House of Finance

SAFE

Working Paper Series

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Does Say on Pay Matter? Evidence from Germany

SAFE Working Paper No. 125

SAFE | Sustainable Architecture for Finance in Europe

A cooperation of the Center for Financial Studies and Goethe University Frankfurt

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Non-Technical Summary

Shareholder involvement in compensation decisions has evolved as the patent remedy that regulators choose to apply across jurisdictions when they aim to cure perceived deficits in executive pay. The latest add-on to this already impressive track record can be found in the revised European Shareholder Rights Directive.

However, this relative uniformity in the general approach should not disguise the considerable variation in the respective institutional arrangements. A more granular analysis indicates that while some jurisdictions opt for mandatory shareholder voice others leave shareholder involvement to managerial discretion, a result which sometimes also hinges on the pertinent rules character as non-compelling self-regulation. While sometimes the shareholder vote is binding, it is only consultative in other cases with varying degrees of soft coercion. Differences also pertain to how often shareholders have to be approached and on what exactly they are asked to vote on (remuneration policy, individual compensation packages ex post etc.).

At least in part the observed differences can be traced to disagreement on say on pay's merits in general and its adequate design in particular. Furthermore, in comparative perspective, say on pay's potential to add value may also hinge on existing institutional alternatives: corporate law may either provide other governance arrangements that seek to align managements' remuneration packages with shareholder interests or – more broadly – pursue different strategies to prevent executive rent seeking. As we will present, from a corporate governance vantage, Germany represents a particularly interesting example in several respects.

This paper investigates the potential implications of say on pay on management remuneration in Germany. Therefore, we try to shed light on some key aspects by presenting quantitative data that allows us to gauge the pertinent effects of the German regulatory experiment that originates with the 2009 amendments to the Stock Corporation Act of 1965. In order to do this, we analyze a hand-collected data set for Germany's major firms, i.e. those included in the main stock market index, the DAX 30, for the years 2006-2014. Rather than focusing exclusively on CEO remuneration we collected data for all members of the management board for the whole period under investigation.

We conclude with several findings. First, we observe that the compensation packages of management board members of Germany's DAX30-firms are closely linked to key performance measures such as return-on-assets and EBIT. Second, we find that say on pay votes which occurred in the time period under investigation had a negative effect on compensation of board members, be it fixed or variable pay. Our analysis also shows that this effect is mainly driven by the compensation payment of newly entering board members. When we consider only compensation contracts, which had been concluded before say on pay votes occurred, the effect of shareholder involvement is rather weak. This finding is not at all surprising given the rather rigid contractual framework for the compensation of management board members. Yet, it is important because it informs our understanding of the channels through which say on pay works. Our observations carry over to the general analytical approach for say on pay-regimes. Any evaluation of a shareholder voice-strategy in regulating executive remuneration has to pay close attention to the limits contract law stipulates for the adaptation of existing remuneration agreements and thus has to take a medium to long-term view that ideally extends to a full turnover-period for board-members. For Germany, we find that the supervisory board is indeed responsive to say on pay-votes when it comes to the design of remuneration packages for newly entering appointees to the management board.

DOES SAY ON PAY MATTER? EVIDENCE FROM GERMANY

Tobias H. Tröger* & Uwe Walz**#

Abstract: We analyze a hand-collected dataset of 1626 executive compensation packages at 34 firms included in the main German stock market index (DAX) for the years 2006-2014 in order to investigate the impact of the 2009 say on pay legislation. The findings provide important insights beyond the German case, not only for the impending implementation of the revised European Shareholder Rights Directive. First, we observe that the compensation packages of management board members of DAX30-firms are closely linked to key performance measures such as return-on-assets and EBIT. Second, we find that say on pay votes which occurred in the time period under investigation had a negative effect on compensation of board members, be it fixed or variable pay. Our analysis also shows that this effect is mainly driven by the compensation payment of newly entering board members. When we consider only compensation contracts, which had been concluded before say on pay votes occurred, the effect of shareholder involvement is rather weak. This finding is not at all surprising given the rather rigid contractual framework for the compensation of management board members. Yet, it is important because it informs our understanding of the channels through which say on pay works. Our observations carry over to the general analytical approach for say on pay-regimes. Any evaluation of a shareholder voice-strategy in regulating executive remuneration has to pay close attention to the limits contract law stipulates for the adaptation of existing remuneration agreements and thus has to take a medium to long-term view that ideally extends to a full turnover-period for board-members. For Germany, we find that the supervisory board is indeed responsive to say on pay-votes when it comes to the design of remuneration packages for newly entering appointees to the management board.

JEL classification: D23, G30, G34, J33, K22.

Keywords: executive compensation, say on pay, Germany

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The authors are thankful for comments and critique provided by friends and colleagues. Input by Arnoud Boot, Paul Davies, Jeff Gordon and Kin Lo as well as participants at the annual Oxford-LSE law and finance conference, the SAFE workshop on say on pay, and the ETH-NYU banking and finance conference were particularly beneficial. We gratefully acknowledge financial support of the LOEWE Research Center Sustainable Architecture for Finance in Europe (SAFE).

A. Introduction

Shareholder involvement in compensation decisions has evolved as the patent remedy that regulators choose to apply across jurisdictions when they aim to cure perceived deficits in executive pay. The latest add-on to this already impressive track record can be found in Articles 9a and 9b of the revised European Shareholder Rights Directive.[1] We take the impending implementation of the European legislation as occasion to test some hypothesis regarding the impact of say on pay-legislation empirically.

The relative uniformity in the general legislative approach should not disguise the considerable variation in the respective institutional arrangements. A more granular analysis[2] indicates that while some jurisdictions opt for mandatory shareholder voice others leave shareholder involvement to managerial discretion. The assessment sometimes hinges on the pertinent rules' character as non-compelling self-regulation where at the outset managers choose to either opt-in or reject the say on pay-regime. While in some cases the shareholder vote is binding,[3] it is only consultative in others with varying degrees of soft coercion. Differences also pertain to how often shareholders have to be approached and on what exactly they are asked to vote on (remuneration policy, individual compensation packages *ex post* or *ex ante* etc.).

At least in part, the observed differences can be traced to disagreement on say on pay's merits in general and its adequate design in particular. Furthermore, in comparative perspective, say on pay's potential to add value may also hinge on existing institutional alternatives: corporate law may either provide other governance arrangements that seek to align managements'

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[1] Directive (EU) 2017/828 of the European Parliament and of the Council of 17 May 2017 amending Directive 2007/36/EC as regards the encouragement of long-term shareholder engagement, 2017 O.J. (L 132) 1.

[2] The most comprehensive comparative survey encompassing eight jurisdictions is Randall S. Thomas & Christoph Van der Elst, *The International Scope of Say on Pay* 92 Wash. U. L. Rev. 653, 658-711 (2015). A shorter overview for 11 European countries can be found in Roberto Barontini, Stefano Bozzi, Guido Ferrarini & Maria-Cristina Ungureanu, *Directors' remuneration before and after the crisis: measuring the impact of reforms in Europe*, *in* Boards and Shareholders in European Listed Companies 251, tbl.1 (Massimo Belcredi & Guido Ferrarini eds., 2013). Ricardo Correa & Ugur Lel, *Say on Pay Laws, Executive Compensation, CEO Pay Slice, and Firm Value Around the World* 122 J. Fin. Econ. 500, 504 (2016) present data reflecting the status of say on pay-regulation in 38 jurisdictions, yet cannot reflect the intricacies of the legal regimes surveyed because coding requires the authors to make distinct decisions also in cases of doubt and thus sacrifice many mezzanine-levels of distinction; for further criticism with regard to specific findings see Thomas & Van der Elst *id.*, at 655 note 5.

[3] We consider the vote binding only if it determines individual compensation packages within its scope.

remuneration packages with shareholder interests or—more broadly—pursue different strategies to prevent executive rent seeking.[4]

This paper tries to shed light on some of these key aspects by presenting quantitative data that allows us to gauge the pertinent effects of the German legislative experiment that originates with the 2009 amendments[5] to the Stock Corporation Act of 1965. From a comparative corporate governance vantage, Germany is by no means a unique example, but has interesting characteristics in several respects.

First, in its say on pay-regime Germany has opted for a voluntary,[6] non-binding shareholder consultation that pertains only to the general compensation scheme and attaches practically no legal sanctions to the vote.[7] Hence, in pertinent part German corporate law relies purely on market discipline as a function of negative cost of capital-effects that poor corporate governance that does not respond to revealed shareholder preferences should entail in efficient markets.[8] It therefore differs from those institutional set-ups that provide for rather rigid legal consequences in case of shareholder discontent and thus bolster shareholder voice with law's momentum.[9]

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[4] For a taxonomy of potential strategies to counter vertical agency conflicts within the firm *see* John Armour, Henry Hansmann & Reinier Krakman, *Agency Problems and Legal Strategies, in* THE ANATOMY OF CORPORATE LAW 29, 31-38 (Reinier Kraakman et al. eds., 3d ed. 2017).

[5] Gesetz zur Angemessenheit der Vorstandsvergütung (VorstAG) [Act on Adequate Executive Compensation], July 31, 2009, BGBl. I at 2509.

[6] For a shareholder vote on compensation to occur, the topic has to be put on the agenda of the general meeting. This is usually occurs through a management board initiative, see Aktiengesetz [AktG, Stock Corporation Act], Sept. 6, 1965, BGBl. I at 1089, § 121, para. 2 sentence 1, para. 3 sentence 1, but can also be achieved by minority shareholders who hold 5% of the corporation's legal capital or a fraction of it that amounts to EUR 500.000 in nominal value, AktG § 122, para. 2, sentence 1. Not even the self-regulating (comply-or-explain) German Corporate Governance Code contains a recommendation to consult the shareholder meeting in compensation matters (see also infra note 65).

[7] Aktiengesetz [AktG, Stock Corporation Act], Sept. 6, 1965, BGBl. I at 1089, § 120, para. 4 provides that the shareholders' meeting of a listed company may resolve on the approval of the compensation scheme. The resolution shall not give rise to any rights or obligations; in particular, the obligations of the supervisory board pursuant to § 87 shall remain unaffected. The resolution shall not be voidable pursuant to § 243.

[8] The same holds true for instance for Spain, see Ley 2/2011 de Economía Sostenible (LES), art. 27.

[9] The most extreme example in this regard currently is Switzerland, see Alexander F. Wagner & Christoph Wenk, *Agency versus Hold-up: On the Impact of Binding Say-on-Pay on*

Second, direct shareholder involvement in compensation decisions represents a legal transplant, which runs counter to the German tradition that vests the right to determine executive compensation with shareholder—and labor[10]—representatives on the supervisory board (two tier system). Hence, say on pay may either improve a deficient arrangement or constitute a redundant, cost-hiking institution. More dramatic, the shift of competences from the supervisory board to the shareholder meeting that say on pay implies may even corrupt a well-functioning and theoretically sound governance arrangement.[11] In this regard, our findings are relevant for all jurisdictions that adhere to a two-tier structure in organizational law.[12]

Finally, looking at Germany is also rewarding insofar as the rather concentrated ownership structure of its firms[13] allows assessing, whether a formal say on pay-regime is nothing but a (superfluous) substitute for the influence a large blockholder usually has at hand through informal channels.[14] In the latter case, the impact of the regime's introduction should vary across firms depending on their ownership structure and be stronger in firms without a dominant shareholder. Again our findings are immediately relevant for policy makers in jurisdictions where

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Shareholder Value 9-12 (Eur. Corp. Gov. Fin. Working Paper 500, 2017) available at http://ssrn.com/abstract=1793089.

[10] Large German firms are subject to codetermination, *i.e.* the supervisory board is filled with parity by shareholder and employee representatives. For a detailed description of the statutory foundations *see* Herbert Wiedemann, *Codetermination by Workers in German Enterprises*, 28 AM. J. COMP. L. 79 (1980); for a brief overview see Katharina Pistor, C*odetermination in Germany: A Socio Political Model with Governance Externalities*, *in* EMPLOYEES AND CORPORATE GOVERNANCE 163, 174-5 (Margareth Blair & Mark J. Roe eds., 1999).

[11] On the theory that demands a strong bargaining agent for shareholders to negotiate proper incentive contracts with management *see supra* B.I.

[12] For a comparative overview of board structures in Europe *see* Paul Davies, Klaus J. Hopt, Richard G.J. Nowak & Gerard van Solinge, *Boards in Law and Practice: A Cross-Country Analysis in Europe*, *in*: CORPORATE BOARDS IN LAW AND PRACTICE 3, 15-23 (Paul Davies, Klaus J. Hopt, Richard G.J. Nowak & Gerard van Solinge, eds., 2013).

[13] For comparative observations at the turn of the last century *see* Rafael LaPorta, Florencio Lopez-de Silanes, Robert Vishny & Andrej Shleifer, *Corporate Ownership Around the World*, 54 J. Fin. 471 (1997); Marco Becht & Ailsa Röell, *Blockholdings in Europe: An International Comparison*, 43 Eur. Econ. Rev. 1049 (1999); specifically for Germany Jeremy Edwards & Marcus Nibler, *Corporate governance in Germany: The role of banks and ownership concentration*, 32 ECON. POL'Y 239 (2000); Julian R. Franks & Colin P. Mayer, *Ownership and control of German corporations*, 14 REV. FIN. STUD. 943 (2001); Jeremy Edwards & Alfons J. Weichenrieder, *Ownership Concentration and Share Valuation: Evidence from Germany* 16 (CESifo Working Paper No. 193, 1999) available at http://ssrn.com/abstract=272627. For evidence that ownership concentration in Germany—despite a declining trend—remains considerable *see* Anke Weber, *An empirical analysis of the 2000 corporate tax reform in Germany: Effects on ownership and control in listed companies*, 29 INT'L. REV. L. & ECON. 57 (2009).

[14] For this view *cf*. for instance Thomas & Van der Elst *supra* note 2, at 656.

large public firms have comparable ownership structures which seems to be the case in most economies around the world.[15]

The remainder of this paper is structured as follows. We first briefly survey the theoretical and empirical scholarship on the merits of direct shareholder involvement in compensation decisions and thus position our contribution in relation to the existing literature (*infra* B). We start our own investigation with a short description of the institutional changes that characterize the German legislative experiment (*infra* C). The paper continues with a description of our sample and the variables we design. In this section we also develop the hypotheses for our empirical analysis (*infra* D). In the latter we provide descriptive statistics and estimate regressions (*infra* E). We finally conclude (*infra* F).

B. Shareholder involvement in board remuneration: Theory and Evidence

I. Incentive compensation as solution to agency conflicts and the significance of direct shareholder involvement

At first glance, the rationale underpinning the success story of say on pay-regimes across jurisdictions is straightforward and intuitive. The optimal contracting approach to executive compensation considers adequately designed incentive compensation as a powerful tool to attenuate the principal agent conflict between (dispersed) shareholders and managers.[16] The substantial criticism that was voiced, particularly during the last decade, does not challenge the basic presumptions of the approach that incentive compensation may align managers' interest with shareholder preferences. Yet, it posits that executives in public firms without dominant blockholders may have the power to influence compensation decisions in their favor and thus hamper

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[15] See LaPorta, Lopez-de Silanes, Vishny & Shleifer, *supra* note 13.

[16] Formative contributions to this momentous school of thought include Stephen A. Ross, *The Economic Theory of Agency: The Principal's Problem*, 63 AM. ECON. REV. 134 (1973); James A. Mirrlees, *The Optimal Structure of Incentives and Authority Within an Organization*, 7 BELL. J. ECON. 105 (1976); Bengt Holmstrom, *Moral Hazard and Observability*, 10 BELL. J. ECON. 74 (1979); Stephen Shavell, *Risk Sharing and Incentives in the Principal and Agent Relationship*, 10 BELL. J. ECON. 55 (1979); Bengt Holmstrom, *Moral Hazard in Teams*, 13 BELL. J. ECON. 324 (1982); Sanford J. Grossman & Oliver D. Hart, *An Analysis of the Principal Agent Problem*, 51 ECONOMETRICA 7 (1983); Dilip Mookherjee, *Optimal Incentive Schemes with many Agents*, 51 REV. ECON. STUD. 433 (1984); Michael C. Jensen & Kevin J. Murphy, *Performance pay and top-management incentives*, 98 J. POL. ECON. 225 (1990); the article that shaped the dominant mindset during the 1990s is Michael C. Jensen & Kevin J. Murphy, *CEO Incentives – Its Not How Much You Pay, But How*, 68 HARV. BUS. REV. 138 (May/June 1990). For an overview cf. William Bratton, *Agency Theory and Incentive Compensation*, *in* RESEARCH HANDBOOK ON EXECUTIVE PAY 101 (Randall S. Thomas & Jennifer G. Hill eds., 2012).

optimal contracting from a shareholder perspective.[17] From this vantage, a plausible route to trim managers' *de facto* control over remuneration decisions would alleviate small shareholders' collective action and information problems by putting executive compensation schemes or even individual compensation packages up for properly informed voting at the shareholder meeting.[18] Indeed surveys show that institutional investors exhibit a great interest in proper incentive compensation.[19] They should thus benefit from the voting rights they become vested with,[20] although the guidance by information intermediaries should play a pivotal role in their compensation decisions as well.[21] However, diverging risk-preferences among shareholders and the costs of bargaining between managers and shareholders have been brought forward

[17] Lucian A. Bebchuk, Jesse M. Fried & David Walker, *Managerial Power and Rent Extraction in the Design of Executive Compensation*, 69 U. CHI. L. REV.751 (2002); Lucian A. Bebchuk & Jesse M. Fried, *Stealth Compensation as an Agency Problem*, 17 J. ECON. PERSPECT. 71 (2003); LUCIAN A. BEBCHUK & JESSE M. FRIED, PAY WITHOUT PERFORMANCE: THE UNFULFILLED PROMISES OF EXECUTIVE COMPENSATION (2004); William W. Bratton, *The Academic Tournament Over Executive Compensation*, 93 CAL. L. REV. 1557 (2005); Arthur Levitt, *Corporate Culture and the Problem of Executive Compensation*, 30 J. CORP. L. 749 (2005). For a critical review of the main posits of this strand of literature *see* John E. Core, Wayne R. Guay & Randall S. Thomas, *Is U.S. CEO Compensation Inefficient Pay Without Performance?*, 103 MICH. L. REV. 1142 (2005).

[18] For statements of this position *see* for instance BRIAN CHEFFINS, COMPANY LAW 678 (1997); Mark J. Loewenstein, *The Conondrum of Executive Compensation*, 35 WAKE FOREST L. REV. 1, 25 et seq. (2000); BEBCHUK & FRIED, *supra* note 17, at 195; Lucian A. Bebchuk & Jesse M. Fried, *Pay without Performance: Overview of the Issues*, 30 J.CORP. L. 647, 672 (2005); Randall S. Thomas, Alan R. Palmiter & James F. Cotter, *Dodd-Frank's Say on Pay: Will it Lead to a Greater Role for Shareholders in Corporate Governance?*, 97 CORNELL L. REV. 1213, 1232 (2012).

[19] *Cf*. Joseph A. McCahery, Zacharias Sautner & Laura T. Starks, *Behind the Scenes: The Corporate Governance Preferences of Institutional Investors*, 71 J. FIN. 2905, 2924-5 (2016) (reporting that in a survey of various institutional investors 88% of respondents conceive excessive compensation practices as trigger for active engagement).

[20] See also John Armour, *Enforcement Strategies in UK Corporate Governance: A Roadmap and Empirical Assessment* 6 (Eur. Corp. Governance Inst. Law Working Paper 106, 2008) *available at* http://ssrn.com/abstract=1133542, noting that shareholder voting may constitute a form of informal private enforcement of standards of conduct expected to be observed by the firm's management.

[21] On the importance of proxy advisors' input for institutional investors in pertinent respect across jurisdictions *see* Thomas and Van der Elst *supra* note 2, at 657. With regard to the U.S. situation post Dodd-Frank and the relevance of ISS-recommendations in particular Thomas, Palmiter & Cotter, *supra* note 18 at 1255

early in the debate as arguments against direct shareholder involvement and in favor of establishing strong bargaining agents instead.[22]

II. SAY ON PAY AND POLICY GOALS NOT PRIMARILY ROOTED IN SHAREHOLDER INTERESTS

Say on pay's merits in attenuating agency conflicts between managers and shareholders are one thing. In the view of policy makers, say on pay represents an institutional arrangement that is not only supposed to align investors' and executives' interests but to serve a broader distributive agenda that seeks to curb total compensation levels in the interest of other corporate stakeholders.[23] Yet, even where low approval rates or outright rejections of compensation packages may be regarded as shareholder "outrage",[24] such insurrection may have nothing to do with total compensation levels—as long as they do not reach proportions that would divert a noticeable slice of corporate profits into managers' pockets. It is indicative that prominent proponents of high-powered incentive compensation as a tool to mitigate vertical agency problems posited in the title of one of their articles that executive compensation "is not about how much you pay, but how".[25] In fact, sophisticated shareholders seem to adhere to this motto.[26] Hence, the introduction of a say on pay-regime should not necessarily have a significant effect on total compensation levels.

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[22] Jeffrey N. Gordon, *Executive Compensation: If There's A Problem, What's the Remedy? The Case for "Compensation Discussion and Analysis*, 30 J. Corp. L. 675, 699 (2005); Jeffrey N. Gordon, *"Say on Pay": Cautionary Notes on the U.K. Experience and the Case for Shareholder Opt-In*, 46 HARV. J. ON LEGIS. 323, 329 et seq. (2009). For another opposing position denying say on pay's benefits Stephen M. Bainbridge, *Is Say on Pay Justified*, 32 REG. 42 (2009).

[23] For a critical assessment of common regulatory strategies other than say on pay to decrease the level of executive compensation (disclosure, taxation) *see* Kevin J. Murphy, *The Politics of Pay: A Legislative History of Executive Compensation*, *in* THE RESEARCH HANDBOOK OF EXECUTIVE PAY 11, 11 (Randall S. Thomas & Jennifer G. Hill eds., 2012). For the political reasons that militate in favor of such regulatory initiatives that may include say on pay Thomas & Van der Elst *supra* note 2, at 656-7.

[24] The term was coined by Paul Krugman, *The Outrage Constraint*, N.Y.Times, August 23, 2002, at A17 and later taken-up in the literature, see for instance Bebchuk & Fried, *supra* note at 65; Kym Sheehan, *Is the Outrage Constraint an Effective Constraint on Executive Remuneration? Evidence from the UK and Preliminary Results from Australia* (Working Paper 2007) *available at* http://ssrn.com/abstract=974965.

[25] See Jensen & Murphy, *supra* note 16.

[26] Thomas, Palmiter & Cotter, *supra* note 18 at 1257 report that U.S. shareholders, despite the popular criticism took no offence at the level of executive compensation in the 2011 proxy season, the first with a say on pay vote as prescribed by Dodd-Frank.

III. Prior empirical analyses

Most empirical surveys test the impact of say on pay in the U.K., certainly not least because this jurisdiction was the front-runner of the movement.[27] These analyses are mainly concerned with the driving forces behind shareholder dissent and/or low approval rates[28] and their effect on executive compensation. Some studies investigate the direct link between negative voting turnouts and changes to individual employment contracts.[29] Others look at general and persistent changes in remuneration practices that could indicate a closer alignment of managers' incentives with shareholder interests as a result of the introduction of the U.K. say on pay-regime. These studies generally find (weak) evidence for such a link.[30]

Similar research also scrutinizes the Australian situation, looking at both the reasons for low approval rates and observable changes in compensation practices in response to the introduction of a say on pay-regime.[31]

Event studies that seek to determine shareholders' assessment of say on pay-regimes by investigating cumulative abnormal returns for the date of the pertinent rule's announcement were first conducted for the U.S.[32] Subsequent contributions in this line were motivated by the U.K. experience[33] and the Swiss policy experiment of 2008 with its introduction of a binding

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[27] Fabrizio Ferri & David A. Maber, *Say on Pay Votes and CEO Compensation: Evidence from the U.K.*, 17 Rev. Fin. 527, 532-35 (2013).

[28] Mary Ellen Carter & Valentina L. Zamora, *Shareholder Remuneration Votes and CEO Compensation Design* (Working Paper 2009) *available at* http://ssrn.com/abstract=1004061; Walid Alissa, *Boards' Response to Shareholders' Dissatisfaction: The Case of Shareholders' Say on Pay in the UK* (Working Paper 2009) *available at* http://ssrn.com/abstract=1412880; Martin Conyon & Graham Sadler, *Shareholder Voting and Directors' Remuneration Report Legislation: Say on Pay in the UK*, 18 Corp. Governance 296, 303-4 (2010); Kym Sheehan, *Say on Pay and the Outrage Constraint*, *in* Research Handbook on Executive Pay 255, 276-8 (Randall S. Thomas & Jennifer G. Hill eds., 2012).

[29] Fabrizio Ferri & David A. Maber, *Say on Pay Votes and CEO Compensation: Evidence from the U.K.*, 17 Rev. Fin. 527, 535-47 (2013).

[30] Ferri & Maber, *supra* note 29 at 547-59; Conyon & Sadler, *supra* note 28 at 304-8; Carter & Zamora, *supra* note 28; Alissa, *supra* note 28; Sheehan, *supra* note 28 at 265-9.

[31] Sheehan, *supra* note 28 at 265-9.

[32] Jie Cai & Ralph A. Walkling, *Shareholders' Say on Pay: Does it Create Value?*, 46 J. Fin. & Quantitative Analysis 299 (2011); David Larcker, Gaizka Ormazabal & Daniel Taylor, *The Market Reaction to Corporate Governance Regulation*, 101 J. Fin. Econ. 431, 441-2 (2011).

[33] Ferri & Maber, *supra* note 29 at 532-35.

say on pay-vote in a referendum.[34] Methodologically related research scrutinizes the effect of the introduction of say on pay through precatory shareholder proposals in the U.S.[35] This strand of literature forms a subsection of surveys that seek to determine the general effect of shareholder empowerment on firm value.[36]

An empirical study[37] that tries to find the determinants that drive negative votes in U.S. say on pay-decisions considers *inter alia* total stock returns as performance measure, but does not analyze a time-series to gauge the medium-term effects that the introduction of the say on pay-regime under Dodd-Frank may entail. Earlier studies also investigate the drivers of voting support for pay-related (non-binding) shareholder proposals in the U.S. and also specify their effect on CEO compensation.[38]

Finally, a comprehensive study that surveys 38 jurisdictions also looks specifically at the correlation between say on pay and the design of compensation packages, thereby distinguishing carefully between the remuneration of CEOs and that of ordinary board members.[39] The analysis delineates a deceleration in the growth of CEO pay and its consequential approximation to that of ordinary board members.

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[34] Wagner & Wenk, *supra* note 9.

[35] Vicente Cuñat, Mireia Giné & Maria Guadalupe, *Say Pays! Shareholder Voice and Firm Performance*, 20 Rev. Fin. 1799 (2015).

[36] E.g. David F. Larcker, Gaizka Ormazabal & Daniel J. Taylor, *The Market Reaction to Corporate Governance Regulation*, 101 J. FIN. ECON. 431 (2011); Bo Becker, Daniel Bergstresser & Guhan Subramanian, *Does Shareholder Proxy Access Improve Firm Value? Evidence From the Business Roundtable Challenge*, 56 J. L. & ECON. 127 (2013); Jonathan B. Cohn, Stuart Gillan & Jay C. Hartzell, *On Enhancing Shareholder Control: A (Dodd-) Frank Assessment of Proxy Access* (Working Paper, 2013) available at http://ssrn.com/abstract=1742506.

[37] James F. Cotter, Alan R. Palmiter & Randall S. Thomas, *The First Year of Say-on-Pay Under Dodd-Frank: An Empirical Analysis and Look Forward*, 81 GEO. WASH. L. REV. 967 (2013).

[38] Yonca Ertimur, Fabrizio Ferri & Volkan Muslu, *Shareholder Activism and CEO Pay*, 24 REV. FIN. STUD. 535 (2011).

[39] Correa & Lel, *supra* note 2.

Our study is similar to the strand of research that tries to measure say on pay's medium term effect on general compensation practices[40] and goes thus beyond surveys in the legal literature that only present descriptive statistics on voting outcomes.[41] We use a hand-collected dataset to analyze the German legislative experiment. Limiting ourselves to one jurisdiction allows us to proxy some of its relevant characteristics in more detail and thus shed new light on key hypotheses articulated in the debate. We pay particular attention to the link between say on pays' impact on executive compensation as well as firm performance measures. The specificity of our data that distinguishes between several features in board members' compensation packages and accounts for executives' tenure allows us to significantly extend and challenge more general findings in similar research on Germany that show that say on pay has an effect on directors' remuneration if lagged over the years following the vote.[42] As already indicated, despite our close attention to German firms' specific corporate governance characteristics, our findings extend well beyond the German context, because many firms around the world have similar organizational and ownership structures (two-tier system, dominant blockholders).

C. The German legislative experiment: the 2009 amendments to the Stock Corporation Act

This section briefly describes the legislative changes Germany promulgated in 2009 (infra I) and puts them into a broader context that also highlights the main features of their implementation in practice (infra II). In particular the latter information should also help recognize why and to what extent the findings of the paper are relevant for other jurisdictions that are similarly situated.

I. The 2009 amendments of the AktG

[40] It is a common feature of all these studies that they consider principal-agent-conflicts between managers and (dispersed) shareholders. A recent study turns to the Israeli experience with a majority-of-the minority vote for compensation packages paid to the controlling shareholder or their relatives, i.e. a horizontal agency conflict between large and small equityholders. It finds the rule to be a relevant constraint for tunneling, Jessie Fried, Ehud Kamar & Yishay Yafeh, *Empowering Minority Shareholders and Executive Compensation: Evidence from a Natural Experiment* (Working Paper 2016) *available at* http://bschool.huji.ac.il/.upload/staff/yishai/Empowering%20Minority%20Shareholders%20and%20Executive%20Compensation%20August%2017%202016.pdf.

[41] Marvin Vesper-Gräske, *"Say On Pay" In Germany: The Regulatory Framework And Empirical Evidence*, 14 German L.J. 749, 783-94 (2013).

[42] Daniel Powell & Marc Steffen Rapp, Non Mandatory Say-on-Pay Votes and AGM: Participation: Evidence from Germany 25-6 (SAFE Working Paper No. 107, 2015) *available at* http://ssrn.com/abstract=2613406. The paper mainly seeks to determine the reasons for low approval rates and the effect of say on pay on shareholder participation in annual meetings.

The amendments to the German AktG that constitute the point of reference for our analysis were part of a broader reform package that purportedly reacted to the financial crises of 2007/2008. Yet, in an act of political overreaching it brought about new rules for all German stock corporations despite a lack of resilient evidence of pervasive deficits. Across industries, the legislative intervention sought to enhance managers' incentives to pursue sustainable growth strategies. In order to achieve this goal, the main changes were directed towards the supervisory boards' broad discretionary power to determine managers' compensation,[43] a power which in principle remains unaltered. Prior to the 2009 reform, the AktG only prescribed that the supervisory board should set management board members' remuneration in adequate relation to their respective duties and the overall situation of the firm.[44] The new law specifies the pivotal adequacy-criterion, also by introducing an explicit duty to reduce managers' compensation if the situation of the firm deteriorates.[45] However, the substance of the new regime does not go materially beyond the determinants that were derived under the old regime by means of statutory interpretation.[46] The same can be said *mutatis mutandis* with regard to the now explicit stipulation of the liability of the members of the supervisory board who breach their duties in setting management board members' remuneration packages:[47] prior to the reform, the liability was derived from the general provision in AktG, § 116, para. 1 and attached to a violation of the respective duties that were largely identical in substance under the old legal regime.

[43] In addition, the reform also introduced a minimum deductible of 10% of total losses if managers‘ personal liability is covered by a D&O insurance policy taken out by the corporation, AktG, § 93, para. 2, sentence 3, and a cooling-off period of two years if members of the management board intend to switch to the supervisory board, AktG, § 102, para. 2 sentence 1 No. 4.

[44] AktG, § 87, para. 1 sentence 1 as in force until 2009.

[45] AktG, § 87, para. 1 stipulates that compensation should be performance based, be in line with usual compensation practices, aim at a sustainable development of the firm, use multiannual determinants, and provide for caps in extraordinary circumstances. The duty to seek a reduction of the compensation in reaction to adverse developments for the corporation is laid down in AktG, § 87, para. 2.

[46] For a detailed discussion see Benedikt Hohaus & Christoph Weber, *Die Angemessenheit der Vorstandsvergütung gem. § 87 AktG nach dem VorstAG [The Adequacy of Management Board Members‘ Compensation According to AktG § 87 after the VorstAG]*, 62 DER BETRIEB [DB] 1515 (2009); Stefan Lingemann, *Angemessenheit der Vorstandsvergütung – Das VorstAG is in Kraft [Adequacy of Management Board Members‘ Compensation – The VorstAG Enters into Force]*, 64 Betriebs-Berater [BB] 1918 (2009).

[47] AktG, § 116, para. 3.

As a consequence, the introduction of the voluntary, non-binding say on pay-vote[48] constitutes the only true institutional innovation of the VorstAG. Studying its effects thus seems promising. Although it cannot be ruled out that the general political, manager-hostile attitude that triggered and supported the regulatory initiative also carries over to the reactions of German supervisory boards in the vicinity of the reform, at least the medium term effects that occur after the public discontent has abated, should be attributable to the regulatory overhaul.

II. Context and Implementation

The VorstAG is yet another instance in a line of legislative interventions that respond to the persistent and widespread sentiment among many voters that executive compensation in Germany is broken because it is out of line with shareholder preferences. Similar motivations were given for a 2005 amendment of the relevant accounting laws that sought to enhance the transparency of executive compensation[49] and an attempt to tighten the say on pay regime that ultimately failed in 2013 only because the legislative period terminated prior to a final vote in parliament.[50] Against this background, the 2009 amendments do not react to an abnormal public outcry or a meaningful change in the social perception of managerial compensation that could drive results regardless of institutional changes. Instead, the VorstOG seems to belong to a continuous pattern of normatively consistent reactions that occur in a generally skeptical environment.

The prescribed say on pay-vote occurs at the annual general meeting on the initiative of either the management board or a qualified minority of shareholders.[51] At listed companies, votes are cast under a strict one share one vote-rule.[52] The attendance at the meetings is usually significantly below the number of voting stock outstanding and therefore 25 to 30 percent of

[48] Supra at note 7.

[49] Gesetz über die Offenlegung der Vorstandsvergütungen (VorstOG) [Act on Disclosure of Executive Compensation], Aug. 3, 2005, BGBl. I at 2267. According to the legislative materials, the transparency requirements were put in place to improve shareholder oversight of supervisory board decision making in compensation matters, see Deutscher Bundestag, Entwurf eines Gesetzes über die Offenlegung der Vorstandsvergütungen, May 25, 2005, BT-Drucks. 15/5577 at 5.

[50] Deutscher Bundestag, Beschlussempfehlung und Bericht des Rechtsausschusses (6. Ausschuss) zu dem Entwurf eines Gesetzes zur Änderung des Aktiengesetzes (Aktienrechtsnovelle 2012), BT-Drucks. 17/14214, at 16-18.

[51] See supra note 6.

[52] AktG, § 134, para. 1.

the voting stock afford a stable majority.[53] Finally, the agenda of the general meeting has to include a resolution on the discharge of the members of the management and the supervisory board.[54] This is important, because the vote on managers' discharge provides for a well-established channel through which shareholders can express their discontent with boards' performance, which should in turn keep say on pay-votes largely free of more general considerations of this type.

D. Data and Methodology

I. Sample description

To investigate the potential implications of say on pay on management remuneration in Germany, we hand-collected a data set for Germany's major firms, *i.e.* those included in the main stock market index, the DAX30, for the years 2006-2014. We produced data for all members of the management board for the whole period under investigation. In order to identify *ceteris paribus* trends that are attributable to the introduction of say on pay, we concentrated on those companies that were included in the DAX30 at least during a part of the entire period, but existed as listed firms at all times. We thus end up with 34 companies in our sample. This gives us information on 1626 remuneration packages of 433 management board members. The sample comprises 45 CEOs and 113 managers who left their board position at the respective company and 134 managers who were newly appointed to the board during the observation period. The average size of the management board in the sample is 6.2 members, with a minimum of 4 and a maximum of 11 managers (including the CEO). The composition of our company base traces very closely the structure of the German economy with five financial companies (two banks,[55] a financial exchange, and two insurance companies), five car manufacturers and suppliers as well as eight pharmaceutical companies (including chemical firms as well as medicine technique companies). The remaining firms are mainly other manufacturing companies.

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[53] See Andreas Cahn, *Der Kontrollbegriff des WpÜG [The Definition of Control in the Takeover Act]*, *in* 10 Jahre Wertpapiererwerbs- und Übernahmegesetz (WpÜG) [10 Years Tender Offer and Takeover Act] 77 (Peter O. Mülbert et al. eds., 2011) (showing for Germany's largest firms that voting shares present at the annual shareholder meeting amount to only slightly more than 50% of the respective shares outstanding).

[54] AktG, 120 paras. 1-3.

[55] Banks were at all times during our survey subject to prudential regulation that impacted at least on the variable component of managers‘ remuneration, although the latest and most incisive regime with its cap for variable remuneration at 200% of fixed pay only became effective for the year 2014, see Directive 2013/36/EU of the European Parliament and of the Council of 26 June 2013 on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms, amending Directive 2002/87/EC and repealing Directives 2006/48/EC and 2006/49/EC [hereinafter: CRD IV], arts. 92-94, 162(1) and (3).

Our data sample comprises information on management compensation, firm performance, general firm characteristics (such as size and industry to which the companies belong). The data on management remuneration was taken from the firms' annual reports for the respective years. As a consequence of a 2005 overhaul of the relevant accounting requirements,[56] executive compensation packages are reported on an individual basis for each member of the management board and have to be itemized with regard to fixed, variable and long-term incentive components.[57] Hence, we are in a position to track executive compensation over time. In doing so we pay close attention to the applicable accounting standards that particularly affect the representation of long-term components.[58] We are thus able to elucidate accurately what the reported figures actually reveal whereas prior research largely treats them as current payout. Information on say on pay-votes (including the percentage turnouts of these votes in favor or against the respective proposals) are also taken from the company accounts. We checked for completeness and accuracy by consulting the firms' websites and the corporate register.[59] The general firm characteristics, such as size and return on assets are drawn from Datastream for the respective years. Information on shareholder returns is taken from Bloomberg We derive the data on ownership structures from Commerzbank's compendium "Wer gehört zu wem".[60] This data source comprises detailed information on ownership structures of German firms and

Yet, the organizational and substantive prescriptions in banking regulation did not curb supervisory boards' discretion in setting bank managers' pay in a way that makes these institutions total outliers to be eliminated from the sample. In fact, regulation mainly increased the costs of legitimizing decisions.

[56] VorstOG, art. 1.

[57] Handelsgesetzbuch [HGB, Commercial Code], May 10, 1897 RGBl. at 219 as amended, § 314, para. 1, no. 6, item a), sentence 5.

[58] The relevant standards are laid down in Deutscher Rechnungslegungsstandard [DRS, German Accounting Standard] 17.21 and 17.30. Long-term non-share-based remuneration is reported as a whole for the financial year in which the compensated services were completed, i.e. at the time of the actual payout, DRS 17.21. On the other hand, long-term share-based remuneration is reported at present value for the financial year in which it was granted, DRS 17.30. Hence, key items of variable remuneration receive a critically diverging treatment in compensation reports.

[59] Pursuant to AktG, § 130, para. 6, German listed companies have to post detailed information on the votes (yes, no, abstain) for each resolution on their website within seven days. The pertinent information is also filed with the register, *see* AktG, § 130, para 5.

[60] COMMERZBANK, WER GEHÖRT ZU WEM [WHO BELONGS TO WHOM] (2010).

their changes over time. We impound new information (since 2010) on significant holdings from the corporate register.[61]

II. DESCRIPTION OF VARIABLES

The compensation reports—as mandatory items of the company accounts—provide detailed information on the remuneration of individual members of the management board.[62] Companies report not only the total level of compensation but also its structure in considerable detail. In particular, the different types of variable pay such as cash bonuses, stock options and long-term incentive plans are disclosed. However, this granular reporting makes comparisons across companies and over time quite difficult: not only do the observed compensation structures diverge materially but also the ways of reporting change over time, because firms do not have to comply with a prescribed form that would standardize disclosure. Hence, despite the risk of sacrificing some granularity, we decided to focus on the three main pillars of the compensation packages: fixed pay, variable remuneration and pension benefits. While fixed payments and pension contributions paid for the members of the management board are rather uniform across time and companies, there is quite some variation with regard to variable pay across time and companies, which should be kept in mind.

By looking at these three elements of managers' remuneration packages, we cover the main elements of monetary compensation and incentive schemes: fixed pay reflecting the overall participation constraint of management board members, variable pay as pay-for-performance (aligning the objectives of management and shareholders by incentivizing managers to provide effort[63]), and pension contributions paid for management board members as inside debt (to provide incentives to reduce risk and avoid default[64]).

In order to achieve sufficient discrimination we extract four variables from the firms' compensation reports. The first variable (FIX) reflects the fixed payments of the members of the management board, whereas the second variable (VARPAY) is the sum of all variable compensation of the respective manager in a given year. In cases in which incentive plans were designed for more than one year, we divide the total amount reported at grant equally over the respective years and add the split-parts to VARPAY for each year. Our third variable (TEXP)

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[61] Wertpapierhandelsgesetz [WpHG, Securities Trading Act], July 26, 1994, BGBl I at 2708, § 33, para 1 – like the identical predecessor norm – compels any person whose shareholdings reaches, exceeds or falls short of 3%, 5%, 10%, 15%, 20%, 25%, 30%, 50%, or 75% of the voting rights in a listed company to disclose this fact immediately to the company and the supervisory authority. The pertinent notifications are then filed with the publicly accessible corporate register.

[62] *See supra* at note 56.

[63] *See e.g.* Jensen & Murphy *supra* note 16.

[64] See Rangarjan K. Sundaram, & David L. Yermack, *Pay me later: Inside debt and its role in managerial compensation*, 62 J. FIN. 1551 (2007).

is simply adding up these two elements and hence stands for total yearly payments ex pensions. Given that we have missing observations for pension contributions in a number of cases, we rely on this variable as our main measure of total compensation. Last but not least, our PENSION variable denotes the annual pension contribution paid for the respective member of the management board. Table 1 provides a summary of our main variables and their definition

Insert Table 1 about here

In a first step, we look into the main descriptive statistics of our data set. Table 2 gives a first overview of the main realizations of these variables.

Insert Table 2 about here

With respect to pay structure, these numbers indicate that sources of income which are usually regarded as pay-for-performance are on average the most important remuneration elements for members of the management board. They clearly exceed the sum of fixed payments and pension contributions that managers receive. Surprisingly, pension contributions paid for management board members are rather small. We observe a slightly skewed distribution with some outliers distorting the picture. Yet again, if we compare the mean and median of the different variables we find that this skewedness is not very pronounced. Hence, we can state that there clearly is variation—arguably explicable with the degree to which German firms seek to mimic the U.S. governance arrangement—with some (but not many) highly paid top managers (all CEOs), but that the discrepancies are not very large. Quite noteworthy, with respect to the overall size of the pay-check, we observe only six data points (among all 1626) where TEXP exceeded 10 mill. Euro. Moreover, these observations comprise 4 different CEOs.

Furthermore, we collected data to define a number of variables reflecting firm characteristics and firm performance, operative as well as stock price developments. Since we aim to relate these variables to the variation in management board compensation and to investigate whether we find an effect of say on pay-votes after including these variables as control, we focus on those variables that play the main role in designing compensation packages for top managers. With respect to firm characteristics, we chose measures for size, namely total assets (TA), and ownership concentration, defined as a consolidated voting block of 25% or more of the shares outstanding (OWC), as well as industry dummies (for the financial, the car and the pharmaceutical industry). We measure firm performance by return-on-assets incurred in the respective year (ROA) defined as EBIT over TA. Our total shareholder return variable (TSR) comprises share price developments and dividends paid. We also looked into other firm characteristics as well as performance measures but the variables ultimately used turned out to have the closest relation to management compensation. The realizations of these variables are depicted in Table 3.

Insert Table 3 about here

Table 3 shows that there is substantial variation in firm characteristics and performance. This indicates on the one hand that the DAX30 companies differ, in pertinent respect, to a large extent among themselves. Moreover, as we will show in the next step, there is also substantial variation, especially with respect to profitability, over time.

Before we turn to this analysis, we comment on the say on pay-votes in the DAX30 companies that occurred after the 2009 amendment of the AktG. Most companies in our data sample had a vote on management board remuneration in 2010. In 2011 to 2014 these votes took only place occasionally which is largely a function of the relevant best practice recommendation in the German Corporate Governance Code.[65] We construct a variable, which documents the acceptance rate of the votes in the shareholder meeting (SOP); we obtain the latter from the corporate register.[66] If no vote has taken place, we assign a value of zero to this variable.

We observe 53 (out of 237) company data points with say on pay-votes. Most of these resolutions had very high acceptance rates, most of them above 85%, many of them even above 95%.[67] There are only four exceptions in which compensation schemes received lower acceptance ratios: Deutsche Börse in 2010 with an acceptance rate of 52.7%, Deutsche Bank with 58.2% in the same year and SAP in 2012 with 65.6%. At Heidelberg Cement we observe the lowest acceptance rate of 45.81% in 2010, i.e. the only rejection of the compensation scheme in the whole sample.

III. Hypotheses

We explore two alternative hypotheses to address the impact of say on pay-votes. The **first hypothesis** conjectures that relatively lower acceptance ratios lead to an adjustment (reduction) in the remuneration package of all management board members.[68] We test this with our SOP

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[65] The German Corporate Governance Code (GCGC) which is voluntary on a comply-or-explain-basis recommends that the chairman of the supervisory board explains the compensation system once to the general meeting and reverts back to shareholders only if the system is changed, see GCGC, item 4.2.3(6).

[66] See *supra* at note 59. As a consequence of the standardized reporting requirements in AktG § 130, para. 2, sentences 2 and 3 we see no cross-sectional variation in the way acceptance rates are calculated

[67] This is in line with the findings across jurisdictions in Thomas & Van der Elst *supra* note 2, at 657.

[68] This accords with similar findings in empirical studies of the U.K. situation: Ferri & Marber, *supra* note 29 at 529 who find a “significant increase in the sensitivity of CEO pay to poor performance” as a result of high shareholder discontent; Carter & Zamora, *supra* note 28 at 24 find that boards respond to sizeable dissent by decelerating compensation increases relative to competitors and curbing diluting stock option grants; Alissa, *supra* note 28 at 26-9 finds no evidence for a change in compensation practices but identifies replacement of CEOs as an

variable while taking further effects into account by including a number of control variables in our panel regressions.

The **second, alternative hypothesis** is that the supervisory board[69] primarily reacts by changing the compensation practices observed in the contracts of newly entering members of the management board and leaves the contracts of the existing executives untouched. This hypothesis seems highly plausible from a basic contract law perspective: although the supervisory board is competent to determine the remuneration of the members of the executive board when they are appointed,[70] it basically lacks the power to interfere unilaterally with existing employment contracts without cause.[71] Hence, it is unlikely that with a view to unfavorable say on pay-votes, supervisory boards adapt (reduce) executive compensation packages immediately and universally. However, at least for those management board members who are appointed after a resolution, compensation arrangements designed with a view to expressed discontent in shareholder polls are intuitive. This leads us to expect significant changes in the compensation packages of newly entering members if compared with prior practice in reaction to low say on pay-votes: the supervisory board will only gradually implement a new remuneration policy[72] that is better attuned to shareholder preferences. We test this second hypothesis by splitting our sample and taking newly entering and incumbent board members separately into account.

E. Empirical Results

I. Descriptive analysis

As a first step of our analysis of the determinants of the remuneration (level and structure) we investigate the total level of compensation as well as its performance-based fraction as a function of firm performance. We use Figure 1 to depict this relationship. Figure 1 plots the means

alternative response to shareholder dissent; conversely, Conyon & Sadler, *supra* note 28 at 304 find only "little evidence of a relation between CEO pay and shareholder dissent". Our first hypothesis also conforms with anecdotal evidence in the U.S., although some incidents suggest that companies also stay the course and blame misinformed proxy-advisors for negative votes, Thomas, Palmiter & Cotter *supra* note 18, at 1260.

[69] Pursuant AktG § 87 the supervisory board was at all times competent to determine the compensation of individual board members thereby adhering to several substantive principles, *supra* C.

[70] AktG, § 84, para. 1, sentence 1.

[71] Again, this is the case in many jurisdictions around the world outside the United States where board members can be sacked immediately without cause, for a survey of the relevant legal frameworks in Europe see Davies, Hopt, Nowak & van Solinge, *supra* note 12 at 37-45.

[72] It is important to keep in mind that German shareholders only vote on the overall compensation scheme, *see* supra A.

of three main payment variables (TEXP, FIX and VARPAY) *vis-à-vis* the key performance measure ROA.

Insert Figure 1 about here

Figure 1 indicates that there seems to be a rather strong relation between firm performance and the compensation of management board members. This illustration already reveals a number of key insights.[73]

First, it appears to be the case that over the entire period of our analysis there is at best only a slight upward trend in top management compensation. When we compare the 2006 figures with the ones in 2014, we observe a nominal increase in total compensation ex pensions in line with inflation (for CEOs) and below inflation (for all board members). When looking into the numbers for pension contributions paid for members of the management board plus the fixed payments a very similar picture emerges. Taking the two components together the numbers (on average) add up to 1,128 TEUR in 2006 and 1,215 TEUR in 2014. At the end of our sample period in 2014 we see an increase slightly above inflation but below the average rise in employee income in Germany of about 13% over the entire time period. A look at the two remuneration components reveals a shift towards more fixed pay (increasing on average from 701 TEUR in 2006 to 907 TEUR) but less pensions (427 TEUR in 2006 and 318 TEUR in 2014).

Second, Figure 1 indicates the sensitivity of variable management pay to firm performance. The correlation coefficient between TEXP and EBIT is an astonishing 0.338 and lower but still pronounced for ROA, namely 0.045. We investigate this relation in a multivariate setting in the next subsection. German incentive plans are typically based on operative performance measures rather than on share price developments. Therefore, we focus on operative performance measures only.

Last but not least, we conjecture at this stage that management board pay has not been removed from economic developments (neither at the macro-level nor at the company level). Whether this conjecture survives a more detailed, multivariate analysis, which allows to control for other factors, is the subject of the next section, in which we also aim to look into the detailed implications of say on pay regulation.

II. Multivariate tests

Up to now we did not sufficiently take the panel structure of our data set into account. Hence, the aim of this subsection is to exploit the variation in the cross-section as well as over time simultaneously. We run multivariate regressions on our panel data set and take the different compensation variables as dependent variables. This includes our variable measuring total compensation (we initially exclude pensions in order to avoid losing too many observations due to

[73] To some extent, the different scales of the variables limit the visibility of this interrelation in Figure 1.

missing entries) as well as our fixed-pay variable. Later on, we also investigate the pension compensation schemes in more detail.

We proceed in various steps. In the first one, we aim to explain the compensation variables by using the information on all board members for the respective compensation variables. Then, we take a more granular look and separate newly appointed members of the corporations' management board from those board members who served in this capacity already for a longer period of time. In particular, we ask how the say on pay votes affected compensation packages of established and newly entering board members differently. Thereby, we test our two alternative hypotheses. Besides our SOP variable we investigate the effect of firm performance and size on the compensation packages of management board members. In addition, we include industry dummies as well as time and company fixed effects. We thereby account for unobserved heterogeneity across time and companies, which affects the compensation packages.

Hence, we estimate the following equation

$$Pay_{it} = \alpha_i + \sum \beta \ X_{it} + Controls + \mu_{it}$$

with our compensation variables forming the left-hand-side variables and the X_j standing for our explanatory variables as described above. The error term is displayed by μ_{it}. In order to take the potential non-linearity of the estimated relationships into account we use the natural logarithms of our compensation variables, firm characteristics, and performance measures. In order to account for unobserved heterogeneity at the level of individual board members we cluster standard errors at this level.

1. Effect of say on pay on compensation

Tables 4 and 5 summarize our findings on the effects on total compensation (TEXP). Models (1)-(4) of Table 4 cover all management board members while we exclude newly appointed management board members in model (5) of Table 4 and Model (1) of Table 5. The remaining regressions of Table 4 cover new management board members in their first year.

Insert Tables 4 and 5 about here

The most obvious result of our regression analysis is that total compensation of the management board members in Germany's DAX30 companies is clearly influenced by firm structure and firm performance. More profitable and larger firms pay more to their management board members. This pattern emerges consistently across the different models in Tables 4 and 5. The effects are not only statistically but also economically pronounced. A ten percent increase in profitability increased total compensation of board members by almost 1% (see Table 3). With respect to size we find a less pronounced effect: a 10 percent larger firm leads to a 0.4% higher pay for board members (see Table 4, models (1) and (2)).

Furthermore, we find— indicated by the industry dummies—that at least in the time period of our sample the car industry paid significantly higher salaries (the industry dummy for the car industry is persistently positive and highly significant), whereas in particular the financial industry paid their management board members significantly less. This observation is driven in part by Commerzbank, which was bailed-out by the German financial market stabilization fund in 2008 and 2009 and had to comply with regulatory salary caps as a consequence: the government rescue obliged the bank to limit the remuneration to 500,000 Euro for its top personnel.[74] We investigated in robustness checks that our results are unaffected by excluding these observations as well as the ones of Heidelberg Cement where we observed the only rejecting say on pay vote (see e.g. model (4) in Table 4). We find that our results remain robust to the exclusion of these observations.

With respect to our say on pay variable we find a positive and statistically significant effect indicating that lower say on pay approval rates led to decreased compensation packages for board members. In Table 4 we find this effect for all our specifications in the entire sample. Neither the inclusion of year and company fixed effects nor the exclusion of Commerzbank and Heidelberg Cement changes the picture. In order to address our two hypotheses we exclude newly appointed board members (see model (5) of Table 4 and Model (1) in Table 5 We find that the coefficient of the say on pay variable remains positive but is not statistically significant anymore. This implies that say on pay votes have no statistically significant effect on the overall compensation of established board members. The conjecture that our effects in models (1)-(4) are indeed driven by newly entering board members is confirmed in models (2)-(5) of Table 5. These regressions which focus only on the incoming board members at the time of the say on pay vote show not only consistent statistically significant and positive coefficients but also coefficients which are larger in size than the ones we observe for our overall sample. Hence, we find only weak support for our hypothesis 1 but strong support for our hypothesis 2.

Given the restrictions defined in contract law,[75] our findings do not really come as a surprise. Instead, they can be readily explained by a lack of bargaining power of supervisory boards *vis-à-vis* incumbents. During their tenure, managers cannot be compelled to accept a decrease in their remuneration packages—or any rearrangement with such an effect—if the supervisory board wishes to react to shareholder discontent by slashing managers' pay checks. Moreover, our findings accord with the legislative strategy that empowers shareholders to resolve on the overarching compensation system and not individual compensation packages: this

[74] The Fund took a silent partnership interest in December 2008 and a 25% equity stake in January 2009, which triggered the remuneration limits that lasted until the government support was ultimately redeemed in 2013. *Cf*. Gesetz zur Errichtung eines Finanzmarktstabilisierungsfonds [Act Establishing a Financial Market Stabilization Fund], Oct. 17, 2008, BGBl. I at 1982, § 10, para. 2b, sentence 1.

[75] See *supra* D.II.

implies that the supervisory board reacts to negative voting turnouts over time when remuneration is up for negotiations. However, for those management board members, who were newly appointed around the promulgation of the VorstAG,[76] compensation arrangements designed with a view to the anticipated shareholder polls or the realized SOP decisions are plausible. In line with this idea we find strong evidence for our second hypothesis. SOP votes have a significant effect on compensation schemes of newly entering members of management boards. In other words, the regulatory strategy works within the binding restrictions put up in contract law. This is an important contribution to the existing literature because it indicates that in all jurisdictions with staggered and entrenched boards say on pay's effects are rather long term. Therefore, they can only be fully gauged if compensation is analyzed over a longer period (ideally full turnover of the entire board) whereas short-term effects may underestimate the regime's momentum.

In Tables 6 and 7 we investigate the effect of say on pay on fixed compensation as well as on the pension packages board members received during the time period under investigation. With respect to fixed payments we observe a similar pattern as with the overall payments. This is a confirmation of our results on our two hypotheses as discussed above. For the overall sample we find positive and statistically significant coefficients (see models (1)-(4) in Table 6) for a number of specifications (the ones we used in Tables 4 and 5 as well). If we exclude the newly entering board members, the coefficient stays positive but is not statistically significant anymore. On the other hand, if we focus on the newly entering board members we find again a larger and statistically significant coefficient. Hence, the very same pattern emerges as in our analysis of the overall compensation. The picture is similar but weaker for our analysis of the pension packages. The coefficients of the overall sample are not statistically significant in any specification (see models (1)-(4) of Table 7). Only if we focus on entering board members with a new contractual arrangement we find a positive and statistically significant, yet slightly less pronounced effect of our say on pay variable (see model (5) of Table 7).

Insert Tables 5 and 6 about here

2. Relevance of ownership Concentration

We also bring the role of ownership into the picture. By using our ownership concentration variable we ask whether the presence of a blockholder has an effect on compensation but even more importantly acts as substitute for say on pay-resolutions. We find partial evidence for the former aspect. In our full-sample regression (Table 4, model 6) it turns out that more concentrated ownership indeed leads to a reduction of overall pay. In the new entrant-sample this effect is not observable (see Table 5, model 6). But in both cases the introduction of the ownership

[76] The maximum tenure permitted by law is 5 years, which regularly makes for deeply staggered management boards. The important takeaway for our analysis is thus that every year about one fifth of the management board should be up for (re-)appointment.

variable leaves our findings on the say on pay variable qualitatively unchanged indicating that ownership does not act as a substitute for say on pay votes.

3. Effect of say on pay on total Shareholder return

As a final step, we investigate the effect of say on pay votes not only on compensation but also on share prices in the subsequent period. Thereby, we ask to what extent say on pay resolutions not only influence managers' incentives but also—directly or indirectly—affect firm performance. Our findings (see Table 8) do not support the notion that say on pay votes have an effect on share performance. The strong conclusion that say on pay does not pay off for shareholders may not be warranted, however, because total shareholder return may be driven by a number of aspects (like for instance the development of promising patent pipelines, anticipated changes in the competitive environment etc), which we do not observe, and hence are not able to control for. On the other hand, we find no immediate support for the notion that shareholder action via say on pay votes improves directly and immediately firm performance and shareholder returns in the subsequent period.

Insert Table 8 about here

4. Summary of findings

In a nutshell, we can summarize our findings by saying that our analysis allows us to draw inferences on the channels through which say on pay actually works: any evaluation of a shareholder voice-strategy in regulating executive remuneration has to pay close attention to the limits contract law stipulates for the adaptation of existing remuneration agreements. Therefore, it has to take a medium to long-term view that extends to a full turnover-period for board-members. With this important supplement, our results are in line with the general observations in prior research.[77]

F. Conclusion

Our main findings can be summarized as follows. First, we observe that the compensation packages of management board members of Germany's DAX30-firms are closely linked to key performance measures such as return-on-assets and size. Second, and most important for our topic, our findings suggest that it is essential to take a closer look at the contractual set-up for the compensation schemes and their structure. When we only consider the compensation packages of all board members, the hypothesis that remuneration is decreased if shareholder support for compensation schemes is low in say on pay-votes finds rather weak support. This is not at all surprising given the rather rigid contractual framework for the compensation of management board members. However, we find that the supervisory board is responsive to say on pay-votes

[77] See Powell & Rapp, *supra* note 42 at 25-6.

when it comes to the design of newly entering candidates, i.e. within the binding restrictions of contract law, it reacts as envisioned by policy makers. It is a consequence of the way say on pay is supposed to work that our results are driven by the rather few pronouncedly discontent say on pay-votes in corporate Germany – only where disapproval is voiced supervisory boards have reason to change compensation packages. They leave matters unaffected where shareholders show rather strong support for the proposed schemes as is the case in most of the observations in our dataset.

FIGURES AND TABLES

Figure 1: Relation between Financial Performance and Compensation

We depict in this figure the evolution of the mean of our key performance measure (return-on-assets (ROA)=EBIT/TA) as well as the evolution of the mean of the main pay variable (fixed pay (FIX), variable pay (VAR) as well as total pay ex pensions (TEXP)

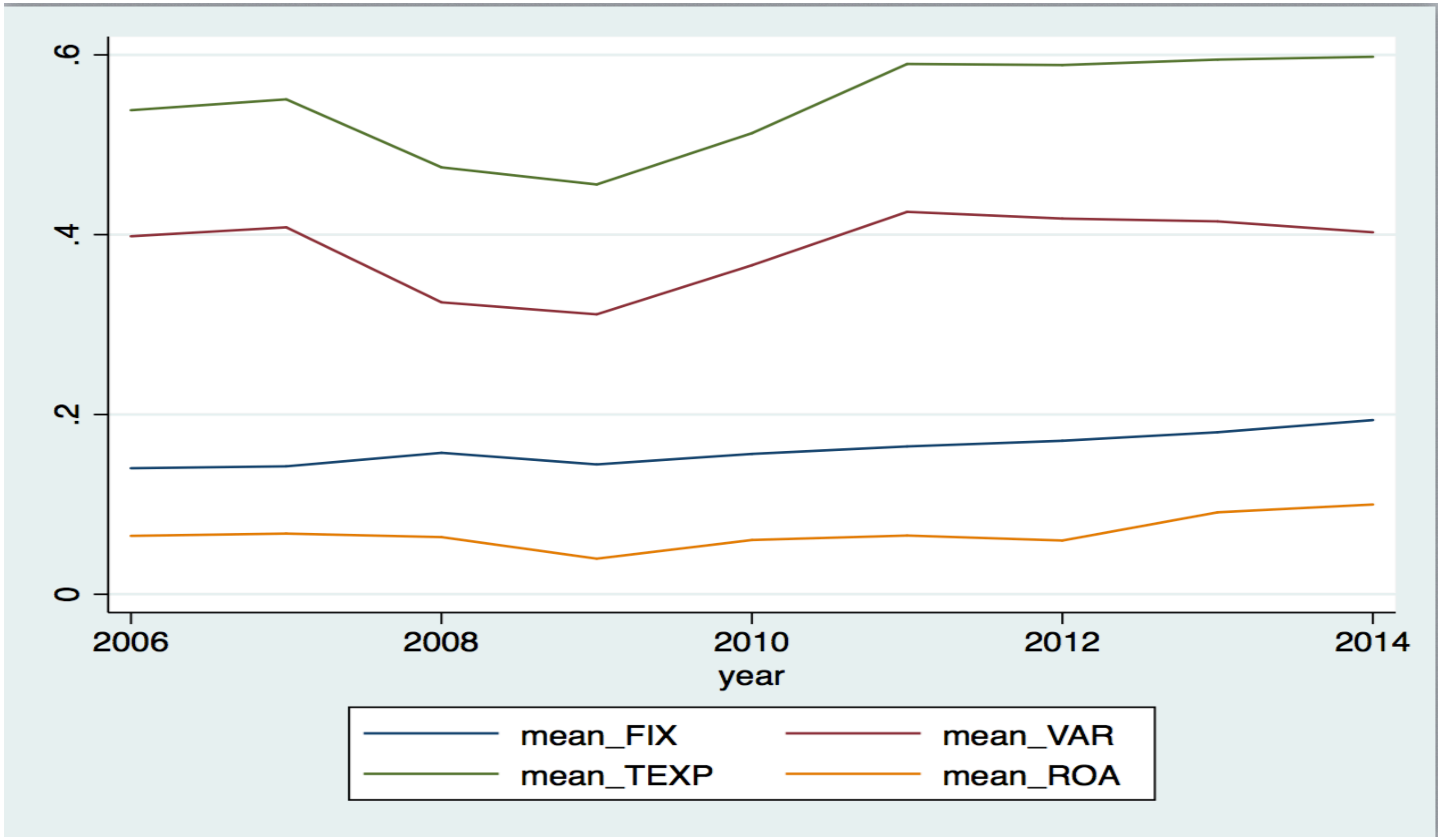

Table 1: Variable description

Variable	Description	Source
FIX	Fixed performance unrelated yearly income of board members	Company remuneration reports (annual accounts)
TEXP	Total yearly income minus pension	Company remuneration reports (annual accounts)
VARPAY	Bonus payments plus discounted long-term incentive payments earned in respective year	Company remuneration reports (annual accounts)
PENSION	Net present value of additional pension income earned in respective year	Company remuneration reports (annual accounts)
TA	Total assets / Total balance sheet size	Datastream
OWC	Ownership concentration: voting block of more than 25% of all outstanding shares	Commerzbank (2010): Wer gehört zu wem; corporate register
EBIT	Earnings-before-interest-and-taxex	Datastream
ROA	Return on assets=EBIT/TA	Datastream
TSR	Total shareholder return=Share price growth + annual dividends	Datastream
SOP	Acceptance rate in say-on-pay votes	Company accounts and corporate register

Table 2: Overview on remuneration of DAX30 management board members (in TEUR)

	Mean	Median	Min	Max	No. of observ
FIX	807	723	590	4811	1626
TEXP	2729	2392	590	17500	1626
VARPAY	1893	1650	0	15600	1626
PENSION	359	280.0	0	3695	1482

Table 3: Summary statistics of firm characteristics and SOP votes

	Mean	Median	Min	Max	No. of observ.
TA (in bill. EUR)	216	78.3	23.2	2190	1626
OWC	11.4	0	0	46	1235
EBIT (in bill. EUR)	4.649	3.402	-3.89	26.9	1626
ROA	0.795	.058	-.047	0.4124	1626
Total shareholder return (in %)	8.19	5.69	-88.1	351.7	1379
SOP (if vote)	91.4	95.36	45.8	99.7	355

Table 4: The impact of say on pay on total compensation of management board members

We estimate linear regressions on our panel data set with the natural logarithm of total compensation ex pension (TEXP) as left hand side variable. The table shows the estimated effects of the regressions with the standard errors clustered at the level of the management board members in parentheses. Models (1)-(4) cover all management board members. In model (5) we exclude those board members who have just entered the board in the respective year. Model (6) additionally takes ownership into account. Significance levels are: * p<0.10, ** p<0.05, *** p<0.01.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
SOP	0.001*	0.001***	0.001***	0.001**	0.001	0.001*
	(0.0004)	(0.0004)	(0.0004)	(0.0005)	(0.0005)	(0.0005)
Ln(ROA)	0.090***	0.079***	0.064***	0.073***	0.072***	0.081***
	(0.010)	(0.009)	(0.010)	(0.010)	(0.010)	(0.011)
Ln(TA)	0.033**	0.040***	-0.011	-0.011	0.010	-0.044
	(0.016)	(0.015)	(0.015)	(0.016)	(0.017)	(0.066)
OWC						-0.027***
						(0.005)
Enter/Leaver	No/Yes	Yes/Yes	Yes/Yes	Yes/Yes	No/No	Yes/Yes
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes
Company FE	No	No	Yes	Yes	Yes	Yes
Year FE	No	Yes	Yes	Yes	Yes	Yes
ExHeidelbergC/Coba	No	No	No	Yes	No	No
# Obs	1626	1626	1625	1509	1491	1235
Adj. R^2	14.65%	28.46%	45.54%	43.88%	32.33%	46.38%

Table 5: The impact of say on pay on total compensation of new management board members

We estimate linear regressions on our panel data set with the natural logarithm of total compensation ex pension (TEXP) as left hand side variable. The table shows the estimated effects of the regressions with the standard errors clustered at the level of the management board members in parentheses. Model (1) is focusing on all but those who have just entered the board. Models (2)-(5) in contrast look only on the newly entering board members in the year of their entrance. Model (6) additionally takes ownership into account Significance levels are: * p<0.10, ** p<0.05, *** p<0.01.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
SOP	0.0006	0.006***	0.006***	0.006***	0.007***	0.008***
	(0.0005)	(0.002)	(0.002)	(0.002)		(0.002)
Ln(ROA)	0.072***	0.031	---	0.031	---	---
	(0.010)	(0.033)		(0.033)		
Ln(TA)	0.010	0.012	---	0.041	---	---
	(0.017)	(0.061)		(0.069)		
OWC						0.002
						(0.007)
Industry dummies	Yes	No	Yes	Yes	Yes	Yes
Company FE	Yes	No	No	No	No	No
Year FE	Yes	No	No	No	No	No
Ex HeidelbergC/Coba	No	No	No	No	Yes	Yes
# Obs	1491	134	134	134	129	103
Adj. R²	32.33%	6.13%	6.68%	7.18%	8.51%	15.33%

Table 6: The impact of say on pay on fixed compensation of management board members

We estimate linear regressions on our panel data set with the natural logarithm of fixed compensation (FIX) as left hand side variable.
The table shows the estimated effects of the regressions with the standard errors clustered at the level of the management board members in parentheses.
Models (1)-(4) cover all management board members. In model (5) we exclude those board members who have just entered the board in the respective year, while we focus only on those in Model (6). Significance levels are: * p<0.10, ** p<0.05, *** p<0.01.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
SOP	0.001***	0.001***	0.001***	0.001***	0.0005	0.005***
	(0.0003)	(0.0003)	(0.0004)	(0.0004)	(0.0004)	(0.002)
Ln(ROA)	0.013*	0.008	0.010	0.011	0.016*	-0.042
	(0.008)	(0.007)	0.007	(0.007)	(0.008)	(0.027)
Ln(TA)	0.020	0.031**	-0.009	-0.009	0.002	0.055
	(0.017)	(0.015)	-0.017	(0.018)	(0.019)	(0.060)
Enter/Leaver	No/Yes	Yes/Yes	Yes/Yes	Yes/Yes	No/No	No/No
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes
Company FE	No	No	Yes	Yes	Yes	No
Year FE	No	Yes	Yes	Yes	Yes	No
ExHeidelbergC/Coba	No	No	No	Yes	Yes	No
# Obs	1626	1626	1625	1509	1380	134
Adj. R^2	6.85%	25.60%	37.69%	39.44%	21.68%	12.70%

Table 7: The impact of say on pay on pension payment of management board members

We estimate linear regressions on our panel data set with the natural logarithm of pension contributions (PENSION) as left hand side variable. The table shows the estimated effects of the regressions with the standard errors clustered at the level of the management board members in parentheses. Models (1)-(3) cover all management board members. In model (4) we exclude those board members who have just entered the board in the respective year, while we focus only on those in Model (5) Significance levels are: * p<0.10, ** p<0.05, *** p<0.01.

	Model 1	Model 2	Model 3	Model 4	Model 5
SOP	-0.001	-0.001	0.0003	0.0005	0.010***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Ln(ROA)	0.042***	0.047***	0.031**	0.030**	---
	(0.012)	(0.012)	(0.012)	(0.012)	
Ln(TA)	0.054**	0.044	-0.043	-0.034	---
	(0.025)	(0.030)	(0.030)	(0.032)	
Enter/Leaver	No/No	No/Yes	Yes/Yes	Yes/Yes	No/No
Industry dummies	No	Yes	Yes	Yes	Yes
Company FE	No	No	Yes	Yes	No
Year FE	No	No	Yes	Yes	No
# Obs	1379	1379	1379	1311	99
Adj. R^2	1.28%	1.44%	36.86%	36.73%	17.16%

Table 8: The impact of say on pay on share performance

We estimate linear regressions on our panel data set with the total share return as left hand side variable. The table shows the estimated effects of the regressions with the standard errors in parentheses. Significance levels are: * $p<0.10$, ** $p<0.05$, *** $p<0.01$.

	Model 1	Model 2
SOP(t-1)	0.038	0.025***
	(0.031)	(0.030)
Ln(ROA)	---	5.243
		(0.708)
Industry dummies	No	Yes
# Obs	1157	1157
Adj. R^2	0.13%	6.91%

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