TWO ESSAYS ON SAY-ON-PAY

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ABSTRACT OF THE THESIS

Two Essays on Say-on-Pay

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High CEO compensation is a known problem. The Dodd-Frank Act of July 21st, 2010 mandates a periodic advisory Say-on-Pay vote (SoP) on a company's executive pay. In the first essay, we estimate the determinants and impacts of the SoP vote. We find that SoP approval is positively related to the firm's past performance and negatively related to the CEO's past compensation. We also find that the increase in future compensation is positively related to the SoP support. These relationships are weaker in the presence of institutional ownership. We document similar results for non-CEO executive compensations. Last, we estimate the impact of SoP vote on future performance. We find that future performance is negatively related to SoP support and is positively associated with a vote being in the lowest SoP quartile.

In the second essay, we use logit estimate to see the impact of the SoP vote on CEO turnover. We find that, controlling for firm performance and CEO attributes, the likelihood of a turnover is negatively related to SoP support. This result is similar for the likelihood of forced CEO turnovers and replacements by CEOs who are hired from outside of the company. We also find that most CEO departures take place in the second half of the year (rather than in the immediate six months) after the annual meeting in which the SoP vote is cast. In conclusion, SoP has consequences even though it is formally an advisory vote.

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Of them all, I dedicate my thesis to my husband, Manoj, and my son, Niranjan, for the love, support and sacrifice that has influenced realization of my dream. You are my foundation and inspiration for that I do and still hope to do.

Dedication

To my husband Manoj and my son Niranjan Behera.

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Essay 1

Determinants and Impacts of Say-on-Pay Vote

1.1. Introduction:

The Dodd-Frank Act of July 21st, 2010 requires US public firms to periodically hold a vote on the remuneration of their executives.[1] This vote is referred to as the Say-on-Pay (SoP). Since the inception of the SoP, its effectiveness has been examined in academic and in non-academic forums. It has also been of interest to investors, legislators, and the general public. Several academic studies suggest that incentives designed by a board and the shareholder's interests are not perfectly aligned[2]. In this essay, we examine the relation between SoP support and two determining variables: lagged executive compensations and lagged firm performance. We also examine its association with the following future variables: firm performance, CEO compensations, and the compensation of the other executives.

The literature documents that SoP support is positively linked to the measures of the firm's equity and accounting performance and negatively associated with the abnormal compensation of the CEO (Kimbro and Xu, 2015, Alissa, 2015). Zhang et.al. (2014), Gregory-Smith et.al. (2014), and Cotter et.al. (2013) document a positive relation between the negative vote and total pay levels. Zhang et.al. (2014) also find that shareholder's approval decreases with the number of pay-restraining provisions[3] that are intended to enhance the alignment between the shareholder and CEO interest and disclosures that are intend to enhance transparency[4]. In this study, we use a larger sample and alternative equity performance measures in order to examine the dependence of SoP on firm performance and CEO compensation. We also examine the sensitivity of the relation between SoP and its determinants to institutional ownerships.

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[1] The vote in the USA is advisory, but it is binding in other countries including the Netherlands, UK, Japan, Norway, Denmark, Finland

[2] Billett, Hribar and Liu, 2015; Conyon and Sadler, 2009; Fortin, Subramaniam, Wang, and Zhang, 2014

[3] Claw back, anti-hedging, guideline for the executives to hold certain amount of firm's own stocks, double triggers and gross-ups treatments for excise tax on in case of severance payments

[4] As measured by Fog index of CD&A and peer choice

Previous studies have documented that SoP approval vote significantly affects CEO compensation. Balsam et al. (2015) find that firms that are subject to the 2011 SoP rule have changed their CEO's compensation even before the first vote was cast. Bainbridge (2008), Cai and Walking (2009), Core et al. (2008), Shivdasani and Yermack (1999), and Bebchuck (2004) argue that allowing shareholders to cast a SoP vote on executive compensation will impact economic costs (through clawbacks and rescission of employment contracts). Cai and Walkling (2011) document that SoP reduces shareholder's wealth in shareholder initiated SoP proposals prior to 2011. They report a positive market reaction to 2007 SoP bill for firms where the CEOs are overcompensated. Brunarski et al. (2015) document that overcompensated managers with low support tend to increase dividends, corporate investment, and decrease leverage. Our focus in this study is to investigate the determinants of SoP and SoP's association with future compensation and performance.

We find that SoP approval vote is positively related to the past firm and accounting performance and negatively related to past compensations which is similar to previous findings. In addition to that we find that sensitivity of the SoP approval to firm performance and compensation varies with institutional ownerships. We also find that there is a positive relation between compensation increments and previous SoP approval votes. We find that the compensation increments do not completely offset the pre-vote compensation differences; thus, the post-vote compensation is still negatively related to the SoP support. We find that the strength of the sensitivity of the executive compensation increments and SoP is positively related to the ownerships by institutions.

Our findings also suggest that future market performance of the firm is negatively related to SoP approval votes. The equities of firms whose CEOs support are in the lower quartile of SoP approval vote perform significantly better in the following fiscal year than the equities of firms whose CEOs SoP approval are in the higher quartile (i.e., Q2-Q4 vs Q1). We also find that change in Market-to-Book is negatively related to past SoP approval votes. We do not find a significant

association between a change in ROA and previous SoP approval.

Our study contributes to the literature on SoP, firm performance and managerial compensation in several dimensions. Previous studies use contemporaneous measures in the empirical estimation. We examine the determinants of SoP using lagged fiscal year and previous trading day measures. We find that the past compensations and past firm performance is associated with future Say-on-Pay vote. We also find that cumulative abnormal return is another determinant of SoP, besides raw equity return. Next, we find higher percentage of institutional ownerships affect the sensitivity of future SoP approval vote to executive compensation and the firm performance. We document that increase in cash, total, non-equity, stock, and option compensations are positively related to past SoP approval. This positive relation does not completely offset the negative relation between Say-on-Pay approval votes and compensation. Therefore, the relation between future compensation and a past vote still remains negative. In the context of the shareholder-manger agency problem, we provide evidence that SoP can act as an incentive to motivate CEOs to perform better. We do not find any evidence related to capital expenditure or firm's cash holdings. Our study supports the notion that the shareholder's voice is heard.

The rest of the paper is organized as follows. Section 2 discusses prior related research and presents our hypotheses. Section 3 describes research methods for the empirical study. Section 4 describes the sample, dependent variables, and independent variables. Section 5 presents summary statistics. Section 6 reports results and discussion. Section 7 provides reports on various robustness tests, and Section 8 concludes the study.

1.2. Literature reviews and hypotheses

Say-on-Pay facilitates the expression of shareholders' opinion. Morgan et al. (2006), Bainbridge (2008), Mangen and Magnan (2012) and Kimbro et al. (2015) document both negative and positive implications of SoP. Supporters of SoP argue that SoP can improve corporate transparency but increase agency cost. Deane (2007) argues that these votes benefit shareholders because they compel boards to function more efficiently to provide executive contracts that are

better aligned with shareholders interest. Brunarsky et al. (2015) suggest that the input from shareholders can improve the lines of communication between shareholders and the directors resulting in board decisions that are more aligned with shareholder expectations. Bainbridge (2008) suggests that compensation contracting is best left to the discretion of the better-informed board of directors. Larcker et al. (2011) consider the date of the press release in an event study that discloses information about the adoption of an initial SoP ballot. They find negative stock price reaction for firms with highly paid executives. They suggest that the market expects, SoP vote will not affect CEO's compensation contract. Larcker et al. (2012) and Larcker et al. (2013) find that market reacts negatively to board initiated changes to executive compensation contracts in response to proxy advisors. Their findings suggest that compensation issues may be too complicated and too delicate. Thus a vote by the general body of shareholders is likely to have unintended consequences. An alternative reason for the negative relation is that these changes indeed are in right direction, but that they focus the attention of the market on a sub-optimal governance/entrenchment problem that is not known to investors. This would imply that the negative impacts are larger for small firms and firms that are less closely followed by the analysts.

As we know, the conventional view of corporate management reflects Berle and Means (1932) classic principal-agent problem where the shareholders are owners and the managers are agents. Due to information asymmetry and conflict of interest, separation of ownership and control in public corporations produces a condition where owners and managers have different objective functions. Bainbridge (2009) classifies these divergences into three categories. First, managers' claims on the corporation are limited to their tenure with the firm, while the shareholders' claims have an indefinite life. In theory, this divergence in interest can be ameliorated by executive compensation schemes that realign the interests of corporate managers with those of the shareholders. Second, managers may not apply the optimal effort level because managerial effort is unobservable to stockholders and is costly to managers. Third, the lack of diversification of a manager's portfolio may affect corporate decisions.

After the financial crisis of 2007, investors and market participants complained that CEOs are paid their lucrative incentives even though other employees are furloughed and stockholders suffer severe losses. Thus, legislators and regulators in several countries attempted to bring a change by facilitating stockholders' vote on executive compensation including the USA.[5] In USA, the Section 951 of the Dodd-Frank Wall Street Reform and Consumer Protection Act requires public companies which are subject to the federal proxy rules to hold advisory SoP vote at least once every three years beginning with the first annual shareholders' meeting taking place on or after January 21, 2011. The Commission also adopted a temporary exemption so that smaller reporting companies are not required to conduct SoP votes until annual meetings in 2013. Rather they are required to conduct the shareholder advisory vote on golden parachute compensation upon the effectiveness of the rules. Therefore, shareholders can vote 'For', 'Against' or stay 'Absent'. Prior to the Dodd-Frank mandate, shareholders of US companies could propose advisory votes to approve/disapprove executive compensation, but such votes were rare. In fact, Ertimur, Ferri, and Muslu (2011) studied a sample of 258 compensation-related shareholder proposals which document just 47 SoP votes during the 1997-2007 period. Thus, any inference about the effects of a general across-the-board mandatory vote on executive compensation cannot be based on the selective votes prior to 2011 (Iliev and Vitanova, 2013). Before the Dodd-Frank Act, the nature of the compensation voting is infrequent and activist driven. Though SoP votes in the United States are non-binding, boards do not ignore majority verdict against its CEO package. Alissa (2015) (UK Data), Nanda, Behera and Palmon (2015) (US data) find that shareholder's dissatisfaction leads to the likelihood of a future CEO departure. Hence it seems that SoP has a substantial impact on CEO compensation. Burns and Minnick (2013) examine the effect of SoP proposals on changes in the level and make-up of executive compensation. They find that relative to non-SoP firms, total compensation does not significantly change after the proposal. Rather, they shift the remuneration

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[5] USA, Netherlands, Switzerland, UK, Australia, Belgium, Canada, Denmark, Finland, France, Gerany, Italy, Japan, Norway, South Africa, Spain, Sweden

from cash compensation towards restricted stock grants and options. On a study of non-investment trust companies, Gregory Smith et al. (2013), find shareholder disapproval leads to lower CEO remunerations. Their findings are restricted to total remunerations only. In the current study, we also examine the relation between SoP and compensation components (non-equity, cash, stock, and option). In addition, we examine the association between the SoP vote and the compensation increments as well as the post SoP compensation level. In order to see whether SoP vote motivates CEOs to perform better in terms of firm performance or not, we examine the impact of vote on future firm performance. We continue by exploring whether the sensitivity of our dependent variable to SoP varies with ownership characteristics.

According to the optimal contract theory, a CEO's contract should align the interests of the CEO and the shareholders. Under a rent extraction view, executives have power to influence their own compensation and are able to extract rent. Jensen and Murphy (1990) suggest that it is not the level of CEO rewards that should generate concern but their relation to firm performance and shareholder's value. It is intuitive that a CEO may receive lack of support by shareholders if firm performance is poor. Hooghiemstra et al. (2015) find that a negative media coverage of CEO pay package is associated with higher level of subsequent shareholder discontent. Therefore, we state that:

H1: SoP approval vote is negatively related to the preceding CEO compensation.

H2: SoP approval vote is positively related to the preceding firm and equity performances.

Kimbro and Xu, 2016 (Data: 2011-2012) find that, in the USA, about 77% of firm's shares are held by institutions. A higher level of institutional ownership represents a substantial stake and stronger monitoring power from investors over the firm's managerial and strategic decisions. Schwartz-Ziv and Wermers (2014) find that small shareholders are more likely than large shareholders to use the non-binding SoP vote to govern their companies. In a study of firms in

Israel, Yafeh and Hamdani (2013) find that institutions vote against any compensation related proposal. Institutional investors would monitor their holdings closer than individual investors. Therefore, we state that:

H3: The relation between the SoP approval vote and the preceding CEO compensation is stronger in companies with high institutional holdings.

H4: The relations between SoP approval vote and the preceding firm and the equity performance are stronger in companies with high institutional holdings.

We have so far discussed the determinants of Say-on-Pay. Next we move to examine the impacts of Say-on-Pay. Since this is a referendum to CEO compensation we include impacts on compensation as well as firm performance. Murphy (1985) finds a strong relation between pay and performance. Cunat et al. (2015) use 258 shareholder-sponsored proposals at annual meeting from 2006 until 2010 and find evidence that SoP leads to a larger increase in market value, firm profitability, and long-term performance. We expect Say-on-Pay to be more closely tie with change in compensation than to the level of compensation. The notion is, percentage change in compensation level will reduce the large variation in compensation level. Hence our next hypothesis is:

H5: The percentage increase in CEO compensation is positively related to SoP approval vote.

Bebchuk (2007) argues that shareholder disagreement on pay packages expressed through SoP votes will result in more efficient bargaining between executives and the board. Johnson, Porter, and Shackell (1997) document that SoP imposes reputational consequences (i.e., lower support vote negates good reputation) both on the board and on the directors. Their results indicate that negative media coverage follows larger pay increases. Hence, if we compare less support as

something like a negative signal of CEO reputation, then we may expect, that is due to an increase in pay. In other words, change in pay is negatively related to SoP approval. Based on the above argument we hypothesize that:

H6: Even following the larger percentage increase in compensation, the post SoP vote CEO compensation is still negatively related to SoP approval.

Gillan and Starks (2007) document that shareholders' votes can serve as implicit, if not explicit, constraint on management. According to the Director Primacy Model, boards should respond selectively by reducing the excessiveness of CEO compensation when performance is poor (Allisa, 2015), because the board is accountable to shareholders (Leblanc and Gryglewicz, 2015). There is another channel for activist shareholders to express their dissatisfaction i.e., "just vote no" campaigns in which activist shareholders can withhold their vote from one or more directors at the annual general meeting. In doing so, shareholders can put pressure on the board, in addition to expressing their dissatisfaction. Alissa (2015), Nanda, Behera and Palmon (2015) find that shareholders' dissatisfaction is positively related to CEO turnover. This implies that the CEO will try to do his/her best even after the first vote. Hence, the CEOs whose SoP support is low will perform better to gain more support in a future vote. The next hypotheses are:

H7: Subsequent equity performance is negatively related to SoP approval.

H7a: Subsequent equity performance is higher for firms in which the SoP approval vote is in the lowest quartile.

H7b. Subsequent equity performance is lower for firms in which the SoP approval vote is in the highest quartile.

In the previous hypothesis we examine the impact of Say-on-Pay on firm performance. Next, we test whether institutional ownership affects the relationship between future market performance and SoP. To the best of our knowledge, the sensitivity of this relation to ownership structure has not been examined. Hence we state that

H8:   The strength of the negative relation between subsequent equity performance and the SoP approval is directly related to institutional ownership.

1.3. Empirical Study

1.3.1. Model 1: Determinants of SoP votes

To examine the determinants of the SoP (i.e., SoP approval) vote, we use the following OLS regression Model (White, 1980) with industry and year dummies.

$$\text{SoP}_{(i,t)} = \beta_0 + \beta_1\,Comp_{i,t-1} + \beta_3 FirmPerf_{i,t-1} + \beta_2 X_{i,t-1} + Ind\ Dummy +$$

$$+Yr\ Dummy + \varepsilon_{i,t} \qquad\qquad (1)$$

The SoP is defined as For / (For + Against) in year t. All the accounting-based independent variables are from the fiscal year prior to that in which the vote is taken. The equity performance is measured during a 254 trading day window prior to the vote. The variable Comp is the various alternative compensation components (total, cash, non-equity, stock, and option) as defined in Appendix 1. Our firm performance measures of interest are cumulative abnormal return and return on assets (roa). Next, we describe $X_{i,t-1}$, the vector of firm characteristics of the firm i in the fiscal year that precede the fiscal year in which the vote is taken. We follow Kimbro and Xu, (2015) and use ln_mveq, the natural log of market value of equity as a proxy for size, and stock return volatility as a proxy for the firm's risk. For firm's investment measure, we include capital

expenditure and MTB which is the ratio of market value of assets to book value of assets. We also include two measures for the CEO characteristics: first, age65 which is a dummy variable equal to 1 if the CEO is 65 years old; and 0 otherwise; second, ln_ten which is a natural log of tenure (the number of years a CEO serves in that position). We also include ownership concentrations. We compute institutional ownership (inst_own) as the mean of the institutional holdings of four quarters at the end of the year. Then we construct a dummy variable, instq2q4, which is set to equal 1 if inst_own is in its top three quartiles and; otherwise 0. In addition, we include insiders%, which is the percentage of shares held by top management and directors as reported in Proxy statement (Alissa, 2015; Kimbro and Xu, 2015). Cotter et al. (2013) find that ISS support is one of the strong determinant of the SoP vote. We construct a dummy for ISS support i.e., iss_for which takes a value of 1 if ISS support is 'Yes' and 0 otherwise. We include dummies for SIC 2digit industry and year in our regression.

1.3.2. Model 2: Impact of SoP vote on compensation

We explore the impact of the SoP vote on the percentage change in the firm's executive compensation. This specification considers the percentage change between the compensation in the fiscal year that follows the vote and the compensation in the fiscal year of the vote.

$$del1\_comp_{(i,j,t)} = \log(Comp_{i,j,t}) - \log(Comp_{i,j,t-1})$$

$$= \beta_0 + \beta_1 \, SoP_{i,t-1} + \beta_2 X_{i,t-1} + IndFE + Year \, dummy + \varepsilon_{i,t} \qquad (2)$$

According to specification, our dependent variables for this model is the change in natural log of compensation components from the period t-1 to t as described in the Appendix 1. The main independent variable of interest is SoP, i.e. SoP approval vote which is defined as for / (for + against). Since SoP is skewed, we use different SoP variables alternatively which are dummies for SoP. SoPQ1 is the dummy for SoP at 25th percentile which is equal to 1 if SoP is in its 1st quartile

and 0 otherwise. Similarly, we define SoPQ4 as a dummy for SoP if SoP is in its 4th quartile and 0 otherwise. We control for firm size which is defined as the natural log of total assets. For firm performance measure, we include firm's raw return (ret) and ROA. We include ln_mtb and capex, as described in the Appendix 1, to proxy firms' investment. We include institutional ownership percentage (inst_own), 5% shareholder percentage and insiders' percentage and E-index to proxy for the governance measure. We include chair as a dummy which is equal to 1 if the CEO is also the chairman and 0 otherwise. We also include cash holdings in order to see if cash holdings have any impact on compensation. Because cash can be used as an incentive instead of other compensations.

Next, we use fixed effect OLS model with year and industry dummies to estimate the impact of SoP vote on the compensation. Our baseline regression for the following fixed effect study is as follows:

$$\log(Comp_{i,t}) = \beta_0 + \beta_1\, SoP_{i,t-1} + \beta_2 X_{i,t-1} + IndFE + Year\ dummy + \varepsilon_{i,t} \qquad (3)$$

We repeat this regression, replacing total compensation by its components (cash, non-equity, stock, and option). We use same independent and control variables of equation (2) for the estimation. We also include the interaction term of SoP and institutional holding in order to assess the sensitivity of CEO compensation or its components to institutional holdings.

1.3.3. Model 3: Impact of SoP vote on Firm performance

We perform an OLS regression with industry fixed effect and year dummies to examine whether the SoP affects firm's future firm performance

$$Perf_{(i,t)} = \beta_0 + \beta_1\, SoP_{i,t-1} + \beta_2 X_{i,t-1} + \beta_3\, SoP_{i,t-1} * Instown_{t-1} + IndFE +$$
$$Yr\ dummy + \varepsilon_{i,t} \qquad (4)$$

Our dependent variables for equation (4) are cumulative abnormal return starting 2 trading days and ending 128 and 255 trading days after the vote, denoted as CAR(+2, +128) and CAR(+2, +255, respectively. We use EVENTUS market model to estimate the cumulative abnormal return. We also use change in market-to-book and change in return on assets as the dependent variables. The main independent variable of interest is SoP. We also use two other dummies for SoP i.e., SoPQ1and SoPQ4 as described in the previous section.

1.4. Data

Our sample consists of Russel 2000 firms for which data is available in MSCI-GMI ratings. We merge the data with COMPUSTAT and CRSP for firm-level accounting and equity return data. For SoP approval data we crawled SEC form 8-K using the algorithm of Engelberg et al. (2007). We search for the word 'non-binding', 'Approve', 'Advisory vote', 'Say on Pay', 'vote for', 'For', and 'Against' to collect the voting data. In case voting data is not available, we manually search for 8-K, 10-Q to collect the SoP voting data. As per Dodd-Frank Act, firms are required to disclose the voting numbers. There was a grace period until 2013 for firms whose public float is less than $75 million dollars. The voting data spans from 2011-2014 (Table 1.1), and compensation data spans from 2011-2013 (Table 1.2). Because MSCI-GMI, ratings compensation data is available only through 2013, we collect compensation data both from MSCI-GMI ratings and EXECUCOMP. We discard the observations if SoP voting data is not available. The resulting sample consists of 6,074 manager-firm-voting observations for Panel A and 3,121 observations for Panel B. We obtain institutional holdings data from the Thomson Financial Spectrum database. This data compile SEC form 13-F filings of institutional holdings. Rule 13-F require all institutional investors managing more than $100 million in equity are required to file all equity holdings greater than 10,000 shares or $200,000 in market value with the SEC on a quarterly basis. For each firm-year observation, we calculate institutional ownership for each quarter and then use the mean of four quarters as the variable inst_own.

1.4.1. Dependent variables

Approval vote (SoP):

For Model 1, we have three alternative SoP approval variables SoP, SoPQ1, and SoPQ4. We follow Kimbro and Xu (2015) in constructing SoP i.e., SoP approval variable which is defined as the ratio of For and (For + Against). "For" is the SoP vote cast in favor of the CEO compensation and "Against" is the SoP vote cast against the CEO compensation. In addition, we construct SoPQ1 and SoPQ4. We define SoPQ1 as a dummy variable which takes a value 1 if SoP is in its 1st quartile and 0 otherwise. Similarly, we construct SoPQ4 as a dummy variable which takes a value 1 if SoP is in its 4th quartile and 0 otherwise. For our sample, SoP at 25 percentiles is 0.9 and at 75 percentiles is 0.98.

Compensation:

The dependent variables in Model 2 are the percentage changes in several alternatives compensation components. In Model 3, we use natural logarithm of the compensation components. We follow the prior literature on SoP proposal and SoP vote such as Burns and Minnick (2013), Kimbro and Xu (2015), and Iliev and Vitanova (2015) to construct our compensation variables. We construct cash_comp variable as the log of the sum of salary and bonus, tot_comp as the log of the sum of base salary, bonus, and all other compensations[6] and noneq_comp as the log of non-equity compensation. We also construct ln_stock as log of stock award[7] and ln_opt as log of option award.[8] We use the following variables from MSCI-GMI ratings database: salary, bonus, CEOTotAnnComp, option awards, stock awards, and non-equity incentive compensation. CEO

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[6] According to GMI ratings, all other compensation, for a CEO includes perquisites and other personal benefits; amounts paid or accrued pursuant to a plan or arrangement in connection with any termination (or constructive termination) of employment or a change in control; annual company contributions or other allocations to vested and unvested defined contribution plans; the dollar value of any insurance premiums paid by the company with respect to life insurance for the benefit of a named executive officer; gross-ups or other amounts reimbursed during the fiscal year for the payment of taxes; discounted securities purchases

[7] MSCI-GMI ratings define stock awards as stock-related awards that derive their value from the company's equity securities or permit settlement by issuance of the company's equity securities such as restricted stock, restricted stock units, phantom stock, phantom stock units, common stock equivalent units or other similar instruments that do not have option-like features. The dollar value reported is the compensation cost of those awards over the requisite service period, as described in FAS 123R.

[8] MSCI-GMI ratings define option awards which includes awards of options, stock appreciation rights, and similar equity-based compensation instruments that have option-like features that are within the scope of FAS 123R. The dollar value reported is the compensation cost of those awards over the requisite service period, as described in FAS 123R

non-equity compensation is the variable CEO non-equity incentive compensation according to MSCI-GMI ratings. If compensation variables are not available, we use corresponding variables from EXECUCOMP for that firm. We discard the observation if data is not available. We construct our percentage change in compensation components as follows:

del1_cash_comp = log (cash_comp $_t$) – log (cash_comp $_{t-1}$)

del1_tot_comp = log (tot_comp $_t$) – log (tot_comp $_{t-1}$)

del1_noneq_comp = log (noneq_comp $_t$) – log (noneq_comp $_{t-1}$)

del1_stock = log (stock $_t$) – log (stock $_{t-1}$)

del1_option = log (option $_t$) –log (option $_{t-1}$)

Future Firm Performance

For Model 3, in equation (4) we use cumulative abnormal return starting 2 days after the vote and ending at 255 and 128 trading day (carp2p255, carp2p128). We define return on the asset (ROA) as income before extraordinary items over the total assets. The change in ROA from period t-1 to t is del_roa. We also use Market-to-Book (MTB) is defined as the ratio of the market value of assets to the book value of assets. The change in MTB is denoted as del_mtb which is a change in MTB from period t-1 to t. in Model 3 We use del_roa and del_mtb as our alternative dependent variables.

1.4.2. Explanatory Variables
Firm size:

The cross-sectional level of SoP approval is associated with firm size (see, e.g., Kimbro and Xu, 2015, Iliev et al., 2015). In large firms dispersed shareholders expect greater public support (Karpoff, Malatesa, & Walking, 1996; Smith, 1996; Rebbein et al. 2004; Rowley & Moldoveanu, 2003). To control for this size effect, our firm size measures are the market capitalization i.e.,

market value of equity, sales (i.e., revenue) and total assets held by the firm. We use natural logarithm of all the firm size variables.

Market-to-book ratio *(M/B)*:

As suggested by numerous studies (see, e.g., Yermack, 1997), when companies have large growth opportunities, shareholders have greater difficulty in evaluating managers' decisions, and thus, should provide managers with more stock-based compensations. Stock appreciation may attract more shareholder support and vice versa. Because a firm's growth may be associated with shareholder approval. We employ market-to-book (*M/B)* as a control variable.

Lagged Firm performance:

Firm performance is another firm related determinant (Balsam et al. 2015; Kimbro and Xu, 2015; Brunarsky et al., 2015; Iliev and Vitanova, 2013) of the SoP vote. On a study of Swiss firms, Wagner and Wenk (2015) find negative market reaction due to the introduction of binding SoP vote. We measure firm performance as firm's return on assets, followed by a cumulative abnormal return starting 255 trading days prior to vote and ending 2 days before vote and return on asset.

Firm Risk:

High return volatility may induce risk averse shareholders to express their displeasure with the CEO. Thus, SoP is expected to be negatively related to firm risk. We follow Kimbro and Xu (2015) in using the variance of the monthly returns over the last twelve months as the measure of the firm risk.

Ownership:

A CEO who is likely to support the compensation is allowed to vote in the SoP according to his/her ownership. Another stream of literature argues in the opposite direction stating that a large number of voting rights may create entrenchment problems which reduce the level and effectiveness of board monitoring. In other words, if the shareholders vote determines the CEO compensation, the board may not be held accountable for CEO performance. However, Kimbro and Xu (2015) document that higher level of SoP approval is positively associated with CEO share

ownership and negatively associated with institutional ownership. Gordon and Pound (1993) examine shareholder proposals and find that greater managerial ownership leads to lower approval rates. We use institutional ownership (inst_own), percentage of insider's ownership (insiderspctg) and five percent owner's percentage (owners5%pctg) for our estimation.

Institutional ownership and insider's ownership are calculated as follows. For each firm-year, we calculate percentage of institutional ownership for each quarter and use the mean of four quarters in our empirical tests. For insider's percentage, we use the variable Insiders% of MSCI-GMI ratings which is the percentage of outstanding shares held by top management and directors; owners5%pctg is the percentage of outstanding shares held by any 5% or greater shareholders, as reported in the company's most recent proxy statement.

Cash holdings:

According to Hall and Liebman (1998), availability of cash holdings will help a firm in substituting executive's equity compensation with cash payment. According to Kimbro and Xu (2015) shareholder approval is negatively associated with CEO's current cash compensation. More cash holdings will allow the flexibility to pay CEOs compensation components in cash. Shareholders may not like this flexibility in accessing direct cash. Rather, shareholders will like to see the utilization of cash in positive NPV investments. Our intuition is there will be a negative relationship between cash holdings and shareholders' approval. We measure cash holdings as the ratio of cash (CH) over the firm's total assets.

Leverage:

Shareholders prefer riskier projects than bondholders, thus conflicts of interest between bondholders and shareholders reduce the value at which debt can be sold and thus reduces the value of the firm. The decrease in firm value may induce lower SoP vote. We measure leverage as the book value ratio of long-term debt to total assets.

Age:

In addition to firm performance, we control for CEO characteristics. Undiversified managers are more risk averse than the diversified stockholders. Older executives are expected to be even more risk averse. However, that may be reflected in the compensation composition and firm performance. Hence, CEO age is an important variable for CEO characteristics. CEO age impacts risk-taking behavior. Sherfling (2014) documents a negative relationship between CEO age and stock return volatility. He suggests that firms risk and riskiness of corporate policies are higher when the CEO and the next influential executives are younger. Hence the question is, "Do they like older CEOs?" In order to see the influence of older CEOs, we create age65 which is a dummy variable and takes a value of 1 if CEO is 65 or older than 65, otherwise 0. CEOs can continue beyond the retirement age and the firm can benefit from their experience. If he is, then either he is doing a very good job or he is entrenched.

Tenure:

Tenure is another CEO variable that may be associated with entrenchment. Dikolli et al. (2014) document that the intensity with which firm monitors a CEO declines over his tenure. Zheng (2010) finds that the percentage of equity-based compensation decreases during the later years of tenure for inside CEOs. Thus, we employ the variable tenure which is the number of years since the CEO started in that position. Long tenure may reflect either talent or entrenchment.

ISS voting recommendations:

ISS and Glass & Lewis are the proxy advisory firms that advise investor clients on how to vote their shares. Choi et al. (2010) find that ISS is a more powerful advisory firm than others. They also find that an ISS recommendation shifts shareholder's vote by 6% - 10%. Cotter et al. (2013) and Kimbro et al. (2015) find that the shareholder's dissatisfaction is associated with ISS negative vote recommendations. Ertimur et al. (2013) employing a 2011 sample find that voting advisors recommendations have explanatory power for SoP vote. Larcker et al. (2012), and Ertimur et al. (2013) find that firms change their compensation contracts based on ISS recommendations.

To control for ISS recommendations we construct a dummy variable iss_for, which is assigned a value of 1 if ISS recommends "For" and 0 otherwise.

1.5. Summary statistics

We report our summary statistics in Table 1.1 and Table 1.2 for SoP vote and compensation panel. We cover 1,657 of the Russel 2000 index firms. Our cross-sectional SoP approval panel consists of 6,074 observations for the year 2011-2014 and compensation panel consists of 3,121 firm year observations for the year 2011-2013. Our compensation is behind one year of voting data as compensation is available till 2013 in MSCI ratings.

1.5.1. Voting approval and firm size

The average of SoP approval is 91% with standard deviation of 0.13. The maximum of voting approval is 100% and the minimum is 8%. Our average log market value of equity is 7.449 ($1,718.25 ml) with a maximum of 13.348 ($626,560.11ml).

1.5.2. Firm performance

Our pre-vote market performance variables, denoted as, carn255n2, is the cumulative abnormal return starting 255 trading days prior to the vote and ending 2 trading days before the vote. Similarly, carp2p255 is the cumulative abnormal return starting two trading days after the vote and ending 255 trading days after the vote. We define return on assets as income before extraordinary items over the total assets. In voting Panel, on average return on assets (ROA) is 2.9% with standard deviation of 14.1%. These results are close to Balsam et al. (2015). Return on asset's standard deviation is 2% higher than their sample. However, stock returns in their sample have a large standard deviation which is 0.48. This difference may be attributed to a difference in the sample period. Our market to book average (voting Panel) is 1.9 which is close to the sample of Balsam et al. (2015). Average capital expenditure is 4% which is consistent with findings of Brunarski et al. (2015). Firms in our sample (voting Panel) held on an average 11 % of cash. Institutions held on average 75% of the outstanding shares in voting panel. However, in the

compensation panel, the average return and return on assets are 1.5% and 5%, respectively. Institutions held 81% of the outstanding shares on average.

1.5.3. CEO age and Tenure

The variables "dirage" (CEO age) and "tenure" are from MSCI-GMI ratings database. In voting Panel, average CEO age is 56.8 which is close to 57 years with a minimum of age 33 years and a maximum of age 96 years. Approximate tenure of those CEOs is 8.94 years with a minimum of 1 year and a maximum of 61 years.

1.5.4. Ownership

In our sample, institutions held approximately 75% of firm's outstanding shares. The median of institutional ownership percentage is 80 % in our sample in comparison to Kimbro and Xu who report 84.11 % of median institutional ownership percentages. On average, 11% of the firm's equity are held by insiders which are in close approximation with Brunarsky et al. (2015).

1.5.5. ISS recommendation Vote

The mean and standard deviation of iss_for are 0.87 and 0.32 respectively. In the lower quartile of SoP, ISS recommends 54% "For". In contrast, ISS recommends 99 % "For" vote if CEO's SoP vote is in Q4.

1.5.6. Investment i.e., capital expenditure

Our capex measure sheds light on the investment behavior of chief executive officers. We calculate capex as capital expenditure over total assets. On average, firms experience 4 % of capital expenditure as reported in Table 1.1. In Deloitte CFO Insights, the article, "Capital Expenditure: Will your investments deliver the desired results?" documents that capital expenditure planning is the process by which an organization sets capital-allocation targets and builds toward an effectively managed portfolio of projects. So, executives can take more objective decisions on where to invest. Median capital expenditure of firms in our sample is 2.5 % and a maximum of 7.3 percent.

1.5.7. Compensation

In Table 1.2 (Compensation Panel), we report the summary statistics about the distribution of variables used in this study. The means of ln_cash_comp and ln_tot_comp are 6.734 and 8.450 respectively. The means of ln_noneq_comp, ln_opt and ln_stock are 6.966, 7.069, and 7.617 respectively. We observe a gradual increase in stock awards in each year, whereas this pattern is not similar to option awards. As explained by Ferri and Maber (2012), this may be due to the investor's skepticism about option-based compensation after US scandals. We also observe a decrease in non-equity compensation. Average SoP approval (SoP) is 90%. In median, 95% of shareholder support CEO compensation. However, in 4th quartile, SoP support is 97.8 percent.

1.6. Results and discussion

1.6.1. Pearson Correlations between the variables

In Table 1.3 we present Pearson correlations between our main variables of interests. All the firm performance measures appear to be correlated with SoP. All the measures of compensations correlate negatively with SoP, the correlation of ln_stock is most negative (Pearson correlation coefficient = -0.19). Consistent with other documented literature, the SoP is highly correlated with iss_for (Pearson correlation coefficient = 0.75). Except for iss_for, most other correlations are small in magnitude, suggesting that multicollinearity is not likely to pose a serious problem in the regression analysis. The VIF for the voting Panel model is 1.55 and for the compensation Panel is 1.42.

1.6.2. Vote outcome and compensation

We use OLS regression model with robust standard errors (Model 1) to investigate the determinants of the SoP vote outcome. In order to find the determinants of SoP, we regress SoP on past firm performance and past CEO compensation variables. We control for firm size, firm's growth, leverage, Market-to-Book, institutional, insider and block holders ownership, and CEO characteristics. All the independent variables are measured over the fiscal year prior to the SoP vote except equity returns (measured as cumulative abnormal return based on trading days). We present

the results of this regression in Tables 1.4 and 1.5. Our results suggest that SoP is positively associated with firm's pre-vote cumulative abnormal return, carn255n2 i.e., CAR (-255, -2), the average monthly raw return, and the return on assets. In addition, in Table 1.5, the coefficient on the interaction between carn255n2 and instq2q4 is positive and significant at the 5 % level. This suggests that higher institutional ownership increases the sensitivity of SoP approval vote to firm performance. We find similar results for the interaction term roa_instq2q4 (Table 1.5). On the other hand, we find that the coefficients on the interaction between the compensation components and instq2q4 are negative and highly significant (Table 1.5). Overall, the result suggests that SoP-compensation relation is weaker in the presence of higher institutional ownerships and block holders.

We also find that SoP is negatively associated with market capitalization only when cash and abnormal compensations are used as an explanatory variable - as opposed to Kimbro and Xu (2015). The results also indicate that SoP is negatively and significantly related to stock return volatility and positively and significantly related to MTB. This result indicates that shareholders are monitoring the growth of the firm and that growth rates affect the vote. We find no evidence that the vote is associated with leverage and capital expenditures which are similar to Lubransky et al. (2015). We also find that the coefficient estimate of cash holdings is negative but not significant. We find that the coefficient estimate of insider's percentage is positive and significant at 1% level for all the specifications. Similar to Kimbro and Xu (2015) and Choi et al. (2009) we find that the coefficient of ISS recommendation is positive and significant.

We also find evidence that the coefficient of CEO tenure is negative and highly significant suggesting that long-tenured CEOs are entrenched. There is a significant relation between SoP and CEOs older than 65 years suggesting that shareholders like older CEOs.

In Table 1.6, we report the logit estimates of our dependent variable, SoPQ1. Consistent with the findings regarding the determinants of SoP we find that the likelihood of a low SoP support is positively related to compensation and negatively related to performance and the impacts of the

other (control) variables are as expected. The estimate also indicates that the larger is insiders' ownerships, the less likely is SoP to be in its bottom quartile. The coefficient estimate of iss_for is negative and highly significant.

In Table 1.7, our dependent variable is SoPQ4. As expected, and consistent with the estimates that we obtain when SoP is the dependent variable, we find that SoPQ4 is negatively related to past total, cash, non-equity, stock, and option compensations. It seems that low performance induces low support. However, we do not find any significant evidence that SoP vote in the upper quartile is related to carn252n2 i.e. CAR (-255, -2). SoPQ4 is positively related to ROA and MTB. The coefficient estimates of the percentage of insider's ownership, the institutional ownership's percentage (inst_own), and iss_for are positive and highly significant. We do not find any significant evidence in the parameter estimates of age65, cash_holdings, capex, leverage and return volatility.

1.6.3. Compensation components and SoP vote

We turn now to examine the association between SoP and post-vote events in the regression that are reported in Table 1.8. The dependent variables are percentage increase in total and cash compensation between the fiscal year in which the SoP vote is taken and the following fiscal year, denoted as del1_tot_comp1 and del1_cash_comp respectively. The independent variables, as defined in the Appendix 1 are proxies for the economic determinants of CEO compensation, CEO characteristics, ownership, and SoP approval (SoP). We include dummy variables for year and control for 2 digit SIC industry effect. The coefficients for the year dummy and industry effect are not reported in the Table as they are not the direct interest in our study. We find that both total and cash compensation increments are positively related to SoP approval (SoP) and negatively relate to SoPQ1. Our estimates indicate that the compensation increases are directly related to SoP support. The coefficient estimate of SoPQ1 is negatively significant at 10 % level for both total and cash compensation increments. In addition, the interaction between SoP and instq2q4 is negative and significant at 5% level (Table 1.8, Column 4). This suggests that higher institutional ownership

reduces the sensitivity of compensation increments to SoP approval vote. It seems in the absence of institutional ownership, CEO's salary increases.

In Table 1.9, we report the regression result for increment in stock and option compensation. The dependent variables are the percentage increase in stock and option compensations denoted as, del1_stock and del1_opt. Our independent variables of interest SoP, SoPQ1, and, SoPQ2 are in period t-1. The results indicate that SoP approvals are positively related to the following increments in option compensations. The coefficient estimate of SoP is significant at 5 % level (Column 5). However, we do not find any significant result for any of the independent variable except stock return (ret), ROA and cash holdings. We also do not find any association of change in stock compensation with SoPQ1, and SoPQ4.

In Table 1.10, we report the regression result for increments in non-equity incentive compensation. In this regression, the dependent variable is the percentage increase in non-equity compensation. We do not find any significance evidence of a relation between our dependent variable and independent variables of interest SoP, SoPQ1, and SoPQ4.

In Table 1.11, we report the estimates from regressions where the dependent variables are the percentage changes in the average compensations of the four non-CEO executives. The dependent variables are del1_nonceo_tot and del1_nonceo_cash. The results indicate compensation increments are positively related to the previous SoP approval vote. The coefficient estimate of SoP is highly significant at 1 % level. The coefficient estimate of SoPQ1 is negative and significant at 5% level for total compensation increments and significant at 10% level for cash compensation increments. We do not find any association of increments in non-CEO total and cash compensation with SoPQ4. However, we do not find any significant result for any of the independent variable except stock return (ret).

In Table 1.12, we report the regression result for the increment in stock and option compensations of non-CEOs. The dependent variable is percentage increases in the average stock or option compensations of the four non-CEO executives denoted by del1_nonceo_stock and

del1_nonceo_opt. Our independent variables of interest SoP, SoPQ1, and, SoPQ4 are in period t-1. The result indicates that SoP approvals are positively associated with the following increments in non-CEO stock and option compensations. The coefficient estimate of SoP is highly significant at 5% and 1 % level. The coefficient estimate of SoPQ1 is negative and significant at 5% level in stock compensation increment regression (Column 2).

In Table 1.13, we report the regression result for increments in non-equity compensation of non-CEOs. In this regression, the dependent variable is percentage change in the average non-equity compensations of the four non-CEO executives denoted by del1_nonceo_noneq_comp. The independent variables are in period t-1. We do not find any significance evidence of relation between our dependent variable and independent variable of interest SoP, SoPQ1, and SoPQ4.

In previous results we document that SoP is negatively related to CEO's pre-vote compensation, but that the increment to the CEO's compensation between the year of the vote and the following fiscal year is positively related to the SoP vote. Thus it is of interest to check the relation between SoP vote and the post-vote compensation level. The regression result reported in Table 1.14 demonstrates that the levels of CEO total and cash compensation is negatively related to SoP approval (SoP) even a year after the vote. The coefficient estimates of SoP and SoPQ1 and SoPQ4 are highly significant in total compensation regression, but insignificant in cash compensation regression. The strength of this relation is even stronger when we add the interaction of SoP and instq2q4 in column 4. This means higher institutional ownership monitor CEO compensations more closely. We also find that the total compensation is positively associated with firms' past stock return, ln_mtb, inst_own, Eindex, and negatively associated with insiderspctg. Cash compensation is positively associated with past roa and negatively associated with past cash_holdings and insiderspctg. The coefficient estimate of inst_own (institutional ownership percentage) is positive and highly significant for total compensation which is similar to the findings of Victoravich et al. (2012).

In Table 1.15, we report the regression results for CEO stock and stock option

compensations. The regression coefficient for SoP, SoPQ1 and SoPQ4 are significant at the 1 % level for stock compensation regression. The estimates indicate that relation with SoP may vary across institutional holdings and entrenchment. The SoP coefficient is the the relation for zero Eindex and the first inst_own quartile. In regression 6, we find that the regression coefficient of SoPQ1 is significant at 5% level. Both stock and option compensations are positively associated with firm size, market-to-book (ln_mtb), R&D (rnd) and institutional ownership percentage (inst_own) over the prior year. In regression 1, 2, 3 the positive coefficient estimates on cash holdings indicate that companies with cash holdings award higher stock compensations or it can be another indicator of good performance. We do not find any significant result for insiders' ownership percentages.

The regression estimates that are reported in Table 1.16 indicate that the level of CEO non-equity compensation is negatively associated with SoP approval (SoP). Column (2) and column (3) show that the coefficient estimates of SoPQ1 and SoPQ4 are highly significant. In regression 4, when we add the interaction term SoP x instq2q4 (i.e. SoP_instq2q4), the coefficient estimates of SoP decreases even more. This result indicates that institutional owners have a substantial impact on SoP in monitoring the level of non-equity compensation. We also find that the CEO non-equity compensation is positively associated with firm size, firms' past stock return, ln_mtb, inst_own, and chair. However, it is negatively associated with past return volatility and Eindex only for low SoP companies.

In Table 1.17 and 1.18 and 1.19, we report the regression results on the non-CEO executive compensations. The dependent variables are the average compensations of the four non-CEO executives in a year. Our independent variables of interest are SoP, SoPQ1, and SoPQ4 are in period t-1. We find that compensation is negatively related to SoP even a year after the vote, meaning that the compensation increment in the first year after the vote does not offset the initial negative relation. The coefficient estimates of SoP, SoPQ1, and SoPQ4 are highly significant which suggests that shareholders monitor even non-CEO executive total, cash, non-equity, stock and option

compensations. We find that the strength of this relationship is even stronger when we add the interaction of SoP and instq2a4. In all these regressions we also find that all the compensation variables are positively related to cash holdings. We also find that non-CEO total, cash and stock option compensation increases with increase in insider's ownership percentages.

1.6.4. Future firm performance and SoP vote

We examined the impact of SoP approval vote on both executive and non-executive compensation, and compensation increments. Next, we want to test its impact of future firm performance. We report our result in Table 1.20 where our dependent variables are the cumulative abnormal return starting 2 trading days and ending 255 (i.e. carp2p255) and 128 (i.e. carp2128) days after the vote. Our accounting explanatory variables are in period t-1 whereas stock equity cumulative abnormal return variables 255 and 128 prior to vote and ending 2 days before vote. These variables are denoted as carn255n2 and carn128n2. The independent variables of our interest are SoP, SoPQ1, and SoPQ4 as we want to see the impacts of SoP. We find that the coefficient estimate of SoP is negative and highly significant. The coefficient estimate of SoPQ1 is positive and highly significant in both the regressions (Column 2, 6). This indicates that the lack of shareholder support is associated with better following performance, and high support is associated with worse following performance. Next, we examine whether the relation between SoP and future performance is sensitive to institutional ownership (i.e., inst_own). We find that after including the interaction term SoP x instq2q4 (i.e., SoP_instq2q4), the strength of the association increases slightly. In another specification (not reported) we find that firms perform worse in the future if their CEO's SoP support is in Q3Q4.

In Table 1.21, we report the regression results of firm's change in ROA and MTB from period t-1 to t on SoP. We use independent variables in period t-1. We find no relationship of del_roa and del_mtb with SoP. However, we find that a negative relationship which is driven mainly by the low SoP observations (Column 5, 6). We do not find any significant evidence about the future performance of CEOs who are in Q4. In an unreported regression, we find that firms

perform worse in future in terms of investment if a CEO's SoP support is more than its median.

1.7. Robustness Check

1.7.1. Functional form of SoP (sqrt of SoP)

In order to test the robustness of our hypotheses, we further consider taking the different functional form of our voting approval variable i.e., SoP. Since the distribution of SoP is negatively skewed, we consider taking the square root of SoP. We run all our regressions for robustness check. We find that our regression results are robust to square root functional form of SoP. These unreported results are available upon request.

1.7.2. Industry dominance

Our second concern is if our sample is dominated by any two digit SIC single industry sector. If a particular two digit SIC dominates the sample, the result will be driven by that sector. We carefully analyze our 2 digit SIC frequency and find that the sample is free of any industry dominance. To further test our results, we include different firm size variables and include Kwoka's dominance index which is defined as the sum of the squared differences between each firm's share and the next largest share in that sector. Kwoka's dominance D is

$$D = \sum_{i=1}^{n-1}(s_i - s_{i+1})^2 \text{ where } s_1 \geq \dots \dots \geq s_i \geq s_{i+1} \geq s_n \text{ for all } i = 1, 2, \dots \dots, n-1$$

We find that our regression results for SoP are robust to any firm size variable.

1.7.3. Exclude Finance and regulated industries

Again, to check if our results are driven by finance and regulated industry, we exclude firms belong to 2 digit SIC 60-67 and 40-49. We find that our results still hold.

1.7.4. Winsorize SoP at 1% level because it is bounded by [0, 1]

Again, our variable SoP is in percentage form, hence it is bounded by [0, 1]. We winsorize SoP at the 1% level from both left and right tail in order to see if the results hold for a sub-sample analysis. We find no change in our results for any of our regression.

1.7.5. Tobit regression

We also use Panel data Tobit regression in Model 1 to investigate the determinants of SoP vote outcome because the distribution of SoP approval vote (SoP) is skewed negatively. Our results are consistent.

1.8. Conclusion

In this paper, we examine the determinant and impact of Say-on-Pay vote on executive compensation and firm performance. We find that SoP approval vote is positively related to past performance and negatively related to past compensation of the executives. We also find that SoP approval vote is negatively related to tenure of the CEO and positively related to the percentage of institutional holdings, insider's ownership percentage, and block holders percentage. Consistent with other findings, we document that SoP approval vote is positively related to ISS "For" recommendations. We find that the future performance measured as cumulative abnormal return is negatively related to SoP. The result indicates that CEOs in the bottom quartile of SoP vote perform better in the year following the SoP vote than CEOs who gained better SoP support. Our results also indicate that low SoP approval vote is associated with high future Market-to-Book. We do not find any significant evidence that relates SoP vote and firm's future capital expenditure.

Further investigation indicates that cash, total, non-equity, and option compensation increments are positively associated with past SoP approval vote. We also find that there is a negative relation between compensation components (cash, total, non-equity, stock, and option) and past SoP approval vote. It seems that the increments are not sufficient to offset the initial negative relation.

We conclude that SoP votes have some kind of incentive effect and act as a monitor. These findings complement our other results. We find that there may also be other indirect benefits to section 931 of Dodd-Frank act. It is also true that the subsequent disciplinary aspect of the voting mechanism also works in the USA (Nanda, Behera, and Palmon, 2015; Alissa, 2015) via likelihood of CEO replacement if the vote in favor of the CEO is less. The UK and some other European

countries have already adopted a forward-looking binding vote on remuneration policy, a binding vote on exit payments, and a non-binding vote on how remuneration policy has been adopted. In our opinion, there is more to research whether this non-binding voting mechanism helps USA firms to enhance corporate transparency or creates better and socially desirable leaders, who not only think about themselves, but also think about the shareholders and become a respected face of the firm.

1.9. References

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Appendix 1

Variables	Definitions
ln_cash_comp	Natural logarithm of cash compensation
ln_tot_comp	Natural logarithm of total compensation
ln_noneq_comp	Natural logarithm of non-equity compensation which is the dollar value of all amounts earned during the fiscal year pursuant to non-equity incentive plans in the year when the relevant specified performance criteria under the plan are satisfied and the compensation earned, whether or not payment is actually made to the named executive officer in that year.
ln_opt	Natural logarithm of option awards
ln_stock	Natural logarithm of stock awards
del1_cash_comp	Percentage changes in cash compensation from year t-1 to year t
del1_tot_comp	Percentage changes in total compensation from year t-1 to year t
del1_noneq_comp	Percentage changes in non-equity compensation from year t-1 to year t
del1_opt	Percentage changes on option compensation from year t-1 to year t
del1_stock	Percentage changes on stock compensation from year t-1 to year t
ln_nonceo_cashcomp	Natural log of mean of 4 non-CEO cash compensation
ln_nonceo_totcomp	Natural log of mean of 4 non-CEO total compensation
ln_nonceo_noneqcomp	Natural log of mean of 4 non-CEO non-equity compensation
ln_nonceo_stock	Natural log of mean of 4 non-CEO stock compensation
ln_nonceo_opt	Natural log of mean of 4 non-CEO option compensation
ln_mveq	Natural logarithm of market value of equity
ln_at	Natural logarithm of total assets
ln_sales	Natural logarithm of sale
Ret	Annualized monthly stock return
ret_vol	Annualized monthly stock return volatility
Roa	Return on asset(roa) which is income before extraordinary items over total assets
carn255n2	Cumulative abnormal ret 255 days prior and ending 2 days before vote
carp2p255	Cumulative abnormal ret after 2 days and ending 255 days after vote
carp2p128	Cumulative abnormal ret after 2 days and ending 255 days after vote
capex	Capital expenditure over total assets
ln_mtb	Natural log of market value of equity over book value of equity defined as: (LT+CSHO*PRCC_F)/AT
cash_holdings	Cash over total assets
chair	Dummy equal to 1 if CEO is chairman; otherwise 0
inst_own	Mean of 4 quarters institutional ownership percentage per year
Instq2q4	Dummy of inst_own = 1 if inst_own > Q2; else 0.
owners5pct%	% of shares held by 5% or greater shareholders (as per proxy statement)
insiders%	% of outstanding shares held by top managements and directors
tenure	Number of years CEO is CEO in a firm
age	Age of the CEO as reported in proxy statement
age65	Dummy equal to 1 if age is greater than 65; otherwise 0
SoP	For/(For+Against)
SoPQ1	Dummy equal to 1 if SoP is in its first quartile; otherwise 0
SoPQ4	Dummy equal t0 1 if SoP is in its fourth quartile; otherwise 0

Table 1.1. Summary Statistics: Voting Panel

The Table shows summary statistics for SoP voting approval for/(for + against) i.e., SoP, firm size, firm performance, investment, ownership, CEO age, CEO tenure for the fiscal year 2011-2014. Voting approval data i.e., "For", "Against" are from SEC form 8K. SoP is defined as for / (for + against). SoPQ1 is a dummy of SoP which is equal to 1 if SoP is in its 1st quartile; zero otherwise. Similarly, we define SoPQ4 is a dummy of SoP which takes a value equal to 1 if SoP is in its 4th quartile; zero otherwise. Firm size variables are the market value of equity, total assets, sales which are from COMPUSTAT. Stock return is defined as ret which is annualized monthly return and ret_vol is return volatility obtained from CRSP. carn255n2 is the cumulative abnormal return 255 trading days prior to voting and ending 2 days before the vote. Ret_vol and lag_vol are stock return volatility in the year of the vote and one year prior to voting. Return on asset (roa) is income before extraordinary items over total assets. mtb is the log of the market to book value of assets. Capex is defined as CAPX over total assets and cash_holdings is defined as COMPUSTAT item CH over total assets. Leverage is defined as total liability plus long-term debt over total assets. We use COMPUSTAT to collect the data for all the accounting variables. We use MSCI-GMI ratings to collect data on CEO compensation, tenure, and CEO age. Ln_cash_comp is the natural logarithm of CEO cash compensation which is defined as the sum of bonus and salary. Similarly, ln_tot_comp is the natural logarithm of CEO total compensation. Ln_noneq_comp is the natural logarithm of CEO non-equity compensations. Ln_opt and ln_stock are natural logarithms of CEO option and stock compensation. We use 13F-S34 to collect firm's percentage of institutional ownership data which is denoted as inst_own. Insiderspctg is the percentage of shares held by insiders of the firm.

Variables	N	Mean	StdDev	Min	P1	P25	P50	P75	P99	Max
SoP	6074	0.91	0.13	0.087	0.382	0.907	0.962	0.982	0.999	1
SoPQ1	6074	0.257	0.437	0	0	0	0	1	1	1
SoPQ4	6074	0.234	0.424	0	0	0	0	0	1	1
ln_mveq	6074	7.449	1.568	2.569	4.649	6.297	7.303	8.416	11.726	13.348
ret	6074	0.018	0.029	-0.185	-0.054	0.002	0.017	0.033	0.105	0.313
lag_ret	6074	0.022	0.042	-0.248	-0.057	0.002	0.017	0.035	0.168	1.176
ret_vol	6074	0.095	0.051	0.017	0.028	0.061	0.086	0.118	0.26	0.866
lag_vol	6074	0.119	0.092	0.017	0.029	0.071	0.101	0.142	0.434	3.884
roa	6074	0.029	0.141	-2.407	-0.572	0.009	0.037	0.076	0.272	0.783
MTB	6074	1.909	1.493	0.388	0.809	1.084	1.43	2.109	7.905	25.379
capex	6074	0.042	0.059	-0.001	0	0.007	0.025	0.053	0.311	0.737
leverage	6074	0.562	0.267	0.007	0.085	0.378	0.551	0.73	1.252	3.793
cash_holdings	6074	0.117	0.138	0	0.001	0.021	0.071	0.164	0.678	0.984
dirage	6074	56.891	7.398	33	41	52	57	61	76	96
tenure	6066	8.944	7.302	1	1	4	7	12	35	61
inst_own	6074	0.755	0.203	0.04	0.19	0.638	0.8	0.915	1	1
insiderspctg	6074	0.104	0.156	0	0	0.02	0.046	0.11	0.81	0.976
owners5%pctg	6074	0.261	0.161	0	0	0.139	0.243	0.356	0.779	1
instq2q4	6074	0.755	0.43	0	0	1	1	1	1	1
iss_for	6074	0.879	0.327	0	0	1	1	1	1	1
ln_tot_comp	6074	14.25	0.974	0	12.378	13.727	14.246	14.803	16.228	18.259
ln_cash_comp	6039	13.54	0.921	0	12.206	13.218	13.567	13.846	15.297	17.282
ln_noneq_comp	4536	13.62	1.129	0.693	10.637	12.974	13.704	14.361	15.96	17.268
ln_stock	4830	14.096	1.26	5.999	10.694	13.339	14.19	15.018	16.508	18.698
ln_opt	3159	13.748	1.166	6.31	10.415	13.036	13.83	14.53	16.258	18.323

Table 1.2. Summary Statistics: Compensation Panel

The Table reports the summary statistics for the compensation panel. We use MSCI-GMI to collect data on CEO compensation, tenure, and CEO age. Ln_cash_comp is the natural log of CEO cash compensation which is defined as the sum of bonus and salary. Similarly, ln_tot_comp is the natural logarithm of CEO total compensation. Ln_noneq_comp is the natural logarithm of CEO non-equity compensation. Ln_opt and ln_stock are natural logarithms of CEO option and stock compensation. del1_cash_comp, del1_tot_comp, del1_noneq_comp, del1_stock, del1_opt are the percentage changes in cash, total, non-equity, stock and option compensations. ln_nonceo_totcomp is the natural log of the avarage of top four non-CEO total compensations. Ln_nonceo_cashcomp is the natural log of the average of the top four non-CEO cash compensations. Ln_nonceo_noneqcomp is the natural log of the average of top four non-CEO non-equity compensations. Ln_nonceo_stock is the natural log of the average of top four non-CEO stock compensations. Ln_nonceo_opt is the natural log of the average of top four non-CEO option compensations. del_nonceo_tot is the percentage change in the average of top four non-CEO total compensations. del_nonceo_cash is the percentage change in the average of non-CEO cash compensations. del_nonceo_noneq is the percentage change in the average of top four non-CEO non-equity compensations. del_nonceo_stock is the percentage change in the average of top four non-CEO stock compensations. del_nonceo_opt is the percentage change in the average of top four non-CEO option compensations. Firm size variable is natural log of the market value of total assets (COMPUSTAT item). Stock return is defined as ret, which is annualized monthly return and ret_vol is volatility of the monthly return obtained from CRSP. Lag_ret and lag_vol are one year lagged value of ret and ret_vol. Return on assets (roa) is defined as income before extraordinary items over total assets. Ln_mtb is natural log of Market-to-Book value of equity. Capex is defined as CAPX over total assets and cash_holdings is defined as COMPUSTAT variable cash i.e., CH over total assets. The chair is a dummy variable which takes a value of 1 if CEO is also the chairman, otherwise zero. Inst_own is the % of institutional holdings. owners5%pctg is the % of shares held by 5% or greater shareholders. Insiderspctg is the % of outstanding shares held by top management and directors. We use COMPUSTAT to collect the data for all the accounting variables. We use 13F-S34 to collect the data on institutional ownerships. We use CRSP to collect stock return data. We use RISKMETRICS data for E-index. We use SEC Form 8K for SoP (SoP approval vote). SoPQ1 and SoPQ4 are the dummies as described in voting panel.

Variables	N	Mean	StdDev	Min	P25	P50	P75	P99	Max
SoP	3121	0.908	0.127	0.087	0.904	0.958	0.978	0.997	1
SoPQ1	3121	0.246	0.431	0	0	0	0	1	1
SoPQ4	3121	0.363	0.481	0	0	0	1	1	1
ln_cash_comp	3120	6.734	1.012	-6.908	6.499	6.791	7.005	8.548	9.831
ln_tot_comp1	3121	8.45	0.871	2.38	7.898	8.506	9.05	10.196	11.464
ln_noneq_comp	2635	6.966	1.033	-6.215	6.416	7.014	7.601	9.228	10.039
ln_stock	2767	7.617	1.089	-1.609	6.981	7.73	8.393	9.644	10.48
ln_opt	1602	7.069	1.08	-0.598	6.397	7.139	7.804	9.45	10.494
del1_tot_comp1	3121	0.063	0.554	-3.193	-0.098	0.062	0.232	1.459	15.245
del1_cash_comp	3120	0.011	0.737	-15.84	0	0.026	0.063	0.879	14.221
del1_noneq_comp	2435	0.031	0.699	-13.67	-0.207	0.036	0.309	1.774	4.166
del1_stock	2623	0.118	0.589	-4.802	-0.058	0.08	0.32	1.934	4.284
del1_opt	1488	0	0.524	-7.499	-0.16	0.031	0.191	1.476	2.741
ln_nonceo_totcomp	3110	7.489	0.757	5.41	6.971	7.466	7.979	9.286	11.198
ln_nonceo_cashcomp	3110	6.191	0.474	4.039	5.883	6.13	6.412	7.836	8.956
ln_nonceo_noneqcomp	2715	5.847	1.008	-0.182	5.255	5.887	6.506	8.102	9.043

Table   1.2   Cont.

Variables	N	Mean	StdDev	Min	P25	P50	P75	P99	Max
ln_nonceo_stock	2898	6.394	1.108	1.167	5.729	6.47	7.128	8.758	11.164
ln_nonceo_opt	1719	5.711	1.104	-1.51	5.017	5.742	6.445	8.099	9.389
del_nonceo_tot	2786	0.036	0.404	-3.34	-0.131	0.046	0.21	1.197	3.962
del_nonceo_cash	2786	0.022	0.206	-2.611	-0.024	0.032	0.086	0.574	2.454
del_nonceo_noneq	2244	-0.005	0.734	-5.218	-0.297	0.023	0.288	2.312	5.321
del_nonceo_stock	2458	0.103	0.696	-4.747	-0.186	0.078	0.401	2.014	4.409
del_nonceo_opt	1523	-0.012	0.636	-4.834	-0.266	0.034	0.261	1.728	4.462
ln_at	3121	8.201	1.724	3.451	6.91	8.088	9.241	12.757	14.697
ret	3121	0.015	0.024	-0.185	0.002	0.015	0.029	0.077	0.137
ret_vol	3121	0.081	0.039	0.017	0.053	0.072	0.102	0.21	0.33
roa	3121	0.051	0.085	-1.997	0.016	0.046	0.084	0.248	0.756
capex	3121	0.042	0.054	0	0.01	0.027	0.055	0.263	0.558
rnd	3121	0.024	0.053	0	0	0	0.024	0.228	0.887
ln_mtb	3013	0.818	0.723	-1.499	0.317	0.755	1.207	2.882	7.34
cash_holdings	3121	0.138	0.148	0	0.029	0.084	0.197	0.644	0.869
chair	3121	0.392	0.488	0	0	0	1	1	1
inst_own	3121	0.811	0.146	0.158	0.719	0.84	0.926	1	1
owners5%pctg	3116	0.257	0.145	0	0.149	0.241	0.351	0.642	0.983
insiderspctg	3116	0.065	0.103	0	0.015	0.032	0.067	0.592	0.975
Eindex	2843	2.454	0.765	1	2	2	3	4	6

Table 1.3. Correlation Matrix

The table reports the correlation matrix of the variables used in this study and described in the Appendix.

	SoP	Ln_mveq	Ret	carn255n2	ret_vol	roa	mtb	cash_hold	Ln_lag_ten	Inst_own	Insiders%	iss_for	ln_tot_comp	ln_cash_Comp	ln_noneq_comp	ln_stock	ln_opt
SoP	1																
ln_mveq	-0.02	1															
Ret	0.14	0.05	1														
carn255n2	0.03	0.01	0.16	1													
ret_vol	-0.06	-0.36	0.26	0.03	1												
Roa	0.07	0.26	0.04	-0.01	-0.31	1											
Mtb	0.07	0.10	0.28	0.02	0.18	-0.13	1										
cash_holdings	-0.03	-0.15	0.11	0.04	0.34	-0.21	0.45	1									
ln_lag_ten	-0.08	-0.06	0.01	-0.02	-0.02	0.01	0.03	0.00	1								
inst_own	-0.08	0.24	-0.05	-0.02	-0.08	0.14	0.02	0.00	-0.06	1							
Insiderspctg	0.09	-0.25	0.09	0.01	0.17	-0.05	0.05	0.08	0.13	-0.35	1						
iss_for	0.75	0.02	0.12	0.02	-0.07	0.07	0.04	-0.03	-0.07	-0.01	-0.06	1					
ln_tot_comp	-0.15	0.53	0.04	0.01	-0.18	0.17	-0.06	-0.12	-0.01	0.20	-0.14	-0.1	1				
ln_cash_comp	-0.12	0.28	0.01	0.01	-0.09	0.07	-0.09	-0.09	0.00	0.11	-0.11	-0.08	0.72	1			
ln_noneq_comp	-0.13	0.23	0.07	0.07	-0.21	0.23	-0.05	-0.14	-0.04	0.19	-0.14	-0.06	0.89	0.47	1		
ln_stock	-0.19	0.25	-0.01	0.00	-0.18	0.14	0.04	-0.04	-0.02	0.30	-0.20	-0.13	0.55	0.42	0.54	1	
ln_opt	-0.17	0.23	-0.02	-0.03	-0.1	0.11	0.13	-0.02	-0.05	0.27	-0.14	-0.13	0.47	0.27	0.51	0.66	1

Table 1.4. Say-on-Pay approval votes and total compensation
This Table reports the OLS regression of SoP and Logit estimates of SoPQ1 and SoPQ4 on firm performance and compensation variables with industry fixed effect and year dummy. The dependent variable is SoP which is a vote for percentages, defined as for / (for+against). SoPQ1 is a dummy which takes a value equal to 1 if SoP is in its 1st quartile; zero otherwise. Similarly, SoPQ4 is a dummy which takes a value of 1 if SoP is in its 4th quartile; zero otherwise. We use one year lagged values of time-varying independent variables. Our firm size variable is ln_mveq which is the natural log of the market value of equity (CSHO*PRCC_F). carn255n2 is the cumulative abnormal return starting 255 trading days prior to vote and ending 2 days before vote. Ret is the 12 month average return prior to voting year. lag_ret is the average of return two year prior to vote. Ret_vol is the standard deviation of the return. Lag_vol is the standard deviation of the return a year prior to the vote. Roa is the return on assets which is the ratio of income before extra- ordinary items over the book value of total assets. Ln_mtb is the natural log of market-to-book, i.e., (LT + CSHO*PRCC_F)/AT. Capex is defined as capital expenditure over the book value of total assets. Cash_holdings is defined as cash (COMPUSTAT item CH) over book value of total assets. Age65 is a dummy which is equal to 1 if age is greater than 65 years; otherwise zero. Ln_lag_ten is defined as the natural log of tenure of the CEO. Inst_own is the mean of quarterly institutional holdings percentages of firms' outstanding shares in a given year. Insiderspctg is the percentage of outstanding shares held by top management and directors. Iss_for is a dummy which takes a value of 1 if ISS recommends "For", otherwise zero. Ln_tot_comp is natural log of total compensation.

	(1) SoP OLS Ret	(2) SoPQ1 Logit Ret	(3) SoPQ4 Logit Ret	(4) SoP OLS CAR	(5) SoPQ1 Logit CAR	(6) SoPQ4 Logit CAR
ln_mveq	0.00 (0.61)	-0.11** (-2.84)	-0.01 (-0.43)	0.01 (1.47)	-0.13** (-3.27)	0.00 (0.03)
Ret	0.20*** (4.58)	-8.31*** (-5.33)	4.23** (3.01)			
lag_ret	0.11** (3.04)	-3.44** (-2.80)	2.72* (2.42)			
carn255n2				0.01 (0.41)	-0.20* (-2.21)	0.04 (0.46)
ret_vol	-0.18*** (-6.20)	3.55*** (3.68)	-1.69 (-1.87)	-0.15 (-1.16)	2.58** (2.89)	-1.11 (-1.32)
lag_vol	-0.03 (-1.44)	1.93** (3.07)	-1.17 (-1.91)	-0.05 (-0.77)	0.79 (1.78)	-0.24 (-0.53)
roa	0.03*** (3.61)	-1.50*** (-5.06)	1.00*** (3.50)	0.14*** (3.51)	-1.90*** (-6.50)	1.21*** (4.31)
mtb	0.00** (2.72)	-0.04 (-1.21)	0.08** (3.10)	0.02*** (4.75)	-0.11** (-3.23)	0.11*** (4.45)
capex	0.03 (1.30)	-0.49 (-0.71)	-0.01 (-0.01)	0.06 (0.47)	-0.29 (-0.42)	-0.16 (-0.26)
leverage	-0.00 (-0.10)	-0.05 (-0.33)	0.06 (0.44)	-0.02 (-0.67)	-0.09 (-0.57)	0.07 (0.54)
cash_holdings	-0.00 (-0.41)	0.21 (0.62)	-0.29 (-0.99)	-0.04 (-0.79)	0.28 (0.84)	-0.33 (-1.11)
age65	0.01*** (3.76)	-0.43*** (-3.56)	-0.04 (-0.35)	-0.01 (-0.33)	-0.41*** (-3.43)	-0.05 (-0.44)
ln_lag_ten	-0.01*** (-4.18)	0.16*** (3.31)	-0.05 (-1.26)	-0.01 (-1.30)	0.16*** (3.37)	-0.06 (-1.34)
inst_own	-0.03*** (-5.11)	0.69** (2.99)	0.51** (2.61)	0.01 (0.32)	0.69** (3.00)	0.49* (2.54)
insiderspctg	0.13*** (15.49)	-3.95*** (-10.07)	6.22*** (22.34)	0.96*** (24.90)	-4.08*** (-10.45)	6.26*** (22.50)
owners5%pctg	0.05*** (6.67)	-0.88** (-3.20)	3.47*** (14.70)	0.53*** (14.79)	-0.92*** (-3.33)	3.46*** (14.68)
iss_for	0.29*** (88.64)	-4.69*** (-25.29)	3.51*** (12.33)	0.25*** (15.77)	-4.76*** (-25.66)	3.56*** (12.53)
ln_tot_comp	-0.01*** (-6.74)	0.46*** (6.78)	-0.30*** (-5.83)	-0.05*** (-7.09)	0.44*** (6.47)	-0.29*** (-5.74)
_cons	0.78*** (40.33)	-2.93*** (-3.37)	-2.11** (-2.85)	0.38*** (4.14)	-2.29** (-2.67)	-2.47*** (-3.39)
N	6074	6074	6074	6074	6074	6074
Ind FE	Yes	Yes	Yes	Yes	Yes	Yes
Yr Dummy	Yes	Yes	Yes	Yes	Yes	Yes

Table 1.5. Determinants of SoP approval vote

This Table reports the OLS regression (robust standard error) of SoP on firm performance and compensation variables with industry and year dummy. The dependent variable is SoP which is a vote for percentage, defined as for / (for+against). We use one year lagged values of time-varying independent variables. Our firm size variable is ln_mveq which is the natural log of the market value of equity (CSHO*PRCC_F). carn255n2 is the cumulative abnormal return 255 trading days prior to voting and ending before 2 days. Ret_vol is the standard deviation of the return. Lag_vol is the standard deviation of the return a year prior to the vote. Roa is the return on assets which is the ratio of income before extra- ordinary items over the book value of total assets. Ln_mtb is the natural log of market-to-book, i.e., (LT + CSHO*PRCC_F)/AT. Capex is defined as capital expenditure over the book value of total assets. Cash_holdings is defined as cash (COMPUSTAT item CH) over book value of total assets. Age65 is a dummy which is equal to 1 if age is greater than 65 years; otherwise zero. Ln_lag_ten is defined as the natural log of tenure of the CEO. Inst_own is the mean of quarterly institutional holdings percentages of firms' outstanding shares in a given year. Insiderspctg is the percentage of outstanding shares held by top management and directors. Iss_for is a dummy which takes a value of 1 if ISS recommends "For", otherwise zero. Ln_cash_comp is the natural logarithm of salary and bonus. Ln_tot_comp is natural log of total compensation. Ln_noneq_comp is natural log of non-equity compensation. Ln_stock is natural log of stock compensation and ln_opt is natural logarithms of option compensation. Instq2q4 is a dummy which takes a value 1 if the firm's institutional ownership is more than 2nd quartile, else equal to zero. carn255n2_instq2q4 is carn255n2 times instq2q4. Similarly, roa_instq2q4 is roa time's instq2q4. abnor_comp is the residual of the OLS regression given below

$$
\begin{aligned}
\ln(totcomp)_t = {} & \ln(MVEQ)_t + \text{carn255n2} + \text{retvol}_t + \text{lagvol}_{t-1} + \text{roa}_t + \text{mtb}_t + \text{capex}_t \\
& + \text{leverage}_t + cashholdings_t + \text{age65} + \ln(\text{ten}) + \text{instown}_t \\
& + \text{insiderspctg}_t + \text{own5\%pctg} + \text{issfor}_t + \text{residual}_t
\end{aligned}
$$

abcomp_instq2q4 is abnormal compensation times instq2q4. We define own5%pctg_car as the product of percentage of 5% block holders and carn255n2. Similarly, we define totcomp_instq2q4, cashcomp_instq2q4, noneqcomp_instq2q4, stockcomp_instq2q4 and optcomp_instq2q4 as the product of ln_total compensation, ln_cash_comp, ln_noneq_comp, ln_stock, ln_opt and instq2q4. We define totcomp_own5%pctg, cashcomp_own5%pctg, noneqcomp_own5%pctg, stockcomp_own5%pctg and optcomp_own5%pctg as the product of ln_tot_comp, ln_cash_comp, ln_noneq_comp, ln_stock, ln_opt and own5%pctg. The *t*-statistics appear in the bracket below the parameter estimates. All specifications include year dummy and industry fixed effects but do not tabulate. Asterisks ***, **, * indicates significance at the 0.1%, 1%, and 5% level, respectively.

	(1) SoP	(2) SoP	(3) SoP	(4) SoP	(5) SoP	(6) SoP
ln_mveq	-0.00*	0.00	-0.00	0.00	0.01***	0.00
	(-2.51)	(0.53)	(-1.27)	(1.59)	(4.59)	(1.88)
carn255n2	-0.01	-0.01	-0.01	-0.02*	-0.01	-0.00
	(-1.46)	(-1.51)	(-1.54)	(-2.33)	(-1.46)	(-0.46)
carn255n2_instq2q4	0.01**	0.01***	0.01***	0.01*	0.01**	0.01
	(3.21)	(3.72)	(3.51)	(2.16)	(2.65)	(1.56)
ret_vol	-0.15***	-0.15***	-0.14***	-0.14***	-0.11***	-0.10**
	(-5.24)	(-5.16)	(-5.03)	(-4.18)	(-3.50)	(-2.60)
lag_vol	0.00	0.01	0.01	0.00	0.01	0.01
	(0.23)	(0.53)	(0.51)	(0.30)	(0.97)	(0.58)
roa	0.01	0.00	0.00	0.01	-0.02	0.01
	(0.40)	(0.24)	(0.24)	(0.61)	(-0.70)	(0.23)
roa_instq2q4	0.06**	0.07***	0.07**	0.08**	0.11***	0.07**
	(2.92)	(3.39)	(3.10)	(2.91)	(4.19)	(2.66)
mtb	0.00***	0.00***	0.00***	0.00**	0.00***	0.01***
	(5.26)	(4.49)	(4.73)	(3.08)	(3.79)	(4.85)
capex	0.03	0.03	0.03	0.02	0.04	0.07
	(1.09)	(0.90)	(1.14)	(0.62)	(1.36)	(1.71)
leverage	-0.00	0.00	-0.00	0.00	0.00	-0.00
	(-0.83)	(0.03)	(-0.46)	(0.33)	(0.29)	(-0.42)
cash_holdings	-0.01	-0.01	-0.01	-0.01	-0.00	-0.01
	(-1.23)	(-0.92)	(-1.01)	(-0.89)	(-0.14)	(-0.86)
age65	0.01**	0.01**	0.01**	0.01*	0.01**	0.02**
	(3.28)	(3.05)	(3.13)	(2.20)	(2.83)	(2.77)
ln_lag_ten	-0.01***	-0.01***	-0.01***	-0.01***	-0.01***	-0.01**
	(-4.30)	(-4.18)	(-4.31)	(-4.00)	(-3.61)	(-2.73)
instq2q4	-0.01***	0.12**	0.14**	0.10**	0.16***	0.11*
	(-5.09)	(2.74)	(3.08)	(2.85)	(5.82)	(2.50)
insiderspctg	0.13***	0.13***	0.13***	0.14***	0.13***	0.11***
	(14.66)	(14.66)	(14.57)	(12.29)	(9.96)	(7.97)
owners5%pctg	0.05***	0.24	0.20	0.10	0.14	0.08
	(6.14)	(1.57)	(1.69)	(0.89)	(1.46)	(0.76)
own5pctpctg_car	0.02	0.02	0.02	0.06**	0.03	0.00
	(1.31)	(1.36)	(1.40)	(2.79)	(1.41)	(0.16)
iss_for	0.30***	0.30***	0.30***	0.30***	0.30***	0.29***
	(49.57)	(49.15)	(49.27)	(41.16)	(45.84)	(36.98)
abnor_comp	-0.00					
	(-0.14)					
abcomp_instq2q4	-0.00					
	(-1.01)					

Table 1.5 Continues

abnorcomp_own5pctpctg	-0.02 (-1.65)					
ln_tot_comp		0.00 (0.22)				
totcomp_instq2q4		-0.01** (-3.01)				
totcomp_own5pctpctg		-0.01 (-1.27)				
ln_cash_comp			0.00 (1.35)			
cashcomp_instq2q4			-0.01*** (-3.36)			
cashcomp_own5pctpctg			-0.01 (-1.29)			
ln_noneq_comp				-0.00 (-1.05)		
noneqcomp_instq2q4				-0.01** (-3.21)		
noneqcomp_own5pctpctg				-0.00 (-0.51)		
ln_stock					-0.00 (-1.02)	
stockcomp_instq2q4					-0.01*** (-6.28)	
stockcomp_own5pctpctg					-0.01 (-1.01)	
ln_opt						-0.00 (-1.23)
optcomp_instq2q4						-0.01** (-2.71)
optcomp_own5pctpctg						-0.00 (-0.37)
_cons	0.60*** (17.37)	0.57*** (8.95)	0.53*** (9.25)	0.65*** (14.78)	0.56*** (10.75)	0.66*** (12.80)
N	6074	6074	6039	4536	4830	3159
R^2	0.6240	0.6248	0.6254	0.6291	0.6433	0.6333
Ind Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Yr Dummy	Yes	Yes	Yes	Yes	Yes	Yes

Table 1.6. Log likelihood of 1ˢᵗ Quartile SoP approval vote

This Table reports the fixed effect logit estimates of the vote in 1ˢᵗ quartile. The dependent variable is SoPQ1. We define SoPQ1 as a dummy which takes a value of 1 if SoP is in its 1ˢᵗ quartile. SoP is defined as for/(for+against). We use one year lagged values of time-varying independent variables. Our firm size variable is ln_mveq which is the natural log of the market value of equity i.e., (CSHO*PRCC_F). carn255n2 i.e., CAR (-255, -2) is the cumulative abnormal return 255 trading days prior to voting and ending 2 trading days before the vote. Ret_vol is the standard deviation of the return. Lag_vol is the standard deviation of the return one years prior to the vote. Roa is the return on assets which is the ratio of income before extra- ordinary items over book value of total assets. Ln_mtb is the natural log of market-to-book, i.e., (LT + CSHO*PRCC_F)/AT. Capex is defined as capital expenditure over book value of total assets. Cash_holdings is defined as cash over the book value of total assets. Age65 is a dummy which is equal to 1 if age is greater than 65 years; otherwise zero. Ln_lag_ten is defined as the natural log of tenure of the CEO. Inst_own is the mean of quarterly institutional holdings percentages of firms' outstanding shares in a given year. Insider's % is a percentage of outstanding shares held by top management and directors. Owners5%pctg is % of shares held by 5% or greater shareholders, as reported in a proxy statement. Ln_cash_comp is the natural logarithm of salary and bonus. Ln_tot_comp is natural log of total compensation. Ln_noneq_comp is natural log of non-equity compensation. Ln_stock is natural log of stock compensation and ln_opt is natural log of stock option compensation. The *t*-statistics appear in the bracket below the parameter estimates. All specifications include year dummy and industry fixed effects but do not tabulate. Asterisks ***, **, * indicates significance at the 0.1%, 1%, and 5% level, respectively.

	(1) SoPQ1	(2) SoPQ1	(3) SoPQ1	(4) SoPQ1	(5) SoPQ1	(6) SoPQ1
ln_mveq	-0.12**	-0.07	-0.09*	-0.22***	-0.21***	0.03
	(-3.09)	(-1.95)	(-2.09)	(-4.79)	(-3.74)	(0.84)
carn255n2	-0.30	-0.28	-0.30	-0.82**	-0.17	-0.34
	(-1.67)	(-1.54)	(-1.29)	(-3.06)	(-0.73)	(-1.84)
carn255n2_instq2q4	0.14	0.16	0.18	0.76**	0.10	0.25
	(0.66)	(0.79)	(0.67)	(2.63)	(0.36)	(1.19)
ret_vol	2.79**	2.72**	2.27*	2.75*	0.22	2.93**
	(3.11)	(3.06)	(2.14)	(2.57)	(0.17)	(3.27)
lag_vol	0.81	0.78	0.76	0.68	0.47	1.01*
	(1.81)	(1.79)	(1.59)	(1.32)	(1.01)	(2.25)
Roa	-1.02**	-0.92*	-1.13*	-0.93	-1.17*	-1.04**
	(-2.58)	(-2.35)	(-2.24)	(-1.44)	(-2.56)	(-2.66)
roa_instq2q4	-1.56**	-1.39**	-2.18**	-2.60**	-1.06	-1.21*
	(-2.93)	(-2.66)	(-3.08)	(-3.26)	(-1.84)	(-2.32)
Mtb	-0.11**	-0.11**	-0.09*	-0.14***	-0.21***	-0.14***
	(-3.13)	(-3.14)	(-2.40)	(-3.38)	(-4.60)	(-4.28)
Capex	-0.19	-0.39	-0.07	-0.90	-0.53	-0.27
	(-0.28)	(-0.58)	(-0.08)	(-1.23)	(-0.50)	(-0.40)
Leverage	-0.12	-0.09	-0.07	-0.04	0.01	0.08
	(-0.72)	(-0.58)	(-0.35)	(-0.21)	(0.07)	(0.52)
cash_holdings	0.43	0.52	0.69	0.40	0.18	0.58
	(1.25)	(1.52)	(1.66)	(0.99)	(0.42)	(1.69)
age65	-0.40***	-0.40***	-0.55***	-0.39**	-0.65***	-0.45***
	(-3.35)	(-3.38)	(-3.79)	(-2.76)	(-3.67)	(-3.74)
ln_lag_ten	0.16***	0.15**	0.23***	0.20***	0.14*	0.17***
	(3.35)	(3.23)	(3.98)	(3.69)	(2.15)	(3.62)
instq2q4	-3.38*	-6.02***	-2.67	-3.47**	-4.47**	0.36***
	(-2.11)	(-3.50)	(-1.91)	(-2.89)	(-2.96)	(3.52)
Insiderspctg	-4.12***	-3.92***	-4.21***	-3.05***	-3.41***	-4.15***
	(-10.56)	(-10.20)	(-8.55)	(-6.63)	(-5.24)	(-10.62)
owners5%pctg	-0.82**	-0.83**	-0.60	-0.79*	-0.61	-0.86**
	(-3.00)	(-3.09)	(-1.83)	(-2.53)	(-1.63)	(-3.17)
iss_for	-4.78***	-4.84***	-5.02***	-4.84***	-5.02***	-4.89***
	(-25.67)	(-25.77)	(-20.63)	(-21.51)	(-16.66)	(-26.24)
ln_tot_comp	0.26*					
	(2.45)					
totcomp_instq2q4	0.26*					
	(2.29)					
ln_cash_comp		0.12				
		(1.28)				

Table 1.6 Continues

cashcomp_instq2q4	0.47***					
	(3.68)					
ln_noneq_comp		0.20*				
		(1.99)				
noneqcomp_instq2q4		0.21*				
		(2.06)				
ln_stock			0.29***			
			(3.51)			
stockcomp_instq2q4			0.27**			
			(3.17)			
ln_opt				0.24*		
				(2.22)		
optcomp_instq2q4				0.34**		
				(2.98)		
abnor_comp					0.42**	
					(3.02)	
abcomp_instq2q4					0.04	
					(0.23)	
_cons	0.46	2.12	1.45	0.79	2.58	3.14***
	(0.32)	(1.63)	(1.14)	(0.73)	(1.92)	(8.06)
N	6073	6130	4616	4921	3203	6073
Ind FE	Yes	Yes	Yes	Yes	Yes	Yes
Yr Dummy	Yes	Yes	Yes	Yes	Yes	Yes

Table 1.7. Log likelihood of 4th Quartile SoP approval vote

This Table reports the fixed effect logit estimation of SoPQ4 on firm performance and compensation variables. The dependent variable is SoPQ4. SoPQ4 is SoP in its 4th quartile. SoP is defined as for/(for+against). We use one year lagged values of time-varying independent variables. Our firm size variable is ln_mveq which is the natural log of the market value of equity i.e., (CSHO*PRCC_F). carn255n2 i.e., CAR (-255, -2) is the cumulative abnormal return 255 trading days prior to voting and ending 2 trading days before the vote. Ret_vol is the standard deviation of the return. Lag_vol is the standard deviation of the return one years prior to the vote. Roa is the return on assets which is the ratio of income before extra- ordinary items over the book value of total assets. Ln_mtb is the natural log of market-to-book, i.e. (LT + CSHO*PRCC_F)/AT. Capex is defined as capital expenditure over the book value of total assets. Cash_holdings is defined as cash (CH) over book value of total assets. Age65 is a dummy which is equal to 1 if age is greater than 65 years; otherwise zero. Ln_lag_ten is defined as the natural log of tenure of the CEO. Inst_own is the mean of quarterly institutional holdings percentages of firms' outstanding shares in a given year. Insider's% is a percentage of outstanding shares held by top management and directors. Owners5%pctg is % of shares held by 5% or greater shareholders, as reported in a proxy statement. Ln_cash_comp is the natural logarithm of sum of salary and bonus. Ln_tot_comp is natural log of total compensation. Ln_noneq_comp is natural log of non-equity compensation. Ln_stock is natural log of stock compensation and ln_opt is natural log of stock option compensation. The *t*-statistics appear in the bracket below the parameter estimates. All specifications include year dummy and industry fixed effects but do not tabulate. Asterisks ***, **, * indicates significance at the 0.1%, 1%, and 5% level, respectively.

	(1) SoPQ4	(2) SoPQ4	(3) SoPQ4	(4) SoPQ4	(5) SoPQ4	(6) SoPQ4
ln_mveq	-0.09**	0.01	-0.06*	0.03	-0.00	0.04
	(-3.08)	(0.20)	(-2.02)	(0.62)	(-0.03)	(0.72)
ret_vol	-1.16	-1.03	-1.07	-0.72	-1.35	0.09
	(-1.36)	(-1.21)	(-1.26)	(-0.73)	(-1.35)	(0.08)
lag_vol	-0.37	-0.25	-0.30	-0.06	-0.02	-1.06
	(-0.81)	(-0.53)	(-0.63)	(-0.12)	(-0.04)	(-1.31)
mtb	0.13***	0.11***	0.12***	0.14***	0.15***	0.12***
	(5.57)	(4.53)	(5.13)	(4.65)	(4.93)	(3.94)
capex	-0.09	-0.15	0.06	-0.18	0.32	-0.47
	(-0.15)	(-0.24)	(0.09)	(-0.25)	(0.47)	(-0.47)
leverage	-0.05	0.08	-0.00	0.03	0.13	-0.12
	(-0.36)	(0.61)	(-0.03)	(0.18)	(0.83)	(-0.69)
cash_holdings	-0.38	-0.28	-0.34	-0.30	-0.48	-0.22
	(-1.28)	(-0.95)	(-1.13)	(-0.85)	(-1.29)	(-0.57)
age65	-0.02	-0.05	-0.03	0.06	0.16	0.13
	(-0.17)	(-0.42)	(-0.24)	(0.43)	(1.08)	(0.70)
ln_lag_ten	-0.07	-0.06	-0.07	-0.11*	-0.13**	-0.12
	(-1.62)	(-1.42)	(-1.57)	(-2.29)	(-2.68)	(-1.90)
instq2q4	0.11	2.66*	1.25	1.18	3.35***	2.48
	(1.28)	(2.18)	(1.09)	(1.00)	(3.42)	(1.87)
insiderspctg	6.15***	6.13***	5.92***	6.39***	5.76***	5.84***
	(22.22)	(22.17)	(21.79)	(18.57)	(17.42)	(13.19)
owners5%pctg	3.49***	3.46***	3.50***	3.59***	3.50***	3.98***
	(14.89)	(14.74)	(15.06)	(12.55)	(12.82)	(11.80)
iss_for	3.64***	3.57***	3.69***	3.67***	3.44***	3.94***
	(12.88)	(12.56)	(12.41)	(9.99)	(9.87)	(6.63)
carn255n2	0.05	0.04	0.06	-0.17	0.37	0.12
	(0.30)	(0.26)	(0.42)	(-0.84)	(1.76)	(0.56)
carn255n2_instq2q4	-0.07	-0.01	-0.08	0.20	-0.47	-0.10
	(-0.38)	(-0.06)	(-0.46)	(0.87)	(-1.95)	(-0.39)
roa	1.79***	1.74***	1.73***	2.08**	1.89*	1.27*
	(3.99)	(3.89)	(3.92)	(3.07)	(2.36)	(2.45)
roa_instq2q4	-1.10*	-0.85	-1.01	-1.11	-0.95	-0.81
	(-2.01)	(-1.55)	(-1.86)	(-1.38)	(-1.05)	(-1.30)
abnor_comp	-0.23**					
	(-2.77)					
abcomp_instq2q4	-0.09					
	(-0.81)					
ln_tot_comp		-0.17*				
		(-2.34)				

Table 1.7 Continues

totcomp_instq2q4	-0.18*					
	(-2.06)					
ln_cash_comp		-0.09				
		(-1.16)				
cashcomp_instq2q4		-0.09				
		(-1.00)				
ln_noneq_comp			-0.18*			
			(-2.11)			
noneqcomp_instq2q4			-0.07			
			(-0.83)			
ln_stock				-0.01		
				(-0.20)		
stockcomp_instq2q4				-0.23**		
				(-3.17)		
ln_opt					-0.10	
					(-1.11)	
optcomp_instq2q4					-0.17	
					(-1.72)	
_cons	-5.68***	-3.97***	-4.77***	-4.35***	-6.20***	-5.73***
	(-13.45)	(-3.89)	(-4.59)	(-3.87)	(-6.67)	(-4.38)
N	6073	6073	6130	4616	4921	3203
Ind FE	Yes	Yes	Yes	Yes	Yes	Yes
Yr Dummy	Yes	Yes	Yes	Yes	Yes	Yes

Table 1.8. Change in total, cash compensations and SoP vote

The Table presents fixed effect regression estimates of the impact of SoP approval votes on the percentage change in total and cash compensations of the CEO. Our independent variables are in time t-1. The main variable of interest, SoP is For / (For+Against). SoPQ1 is a dummy which is equal to 1 if SoP is in its 1ˢᵗ quartile; otherwise zero. Similarly, SoPQ4 is a dummy which is equal to 1 if SoP is in its 4ᵗʰ quartile; otherwise 0. Firm size is defined as the natural logarithm of total assets which is ln_at. Ret is annualized monthly stock return. Ret_vol is the standard deviation of monthly return. Return on assets (roa) is defined as income before extraordinary items over total assets. Capex is capital expenditure which is defined as CAPX (COMPUSTAT item) over total assets (AT). Rnd is research and development which is defined as XRD (COMPUSTAT item) over total assets (AT). Ln_mtb is the log of market-to-book value of equity. Cash-holdings is defined as CH (COMPUSTAT item) over AT. chair is a dummy which is equal to 1 if CEO is also the chairman of the firm, otherwise zero. Inst_own is the mean of quarterly institutional holdings percentage of firms' outstanding shares in a given year. Next, we define instq2q4 as a dummy which is equal to 1 if inst_own is more than the 1ˢᵗ quartile; else zero. Owners5%pctg is % of shares held by 5% or greater shareholders, as reported in a proxy statement. Insiderspctg is % of shares held by firms' top management and directors as reported in a proxy statement. SoP_instq2q4 is SoP x instq2q4. The *t*-statistics appears in brackets below parameter estimates. Asterisks ***, **, and * indicates significance at the 1%, 5%, and 10% level, respectively.

	(1) del1 _tot_ comp1	(2) del1 _tot_ comp1	(3) del1 _tot_ comp1	(4) del1 _tot_ comp1	(5) del1 _cash_ comp	(6) del1 _cash_ Comp	(7) del1 _cash_ comp	(8) del1 _cash_ Comp
ln_at	0.007	0.006	0.006	0.008	-0.002	-0.005	-0.006	-0.002
	(0.77)	(0.58)	(0.64)	(0.85)	(-0.17)	(-0.39)	(-0.47)	(-0.13)
Ret	1.166*	1.152*	1.206*	1.202*	-0.149	-0.168	-0.117	-0.124
	(2.09)	(2.07)	(2.16)	(2.16)	(-0.19)	(-0.22)	(-0.15)	(-0.16)
ret_vol	-0.118	-0.183	-0.220	-0.099	-0.886	-0.992	-1.057*	-0.872
	(-0.32)	(-0.49)	(-0.59)	(-0.27)	(-1.72)	(-1.92)	(-2.05)	(-1.69)
roa	-0.320	-0.291	-0.283	-0.315	0.352	0.402	0.437	0.355
	(-1.55)	(-1.41)	(-1.37)	(-1.53)	(1.23)	(1.40)	(1.52)	(1.24)
capex	0.123	0.142	0.154	0.115	0.050	0.079	0.087	0.044
	(0.39)	(0.46)	(0.49)	(0.37)	(0.11)	(0.18)	(0.20)	(0.10)
rnd	-0.082	-0.102	-0.073	-0.089	0.094	0.064	0.084	0.089
	(-0.23)	(-0.29)	(-0.21)	(-0.25)	(0.19)	(0.13)	(0.17)	(0.18)
ln_mtb	0.012	0.014	0.014	0.011	-0.032	-0.028	-0.027	-0.032
	(0.58)	(0.69)	(0.68)	(0.52)	(-1.10)	(-0.97)	(-0.93)	(-1.13)
cash_holdings	-0.096	-0.099	-0.111	-0.101	-0.049	-0.054	-0.071	-0.052
	(-0.98)	(-1.00)	(-1.13)	(-1.03)	(-0.36)	(-0.39)	(-0.52)	(-0.38)
chair	-0.033	-0.034	-0.032	-0.034	-0.061	-0.063	-0.061	-0.062
	(-1.44)	(-1.49)	(-1.37)	(-1.49)	(-1.90)	(-1.96)	(-1.90)	(-1.92)
inst_own	0.025	0.018	0.015	0.322*	0.021	0.011	0.003	0.223
	(0.26)	(0.20)	(0.16)	(2.34)	(0.16)	(0.08)	(0.03)	(1.16)
owners5%pctg	-0.006	0.001	-0.019	-0.011	0.111	0.121	0.102	0.108
	(-0.06)	(0.01)	(-0.19)	(-0.11)	(0.83)	(0.90)	(0.76)	(0.80)
insiderspctg	-0.031	-0.024	-0.060	-0.035	-0.308	-0.298	-0.325	-0.311
	(-0.24)	(-0.18)	(-0.46)	(-0.27)	(-1.73)	(-1.66)	(-1.80)	(-1.74)
Eindex	0.001	-0.001	0.001	0.003	-0.021	-0.024	-0.022	-0.020
	(0.04)	(-0.09)	(0.08)	(0.18)	(-1.00)	(-1.15)	(-1.05)	(-0.93)
SoP	0.318***			0.433***	0.480***			0.558***
	(3.57)			(4.45)	(3.88)			(4.13)
SoPQ1		-0.055*				-0.075*		
		(-2.09)				(-2.06)		
SoPQ4			0.058*				0.045	
			(2.46)				(1.37)	
SoP_instq2q4				-0.135**				-0.092
				(-2.94)				(-1.44)
_cons	-0.299	0.028	-0.007	-0.563**	-0.252	0.244	0.227	-0.432
	(-1.77)	(0.20)	(-0.05)	(-2.95)	(-1.08)	(1.27)	(1.17)	(-1.63)
N	2755	2755	2755	2755	2754	2754	2754	2754
Ind FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Yr Dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 1.9. Change in stock and option compensation and SoP vote

The Table presents fixed effect regression estimates of the impact of SoP approval vote on the percentage changes in the stock and option compensations of the CEO. Our independent variables are in time t-1. The main variable of interest, SoP is For / (For+Against). SoPQ1 is a dummy which is equal to 1 if SoP is in its 1st quartile; otherwise zero. Similarly, SoPQ4 is a dummy which is equal to 1 if SoP is in its 4th quartile; otherwise zero. Firm size is defined as the natural logarithm of total assets which is ln_at. Ret is annualized monthly stock return. Ret_vol is the standard deviation of monthly return. Return on assets (roa) is defined as income before extraordinary items over total assets. Capex is capital expenditure which is defined as CAPX (COMPUSTAT item) over total assets (AT). Rnd is research and development which is defined as XRD (COMPUSTAT item) over total assets (AT). Ln_mtb is the log of market-to-book value of equity. Cash-holdings is defined as CH (COMPUSTAT item) over AT. The chair is a dummy which is equal to 1 if CEO is chair of the firm, otherwise zero. Inst_own is the mean of quarterly institutional holdings percentage of firms' outstanding shares in a given year. Next, we define instq2q4 as a dummy which is equal to 1 if inst_own is more than the 1st quartile; else zero. Owners5%pctg is % of shares held by 5% or greater shareholders, as reported in a proxy statement. Insiderspctg is % of shares held by firms' top management and directors as reported in a proxy statement. SoP_instq2q4 is SoP x instq2q4. The *t*-statistics appears in brackets below parameter estimates. Asterisks ***, **, and * indicates significance at the 1%, 5%, and 10% level, respectively.

	(1) del1_ stock	(2) del1_ stock	(3) del1_ stock	(4) del1_ stock	(5) del1_ opt	(6) del1_ opt	(7) del1_ opt	(8) del1_ opt
ln_at	-0.005 (-0.47)	-0.007 (-0.64)	-0.006 (-0.54)	-0.004 (-0.41)	-0.015 (-1.13)	-0.016 (-1.23)	-0.017 (-1.28)	-0.015 (-1.13)
Ret	2.343*** (3.69)	2.323*** (3.66)	2.342*** (3.69)	2.363*** (3.73)	2.514*** (3.36)	2.494*** (3.32)	2.552*** (3.40)	2.511*** (3.35)
ret_vol	0.078 (0.18)	0.030 (0.07)	0.038 (0.09)	0.077 (0.18)	-0.109 (-0.20)	-0.186 (-0.34)	-0.249 (-0.46)	-0.111 (-0.20)
roa	-0.835*** (-3.30)	-0.798** (-3.15)	-0.817** (-3.24)	-0.830** (-3.28)	-0.093 (-0.33)	-0.055 (-0.19)	-0.028 (-0.10)	-0.092 (-0.32)
capex	0.162 (0.45)	0.164 (0.46)	0.168 (0.47)	0.148 (0.42)	-0.135 (-0.28)	-0.100 (-0.21)	-0.115 (-0.24)	-0.129 (-0.27)
rnd	0.577 (1.41)	0.560 (1.37)	0.574 (1.40)	0.593 (1.45)	0.116 (0.27)	0.101 (0.24)	0.150 (0.35)	0.118 (0.28)
ln_mtb	0.027 (1.15)	0.029 (1.23)	0.028 (1.19)	0.026 (1.11)	-0.015 (-0.55)	-0.012 (-0.45)	-0.011 (-0.42)	-0.015 (-0.55)
cash_holdings	-0.084 (-0.73)	-0.092 (-0.79)	-0.091 (-0.79)	-0.086 (-0.75)	-0.335* (-2.49)	-0.337* (-2.50)	-0.361** (-2.69)	-0.335* (-2.49)
chair	-0.002 (-0.08)	-0.003 (-0.11)	-0.001 (-0.05)	-0.003 (-0.13)	0.023 (0.73)	0.020 (0.64)	0.023 (0.73)	0.023 (0.73)
inst_own	0.043 (0.40)	0.038 (0.36)	0.039 (0.37)	0.250 (1.58)	0.001 (0.01)	0.013 (0.10)	0.020 (0.15)	-0.026 (-0.14)
owners5%pctg	-0.082 (-0.75)	-0.080 (-0.73)	-0.087 (-0.79)	-0.084 (-0.78)	-0.018 (-0.14)	-0.009 (-0.07)	-0.032 (-0.24)	-0.016 (-0.13)
insiderspctg	-0.096 (-0.62)	-0.091 (-0.59)	-0.107 (-0.69)	-0.097 (-0.63)	-0.204 (-0.91)	-0.188 (-0.84)	-0.231 (-1.03)	-0.202 (-0.91)
Eindex	0.024 (1.35)	0.023 (1.33)	0.024 (1.37)	0.025 (1.45)	0.018 (0.86)	0.017 (0.82)	0.020 (0.95)	0.017 (0.85)
SoP	0.139 (1.37)			0.217* (1.96)	0.417** (2.93)			0.408** (2.72)
SoPQ1		0.004 (0.14)				-0.066 (-1.77)		
SoPQ4			0.022 (0.84)				0.052 (1.61)	
SoP_instq2q4				-0.093 (-1.79)				0.012 (0.19)
_cons	-0.108 (-0.56)	0.039 (0.25)	0.023 (0.14)	-0.293 (-1.34)	-0.268 (-1.11)	0.132 (0.66)	0.100 (0.50)	-0.247 (-0.92)
N	2312	2312	2312	2312	1323	1323	1323	1323
Ind FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Yr Dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 1.10. Change in non-equity compensation and SoP vote
The Table presents fixed effect regression estimates of the impact of SoP approval vote on the percentage change in the non-equity compensations of the CEO. Our independent variables are in time t-1. The main variable of interest, SoP is For / (For+Against). SoPQ1 is a dummy which is equal to 1 if SoP is in its 1st quartile; otherwise zero. Similarly, SoPQ4 is a dummy which is equal to 1 if SoP is in its 4th quartile; otherwise 0. Firm size is defined as the natural logarithm of total assets which is ln_at. Ret is annualized monthly stock return. Ret_vol is the standard deviation of monthly return. Return on assets (roa) is defined as income before extraordinary items over total assets. Capex is capital expenditure which is defined as CAPX (COMPUSTAT item) over total assets (AT). Rnd is research and development which is defined as XRD (COMPUSTAT item) over total assets (AT). Ln_mtb is the log of market-to-book value of equity. Cash-holdings is defined as CH (COMPUSTAT item) over AT. The chair is a dummy which is equal to 1 if CEO is chair of the firm, otherwise zero. Inst_own is the mean of quarterly institutional holdings percentage of firms' outstanding shares in a given year. Next, we define instq2q4 as a dummy which is equal to 1 if inst_own is more than the 1st quartile; else zero. Owners5%pctg is % of shares held by 5% or greater shareholders, as reported in a proxy statement. Insiderspctg is % of shares held by firms' top management and directors as reported in a proxy statement. SoP_instq2q4 is SoP x instq2q4. The *t*-statistics appears in brackets below parameter estimates. Asterisks ***, **, and * indicates significance at the 1%, 5%, and 10% level, respectively.

	(1) del1_ noneq_comp	(2) del1_ noneq_comp	(3) del1_ noneq_comp	(4) del1_ noneq_comp
ln_at	-0.008	-0.009	-0.009	-0.007
	(-0.54)	(-0.67)	(-0.64)	(-0.52)
ret	-1.269	-1.334	-1.300	-1.225
	(-1.50)	(-1.58)	(-1.54)	(-1.45)
ret_vol	-0.135	-0.213	-0.233	-0.136
	(-0.24)	(-0.37)	(-0.41)	(-0.24)
roa	-1.490***	-1.453***	-1.461***	-1.485***
	(-4.67)	(-4.55)	(-4.59)	(-4.65)
capex	-0.720	-0.708	-0.693	-0.719
	(-1.52)	(-1.49)	(-1.46)	(-1.51)
rnd	0.182	0.165	0.179	0.179
	(0.34)	(0.31)	(0.34)	(0.34)
ln_mtb	-0.016	-0.014	-0.015	-0.018
	(-0.57)	(-0.49)	(-0.53)	(-0.61)
cash_holdings	-0.056	-0.062	-0.065	-0.056
	(-0.37)	(-0.41)	(-0.44)	(-0.38)
chair	0.010	0.009	0.011	0.009
	(0.30)	(0.28)	(0.34)	(0.28)
inst_own	0.144	0.140	0.140	0.318
	(1.05)	(1.03)	(1.03)	(1.60)
owners5%pctg	0.174	0.181	0.165	0.170
	(1.23)	(1.28)	(1.16)	(1.20)
insiderspctg	-0.024	-0.013	-0.038	-0.026
	(-0.12)	(-0.07)	(-0.20)	(-0.14)
Eindex	-0.022	-0.023	-0.021	-0.021
	(-1.00)	(-1.03)	(-0.95)	(-0.92)
SoP	0.226			0.293*
	(1.66)			(1.99)
SoPQ1		-0.022		
		(-0.57)		
SoPQ4			0.037	
			(1.08)	
SoP_instq2q4				-0.079
				(-1.21)
_cons	0.032	0.266	0.245	-0.123
	(0.13)	(1.31)	(1.19)	(-0.44)
N	2164	2164	2164	2164
Ind FE	Yes	Yes	Yes	Yes
Yr Dummy	Yes	Yes	Yes	Yes

Table 1.11. Change in total and cash compensation of non-CEO and SoP vote

The Table presents fixed effect regression estimates of the impact of SoP approval vote on the percentage change in the total and cash compensations of the top four non-CEOs. Our independent variables are in period t-1. The main variable of interest, SoP is For / (For+Against). SoPQ1 is a dummy which is equal to 1 if SoP is in its 1st quartile; otherwise zero. Similarly, SoPQ4 is a dummy which is equal to 1 if SoP is in its 4th quartile; otherwise zero. Firm size is defined as the natural logarithm of total assets which is ln_at. Ret is annualized monthly stock return. Ret_vol is the standard deviation of monthly return. Return on assets (roa) is defined as income before extraordinary items over total assets. Capex is capital expenditure which is defined as CAPX (COMPUSTAT item) over total assets (AT). Rnd is research and development which is defined as XRD (COMPUSTAT item) over total assets (AT). Ln_mtb is the log of market-to-book value of equity. Cash-holdings is defined as CH (COMPUSTAT item) over AT. chair is a dummy which is equal to 1 if CEO is chair of the firm, otherwise zero. Inst_own is the mean of quarterly institutional holdings percentage of firms' outstanding shares in a given year. Next, we define instq2q4 as a dummy which is equal to 1 if inst_own is more than the 1st quartile; else zero. Owners5%pctg is % of shares held by 5% or greater shareholders, as reported in a proxy statement. Insiderspctg is % of shares held by firms' top management and directors. SoP_instq2q4 is SoP x instq2q4. The *t*-statistics appears in brackets below parameter estimates. Asterisks ***, **, and * indicates significance at the 1%, 5%, and 10% level, respectively.

	(1) del_ nonceo _tot	(2) del_ nonceo _tot	(3) del_ nonceo _tot	(4) del_ nonceo _tot	(5) del_ nonceo _cash	(6) del_ nonceo _cash	(7) del_ nonceo _cash	(8) del_ nonceo _cash
ln_at	0.00 (0.25)	0.00 (0.01)	-0.00 (-0.14)	0.00 (0.24)	-0.01 (-1.56)	-0.01 (-1.68)	-0.01 (-1.93)	-0.01 (-1.56)
ret	2.43*** (5.77)	2.39*** (5.65)	2.43*** (5.74)	2.43*** (5.77)	0.47* (2.25)	0.46* (2.19)	0.47* (2.22)	0.48* (2.27)
ret_vol	0.22 (0.75)	0.13 (0.46)	0.07 (0.25)	0.23 (0.79)	-0.06 (-0.40)	-0.08 (-0.57)	-0.11 (-0.75)	-0.04 (-0.31)
roa	0.07 (0.44)	0.11 (0.67)	0.14 (0.83)	0.07 (0.43)	-0.10 (-1.28)	-0.09 (-1.15)	-0.08 (-0.95)	-0.11 (-1.30)
capex	0.23 (0.88)	0.26 (1.00)	0.26 (1.00)	0.22 (0.87)	0.17 (1.34)	0.18 (1.42)	0.18 (1.41)	0.17 (1.32)
rnd	0.31 (1.17)	0.28 (1.05)	0.29 (1.08)	0.32 (1.19)	0.06 (0.45)	0.05 (0.38)	0.05 (0.34)	0.06 (0.47)
ln_mtb	-0.00 (-0.13)	0.00 (0.05)	0.00 (0.12)	-0.00 (-0.13)	0.01 (0.98)	0.01 (1.08)	0.01 (1.20)	0.01 (0.96)
cash_holdings	0.02 (0.22)	0.02 (0.22)	0.01 (0.09)	0.02 (0.23)	0.02 (0.55)	0.02 (0.56)	0.02 (0.48)	0.02 (0.57)
chair	0.01 (0.43)	0.01 (0.30)	0.01 (0.33)	0.01 (0.45)	0.01 (1.19)	0.01 (1.12)	0.01 (1.07)	0.01 (1.23)
inst_own	-0.02 (-0.21)	-0.02 (-0.31)	-0.03 (-0.42)	-0.06 (-0.53)	-0.02 (-0.58)	-0.02 (-0.63)	-0.03 (-0.71)	-0.04 (-0.75)
owners5%pctg	0.10 (1.31)	0.10 (1.41)	0.09 (1.23)	0.10 (1.33)	0.01 (0.39)	0.02 (0.46)	0.01 (0.39)	0.02 (0.42)
insiderspctg	0.02 (0.20)	0.03 (0.29)	0.01 (0.11)	0.02 (0.23)	-0.01 (-0.26)	-0.01 (-0.20)	-0.01 (-0.20)	-0.01 (-0.19)
Eindex	-0.01 (-0.52)	-0.01 (-0.67)	-0.01 (-0.52)	-0.05 (-0.63)	-0.01 (-1.24)	-0.01 (-1.33)	-0.01 (-1.30)	-0.06 (-1.40)
SoP	0.36*** (5.29)			0.23 (0.99)	0.12*** (3.41)			-0.02 (-0.20)
SoPQ1		-0.06** (-2.91)				-0.02* (-2.08)		
SoPQ4			0.03 (1.70)				0.00 (0.07)	
SoP_instq2q4				0.02 (0.52)				0.01 (0.46)
_cons	-0.41** (-3.24)	-0.04 (-0.41)	-0.05 (-0.47)	-0.27 (-1.11)	-0.03 (-0.50)	0.09 (1.66)	0.09 (1.76)	0.10 (0.86)
N	2477	2477	2477	2477	2477	2477	2477	2477
Ind FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Yr Dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 1.12. Change in stock and option compensation of non-CEO and SoP vote

The Table presents fixed effect regression estimates of the impact of SoP approval vote on the percentage change in the stock and option compensations of the top four non-CEOs. Our independent variables are in period t-1. The main variable of interest, SoP is For / (For+Against). SoPQ1 is a dummy which is equal to 1 if SoP is in its 1st quartile; otherwise 0. Similarly, SoPQ4 is a dummy which is equal to 1 if SoP is in its 4th quartile; otherwise 0. Firm size is defined as the natural logarithm of total assets which is ln_at. Ret is annualized monthly stock return. Ret_vol is the standard deviation of monthly return. Return on assets is defined as roa which is income before extraordinary items over total assets. Capex is capital expenditure which is defined as CAPX (COMPUSTAT item) over total assets (AT). Rnd is research and development which is defined as XRD (COMPUSTAT item) over total assets (AT). Ln_mtb is the log of market-to-book value of equity. Cash-holdings is defined as CH (COMPUSTAT item) over AT. The chair is a dummy which is equal to 1 if CEO is also the chairman of the firm, otherwise zero. Eindex is entrenchment index. Inst_own is the mean of quarterly institutional holdings percentage of firms' outstanding shares in a given year. Next, we define instq2q4 as a dummy which is equal to 1 if inst_own is more than the 1st quartile; else zero. Owners5%pctg is % of shares held by 5% or greater shareholders, as reported in a proxy statement. Insiderspctg is % of shares held by firms' top management and directors. SoP_instq2q4 is SoP x instq2q4. The *t*-statistics appears in brackets below parameter estimates. Asterisks ***, **, and * indicates significance at the 1%, 5%, and 10% level, respectively.

	(1) del_ nonceo _stock	(2) del_ nonceo _stock	(3) del_ nonceo _stock	(4) del_ nonceo _stock	(5) del_ nonceo _opt	(6) del_ nonceo _opt	(7) del_ nonceo _opt	(8) del_ nonceo _opt
ln_at	0.00 (0.08)	0.00 (0.08)	-0.00 (-0.08)	0.00 (0.08)	-0.00 (-0.20)	-0.01 (-0.55)	-0.01 (-0.59)	-0.00 (-0.18)
ret	0.86 (1.06)	0.80 (0.99)	0.88 (1.08)	0.85 (1.05)	2.53** (2.80)	2.54** (2.80)	2.61** (2.88)	2.53** (2.80)
ret_vol	0.65 (1.19)	0.60 (1.10)	0.49 (0.89)	0.64 (1.15)	0.30 (0.47)	0.06 (0.09)	0.00 (0.00)	0.33 (0.51)
roa	0.08 (0.26)	0.09 (0.30)	0.14 (0.47)	0.08 (0.26)	0.24 (0.65)	0.31 (0.83)	0.33 (0.89)	0.24 (0.65)
capex	0.47 (0.92)	0.51 (1.02)	0.51 (1.00)	0.47 (0.92)	-0.39 (-0.71)	-0.35 (-0.63)	-0.35 (-0.62)	-0.40 (-0.73)
rnd	0.05 (0.09)	0.03 (0.06)	0.03 (0.06)	0.04 (0.08)	-0.02 (-0.03)	-0.05 (-0.09)	-0.03 (-0.05)	-0.02 (-0.03)
ln_mtb	-0.01 (-0.18)	-0.00 (-0.14)	-0.00 (-0.06)	-0.01 (-0.17)	-0.01 (-0.41)	-0.01 (-0.21)	-0.01 (-0.18)	-0.01 (-0.44)
cash_holdings	0.11 (0.78)	0.11 (0.77)	0.10 (0.66)	0.11 (0.77)	0.03 (0.21)	0.02 (0.13)	0.01 (0.03)	0.03 (0.19)
Chair	-0.01 (-0.46)	-0.02 (-0.50)	-0.02 (-0.52)	-0.02 (-0.47)	-0.01 (-0.17)	-0.01 (-0.30)	-0.01 (-0.28)	-0.01 (-0.18)
inst_own	0.10 (0.72)	0.09 (0.70)	0.08 (0.61)	0.12 (0.62)	-0.16 (-0.97)	-0.16 (-0.98)	-0.16 (-0.99)	-0.07 (-0.30)
owners5%pctg	0.08 (0.57)	0.09 (0.69)	0.07 (0.49)	0.08 (0.57)	0.10 (0.63)	0.09 (0.59)	0.08 (0.50)	0.10 (0.63)
insiderspctg	0.17 (0.93)	0.18 (0.99)	0.15 (0.81)	0.17 (0.91)	-0.17 (-0.63)	-0.14 (-0.54)	-0.17 (-0.64)	-0.17 (-0.62)
Eindex	-0.02 (-0.89)	-0.02 (-0.97)	-0.02 (-0.85)	0.03 (0.20)	0.01 (0.25)	0.00 (0.17)	0.01 (0.23)	-0.08 (-0.46)
SoP	0.39** (3.08)			0.53 (1.26)	0.56*** (3.59)			0.34 (0.64)
SoPQ1		-0.10** (-2.72)				-0.06 (-1.27)		
SoPQ4			0.05 (1.39)				0.04 (1.04)	
SoP_instq2q4				-0.01 (-0.15)				-0.04 (-0.54)
_cons	-0.41 (-1.74)	-0.03 (-0.17)	-0.04 (-0.19)	-0.55 (-1.24)	-0.46 (-1.57)	0.13 (0.53)	0.11 (0.45)	-0.30 (-0.54)
N	2197	2197	2197	2197	1358	1358	1358	1358
Ind FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Yr Dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 1.13. Change in non-equity compensation of non-CEO and SoP vote

The Table presents fixed effect regression estimates of the impact of SoP approval vote on the percentage change in non-equity compensations of the top four non-CEOs. Our independent variables are in period time t-1. The main variable of interest, SoP is For / (For+Against). SoPQ1 is a dummy which is equal to 1 if SoP is in its 1ˢᵗ quartile; otherwise zero. Similarly, SoPQ4 is a dummy which is equal to 1 if SoP is in its 4ᵗʰ quartile; otherwise zero. Firm size is defined as the natural logarithm of total assets which is ln_at. Ret is annualized monthly stock return. Ret_vol is the standard deviation of monthly return. Return on assets is defined as roa which is income before extraordinary items over total assets. Capex is capital expenditure which is defined as CAPX (COMPUSTAT item) over total assets (AT). Rnd is research and development which is defined as XRD (COMPUSTAT item) over total assets (AT). Ln_mtb is the log of market-to-book value of equity. Cash-holdings is defined as CH (COMPUSTAT item) over AT. chair is a dummy which is equal to 1 if CEO is chair of the firm, otherwise zero. Inst_own is the mean of quarterly institutional holdings percentage of firms' outstanding shares in a given year. Next, we define instq2q4 as a dummy which is equal to 1 if inst_own is more than the 1ˢᵗ quartile; else zero. Owners5%pctg is % of shares held by 5% or greater shareholders, as reported in a proxy statement. Insiderpctg is % of shares held by firms' top management and directors. SoP_instq2q4 is SoP x instq2q4. The *t*-statistics appears in brackets below parameter estimates. Asterisks ***, **, and * indicates significance at the 1%, 5%, and 10% level, respectively.

	(1) del_nonceo_ noneq_comp	(2) del_nonceo_ noneq_comp	(3) del_nonceo_ noneq_comp	(4) del_nonceo_ noneq_comp
ln_at	0.01 (0.62)	0.01 (0.52)	0.01 (0.54)	0.01 (0.61)
ret	9.45*** (10.53)	9.44*** (10.53)	9.43*** (10.51)	9.49*** (10.56)
ret_vol	-1.11 (-1.85)	-1.15 (-1.92)	-1.12 (-1.88)	-1.05 (-1.75)
roa	-0.08 (-0.24)	-0.06 (-0.18)	-0.07 (-0.20)	-0.09 (-0.28)
capex	0.42 (0.75)	0.42 (0.75)	0.43 (0.76)	0.45 (0.79)
rnd	0.47 (0.83)	0.46 (0.83)	0.45 (0.81)	0.47 (0.83)
ln_mtb	-0.03 (-0.95)	-0.03 (-0.91)	-0.03 (-0.90)	-0.03 (-0.96)
cash_holdings	0.21 (1.35)	0.20 (1.31)	0.21 (1.34)	0.21 (1.35)
chair	0.02 (0.72)	0.02 (0.71)	0.02 (0.68)	0.03 (0.74)
inst_own	-0.22 (-1.48)	-0.22 (-1.50)	-0.22 (-1.49)	-0.27 (-1.28)
owners5%pctg	0.05 (0.36)	0.05 (0.35)	0.06 (0.40)	0.06 (0.42)
insiderspctg	0.03 (0.14)	0.03 (0.16)	0.04 (0.21)	0.04 (0.21)
Eindex	0.00 (0.01)	0.00 (0.02)	-0.00 (-0.02)	-0.22 (-1.28)
SoP	0.02 (0.12)			-0.60 (-1.22)
SoPQ1		0.02 (0.54)		
SoPQ4			-0.02 (-0.52)	
SoP_instq2q4				0.02 (0.32)
_cons	-0.10 (-0.36)	-0.07 (-0.32)	-0.06 (-0.29)	0.49 (0.95)
N	2013	2013	2013	2013
Ind FE	Yes	Yes	Yes	Yes
Yr Dummy	Yes	Yes	Yes	Yes

Table 1.14. Determinants of the CEO total and cash compensations

The Table presents fixed effect estimates of the impact of SoP approval vote on the level of CEO total and cash compensations. The dependent variables are the natural logarithm of CEO total and cash compensation. We use one year lagged values of time-varying independent variables. Firm size is defined as the natural logarithm of total assets which is ln_at. Ret is annualized monthly stock return. Ret_vol is the standard deviation of monthly stock return. Return on asset is defined as roa which is income before extraordinary items over total assets. Capex is capital expenditure which is defined as CAPX over total assets (AT). Rnd is research and development which defined as XRD (COMPUSTAT item) over total assets. Ln_mtb is the log of the market to book value of assets. Cash-holdings is defined as CH/AT. Chair is a dummy which is equal to 1 if CEO is also the chairman of the firm, otherwise 0. Inst_own is the mean of quarterly institutional holdings % of firm's outstanding share in a given year. Instq2q4 is a dummy which takes a value of 1 if inst_own is more than its 1st quartile, otherwise zero. Owners5%pctg is % of shares held by 5% or greater shareholders, as reported in a proxy statement. Insiderspctg is % of shares held by firms' top management and directors. Eindex is entrenchment index. SoP is For / (For+Against). SoPQ1 is a dummy which is equal to 1 if SoP is in its 1st quartile; otherwise zero. Similarly, SoPQ4 is a dummy which is equal to 1 if SoP is in its 4th quartile; otherwise 0. SoP_instq2q4 is SoP x instq2q4. SoP_eindex is SoP x eindex. The *t*-statistics appear in brackets below parameter estimates. Asterisks ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively.

	(1) ln_tot_comp1	(2) ln_tot_comp1	(3) ln_tot_comp1	(4) ln_tot_comp1	(5) ln_cash_comp	(6) ln_cash_comp	(7) ln_cash_comp	(8) ln_cash_comp
ln_at	0.40***	0.40***	0.40***	0.40***	0.15***	0.15***	0.15***	0.15***
	(43.42)	(43.39)	(43.35)	(43.39)	(8.90)	(8.89)	(8.76)	(8.96)
ret	2.90***	2.95***	2.79***	2.88***	0.74	0.75	0.69	0.79
	(5.33)	(5.44)	(5.14)	(5.30)	(0.74)	(0.75)	(0.70)	(0.79)
ret_vol	-0.44	-0.43	-0.27	-0.42	-0.48	-0.48	-0.47	-0.40
	(-1.21)	(-1.19)	(-0.76)	(-1.15)	(-0.72)	(-0.72)	(-0.71)	(-0.59)
roa	0.03	0.06	-0.00	0.03	1.08**	1.08**	1.10**	1.08**
	(0.15)	(0.31)	(-0.02)	(0.14)	(2.92)	(2.93)	(2.99)	(2.93)
capex	-0.13	-0.17	-0.20	-0.12	-0.65	-0.66	-0.67	-0.65
	(-0.44)	(-0.57)	(-0.66)	(-0.41)	(-1.17)	(-1.18)	(-1.21)	(-1.16)
rnd	1.70***	1.73***	1.65***	1.70***	0.91	0.92	0.88	0.91
	(4.93)	(5.03)	(4.80)	(4.95)	(1.45)	(1.45)	(1.40)	(1.45)
ln_mtb	0.19***	0.19***	0.18***	0.19***	-0.04	-0.04	-0.04	-0.04
	(9.21)	(9.22)	(9.15)	(9.24)	(-1.05)	(-1.05)	(-1.00)	(-1.09)
cash_holdings	-0.07	-0.09	-0.04	-0.07	-0.48**	-0.48**	-0.48**	-0.49**
	(-0.73)	(-0.91)	(-0.44)	(-0.71)	(-2.73)	(-2.75)	(-2.71)	(-2.76)
chair	0.03	0.03	0.03	0.03	-0.03	-0.03	-0.04	-0.03
	(1.43)	(1.48)	(1.17)	(1.47)	(-0.80)	(-0.80)	(-0.88)	(-0.80)
inst_own	1.07***	1.07***	1.09***	0.93***	0.18	0.18	0.18	0.49*
	(11.71)	(11.73)	(11.89)	(6.89)	(1.06)	(1.06)	(1.06)	(1.98)
owners5%pctg	-0.10	-0.12	-0.07	-0.10	0.48**	0.48**	0.50**	0.48**
	(-1.07)	(-1.30)	(-0.69)	(-1.02)	(2.79)	(2.77)	(2.88)	(2.79)
Insiderspctg	-0.39**	-0.40**	-0.30*	-0.37**	-1.32***	-1.32***	-1.28***	-1.30***
	(-3.08)	(-3.18)	(-2.40)	(-2.98)	(-5.72)	(-5.73)	(-5.52)	(-5.63)
Eindex	0.05**	0.05***	0.04**	-0.09	-0.02	-0.01	-0.02	-0.32
	(3.05)	(3.30)	(2.82)	(-0.91)	(-0.56)	(-0.54)	(-0.65)	(-1.75)
SoP	-0.58***			-1.01***	-0.09			-0.82
	(-6.62)			(-3.48)	(-0.56)			(-1.54)
SoPQ1		0.20***				0.03		
		(7.69)				(0.66)		
SoPQ4			-0.16***				-0.07	
			(-6.70)				(-1.58)	
SoP_instq2q4				0.06				-0.14
				(1.43)				(-1.73)
SoP_eindex				0.15				0.33
				(1.37)				(1.69)
_cons	4.51***	3.95***	4.02***	4.98***	5.49***	5.40***	5.45***	5.98***
	(27.36)	(29.26)	(29.45)	(16.11)	(18.16)	(21.77)	(21.76)	(10.56)
N	2755	2755	2755	2755	2754	2754	2754	2754
Ind FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Yr Dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 1.15. Determinants of the CEO stock and option compensation

The Table presents fixed effect estimates of the impact of SoP approval vote on the level of CEO stock and option compensations. The dependent variables are the natural logarithm of CEO stock and option compensations. We used one year lagged values of time-varying independent variables. Firm size is defined as the natural logarithm of total assets which is ln_at. Ret is annualized monthly stock return. Ret_vol is the standard deviation of monthly stock return. Return on asset is defined as roa which is income before extraordinary items over total assets. Capex is capital expenditure which is defined as CAPX over total assets (AT). Rnd is research and development which is defined as XRD (COMPUSTAT item) over total assets. Ln_mtb is the log of the market to book value of assets. Cash-holdings is defined as CH/AT. The chair is a dummy which is equal to 1 if CEO is also the chairman of the firm, otherwise zero. Inst_own is the mean of quarterly institutional holdings percentage of firm's outstanding share in a given year. Instq2q4 is a dummy which takes a value of 1 if instq2q4 is more than its 1st quartile; zero otherwise. Owners5%pctg is % of shares held by 5% or greater shareholders, as reported in a proxy statement. Insider's % is % of shares held by firms' top management and directors. Eindex is entrenchment index. SoP is For / (For+Against). SoPQ1 is a dummy which is equal to 1 if SoP is in its 1st quartile; otherwise zero. Similarly, SoPQ4 is a dummy which is equal to 1 if SoP is in its 4th quartile; otherwise zero. SoP_instq2q4 is SoP x instq2q4. SoP_eindex is SoP x eindex. The *t*-statistics appear in brackets below parameter estimates. Asterisks ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively.

	(1) ln_ stock	(2) ln_ stock	(3) ln_ stock	(4) ln_ stock	(5) ln_ opt	(6) ln_ opt	(7) ln_ opt	(8) ln_ opt
ln_at	0.46***	0.46***	0.47***	0.46***	0.48***	0.48***	0.48***	0.48***
	(34.28)	(34.23)	(34.35)	(34.21)	(26.81)	(26.70)	(26.80)	(26.78)
Ret	2.12**	2.19**	2.05*	2.12**	1.69	1.76	1.64	1.61
	(2.65)	(2.74)	(2.55)	(2.65)	(1.66)	(1.73)	(1.61)	(1.58)
ret_vol	-0.66	-0.64	-0.44	-0.63	0.68	0.65	0.80	0.76
	(-1.22)	(-1.19)	(-0.81)	(-1.15)	(0.94)	(0.89)	(1.10)	(1.04)
roa	-0.18	-0.14	-0.25	-0.18	1.41***	1.47***	1.39***	1.43***
	(-0.57)	(-0.44)	(-0.80)	(-0.58)	(3.82)	(3.98)	(3.77)	(3.86)
capex	1.49***	1.43**	1.42**	1.50***	0.18	0.16	0.22	0.28
	(3.34)	(3.21)	(3.18)	(3.37)	(0.29)	(0.26)	(0.34)	(0.44)
rnd	1.87***	1.90***	1.88***	1.85***	3.34***	3.37***	3.30***	3.44***
	(3.58)	(3.65)	(3.59)	(3.55)	(5.61)	(5.69)	(5.55)	(5.80)
ln_mtb	0.19***	0.19***	0.19***	0.19***	0.27***	0.27***	0.27***	0.27***
	(6.47)	(6.45)	(6.34)	(6.50)	(7.30)	(7.41)	(7.31)	(7.38)
cash_holdings	0.65***	0.63***	0.69***	0.66***	0.27	0.23	0.29	0.24
	(4.50)	(4.36)	(4.74)	(4.53)	(1.48)	(1.25)	(1.58)	(1.33)
Chair	-0.02	-0.02	-0.03	-0.02	0.06	0.06	0.06	0.06
	(-0.64)	(-0.60)	(-0.79)	(-0.58)	(1.39)	(1.41)	(1.29)	(1.34)
inst_own	1.56***	1.55***	1.57***	1.30***	1.17***	1.18***	1.16***	0.79**
	(11.41)	(11.41)	(11.53)	(6.49)	(6.62)	(6.65)	(6.55)	(3.03)
owners5%pctg	-0.21	-0.24	-0.17	-0.20	-0.17	-0.18	-0.15	-0.13
	(-1.51)	(-1.72)	(-1.20)	(-1.48)	(-0.96)	(-0.98)	(-0.81)	(-0.74)
insiderspctg	0.03	0.01	0.11	0.04	0.36	0.36	0.41	0.43
	(0.14)	(0.04)	(0.57)	(0.19)	(1.23)	(1.23)	(1.39)	(1.48)
Eindex	0.03	0.03	0.02	-0.12	0.10***	0.10***	0.10***	-0.60**
	(1.24)	(1.48)	(1.10)	(-0.81)	(3.54)	(3.57)	(3.41)	(-2.73)
SoP	-0.77***			-1.27**	-0.33			-2.42***
	(-6.01)			(-2.96)	(-1.82)			(-3.76)
SoPQ1		0.25***				0.16**		
		(6.63)				(3.17)		
SoPQ4			-0.17***				-0.08	
			(-4.90)				(-1.91)	
SoP_instq2q4				0.11				0.15
				(1.68)				(1.80)
SoP_eindex				0.16				0.76**
				(1.00)				(3.21)
_cons	2.85***	2.11***	2.17***	3.44***	1.55***	1.24***	1.28***	3.68***
	(11.78)	(10.50)	(10.69)	(7.54)	(4.74)	(4.62)	(4.74)	(5.39)
N	2434	2434	2434	2434	1421	1421	1421	1421
Ind FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Yr Dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 1.16. Determinants of the CEO non-equity compensation

The Table presents fixed effect estimates of the impact of SoP approval votes on the level of CEO non-equity compensation. The dependent variable is the natural logarithm of CEO non-equity compensation. We used one year lagged values of time-varying independent variables. Firm size is defined as the natural logarithm of total assets which is ln_at. Ret is annualized monthly stock return. Ret_vol is the standard deviation of monthly stock return. Return on asset is defined as roa which is income before extraordinary items over total assets. Capex is capital expenditure which is defined as CAPX over total assets (AT). Rnd is research and development which defined as XRD (COMPUSTAT item) over total assets. Ln_mtb is the log of the market to book value of assets. Cash-holdings is defined as CH/AT. Chair is a dummy which is equal to 1 if CEO is also the chairman of the firm, otherwise zero. Inst_own is the mean of quarterly institutional holdings % of firm's outstanding share in a given year. Instq2q4 is a dummy which takes a value of 1 if inst_own is more than its 1st quartile. Owners5%pctg is % of shares held by 5% or greater shareholders, as reported in proxy statement. Insiderspctg is % of shares held by firms' top management and directors. Eindex is entrenchment index. SoP is For / (For+Against). SoPQ1 is a dummy which is equal to 1 if SoP is in its 1st quartile; otherwise zero. Similarly, SoPQ4 is a dummy which is equal to 1 if SoP is in its 4th quartile; otherwise zero. SoP_instq2q4 is SoP x instq2q4. SoP_eindex is SoP x eindex. The *t*-statistics appear in brackets below parameter estimates. Asterisks ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively.

	(1) ln_noneq _comp	(2) ln_noneq _comp	(3) ln_noneq _comp	(4) ln_noneq _comp
ln_at	0.38***	0.38***	0.38***	0.38***
	(25.32)	(25.18)	(25.47)	(25.35)
ret	5.24***	5.31***	5.18***	5.28***
	(5.92)	(6.02)	(5.85)	(5.98)
ret_vol	-1.62**	-1.62**	-1.39*	-1.54*
	(-2.66)	(-2.67)	(-2.29)	(-2.53)
roa	0.66	0.72*	0.61	0.65
	(1.94)	(2.13)	(1.81)	(1.91)
capex	-1.34**	-1.36**	-1.41**	-1.31**
	(-2.65)	(-2.71)	(-2.78)	(-2.59)
rnd	-0.63	-0.59	-0.65	-0.61
	(-1.10)	(-1.03)	(-1.13)	(-1.06)
ln_mtb	0.11***	0.11***	0.11***	0.11***
	(3.60)	(3.66)	(3.58)	(3.58)
cash_holdings	0.14	0.11	0.16	0.14
	(0.89)	(0.70)	(1.02)	(0.89)
chair	0.13***	0.13***	0.13***	0.13***
	(3.67)	(3.70)	(3.52)	(3.74)
inst_own	0.50***	0.49***	0.50***	0.43*
	(3.40)	(3.36)	(3.43)	(2.02)
owners5%pctg	0.13	0.11	0.17	0.14
	(0.85)	(0.69)	(1.13)	(0.95)
insiderspctg	0.38	0.36	0.45*	0.41*
	(1.82)	(1.75)	(2.14)	(1.98)
Eindex	-0.07**	-0.07**	-0.08**	-0.54**
	(-2.95)	(-2.81)	(-3.13)	(-3.25)
SoP	-0.60***			-1.92***
	(-4.23)			(-4.00)
SoPQ1		0.22***		
		(5.50)		
SoPQ4			-0.14***	
			(-3.90)	
SoP_instq2q4				0.03
				(0.36)
SoP_eindex				0.52**
				(2.85)
_cons	3.95***	3.38***	3.43***	5.18***
	(14.93)	(15.56)	(15.60)	(10.22)
N	2335	2335	2335	2335
Ind FE	Yes	Yes	Yes	Yes
Yr Dummy	Yes	Yes	Yes	Yes

Table 1.17. Determinants of the non-CEO total and cash compensation

The Table presents fixed effect estimates of the impact of SoP approval vote on the level of non-CEO total and cash compensations. The dependent variables are the natural logarithm of the average of top four non-CEO total and cash compensations. We use one year lagged values of time-varying independent variables. Firm size is defined as the natural logarithm of total assets which is ln_at. Ret is annualized monthly stock return. Ret_vol is the standard deviation of monthly stock return. Return on asset is defined as roa which is income before extraordinary items over total assets. Capex is capital expenditure which is defined as CAPX over total assets (AT). Rnd is research and development which defined as XRD (COMPUSTAT item) over total assets. Ln_mtb is the log of the market to book value of assets. Cash-holdings is defined as CH/AT. The chair is a dummy which is equal to 1 if CEO is also the chairman of the firm, otherwise zero. Inst_own is the mean of quarterly institutional holdings percentage of firm's outstanding shares in a given year. Owners5%pctg is % of shares held by 5% or greater shareholders, as reported in a proxy statement. Insiderspctg is % of shares held by firms' top management and directors as reported in a proxy statement. SoP is For / (For+Against). SoPQ1 is a dummy which is equal to 1 if SoP is in its 1st quartile; otherwise zero. Similarly, SoPQ4 is a dummy which is equal to 1 if SoP is in its 4th quartile; otherwise zero. Similarly, we define another dummy instq2q4 which takes a value of 1 if inst_own is more than its 1st quartile; 0 otherwise. SoP_instq2q4 is SoP x instq2q4. SoP_eindex is SoP x eindex. The t-statistics appear in brackets below parameter estimates. Asterisks ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively.

	(1) ln_ nonceo tot comp	(2) ln_ nceo tot comp	(3) ln_ nonceo tot comp	(4) ln_ nonceo tot comp	(5) ln_ nonceo cash comp	(6) ln_ nonceo cash comp	(7) ln_ nonceo cash comp	(8) ln_ nonceo cash comp
ln_at	0.40***	0.40***	0.41***	0.40***	0.22***	0.22***	0.22***	0.22***
	(57.57)	(57.61)	(57.45)	(57.52)	(43.20)	(43.21)	(43.32)	(43.16)
ret	1.51***	1.56***	1.45***	1.50***	-0.08	-0.06	-0.10	-0.08
	(3.64)	(3.77)	(3.49)	(3.62)	(-0.26)	(-0.19)	(-0.32)	(-0.26)
ret_vol	-0.07	-0.07	0.06	-0.06	0.77***	0.80***	0.86***	0.77***
	(-0.25)	(-0.26)	(0.23)	(-0.21)	(3.79)	(3.94)	(4.24)	(3.80)
roa	0.57***	0.60***	0.53***	0.57***	0.48***	0.48***	0.44***	0.48***
	(3.73)	(3.95)	(3.43)	(3.72)	(4.30)	(4.23)	(3.89)	(4.30)
capex	0.91***	0.88***	0.86***	0.91***	0.29	0.27	0.27	0.29
	(3.92)	(3.81)	(3.71)	(3.94)	(1.72)	(1.61)	(1.58)	(1.72)
rnd	1.52***	1.55***	1.50***	1.53***	0.19	0.20	0.19	0.19
	(5.81)	(5.93)	(5.72)	(5.82)	(0.99)	(1.07)	(1.00)	(0.99)
ln_mtb	0.14***	0.14***	0.13***	0.14***	0.01	0.01	0.01	0.01
	(8.83)	(8.88)	(8.66)	(8.84)	(0.97)	(0.87)	(0.74)	(0.97)
cash_holdings	0.52***	0.50***	0.54***	0.52***	0.13*	0.13*	0.15**	0.13*
	(7.06)	(6.87)	(7.34)	(7.07)	(2.49)	(2.43)	(2.71)	(2.49)
chair	-0.04*	-0.04*	-0.04*	-0.04*	-0.00	-0.00	-0.00	-0.00
	(-2.15)	(-2.11)	(-2.32)	(-2.12)	(-0.30)	(-0.24)	(-0.32)	(-0.29)
inst_own	0.42***	0.41***	0.43***	0.34***	-0.07	-0.07	-0.06	-0.08
	(5.96)	(5.96)	(6.14)	(3.35)	(-1.33)	(-1.28)	(-1.14)	(-1.05)
owners5%pctg	-0.04	-0.06	-0.02	-0.04	0.20***	0.20***	0.21***	0.20***
	(-0.53)	(-0.77)	(-0.23)	(-0.50)	(3.87)	(3.71)	(3.95)	(3.87)
insiderspctg	0.40***	0.39***	0.44***	0.40***	0.55***	0.55***	0.56***	0.55***
	(4.14)	(4.07)	(4.60)	(4.20)	(7.91)	(7.81)	(7.99)	(7.90)
Eindex	-0.01	-0.00	-0.01	-0.08	-0.03***	-0.03**	-0.03***	-0.04
	(-0.65)	(-0.42)	(-0.76)	(-1.01)	(-3.46)	(-3.25)	(-3.38)	(-0.78)
SoP	-0.45***			-0.67**	-0.27***			-0.31
	(-6.76)			(-3.02)	(-5.57)			(-1.94)
SoPQ1		0.16***				0.07***		
		(8.37)				(4.77)		
SoPQ4			-0.09***				-0.03*	
			(-5.31)				(-2.33)	
SoP_instq2q4				0.03				0.00
				(0.93)				(0.19)
SoP_eindex				0.08				0.02
				(0.92)				(0.26)
_cons	3.94***	3.51***	3.54***	4.18***	4.54***	4.27***	4.28***	4.59***
	(31.43)	(34.20)	(33.92)	(17.74)	(49.54)	(56.65)	(55.97)	(26.64)
N	2747	2747	2747	2747	2747	2747	2747	2747
Ind FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Yr Dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 1.18. Determinants of the non-CEO stock and option compensation

The Table presents fixed effect estimates of the impact of SoP approval votes on the level of non-CEO stock and option compensations. The dependent variables are the natural logarithm of the average of top four non-CEO stock and option compensations. We use one year lagged values of time-varying independent variables. Firm size is defined as the natural logarithm of total assets which is ln_at. Ret is annualized monthly stock return. Ret_vol is the standard deviation of monthly stock return. Return on asset is defined as roa which is income before extraordinary items over total assets. Capex is capital expenditure which is defined as CAPX over total assets (AT). Rnd is research and development which defined as XRD (COMPUSTAT item) over total assets. Ln_mtb is the log of the market to book value of assets. Cash-holdings is defined as CH/AT. Chair is a dummy which is equal to 1 if CEO is also the chairman of the firm, otherwise zero. Eindex is entrenchment index. Inst_own is the mean of quarterly institutional holdings of firm's outstanding share in a given year. Instq2q4 is a dummy which takes a value of 1 if inst_own is more than its 1st quartile, zero otherwise. Owners5%pctg is % of shares held by 5% or greater shareholders, as reported in a proxy statement. Insiderspctg is % of shares held by firms' top management and directors as reported in a proxy statement. SoP is For / (For + Against). SoPQ1 is a dummy which is equal to 1 if SoP is in its 1st quartile; otherwise zero. Similarly, SoPQ4 is a dummy which is equal to 1 if SoP is in its 4th quartile; otherwise zero. SoP_instq2q4 is SoP x instq2q4. SoP_eindex is SoP x index. The *t*-statistics appear in brackets below parameter estimates. Asterisks ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively.

	(1) ln_ nonceo _stock	(2) ln_ nonceo _stock	(3) ln_ nonceo _stock	(4) ln_ nonceo _stock	(5) ln_ nonceo _opt	(6) ln_ nonceo _opt	(7) ln_ nonceo _opt	(8) ln_ nonceo _opt
ln_at	0.49***	0.49***	0.49***	0.49***	0.48***	0.48***	0.48***	0.48***
	(36.93)	(36.90)	(37.11)	(36.88)	(26.04)	(26.05)	(25.93)	(26.04)
ret	1.97*	2.02**	1.93*	1.96*	-0.81	-0.77	-0.98	-0.96
	(2.52)	(2.59)	(2.47)	(2.51)	(-0.79)	(-0.75)	(-0.95)	(-0.94)
ret_vol	-0.03	-0.03	0.15	-0.02	1.13	1.16	1.31	1.22
	(-0.06)	(-0.06)	(0.28)	(-0.05)	(1.55)	(1.60)	(1.81)	(1.67)
roa	0.73*	0.78**	0.66*	0.73*	1.60***	1.62***	1.54***	1.63***
	(2.45)	(2.62)	(2.22)	(2.44)	(4.21)	(4.27)	(4.06)	(4.29)
capex	2.32***	2.29***	2.28***	2.33***	0.41	0.42	0.43	0.50
	(5.30)	(5.24)	(5.20)	(5.32)	(0.66)	(0.67)	(0.68)	(0.80)
rnd	2.91***	2.93***	2.93***	2.91***	3.56***	3.62***	3.53***	3.63***
	(5.74)	(5.78)	(5.76)	(5.72)	(5.79)	(5.90)	(5.73)	(5.91)
ln_mtb	0.14***	0.14***	0.13***	0.14***	0.23***	0.23***	0.23***	0.23***
	(4.82)	(4.85)	(4.67)	(4.84)	(6.09)	(6.15)	(6.06)	(6.14)
cash_holdings	0.78***	0.76***	0.81***	0.78***	1.06***	1.03***	1.09***	1.03***
	(5.58)	(5.47)	(5.74)	(5.60)	(5.83)	(5.65)	(6.00)	(5.69)
Chair	-0.12***	-0.12***	-0.13***	-0.12***	0.03	0.03	0.03	0.03
	(-3.86)	(-3.85)	(-3.88)	(-3.83)	(0.73)	(0.76)	(0.58)	(0.68)
inst_own	0.94***	0.93***	0.95***	0.83***	0.91***	0.91***	0.90***	0.53*
	(7.07)	(7.06)	(7.18)	(4.25)	(5.07)	(5.08)	(5.01)	(1.99)
owners5%pctg	-0.10	-0.12	-0.08	-0.10	-0.29	-0.29	-0.25	-0.26
	(-0.73)	(-0.89)	(-0.58)	(-0.71)	(-1.58)	(-1.59)	(-1.32)	(-1.38)
insiderspctg	0.44*	0.43*	0.48**	0.44*	0.54	0.53	0.59*	0.61*
	(2.44)	(2.36)	(2.61)	(2.45)	(1.91)	(1.90)	(2.09)	(2.17)
Eindex	-0.04*	-0.04	-0.04*	-0.08	0.08**	0.09**	0.08**	-0.32
	(-2.05)	(-1.91)	(-2.01)	(-0.59)	(2.94)	(3.01)	(2.87)	(-1.53)
SoP	-0.50***			-0.65	-0.57**			-1.88**
	(-4.08)			(-1.58)	(-3.16)			(-2.97)
SoPQ1		0.19***				0.19***		
		(5.14)				(3.72)		
SoPQ4			-0.07*				-0.12**	
			(-2.13)				(-2.61)	
SoP_instq2q4				0.05				0.17
				(0.73)				(1.90)
SoP_eindex				0.04				0.44
				(0.27)				(1.95)
_cons	1.81***	1.32***	1.32***	2.00***	0.71*	0.14	0.22	2.10**
	(7.62)	(6.73)	(6.65)	(4.56)	(2.13)	(0.52)	(0.80)	(3.14)
N	2554	2554	2554	2554	1524	1524	1524	1524
Ind FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Yr Dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 1.19. Determinants of the non-CEO non-equity compensation

The Table presents fixed effect estimates of the impact of SoP approval vote on the level of non-CEO non-equity compensation. The dependent variable is the natural logarithm of the average of top four non-CEO non-equity compensations. We use one year lagged values of time-varying independent variables. Firm size is defined as the natural logarithm of total assets which is ln_at. Ret is annualized monthly stock return. Ret_vol is the standard deviation of monthly stock return. Return on asset is defined as roa which is income before extraordinary items over total assets. Capex is capital expenditure which is defined as CAPX over total assets (AT). Rnd is research and development which defined as XRD (COMPUSTAT item) over total assets. Ln_mtb is the log of the market to book value of assets. Cash-holdings is defined as CH/AT. The chair is a dummy which is equal to 1 if CEO is also the chairman of the firm, otherwise zero. Inst_own is the mean of quarterly institutional holdings of firm's outstanding share in a given year. Owners5%pctg is % of shares held by 5% or greater shareholders, as reported in a proxy statement. Insiderspctg is % of shares held by firms' top management and directors. SoP is For / (For+Against). SoPQ1 is a dummy which is equal to 1 if SoP is in its 1st quartile; otherwise zero. Similarly, SoPQ4 is a dummy which is equal to 1 if SoP is in its 4th quartile; otherwise zero. Similarly, we define a dummy instq2q4 which takes a value of 1 if inst_own is more than its 1st quartile; 0 otherwise. SoP_instq2q4 is SoP x instq2q4. SoP_eindex is SoP x eindex. The *t*-statistics appear in brackets below parameter estimates. Asterisks ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively.

	(1) ln_nonceo_noneqcomp	(2) ln_nonceo_noneqcomp	(3) ln_nonceo_noneqcomp	(4) ln_nonceo_noneqcomp
ln_at	0.42***	0.42***	0.42***	0.42***
	(31.31)	(31.19)	(31.47)	(31.30)
ret	5.70***	5.81***	5.72***	5.73***
	(7.30)	(7.47)	(7.31)	(7.33)
ret_vol	-1.39**	-1.40**	-1.18*	-1.37*
	(-2.62)	(-2.66)	(-2.23)	(-2.58)
roa	0.99***	1.03***	0.90**	0.99***
	(3.36)	(3.50)	(3.06)	(3.36)
capex	0.47	0.45	0.44	0.48
	(1.07)	(1.03)	(0.98)	(1.09)
rnd	0.08	0.12	0.07	0.09
	(0.17)	(0.25)	(0.13)	(0.19)
ln_mtb	0.10***	0.10***	0.10***	0.10***
	(3.61)	(3.65)	(3.52)	(3.59)
cash_holdings	0.34*	0.32*	0.38**	0.34*
	(2.44)	(2.27)	(2.66)	(2.42)
chair	0.06	0.06*	0.06	0.06
	(1.94)	(1.98)	(1.81)	(1.95)
inst_own	0.16	0.15	0.16	0.22
	(1.18)	(1.14)	(1.23)	(1.14)
owners5%pctg	0.16	0.13	0.18	0.16
	(1.14)	(0.97)	(1.34)	(1.15)
insiderspctg	0.27	0.25	0.31	0.28
	(1.49)	(1.38)	(1.72)	(1.54)
Eindex	-0.04	-0.03	-0.04	-0.16
	(-1.77)	(-1.61)	(-1.89)	(-1.09)
SoP	-0.63***			-0.95*
	(-4.84)			(-2.18)
SoPQ1		0.22***		
		(6.07)		
SoPQ4			-0.11***	
			(-3.40)	
SoP_instq2q4				-0.03
				(-0.47)
SoP_eindex				0.14
				(0.85)
_cons	2.60***	2.00***	2.03***	2.86***
	(10.94)	(10.32)	(10.32)	(6.21)
N	2412	2412	2412	2412
Ind FE	Yes	Yes	Yes	Yes
Yr Dummy	Yes	Yes	Yes	Yes

Table 1.20. Firm's cumulative abnormal return and SoP vote

The Table presents fixed effect estimates of the impact of SoP approval vote i.e., SoP on cumulative abnormal return after the vote. The dependent variables are cumulative abnormal return starting 2 days after the vote and ending128 and 255 trading days after the vote i.e., CAR (+2, +255) and CAR (+2, +128). We use one year lagged values of time-varying independent variables. Firm size is defined as the natural logarithm of sales. Firm performance variables are cumulative abnormal return starting 255 and 128 days prior to voting and ending 2 days before the vote i.e., CAR(-255, -2) and CAR (-128, -2). Lag_vol is the standard deviation of monthly stock return, return on assets is income before extraordinary items over total assets, denoted as lag_roa. We define ln_mtb as the natural logarithm of Market-to-Book value of assets, i.e., (LT + CSHO*PRCC_F)/AT. Lag_capex is capex over total assets. Lag_cash_holdings is defined as CH (COMPUSTAT item) over total assets. Ln_cash_comp is natural logarithm of cash (i.e., SALARY+BONUS) compensation. Inst_own is the mean of quarterly institutional holdings percentages of firm's outstanding share in a given year. instq2q4 is a dummy which takes a value of 1 if inst_own is in Q2Q4 and zero otherwise. Owners5%pctg is % of shares held by 5% or greater shareholders, as reported in a proxy statement. Iss_for is a dummy which takes a value 1 if ISS recommendation is "For", zero otherwise. SoP is For / (For+Against). SoP_instq2q4 is SoP x instq2q4. SoPQ1 is a dummy which is equal to 1 if SoP is in its 1st quartile; otherwise zero. SoPQ4 is a dummy which is equal to 1 if SoP is in its 4th quartile; otherwise 0. The *t*-statistics appears in brackets below parameter estimates. Asterisks ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively.

	(1) carp2p255	(2) carp2p255	(3) carp2p255	(4) carp2p128	(5) carp2p128	(6) carp2p128
lag_sales	0.02*** (3.67)	0.02*** (3.71)	0.02*** (3.60)	-0.00 (-0.82)	-0.00 (-0.76)	-0.00 (-0.86)
carn255n2	-0.36*** (-26.11)	-0.36*** (-26.15)	-0.36*** (-26.07)			
lag_vol	0.13 (0.88)	0.16 (1.05)	0.13 (0.87)	0.20 (1.92)	0.22* (2.09)	0.20 (1.92)
lag_roa	-0.04 (-0.80)	-0.05 (-0.91)	-0.04 (-0.78)	0.15*** (4.20)	0.15*** (4.09)	0.15*** (4.22)
ln_lag_mtb	0.01 (0.72)	0.01 (0.59)	0.01 (0.72)	0.05*** (4.82)	0.05*** (4.67)	0.05*** (4.82)
lag_capex	-0.87*** (-5.61)	-0.87*** (-5.62)	-0.87*** (-5.63)	-0.54*** (-5.09)	-0.54*** (-5.09)	-0.54*** (-5.11)
lag_cash_holdings	-0.10* (-2.10)	-0.10* (-2.01)	-0.10* (-2.12)	-0.10** (-2.92)	-0.09** (-2.79)	-0.10** (-2.93)
lag_lev	0.02 (0.49)	0.02 (0.60)	0.02 (0.51)	-0.01 (-0.50)	-0.01 (-0.40)	-0.01 (-0.49)
ln_cash_comp	-0.01 (-1.31)	-0.01 (-1.21)	-0.01 (-1.34)	-0.00 (-0.01)	0.00 (0.05)	-0.00 (-0.03)
inst_own	-0.23*** (-6.22)	-0.22*** (-5.97)	-0.28*** (-4.92)	-0.11*** (-4.49)	-0.11*** (-4.34)	-0.14*** (-3.56)
owners5%pctg	0.25*** (6.10)	0.25*** (5.93)	0.25*** (6.10)	0.14*** (4.95)	0.14*** (4.89)	0.14*** (4.95)
iss_for	0.07*** (3.74)	0.06** (3.26)	0.07*** (3.73)	0.05*** (4.14)	0.05*** (3.71)	0.05*** (4.13)
SoP	-0.42*** (-8.54)		-0.44*** (-8.30)	-0.22*** (-6.63)		-0.24*** (-6.42)
SoPQ1		0.09*** (6.40)			0.04*** (4.33)	
SoPQ4		-0.01 (-0.95)			-0.01 (-1.44)	
SoP_instq2q4			0.03 (1.21)			0.02 (0.88)
carn128n2				-0.15*** (-10.09)	-0.15*** (-10.03)	-0.15*** (-10.08)
_cons	0.39*** (3.61)	-0.02 (-0.22)	0.43*** (3.81)	0.19* (2.52)	-0.03 (-0.43)	0.21** (2.67)
N	3980	3980	3980	3980	3980	3980
Ind FE	Yes	Yes	Yes	Yes	Yes	Yes
Yr Dummy	Yes	Yes	Yes	Yes	Yes	Yes

Table 1.21. Firm's change in ROA and MTB and SoP vote

The Table presents estimates of the impact of SoP approval vote at different percentiles on firm's change in ROA. The dependent variables, del_roa and del_mtb are the changes in return on assets and MTB from period t-1 to period t. All the independent variables are in period t-1. Firm size is lag_sales, which is the log of sales in period t-1. Lag_mtb is natural logarithm of market-to-book value of equity in period t-1. Firm performance variables are returns (lag_ret), the standard deviation of monthly stock return (lag_vol), lagged return on assets (lag_ROA). Lag_capex is capex over total assets. Lag_cash_holdings is CH (COMPUSTAT item) over total assets. Ln_cash_comp is natural logarithm of cash (SALARY+BONUS) compensation. Inst_own is the mean of quarterly institutional holdings percentages of firm's outstanding share in a given year. Instq2q4 is a dummy which takes a value of 1 if inst_own is in Q2Q4, zero otherwise. Owners5%pctg is % of shares held by 5% or greater shareholders, as reported in a proxy statement. Iss_for is the dummy for ISS recommendations which takes a value of 1 if ISS recommends "For", zero otherwise. SoP is For/(For+Against). SoPQ1 is a dummy which is equal to 1 if SoP is in its 1st quartile; otherwise 0. Similarly, SoPQ4 is a dummy which is equal to 1 if SoP is in its 4th quartile; otherwise 0. SoP_instq2q4 is SoP x instq2q4. The *t*-statistics appear in brackets below parameter estimates. Asterisks ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively.

	(1) del _roa	(2) del _roa	(3) del _roa	(4) del _roa	(5) del _mtb	(6) del _mtb	(7) del _mtb	(8) del _mtb
lag_sales	0.01*** (7.35)	0.01*** (7.30)	0.01*** (7.45)	0.01*** (7.34)	0.00 (0.29)	0.00 (0.29)	0.00 (0.47)	0.00 (0.24)
carn255n2	0.01** (2.65)	0.01** (2.65)	0.01** (2.64)	0.01** (2.64)	0.00 (0.04)	0.00 (0.01)	0.00 (0.00)	0.00 (0.06)
lag_vol	-0.15*** (-4.18)	-0.15*** (-4.21)	-0.15*** (-4.20)	-0.15*** (-4.18)	-0.24** (-3.07)	-0.24** (-3.06)	-0.22** (-2.90)	-0.24** (-3.07)
lag_roa	-0.49*** (-38.03)	-0.49*** (-38.02)	-0.49*** (-38.16)	-0.49*** (-38.02)	-0.09*** (-3.32)	-0.09*** (-3.36)	-0.10*** (-3.49)	-0.09*** (-3.31)
ln_lag_mtb	0.04*** (10.34)	0.04*** (10.39)	0.04*** (10.29)	0.04*** (10.34)	-0.12*** (-14.50)	-0.12*** (-14.50)	-0.12*** (-14.75)	-0.12*** (-14.49)
lag_capex	0.09* (2.26)	0.09* (2.27)	0.09* (2.23)	0.09* (2.26)	-0.15 (-1.83)	-0.15 (-1.83)	-0.15 (-1.88)	-0.15 (-1.85)
lag_cash_holdings	-0.10*** (-8.72)	-0.10*** (-8.75)	-0.10*** (-8.74)	-0.10*** (-8.72)	0.10*** (3.89)	0.10*** (3.88)	0.10*** (4.04)	0.10*** (3.88)
lag_lev	-0.01 (-0.71)	-0.01 (-0.72)	-0.01 (-0.71)	-0.01 (-0.71)	0.04* (2.10)	0.04* (2.13)	0.04* (2.16)	0.04* (2.12)
ln_cash_comp	-0.00 (-1.36)	-0.00 (-1.37)	-0.00 (-1.32)	-0.00 (-1.35)	-0.01 (-1.74)	-0.01 (-1.71)	-0.01 (-1.67)	-0.01 (-1.77)
inst_own	0.00 (0.37)	0.00 (0.35)	0.00 (0.47)	0.00 (0.27)	-0.03 (-1.67)	-0.03 (-1.60)	-0.03 (-1.57)	-0.05 (-1.78)
owners5%pctg	0.02 (1.91)	0.02 (1.91)	0.02 (1.79)	0.02 (1.91)	0.00 (0.16)	0.00 (0.10)	0.00 (0.18)	0.00 (0.16)
iss_for	0.02*** (3.55)	0.02*** (3.66)	0.02*** (3.51)	0.02*** (3.55)	0.00 (0.38)	0.00 (0.28)	-0.00 (-0.09)	0.00 (0.37)
SoP	0.00 (0.01)			0.00 (0.03)	-0.07** (-2.59)			-0.08** (-2.74)
SoPQ1		0.00 (0.48)				0.02* (2.46)		
SoPQ4			0.00 (1.11)				-0.01 (-0.84)	
SoP_instq2q4				-0.00 (-0.04)				0.01 (0.92)
_cons	-0.03 (-1.14)	-0.03 (-1.28)	-0.03 (-1.37)	-0.03 (-1.09)	0.27*** (4.75)	0.20*** (4.02)	0.21*** (4.06)	0.29*** (4.77)
N	3980	3980	3980	3980	3938	3938	3938	3938
Ind FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Yr Dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Essay 2

Shareholder Democracy: Say-on-Pay and CEO Turnover

2.1. Introduction

The direct impact of small shareholders on corporate policy in large publicly owned firms has been relatively small. The general notion is that for most firms with widely dispersed ownership, shareholders do not have the resources or the economic stake to contribute meaningfully to the governance of their corporations. Other than infrequent occasions such as in a proxy fight, shareholders essentially "vote with their feet", selling their holdings if they have low confidence in the quality of a firm's management. At the same time, the idea of shareholder democracy, with its obvious connotations to the political system, has its supporters. The appeal is that in the existing corporate governance system, in which boards can be co-opted and corporate control contests are costly to launch, a mechanism for the airing of shareholder views (other than by trading out of the firm's holdings) could be beneficial. The role of shareholders in corporate governance seems to have garnered additional support after the perceived failures of corporate governance during the Great Recession. The Dodd-Frank Act (DFA), in particular, mandates an advisory SoP vote on a company's pay practices for its top executives on a periodic basis.

Our objective in this essay is to understand whether such a vote is consequential, despite being advisory. We examine whether the vote is associated with changes in the CEO suite. While the shareholder vote is advisory, it may well have significant ramifications. Whether the shareholder vote is particularly well informed or not, a poor vote outcome is not something that is easily dismissed by the board. After all, it is an expression of the shareholder's view on an important function of the board i.e., the nature of the incentive and compensation contracts given to the CEO.

The Dodd-Frank Act (DFA) was passed on July 21st, 2010. DFA's section 951 requires publicly traded companies to periodically hold non-binding shareholders' votes on executive compensation. Companies with a public float below $75 million or revenues of less than $50 million were not required to hold a vote until Jan. 21, 2013. Most firms conduct their SoP vote on

their annual meeting date. Our empirical work contributes to the existing literature by studying 415 voluntary and involuntary turnovers for the period 2011-2014 after the DFA legislation for whom Say-on-Pay (SoP) voting result is available in 8-K SEC form.

To further understand the association between SoP votes and CEO turnovers, we identify forced turnovers and turnovers where the next CEO is an outsider. We study the effects of the shareholder's vote on the likelihood of turnovers classified as turnover, forced turnover, and succession by an outsider. Turnovers are the cases in which the CEO separates from the firm. Forced turnovers are the cases where a CEO resigns, is ousted or dismissed by the board of directors. We test whether SoP compensation supports affect CEO turnover. Our results confirm the fact that low SoP approval vote has a significant effect on CEO turnover. Hence, it appears that despite its advisory nature, boards do pay attention to the opinions of shareholders as expressed via the vote. Our analysis provides support to earlier findings that poor equity performance (Jenter and Kanaan, 2015) increases the likelihood of CEO turnover. We believe that our paper is the first to show this result for US data.

The essay is constructed as follows. In section 2 we examine the literature relating to CEO turnover and develop our empirical hypothesis. Section 3 describes our data and summary statistics. In Section 4, we document the main empirical relationships between CEO turnover and support of shareholders using turnover data from 2011-2014. Our results suggest that likelihood of a turnover is more sensitive to SoP vote when the CEO is more entrenched. Our results also confirm that the CEO being a chairman does not affect consequences of the vote. We find that the likelihood of a replacement by an outsider is negatively related to Say-on-Pay support where the governance is weak. In section 5, we show that our results are robust over time and to different classifications of age, tenure, and CEO duality. Section 6 concludes our research findings.

2.2. Testable Hypotheses and Literature Review

In imperfect labor and capital markets, agency theory suggests that managers seek to maximize their own utility at the expense of corporate shareholders. Management teams of large

companies that are owned by a large number of stockholders face little risk of being ousted by its own stockholders in proxy voting (Morck et al., 1989; Parrino, 1997). In these companies, management's control over the voting mechanism is so strong that it is almost impossible for dissident stockholders to obtain the necessary votes required to remove managers. The risk of management comes from the response of the board, large shareholders, and corporate raiders.

Previous studies document that disciplinary CEO turnover is often associated with external pressure, rather than a result of effective board monitoring (Fisman et al., 2014). Denis and Denis (1995) report that a prolonged period of performance decline results in the vast majority of management turnovers. They mention that management turnover appears to be preceded by external pressure from block holders, raiders, or creditors. Similarly, boards act when they face institutional selling pressure (Parrino et al., 2003). In the light of these studies, we explore whether the SoP vote (to be described below) is another mechanism for exerting external pressure on boards to act to replace their CEOs.

After January 21, 2013 all the companies are required to hold a vote on CEO compensation. Kimbro & Xu (2015), Brunarsky et al. (2015) document that shareholders support of the CEO's compensation package is positively related to firm performance as measured by stock return and return on assets. Jenter and Kanaan (2015) find that CEOs are more likely to be terminated from their position after bad industry performance. The bad market performance also increases the likelihood of a forced CEO dismissal, although by a smaller magnitude than a bad industry performance. In this study, we examine whether this relation is intensified by the outcome of SoP.

According to Ertugrul et al., (2011), Jenter and Kanaan (2015), standard economic theory predicts that when firms decide to retain a CEO, corporate boards filter out exogenous industry and market shocks from the firm performance. Alissa (2015) argues that CEO performance reflects shareholder sentiment in terms of the vote. Therefore, more negative votes mean a poorly perceived CEO, which in turn will put more pressure on the board to remove the CEO. Cai et al., (2015) document that CEOs have the ability to operate in their self-interest as opposed to the best interest

of the shareholders because of asymmetric information and uncertainty. Evidence by HomRoy (2015) suggests that lower firm performance increases the risk of CEO turnover. Hence, it is intuitive that lower performance will induce shareholders to cast a negative vote. We can state:

Hypothesis 1: The likelihood of a CEO turnover, including involuntary turnover, is negatively related to the CEO's SoP support level.

As an auxiliary measure, we use the Bebchuk et al., (2009) entrenchment index (E-index), tenure and board independence (indirect) as measures of entrenchment. Weisbach (1988) states that "Managerial entrenchment occurs when managers gain so much power that they are able to use the firm to further their own interests rather than the interest of shareholders." Shleifer and Vishny (1989) document that by making manager specific investments, managers can reduce the probability of being replaced, extract higher wages and large perquisites from shareholders, and obtain more latitude in determining corporate strategy. Fich and Shivdasani (2006) find that director independence is associated with greater performance sensitivity of CEO turnover. An alternative hypothesis is that, controlling for firm performance, the vote should have a larger impact when a manager is entrenched because an entrenched CEO is less likely (than a CEO who is not entrenched) to be ousted due to bad performance. Hence, we can state that:

Hypothesis 2: Forced CEO turnover is less likely to be affected by the vote outcome when the manager is entrenched.

It is an empirical fact that the successor is an insider in the majority of CEO turnovers. According to Warner et al. (1988) there is a negative relation between the likelihood of outside succession and stock returns 7 to 12 months prior to succession. They also find that likelihood of forced turnover is negatively related to past 12 month's stock return. Parrino (1997) finds a strong negative relation between industry adjusted firm performance and the likelihood of appointing an

outsider as the next CEO. In this case, a CEO from another company is chosen based on some industry experience which may reduce costly errors. Another reason that the board chooses an external CEO may be intended to change the firm's policies. However, when an outsider is chosen for routine succession, industry experience appears to be less important. According to Dherment-Ferere and Renneboog's (2003) company-specific human capital accumulation theory, insiders have the opportunity to accumulate company-specific human capital naturally, which makes insiders more attractive than outsiders for a CEO position. Based on this theory we can argue that being an outsider, a new CEO will take the time to build the network in order to acquire both internal/external information. It is also easy to assess the quality of an insider from her performance track record. However, for an outsider, quality is a less accurate estimate for shareholders because of the short tenure with the firm. Therefore, we can state:

Hypothesis 3:   The likelihood of a replacement by an external CEO is negatively related to

SoP supports in firms where the governance is weak.

2.3. Data, dependent variables, and independent variables

2.3.1. Data

Our full sample consists of 969 vote-year observations and 210 turnovers during the period 2012-2013. Here turnovers are *all turnovers* (turn_over) where CEO changes his position as a CEO. We merge this data with COMPUSTAT and CRSP to collect the data on accounting and stock return variables. We use MSCI-GMI for the data on independent director percentage, the number of board meetings, and board size. We use EXECUCOMP to collect the data on Executive compensation. We use the variable LEFTOFC of EXECUCOMP to determine whether a CEO leaves his position as CEO or not. Following Bebchuck (2009) we employ E-index, which we obtain from RISKMETRICS, as a proxy for CEO entrenchment. Our sample size drops because we have E-index data only for 840 firms. We merge this data with our hand-collected SoP voting data which contains the date of the vote, vote 'for' and vote 'against'. We follow Goyal and Park (2001) to construct our sample that satisfy the following criteria:

1. Name of the CEO, Date became CEO, present age, and CO_PER_ROL (unique EXECUTIVE-COMPANY ID) is available for the sample period

2. The data for the date on which CEO terminates if she terminates (LEFTOFC) as CEO is available.

3. SoP voting data is available for all the CEOs.

4. The annual meeting date is available for all firm-year.

5. Return data are available in CRSP database and financial statements data are available in the COMPUSTAT database.

6. Indicator for all governance provisions are available in RISKMETRICS.

We identify 216 CEO turnovers during 2012-2013. We discard 6 observations in which the CEO has passed away. Out of the 210 turnovers, 123 cases are forced turnovers, and 89 are outside hires. Our no-turnover sample consists of 759 observations in which all the CEOs serve as CEO for 5 years and face SoP vote for the period 2012-2013 and from the same SIC 2 digit. According to the criteria above, we have 969 vote-year observations.

Voting year	2011	2012	Total	Voting year	2011	2012	Total	Voting year	2011	2012	Total
Turnover	95	115	210	Forced turnovers	52	71	123	outsiders	35	54	89
No turnover	194	565	759	No Forced turnovers	237	621	846	No outsiders	254	626	880
Total	289	680	969	Total	289	680	969	Total	289	680	969

2.3.2. Dependent Variables

We use three alternative types of definitions of turnover. First, any change in the CEO suite (*All Turnovers*); second, a change in the CEO suite that is imposed by the board (*Forced CEO Turnovers*) (to be explained); third, a change in the CEO suite where the incoming CEO has not been a company employee just prior to the nomination as a CEO (*Outsider*). Definition (1) *All turnovers* includes any case in which a CEO enters office in that fiscal year. *Forced turnovers* include all CEO changes other than those arising from retirement, turnover due to normal management succession, death, or if CEO departs for a prestigious position elsewhere. In order to

determine whether a separation is forced, we look for internet sources which give clues on why the CEO leaves his/her position. To make sure the information is correct; multiple sources are used. A word search on the internet with the CEO name, a year left, 'resigned', 'ousted', 'terminated', 'dismissed', 'fired' in Factiva, Lexis-Nexis, Bloomberg Businessweek, Wall Street Journal, or corporate website gives the announcement date of CEO turnover. If the announcement date and the LEFTOFC date (EXECUCOMP) are same and the separation process is declared 'ousted' or 'dismissed' or 'fired' or 'terminate', we classify that turnover as forced turnover. Bloomberg Businessweek (http://www.bloomberg.com/businessweek) gives the status of CEOs if CEO moves to any other company or is promoted to next level in the same firm. Firms do not generally report precise reasons for turnover (Warner et al., 1988; Weisbach, 1988) even in the proxy statement. Reasons such as poor performance or low stock returns are rarely cited (only in two instances in our sample). We review all CEO turnovers where the CEO is under 61 years of age for forced CEO turnover.

Our third classification is based on whether the next appointed CEO is an insider or an outsider. In order to determine that, we first collect from the Audit Analytics' CEO departure database the names of the new CEOs and their effective dates and reason for turnover. We match this sample according to CEO's last name and effective date with our full sample. To be an O*utsider*, a turnover CEO's resignation date and the incoming CEO's appointment date should be match, and audit analytics do not indicate the reason as "position changes within company". For outside hire CEOs, we further investigate Bloomberg Businessweek's CEO information and proxy statements to check the accuracy of our data.

2.3.3. Explanatory Variables

SoP facilitates the expression of shareholder's views regarding executive compensation. We follow Kimbro and Xu (2015) and do not include abstentions in our calculation. To collect the voting data, we follow the algorithm developed by Engelberg and Sankaraguruswamy (2007) to crawl SEC form 8-K. We search for the word 'non-binding', 'Approve', 'Advisory vote', 'Say-on-

Pay', 'vote for', 'For', and 'Against' to collect the voting data for all the CEOs in all the relevant years. In case voting data is not available, we manually search for 8-K, 10-Q to collect the data. Voting information for all firms may not be available for 2011-2012 because DFA section 951 does not require companies with a public float below $75 million or revenues of less than $50 million to hold a vote until Jan. 21, 2013. If SoP is an annual event, then firms may have voting information for both the years. We collect both SoP vote 'for' and 'against' data for all CEOs whether she/he continues or separates. Our goal is to see the effect of shareholder's vote on the likelihood of CEO turnover. Hence, the SoP vote for percentage (SoP) is calculated as "for" divided by sum of "for" and "against".

Then, to measure the firm's stock performance (ret_mean), we collect stock return data for each full year in the voting fiscal year of each CEO from the Center for Research in Security Prices (CRSP) database. Then we measure ret_mean as the average of 12 month's return. For accounting performance, we employ the return on assets (ROA) which is calculated as COMPUSTAT item IB over lagged total assets. We also include the standard deviation of the firm's stock returns in our tests following DeFond and Park (1999). We define this variable as ret_vol which is calculated as the variance of stock returns during the voting year. There is ambiguity in the relation between firm's standard deviation of their stock return and their CEO turnover. Goyal and Park (2001) argue that in industries where the standard deviation of stock return is high, a negative stock return is less accurate for CEO's poor performance.

Next, we look for the age of the CEO in the voting year in Execucomp. If this data is missing, we confirm the age by looking at the CEO age data from the MSCI-GMI ratings. Murphy and Zimmerman (1993) and Weisbach (1988) find a strong relation between CEO age and CEO turnover. We also take age65 to control for the CEO age.

We define tenure as the duration between CEO became CEO (BECAMECEO) and leaves office (LEFTOFC) or the end of the year of the voting fiscal year depending on whether the CEO separates or continues. We use log of the tenure i.e., ln_ten in the regression specification. In oreder

to check for the possibility that the relation follows another functional forms, we use a dummy for tenure if tenure is more than the median tenure to see if SoP affects turnover in the median tenure. Taylor (2010) argues that boards of directors often fail to fire underperforming CEOs. In order to see the effect of entrenchment on CEO turnover we use E-index which is described in Bebchuk et al., 2009. By construction, E-index varies from 1 to 6. E-Index (six provisions of G-index) is a proxy which is strongly associated with governance. Here the logic is, better firing decision can be achieved if board listens to the shareholder's voice and vice versa. This index explicitly relates to the ability of shareholders to exercise their power. So, provisions in place means making it difficult for shareholders, like reaching a threshold majority for approving measures, hold confidential votes, or vote out directors. We also incorporate board independence, or the fraction of independent directors on a board, as a measure of entrenchment. It is known that dependent directors have less power over the CEO than independent ones (Jenter and Kanaan 2015).

We expect a negative coefficient of E-index for forced CEO turnover and outside succession. In order to check whether it makes the votes less or more effective, we interact E-index with SoP. The notion is relatively weak governance enables CEOs to stay for a longer period. However, we are also interested to see whether entrenchment is associated with the impact of SoP. Low SoP support will help the board to force the CEO out when the entrenchment is high and board by itself is less powerful. Additional explanatory governance variables are the percentage of independent directors (ind_dir) and whether the CEO and Chairman of the board position are held by the same person (Dum_chair).

We collect board size and independent director's data from MSCI-GMI ratings. EXECUCOMP provide data on CEO status whether the CEO is a chairman or not. Dum_chair is an indicator variable that equals one if CEO is a chairman, and zero otherwise. Denis, Denis, and Sarin (1997) argue that a board's ability to monitor CEOs is also affected by the firm's ownership structure. Therefore, we control for the ownership of institutions which is the fraction of shares owned by institutions at the end of the fiscal year preceding the CEO turnover. We collect

institutional ownership data from Thompson Reuters' 13F database. We also control for the five

percent owners share ownership percentage and firm size.

2.4. Empirical Model

2.4.1. Effect of Say-on-Pay votes on CEO Turnover

Our baseline logistic regression specification for estimating the determinant of CEO

turnover is

$$Pr(Turnover_{it}) = \beta_0 + \beta_1 SoP_{it-1} + \beta_2 X_{it-1} + + \epsilon_{it} \tag{1}$$

i.e., Logit model of the probability that a CEO of firm i experiences a turnover in fiscal year t,

where β_1 estimates the effect of SoP vote outcome on turnover, and X is a matrix of control

variables. Coefficients are presented as odds ratios. Errors ϵ_{it} are assumed to be independent

across but not within firms as an odds ratio greater (less) than one indicates that the covariate

increases (decreases) the odds of a positive outcome. Standard errors reference the test of whether

the coefficient equals one. Our independent variable SoP and control variables are in period t-1.

We extend the above model for both forced turnover and outside succession.

To examine the impact of SoP on the time-frame of CEO turnover, we create two indicator

variables. We define days to departure are the number of days between the SoP vote date and the

CEO's departure date. We construct dayslt_180tn to equal 1 if the CEO departs in less than 180

calendar days; otherwise zero. We also construct days180_365tn to equal 1 if the CEO departs

between 180 and 366 calendar days after the SoP vote and zero otherwise. Our specifications are

as follows

$$Pr(\text{dayslt\_180tn}_i) = \beta_0 + \beta_1 SoP_{it-1} + \beta_2 X_{it-1} + + \epsilon_i \tag{2}$$

$$Pr(\text{dayslt180\_365tn}_i) = \beta_0 + \beta_1 SoP_{it-1} + \beta_2 X_{it-1} + + \epsilon_i \tag{3}$$

2.4.2. Summary Statistics

Table 2.1 reports summary statistics for the entire sample (2012-2013) including mean,

median, standard deviation, min, max, 1st quartile and 4th quartile. Table 2.2 reports mean, median

and standard deviation of SoP, E-index, CEO title dummy variable, performance measures, and other control variables such as tenure, age, institutional ownership percentage, independent director percentage and firm size for the turnover and no turnover sub sample (2012-2013). The last column in Table 2.2 reports the result of the T-test and Wilcoxon test for the differences in the mean and median values of the variables across the turnover and no-turnover samples, respectively. The vote for percentage (SoP) is defined as the ratio of vote "for" to the sum of vote "for" and vote "against". For the entire sample in Table 2.1, the mean of SoP is 0.92. For the turnover sample (Table 2.2), the mean and median of SoP are 0.89 and 0.95, respectively. However, for the no turnover sub sample, the mean and median of SoP are 0.93 and 0.96, respectively. Both the mean and the median differences across the two samples are significant at 1% (t-stat) and 5% respectively (Z-stat).

The average tenure for the full sample is 9.57 years which is one year more than Kaplan et al. (2012) who reports 8.6 years. The CEOs in the no-turnover sub sample have a mean tenure of 9.52 years and turnover sub sample have a mean of 9.65 years. The average age of CEOs in the full sample is 56.3 years which is close to 55.8 years of average age in the findings of Dikolli et al. (2014).The minimum and maximum ages are 33 and 95 years, respectively. For the no turnover sample, the average age is 55.4 years, and the minimum and maximum ages are 34 and 83 years, respectively. The differences in the natural logarithm of age measure for the two samples are statistically significant at less than the 1% level reported in Table 2.2.

Table 2.2 also reports results for chairman dummy i.e., dum_chair. The mean of the CEO title dummy is 0.26 for the CEO turnover sample and 0.44 for the no-turnover sample for the period 2012-2013. The differences in the mean and median across the two samples are significant at less than 1% level. The mean of this variable is higher in Goyal and Park (2002) where the mean of chair dummy of turnover and no turnover samples are about 0.77 and 0.81, respectively. The means in the current study are lower than the corresponding means in Goyal and Park may be because of the time period. The hypothesis is that turnover should be negatively related to dum_chair. The understanding is dual responsibility means more power for the CEO than an independent chairman

which may be meaningful in case the board decides to fire the CEO and whether or not all board members are actively engaged. Consistent with findings in previous studies, we document that CEOs who serve as board chairperson are less likely to separate from their position. We do not find any evidence that the impact of SoP varies with CEO being chairman or not.

In Table 2.2, firm performance variables confirm the previously documented results that turnover is associated with lower past performance. The mean and median of annualized return (ret_mean) for the CEO turnover (no-turnover) sample are 3% (11%) and 6% (11%), respectively. The t- and Z- statistics of ret_mean are –4.44 and -4.49, respectively. Both the mean and median differences across the two samples are significant at the 5% level.

The stock return volatility for turnover and no-turnover samples are 0.086 and 0.079, respectively. It seems that the standard deviation of the stock return of turnover sample is higher than that of the no-turnover sample. Both the mean and median differences across the two samples are significant at the 5% level.

The E-index is lower for CEO turnover firms in comparison to no-turnover firms. Both the mean and median differences across the two samples are significant at less than 1% level. This is consistent with the expectation that more entrenched CEOs are less likely to separate from their companies. Our next measure of board governance is board size which is defined as a log of the total number of directors serving on a board. In Table 2.2, we report that the difference in board size between the turnover and no-turnover samples is not statistically significant. Our third measure of governance is a percentage of independent directors which is defined as the number of independent directors over a number of total directors in the firm's board. Cai and Walkling (2011) find that abnormal returns to the enactment of SoP are directly related to the fraction of outside directors which are appointed by the CEO (and therefore are likely to be less independent than outside directors which are not appointed by the CEO). Also, Laux (2008) argues that greater board independence is associated with higher CEO turnover. The full sample mean of independent director percentage (ind_dir) is 0.78 percent. However, for turnover and no-turnover sample the

mean is 0.848 and 0.854, respectively. The *t*- and Z- statistics for inddirpct in both turnover and no-turnover samples are not significant.

For the entire sample, the mean of ROA is 0.09. However, the mean of ROA for turnover and no-turnover samples are 0.052 and 0.051, respectively. The *t*- and Z- statistics are not significant for both the turnover and no-turnover samples. Another variable of interest is institutional ownership. The variable is inst_own which is defined as the percentage of shares held by institutions at the end of the year prior to the turnover year. If the institutional investors are dissatisfied with a firm's management, they vote with their feet (Parrino, 2003). In Table 2.2 we report inst_own for CEO turnover/no-turnover sample. The mean and median of inst_own for turnover (no turnover) sample is 0.639 and 0.652 (0.607 and 0.619) respectively. The mean is higher in the turnover sample than the no-turnover sample. Both the mean and median differences are significant at less than 5% level.

2.5. Results and discussions

2.5.1. CEO turnover at different window and SoP vote

In this section we discuss the logit regression in which we examine the relation between CEO turnover and SoP vote using three alternative windows for the turnover event: turnovers during first year, the first half of the year and second half of the year following the SoP vote. We are the 1st study to see the impact of SoP approval vote on the CEO turnover time frame.

Table 2.3 provides the result for the logit estimates of the likelihood of turnover at three different time-frames. Regression 1 provides the estimation on the turnover in full year. 2nd and 3rd regression estimates the likelihood of turnover in first half and second of the year. We find that likelihood of turnover is negatively related to SoP and CEOs separate from the firm in 2nd half of the year.

Our measure of performance is ret_mean. We find that likelihood of turnover is negatively related to ret_mean which is consistent with prior findings. For example, Dalton and Kesner (1985), Weisbach (1988), Friedman and Singh (1989), Boeker (1992), Murphy and Zimmerman (1993),

and Datta and Guthrie (1994) document an inverse relationship between the likelihood of CEO turnover and firm performance. Warner, Ross and Wruck (1988) and Weisbach (1988) find that poor stock return increases the probability of a CEO losing his/her job. Dikolli, Mayew, and Nanda (2014) show that the likelihood of CEO turnover increases with negative financial performances such as stock return and return on assets. We also examine the impact of interaction variable of vfp and ret_mean. We do not report this regression since the coefficient estimate of interaction variable is not significant.

Table 2.4 reports the logit estimates of the likelihood of CEO turnover with marginal effect. The dependent variable is turn_over. After controlling for age, tenure, and independent director percentage, institutional ownership percentage, firm size, and firm performance we find that 1% decrease from the mean in the level of SoP (SoP) support will result in an increase of 37% in the likelihood of CEO turnover in the coming year. We also report the estimates from regressions where a linear relation between SoP and the turnover probability is not assumed. Instead, we estimate the impacts on the turnover probability of a low SoP (in the 1st quartile, indicated by SoPQ1=1) and of a high SoP (in the 4th quartile, indicated by SoPQ4=1). In regression 2, we find that the coefficient estimate of SoPQ1 is positive and significant at the 1% level which indicates that CEOs those whose SoP is in the 1st quartile are more likely to be forced out. The coefficient estimate of SoPQ4 is not significant. We see that turnover probability is more sensitive to SoP in the low range of the support than in the high range. When we interact SoP with ret_mean and run the same regression, we find that the coefficient estimate of SoP is still negative and highly significant (not reported) which means turnover is negatively related to SoP turnover regardless of firm performance.

2.5.2. Forced CEO turnover and SoP vote

Turnovers can be involuntary. Next, we want to examine whether SoP vote affects involuntary turnover. We report the logit estimation of forced CEO turnover (forced_trnovr) in table 2.5. The variables of interest are SoP, SoPQ1, and SoPQ4. The coefficient estimate of SoP is

negative and significant at 5% level. The coefficient estimate of SoPQ1 is positive and significant at a 10% level which indicates that CEOs who are in 1st quartile of SoP are more likely than those in the upper three SoP quartiles to be ousted. Similarly, the coefficient estimates of SoPQ4 is not significant which indicates that forced turnover is more likely when there is relatively little support, but that average support does not make turnover more likely than strong support. The parameter estimate of ret_mean is negative and significant at less than 1% level. The table also reports that forced turnover is less likely if the CEO is also the chairman of the company. The parameter estimate of dum_chair is highly significant and negative for SoP, SoPQ1, and SoPQ4. The interaction of dum_chair with SoP (SoP_chair) is not significant (not reported) which indicates that the relation between turnover and SoP is not sensitive to whether the CEO is also a chair. Forced turnover (forced_trnovr) is more likely the higher the number of board meetings, a year prior to turnover; i.e., if there is a need to replace a CEO, the board may meet more often. Our result for the age variable (ln_age) is similar to Goyal and Park (2002), Murphy and Zimmerman (1993) and Weisbach (1988) who find a strong positive relation between CEO turnover and age. The normal age of retirement is 65. Hence, turnover of older CEOs (>65) may be due to normal retirement. To control for this routine turnover, we also consider a dummy for CEO age i.e., age65 which is equal to 1 if CEO age is greater than 65, otherwise zero. The parameter estimate of age65 is insignificant as reported in Table 2.5. Table 2.5 also reports the parameter estimates of the predictor institutional shareholding percentage (inst_own). It seems that forced turnover is more likely if the percentage of the institutional ownership (inst_own) is high. This result is opposite of Parrino et al. (2002).

In Table 2.5, the parameter estimate of E-index is negative and significant at 10% level (Column 1) in the forced turnover regression. The interaction of SoP and E-index is significant in Table 2.5. We find that low support increases the likelihood of forced turnover when the CEO is entrenched. This implies when the CEO is less powerful the board is able to terminate a CEO without the help of the SoP vote.

2.5.3. Outside CEO succession and SoP vote

Next, we examine the impact of SoP on the likelihood CEO turnover if next CEO is an outsider. Outsider is an indicator variable which takes a value 1 if next CEO is from outside of the firm, otherwise zero. We present the results in Table 2.6. The main variables of interest are SoP, SoPQ1, and SoPQ4. The parameter estimate of SoP is negative and significant at 10% level and the parameter estimates of SoPQ1 is positive and significant at 10% level, whereas the parameter estimate of SoPQ4 is not significant. The parameter estimate of the firm performance variable ret_mean is negative but not significant. Ln_age is highly significant and positive which indicates that hiring an outside CEO is more likely when the CEO is older. Dummy for CEO duality i.e., dum_chair is highly significant and negative. Again the same logic, dual responsibility vests with more power and more resistant for a new hire. The parameter estimate of ln_bdmtgs i.e., logarithm of board meetings is also highly significant. A larger number of meetings may indicate a more severe problem and may be affected by a decision to search for new CEO. We have also used other control variables to see their effect on the outsider indicator. The parameter estimates of board size (bd_size), E-index, and the logarithm of total assets (ln_at) are not significant. We use the interaction variable of SoP with ln_age, dum_chair, and ln_bdmtgs. The parameter estimates are not significant. However, parameter estimate of SoP is negative and significant which indicates that outsiders are more likely to be recruited when shareholder's support is low.

In Table 2.6, the parameter estimate of E-index is negative but not significant. We find that low support increases the likelihood of hiring an outsider when the CEO is entrenched. This implies when the CEO is less powerful the board is able to terminate a CEO and hire an outsider without the help of the SoP vote.

2.6. Robustness checks

2.6.1. Robustness over time

In order to test the robustness of our model, we run the same regression that is reported earlier on a year-by-year subsample for all three turnover indicator variables. The parameter

estimates of SoP for years 2012 and 2013 are negative and highly significant with industry fixed effect. There is no change in the logit estimate of SoP (vote for percent) which ultimately tells us that there is a negative relation between CEO turnover and previous SoP support vote. The results also indicate that there is a negative relation between an outside hire and SoP support vote. This may be due to the fact that shareholders may not have confidence in the ability of the new CEO.

We also find that CEOs, whose shareholders' support for the executive compensation is weak (i.e., the vote outcome is in the lowest quartile) are more likely to be separated from the company in the year following the vote and vice-versa. This result is also robust if we consider the regression estimate by year. The parameter estimates of SoPQ1 and SoPQ4 are similar to their corresponding estimates in the full sample.

2.6.2. Classification of age

We examine the robustness of our main findings to a different classification of CEO age. By construction, CEO age and CEO's tenure are correlated because CEOs with longer tenure are on average older. In Tables 2.3, 2.4, 2.5 & 2.6, we ran logit regression with ln_age and age65 and in another time the regression were repeated with age58 replacing age65. We find that our main results remain unchanged, i.e., turnover, forced turnover, outsider, and SoP are inversely related. For a further check on the robustness of retirement age, we dropped all retired CEOs from the sample. Our results remain unchanged.

2.6.3. CEO duality and Tenure

As a robustness check, we examine Tenlt5 (or Tengr5) in addition to chair as a measure of power. As argued by Goyal and Park (2002) new CEOs undergo an evaluation period early in their tenure. We address this concern by constructing another dummy for tenure. Tenlt5 is a dummy for tenure which takes a value of one if tenure is less than five years, zero otherwise. For robustness check, we have included the interaction of tenlt5 and dum_chair in our regression of other turnover indicator variables. However, we see no change in our main result.

2.7. Conclusion

The Dodd-Frank Act mandates a periodic advisory SoP vote on a company's executive pay. In this essay, we examine whether a lack of support affects the likelihood of turnover. Our full sample spans from 2011-2014 having 415 voluntary and involuntary turnovers. We also utilize a subsample of 222 turnovers during 2011-2013 for which we have a classification of the turnovers. Following previous studies, we examine three types of turnovers: all turnover, forced turnovers, and turnovers where the incoming CEO is recruited from outside of the firm. We find an inverse relation between all turnover and shareholders support for executive compensation. That relation is mostly due to an increased likelihood of a turnover, where the vote support is in the lowest quartile. We also find that most of these replacements take place in the second half of the year following the vote. Similar relations are found in a subsample when the dependent variable indicates either a forced turnover or a turnover where the CEO is replaced by an outsider. We also find that the sensitivity of the turnover to Say-on-Pay support vary negatively with entrenchment (E-index).

This is the first study of the impact of SoP vote on CEO turnover in the USA. Our findings are consistent with previous findings by Alissa (2015) for the UK. Future research may examine whether the same relation holds for other countries. We did not find that the impact of the SoP vote on turnover varies with institutional ownership. However, this issue may be revisited when a larger sample becomes available.

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Appendix 2

Variables	Definitions
turn_over	Dummy = 1 if CEO leaves his position as CEO in a given year; otherwise 0
forced_turnover	Dummy = 1 if CEO resigns, dismisses, fires, oust from his position as CEO in a given year; otherwise 0
Outsider	Dummy = 1 if new CEO is hired from outside of the firm, otherwise 0
SoP	For/(for+against) i.e. Vote for divided by sum of vote for and vote against
Age	The age of the CEO in a given year
ln_age	The natural logarithm of age
Tenure	Number of years as CEO of the firm as of voting year
ln_ten	The natural logarithm of tenure
ln_bdmtgs	Log (Number of board meetings in voting year)
bd_size	Natural logarithm of total number of directors on the firm's board of directors
At	Total assets, in millions, as reported in COMPUSTAT in a voting year
ind_dir	Percentage of independent directors on the firm's board of directors
stagbd (A)	Dummy = 1 if board is classified; otherwise 0
dum_bylawamen (B)	Dummy = 1 if there exists any shareholder bylaw amendments; otherwise 0
dum_chartrament (C)	Dummy = 1 if there is any requirements for charter amendments; otherwise 0
dum_poisonpill (D)	Dummy = 1 if takeover defense poison pill provision is in place; otherwise 0
dum_supmaj (E)	Dummy = 1 if there is supermajority provision in the charter; otherwise 0
dum_gparachute (F)	Dummy = 1 if there is golden parachute provision; otherwise 0
E-index	Sum of A, B, C, D, E, F
dum_chair	Dummy = 1 if CEO is also the Chairman of the board; 0 otherwise
inst_own	The percentage of institutional holdings
Roa	Return on asset i.e. IB divided by book value of total assets
ret_mean	Annualized mean return computed from CRSP
ret_stddev	Standard deviation of firm's monthly change in stock price in voting year

Table 2.1. Descriptive Statistics

This table reports the summary statistics of 969 SoP votes for the year 2012-2013. Turnover is a dummy variable which is equal to 1 if CEO leaves his position as a CEO in a given year, otherwise zero. This excludes deaths and health related assignments. SoP is the vote for percentage based on SoP vote, defined as For/ (For+Against), where 'For' = number of 'For' vote cast and Against = number of 'Against' vote cast. SoPQ1 is a dummy which is equal to 1 if SoP is in its 1st quartile, else zero. Similarly, SoPQ4 is a dummy which is equal to 1 if SoP is in its 4th quartile; otherwise zero. Ret_mean is the annualized monthly return of the firm, a year prior to turnover. Ret_stddev is the standard deviation of monthly return of a firm in a voting year. Roaib is the return on assets defined as COMPUSTAT item IB over total assets. Tenure is the number of years CEO serves as CEO. Age is the age of CEO which is EXECUCOMP data item AGE. Bd_size is the natural logarithm of a total number of directors in firm's board. Ln_bdmtgs is the natural logarithms of the number of board meetings. Dum_chair is a dummy variable which is equal to 1 if CEO is also the chairman of the firm, otherwise zero. Inddirpct is the percentage of independent directors in firm's board. inst_own is the percentage of shares held by institutions. Eindex is the entrenchment index measured according to Bebchuk et al., (2008). Ln_at is a natural logarithm of firm's total assets.

Variables	N	Mean	StdDev	Min	P1	P25	P50	P75	P99	Max
turn_over	969	0.217	0.412	0	0	0	0	0	1	1
ln_at	969	8.249	1.767	3.996	4.899	6.996	8.174	9.338	13.472	14.674
Age	969	56.309	6.887	33	41	52	56	60	75	95
tenure	969	9.577	7.08	2.011	2.167	4.658	7.745	12.415	34.997	61.415
ret_mean	969	0.01	0.022	-0.078	-0.05	-0.002	0.01	0.022	0.064	0.091
ret_stddev	969	0.08	0.038	0.018	0.024	0.051	0.074	0.103	0.186	0.264
Roaib	969	0.09	0.177	-3.318	-0.47	0.039	0.084	0.151	0.489	0.711
dum_chair	969	0.405	0.491	0	0	0	0	1	1	1
bd_size	969	2.223	0.251	1.386	1.609	2.079	2.197	2.398	2.773	3.526
Inddirpct	969	0.853	0.074	0.545	0.583	0.833	0.875	0.9	0.933	1
ln_bdmtgs	969	2.018	0.397	0	1.386	1.792	1.946	2.303	3.091	3.466
inst_own	969	0.635	0.163	0.114	0.237	0.539	0.635	0.722	1	1
ln_tdc1	969	8.309	1.011	-6.908	5.94	7.762	8.362	8.954	9.994	10.614
Eindex	969	2.481	1.345	1	1	2	2	3	5	6
SoP	969	0.926	0.104	0.2	0.442	0.928	0.961	0.98	0.998	1
SoPQ1	969	0.251	0.434	0	0	0	0	1	1	1
SoPQ4	969	0.25	0.433	0	0	0	0	1	1	1

Table 2.2. Descriptive statistics for the turnover and no turnover sample

This table presents the descriptive statistics for the turnover and no turnover sample. The *t*-statistics refer to T-test comparing the means and the Z-statistics refer to Wilcoxon rank-sum tests comparing the central tendency of the two samples.

Variables	Sample	N	Mean	Median	StdDev	T-statistics Z-statistics
SoP	Turnover	210	0.898	0.955	0.143	-4.517***
	No turnover	759	0.934	0.962	0.088	-2.103**
ln_ten	Turnover	210	2.067	2.042	0.621	0.856
	No turnover	759	2.023	2.039	0.680	0.723
ln_age	Turnover	210	4.076	4.078	0.125	7.266***
	No turnover	759	4.008	4.007	0.118	7.299***
dum_chair	Turnover	210	0.266	0.000	0.443	-4.638***
	No turnover	759	0.441	0.000	0.497	-4.590***
ret_mean	Turnover	210	0.003	0.006	0.024	-4.763***
	No turnover	759	0.011	0.011	0.021	-4.242***
ret_stddev	Turnover	210	0.086	0.079	0.039	2.350**
	No turnover	759	0.079	0.073	0.038	2.344**
Inst_own	Turnover	210	0.639	0.652	0.140	2.794**
	No turnover	759	0.607	0.619	0.141	2.971**
bd_size	Turnover	210	2.235	2.197	0.225	0.777
	No turnover	759	2.220	2.197	0.258	0.692
Inddirpct	Turnover	210	0.848	0.875	0.072	-1.018
	No turnover	759	0.854	0.875	0.074	-1.363
Eindex	Turnover	210	2.148	2.000	1.383	-4.128***
	No turnover	759	2.572	3.000	1.317	-4.504***
Ln_bdmtgs	Turnover	210	2.066	2.079	0.430	-1.922
	No turnover	759	2.007	1.945	0.387	-1.302
Ln_tdc1	Turnover	210	8.367	8.428	0.917	0.079
	No turnover	759	8.292	8.354	1.034	8.361
Ln_at	Turnover	210	8.153	8.061	0.113	-0.874
	No turnover	759	8.273	8.217	0.065	-0.637

Table 2.3. Likelihood of *All Turnover* CEOs at different window and SoP vote

The table reports the logit estimation of *all turnover* for the period 2012-2013 within 180 and after 180-365 days of the vote. Dayslt180tn represent turnovers in the 1st half of the year. Here dayslt180tn is a dummy which takes a value of 1 if the CEO leaves his position as CEO in less than 180 days, otherwise zero. Similarly, we define Days180_365tn is a dummy which takes a value of 1 if the CEO leaves his position as CEO in less than 365 days, otherwise zero. The independent variable SoP is the vote for percentage based on SoP vote, defined as For/(For+Against), where 'For' = number of 'For' vote cast and Against = number of 'Against' vote cast. SoPQ1 is a dummy which is equal to 1 if SoP is in the 1st quartile, else zero. Similarly, SoPQ4 is a dummy which is equal to 1 if SoP is in the 4th quartile, otherwise 0. Ln_at is a log of total asset of the firm. Ln_age is a log of the age of CEO. Age65 is a dummy which takes a value of 1 if CEO age is more than 65 years; otherwise zero. Dum_chair is a dummy which is equal to 1 if CEO is chairman, otherwise zero. Ln_ten is a logarithm of tenure of CEO as CEO. Eindex is entrenchment index according to Bebchuk et al., 2009. Bd_size is the total number of directors on the firm's board. Inddirpct is the percentage of independent directors on the board which is defined as the ratio of outside directors to total directors in the board. Ln_bdmtgs is the natural logarithm of the number of board meetings held in a year. Inst_own is the percentage of shares held by the institutions at the end of the year. Ln_dc1 is a log of total compensation which is COMPUSTAT item TDC1. Roa is a return on an asset which is COMPUSTAT item IB i.e. income before extraordinary items over book value of total assets. Ret_mean is the annualized mean return of the firm. Ret_stddev is the standard deviation of monthly return. Appendix 1 provides variable definitions. We used one-year lagged values of time-varying independent variables. The standard errors appear in the bracket below the parameter estimates. Asterisks ***, **, * indicates significance at the 0.1%, 1%, and 5% level, respectively.

	(1) Turnover	(2) left_lt_180tn	(3) left_180_365tn
ln_at	-0.237***	-0.873	-0.290***
	(-2.26)	(-1.70)	(-3.35)
ln_age	6.693***	1.510	6.947***
	(6.04)	(0.33)	(6.52)
ln_ten	0.007	-0.336	-0.026
	(0.05)	(-0.37)	(-0.18)
age65	0.083	0.881	-0.097
	(0.22)	(0.52)	(-0.27)
ret_mean	-17.497***	-24.662	-15.660***
	(-3.70)	(-1.18)	(-3.51)
ret_stddev	-1.949	9.826	-1.507
	(-0.66)	(0.80)	(-0.57)
roa	0.620	2.892	0.193
	(1.00)	(0.85)	(0.40)
dum_chair	-1.128***	-0.304	-1.030***
	(-5.31)	(-0.24)	(-5.10)
bd_size	1.557**	4.688*	1.321**
	(2.97)	(2.07)	(2.77)
Ind_dir	-1.358	4.381	-0.723
	(-0.98)	(0.52)	(-0.56)
ln_bdmtgs	0.510*	1.038	0.411
	(2.16)	(0.74)	(1.89)
inst_own	1.515*	-2.056	1.576**
	(2.52)	(-0.79)	(2.80)
ln_tdc1	0.230	0.160	0.326*
	(1.44)	(0.22)	(2.40)
Eindex	-0.228***	-0.707	-0.225***
	(-3.26)	(-1.55)	(-3.35)
SoP	-3.194***	1.645	-2.761***
	(-3.84)	(0.35)	(-3.53)
N	969	969	969
Ind FE	Yes	Yes	Yes
Yr Dummy	Yes	Yes	Yes

Table 2.4. CEO Turnover, SoP vote and marginal effect

This table reports Logit regression estimates of the likelihood of CEO turnover during the period 2012-2013. The dependent variable is *turnover* which is equal to 1 if CEO leaves his position as CEO, otherwise zero. The independent variable SoP is the vote for percentage based on SoP vote, defined as For/(For+Against), where 'For' = number of 'For' vote cast and Against = number of 'Against' vote cast. SoPQ1 is a dummy which is equal to 1 if SoP is in the 1st quartile, else zero. Similarly, SoPQ4 is a dummy which is equal to 1 if SoP is in the 4th quartile, otherwise zero. dy/dx represents the marginal effect of *turnover*. Ln_at is a log of total asset of the firm. Ln_age is natural log of the age of CEO. Age65 is a dummy which takes a value of 1 if CEO age is more than 65 years; otherwise 0. Dum_chair is a dummy which is equal to 1 if CEO is also the chairman, otherwise zero. Ln_ten is a logarithm of tenure of CEO as CEO. Eindex is entrenchment index according to Bebchuk et al., 2009. Bd_size is the total number of directors on the firm's board. Inddirpct is the percentage of independent directors on the board which is defined as the ratio of outside directors to total directors in the board. Ln_bdmtgs is the natural logarithm of the number of board meetings held in a year. Inst_own is the percentage of shares held by the institutions at the end of the year. Ln_tdc1 is a log of total compensation which is COMPUSTAT item TDC1. Roa is the return on the assets which is COMPUSTAT item IB i.e., income before extraordinary items over book value of total assets. Ret_mean is the annualized mean return of the firm. Ret_stddev is the standard deviation of monthly return. Appendix 2 provides variable definitions. We used one-year lagged values of time-varying independent variables. The standard errors appear in the bracket below the parameter estimates. Asterisks ***, **, * indicates significance at the 0.1%, 1%, and 5% level, respectively.

	(1) Turnover	(3) Turnover	(4) Turnover	(2) dy/dx
ln_at	-0.237[*]	-0.214[*]	-0.036[**]	-0.039[***]
	(-2.26)	(-2.06)	(-3.13)	(-3.39)
ln_age	6.693[***]	6.490[***]	0.924[***]	0.939[***]
	(6.04)	(5.88)	(6.77)	(6.88)
ln_ten	0.007	-0.010	-0.005	-0.004
	(0.05)	(-0.07)	(-0.27)	(-0.18)
age65	0.083	0.117	-0.011	-0.013
	(0.22)	(0.31)	(-0.24)	(-0.28)
ret_mean	-17.497[***]	-17.914[***]	-2.184[***]	-2.117[***]
	(-3.70)	(-3.81)	(-3.67)	(-3.56)
ret_stddev	-1.949	-1.325	-0.116	-0.204
	(-0.66)	(-0.45)	(-0.33)	(-0.57)
Roa	0.620	0.657	0.029	0.026
	(1.00)	(1.09)	(0.44)	(0.40)
dum_chair	-1.128[***]	-1.141[***]	-0.133[***]	-0.131[***]
	(-5.31)	(-5.35)	(-5.49)	(-5.44)
bd_size	1.557[**]	1.441[**]	0.163[*]	0.178[**]
	(2.97)	(2.77)	(2.55)	(2.79)
Inddirpct	-1.358	-1.198	-0.081	-0.098
	(-0.98)	(-0.87)	(-0.46)	(-0.56)
ln_bdmtgs	0.510[*]	0.514[*]	0.055	0.056
	(2.16)	(2.17)	(1.86)	(1.89)
inst_own	1.515[*]	1.579[**]	0.223[**]	0.213[**]
	(2.52)	(2.62)	(2.93)	(2.81)
ln_tdc1	0.230	0.249	0.047[*]	0.044[*]
	(1.44)	(1.56)	(2.57)	(2.43)
Eindex	-0.228[**]	-0.230[***]	-0.030[***]	-0.030[***]
	(-3.26)	(-3.29)	(-3.35)	(-3.37)
SoP	-3.194[***]			-0.373[***]
	(-3.84)			(-3.51)
SoPQ1		0.744[***]		
		(3.32)		
SoPQ4			0.017	
			(0.53)	
N	969	969	969	969
Ind FE	Yes	Yes	No	No
Yr Dummy	Yes	Yes	Yes	Yes

Table 2.5. Forced CEO Turnover, SoP vote and marginal effect

This table reports Logit regression estimates of the likelihood of forced CEO turnover during the period 2012-2013. The dependent variable is *forced turnover* which is equal to 1 if a CEO is forced out to leave his position as CEO, otherwise zero. The independent variable SoP is the vote for percentage based on SoP vote, defined as For/(For+Against), where 'For' = number of 'For' vote cast and Against = number of 'Against' vote cast. SoPQ1 is a dummy which is equal to 1 if SoP is in the 1st quartile, else 0. Similarly, SoPQ4 is a dummy which is equal to 1 if SoP is in the 4th quartile, otherwise zero. dy/dx represents the marginal effect of *forced turnover*. Ln_at is log of total asset of the firm. Ln_age is log of the age of CEO. Age65 is a dummy which takes a value of 1 if CEO age is more than 65 years; otherwise zero. Dum_chair is a dummy which is equal to 1 if CEO is chairman, otherwise zero. Ln_ten is a logarithm of tenure of CEO as CEO. Eindex is entrenchment index according to Bebchuk et al., 2009. Bd_size is the total number of directors on the firm's board. Inddirpct is the percentage of independent directors on the board which is defined as the ratio of outside directors to total directors in the board. Ln_bdmtgs is the natural logarithm of the number of board meetings held in a year. Inst_own is the percentage of shares held by the institutions at the end of the year. Ln_tdc1 is a log of total compensation which is COMPUSTAT item TDC1. Roa is return on an asset which is COMPUSTAT item IB i.e., income before extraordinary items over book value of total assets. Ret_mean is the annualized mean return of the firm. Ret_stddev is the standard deviation of the monthly return. Appendix 2 provides variable definitions. We use one-year lagged values of time-varying independent variables. The standard errors appear in the bracket below the parameter estimates. Asterisks ***, **, * indicates significance at the 0.1%, 1%, and 5% level, respectively.

	(1) Forced Turnover	(2) Forced Turnover	(3) Forced Turnover	(4) dy/dx	(5) Forced Turnover	(6) Forced Turnover
ln_at	-0.240* (0.121)	-0.228 (0.120)	-0.249* (0.119)	-0.027** (0.008)	-0.275* (0.122)	-0.242* (0.121)
ln_age	2.665* (1.235)	2.639* (1.230)	2.701* (1.221)	0.238* (0.096)	3.169* (1.262)	2.958* (1.242)
ln_ten	-0.026 (0.174)	-0.029 (0.174)	-0.013 (0.175)	-0.005 (0.014)	-0.049 (0.177)	-0.063 (0.176)
age65	0.536 (0.406)	0.501 (0.405)	0.481 (0.402)	0.029 (0.039)	0.477 (0.407)	0.511 (0.407)
ret_mean	-19.851*** (5.263)	-20.109*** (5.216)	-21.075*** (5.227)	-1.631*** (0.414)	-21.372*** (5.367)	-20.910*** (5.340)
ret_stddev	0.146 (3.236)	0.805 (3.196)	1.077 (3.188)	-0.013 (0.247)	-0.520 (3.241)	-0.176 (3.236)
Roaib	0.055 (0.565)	0.090 (0.557)	-0.011 (0.547)	0.002 (0.041)	0.147 (0.575)	0.154 (0.571)
dum_chair	-0.956*** (0.255)	-0.966*** (0.255)	-0.912*** (0.253)	-0.064*** (0.018)	-1.017*** (0.259)	-0.970*** (0.257)
bd_size	1.247* (0.609)	1.145 (0.605)	1.121 (0.609)	0.092* (0.045)	1.254* (0.609)	1.146 (0.600)
Inddirpct	0.268 (1.640)	0.415 (1.638)	0.552 (1.631)	0.023 (0.129)	0.432 (1.652)	0.363 (1.638)
ln_bdmtgs	0.893** (0.275)	0.904** (0.276)	0.930*** (0.275)	0.062** (0.021)	0.945*** (0.277)	0.918*** (0.275)
inst_own	1.928** (0.697)	1.940** (0.695)	1.848** (0.693)	0.156** (0.054)	1.915** (0.698)	1.923** (0.699)
ln_tdc1	0.433* (0.196)	0.456* (0.193)	0.523** (0.190)	0.041** (0.013)	0.484* (0.197)	0.449* (0.197)
Eindex	-0.168* (0.082)	-0.176* (0.081)	-0.181* (0.082)	-0.015* (0.007)	1.532** (0.541)	
SoP	-2.574** (0.877)			-0.199** (0.068)	1.581 (1.589)	-1.054 (1.113)
SoPQ1		0.501* (0.240)				
SoPQ4			0.038 (0.258)			
SoP_eindex					-1.897** (0.598)	
high_eindex						3.240* (1.587)
SoP_high_eindex						-4.110* (1.737)
N	957	957	957	969	957	957
Ind FE	Yes	Yes	Yes	No	Yes	Yes
Yr Dummy	Yes	Yes	Yes	Yes	Yes	Yes

Table 2.6. Outside CEO succession, SoP vote and marginal effect

This table reports Logit regression estimates of the likelihood of outside CEO succession during the period 2012-2013. The dependent variable is *outsider* which is equal to 1 if a new CEO is hired from outside of the firm, otherwise zero. The independent variable SoP is the vote for percentage based on SoP vote, defined as For/(For+Against), where 'For' = number of 'For' vote cast and Against = number of 'Against' vote cast. SoPQ1 is a dummy which is equal to 1 if SoP is in the 1st quartile, else 0. Similarly, SoPQ4 is a dummy which is equal to 1 if SoP is in the 4th quartile, otherwise zero. dy/dx represents the marginal effect of *outsider*. Ln_at is log of total asset of the firm. Ln_age is log of the age of CEO. Age65 is a dummy which takes a value of 1 if CEO age is more than 65 years; otherwise zero. Dum_chair is a dummy which is equal to 1 if CEO is chairman, otherwise zero. Ln_ten is a logarithm of tenure of CEO as CEO. Eindex is entrenchment index according to Bebchuk et al., 2009. Bd_size is the total number of directors on the firm's board. Inddirpct is the percentage of independent directors on the board which is defined as the ratio of outside directors to total directors in the board. Ln_bdmtgs is the natural logarithm of the number of board meetings held in a year. Inst_own is the percentage of shares held by the institutions at the end of the year. Ln_tdc1 is the log of total compensation which is COMPUSTAT item TDC1. Roa is the return on assets which is COMPUSTAT item IB i.e., income before extraordinary items over book value of total assets. Ret_mean is the annualized mean return of the firm. Ret_stddev is the standard deviation of monthly return. Appendix 2 provides variable definitions. We use one-year lagged values of time-varying independent variables. The standard errors appear in the bracket below the parameter estimates. Asterisks ***, **, * indicates significance at the 0.1%, 1%, and 5% level, respectively.

	(1) outsider	(2) outsider	(3) outsider	(4) dy/dx	(5) outsider	(6) outsider
ln_at	-0.187 (0.136)	-0.173 (0.135)	-0.202 (0.134)	-0.016* (0.007)	-0.214 (0.137)	-0.192 (0.136)
ln_age	5.558*** (1.560)	5.505*** (1.556)	5.563*** (1.545)	0.325*** (0.081)	6.198*** (1.601)	5.819*** (1.573)
ln_ten	0.007 (0.194)	-0.002 (0.194)	0.006 (0.195)	-0.001 (0.011)	-0.036 (0.196)	-0.034 (0.196)
age65	0.184 (0.452)	0.164 (0.452)	0.153 (0.448)	0.001 (0.025)	0.115 (0.452)	0.162 (0.452)
ret_mean	-8.067 (6.018)	-8.209 (5.997)	-9.292 (6.005)	-0.451 (0.337)	-9.539 (6.066)	-8.850 (6.032)
ret_stddev	-1.663 (3.758)	-1.132 (3.710)	-0.816 (3.702)	-0.036 (0.194)	-2.285 (3.764)	-1.999 (3.757)
Roaib	-0.136 (0.651)	-0.083 (0.644)	-0.180 (0.628)	-0.009 (0.032)	-0.060 (0.683)	-0.077 (0.659)
dum_chair	-0.958*** (0.289)	-0.991*** (0.292)	-0.926** (0.287)	-0.046** (0.014)	-1.005*** (0.291)	-0.963*** (0.290)
bd_size	1.300 (0.692)	1.193 (0.688)	1.183 (0.692)	0.066 (0.036)	1.345 (0.693)	1.253 (0.685)
inddirpct	-1.305 (1.775)	-1.146 (1.772)	-1.070 (1.765)	-0.038 (0.099)	-1.083 (1.793)	-1.126 (1.786)
ln_bdmtgs	0.965** (0.310)	0.973** (0.311)	1.006** (0.309)	0.048** (0.017)	0.999** (0.310)	0.985** (0.309)
inst_own	1.822* (0.786)	1.885* (0.784)	1.766* (0.783)	0.104* (0.042)	1.798* (0.784)	1.789* (0.786)
ln_tdc1	0.408 (0.224)	0.414 (0.220)	0.482* (0.220)	0.030** (0.010)	0.428 (0.223)	0.420 (0.224)
Eindex	-0.115 (0.092)	-0.120 (0.092)	-0.131 (0.092)	-0.010 (0.005)	1.583* (0.627)	
SoP	-2.471* (1.020)			-0.104 (0.053)	1.749 (1.921)	-1.107 (1.337)
SoPQ1		0.585* (0.270)				
SoPQ4			-0.062 (0.299)			
SoP_eindex					-1.879** (0.687)	
high_eindex						2.746 (1.796)
SoP_high_eindex						-3.361 (1.962)
N	929	929	929	969	929	929
Ind FE	Yes	Yes	Yes	No	Yes	Yes
Yr Dummy	Yes	Yes	Yes	Yes	Yes	Yes