Say Pays!
Shareholder Voice and Firm Performance

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Abstract

This paper estimates the effect of increasing shareholder "voice" in corporations through a new governance rule that provides shareholders with a regular vote on pay: Say-on-Pay (SoP). We apply a regression discontinuity design to SoP shareholder proposals to deal with prior expectations and the endogeneity of internal governance rules. Adopting SoP leads to large increases in market value (7%), firm profitability and long-term performance. In contrast, we find small effects on the level and structure of pay. This suggests that SoP operates as a regular confidence vote, increasing efficiency and market value.

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1 Introduction

How much "voice" should shareholders have in a large modern corporation? Shareholders who disagree with the course of events at their corporation have two main mechanisms to express their dissent: they can threaten to sell their shares, i.e. "exit", or alternatively, they can engage with management and express their opinions, i.e. use the "voice" mechanism, (Hirshman,1970). While the impact of "exit" on firm value and policies has been studied extensively, less attention has been devoted to estimating the value of "voice" in corporations.

This paper studies the consequences of Say-on-Pay, a mechanism that allows shareholders to express their voice by voting on a crucial corporate matter: the pay policy of its executive officers, and its relationship to firm performance. Firms with a Say-on-Pay policy in place offer shareholders a regular advisory vote on whether they approve of the relationship between executive pay and performance in their companies. Given the focus of this vote is not just on pay itself, but on whether pay is commensurate with the value that the CEO adds to the firm, the vote resembles an explicit confidence vote on the CEO: the vote effectively aggregates the opinion of shareholders into a simple and highly visible metric.

Our goal is to provide a causal estimate of the effect of increasing shareholder voice on shareholder value, firm performance and executive pay. To do so, we use a regression discontinuity design on the vote outcomes of shareholder-sponsored Say-on-Pay proposals at annual meetings between 2006 and 2010. This provides direct evidence on the consequences of giving shareholders more voice in the affairs of their company.

Proponents of Say-on-Pay have argued that it strengthens shareholder oversight and limits executive compensation excesses. Critics contend that Say-on-Pay does not effectively monitor compensation, and consider it to be an intrusive policy that undermines the power of the board and can be very costly to the firm. This view is reflected in the fact that management is systematically opposed to the policy.[1] The interest in Say-on-Pay culminated with its inclusion in the 2010 Dodd-Frank Wall Street Reform and Consumer Protection Act, which made Say-on-Pay compulsory at all U.S. firms starting in 2011. This has been highly

[1] In the proxy materials mailed to shareholders, management states a recommendation on all proposals included by shareholders to be voted on; in all but two shareholder Say-on-Pay proposals in our sample, the management recommendation was to vote against the proposal.

contentious policy. Still, our current knowledge on the effects of Say-on-Pay is limited and the debate has been hampered by the lack of causal evidence on its consequences.[2]

To evaluate the consequences of Say-on-Pay, ideally one would like to randomly allocate this policy measure to different firms and examine their subsequent stock market reaction, performance and pay policy changes, but this is an impossible experiment de facto. Investors in the stock market incorporate expectations as they receive information on the value of adopting a Say-on-Pay proposal. Thus, it is difficult to capture the effect of the policies from changes in market prices in the absence of clear events where unexpected information is released. We argue that Say-on-Pay shareholder proposals voted in annual meetings provide us with this quasi-experimental setting.

Between 2006 and 2010, shareholders in a number of S&P 1500 firms proposed to adopt Say-on-Pay and held a vote to adopt the policy in 258 occasions.[3] Our approach is to use a regression discontinuity design that compares the stock market reaction and other outcomes of Say-on-Pay proposals that pass by a small margin to those that fail by a small margin (similar to Mas and Lee, 2012, or, in an event-study setting to, Cuñat, Gine and Guadalupe, 2012). The intuition behind this strategy is that the average characteristics of a firm in which a Say-on-Pay proposal passes with 50.1% of the votes are similar to those of a firm in which the proposal gathers only 49.9% and fails to pass. However, this small difference in the vote share leads to a discrete change in the probability of implementing these proposals. In other words, for close-call proposals, passing is akin to an independent random event that is correlated with the implementation of the proposal, but it is "locally" exogenous and, therefore, uncorrelated with other firm characteristics. We show that indeed, for votes around the majority threshold, passing is uncorrelated with observed firm and meeting characteristics. Moreover, when studying the stock market reaction, it is precisely for these close-call proposals that the vote contains substantial information –switching from an unpredictable outcome to either pass or fail– that is not already fully incorporated in prices.

[2]Furthermore, the existing evidence on Say-on-Pay is silent on the performance effects of the policy. Ferri and Maber (2008, 2011) provide some evidence for the UK, where Say-on-Pay regulation was introduced in 2002, suggesting that Say-on-Pay increases the sensitivity of CEO pay to poor performance, that is, it may curb "pay for failure". For the US, Cai and Walkling (2011) do an event study using the Say-on-Pay Bill that passed in the House in 2007 and find that returns were higher on that date in firms with inefficient compensation contracts (high abnormal CEO pay and low pay-for-performance sensitivity).

[3]Note we study the votes to adopt the policy. If the policy is adopted then shareholders vote on the relationship between CEO pay and performance in subsequent meetings.

Therefore, the regression discontinuity design delivers causal estimates of the expected value of adopting Say-on-Pay.

We find that Say-on-Pay significantly increases shareholders' value. On the day of the vote, a Say-on-Pay proposal that passes yields an abnormal return of 2.7% relative to one that fails. There are significant additional returns on subsequent days going up to a cumulative abnormal return of 5% one week after the vote. Given that the shareholder vote outcome is not binding, the market reaction should only account for the increase in the probability with which the proposal will be implemented after a positive shareholder vote. We collected information on whether each proposal in our sample was implemented, and found there is a 30% higher probability of implementation for proposals that narrowly pass at the vote threshold. This implies that implementing Say-on-Pay will deliver an increase in shareholder value that ranges from 7.9% to 10.5%. This effect is economically large and significant and it amounts to an average increase per firm of US$4,229 million within our sample.

Where do these large market gains come from? In principle, there are two distinct channels through which a Say-on-Pay policy can improve firm performance. First, by giving a clear mechanism for shareholders to express their voice, monitoring and pressure on boards and CEOs increases, potentially leading to an increase in performance. Second, Say-on-Pay can affect the level and structure of pay such that there is a better alignment of pay to performance.

Our results show that Say-on-Pay has a strong positive impact on firm accounting and operational performance in the years following the vote, beyond the short-term market reaction: firms that pass Say-on-Pay proposals have higher growth in earnings per share, return on assets, return on equity and Tobin's Q one year after the vote. We also find these companies have a higher increase in labor productivity (sales per worker) one year and two years after the vote. Some of the increase in labor productivity is associated with a decline in the number of employees, but only one year after the vote. These results provide strong evidence of efficiency and profitability gains achieved through the implementation of the Say-on-Pay proposals.

The effects on compensation are smaller. While we do find that following a positive Say-on-Pay vote, firms have lower salary growth and a small increase in the sensitivity of pay to performance, we do not find large systematic changes in the level or structure of

CEO compensation. We find no evidence that CEOs are more likely to leave the firm after a positive vote. Given that performance at the Say-on-Pay firms is improving, arguably resulting from higher effort from management, it is not surprising that there are no dramatic changes in pay: to the extent that pay is linked to performance, and performance increases, pay can remain unchanged even if shareholders are stricter on pay awards given a level of performance. Overall, while Say-on-Pay may tie compensation more closely to performance, our results rule out that it leads to a large and across the board reduction in the level of executive compensation.

Our results suggest that Say-on-Pay operates as a mechanism to monitor and incentivize CEOs to deliver better firm performance, as it creates a clear mechanism for shareholders to express their voice. This leads to large improvements in shareholder value and firm performance for firms in our sample.[4] We interpret these results, together with the strong opposition of executives to adopting these policies, as indicating that current governance structure may give insufficient voice to shareholders in large corporations.

These results are therefore important to determine the appropriate role of government regulation and shareholder activism in shaping corporate governance structures. Say-on-Pay has been made compulsory in countries such as the Netherlands, Norway and the UK. In the US, the controversy around Say-on-Pay continues: after the 2010 Dodd-Frank Financial Regulation Act made Say-on-Pay compulsory at all firms starting in 2011, the 2012 Jumpstart Our Business Startups Act (JOBS) Act eliminated that requirement for firms with gross annual revenues of less than $1 billion. This paper provides causal evidence on the effect for US firms of Say-on-Pay in particular, but also of giving shareholders more voice more broadly, to guide the debate.

2 Background

Say-on-Pay policies are the result of a general trend towards requiring more accountability of CEOs, improved transparency and increased shareholders rights. They emerge following an increase in the number of shareholders proposal submitted to a vote at annual meetings

[4] The main difference between firms in the sample (those targeted by a Say-on-pay vote between 2006 and 2010) and the rest of the S&P 1500 firms is size. Firms in the sample are clearly larger (in sales and employment), but there is no difference in operating ratios or other variables once size is controlled for.

that focus on compensation-related matters. These proposals typically express shareholder discontent with executive pay policies and are aimed at reinforcing the pay for performance link, eliminating or reducing "exit packages", or improving disclosure (see Ertimur, Ferri and Muslu, 2011 for an analysis of shareholders activism and pay).

Starting in 2006, shareholders of several companies proposed to adopt Say-on-Pay policy in their firms. Between 2006 and 2010, 258 shareholders proposals were filed with the SEC and voted to adopt an advisory vote. A firm that adopts a Say-on-Pay policy commits to offer an annual vote to its shareholders on whether they approve of the relationship between executive pay and firm performance. Companies such as Motorola, Target, Raytheon or Pfizer were all target of Say-on-Pay proposals in that period. A noteworthy case is the Verizon Say-on-Pay proposal in 2007 which was approved by a small margin of 50.18% and the board decided to implement it starting in 2009. In their proposal, shareholders mentioned the following reasons to adopt Say-on-Pay: little relationship between CEO pay and performance, excessive bonus and excessive company contributions to pension plans.

The increasing focus on Say-on-Pay in the U.S. culminated with its incorporation in the Dodd- Frank Act of July 2010.[5] The law provides shareholders the right to a regular advisory vote on a company's current and future executive compensation and is mandatory for all U.S. firms starting in 2011.[6] Proponents of the bill have argued that Say-on-Pay strengthens the relationship between the board of directors, executives and shareholders, ensuring that board members fulfill their fiduciary duty. Critics of the policy believe that Say-on-Pay does not effectively monitor compensation, and consider it to be an intrusive policy that undermines the power of the board.

The proposal of Say-on-Pay policies prior to the resolution of the bill by the Senate in July 2010, received substantial support by shareholders: on average, shareholders voted 43% in favor of adopting Say-on-Pay proposals (Table 1). This average support is large relative to the average vote on corporate governance shareholder proposals (36%) or, in particular,

[5]The Dodd-Frank Act changes several aspects of the governance and disclosure practices of all public companies. Some of the most prominent changes are: new proxy access rules that will include shareholders nominees in company proxy statements; new broker discretionary voting rules and new advance voting instructions. The act also covers many different grounds on financial regulation relative to the oversight of systemic risk, the transparency of the financial companies and the regulation of credit agencies. As well it aims at improving investor protection and firm accountability.

[6]The Dodd-Frank Act required an additional vote regarding the frequency of the compensation approval vote: to occur every 1, 2, or 3 years.

relative to compensation proposals (23%). We now turn to discuss what are the expected effects of the policy.

Given Say-on-Pay is not binding, it has been argued that it should have no effect on executive and director behaviors, and hence on firm outcomes. However, given that there are potential costs (legal, managing the relationship with investors) associated with the vote, the net effect of putting in place the Say-on-Pay mechanism may very well be negative even if it has no effect on behaviors. Say-on-Pay can also be detrimental to firm performance for other reasons: To the extent that the board of directors is better informed on the affairs of the company than the average shareholder, they should be better placed to make the right decisions for the firm; and Directors (and CEOs) may also have private information that it is in the interest of shareholders that it is not divulged to the market. In those circumstances, restricting director's actions can be value reducing for shareholders.

There are also a number of channels through which Say-on-Pay proposals can positively affect firm performance. A direct channel, often echoed by popular views, is that Say-on-Pay can help curbing excessive pay. Indeed, Say-on-Pay policies may reduce the share of firm surplus that CEOs are able to capture; however, the potential gains from this effect are modest from the point of view of shareholders' value. Given the size of CEO and executive pay relative to total firm value, even a substantial reduction in total pay, would represent a small change in shareholders' value. A slightly different channel operates through better alignment of pay with performance. Improved incentives would make CEOs more effective at generating higher profits.

Say-on-Pay policies are also an automatic mechanism that allows shareholders to express dissent. If a Say-on-Pay policy is adopted, Say-on-Pay votes are held regularly and are part of the set of votes that shareholders emit in annual meetings (along with director elections and other governance votes, for example). But Say-on-Pay is the only vote that allows shareholders to express a clear opinion on the relationship between pay and performance and as such is akin to a referendum on CEO performance, a vote of confidence on the CEO. This mechanism for increased shareholder voice empowers shareholders, who have a mechanism through which they can punish a CEO for poor performance. Even though the Say-on-Pay votes themselves are only advisory by nature, they are very visible, aggregate

shareholder opinion into a simple metric, and can also serve as a coordination mechanism for further votes to remove management or board members.

The Say-on-Pay process also requires boards to disclose more information about CEO pay, and in particular about the rationale behind the chosen compensation package including its relationship to past and planned performance. To the extent that shareholders have more information and a better way to discipline managers, their monitoring is more effective and hence, the incentives to monitor are higher.

The existing empirical literature on Say-on-Pay in the U.S. provides mixed results. Cai and Walkling (2011) using an event study methodology find that the Say-on-Pay bill passed in the House of Representatives in April 2010 created value for firms with inefficient executive compensation and with weak governance. However, when examining the price reaction upon announcement of a shareholder Say-on-Pay proposal between 2006 and 2008, they find a negative price effect, and a positive effect when the proposal is defeated. For the U.K., Ferri and Maber (2011) examine the implementation of Say-on-Pay regulation in 2002 in the United Kingdom and find, also in an event study setting, a positive market reaction to the regulation in firms with weak penalties from poor performance.

On possible reason for these mixed findings is that with standard event study methodologies the event date can be confounded by different news and information being released to the market on the same date. As we discuss below, our estimation strategy (the regression discontinuity design) actually estimates a causal effect and deals with this problem.

Finally, Ferri, Maber and Balachandran (2008) examine the effect of the U.K. Say-on-Pay regulation on pay ex-post and find some evidence that it increased the sensitivity of CEO pay to poor accounting performance (but not to stock performance), that is, it curbed the "pay for failure" scenario. To date, however there is no evidence on the impact of Say-on-Pay on the detailed components of pay for the U.S., or more importantly, on long-term firm performance.

3 Data and identification strategy

3.1 Data description

We obtain data on Say-on-Pay proposals from Riskmetrics. The dataset includes information on all the proposals voted in the S&P1500 universe plus an additional 500 widely held firms. There are 258 shareholder-sponsored proposals voted at annual meetings from 2006 until 2010 to implement Say-on-Pay provisions. Riskmetrics provides information on the company name, the date of the annual meeting and the percentage of votes in favor of the proposal. Panel A of Table 1 shows the distribution of proposals by year and some vote statistics. The number of voted proposals increased throughout the period as well as the proportion of votes in favour. As a result, the percentage of passed proposals increased from a 15% in 2007 to 25% in 2010. Our identification strategy relies on proposals with a close-call vote outcome. More than half of the voted proposals in our sample fall within ten percentage points of the majority threshold and provide power to our identification.

Any shareholder that owns at least 1% or $1,000 of the securities for at least one year is entitled to vote and can submit a proposal to implement a Say-on-Pay provision. The proponents of Say-on-Pay proposals are diverse and they are classified in Panel B of Table 1. The most frequent sponsors are unions, followed by individuals and socially responsible (SR) funds.

We use additional information from a number of different sources: security prices from CRSP are used to calculate daily abnormal returns with a standard OLS model and also with the three Fama-French factors plus a momentum factor as in Carhart (1997).[7] Financial information comes from Compustat and executive compensation from Execucomp.

3.2 Identification strategy

We are interested in the impact that passing a Say-on-Pay proposal has on an outcome variable y_{ft} such as the market reaction or subsequent performance and pay policies. We can define v_{ft} as the votes in favour of a Say-on-Pay proposal for firm f at time t, v^* as the

[7] The estimation period starts two months prior to the event date; the length of the estimation period is 200 trading days, and we require at least 15 days with available returns.

majority threshold for a proposal to pass and an indicator for pass as $D_{ft} = 1(\ v_{ft} \geqslant v^*)$ so we can write:

$$y_{ft} = \kappa + D_{ft}\theta + u_{ft}, \tag{1}$$

The effect of interest is captured by the coefficient θ while u_{ft} represents all other determinants of the outcome ($E(u_{ft}) = 0$). However, this regression cannot be estimated directly given that passing a proposal is likely to be correlated with omitted variables that are themselves correlated with y_{ft}. The estimated $\widehat{\theta}$ will be biased given that $E(D_{ft}, u_{ft}) \neq 0$. Moreover it would be difficult to interpret the causality of the results given that some outcome variables (e.g. future expected pay structure) may affect shareholder votes and lead to reverse causality.

To obtain a causal estimate of the effect of Say-on-Pay proposals we use a regression discontinuity estimate that exploits that, in an arbitrarily small interval around the discontinuity (the threshold v^*), whether the proposal passed or failed, is akin to a random outcome. Cuñat, Gine and Guadalupe (2010) show the conditions under which one can recover the value of a proposal in an event-study setting using a regression discontinuity design.

More formally, Lee (2008) shows that, as long as there is a (possibly small) random component to the vote, the assignment into "treatment" (pass and $D_{ft} = 1$) and "control" groups (fails and $D_{ft} = 0$) is random around the threshold. A simple non-parametric way to estimate $\widehat{\theta}$ is therefore to measure the difference in average y_{ft} between Say-on-Pay proposals that pass and the ones that do not pass by a narrow margin of votes. This is an unbiased estimate of θ that can be interpreted as causal. However a more efficient way to estimate the effect consists in fitting a flexible function that captures the continuous relationship between y_{ft} and v allowing for a discontinuous jump at the discontinuity v^*. Following Lee and Lemieux, (2010) we approximate the underlying relationship between y_{ft} and v_f, with two different polynomials for observations on the right-hand side of the threshold $P_r(v_{ft}, \gamma^r)$ and on the left-hand side of the threshold $P_l(v_{ft}, \gamma^l)$, we also include year dummies α_τ:

$$y_{ft} = D_{ft}\theta + P_r(v_{ft}, \gamma^r) + P_l(v_{ft}, \gamma^l) + \alpha_\tau + u_{ft}. \tag{2}$$

The polynomials $P_r(v_{ft}, \gamma^r)$ and $P_l(v_{ft}, \gamma^l)$ capture any continuous relationship between y_{ft} and v_{ft} and in particular, the effect of any confounding factors that are correlated both with the vote and firm characteristics in a continuous way. At the same time, θ captures the discrete changes in y_{ft} at the majority threshold and it is a consistent estimate of the causal effect of the passing of a proposal on y_{ft}. This procedure is a more efficient way to estimate the effect than a simple comparison of means around the threshold, as all the observations participate in the estimation. The estimate of θ captures the weighted average effect across all firms, where more weight is given to those firms in which a close election was expected.

3.3 Sample characteristics and pre-existing differences

In this section we investigate two selection issues that are important to understand the scope and validity of our results. The first one, is to assess whether the firms in our sample are representative of a broader population of firms. To do so we compare firms with a Say-on-Pay proposal to the general population of S&P 1500 firms. The second issue relates to the selection into treated an non-treated firms within our sample. To the extent that the exact vote outcome around the threshold is random, our identification strategy implies there is no selection into treatment, that is, firms that pass a Say-on-Pay provision by few votes should be ex-ante comparable to firms that reject a Say-on-Pay provision by a short margin. We run a number of tests to evaluate the validity of this assumption.

We start by assessing what type of firms constitute our sample. From the Riskmetrics sampling universe (S&P1500 plus 500 additional firms that are widely-held) only a subset of firms is targeted with votes on Say-on-Pay, and 64% of those have votes within 10% of the threshold. To assess how different the average S&P1500 firm is from the firms identifying our estimate, we explore the determinants that make firms more prone to having a contested Say-on-Pay vote. Table 2 presents summary statistics of firm characteristics for firms in our sample as well as for the universe of S&P1500 firms in our sample period. The one systematic difference between them is appears to be firm size. Firms are different in terms of total market value, number of employees, total CEO pay and the extent of dispersed ownership as it is expected in larger firms. However, there do not seem to be systematic differences in terms of profitability. While these differences do not generate biases to our estimate of the treatment

on the treated, they have to be taken into account when generalizing the results to a broader population of firms.

Table 3 examines whether there are any the pre-existing differences between firms that pass a Say-on-Pay proposal and firms that don't. Columns 1 and 3 compare the characteristics of the whole population of firms, while columns 2 and 4 report only the effect at the discontinuity by including polynomials of order four on either side of the threshold. Columns 1 and 2 refer to the variables in levels and 3 and 4 in growth rates. Column 1 shows that, on average, firms that pass a proposal have different characteristics to firms that fail a proposal. For instance, firms where a proposal passes have on average lower prior return on assets and lower earnings per share than those where it fails. These are the kind of selection problems that would make the estimates of regression (1) biased. In contrast, when we control for a polynomial in the vote share and estimate the effect at the discontinuity (in column 2 and 4), we find that these average differences across firms on each side of the threshold disappear. Hence, we do not find any systematic differences between firms on each side of the majority threshold.

Next, we concentrate on the distribution of shareholder votes. Figure 1 shows the distribution of votes within the sample. First, the average and median vote is slightly below the majority threshold, but 64% of the observations fall within the 10 points from the majority threshold. This implies that our RDD coefficient is estimated from a large and significant share of the actual votes and hence can be thought of a representative of the effect of Say-on-Pay on the sample of firms. Second, Figure 1 shows that the distribution of votes is also continuous at the 50% threshold.[8] The fact that there is no sharp discontinuity in the distribution of votes at the threshold indicates there is no strategic voting, or withdrawal of proposals for close-call votes. Cuñat, Gine and Guadalupe (2012) show a similar lack of strategic voting for shareholder sponsored proposals, while Listokin (2008) documents that strategic withdrawal of proposals is a real issue for management sponsored proposals.

Overall, this section shows that the assumptions behind our identification strategy – continuity of votes at the majority threshold and lack of preexisting differences in the neighborhood of pass – do hold and allow us to estimate a clean causal effect. It also shows that

[8] A formal continuity test (McCrary 2008) rejects the discontinuity of the distribution, see Figure 2.

the main distinguishing difference between firms in our sample and the sampling universe is size.

4 Results

4.1 The effect of Say-on-Pay on abnormal returns

To evaluate the impact of Say-on-Pay proposals on shareholder value we first examine the market reaction to passing a Say-on-Pay proposal. Table 4 reports estimates of the difference in abnormal returns between Say-on-Pay proposals that pass and those that do not pass. We compute this difference for increasingly close intervals around the majority threshold, to isolate the causal effect of Say-on-Pay on value, under our identification strategy. To compute abnormal returns we use two benchmarks: the Market model and the four factor model by Carhart.

Columns 1 to 5 present non-parametric estimates, where the estimate of $\widehat{\theta}$ is the difference in abnormal returns between proposals that pass and those that do not pass for increasingly small intervals around the voting threshold. Column 1 estimates are based on the whole sample. As expected, we find that there is no difference, on average, between proposals that pass and those that fail (a small point estimate of -0.00270 that is not statistically different from zero). This reflects that, for proposals that pass or fail by a large margin, the market already incorporates the expectation of vote outcomes in the prices. Column 2 and 3 restrict the sample to within ten percentage points of the threshold, and five percentage points respectively. As we narrow the margin of votes around the pass threshold, we begin to appreciate a small increase in the estimates though the standard errors are still large. For votes within two and half percentage points of the threshold (column 4), we observe an estimate of 1.27% abnormal return that is significant at the 5% confidence level. Finally, if we narrow the window to within one and half percentage points, we observe that the estimate still follows an increasing pattern, reaching a statistically significant abnormal return of 1.65% .

Column 6 shows the regression for equation (2) for the entire sample, when we allow for a discontinuous jump at the majority threshold, but we control for two polynomials of order 4

in the vote share on each side of it. The results are consistent with the non-parametric ones: the abnormal return of firms that pass a Say-on-Pay proposal is 2.7% higher than firms that do not pass such proposals. The point estimate in column 6 is larger than that in column 5 but not statistically different.

Panel B of Table 4 shows the same set of regressions using as an alternative benchmark the Carhart 4 factor model. We find a similar pattern of increasing estimates as we narrow the interval around the threshold. When fitting a polynomial on each side of the threshold we obtain an estimate of the differential abnormal return of 2.26%, that is statistically significant at the 5% level.

Another way of visualizing these results is to plot the abnormal returns on the day of the meeting. Figure 3 and 4 show the impact of passing Say-on-Pay proposals on abnormal returns on the day of the vote. The daily abnormal returns were calculated from CRSP using the Market model for Figure 3 and the three Fama-French factors and the fourth factor model from Carhart (1997) for Figure 4. The graph plots the smoothed average daily abnormal return for the day of the meeting (t = 0) when the information of the vote is revealed.[9] The X-axis reflects the margin of victory (the vote share minus the threshold for that vote). On the day of the vote, Say-on-Pay proposals that pass by a small margin have positive abnormal returns and comparing those to proposals that fail by a small margin gives us the differential effect of passing such proposals on abnormal returns (Cuñat, Gine and Guadalupe (2012) show why the price reaction as a function of the vote is decreasing in the absolute distance to the threshold).

Note that for proposals that pass with a very small margin of victory (up to 3%) the abnormal return is positive, though it decreases sharply denoting that the market may be able to predict very well the vote outcome. On the other hand, for proposals that lose by a small margin the effect is quite flat.

Say-on-Pay proposal sponsored by shareholders have been at the center of controversy and have been closely followed by the media. Moreover, there is a variety of channels such as news wires and real-time broadcast disclosure the vote outcome on the same day of the annual meeting. However, even if a substantial part of the information about the vote

[9] The non-parametric regression uses a tri-cube weight and a bandwith of half of the sample to each side of the discontinuity.

is released on the day of the meeting, we need to explore any further gains (or potential reversals) beyond the date of the vote. Table 5 reports the regression for equation (2) where the outcome variable y_{ft} will be different event windows around the day of the vote. We use the entire sample of data and a polynomial of order 4 in the vote share on each side of the threshold. First, in column 1 we observe that the effect is not foreseen by the market the day before the vote for any of the benchmarks in Panel A and B. Second, we find that passing a Say-on-Pay proposal delivers abnormal returns beyond the day of the vote. Column 3 shows the impact of pass on a two day window that includes the day of the vote and the following day. The coefficients are 3.6% for the Market model and 3.7% for the Carhart four factor model, which are larger than the ones on the day of the vote and statistically significant at 5% level. Column 4 displays an even larger estimate for the one week window: 3.8% for the market model and 5.1% for the Carhart four factor model. Finally, column 5 shows sustained estimates of 3.4% and 6.7%, indicating that there is no reversal one month after the vote. Overall, we find that the large positive market reaction to passing a Say-on-Pay proposal is sustained and even increases following the vote.

Overall, the results on this section show that the market reacts to the passing of Say-on-Pay proposals with market returns of up to 5% of firm value. In the following sections we explore the different channels that could be driving this market reaction.

4.2 Implementation

In this section we document how much the implementation probability of a Say-on-Pay proposal changes at the vote majority threshold. There are three main purposes of this section. Firstly, to shed some light on the implementation of Say-on-Pay proposals. Given that the vote outcome on shareholder proposals is typically non-binding it is important to establish whether these votes do matter. Secondly, our identification strategy relies on a discontinuity of the implementation probability of a Say-on-Pay proposal at the majority threshold. So it is important to explicitly test for this assumption. Finally, in the previous section we have established the market reaction of passing. However, this market reaction takes into account the fact that proposals will be implemented with a certain probability. In order to estimate the actual value of implementing a Say-on-Pay proposal we need to re-scale the market reaction dividing by the discrete jump in the probability of implementation

of these proposals around the vote threshold between passing and not passing. We have gathered complete implementation data for all voted proposals. Table 6 displays the effect of pass on the probability of implementation. Column 1 shows an estimate 0.51 for the whole sample, that is, a proposal that passes has an average likelihood of being implemented of 51%. This is an average estimate for all vote outcomes and, therefore, it is susceptible of endogeneity concerns. We need to estimate the probability of implementation at the threshold and thus take a similar approach as in Table 4. Hence, from column 2 to 5 we run a non-parametric analysis for increasingly small intervals around the voting threshold. We observe that the probability of implementation decreases to settle at 30% for proposals that are very close to the threshold, i.e. within 1.5 points. Finally, column 6 displays the full model estimated using a polynomial in the vote share of order three on each side of the threshold. We obtain a very similar coefficient of 34% significant at the 10%.

With this estimate in hand, we can recover the value of a Say-on-Pay proposal. Using the abnormal returns from Table 5 — i.e. 2.7% on the day of the vote and 3.6% for the two day window – re-scaling by a probability of implementation around the threshold of 34%, we estimate that the value of a Say-on-Pay proposal ranges from 7.9% to 10.5%.

4.3 The effect of Say-on-Pay on firm's outcomes

We have established that the market reaction to passing a Say-on-Pay provision is positive. This increased market value may reflect the market perception of the cost saving and managerial efficiency gains that would be induced by the Say-on-Pay provision. There are at least two channels that can deliver better performance for these Say-on-Pay firms. First, through a stricter alignment of pay with performance: these improved incentives would make the CEO more effective at generating higher profits. Second through more efficient monitoring: the annual vote on Say-on-Pay may work as a vote of confidence to the CEO providing enough pressure for delivering better performance at the risk of being dismissed if the vote does not pass. In addition, the fact that there is a new established venue for expressing shareholders' voice, lowers the cost of coordinating and aggregating shareholders opinions regarding management and increases the incentives to monitoring. In this section we evaluate the real effects of Say-on-Pay proposals that may be induced by more intense and effective monitoring and better contractual incentives.

Tables 7 and 8 show the impact of passing a Say-on-Pay proposal on variables that capture firm profitability, long term performance and other real outcomes. Each cell corresponds to a different regression that measures the effect at the discontinuity using the identification in expression 2 with 4th order polynomials to each side of the majority threshold. Each column corresponds to a different dependent variable y_{ft} and each panel to a different year-to-year effect. We denote as year t the year in which the Say-on-Pay proposal has been voted.[10] The top panel measures the change from $t-1$ to t. This corresponds to some pre-treatment months and the first post treatment ones. The coefficients may capture early effects since most of our proposals are voted 6 months before the end of their fiscal year. The second panel measures the change in variables from the end of the year of the vote t until the first full year after the Say-on-Pay vote $(t+1)$. Similarly, the bottom panel shows the change from $t+1$ to $t+2$.

Table 7 reports the differential effect on commonly used profitability measures between firms that pass a Say-on-Pay proposals and the control firms. To further homogenize the dependent variable across firms, we report results on growth rates and on the sign of their change. In columns 1 and 2 , we find that, one year after the vote, firms that pass Say-on-Pay have a 71% higher chance of a positive earnings per share growth than firms that fail to pass such provision. The magnitude of the change is very large, exceeding 300% due to some outlier firms that have earnings per share close to zero on year t, but the percentage of positive growth firm indicates that the effect goes beyond those abnormal firms. Columns 2 and 3 show a similar pattern for return on equity growth and return on assets growth, respectively. We observe that companies that pass Say on Pay have 67% and 71% higher chance of reporting a positive growth than those that do not. The magnitude of the change is 20% and 5% respectively. The fact that CEOs at Say-on-Pay firms are delivering higher profitability may indicate that they have stronger incentives to increase firm performance under this new monitoring environment.

Next, we examine other broader measures of performance beyond short-term earnings. In table 8 column 1, we observe that firms that pass Say-on-Pay report improvements in Tobin's Q one year later. The differential increase of 18% higher Tobin's Q, which corresponds to one standard deviation, is strongly significant and there in no reversal over the next year.

[10] This is an intuitive way to set the cut from one year to another, though our results are robust to different cuts. Most of the proxy season takes place between April and June – 88% of the proposals in our sample take place before June.

Improvements in Tobin's Q may denote a more long term growth potential. How is this better performance attained? On the cost side we have identified a reduction in overheads growth of 14%. Though, most importantly we observe a strong impact on productivity as measured by sales per worker. Over the next two years after the vote, firms that pass Say-on-Pay display a stronger growth on productivity: for the first year the differential growth is 21% and for the second year is 24%, both statistically significant. These gains in productivity could come from delivering higher sales or, alternatively, from lowering employment growth. Column 6 shows that employment grows less in firms where Say-on-Pay passes one year after the vote: firms that pass Say-on-Pay lower their employment growth by 13% relative to those that do not pass Say-on-Pay. These results do not necessarily show that Say-on-Pay firms are cutting on employment, but rather a differential growth pace for Say-on-Pay firms relative to our control group. Two years after the vote sales per worker continues to grow without further declines in employment.

In sum, firms that pass Say-on-Pay are delivering stronger performance. CEOs seem to be reacting to having a Say-on-Pay provision in place by providing shareholders with better earnings as well as better Tobin's Q which may denote more long term firm growth opportunities. These performance results are accompanied by better productivity ratios and a lower employment growth rate. Say-on-Pay provisions are pushing CEOs to deliver stronger performance that is commensurate with their compensation. In the next section, we examine whether Say-on-Pay has an effect on the level of CEO pay and on the incentive structure.

4.4 The effect of Say-on-Pay on CEO's pay

The main stated objective of Say-on-Pay proposals is to improve the alignment of CEO incentives with firm objectives. In general, one should see firms as diverse in their pay policies and in how they intend to improve them. However the declared emphasis of Say-on-Pay proposals on improving the relationship between pay and performance often translates into common proposed practices across these firms that can be seen in the pay proposals submitted to subsequent proxy materials. For example, new incentive schemes are intended to become more explicitly linked to quantitative performance measures that are easier to monitor. Similarly, pay components that are perceived as not directly linked to performance

may be challenged. In this section we examine whether passing a Say-on-Pay proposal has an impact on the level and on the incentive structure of CEO pay.

In Table 9 we report the effect of Say-on-Pay at the discontinuity threshold on changes in different elements of CEO compensation. To deal with the fact that firms in our sample are heterogeneous in size and other characteristics, we measure all the monetary variables in growth rates, so that the effects we report are in one percentage point changes. Coefficients can then be interpreted as the one percentage change between two periods induced by Say-on-Pay. Column 1 reports the effect on total CEO compensation. We do not observe any significant change in the growth rates of CEO compensation on the three years following the passing of a Say-on-Pay proposal. Column 2 reports the effect of Say-on-Pay on the probability of CEO turnover. If Say-on-Pay proposals induce better shareholder monitoring they may increase the probability of turnover. On the other hand if CEOs are going to be watched more closely they could respond by performing better and, therefore, offsetting the increased monitoring and lowering the chances of being dismissed. We observe that the estimates for the differential on the probability of turnover are negative but not significant. In other words, CEOs in firms that pass Say-on-Pay are not more likely to leave than those in firms that do not pass Say-on-Pay. The probability of leaving (which includes dismissal) does not seem to be affected by Say-on-Pay proposals. Next we look into the changes on CEO compensation for firms that do not change their CEO. Column 3 reports a similar pattern as column 1. However, these estimates are again not statistically different from zero. Taken together, the results in columns 1 to 3 show no differential effect between firms that pass Say on Pay proposals in terms of total CEO compensation or turnover.

We now turn to the different components of CEO pay. Column 4 reports the impact of passing Say-on-Pay on the change in salary: it decreases 4% one year later and there is no reversal one year after that. Given the fact that salary is a component of total compensation in cash and not directly linked to performance, this result is in line with the efforts to reduce the amount of compensation that is not sensitive to performance. Column 5 reports the effect on the proportion of variable compensation granted (granting of stock, options and bonus) relative to total pay and shows no particular differential pattern between those firms that pass Say-on-Pay proposals and those that do not. Columns 6 to 8 look instead to the total portfolio of options and stock owned by the CEO. Columns 6 and 7 show no particular pattern in terms of the value of the portfolio of stock and options held by the CEO. However,

column 8 shows the changes in the overall delta of the portfolio of stock and options held.[11] As we can see, there is a substantial increase in total portfolio delta around one year after Say-on-Pay proposals get approved. Overall, the results in Table 9 show that the value of total CEO compensation does not seem to be affected by Say-on-Pay, however the results suggest that the composition of pay does change, shifting from lower levels of fixed pay to higher levels of compensation that is contingent on stock returns.

We now turn to examine changes in the structure of pay and all variables in Table 10 are normalized relative to total compensation (as measured in Execucomp by tdc1). Column 1 shows that the share of bonus has a slight increase for firms that pass Say-on-Pay. This is again consistent with an increase of the elements of pay that are linked to performance. Columns 2 and 3 display the changes in share of stock awards and option awards relative to total compensation. Again, as in Table 9, we do not find a clear pattern on the granting of new options and shares.

One possible effect of the implementation of Say-on-Pay is that CEOs should try to reduce unpopular or excessively visible parts of CEO pay when they do not represent a large share of total compensation. Column 4 examines the effect of passing a Say-on-Pay proposal on the share of pay that is deemed as private benefits or perks: the estimates are negative denoting that the change in share of perks is reduced slightly within the year of the vote and one year later, however, these estimates are not statistically significant. Column 5 focuses on the realizations of deferred compensation. It shows that the share of deferred compensation is not affected just after Say-on-Pay is approved, but it increases two years later. CEOs may be less prone to cash-in already accrued earnings after Say-on-Pay has been approved and decide to recover them later on. This is by definition a transitory effect, and shows some degree of "window dressing" in CEO pay.

Overall, the results in this section show very small effects of Say-on-Pay on CEO compensation. Total pay does not change and we find suggestive evidence of a shift from fixed pay towards variable pay. This can be explained by two effects that are not mutually exclusive. First, as seen in the previous section, firm performance substantially increases after implementing Say-on-Pay. CEOs are performing better due to the increase in shareholder monitoring and, as a result, they may be able to justify levels of pay that do not differ

[11] The total delta of the portfolio is calculated following Core and Guay (1999).

substantially from their previous ones. Secondly, the adjustments of the pay packages may be heterogeneous across firms. Even if there is room for improvement in CEO pay packages, there may not be systematic deviations across firms. If each firm requires a different treatment this would induce to imprecise estimates of the effect of Say-on-Pay. In any case, we can rule out that Say-on-Pay systematically curbs compensation across firms.

5 Conclusion

Say-on-Pay policy is an important governance change mandated by the Dodd-Frank Act that provides shareholders with a vote on executive pay. It is as well part of a general trend towards more CEO accountability and increased shareholders rights. Shareholders may use this new channel to voice their discontent regarding the link between pay and performance. This new policy is at the forefront of the debate on executive pay and its efficacy to deliver firm performance.

However, so far it has been difficult to assess its economic impact. Its mandatory imposition is not useful to identify its effects, as it is mandated together with other changes in governance practices at the firm level. Moreover, prior voluntary adoption of Say-on-Pay is an endogenous decision of the firm and is correlated with firm characteristics. To overcome these difficulties we use a regression discontinuity design on the outcomes of shareholders proposals to adopt a Say-on-Pay policy. This allows us to deal with the presence of prior expectations and estimate the causal effect of adopting the policy. We first show that adopting Say-on-Pay generates value for shareholders. Say-on-Pay proposals that pass yield, on average, an abnormal return of 2.7% relative to ones that fail on the day of the vote. This positive market reaction delivers a cumulative abnormal return of 5% one week after the vote. We can estimate the actual value of a Say-on-Pay proposal which ranges from 7.9% to 10.5% of firm value. This is an economically sizeable effect and it may arise through different potential channels.

The declared role of Say-on-Pay proposals is to improve CEO pay policies of firms. As such, Say-on-Pay policies may affect firm value through better designed pay policies that motivate CEOs more efficiently. Moreover it may also help curbing excessive pay generating cost savings for the firm. Finally, the Say-on-Pay policy lowers the shareholder cost of

expressing dissent, and therefore makes monitoring by shareholders more attractive and effective. We explore the relative relevance of all of these mechanisms that could potentially be behind the shareholder reaction to the implementation of Say-on-Pay.

We find that firms that pass Say-on-Pay display stronger performance outcomes. CEOs seem to be reacting to having a Say-on-Pay provision in place by providing shareholders with better EPS marks, stronger profitability and higher Tobin's Q. We find as well, better productivity ratios and a lower employment growth rate. In short, Say-on-Pay provisions lead to stronger firm performance.

Regarding the effect of Say-on-Pay on the level of compensation we find no effect on the total CEO compensation for firms that pass the policy. In terms of the composition of pay, we do observe, a decrease in the fixed salary component and an increase in the variable component of pay. Despite finding small effects on CEO pay, we cannot rule out that part of the performance effects are due to adjustments in the pay structure that provide better incentives. It is important to note that the adjustments of the pay packages may be heterogeneous across firms. Even if there is room for improvement in CEO pay packages, there may not be systematic deviations across firms. If each firm requires a different treatment this would induce small and imprecise estimates of the effect of Say-on-Pay.

Our results are consistent with viewing Say-on-Pay policy as resembling an annual confidence vote in which shareholders approve or reject the CEOs performance relative to pay. This empowers shareholders, who have a new costless mechanism through which they can punish a CEO for poor performance. Overall our results suggest that CEOs are performing better due to the increase in shareholder monitoring and potentially due to better alignment of incentives. As a result, they may be able to justify total levels of pay that do not differ substantially from their previous ones.

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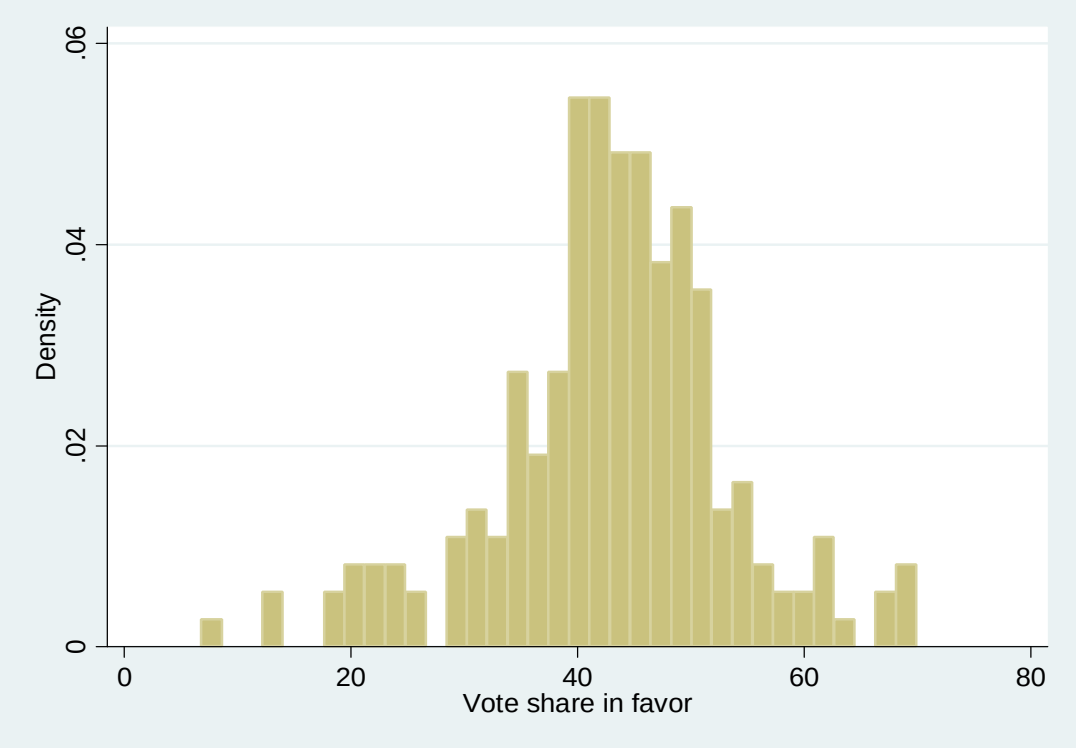
7 Figures and Tables



Distibution of vote shares for Say-on-Pay proposals

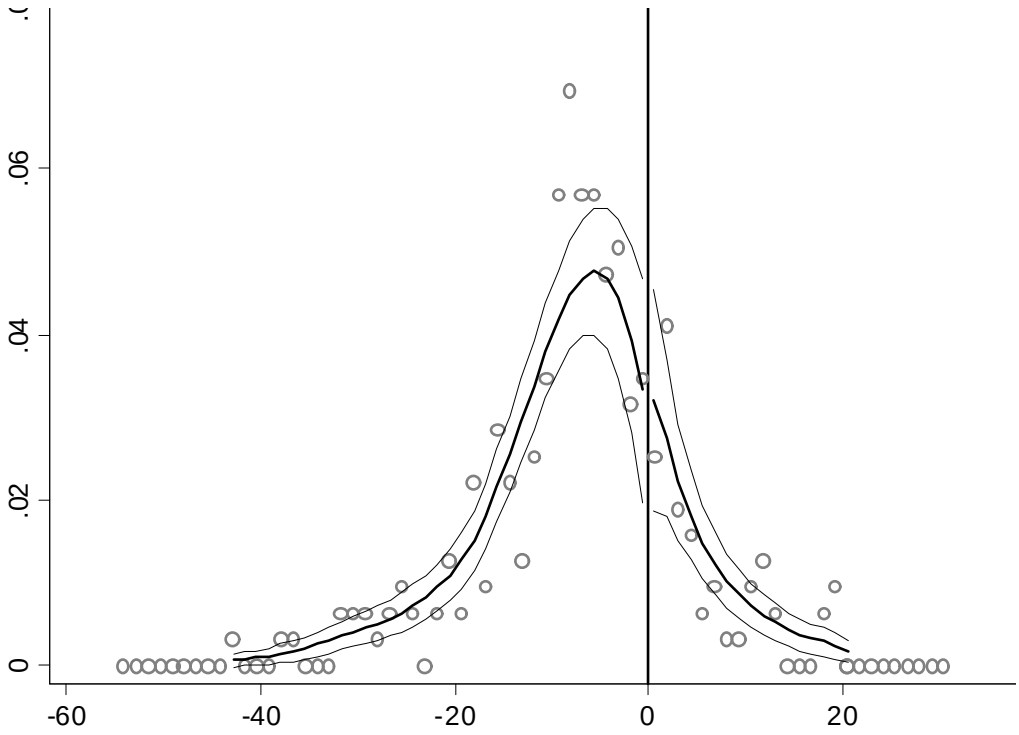


Figure 1: McCrary density Test

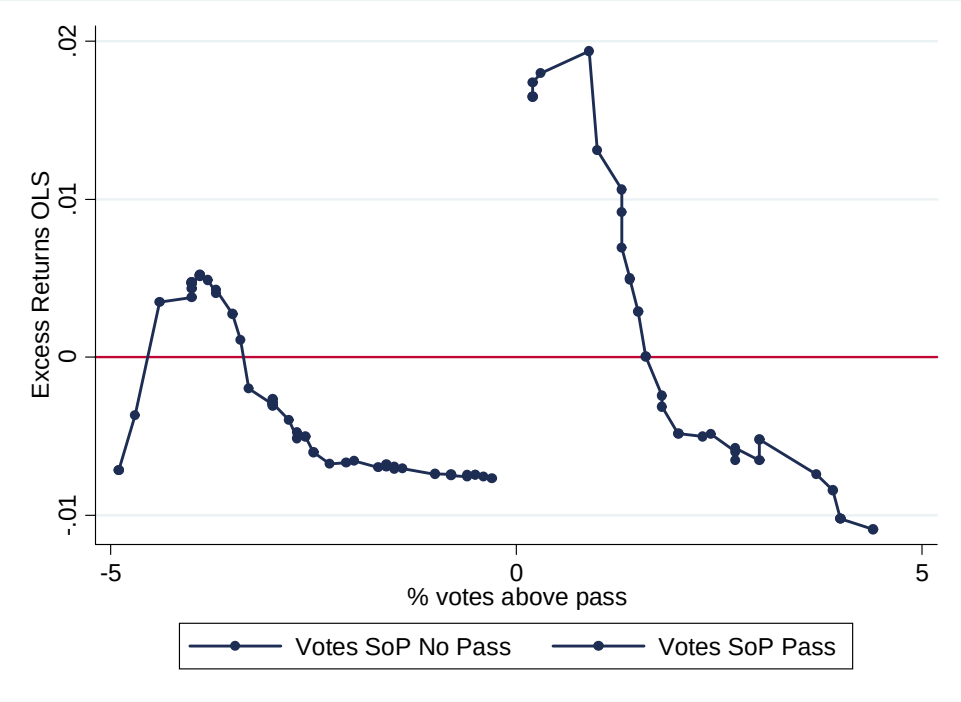


Figure 2: Abnormal return by vote share on the day of the vote

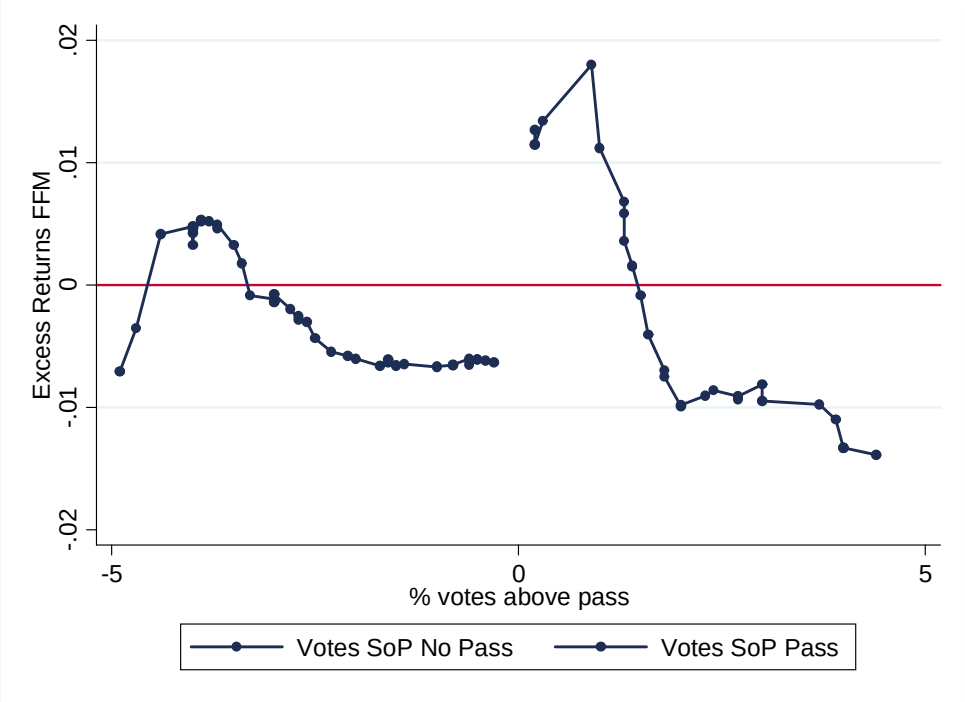


Figure 3: Abnormal Return by vote share on the day of the vote

TABLE 1

Shareholder Say-on-Pay Proposals

Panel A displays the frequency of Say on Pay voted proposals, the percent of passed and the average support over time. Data is collected by Riskmetrics on all shareholders Say on Pay proposals from 2006 until 2010 for all S&P 1,500 companies plus an additional 500 firms widely held. We have a sample of 258 voted proposals. For all of our observations the threshold for approval is 50%. Panel B classifies proposals by type of sponsor.

Panel A. Shareholder Proposal Summary Statistics

Year	Voted Proposals	Passed Proposals	Percentage Passed	Average Vote Outcome	# -5, +5	# -10,+10
2006	7	0	0%	40.2	0	5
2007	52	8	15.38%	41.26	13	32
2008	72	11	15.28%	41.38	18	44
2009	79	24	30.38%	45.67	35	54
2010	48	12	25.00%	44.83	20	35
Total	258	55	21.37%	43.37	86	170

Panel B. Type of Sponsor

Type of Sponsor	Freq.	Average Vote	stdev	Min	Max
Fund	8	45.68	3.90	40.6	51.5
Individual	44	40.9	10	6.8	55
Public Pen. Fund	19	49.5	11.9	25.2	69.9
Religious	21	43.37	8.7	30.4	62.4
SRI Fund	33	45.8	8.6	30	69.6
Union	68	41.38	10.1	13	69
Foundation	4	42.6	21.1	23	67
Other	6	35.5	12.5	20	52.7

TABLE 2

Descriptive Statistics and Sample Selection

Our sample of 258 voted proposals corresponds to 138 firm-year observations. All accounting variables are obtained from Compustat: Market Value (mkvalt_f), Leverage ((DLTT+DLC)/AT), Overheads (XSGA/XOPR), Payout (DVT/NI), Return on Equity (NI/(CEQ+TXDITC)), Return on Assets (NI/AT), Sales per Worker (SALE/EMP), Log Number of Employees (log(EMP)). Tobin's Q is defined as the market value of assets (AT+mkvalt_f-CEQ) divided by the book value of assets (AT), and balance sheet Deferred Taxes and Investment Tax Credit (TXDITC). Book-to-market is the ratio of book value of common equity (previous fiscal year) to market value of common equity (end of previous calendar year). CEO Pay is defined as TDC1 in Execucomp. All monetary values are in 2010 US$. Note that the number of observations may change due to missing values in some of the variables.

	Say on Pay Target						SP1500	
	N	**Mean**	**Median**	**Std. dev.**	**10th Per.**	**90th Per.**	**Mean**	**t-stat**
Market Value ($mil)	257	57,354	27,389	76,953	2,574	154,375	6,873.303	10.32
Tobin Q	249	1.62	1.34	0.78	0.96	2.74	1.7	-1.71
Return on Equity	257	0.06	0.14	1.14	-0.10	0.34	0.10	-0.55
Return on Assets	257	0.04	0.04	0.1	-0.01	0.13	0.11	-0.86
Leverage (Debt/Assets)	256	0.271	0.246	0.167	0.079	0.549	0.205	6.1
Payout (Dividend/Net Income)	256	0.29	0.22	0.82	0	0.74	0.23	1.17
Overheads (SGA/Op.Exp.)	215	0.287	0.248	0.189	0.06	0.559	0.311	-1.85
Sales per Worker	257	742	422	945	218.4	1511	501.27	3.9
Log Number Employees	257	3.73	3.95	1.57	1.47	5.71	1.6	20.9
CEO Pay (Thousands)	244	15,095	12,793	14,132	3,557	25,569	5,126.1	10.9
CEO Abnormal Pay	245	-0.191	0.108	2.18	-0.705	.0703	-0.015	-1.26
CEO Stock Awards FV	236	4,870.1	3.788	5.548	0	12.22	1.6	8.9
CEO Option Awards FV	242	3,960.8	2.319	7.797	0	8.479	1,138.5	5.6
Ownership by Instit. Shareholders	251	0.71	0.69	0.15	0.54	0.91	0.78	-6.1
Ownership by Top 5 Shareholders	251	0.241	0.21	0.088	0.15	0.36	0.29	-9.1
Number Shareholders own > 5%	176	2.2	2	1.22	1	4	2.8	-5.9

TABLE 3

Pre-differences in Firm Characteristics as a Function of the Vote Outcome

Table 3 tests whether passing a Say-on-Pay vote on the meeting date is systematically related to firm characteristics prior to the meeting. Note that in Panel A t refers to days, while for the rest, t refers to years. Each row corresponds to a different dependent variable and each entry comes from a separate regression. Each entry in the table reports the coefficient on whether a proposal passed. Columns 1 and 2 (3 and 4) report the estimated effect of passing a vote on outcome variable levels (changes) the year before the annual meeting, t-1 (between t-2 and t-1). Columns 1 and 3 present estimates without controlling for a polynomial in the vote share and, therefore, estimate the average effect of passing relative to not passing. Columns 2 and 4 include the polynomial in the vote share of order 4 on each side of the threshold such that it effectively estimates the effect at the discontinuity. All columns control for year fixed effects and standard errors (in parenthesis) are clustered at the firm level. Significance at the 10%, 5%, and 1% levels are indicated by *, **, and *** respectively.

	Before meeting (t-1)		**Change, from (t-2) to (t-1)**	
	(1)	(2)	(3)	(4)
A.				
Abnormal Return one day before Meeting, Car (-1,-1) OLS	-0.006	-0.000	-0.016	0.012
	(0.004)	(0.009)	(0.016)	(0.027)
Abnormal Return one day before Meeting, Car (-1,-1) FFM	-0.006	0.001	-0.016	-0.002
	(0.004)	(0.008)	(0.016)	(0.029)
B.				
Tobin Q	-0.110	0.181	0.016	0.081
	(0.154)	(0.518)	(0.056)	(0.148)
Return on Assets	-0.043*	-0.008	-0.027	-0.021
	(0.022)	(0.036)	(0.017)	(0.033)
Return on Equity	-0.516	-0.409	-0.437	-0.371
	(0.370)	(0.343)	(0.393)	(0.369)
Leverage/ Assets	-0.068**	-0.020	0.002	0.003
	(0.026)	(0.072)	(0.006)	(0.025)
Overheads (SGA/Op. Exp.)	-0.072**	-0.233**	0.002	-0.001
	(0.035)	(0.103)	(0.004)	(0.008)
Earnings Per Share	-1.289*	-0.446	0.312	-1.106
	(0.739)	(2.115)	(0.960)	(3.022)
Sales per Worker	409.930	1,134.590	12.174	69.389
	(265.020)	(883.621)	(21.229)	(64.241)
Log Sales	-0.542*	1.187	-0.022	0.109
	(0.282)	(0.768)	(0.028)	(0.067)
Log Number Employees	-0.837***	0.607	0.016	0.148*
	(0.261)	(0.620)	(0.032)	(0.081)
C.				
Ceo Pay	-4,765.618***	1,519.208	-2,138.331	-4,284.773
	(1,732.777)	(3,831.642)	(2,240.518)	(3,465.110)
Ceo Abnormal Pay	-0.364	-1.397	-0.105	0.041
	(0.662)	(1.454)	(0.087)	(0.184)
Ceo Stock Awards FV	-1,092.653	761.297	0.039	-0.161
	(823.945)	(2,447.353)	(0.042)	(0.100)
Ceo Option Awards FV	-2,014.357**	-2,046.357	0.015	-0.046
	(986.480)	(1,683.134)	(0.030)	(0.065)
D.				
Number Proposals	-0.383*	0.679	n.a.	n.a.
	(0.225)	(0.689)		
Dummy Proposal Compensation	-0.137	0.115	n.a.	n.a.
	(0.084)	(0.238)		
Polynomial in the vote share	no	yes	no	yes

TABLE 4

Abnormal Returns around the Majority Threshold

This table presents regressions of the abnormal returns on the day of the meeting t=0, on whether the Say-on-Pay proposal passed. Abnormal returns are computed using two benchmarks: Market Model and Fama French and momentum factors from Carhart (1997). Column 1 estimates are based on the whole sample. Column 2 restricts the sample to observations with a vote share within ten points of the threshold, column 3 to five points and so forth. Column 6 introduces a polynomial in the vote share of order 4, one on each side of the threshold, and uses the full sample. All columns control for year fixed effects; standard errors are clustered by firm. Significance at the 10%, 5%, and 1% levels are indicated by *, **, and *** respectively.

	(1)	(2)	(3)	(4)	(5)	(6)
			A. Market Model			
	All votes	-10;+10	-5;+5	-2.5;+2.5	-1.5;+1.5	Full Model
Pass	-0.00225	0.000910	0.00176	0.0127**	0.0165**	0.0269***
	(0.00318)	(0.00408)	(0.00490)	(0.00550)	(0.00601)	(0.00920)
Obs	255	170	89	43	28	255
R-squared	0.009	0.000	0.002	0.119	0.198	0.042
			B. Fama French & Momentum			
	All votes	-10;+10	-5;+5	-2.5;+2.5	-1.5;+1.5	Full Model
Pass	-0.00403	-0.00272	-0.00263	0.00749	0.0127**	0.0229**
	(0.00322)	(0.00414)	(0.00490)	(0.00539)	(0.00585)	(0.00884)
Obs	255	170	89	43	28	255
R-squared	0.012	0.002	0.004	0.045	0.128	0.040

TABLE 5

Abnormal Returns beyond the Day of the Meeting

This table presents the effect of passing a Say-on-Pay proposal on abnormal returns around different event windows. Column 1 reports the effect of pass one day before the meeting. Column 2 reports the effect on the day of the meeting. Column 3, 4 and 5 report the effect of pass on the cummulative abnormal returns for two days, one week and one month respectively. Abnormal returns are computed using two benchmarks: Market Model and Fama French and momentum factors from Carhart (1997). The specification is equation (2) using a polynomial in the vote share of order 4 one on each side of the threshold. All columns control for year fixed effects; standard errors are clustered by firm. Significance at the 10%, 5%, and 1% levels are indicated by *, **, and *** respectively.

	(1)	(2)	(3)	(4)	(5)
	A. Market Model				
	day before vote	**day of vote**	**two days**	**one week**	**one month**
Pass	-0.000254	0.0269***	0.0368***	0.0381	0.0340
	(0.00859)	(0.00920)	(0.0128)	(0.0330)	(0.0479)
Obs	255	255	255	255	255
R-squared	0.097	0.042	0.073	0.052	0.080
	B. Fama French & Momentum				
	day before vote	**day of vote**	**two days**	**one week**	**one month**
Pass	0.000776	0.0229**	0.0376***	0.0507*	0.0674
	(0.00811)	(0.00884)	(0.0109)	(0.0299)	(0.0473)
Obs	255	255	255	255	255
R-squared	0.061	0.040	0.085	0.063	0.036

TABLE 6

The Effect of Pass on Implementation

This table presents the effect of passing a Say-on-Pay proposal on Implementation. Column 1 estimates are based on the whole sample. Column 2 restricts the sample to observations with a vote share within ten points of the threshold, column 3 to five points and so forth. Column 6 introduces a polynomial in the vote share of order 3, one on each side of the threshold, and uses the full sample. All columns control for year fixed effects; standard errors are clustered by firm. Significance at the 10%, 5%, and 1% levels are indicated by *, **, and *** respectively.

	(1)	(2)	(3)	(4)	(5)	(6)
	All	-10;+10	-5;+5	-2.5;+2.5	-1.5;+1.5	Full Model
Pass	0.510***	0.443***	0.431***	0.283	0.300	0.343*
	-0.0774	(0.0940)	(0.111)	(0.167)	(0.208)	(0.199)
Observations	206	135	69	31	20	206
R-squared	0.327	0.225	0.218	0.085	0.099	0.355

TABLE 7

Effect of Say-on-Pay Proposals on Firm Profitability

This table presents the effect of passing a Say-on-Pay proposal on firm profitability. The specification is equation (2) using a polynomial in the vote share of order 4 one on each side of the threshold. The dependent variables are obtained from Compustat are all defined as changes: Earnings per Share (EPS), Return on Equity (NI/(CEQ+TXDITC)), Return on Assets (NI/AT). All dependent variables are winsorized at the 5th and 95th percentile. Standard errors in parentheses are clustered by firm. Significance at the 10%, 5%, and 1% levels are indicated by *, **, and *** respectively.

	(1) **EPS Change sign**	(2) **EPS Change**	(3) **ROE Change sign**	(4) **ROE Change**	(5) **ROA Change sign**	(6) **ROA Change**
Effect from t-1 to t						
Say on Pay	0.0512	0.238	0.156	0.0770	0.182	0.0128
	(0.226)	(1.069)	(0.214)	(0.0672)	(0.214)	(0.0218)
Obs.	257	257	257	257	257	257
R-sq.	0.109	0.151	0.095	0.066	0.153	0.117
Effect from t to t+1						
Say on Pay	0.713***	3.134**	0.673**	0.201*	0.713**	0.0508*
	(0.198)	(1.284)	(0.292)	(0.105)	(0.296)	(0.0271)
Obs.	198	198	198	198	198	198
R-sq.	0.197	0.198	0.149	0.146	0.183	0.216
Effect from t+1 to t+2						
Say on Pay	-0.298	-1.310	-0.0831	-0.141	-0.0596	-0.0210
	(0.383)	(2.062)	(0.388)	(0.158)	(0.400)	(0.0526)
Obs.	115	115	115	115	115	115
R-sq.	0.168	0.119	0.140	0.185	0.114	0.119

TABLE 8

Real Effects of Say-on-Pay Proposals

This table presents the effect of passing a Say-on-Pay proposal on firm outcomes. The specification is equation (2) using a polynomial in the vote share of order 4 one on each side of the threshold. The dependent variables are obtained from Compustat are all defined in growth terms: Tobin's Q is defined as the market value of assets (AT+mkvalt_f-CEQ) divided by the book value of assets (AT), and balance sheet Deferred Taxes and Investment Tax Credit (TXDITC), Overheads (XSGA/XOPR), Sales per Worker is defined as SALE/EMP, Employment (EMP), Net Income (EBITDA-INTPN), Total Assets (AT). All dependent variables are winsorized at the 5th and 95th percentile. Standard errors in parentheses are clustered by firm. Significance at the 10%, 5%, and 1% levels are indicated by *, **, and *** respectively.

	(1) **TobinQ Growth**	(2) **Overheads Growth**	(3) **Sales/Worker Growth**	(4) **Employment Growth**	(5) **Net Income Growth**	(6) **Total Assets Growth**
Effect from t-1 to t						
Say on Pay	-0.000632	0.0185	-0.0539	0.0385	0.0768	-0.00977
	(0.0701)	(0.0606)	(0.0590)	(0.0403)	(0.352)	(0.0615)
Obs.	248	215	257	257	257	257
R-sq.	0.280	0.074	0.157	0.079	0.075	0.095
Effect from t to t+1						
Say on Pay	0.181***	-0.140***	0.215***	-0.130**	0.923**	0.0566
	(0.0610)	(0.0511)	(0.0756)	(0.0649)	(0.385)	(0.0934)
Obs.	190	163	196	196	198	198
R-sq.	0.329	0.173	0.145	0.101	0.138	0.125
Effect from t+1 to t+2						
Say on Pay	0.0398	-0.0545	0.249*	-0.0215	0.410	-0.0156
	(0.122)	(0.0942)	(0.130)	(0.133)	(0.660)	(0.170)
Obs.	109	93	113	113	115	115
R-sq.	0.222	0.069	0.121	0.126	0.194	0.158

TABLE 9

Changes in the Level of Compensation

This table presents the effect of passing a Say-on-Pay proposal on compensation measures. The specification is equation (2) using a polynomial in the vote share of order 4 one on each side of the threshold.The dependent variables are obtained from Execucomp: column 1 reports the change in Total Compensation (TDC1), column 2 the change in Turnover and column 3 the change in Total Compensation within CEO. Column 4 reports change in Salary, column 5 change in Variable Compensation (Stock_awards_fv+Option_awards_fv+Bonus+ Noneq_Incent). Colunm 6 and report changes in Option and Stock Portfolio. Column 8 reports changes in Stock and Option Portfolio Delta. All dependent variables are winsorized at the 5th and 95th percentile. Standard errors in parentheses are clustered by firm. *** p<0.01, ** p<0.05, * p<0.1

	(1) **Total Compensation Growth**	(2) **Change in CEO (Turnover)**	(3) **Total Compensation Growth** *Within CEO*	(4) **Salary Growth** *Within CEO*	(5) **Variable Compensation Growth** *Within CEO*	(6) **Option Portfolio Growth** *Within CEO*	(7) **Stock Portfolio Growth** *Within CEO*	(8) **Growth Delta Stock & Option Portfolio** *Within CEO*
From (t-1) to (t)								
yes	-0.209	0.129	-0.175	0.0103	-0.172	-0.0866	-0.509*	-0.321
	(0.211)	(0.0853)	(0.201)	(0.0195)	(0.208)	(0.453)	(0.266)	(0.218)
Obs	232	232	208	206	202	195	201	200
R-sq	0.067	0.036	0.112	0.072	0.107	0.395	0.124	0.350
From (t) to (t+1)								
yes	0.0835	-0.0383	0.116	-0.0408*	0.276	-0.0443	0.468	0.362**
	(0.460)	(0.103)	(0.456)	(0.0228)	(0.773)	(0.578)	(0.438)	(0.147)
Obs	178	178	158	156	155	145	152	153
R-sq	0.056	0.052	0.081	0.090	0.079	0.316	0.200	0.382
From (t+1) to (t+2)								
yes	-0.464	-0.111	-0.315	-0.000326	-0.352	-0.215	-0.157	-0.504
	(0.283)	(0.167)	(0.207)	(0.0279)	(0.263)	(0.894)	(0.497)	(0.325)
Obs	102	102	96	94	91	87	93	91
R-sq	0.147	0.024	0.165	0.044	0.243	0.335	0.150	0.256

TABLE 10

Changes in the Structure of Compensation

This table presents the effect of passing a Say-on-Pay proposal on the structure of compensation. The specification is equation (2) using a polynomial in the vote share of order 4 one on each side of the threshold.The dependent variables are obtained from Execucomp: column 1 reports the change in the Share of Bonus (bonus/tdc1), column 2 the change the Share of Stock Awards (stock_awards_fv/tdc1), column 3 the change in the Share of Option Awards (option_awards_fv/tdc1). Column 4 the change in the Share of Perks (othcomp/tdc1) and column 5 the change in the Share of Deferred Compensation (defer_earnings_tot/tdc1). All dependent variables are winsorized at the 5th and 95th percentile. Standard errors in parentheses are clustered by firm. *** p<0.01, ** p<0.05, * p<0.1

	(1) **Share of bonus**	(2) **Share of stock awards**	(3) **Share of option awards**	(4) **Share of perks**	(5) **Share of defferred compensation**
Change (t-1) to (t)					
yes	0.0254**	-0.130	0.0521	-0.00515	0.0468
	(0.0112)	(0.0840)	(0.0556)	(0.0104)	(0.0646)
Obs	208	203	203	208	203
R-sq	0.224	0.063	0.085	0.102	0.340
Change (t) to (t+1)					
yes	-0.0315	-0.00826	0.0137	-0.00644	-0.0926
	(0.0272)	(0.126)	(0.0739)	(0.0151)	(0.0857)
Obs	158	158	158	158	158
R-sq	0.139	0.126	0.119	0.030	0.166
Change (t+1) to (t+2)					
yes	-0.00110	-0.0188	0.0481	0.0121	0.464***
	(0.0248)	(0.104)	(0.0725)	(0.0138)	(0.171)
Obs	96	96	96	96	96
R-sq	0.091	0.101	0.033	0.074	0.153