table 13 reports the used variables, their definitions and sources. Ownership variables are collected from the Hoppenstedt Aktienführer and combined with founding family information from firm's annual reports, Lexis-Nexis, Who-is who webpage, and further web and press search. Say on pay information is hand collected from AGM invites as well as decision summaries. Accounting information is from Thomson Financial.

Table 13: Overview of variables used

[16] The 17 categories are: 1 Reporting for the financial year, 2 Appropriation of profits, 3 Approval of actions of the executive board, 4 Approval of actions of the supervisory board, 5 Mandating supervisory board members, 6 Mandating of auditor, 7 Say-on-Pay, 8 Compensations system supervisory board, 9 Detailed executive compensation disclosure opt out, 10 Authorization of share buyback, 11 Authorized capital, 12 Conditional capital, 13 Capital increase, 14 Other, 15 Changes to articles of association, 16 Conditional capital for compensation purposes, 17 Liquidation of the corporation

B Robustness Tests

Table 14: SoP approval rates, relative to "Approval of actions of the supervisory board" and "Mandating of auditors"

Dependent variable	Approval (in %)								
Sample	All AGMs					AGMs of firms with (rel) high executive compensation		AGMs of firms with (rel) low executive compensation	
Methods	Fixed AGM effects model								
Standard errors	Robust	Robust	Robust	Robust	Robust	Robust	Robust	Robust	Robust
Say-on-Pay approval relative to discharge of the supervisory board									
Say-on-Pay Voting	-6.868***	-4.431***	-1.306	-6.434***	-1.275	-6.522***	1.213	-7.339***	-4.087
	[-7.85]	[-4.06]	[-0.66]	[-6.29]	[-0.70]	[-5.47]	[0.63]	[-5.74]	[-1.15]
SoP x Widely held firm		-3.561**							
		[-2.23]							
SoP x Free Float			-9.206**		-8.931**		-12.747***		-5.439
			[-2.56]		[-2.38]		[-3.00]		[-0.93]
SoP x Abnormal AGM participation (dummy)				-0.869	-0.466				
				[-0.49]	[-0.26]				
Year dummies	No	No	No	No	No	No	No	No	No
Observations	2,076	2,076	2,048	1,863	1,863	1,009	984	913	913
R^2	0.105	0.111	0.112	0.106	0.114	0.093	0.105	0.127	0.131
Say-on-Pay approval relative to appointment of auditor									
Say-on-Pay Voting	-7.761***	-3.837***	-0.061	-7.469***	-0.259	-8.109***	1.602	-7.249***	-2.005
	[-9.93]	[-4.67]	[-0.04]	[-6.85]	[-0.17]	[-8.14]	[0.86]	[-5.76]	[-0.72]
SoP x Widely held firm		-5.759***							
		[-4.32]							
SoP x Free Float			-12.894***		-12.802***		-15.933***		-9.082*
			[-4.04]		[-3.77]		[-4.23]		[-1.67]
SoP x Abnormal AGM participation (dummy)				-0.605	0.181				
				[-0.38]	[0.11]				
Year dummies	No	No	No	No	No	No	No	No	No
Observations	1,549	1,549	1,534	1,372	1,372	889	874	660	660
R^2	0.092	0.11	0.111	0.102	0.122	0.087	0.114	0.101	0.111

Notes: Table 14 reports the relevant AGM fixed effects estimates of our model (3) explaining the AGM approval rates relative two specific items. As a comparison we pic "Approval of actions of the supervisory board" and "Mandating of auditors". Our sample covers all firms listed in the Prime Standard between 2010 and 2013. For the 1,169 observed AGMs, we analyse 9,324 AGM agenda items. We thereby measure approval as the sum of votes in favour of the AGM agenda item in question, over the total number of votes submitted. To account for any kind of heterogeneity between different AGMs in our sample we introduce AGM fixed effects. Our main explanatory variable is SoP, to determine the influence of SoP vote on the approval rate. We furthermore introduce a Widely Held dummy indicating whether the firms' three largest shareholders own less than 50% of all voting rights (taking on the value one if this is the case and zero otherwise, i.e. when the free float is less than fifty percent). Robust t-statistics are reported in the parentheses below the coefficients, allowing for heteroskedasticity using the Huber/White sandwich estimator of variance (White, 1980). Our goodness of fit measure is the R2.

*, **, *** Significance is at the 0.10, 0.05, and 0.01 level, respectively.

Source: Own preparation

Table 15: Circumventing any potential selection bias using a two-step Heckman model to explain SoP approval

Dependent variable	Approval (in%)	ln (Approval / (1 - Approval)	Approval (in%)	ln (Approval / (1 - Approval)
Sample	All AGMs	All AGMs	All AGMs	All AGMs
Methods	Heckman	Heckman	Heckman	Heckman
Blockholdings	13.363***	2.277***	13.708***	2.271***
	[2.91]	[2.91]	[2.87]	[2.78]
Firm size	0.153	0.016	0.025	0.003
	[0.21]	[0.14]	[0.03]	[0.02]
Oper. Performance	-4.616	0.285	-4.413	0.256
	[-0.64]	[0.25]	[-0.59]	[0.21]
Excess compensation (extended)			-1.294	-0.158
			[-0.66]	[-0.50]
IMR				
	-0.399*	-0.472**	-0.393*	-0.468**
First Step (Propensity for SoP)	[-1.90]	[-2.22]	[-1.84]	[-2.16]
Firm size	0.052	0.045	0.064*	0.058*
	[1.63]	[1.42]	[1.95]	[1.75]
Oper. Performance	-0.553*	-0.570*	-0.602*	-0.621*
	[-1.74]	[-1.79]	[-1.82]	[-1.87]
Excess compensation (extended)			0.147	0.152*
			[1.64]	[1.68]
Media presence	0.175***	0.190***	0.152***	0.166***
	[3.47]	[3.71]	[2.90]	[3.13]
IMR	1.438	1.189	0.344	1.147
	[0.22]	[1.20]	[0.05]	[1.00]
Year dummies	Yes	Yes	Yes	Yes
Observations	1144	1138	1109	1103

Notes: Table 15 reports our estimates for a two-step Heckman model explaining the Say-on-pay approval rates. Our sample covers all firms listed in the Prime Standard between 2010 and 2013 providing 1,169 observed AGMs. We thereby measure approval as the sum of votes in favour of the AGM agenda item in question, over the total number of votes submitted. As a second specification to counter the 0 to 1 restrictions of approval rate, we use ln(approval / (1-approval)). The in a first step obtained inverse mills ratio is included in a second step to counter any selection bias in Say-on-pay approval caused by the potentially endogenous nature of the SoP choice. Robust t-statistics are reported in the parentheses below the coefficients.

*, **, *** Significance is at the 0.10, 0.05, and 0.01 level, respectively.

Source: Own preparation

Table 16: Using a two-stage selection model (Treatment Effect) to circumvent potential endogeneity when analysing the impact of SoP on approval rates

Dependent variable	AGM partici-pation	AGM partici-pation	AGM partici-pation	AGM partici-pation
Method	Treatreg	Treatreg	Treatreg	Treatreg
Standard errors	Robust	Robust	Robust	Robust
Say-on-Pay Voting (dummy)	0.017	0.113***	0.127***	0.128***
	[0.22]	[2.97]	[3.44]	[3.50]
Firm size		0.015***	0.015***	0.015***
		[5.99]	[5.99]	[5.99]
TobinsQ		0.023***	0.019***	0.021***
		[4.87]	[3.89]	[4.53]
Oper. Performance		0.094***	0.087***	0.089***
		[3.14]	[2.73]	[2.78]
Blockholdings		0.652***	0.674***	0.666***
		[34.38]	[36.76]	[36.83]
Excess compensation			0.014**	
			[2.04]	
Excess compensation (extended)				0.014**
				[2.00]
Say-on-Pay Voting (dummy)				
Media presence	0.255***	0.194***	0.186***	0.187***
	[8.90]	[3.47]	[3.47]	[3.48]
Firm size		0.042	0.046	0.046
		[1.21]	[1.32]	[1.31]
TobinsQ		0.058	0.068	0.067
		[1.12]	[1.30]	[1.30]
Oper. Performance		-0.427	-0.433	-0.432
		[-1.44]	[-1.37]	[-1.37]
Blockholdings		-0.372*	-0.34	-0.339
		[-1.76]	[-1.60]	[-1.59]
Year dummies	Yes	Yes	Yes	Yes
Observations	1165	1140	1108	1108
χ^2	3	1,441	1,590	1,589
p-value	0.6	0.000	0.000	0.000

Notes: Table 16 reports our estimates for a two-step selection model (Treatment Effect) explaining AGM participation. Our sample covers all firms listed in the Prime Standard between 2010 and 2013, providing 1,169 observed AGMs. Our main explanatory variable is AGM participation. Our endogenous, observable selection effect is given by SoP vote (dummy). To circumvent endogeneity concerns we treat SoP vote in a first step probit model using Media presence as exogenous instrument explaining selection, alongside other exogenous variables used in a second step. As exogenous variables in the second step, we use Blockholdings, Excess compensation (extended) and Media Presence. T-statistics are reported in the parentheses below the coefficients. Our goodness of fit measure is R2.

*, **, *** Significance is at the 0.10, 0.05, and 0.01 level, respectively.

Source: Own preparation

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