

Managerial discretion, say on pay, and CEO compensation

Journal:	<i>Management Decision</i>
Manuscript ID	MD-03-2020-0242.R2
Manuscript Type:	Original Article
Keywords:	Say on pay, Corporate governance, Aligned CEO compensation, Managerial discretion, Individual discretion, Contextual discretion

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Cite as: Baixauli-Soler, J.S., Lozano-Reina, G. and Sánchez-Marín, G. (2021), "Managerial discretion, say on pay, and CEO compensation", *Management Decision*, Vol. 59 No. 6, pp. 1333-1362. <https://doi.org/10.1108/MD-03-2020-0242>

ABSTRACT:

The purpose of this paper is to analyze the influence of managerial discretion on the effectiveness of say on pay (SOP) as a governance mechanism. This goal covers an important gap since the issue of how effective SOP is in promoting more aligned compensation has proved somewhat controversial.

This empirical research opted for a panel methodology for the period 2003-2017, using a sample of large UK listed-companies (specifically, 3,445 firm-year observations). Data were obtained from several sources (Manifest Ltd, BoardEx, Worldscope, Factset Ownership and DataStream).

Results shows that managerial discretion plays an important role in the effectiveness of SOP as a mechanism for increasing aligned CEO compensation. While individual discretion (latitude of objectives) exerts a negative effect, contextual discretion (latitude of action) increases SOP effectiveness. The global effect of managerial discretion is positive when there is high level of both individual and contextual discretion.

CUST_RESEARCH_LIMITATIONS/IMPLICATIONS__(LIMIT_100_WORDS) :No data available.

CUST_PRACTICAL_IMPLICATIONS__(LIMIT_100_WORDS) :No data available.

CUST_SOCIAL_IMPLICATIONS__(LIMIT_100_WORDS) :No data available.

This empirical study provides evidence concerning an emerging topic in the literature regarding the impact of SOP as a shareholder activism mechanism of corporate governance on executive compensation. By taking managerial discretion into consideration as a relevant moderating factor, it also offers a better explanation of SOP effectiveness as a governance mechanism.

MANAGERIAL DISCRETION, SAY ON PAY, AND CEO COMPENSATION

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Originality/Value: This empirical study provides evidence concerning an emerging topic in the literature regarding the impact of SOP as a shareholder activism mechanism of corporate governance on executive compensation. By taking managerial discretion into consideration as a relevant moderating factor, it also offers a better explanation of SOP effectiveness as a governance mechanism.

Keywords:

Say on pay; corporate governance; aligned CEO compensation; managerial discretion; individual discretion; contextual discretion.

MANAGERIAL DISCRETION, SAY ON PAY, AND CEO COMPENSATION

1.- INTRODUCTION

As a result of disproportionate increases in executive compensation, in 2002 the United Kingdom (UK) introduced say on pay (SOP), a voting process whereby shareholders express their views on executive compensation by either voting for or against it, or by abstaining (Hooghiemstra et al., 2015). Said mechanism aims to complement traditional corporate governance mechanisms (such as boards and ownership structure) as well as to increase shareholder power and influence on compensation design (Conyon and Sadler, 2010). Since 2002, many countries have followed in the footsteps of the UK and have implemented a similar voting system (e.g., the United States (US), Australia, Japan, South Africa, the Netherlands, France, Italy, or Spain) (Stathopoulos and Voulgaris, 2016).

Despite it only having been implemented recently, many studies have focused on SOP effectiveness, with the latter being seen as a way in which voting capacity can get boards and compensation committees to promote compensation¹ that is more aligned with firm interests (Correa and Lel, 2016; Ferri and Maber, 2013; Kimbro and Xu, 2016; Stathopoulos and Voulgaris, 2016). The evidence regarding the impact of SOP on executive pay has, however, proved inconclusive (Lozano-Reina and Sánchez-Marín, 2020). While most research has focused on the main effects of SOP on executive compensation (e.g., Brunarski et al., 2015; Conyon and Sadler, 2010; Grosse et al., 2017), some factors might be modulating its influence and, in turn, may lie behind these mixed findings. To date, only firm performance as well as certain corporate governance factors have been explored in the context of SOP (Correa and Lel, 2016; Sánchez-Marín et al.,

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3 2017), and have shown the importance of examining the interactive effects related to SOP
4 effectiveness. In this vein, Correa and Lel (2016) find that SOP effectiveness is greater in
5 firms with poor performance as well as in firms with weak corporate governance tools in
6 the pre-SOP period. Sanchez-Marín et al. (2017) state that SOP effectiveness is greater in
7 firms with non-duality structures and a greater percentage of independent directors.
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14 Taking this into consideration, further investigation must incorporate additional
15 moderating factors in order to better explain SOP effectiveness (Obermann and Velte,
16 2018). In this vein, Lozano-Reina and Sánchez-Marín (2020) point out managerial
17 discretion as one of the key determinants in the understanding of SOP effectiveness.
18 Defined as the latitude of action available to executives in strategic decision making
19 (Hambrick and Finkelstein, 1987), past literature has shown its importance when
20 explaining executive pay policies (Van Essen et al., 2015; Finkelstein and Boyd, 1998;
21 Rajagopalan and Finkelstein, 1992; Wangrow et al., 2015). The influence of managerial
22 discretion may thus be extended to the analysis of SOP effectiveness, since the latter may
23 increase or decrease depending on the courses of action available to executives and what
24 objectives they pursue in their decision making. Considering that SOP seeks to encourage
25 boards to link executive compensation to shareholder and company interests (Alissa,
26 2015; Correa and Lel, 2016; Ferri and Maber, 2013), exploring managerial discretion may
27 shed light on the effectiveness of SOP as a corporate governance mechanism when
28 improving executive compensation alignment.
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49 Based on this, we posit a different impact of the various dimensions affecting CEO
50 discretion on SOP effectiveness. Considering the *economic perspective* of discretion
51 (Williamson, 1963), we expect a negative moderating impact of individual discretion (as
52 a latitude of objectives) on SOP effectiveness. Under this dimension, CEOs take
53 advantage of their power to influence the pay decisions adopted by boards from SOP
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3 results in an effort to secure compensation designs linked to their own interests (even if
4 such designs are not aligned to company interests). Alternatively, from a *strategic*
5 *management perspective* (Hambrick and Finkelstein, 1987), we expect a positive
6 moderating impact of environmental and organizational discretion (as a latitude of action)
7 on SOP effectiveness. These dimensions are usually out of CEOs' hands and encourage
8 executive decisions that are more closely linked to business interests, thus favoring the
9 functioning of SOP and its impact on pay designs.

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19 This research therefore seeks to examine how managerial discretion and, in
20 particular, its different dimensions (individual, environmental, and organizational)
21 (Hambrick and Finkelstein, 1987) moderate the impact of SOP voting on the design of
22 more aligned CEO compensation and how this influences firm performance. Specifically,
23 using a sample of UK listed-companies from 2003 to 2017, we examine the direct effects
24 of SOP on CEO compensation designs and firm performance in addition to analyzing the
25 interactive (moderating) influence of managerial discretion on these relationships. It is
26 worth noting that the UK provides a particularly important context since it follows a
27 comply-or-explain approach (Conyon and Sadler, 2010; Correa and Lel, 2016), which
28 provides companies with greater freedom – and discretion for executives – to comply
29 with corporate governance requirements. This issue is thus interesting both from the
30 perspective of managerial discretion and from the perspective of changes in SOP
31 legislation (since the nature of SOP changed in October 2013 from advisory to binding in
32 this country).

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51 This paper thus contributes to the debate surrounding SOP effectiveness in several
52 ways. First, the study expands existing knowledge concerning SOP's impact on executive
53 compensation – a field that has thus far yielded mixed evidence (Sánchez-Marín et al.,
54 2017) – through innovative research that dynamically assesses a company's capacity to

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3 design more aligned compensation over time. Second, by analyzing the impact of SOP
4 on financial firm value, this paper completes a natural flow of logic by suggesting that
5 SOP (in addition to promoting more aligned compensation) may enhance financial firm
6 value, thereby expanding the current debate on the issue (e.g., Brunarski et al., 2015; Cai
7 and Walkling, 2011; Cuñat et al., 2016). Third, we test how managerial discretion as a
8 whole, and its three dimensions in particular, modulate SOP effectiveness on
9 compensation designs (Obermann and Velte, 2018), gauging their importance in
10 promoting more aligned CEO compensation designs subsequent to an adverse SOP result.
11 Specifically, we elaborate on how competitive contexts make CEOs more or less
12 powerful in terms of their ability to achieve opportunistic pay designs that influence SOP
13 effectiveness. Fourth, we expand theoretical frameworks, beyond agency theory
14 (Stathopoulos and Voulgaris, 2016), to study the impact of SOP voting on executive
15 compensation from the perspective of managerial discretion, combining economic and
16 management literature to explain these relationships. Finally, this paper also makes
17 progress in the methodological field by employing refined measures that are likely to
18 capture the dimensions of managerial discretion (Wangrow et al., 2015). Specifically, we
19 use three different measures related to dimensions of managerial discretion, in addition
20 to operationalizing the concepts of "latitude of objectives" and "latitude of action"
21 proposed by Shen and Cho (2005).

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47 The paper is structured as follows. After this introduction, the second section
48 describes the theoretical framework and hypotheses. In the methodology section, the
49 sample, data, and variables are described, as are the models and analysis used. The results
50 are described in the fifth section, and finally, the conclusions, discussion, implications
51 and lines of future research are set out.
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2.- THEORETICAL FRAMEWORK AND HYPOTHESES

2.1.- SOP effectiveness, CEO compensation, and financial firm value

The separation between ownership and control in large companies, as well as the inefficiency shown by traditional corporate governance mechanisms, has triggered the need for new corporate governance tools (Fiss and Zajac, 2006). In this sense, SOP was introduced as a way to increase shareholder influence –consistent with the shareholder power view (Friedman, 1962) – in taking measures aimed at curbing executive control, increasing the linkage of executive pay to business performance as well as aligning shareholder and executive interests (Stathopoulos and Voulgaris, 2016; Tse, 2011). After implementing SOP, boards and compensation committees tend to be more diligent when designing executive compensation – in order to avoid potential loss of reputation and negative publicity –, and usually break down psychological barriers in an effort to analyze pay designs with executives – on behalf of shareholders (Brunarski et al., 2015; Kimbro and Xu, 2016).

Despite the importance of this issue, there is no consensus concerning the impact of SOP on executive compensation. One stream of SOP literature defends its effectiveness on the basis that such voting increases executive monitoring and has a favorable impact vis-à-vis designing more aligned or efficient executive compensation (e.g., Alissa, 2015; Clarkson et al., 2011; Correa and Lel, 2016; Ferri and Maber, 2013; Kimbro and Xu, 2016). However, other papers fail to find any significant effect of SOP on pay designs (Armstrong et al., 2013; Conyon and Sadler, 2010; Cuñat et al., 2016). Others adopt a critical view of such voting – e.g., Brunarski et al. (2015) and Sanchez-Marin et al. (2017) point out that misaligned compensation received by overpaid CEOs may be legitimized when major support for SOP is received.

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3 Although the evidence remains inconclusive, most SOP-related literature
4 establishes that SOP promotes more aligned compensation designs (Lozano-Reina and
5 Sánchez-Marín, 2020). Correa and Lel (2016) who carry out a prominent cross-country
6 study, point out that in countries where SOP has been adopted it seems to have proven
7 effective since its implementation, and has led to an overall improvement in executive
8 compensation compared to countries that have not adopted it. Similarly, several studies
9 report an increase in pay-for-performance after implementing SOP (e.g., Balsam et al.,
10 2016; Correa and Lel, 2016; Monem and Ng, 2013), as well as an improvement in CEO
11 compensation when an unfavorable SOP is received (Alissa, 2015; Kimbro and Xu,
12 2016). Ferri and Maber (2013) point out that boards tend to remove controversial pay
13 practices when high SOP dissent is received at the general meeting, and Burns and
14 Minnick (2013) evidence that boards modify the pay mix after implementing SOP,
15 tending towards designs that are more in line with company interests. This voting not only
16 stands out for the effect of high dissent on subsequent pay designs, but also for the
17 persuasive effect that SOP-related legislation has on boards and compensation
18 committees, which might even improve the linkage between compensation and
19 shareholders' interests before voting takes place (Lozano-Reina and Sánchez-Marín,
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45 Based on this evidence, and on the following four agency arguments (Jensen and
46 Meckling, 1976), we posit the positive impact of SOP on aligned CEO compensation
47 designs. First, SOP reduces the agency problems caused by the separation between
48 ownership and business management, thus favoring CEO compensation designs that are
49 more linked with company interests (Alissa, 2015). Likewise, SOP increases board
50 sensitivity towards pay-for-performance, in addition to promoting the eradication of high
51 compensation in the event of underperformance or failure – this sensitivity proving to be
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3 substantially greater when high SOP dissent is received from shareholders and in firms
4 where boards had previously designed misaligned compensation (Ferri and Maber, 2013).
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6 Second, SOP reduces information asymmetries since it increases information
7 dissemination regarding compensation policies (Greenstone et al., 2006) and improves
8 communication between boards, compensation committees, and shareholders, thereby
9 promoting more aligned compensation (Correa and Lel, 2016; Deane, 2007). Similarly,
10 shareholder voting behavior is affected by the language and reliability of the remuneration
11 report (Hooghiemstra et al., 2017; Laksmana et al., 2012), with SOP tending to clarify
12 the language and increase the reliability of these reports – which are often very difficult
13 for shareholders to understand – in an attempt to reduce information asymmetries.
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26 Third, given that shareholders tend to act rationally, they usually vote against
27 executive compensation, not when it is high, but when they feel it to be misaligned or
28 inefficient. This rationality is increased due to the need to solve the agency conflicts that
29 exist within firms (Alissa, 2015). Fourth, SOP provides an incentive for boards to promote
30 more aligned compensation in order to avoid any negative publicity about themselves and
31 so prevent possible loss of reputation (Sanchez-Marin and Baixauli-Soler, 2014),
32 particularly when an unfavorable SOP is received (Ertimur et al., 2013; Grundfest, 1993).
33 Moreover, SOP affects executive turnover, since this rate decreases when high SOP
34 support is received or when CEOs act in line with shareholders' views (Alissa, 2015;
35 Armstrong et al., 2013), thus reducing agency conflicts, particularly those linked to
36 misaligned compensation. Therefore, we expect SOP dissent to promote the design of
37 more aligned compensation in subsequent years.
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53 Hypothesis 1a: *An unfavorable SOP has a positive impact on aligned CEO*
54 *compensation.*
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3 In addition to affording shareholders a good opportunity to air their views on
4 compensation policies, SOP provides a useful mechanism for them to express “their
5 views on how the firm is run” (Cuñat et al., 2016, p. 1826). One specific stream of SOP-
6 related literature has thus analyzed how this voting affects financial firm value (e.g.,
7 Brunarski et al., 2015; Cai and Walkling, 2011; Cuñat et al., 2016). According to the
8 shareholder-alignment hypothesis (Deane, 2007; Friedman, 1962; Tse, 2011), SOP helps
9 to improve firm governance and performance, and makes boards willing to consider
10 shareholders’ concerns in order to avoid an unfavorable SOP (Brunarski et al., 2015; Cai
11 and Walkling, 2011). In this way, boards may react to SOP dissent by adopting certain
12 decisions that increase financial firm value (e.g., by increasing capital expenditures or
13 their investment in R&D) (Brunarski et al., 2015). Moreover, the greater pay alignment
14 promoted by SOP also encourages executives to act in line with business interests, which
15 ultimately increases financial firm value. In a similar vein, Correa and Lel (2016) find an
16 increase in firm value for firms subject to SOP legislation, and point out that a greater
17 linkage between CEO compensation and business performance is one way in which SOP
18 voting may boost firm value. Therefore, we expect SOP dissent to promote an increase in
19 financial firm value.
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42 Hypothesis 1b: *An unfavorable SOP has a positive impact on financial firm value.*
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46 47 **2.2.- The moderating role of managerial discretion**

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49 Managerial discretion determines whether the shape and fate of a company are
50 totally beyond executive control, completely under its control, or somewhere in between
51 (Finkelstein and Boyd, 1998; Mackey, 2008). Managerial discretion comes from a variety
52 of sources: the task environment, internal organizational factors, and individual
53 characteristics, which affect executives’ decision making and their potential impact on
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3 firm success (Wangrow et al., 2015). One specific stream of managerial discretion-related
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5 literature has focused on its impact on executive compensation. Broadly speaking, under
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7 higher levels of discretion, executives face greater risks, their jobs prove more complex,
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9 and they can make a greater contribution to the company, which tends to increase the
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11 impact they have on firm performance and which, in turn, usually impacts pay policies
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13 (Finkelstein, 2009; Finkelstein and Boyd, 1998). Considering a variety of internal and
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15 contextual factors as proxies for managerial discretion, the literature has evidenced a
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17 strong relationship between executive compensation and managerial discretion.
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19 Specifically, an increase in the level of executive pay and/or the greater use of
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21 performance-contingent pay are associated with high levels of discretion (Finkelstein,
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23 2009; Finkelstein and Boyd, 1998; Rajagopalan and Finkelstein, 1992).

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28 Economic and management scholars have recognized the importance of
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30 managerial discretion in business policies using different approaches. Considering these
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32 different approaches is interesting for SOP-related literature since managerial discretion
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34 may impact SOP effectiveness in different ways (Finkelstein and Peteraf, 2007). In this
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36 sense, we based our following arguments on both the *economic approach* of latitude of
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38 objectives and the *strategic management approach* of latitude of actions to illustrate the
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40 various potential effects of managerial discretion on SOP effectiveness.
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47 **2.2.1.- SOP effectiveness and individual discretion**

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49 Individual discretion is defined as “the degree to which the chief executive
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51 personally is able to envision or create multiple courses of action” (Hambrick and
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53 Finkelstein 1987, p. 379). From the *economic approach* (Williamson, 1963), and based
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55 on agency theory (Jensen and Meckling, 1976), individual discretion is closely associated
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57 with the concept of "latitude of objectives" (Shen and Cho, 2005), which describes
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3 managers' freedom to pursue their personal objectives beyond those of shareholders. In
4 this way, executives (and CEOs in particular) may use certain managerial practices, and
5 their power to persuade boards, in order to play down the negative results of voting,
6 thereby resulting in misaligned pay designs (Fields et al., 2001; Iatridis, 2018). This is
7 also a way to achieve additional rents that are not linked to business performance (Roth
8 and O'Donnell, 1996; Werner and Tosi, 1995).
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12 Related to this dimension, the literature stresses the particular importance of
13 power baseⁱⁱ (Mackey, 2008; Wangrow et al., 2015), which Hambrick and Finkelstein
14 (1987) positively relate to individual discretion. This dimension is seen as a CEO's
15 additional power source (Carpenter and Golden, 1997) associated with executives'
16 deliberate actions that increase their freedom to pursue their own goals coupled with the
17 existence of moral hazard (Holmstrom, 1979). In fact, most of the literature points out
18 that an executive's power base encourages the proliferation of opportunistic behaviors
19 and rent expropriations (Bebchuk et al., 2002; Finkelstein, 1992; Iatridis, 2018; Shin,
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38 Powerful executives have a strong impact on board decisions – in particular, on
39 the setting and design of pay policies (Abernethy et al., 2015; Bebchuk et al., 2002; Core
40 et al., 2005). In this sense, the effectiveness of SOP voting may prove ineffective if
41 executives manipulate key economic and financial issues (Laux and Laux, 2009) or if
42 they take advantage of their power to influence boards by negotiating for higher pay that
43 is not linked to business interests (Bebchuk and Fried, 2004; Van Essen et al., 2015; Shin,
44 2016). The existence of information asymmetries between executives and shareholders
45 may also affect SOP effectiveness since the more difficult it is for shareholders to observe
46 and assess management behavior, the greater the opportunity for executives (and
47 particularly CEOs) to pursue opportunistic behaviors when boards design their pay
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3 packages (Ndofor et al., 2015). These obstacles tend to increase shareholder inattention
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5 or indifference to aspects outside their immediate control (Parker et al., 2019), which
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7 translates into a loss of effectiveness of SOP as a corporate governance mechanism.
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10 In this sense, greater individual discretion allows executives to take advantage of
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12 their status through their influence on boards and compensation committees, in order to
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14 pursue their own interests – rather than encouraging executive actions that are adjusted to
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16 shareholder interests. This particularistic use of pay policies arising from SOP results,
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18 specifically when voting dissent increases, will lead to designing executive pay that is not
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20 linked to company interests (Bebchuk and Fried, 2004; Core et al., 2008). Thus, in these
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22 contexts, SOP voters may be expected to react by voting more negatively in subsequent
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24 years, whereas CEOs will seek to reduce the effectiveness of SOP by taking advantage of
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26 their levels of discretion and by pressuring boards (Iatridis, 2018; Shin, 2016), thereby
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28 turning all of this into a "vicious circle". Therefore, individual discretion does not help
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30 the SOP to meet its main goal, since it serves as a discretionary mechanism that endows
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32 CEOs with enormous power to pressure boards in order to obtain higher levels of pay.
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34 CEOs may also manipulate compensation disclosure so as to obtain a more favorable
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36 assessment in the SOP voting process. Based on this, we expect this dimension to
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38 negatively moderate the impact of an unfavorable SOP on the design of more aligned
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40 compensation in subsequent years.
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46 Hypothesis 2: *Individual discretion – or latitude of objectives – negatively*
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48 *moderates the relationship between an unfavorable SOP and aligned CEO compensation.*
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52 53 **2.2.2.- SOP effectiveness and contextual discretion**

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55 Contextual discretion comprises environmental and organizational discretion.
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57 Environmental discretion is defined as “the degree to which an environment enables
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3 variety and change” (Hambrick and Finkelstein 1987, p. 379) whereas organizational
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5 discretion is considered as “the degree to which the organization itself is amenable to an
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7 array of possible actions and empowers chief executives to formulate and execute those
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9 actions” (Hambrick and Finkelstein 1987, p. 379). Based on the *strategic management*
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11 *approach*ⁱⁱⁱ (Hambrick and Finkelstein, 1987), these two dimensions are close to the
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13 concept of "latitude of action" (Shen and Cho, 2005), which describes the range of
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15 strategic options available to executives who strive to implement the policies and achieve
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17 the outcomes demanded by shareholders (Shen and Cho, 2005). Research shows that
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19 contextual discretion encourages managers to support board policies that are linked to
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21 company interests since this ultimately proves beneficial to all stakeholders (by including
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23 executives) (Jing et al., 2010; Yan et al., 2010). In this sense, the presence of high-quality
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25 executives who are able to make the right strategic choices is required, with the
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27 subsequent design of an appropriate pay-for-performance compensation package that is
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29 closely linked to business results (Finkelstein and Boyd, 1998).
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35 Environmental discretion is positively associated with business competitiveness –
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37 i.e., contexts of product differentiability, market growth and demand instability –
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39 (Finkelstein and Boyd, 1998; Hambrick and Abrahamson, 1995; Hambrick and
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41 Finkelstein, 1987; Wangrow et al., 2015) and enables executives to provide a wider array
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43 of actions that can innovate and enhance firm performance (Youssef et al., 2019).
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45 Environmental discretion tends to increase executive monitoring and limit executive
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47 capacity to opportunistically influence board policies (in particular, policies arising from
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49 SOP), which frees boards from executive pressure and allows them (and compensation
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51 committees) to freely negotiate pay designs on behalf of shareholders with the aim of
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53 protecting their wealth and interests (Finkelstein, 2009; Jing et al., 2010). For its part,
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55 organizational discretion is greater in firms which display a high level of business
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3 opportunities – possessing abundant transferable resources, lower capital intensity and a
4 more disperse ownership structure – (Hambrick and Finkelstein, 1995; Key, 2002;
5 Werner and Tosi, 1995) and encourages greater leeway to involve executives in decision
6 making geared towards maximizing company interests. Similar to environmental
7 discretion, factors determining organizational discretion, in addition to being associated
8 with the increase in firm value and competitiveness, are beyond opportunistic managerial
9 behaviors (Li and Kuo, 2017; Youssef et al., 2019). This favors shareholder interests
10 being taken into consideration by boards, including those related to aligning executive
11 compensation packages with firms' interests (Rajagopalan and Finkelstein, 1992; Yan et
12 al., 2010).

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26 Although executive compensation packages may initially reflect elements related
27 to environmental and organizational discretion (Wangrow et al., 2015), their relevance in
28 this paper lies in their ability to moderate SOP effectiveness. Based on previous
29 arguments, executive compensation after SOP tends to be linked with business interests,
30 since compensation design is influenced both by the internal (organizational) and external
31 (environmental) risks these executives take and their marginal impact on firm
32 performance rather than being influenced by executive power (Finkelstein, 2009;
33 Finkelstein and Boyd, 1998; Li and Kuo, 2017; Zou et al., 2015). In current contexts of
34 competitiveness (characterized by high environmental and organizational discretion),
35 executive decisions are usually subject to greater monitoring and control by owners,
36 which reduces managerial opportunism and promotes policies linked to company interests
37 (Mustakallio et al., 2002). In an effort to promote and protect firm competitiveness and
38 success, the vigilance exerted by shareholders tends to be particularly intense. Executives
39 will feel compelled to live up to expectations and will thus restrict possible opportunistic
40 goals and so perpetuate business objectives and interests (Parker et al., 2019). As regards
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3 SOP voting, when an unfavorable result is received, boards are therefore prone to act in
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5 accordance with this result rather than attempting to mask it as indicated in individual
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7 discretion (due to the major influence of executives). An unfavorable SOP in this context
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9 ultimately emphasizes an additional adjustment of executive compensation to firm and
10
11 shareholder interests (Finkelstein, 2009; Jing et al., 2010; Li and Kuo, 2017; Yan et al.,
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13 2010).
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17 SOP effectiveness is expected to intensify in these contexts because, in addition
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19 to the positive impact of SOP dissent on aligned CEO compensation (Alissa, 2015;
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21 Brunarski et al., 2015), the impact of contextual discretion is added. Given the alignment
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23 of pay designs with firm interests which is promoted in such contexts, executives seek to
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25 maximize business results in order to increase their earnings, which ultimately benefits
26
27 all stakeholders. Going further, the resulting pay policies are also more consistent with
28
29 the interests of shareholders, who tend to prefer compensation designs that are linked to
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31 company interests as a form of monitoring, since monitoring CEOs' work proves more
32
33 difficult in high discretion contexts (Boyd and Salamin, 2001; Finkelstein and Boyd,
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35 1998). For instance, shareholders and boards will be more inclined to establish
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37 performance-contingent compensation plans that reflect the potential efficacy of CEOs to
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39 affect business interests (Finkelstein, 2009). Therefore, we expect environmental and
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41 organizational dimensions to positively moderate the impact of an unfavorable SOP on
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43 the design of more aligned CEO compensation.
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49 Hypothesis 3: *Contextual discretion – or latitude of action – positively moderates*
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51 *the relationship between an unfavorable SOP and aligned CEO compensation.*
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2.2.3.- SOP effectiveness and the global effect of managerial discretion

As mentioned previously, SOP proves very effective in aligning executive compensation with shareholder interests when individual discretion (or latitude of objectives) tends to be low and when contextual discretion (or latitude of action) tends to be high. Yet, since companies can also face contexts under different combinations of levels of discretion (Parker et al., 2019; Shen and Cho, 2005), the global effect of managerial discretion should clearly be considered. On the one hand, individual discretion is positively related to executive power (Carpenter and Golden, 1997), a power that will be used by them to counteract pressure from shareholders (by reducing shareholder activism) and by freely pursuing their personal and opportunistic interests – should they decide to do so (Bebchuk and Fried, 2004; Van Essen et al., 2015; Shin, 2016). On the other hand, by promoting a wider range of strategic options available to executives, contextual discretion encourages them to achieve firm success and competitiveness, reducing their opportunistic behaviors and promoting firm action that is geared towards linking executive compensation to shareholder interests (Finkelstein and Boyd, 1998; Jing et al., 2010; Yan et al., 2010).

In this way, while individual discretion tends to reduce the control and monitoring tasks linked to executive compensation – by weakening SOP effectiveness to convey shareholder views and promote more aligned compensation – contextual discretion tends to increase pressure from shareholders (manifested through the SOP), by increasing executive control and monitoring and by encouraging pay policies that are closely linked to firm interests. Considering the current competitive contexts usually faced by CEOs, we expect the global effect of both dimensions (when a high level of both individual and contextual discretion converges) to make CEOs less powerful, diminishing their ability to achieve opportunistic pay designs by enhancing SOP effectiveness. In this context,

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3 CEO freedom of action – provided by their power base – is restricted, as is their chance
4 of influencing boards when pursuing their own opportunistic goals (Shen and Cho, 2005).
5
6 Meanwhile, the range of strategic options – provided by contextual discretion – increases
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8 CEO monitoring and control, and encourages CEOs to promote company competitiveness
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10 (Mustakallio et al., 2002), which also urges boards to act diligently when establishing pay
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12 packages (Finkelstein, 2009; Li and Kuo, 2017). Control and monitoring tasks exerted by
13
14 shareholders will be reinforced – while executives’ opportunistic behaviors will tend to
15
16 be limited, and the struggle to steer managerial decisions and policies toward a firm’s
17
18 general interests will become the most beneficial way for all stakeholders. Therefore, we
19
20 believe that the negative effect of individual discretion may be outweighed by the positive
21
22 effect of contextual discretion, such that the global effect of managerial discretion tends
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24 to positively moderate the impact of an unfavorable SOP on the design of more aligned
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26 CEO compensation when levels of individual and contextual discretion are both high.
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33 Hypothesis 4: *The global effect of managerial discretion (when a high level of*
34 *individual discretion is combined with a high level of contextual discretion) positively*
35 *moderates the relationship between an unfavorable SOP and aligned CEO compensation.*
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42 **3.- METHODOLOGY**

43 **3.1.- Sample and data**

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45 This analysis focuses on large UK listed companies. The UK provides a
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47 particularly important context for three reasons. First, the UK was the first country where
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49 SOP was implemented (2002) such that there is more accumulated experience and data
50
51 available than for other countries. Second, the UK changed the nature of SOP from non-
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53 binding to binding in 2013 (Stathopoulos and Voulgaris, 2016). Third, the UK follows a
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55 comply-or-explain approach, which promotes the implementation of best practice
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3 corporate governance ("comply"). When a company wishes to deviate from these
4 practices and recommendations, it must explain and justify why ("explain") (Conyon and
5 Sadler, 2010). Taking these UK particularities into consideration may help to enrich
6 current understanding of SOP effectiveness and managerial discretion relationships under
7 several contexts. By mandating organizations to hold an annual vote on executive
8 compensation, SOP affects the comply-or-explain approach and the role played by the
9 board of directors in establishing such pay policies (Correa and Lel, 2016), forcing
10 companies to take this vote. However, when this vote was advisory (before 2013), they
11 were able to deviate from the SOP results obtained by explaining or justifying their
12 position to shareholders. It is thus interesting to see how SOP effectiveness works in these
13 varying scenarios.

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After matching observations across the different databases, our initial sample comprises 5,281 firm-year observations from 2003 (the first year that data on SOP voting were available) to 2017. We subsequently removed observations that omit relevant information from our variables and limited extreme values in order to reduce the effect of possible spurious outliers (specifically, we removed observations that were three standard deviations away from the mean). Our final sample comprised 3,445 firm-year observations from 2003 to 2017.

Five main sources of information were used to collect data on SOP, CEO compensation, and managerial discretion: *Manifest Ltd*, an independent shareholder voting and corporate governance support service, was used to collect data on SOP; *BoardEx*, a database containing biographical data on most board members and senior executives around the world, provided data on CEO compensation and CEOs' individual characteristics (concerning individual discretion); *Worldscope*, a database offering fundamental data on the world's leading public and private companies, provided

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3 information about economic, financial, and contextual variables (concerning
4 organizational and environmental discretion); *Factset Ownership*, a firm providing
5 institutional, stakeholder, mutual fund and float-related share ownership information for
6 equities worldwide, provided information on ownership; finally, *DataStream*, a financial
7 time series database, provided information on stock returns.
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17 3.2.- Variables

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19 *Aligned CEO compensation* (ALIG_CEO). Following Core et al. (Core et al.,
20 1999, 2008), aligned CEO pay is obtained by regressing CEO compensation on its major
21 determinants. This procedure is useful for obtaining an appropriate measure of estimated
22 or aligned pay (Brunarski et al., 2015; Sánchez-Marín et al., 2017), which estimates
23 executive pay packages using economic and financial indicators closely linked to firm
24 interests. It is used extensively in SOP-related literature (e.g., Alissa, 2015; Balsam et al.,
25 2016; Brunarski et al., 2015; Correa and Lel, 2016; Ferri and Maber, 2013; Sanchez-
26 Marin et al., 2017). The estimation is shown in Appendix A. After estimating it, we
27 calculate the change in aligned CEO compensation for a firm from year t to year $t + 1$
28 (Δ ALIG_CEO).
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42 The variables required to calculate aligned CEO compensation are: *CEO*
43 *compensation* (C_CEO), which is the natural logarithm of the sum of salary (base annual
44 pay in cash), bonus, other compensation (e.g., relocation or fringe benefits awarded
45 during the period), employers' defined contribution (employers' defined retirement /
46 pension contribution), and the value of equity (shares) awarded, estimated value of
47 options awarded, and the value of LTIP awarded, based on the closing stock price of the
48 annual report at the end of year t ; *tenure* (TEN) is the natural logarithm of the number of
49 years the CEO has been in office at the end of year t ; *sales* (SALES) is the natural
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3 logarithm of net sales of the company at the end of year $t-1$; the FTSE100 index
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5 (FTSE100) is one if the firm is in the FTSE100 at the end of year t , and zero otherwise;
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7 *book-to-market* (BTM) is the book value of equity scaled by market capitalization at the
8
9 end of year $t-1$; *stock performance* (RET) is the annual total return for years t and $t-1$; and
10
11 *return on assets* (ROA) is measured as the ratio of the net income to the book value of
12
13 total assets for the current and previous year. Finally, we control the time effect (d_t) and
14
15 the industry of each company (ψ_i) through dichotomous variables.
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19 ***Financial firm value*** (FIRM_VAL). Financial firm value is measured through the
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21 firm's Tobin's Q, which is the ratio of total assets plus market value of equity minus book
22
23 value of equity to total assets. Tobin's Q is a frequently used proxy for financial firm
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25 value within this research field (Brunarski et al., 2015; Correa and Lel, 2016; Cuñat et al.,
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27 2016).
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31 ***Say on pay***. This refers to the percentages of votes cast by shareholders, and is
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33 measured as a continuous variable, considering ratios of votes in favor, against, and
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35 abstentions out of the total (Conyon and Sadler, 2010; Ferri and Maber, 2013;
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37 Hooghiemstra et al., 2015). In particular, in line with prior literature (Conyon and Sadler,
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39 2010; Hooghiemstra et al., 2015, 2017; Sánchez-Marín et al., 2017), we measure
40
41 unfavorable SOP (SOP⁻) by the fraction of votes against and abstentions over total votes
42
43 – where *Against* is the total number of negative votes cast in year t ; *For* is the total number
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45 of positive votes cast in year t ; and *Abstain* is the total number of abstentions in year t .
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49 ***Managerial discretion***. This variable is measured through different indexes based
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51 on the three sources of discretion. Similar to Haleblan and Finkelstein (1993), we
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53 standardized the indicators related to each dimension and removed extreme values (i.e.
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55 values three standard deviations away from the mean). Using principal component
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57 analysis, the component of greatest common variance is chosen in order to yield an overall
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3 measure of individual, environmental, and organizational discretion. Indicators whose
4 impact is negative are reverse-scored (Haleblian and Finkelstein, 1993).
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8 First, the *individual discretion index* (IND), which represents CEOs' power base
9 (Finkelstein, 1992), is calculated through the following dimensions: (1) *CEO education*
10 (Key, 2002; Li and Tang, 2010), an indication of prestige, measured by the number of
11 qualifications the CEO holds at the end of year t ; (2) *CEO wealth*, which represents
12 ownership influence, measured by the total value of equity-linked wealth over market
13 capitalization in the period analyzed (Finkelstein, 1992); and (3) *CEO overconfidence*,
14 representing expertise, also influences CEO power for corporate decision making
15 (Malmendier and Tate, 2005), calculated on the basis of four sub-indicators (Schrand and
16 Zechman, 2012): (a) excess investment, measured through the firm's residual from a
17 regression of total asset growth on sales growth residual in the period studied; (b)
18 acquisitions made by the firm in the period analyzed; (c) debt-to-equity ratio, equals the
19 long-term debt divided by the market value of the firm in the period studied; and (d)
20 convertible debt or preferred stock over total assets in the period analyzed (Schrand and
21 Zechman, 2012). To calculate this index, all the indicators have a positive impact on
22 individual discretion.
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42 Second, the *environmental discretion index* (ENV) is calculated through four
43 dimensions: (1) *product differentiability*, measured by the industry median of sales,
44 general and administrative expenses, which includes advertising expenses, scaled by the
45 firm sales of all the companies in the industry during the period studied (Finkelstein and
46 Boyd, 1998); (2) *market growth*, measured by the industry median sales growth in the
47 period analyzed (Boyd, 1990; Hambrick and Abrahamson, 1995); (3) *demand instability*,
48 measured by the industry standard deviation of annual sales growth (five-year average)
49 in the period studied (Boyd, 1990; Hambrick and Abrahamson, 1995); and (4) *industry*
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3 *structure*, measured by the level of industry concentration in the period examined (based
4 on market shares) through the Herfindahl index (Finkelstein, 2009; Finkelstein and Boyd,
5 1998)^{iv}. To calculate this index, only the impact of industry structure on environmental
6 discretion is negative, while the impact of the remaining indicators is positive.
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12 Third, the *organizational discretion* index (ORG) is obtained through the
13 following indicators: (1) *capital intensity*, measured by total property, plant and
14 equipment over total employees in the period analyzed (Finkelstein and Boyd, 1998;
15 Finkelstein and D'Aveni, 1994); (2) *resource availability*, measured by the ratio of R&D
16 expenditures on firm sales in the period studied (Li and Tang, 2010); and (3) *ownership*
17 *structure* (Singh and Harianto, 1989; Werner and Tosi, 1995), measured by the ownership
18 concentration ratio in the period analyzed (through the Herfindahl index, which is
19 calculated on the four largest shareholders within a firm). To calculate this index, only
20 the impact of resource availability on organizational discretion is positive, while the
21 impact of the remaining indicators is negative.
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35 Based on the above indexes, we differentiate three main measures of managerial
36 discretion: latitude of objectives, latitude of action, and the global effect of discretion.
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38 *Latitude of objectives* (L_OBJ) is represented by the individual discretion index. *Latitude*
39 *of action* (L_ACT) embodies contextual discretion and is the average of environmental
40 and organizational discretion indexes. *Global effect of managerial discretion* (G_DIS) is
41 measured through a dummy variable that takes the value 1 when a company is
42 characterized by a high level of both individual and contextual discretion (i.e., discretion
43 levels above the median), and the value 0 when a company is characterized by a low level
44 of both individual and contextual discretion (i.e., discretion levels equal to or below the
45 median). Otherwise, we assign a missing value when firms show a high (low) level of
46 contextual discretion combined with a low (high) level of individual discretion.
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3 **Control variables.** In addition to those variables indirectly controlled when
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5 estimating aligned CEO compensation (e.g., tenure, sales, book-to-market ratio, or stock
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7 performance), we consider others that the literature has identified as variables which
8
9 might influence SOP effectiveness, specifically: *institutional ratio* (INSTITUTIONAL),
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11 which is the total institutional ownership ratio in terms of market capitalization at the end
12
13 of year t (Alissa, 2015); *board independence* (INDEPENDENCE), which is the ratio of
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15 independent directors over the total number of directors on the board at the end of year t
16
17 (Daily and Johnson, 1997; Zhou et al., 2017); *duality* (DUAL), which is a dummy variable
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19 equal to 1 if the CEO is also the chairman of the board at the end of year t , and 0 otherwise
20
21 (Daily and Johnson, 1997; Zhou et al., 2017); *cash flow* (CASHFLOW), measured by
22
23 free-cash flow scaled by the firm's market value in the period analyzed, where free cash
24
25 flow is measured as cash inflows from operating (Balsam et al., 2016; Burns and Minnick,
26
27 2013); *leverage* (LEV), which equals the book value of total liabilities scaled by the firm's
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29 market value in the period analyzed (Balsam et al., 2016); finally, in addition to board
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31 independence, other board characteristics are controlled, such as *board size* (BSIZE),
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33 which is the standard deviation of the number of board members in the period studied
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35 (Conyon and Sadler, 2010); *gender ratio* (GENDER), which equals the proportion of
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37 male directors in the period studied; *nationality mix* (NATION), which equals the
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39 proportion of directors from different countries in the period studied; and *succession*
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41 *factor* (SUCCESSION), which is a measurement of the clustering of directors around
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43 retirement age in each period studied.
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54 **3.3.- Models and analyses**

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56 In our analysis, we use a panel data method, which facilitates improvements in the
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58 estimation and econometric specifications, and allows the dynamics of cross-sectional
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3 populations to be examined since it provides more information and is more efficient than
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5 other methods (Balgati, 2001). Moreover, the panel method controls for unobservable
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7 heterogeneity, preventing biased results, since certain features that are difficult to
8
9 measure can affect CEO compensation. Furthermore, since an unfavorable SOP may be
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11 endogenous, we use a generalized method of moments (GMM) estimator in the following
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13 models to make our analysis less likely to suffer from self-selection or endogeneity bias
14
15 (Greene, 2007). Thus, similar to Conyon and Sadler (2010), the lag of this variable is used
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17 to avoid endogeneity bias. As shown in the result tables, this lag of the SOP constitutes a
18
19 valid instrument, given its non-correlation with the error term (Hansen, 1982)^v.
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24 In relation to Hypothesis 1 a), we set out Equation 1, whose dependent variable is
25
26 the change in aligned CEO compensation ($\Delta ALIG_CEO$) for a firm from year t to year t
27
28 $+ 1$, indicating the firm's capacity to link CEO compensation to business interests. The
29
30 independent variables are prior unfavorable voting results (SOP^-) and control variables.
31
32 We expect β_1 to exert a significant and positive influence on firms' capacity to design
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34 more aligned CEO compensation (Cai and Walkling, 2011; Ertimur et al., 2013; Ferri and
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36 Maber, 2013; Kimbro and Xu, 2016). Specifically:
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$$40 \quad \Delta ALIG_CEO_{it,it+1} = \beta_0 + \beta_1 \cdot SOP_{it-1}^- + \beta_2 \cdot Control\ variables_{it} + n_i + d_t + e_{it} \quad (1)$$

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42
43 Moreover, Equation 2 is set out with regard to Hypothesis 1 b), whose dependent
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45 variable is financial firm value ($FIRM_VAL$), which is measured through Tobin's Q. The
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47 independent variables are prior unfavorable SOP results (SOP^-) and control variables (by
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49 including the change in previous years' aligned CEO compensation as a control variable
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51 due to its potential influence on financial firm value). We expect β_1 to exert a significant
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53 and positive influence on financial firm value. Specifically:
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$$56 \quad FIRM_VAL_{it} = \beta_0 + \beta_1 \cdot SOP_{it-1}^- + \beta_2 \cdot Control\ variables_{it} + n_i + d_t + e_{it} \quad (2)$$

Subsequently, we apply Equation 3 to test the moderating role of managerial discretion (Hypotheses 2 and 3), where we also use the GMM estimator to prevent endogeneity bias. The dependent variable is also the change in aligned CEO compensation ($\Delta ALIG_CEO$). The independent variables are prior unfavorable SOP results (SOP^-), the three indexes of managerial discretion, the interaction term between SOP^- and discretion indexes, and control variables. We expect the same sign for β_1 as in Hypothesis 1a. We also expect β_5 and β_6 to have a significant and positive impact on aligned CEO compensation since they refer to organizational and environmental discretion (i.e., latitude of action). We expect β_7 to have a significant and negative impact because it refers to individual discretion (i.e., latitude of objectives). Specifically:

$$\begin{aligned}
 \Delta ALIG_CEO_{it,it+1} &= \beta_0 + \beta_1 \\
 &\cdot SOP_{it-1}^- + \beta_2 \cdot ENV_{it} + \beta_3 \cdot ORG_{it} + \beta_4 \cdot IND_{it} + \beta_5 \cdot (SOP_{it-1}^- \cdot ENV_{it}) + \beta_6 \\
 &\cdot (SOP_{it-1}^- \cdot ORG_{it}) + \beta_7 \cdot (SOP_{it-1}^- \cdot IND_{it}) + \beta_8 \cdot Control\ variables_{it} + n_i \\
 &+ d_t + e_{it}
 \end{aligned} \quad (3)$$

Finally, in order to test the moderating role exerted by the global effect of managerial discretion (Hypothesis 4), we also apply Equation 3. However, instead of using the above managerial discretion variables, we use the dummy variable which reflects the global effect of discretion (G_DIS) and the interaction term between SOP^- and G_DIS . In order to test this last hypothesis, only firms with a high level of both individual and contextual discretion (i.e., G_DIS takes the value 1), and firms with a low level of both dimensions (i.e., G_DIS takes the value 0) are considered. We expect this global effect to have a significant and positive moderating impact on the effectiveness of SOP since the confluence of a high level of both individual and contextual discretion tends to positively moderate the impact of SOP voting on aligned CEO compensation, as shown in section 2.2.3.

4.- RESULTS

4.1. Descriptive statistics and correlations

Table 1 provides a description of the basic statistics. As regards CEO compensation, the values (in logarithms) shown in Table 1 indicate that the observed compensation received by CEOs is greater than they should have received based on the firm's economic determinants. This is in line with other studies (Alissa, 2015; Brunarski et al., 2015), since many CEOs usually receive additional payments not linked to firm interests. Moreover, a high standard deviation emerges, which indicates the existence of a large pay gap among CEOs. As for SOP voting results, according to SOP-related literature (Canyon and Sadler, 2010; Sánchez-Marín et al., 2017), over 90% of shareholders approve CEO pay, while about 8.5% cast a negative vote or abstain as a vehicle for expressing dissatisfaction. With regard to managerial discretion variables, after constructing the managerial discretion indexes, the main descriptive statistics are shown in Table 1. This Table also contains the descriptive statistics related to control variables.

Insert Table 1 about here

Table 2 shows correlations between variables. This panel contains correlations of variables regarding the hypothesis testing. Noticeable is the correlation between certain managerial discretion dimensions (e.g., the correlation between individual discretion and environmental and organizational discretion). The remaining correlations are not high and the condition indexes are below 30, while VIF values are below 5, suggesting an absence of significant multicollinearity between independent variables (Hair et al., 1998).

Insert Table 2 about here

4.2. Testing the hypotheses

Table 3 shows the regressions of Models 1 and 2 to test Hypothesis 1a) (regression 1) and Hypothesis 1b) (regression 2). We obtain a positive and significant influence of an unfavorable SOP on a firm's capacity to design more aligned compensation in subsequent years, indicating that SOP positively impacts pay designs adopted by boards that are more closely linked to firm interests. These results confirm our Hypothesis 1 a). As regards the control variables, we find that this change in aligned CEO compensation is influenced by board characteristics. Specifically, while board independence and the proportion of directors from different countries favors more aligned pay designs, these designs are blurred when the proportion of male directors on the board increases – i.e., gender diversity would help companies to increase the efficiency of their compensation designs – or when the clustering of directors around retirement age is higher. These results are consistent with the idea that greater diversity within boards tends to increase their monitoring tasks, which favors the design of pay that is more aligned with shareholder interests. Director succession also implies different changes in board policies – in particular, in pay issues –, which seen to be negative vis-à-vis designing more aligned compensation.

Moreover, we also find a positive and significant impact of an unfavorable SOP on financial firm value. This confirms our Hypothesis 1 b) and shows how voting dissent favors the implementation of firm policies that promote business value – beyond the effect which refers to the design of more aligned compensation. As regards the control variables, the positive impact of previous aligned pay designs, institutional ownership, and board independence is particularly worthy of note. It stands to reason that the more aligned compensation design from previous years positively impacts financial firm value in subsequent years, as it will encourage CEOs to maximize it. In addition, the presence of

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3 more institutional investors and a more independent board favors monitoring and
4 supervision tasks, and urges CEOs to act more diligently.
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8 Insert Table 3 about here
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10 Moreover, Table 4 also contains the regressions of Model 3 to test Hypotheses 2
11 and 3, where the moderating role of individual and contextual discretion is analyzed. We
12 find a positive and significant impact of an unfavorable SOP on the design of more
13 aligned compensation (regressions 1-5), as was also found in relation to Hypothesis 1 a).
14 We also find a moderating effect of managerial discretion. In particular, while individual
15 discretion negatively moderates the relationship between an unfavorable SOP and the
16 design of more aligned compensation, environmental and organizational discretion
17 positively moderate this relationship – whereas the direct effects of these dimensions are
18 not significant. These results are robust since they remain on the same terms regardless
19 of whether they are tested individually (regressions 2-4) or collectively (regression 5).
20 These findings, which confirm Hypothesis 2 and Hypothesis 3, are in line with our
21 theoretical foundations, since environmental and organizational discretion, by increasing
22 executive monitoring and control, encourage CEOs to achieve business results that are
23 aligned with shareholder interests while at the same time fostering aligned pay designs,
24 thereby enhancing SOP effectiveness. Moreover, under individual discretion, we
25 expected SOP effectiveness to be reduced because CEOs take advantage of their power
26 to exert pressure on boards in order to secure higher pay (not linked to company interests)
27 and rent extractions. As for the control variables, we also find a significant impact of
28 board characteristics, similar to the first hypothesis^{vi}.
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53 Moreover, Table 5 includes the regressions to test Hypothesis 4 by considering
54 the global effect of managerial discretion when there is a high level of both individual
55 and contextual discretion. We find that this global effect plays a positive moderating role,
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3 intensifying the impact of SOP dissent on the design of more aligned compensation when
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5 both individual and contextual discretion levels are high. This shows how organizational
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7 and environmental discretion are of great importance and atone for the negative effect of
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9 individual discretion, thus confirming our Hypothesis 4. As regards the control variables,
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11 we again find a significant impact of board characteristics, as stated below.
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15 Insert Table 4 about here
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20 21 **4.3. Robustness analyses**

22 In this section, we examine the robustness of our results. Firstly, we consider
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24 whether our findings might be affected by the change in SOP-related legislation
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26 implemented by the UK in 2013. Secondly, we compare the effectiveness of SOP by
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28 comparing high-dissent firms to low-dissent firms. Finally, in order to test the role played
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30 by institutional ownership, we study whether SOP effectiveness when designing more
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32 aligned compensation differs between firms with high institutional ownership and firms
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34 with low institutional ownership.
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38 First, it should be noted that the nature of SOP has evolved in countries over the
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40 years. Initially, such voting tended to emerge as a corporate governance recommendation
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42 in most countries and was non-mandatory in nature. Although holding a vote later became
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44 law, the results of the vote were often used merely for consultation purposes and were not
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46 binding. Some countries have subsequently implemented new legal changes (by applying
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48 more stringent legislation related to SOP) with the aim of increasing its effectiveness. In
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50 this sense, the UK changed the nature of SOP from merely advisory to binding in 2013
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52 (Stathopoulos and Voulgaris, 2016). This change in the nature of SOP in the UK increased
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54 the coercive pressure stemming from legal mandates, a greater coercive pressure which
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3 might favor the deinstitutionalization of implemented pay policies within firms in an
4 effort to increase their linkage to shareholder interests (Mangen and Magnan, 2012).
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8 To test this issue, as shown in Table 6, we draw on a procedure to capture any
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10 post-regulation changes in SOP effectiveness. First, we tested the possible effect of this
11 change using the whole time period (regressions 1-2), and found that the interaction
12 between POST and SOP⁻ is not significant, such that there is no evidence to suggest that
13 the toughening of SOP legislation in the UK increased SOP effectiveness. Moreover, by
14 differentiating between SOP effectiveness (on the design of more aligned pay) during
15 advisory periods as compared to binding periods, we only find a positive and significant
16 impact of an unfavorable SOP when SOP was advisory (regressions 3-4), whereas the
17 impact of SOP does not prove significant when SOP is binding (regressions 5-6). Similar
18 results are obtained when moderating effects of managerial discretion are considered –
19 only organizational discretion plays a positive (and significant) moderating role, whereas
20 the impact of the other dimensions is not significant. Our results thus suggest that a
21 toughening of SOP legislation does not promote the design of more aligned
22 compensation, since this effect is blurred when SOP changes from advisory to binding.
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24 As regards the control variables, in both periods, we find a significant impact of board
25 characteristics. In addition, in the advisory period, we find that the cash flow ratio has a
26 negative impact.
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47 Insert Table 6 about here
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49 Second, boards (and compensation committees) might only react to SOP results
50 when dissent levels are high – since low dissent might not involve any change in pay
51 policies. In this sense, we test whether SOP effectiveness changes when distinguishing
52 between firms which received high dissent and firms which received low dissent. Among
53 the different measures used by prior studies to distinguish between high and low dissent,
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3 we consider the median value as an adequate threshold of high SOP dissent (Sánchez-
4 Marín et al., 2017) in order to divide the sample between high-dissent firms and low-
5 dissent firms. The results, shown in Table 7, reveal that firms react to dissent levels
6 received by shareholders in both groups – both when dissent is deemed to be high and
7 when it is seen as low. Managerial discretion exerts a moderating influence in the same
8 terms as stated above. In any case, in order to test whether the coefficients of interests in
9 these two groups are equal or not, we performed a Chow test (Chow, 1960). After carrying
10 out this Chow test, the results do not point to there being any significant difference. In
11 this way, it is possible to state that, after implementing SOP, boards remain likely to
12 improve compensation designs by linking them to shareholder and business interests,
13 even in firms where voting dissent is not high.
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28 Insert Table 7 about here

31 Finally, institutional investors play, as expected, an important monitoring role
32 within businesses. It is thus interesting to test whether the likelihood of designing more
33 aligned compensation by boards after SOP results is affected by the role played by
34 institutional ownership. To test this, similar to prior studies (Buchanan et al., 2018; Denis
35 et al., 2006), we divide our sample into firms with high institutional ownership – i.e.,
36 firms with above-median institutional ownership – and firms with low institutional
37 ownership – i.e., firms with below-median institutional ownership. The results, shown in
38 Table 8, evidence that the impact of an unfavorable SOP on the design of more aligned
39 pay is significantly positive, both in firms with high institutional ownership and firms
40 with low institutional ownership (the Chow test results indicate no significant differences
41 between low- and high-institutional ownership firms). This implies that, beyond the
42 important supervisory and monitoring role these institutional investors play, SOP is useful
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3 *per se*. Similarly, in both groups, individual discretion has a negative moderating effect,
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5 and contextual discretion exerts a positive moderating effect.
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8 Insert Table 8 about here
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10 11 12 **5.- CONCLUSIONS AND DISCUSSION**

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15 SOP is an activism mechanism that complements traditional corporate governance
16 mechanisms and allows shareholders to vote on executive compensation, thereby
17 providing an additional channel for them to express their opinion, and so increasing their
18 influence over compensation agreements (Sánchez-Marín et al., 2017; Stathopoulos and
19 Voulgaris, 2016). In this vein, this paper further elaborates on global explanations of SOP
20 effectiveness from a managerial discretion viewpoint. Using a sample of large UK listed-
21 companies (specifically, 3,445 firm-year observations) from 2003 to 2017, this study
22 contributes to SOP-related literature by extending, both theoretically and empirically,
23 current knowledge on SOP's capacity to design more aligned CEO compensation and to
24 increase financial firm value, whilst also showing how different dimensions of managerial
25 discretion influence SOP effectiveness (Wangrow et al., 2015).
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40 Results show that SOP plays a key role in UK listed companies, since an
41 unfavorable SOP enhances a board's capacity to design more aligned compensation,
42 helping to correct potential agency problems and increasing financial firm value and
43 shareholder wealth. Consistent with the shareholder-alignment hypothesis (Brunarski et
44 al., 2015; Cai and Walkling, 2011; Kimbro and Xu, 2016) these findings help to
45 consolidate the positive role of SOP and its effectiveness as a corporate governance
46 mechanism. Boards therefore take shareholders' views into consideration when designing
47 more aligned CEO compensation, which fosters greater pay-for-performance alignment
48 and compensation transparency. Moreover, this effect is accentuated with the existence
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3 of gender and nationality-diverse boards which help increase CEO compensation
4 monitoring intensity. In addition, by analyzing the effect of SOP voting results on
5 financial firm value, a positive impact is found, showing that an unfavorable SOP not
6 only drives boards to design more aligned CEO compensation but also promotes the
7 adoption of pay policies – geared towards avoiding fresh dissent in subsequent years –
8 that increase business value.
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11 Our findings also confirm managerial discretion as being a key moderating factor
12 to consider in the understanding of SOP effectiveness, offering a fine-grained, holistic
13 approach to the effects of all managerial discretion dimensions (individual,
14 environmental, and organizational) on SOP effectiveness. Specifically, our results show
15 that CEOs often influence board policies arising from SOP in order to ensure
16 compensation that is consistent with their opportunistic interests – in line with the ideas
17 previously set out by Brunarski et al. (2015) or Mangen and Magnan (2012). Given that
18 these CEOs take advantage of their power to neutralize the impact of a potentially
19 unfavorable SOP, individual discretion tends to exert a negative effect on SOP
20 effectiveness. However, contextual (environmental and organizational) discretion plays
21 just the opposite role, since the determining factors of contextual discretion are associated
22 with business competitiveness and success (in addition to being far removed from CEO
23 opportunism), which ultimately encourages boards to take SOP results into consideration.
24 Going further, our findings include the analysis of the global effect of managerial
25 discretion. Specifically, under high levels of both individual and contextual discretion,
26 managerial discretion has a positive influence on SOP effectiveness. Thus, the positive
27 effect from contextual (environmental and organizational) discretion makes up for the
28 negative effect from individual discretion. This can be explained by the major influence
29 of competitive contexts that exert a tight control over CEO decision making, reducing
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3 their power and capacity to behave opportunistically, whilst encouraging CEOs to
4 emphasize policies that focus on company competitiveness, including those related to
5 pay-for performance aligned policies.
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10 With regard to robustness analyses, three main considerations are worthy of note.
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12 First, as for changes in the nature of SOP, our findings indicate that a toughening of SOP
13 legislation does not improve the design of more aligned compensation since this effect is
14 blurred with the conversion of SOP from advisory to binding. Advisory SOP therefore
15 seems to be an appropriate mechanism for aligning CEO compensation with firm
16 interests, while stricter SOP legislation fails to enhance SOP effectiveness. One reason
17 explaining this result may be based on symbolic versus substantive responses to
18 institutional or stakeholder pressures. When SOP becomes mandatory, boards adopt ‘in
19 form’ and it becomes more symbolic. However, when SOP is advisory, there is greater
20 ‘buy in’ to the concept (Fiss and Zajac, 2006; Zattoni and Cuomo, 2008). Other reasons
21 might be based on progressive changes, since the change to a binding SOP came about
22 many years after adopting an advisory SOP. As a result, this advisory SOP has to some
23 extent already influenced CEO pay. It should also be remembered that the UK advisory
24 period was marked by the global financial crisis, which might have affected SOP
25 effectiveness (Gregory-Smith et al., 2014). During this tough period, situations of major
26 pay misalignment and high compensation inequality were evidenced, and SOP might
27 have played an important role by empowering shareholders to go for more aligned
28 compensation packages.
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51 Second, it should be noted that boards’ propensity to design more aligned
52 compensation occurs both in companies which receive high dissent and in companies
53 which receive lower dissent in SOP voting, showing that the persuasive effect of this
54 voting remains in all firms which receive a certain percentage of dissent votes from
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3 shareholders. In this way, SOP-related legislation really does imply shareholders'
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5 continuous monitoring of executive pay, while increasing board or director caution when
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7 designing such compensation (Lozano-Reina and Sánchez-Marín, 2020). Third, given the
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9 fiduciary duty of institutional investors towards business owners, one might think that
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11 SOP effectiveness could be influenced by the role of these investors, who usually vote in
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13 accordance with shareholder interests (Larcker et al., 2015; Obermann and Velte, 2018).
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15 However, our results maintain that this voting works well *per se* – both in firms with high
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17 institutional ownership and in firms with low institutional ownership – by showing how
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19 this voting constitutes a self-sustaining and useful monitoring tool beyond institutional
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21 ownership.
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26 In summary, this study contributes academically by confirming a positive impact
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28 of SOP on cases of misaligned CEO compensation, where an unfavorable SOP promotes
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30 more adjusted pay-for-performance designs (Alissa, 2015; Cai and Walkling, 2011; Ferri
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32 and Maber, 2013; Gregory-Smith et al., 2014; Kimbro and Xu, 2016). This evidence
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34 reinforces the importance of SOP as a corporate governance mechanism that
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36 complements traditional ones, and provides fresh impetus in terms of designing more
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38 aligned compensation. In addition, this paper makes significant progress in SOP-related
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40 literature by providing a better understanding of the role played by contextual factors in
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42 SOP effectiveness. In particular, it shows that SOP effectiveness is significantly
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44 determined by managerial discretion (Lozano-Reina and Sánchez-Marín, 2020), where
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46 each dimension exerts a different impact although, broadly speaking, managerial
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48 discretion positively moderates SOP effectiveness on more aligned CEO compensation.
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50 Finally, this paper responds to prior literature calls by introducing new theoretical
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52 foundations from the strategic management and economic standpoints (Stathopoulos and
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54 Voulgaris, 2016). Specifically, the strategic management approach proves useful vis-à-
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3 vis explaining the positive impact of environmental and organizational discretion, while
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5 the economic approach allows the negative impact of individual discretion to be explored.
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8 As regards practical contributions, our findings offer several interesting
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10 implications. First, companies should design executive compensation that is more closely
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12 linked to firms' interests so as to avoid restructuring compensation designs after receiving
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14 an unfavorable SOP, with undesirable consequences for firm value and reputation (e.g.,
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16 negative publicity, costs of changes in pay packages or loss of competent executives) (Cai
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18 and Walkling, 2011; Correa and LeI, 2016). Second, companies should take due note of
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20 factors that determine managerial discretion and, in particular, individual discretion, since
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22 this usually increases executive power and negatively impacts SOP effectiveness. Third,
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24 and with specific regard to policy-makers, companies should consider that any
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26 toughening of SOP legislation needs to be rethought, since applying more stringent
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28 measures fails to improve the way in which SOP works. According to our results,
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30 governments should implement more balanced corporate governance systems rather than
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32 tightening up SOP legislation (Almadi and Lazic, 2016).
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37 Finally, this study has some limitations which, in turn, also offer interesting
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39 opportunities for future research. First, this study focuses on the UK because we preferred
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41 to focus on a single country with a specific government structure in an effort to obtain
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43 robust results that can be extended to other countries with a similar corporate governance
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45 model. In any case, future studies should extend the evidence provided in this paper by
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47 comparing SOP effectiveness among countries. In particular, it would be interesting to
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49 compare our evidence with that from other countries which have different corporate
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51 governance systems that are more normative/mandatory (e.g., continental European
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53 systems) and to look at this type of voting in hitherto unexplored contexts (e.g., Japan,
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55 South Africa or Germany). Second, we do not include qualitative determining factors
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3 regarding individual discretion, but merely consider the moderating effects of managerial
4 discretion. In particular, we use a proxy for measuring CEO power based on Finkelstein
5 (1992), which includes all dimensions of CEO power stated by this author – although the
6 measure is not exactly the same as the original one^{vii}. Future research might also add new
7 evidence by examining other mechanisms that moderate the relationship between SOP
8 and executive compensation. Third, from a stakeholder perspective, future studies should
9 consider how the behavior of different kinds of stakeholders affects SOP results and its
10 effectiveness. Fourth, this research does not look at the role of proxy advisors, the media
11 or other potentially important gatekeepers, which future research might take into
12 consideration. Finally, since this paper is the first to study the effects of changes in SOP
13 legislation, fresh evidence is required to complement our results and to test whether the
14 2008 financial crisis and the above-mentioned 2013 legal changes in SOP might have
15 affected SOP effectiveness and financial firm value.

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ⁱ Throughout this paper, we use the expression "aligned compensation" to refer to the alignment of executive (or CEO) compensation with company interests.

ⁱⁱ As regards individual discretion, we rely on power base because, in addition to being one of the most important determining factors of individual discretion (Carpenter and Golden, 1997; Wangrow et al., 2015), it is the only one that allows for direct quantitative measurement. The remaining determining factors related to individual discretion pointed out by Hambrick and Finkelstein (1987) (e.g., level of aspiration, commitment, tolerance of ambiguity, or locus of control) have a qualitative nature and are thus not included in this study.

ⁱⁱⁱ The *strategic management approach* reflects the efforts made by Hambrick and Finkelstein (1987) to reconcile population ecology theory (Hannan and Freeman, 1977) and strategic choice theory (Andrews, 1971). While the first shows that executive leeway is constrained by certain organizational and environmental pressures, the strategic choice theory points out that executives have a wide range of strategic options that may shape organizational policies and outcomes (Parker et al., 2019; Shen and Cho, 2005; Wangrow et al., 2015).

^{iv} Since these variables refer to environmental discretion, the whole population of UK companies is used to estimate its four indicators: 37,080 firm-year observations from 2003 (the first year that data were available on SOP voting) to 2017.

^v The annual design of executive compensation is greatly influenced by SOP results referring to the previous year (Lozano-Reina and Sánchez-Marín, 2020; Stathopoulos and Voulgaris, 2016). In this sense, pay models should test the influence of SOP results (received in the previous year) on current pay design. However, in order to avoid endogeneity problems (Greene, 2007), we use the second lag of SOP dissent as an instrument of the first lag, which proves valid (Hansen, 1982).

Specifically, in order to select this instrument, we tested different lags (in particular, second, third, and fourth lags). The second lag passed the validity tests and, as a result, was considered the most appropriate. This second lag of SOP dissent is an appropriate instrument since, while the shareholder voting pattern tends to maintain a certain annual stability (which shows the relationship between dissent in year "t-1" and

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dissent in year "t-2"), the effect of dissent in year "t-2" on pay designs in year "t" has been lost over time, which also proves statistically valid (Hansen, 1982)

^{vi} In an effort to complement the analysis on the above moderating effects, we retest them through two complementary indexes (i.e., latitude of objectives and latitude of action). Our findings are in line with our expectations and reinforce our previous results, since latitude of objectives is equal to the negative effect of individual discretion (in line with Hypothesis 2), and latitude of action encompasses the positive effects of environmental and organizational discretion (in line with Hypothesis 3). These results are available from the authors upon request.

^{vii} We performed a robustness analysis regarding this issue by retesting our models using CEO ownership as a measure of power base. Results were quite similar.

Management Decision

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APPENDIX A. ESTIMATION OF ALIGNED CEO COMPENSATION

In order to estimate aligned CEO compensation, we use the model proposed by Core et al. (1999, 2008), which has been used extensively by SOP-related literature (e.g., Alissa, 2015; Balsam et al., 2016; Brunarski et al., 2015; Correa and Lel, 2016; Ferri and Maber, 2013; Sanchez-Marín et al., 2017). Specifically, following the estimation of the authors mentioned, we use pooled cross-sectional OLS regression for the logarithm of CEO compensation. Our results, shown in Table A1, indicate that the main pay determinants are CEO tenure, company sales in the previous year, and the FTSE 100 index. Moreover, stock performance in the current year, and ROA in both the current as well as in the previous year have a significant impact on aligned CEO compensation. These results are similar to prior literature (Brunarski et al., 2015; Core et al., 2008; Sánchez-Marín et al., 2017). In addition, we also estimate aligned CEO compensation using a panel data method. Results were quite similar.

Insert Table A1 about here

TABLES

TABLE 1. Summary of sample characteristics (2003-2017)

	Variable	Mean	Median	Standard deviation	p25	p75
CEO compensation and firm value ^a	C_CEO	7.9153	7.9060	0.9105	7.3008	8.5322
	ALIG_CEO	7.7561	7.7561	0.5367	7.1609	8.1088
	FIRM_VAL	2.3142	1.8637	1.3536	1.0419	3.2106
Say on pay ^b	SOP ⁺	0.9091	0.9549	0.1185	0.8870	0.9840
	SOP ⁻	0.8492	0.3970	0.1154	0.1300	0.1021
Managerial discretion ^c	IND	-1.71e-10	-0.2015	1.1070	-0.5142	0.2257
	ORG	-1.20e-10	-0.0325	0.7309	-0.0345	0.0354
	ENV	-8.82e-10	-0.1895	1.0771	-0.7267	0.5937
Control variables ^d	INSTITUTIONAL	0.3414	0.3369	0.1470	0.2475	0.4275
	INDEPENDENCE	0.5883	0.5700	0.1928	0.5000	0.6600
	DUAL	0.1160	0.0000	0.1260	0.0000	0.0000
	CASHFLOW	0.1586	0.9740	0.7982	0.4309	0.1777
	LEV	0.1997	0.1657	0.1100	0.2858	0.3028
	BSIZE	0.9860	0.9000	0.5603	0.7000	1.3000
	GENDER	0.9010	0.9000	0.1075	0.8330	1.0000
	NATION	0.2017	0.2000	0.2354	0.0000	0.4000
SUCCESSION	0.3513	0.3000	0.1351	0.3000	0.4000	

^aC_CEO is the natural logarithm of the sum of salary (base annual pay in cash), bonus, other compensation, employers' defined contribution, and the value of equity (shares) awarded, estimated value of options awarded and the value of LTIP awarded, based on the closing stock price of the annual report; ALIG_CEO is the annual variation of the natural logarithm of estimated compensation using the model of Core et al. (1999, 2008); and FIRM_VAL is measured through the firm's Tobin's Q.

^bSOP⁺ refers to the ratio of positive votes over the total; and SOP⁻ refers to the ratio of negative votes and abstentions over the total.

^cINV, ORG and ENV are the indexes representing individual, organizational, and environmental discretion, calculated as indicated in Section 3.2.

^dINSTITUTIONAL is the total institutional ownership ratio in terms of market capitalization; INDEPENDENCE is the ratio of independent directors on the board; DUAL is a dummy variable equal to 1 if the CEO is also the chairman of the board, and 0 otherwise; CASHFLOW equals free-cash flow scaled by the firm's market value, where free cash flow is measured as cash inflows from operating; LEV equals the book value of total liabilities scaled by the firm's market value; BSIZE is the standard deviation of the number of board members; GENDER equals the proportion of male directors; NATION equals the proportion of directors from different countries, and SUCCESSION is a measurement of the clustering of directors around retirement age.

TABLE 2. Correlations between variables

Variables ^a	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
(1) ΔALIG_CEO	1.000														
(2) FIRM_VAL	0.1824***	1.000													
(3) SOP-	0.0438**	0.1126*	1.000												
(4) ENV	0.2644**	0.0326*	-0.0485**	1.000											
(5) ORG	0.2870**	0.0029	0.0268	0.0126	1.000										
(6) IND	-0.1949*	-0.0039	0.0370*	0.0364*	0.1541**	1.000									
(7) INSTITUTIONAL	0.2264**	0.1065*	0.1352**	-0.0229	-0.1011***	0.1025**	1.000								
(8) INDEPENDENCE	0.2553*	0.0216	0.0751*	0.0751	0.0621	-0.1195*	0.1489**	1.000							
(9) DUAL	0.0867	0.0739	-0.0651	-0.1059	-0.0738	-0.0176	0.0953	-0.1098**	1.000						
(10) CASHFLOW	0.0172	0.0002	0.0205	0.0028	0.1035	0.0128	0.0432	0.0436	0.0118	1.000					
(11) LEV	-0.0665*	-0.1078**	0.0401*	0.0034*	0.0864*	0.1260**	-0.0322	0.0712	-0.4970	0.0395*	1.000				
(12) BSIZE	0.1006	-0.0066	0.0348*	0.0078	0.0952	0.0564	0.0270	0.1187**	0.0788	0.0446**	0.0370*	1.000			
(13) GENDER	-0.2649**	-0.0507*	-0.0163	0.0736**	-0.0983**	-0.0641*	-0.2130**	-0.1007*	-0.1176*	-0.0040*	-0.0097	-0.0313*	1.000		
(14) NATION	0.2559**	0.0432	0.0474**	-0.1182*	0.0887*	0.1885*	-0.0134	0.0076	0.0678	0.0054	0.0495*	0.1389***	-0.1745***	1.000	
(15) SUCCESSION	-0.2068**	0.0261	-0.0240	0.1132**	-0.0595***	-0.0168	-0.2226***	-0.0634	0.1004	0.0027	-0.0267	-0.0783***	0.0123	-0.1136***	1.000

p-value: *p<0.05; **p<0.01; ***p<0.001

^aΔALIG_CEO is the change in aligned CEO compensation (estimated using the model of Core et al. (1999, 2008)) for a firm from year t to year $t + 1$; SOP⁻ refers to the ratio of negative votes and abstentions over the total; FIRM_VAL is measured through the firm's Tobin's Q. ENV, ORG and IND are the indexes representing environmental, organizational, and individual discretion, calculated as indicated in Section 3.2; INSTITUTIONAL is the total institutional ownership ratio in terms of market capitalization; INDEPENDENCE is the ratio of independent directors on the board; DUAL is a dummy variable equal to 1 if the CEO is also the chairman of the board, and 0 otherwise; CASHFLOW equals free-cash flow scaled by the firm's market value, where free cash flow is measured as cash inflows from operating; LEV equals the book value of total liabilities scaled by the firm's market value; BSIZE is the standard deviation of the number of board members; GENDER equals the proportion of male directors; NATION equals the proportion of directors from different countries, and SUCCESSION is a measurement of the clustering of directors around retirement age.

TABLE 3. SOP effectiveness on CEO compensation and firm value

Variable	Δ ALIG_CEO _{it,it+1}	FIRM_VAL _{it}
	(1)	(2)
SOP _{it-1}	0.1952*	0.3192**
Δ ALIG_CEO _{it-1,it}		0.2610*
INSTITUTIONAL _{it}	0.1618	0.2533**
INDEPENDENCE _{it}	0.2703*	0.1995*
DUAL _{it}	-0.0168	-0.0271
CASHFLOW _{it}	-0.0011	0.0306
LEV _{it}	-0.0014	-0.1310*
BSIZE _{it}	0.1120	0.0289
GENDER _{it}	-0.2378*	-0.3191**
NATION _{it}	0.3592**	0.1779
SUCCESSION _{it}	-0.3283**	0.1341
Industry control	YES	YES
Year control	YES	YES
Observations	3,445	3,445
Hansen J statistics	26.45	28.03
(p-value)	0.109	0.112
AR(2)	1.14	1.27

p-value: *p<0.05; **p<0.01; ***p<0.001

The dependent variable is, in the first regression, Δ ALIG_CEO, which is the change in aligned CEO compensation (estimated using the model of Core et al. (1999, 2008)) for a firm from year t to year $t + 1$; and, in the second regression, FIRM_VAL, which is measured through the firm's Tobin's Q for year t . Independent variables are: SOP refers to the ratio of negative votes and abstentions out of the total at the end of year $t-1$; INV, ORG and ENV are the indexes representing individual, organizational, and environmental discretion at the end of year t , calculated as indicated in Section 3.2; INSTITUTIONAL is the total institutional ownership ratio in terms of market capitalization at the end of year t ; INDEPENDENCE is the ratio of independent directors on the board at the end of year t ; DUAL is a dummy variable equal to 1 if the CEO is also the chairman of the board at the end of year t , and 0 otherwise; CASHFLOW equals free-cash flow scaled by the firm's market value at the end of year t , where free cash flow is measured as cash inflows from operating; LEV equals the book value of total liabilities scaled by the firm's market value; BSIZE is the standard deviation of the number of board members in the period studied; GENDER equals the proportion of male directors at the end of year t ; NATION equals the proportion of directors from different countries at the end of year t ; and SUCCESSION is a measurement of the clustering of directors around retirement age at the end of year t .

The Hansen test has been used to test endogeneity and the null hypothesis of the validity of the instruments is accepted. The Arellano-Bond test has been used to test that there is no autocorrelation in the sample.

TABLE 4. Moderating effects of managerial discretion (environmental, organizational, and individual dimensions)

Variable	$\Delta\text{ALIG_CEO}_{it,t+1}$				
	(1)	(2)	(3)	(4)	(5)
SOP^-_{it-1}	0.2492**	0.1634*	0.2354**	0.2963**	0.2736**
IND_{it}	-0.1282	0.0413			-0.0339
ORG_{it}	0.0982		0.1203		0.0218
ENV_{it}	0.1378			0.1018	0.0537
$\text{SOP}^-_{it-1} * \text{IND}_{it}$		-0.1057*			-0.2017**
$\text{SOP}^-_{it-1} * \text{ORG}_{it}$			0.2108**		0.2424**
$\text{SOP}^-_{it-1} * \text{ENV}_{it}$				0.2488**	0.2930**
$\text{INSTITUTIONAL}_{it}$	0.2348	0.1969	0.2216	0.1873	0.1465
INDEPENDENCE_{it}	0.2365**	0.4343***	0.4867***	0.3771**	0.3465**
DUAL_{it}	-0.0771	0.0131	-0.1056	-0.1062	-0.0953
CASHFLOW_{it}	-0.0011	-0.0010	-0.0061*	-0.0009	-0.0035*
LEV_{it}	-0.0010	-0.0004	-0.0007	-0.0007	-0.0006
BSIZE_{it}	0.1194	0.1559	0.2167	0.1719	-0.0494
GENDER_{it}	-0.3482*	-0.1977	-0.4626**	-0.4887**	-0.4380**
NATION_{it}	0.4332**	0.3143*	0.2811*	0.2754*	0.5478**
SUCCESSION_{it}	-0.3122*	-0.3749**	-0.4152**	-0.4952**	-0.4903**
Industry control	YES	YES	YES	YES	YES
Year control	YES	YES	YES	YES	YES
Observations	3,445	3,445	3,445	3,445	3,445
Hansen J statistics	26.74	40.11	38.91	38.23	55.13
(p-value)	0.110	0.217	0.258	0.283	0.719
AR(2)	1.03	0.97	0.94	0.96	0.66

p-value: *p<0.05; **p<0.01; ***p<0.001

The dependent variable is $\Delta\text{ALIG_CEO}$, which is the change in aligned CEO compensation (estimated using the model of Core et al. (1999, 2008)) for a firm from year t to year $t + 1$. Independent variables are: SOP^- refers to the ratio of negative votes and abstentions out of the total at the end of year $t-1$; IND , ORG and ENV are the indexes representing individual, organizational, and environmental discretion at the end of year t , calculated as indicated in Section 3.2; INSTITUTIONAL is the total institutional ownership ratio in terms of market capitalization at the end of year t ; INDEPENDENCE is the ratio of independent directors on the board at the end of year t ; DUAL is a dummy variable equal to 1 if the CEO is also the chairman of the board at the end of year t , and 0 otherwise; CASHFLOW equals free-cash flow scaled by the firm's market value at the end of year t , where free cash flow is measured as cash inflows from operating; LEV equals the book value of total liabilities scaled by the firm's market value; BSIZE is the standard deviation of the number of board members in the period studied; GENDER equals the proportion of male directors at the end of year t ; NATION equals the proportion of directors from different countries at the end of year t ; and SUCCESSION is a measurement of the clustering of directors around retirement age at the end of year t .

The Hansen test has been used to test endogeneity and the null hypothesis of the validity of the instruments is accepted. The Arellano-Bond test has been used to test that there is no autocorrelation in the sample.

TABLE 5. Moderating effects of the global effect of managerial discretion

Variable	$\Delta\text{ALIG_CEO}_{it,it+1}$	
	(1)	(2)
SOP^-_{it-1}	0.1931*	0.2347**
G_DIS_{it}	0.1088	0.1208
$\text{SOP}^-_{it-1} * \text{G_DIS}_{it}$		0.2492**
$\text{INSTITUTIONAL}_{it}$	0.1647	0.1824
INDEPENDENCE_{it}	0.3546**	0.4572***
DUAL_{it}	0.0355	0.0696
CASHFLOW_{it}	-0.0073	-0.0001
LEV_{it}	-0.0004	-0.0012
BSIZE_{it}	0.1063	0.1239
GENDER_{it}	-0.3621*	-0.4434**
NATION_{it}	0.4601**	0.3597*
SUCCESSION_{it}	-0.3867**	-0.4476**
Industry control	YES	YES
Year control	YES	YES
Observations	2,213	2,213
Hansen J statistics	9.86	9.56
(p-value)	0.362	0.387
AR(2)	-0.91	-0.84

p-value: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

The dependent variable is $\Delta\text{ALIG_CEO}$, which is the change in aligned CEO compensation (estimated using the model of Core et al. (1999, 2008)) for a firm from year t to year $t + 1$. Independent variables are: SOP^- refers to the ratio of negative votes and abstentions out of the total at the end of year $t-1$; G_DIS , which represents the global effect of managerial discretion, is measured through a dummy variable that takes the value 1 when a company is characterized by high levels of both individual and contextual discretion, and the value 0 when a company is characterized by low levels of both individual and contextual discretion; INSTITUTIONAL is the total institutional ownership ratio in terms of market capitalization at the end of year t ; INDEPENDENCE is the ratio of independent directors on the board at the end of year t ; DUAL is a dummy variable equal to 1 if the CEO is also the chairman of the board at the end of year t , and 0 otherwise; CASHFLOW equals free-cash flow scaled by the firm's market value at the end of year t , where free cash flow is measured as cash inflows from operating; LEV equals the book value of total liabilities scaled by the firm's market value; BSIZE is the standard deviation of the number of board members in the period studied; GENDER equals the proportion of male directors at the end of year t ; NATION equals the proportion of directors from different countries at the end of year t ; and SUCCESSION is a measurement of the clustering of directors around retirement age at the end of year t .

The Hansen test has been used to test endogeneity and the null hypothesis of the validity of the instruments is accepted. The Arellano-Bond test has been used to test that there is no autocorrelation in the sample.

TABLE 6. Impact of changes in SOP on SOP effectiveness

Variable	Δ ALIG_CEO _{it,it+1}					
	Full period		Advisory period		Binding period	
	(1)	(2)	(3)	(4)	(5)	(6)
POST _{it}	0.2221	0.2269				
SOP ⁻ _{it-1}	0.1709*	0.2298**	0.2937**	0.3379***	0.0951	0.0917
POST _{it} * SOP ⁻ _{it-1}	0.0703	0.0328				
IND _{it}		-0.0424		-0.0238		-0.0361
ORG _{it}		0.0779		0.0551		0.0518
ENV _{it}		0.0973		0.0623		0.0475
SOP ⁻ _{it-1} * IND _{it}		-0.1912*		-0.1707*		0.0924
SOP ⁻ _{it-1} * ORG _{it}		0.2389**		0.2347**		0.2313**
SOP ⁻ _{it-1} * ENV _{it}		0.2844**		0.2517**		0.0949
INSTITUTIONAL _{it}	0.1889	0.1491	0.1929	0.2048	0.0913	0.2160
INDEPENDENCE _{it}	0.2679**	0.4484***	0.3893**	0.4495***	0.3332**	0.3091**
DUAL _{it}	-0.1342	-0.0857	0.1164	-0.1092	-0.3409	-0.3491
CASHFLOW _{it}	-0.0027*	-0.0032*	-0.0065*	-0.0031*	-0.0017	-0.0201
LEV _{it}	-0.0008	-0.0015	-0.0113	-0.0041	-0.0173	-0.0095
BSIZE _{it}	-0.0656	0.0278	-0.1620	-0.1938	-0.2189	0.2160
GENDER _{it}	-0.3176**	-0.4158**	-0.3813**	-0.4293**	-0.2611*	-0.3519**
NATION _{it}	0.2521*	0.2192*	0.4457***	0.3977**	0.3317**	0.2716*
SUCCESSION _{it}	-0.5282***	-0.4298**	-0.5328***	-0.4033**	-0.1206	-0.1454
Industry control	YES	YES	YES	YES	YES	YES
Year control	YES	YES	YES	YES	YES	YES
Observations	3,445	3,445	2,305	2,305	1,140	1,140
Hansen J statistics	15.40	53.94	13.76	34.32	16.78	13.06
(p-value)	0.763	0.695	0.246	0.596	0.210	0.365
AR(2)	-0.30	-1.42	-0.33	-1.43	0.14	-0.42

p-value: *p<0.05; **p<0.01; ***p<0.001

We essentially stack three panel data regressions: the first where the full time period is considered (regressions 1-2), the second where the observations are from the advisory period (2003–2013) (regressions 3-4), and the third where the observations are from the binding period (2014–2017) (regressions 5-6).

The dependent variable is Δ ALIG_CEO, which is the change in aligned CEO compensation (estimated using the model of Core et al. (1999, 2008)) for a firm from year t to year $t + 1$. Independent variables are: POST is an indicator that equals 1 for observations in the period 2014-2017 (binding SOP) and 0 for those in the period 2003-2013 (advisory SOP); SOP⁻ refers to the ratio of negative votes and abstentions cast out of the total at the end of year $t-1$; INV, ORG and ENV are the indexes representing individual, organizational, and environmental discretion at the end of year t , calculated as indicated in Section 3.2; INSTITUTIONAL is the total institutional ownership ratio in terms of market capitalization at the end of year t ; INDEPENDENCE is the ratio of independent directors on the board at the end of year t ; DUAL is a dummy variable equal to 1 if the CEO is also the chairman of the board at the end of year t , and 0 otherwise; CASHFLOW equals free-cash flow scaled by the firm's market value at the end of year t , where free cash flow is measured as cash inflows from operating; LEV equals the book value of total liabilities scaled by the firm's market value; BSIZE is the standard deviation of the number of board members in the period studied; GENDER equals the proportion of male directors at the end of year t ; NATION equals the proportion of directors from different countries at the end of year t ; and SUCCESSION is a measurement of the clustering of directors around retirement age at the end of year t .

The Hansen test has been used to test endogeneity and the null hypothesis of the validity of the instruments is accepted. The Arellano-Bond test has been used to test that there is no autocorrelation in the sample.

TABLE 7. SOP effectiveness in high- versus low- dissent companies

Variable	$\Delta\text{ALIG_CEO}_{it,it+1}$		Chow test	High-dissent firms	Low-dissent firms	Chow test
	High-dissent firms	Low-dissent firms				
	(1)	(1')		(2)	(2')	
SOP^-_{it-1}	0.2762**	0.2673**	2.25	0.3121***	0.2815**	0.85
IND_{it}				-0.0254	-0.0311	
ORG_{it}				0.1087	0.0961	
ENV_{it}				0.0121	0.0783	
$\text{SOP}^-_{it-1} * \text{IND}_{it}$				-0.2087**	-0.1936**	1.36
$\text{SOP}^-_{it-1} * \text{ORG}_{it}$				0.2409**	0.2236**	0.71
$\text{SOP}^-_{it-1} * \text{ENV}_{it}$				0.2687**	0.2463**	2.44
$\text{INSTITUTIONAL}_{it}$	0.2001	0.1664		0.1756	0.1907	
INDEPENDENCE_{it}	0.3189**	0.3614**		0.2952*	0.3490**	
DUAL_{it}	-0.1149	-0.2183		-0.0954	0.0960	
CASHFLOW_{it}	-0.0004	0.0001		-0.0522**	-0.0114*	
LEV_{it}	-0.0016	-0.0019		-0.0005	-0.0003	
BSIZE_{it}	0.1311	0.0965		-0.2401	-0.1186	
GENDER_{it}	-0.3422*	-0.3289*		-0.3866**	-0.4291**	
NATION_{it}	0.2244*	0.2621*		0.3234**	0.3133**	
SUCCESSION_{it}	-0.1964	0.0932		-0.4817**	-0.5119***	
Industry control	YES	YES		YES	YES	
Year control	YES	YES		YES	YES	
Observations	1,722	1,723		1,722	1,723	
Hansen J statistics	25.69	37.38		52.21	38.33	
(p-value)	0.107	0.199		0.722	0.321	
AR(2)	0.97	-1.42		0.37	1.22	

p-value: *p<0.05; **p<0.01; ***p<0.001

The dependent variable is $\Delta\text{ALIG_CEO}$, which is the change in aligned CEO compensation (estimated using the model of Core et al. (1999, 2008)) for a firm from year t to year $t + 1$. Independent variables are: SOP^- refers to the ratio of negative votes and abstentions out of the total at the end of year $t-1$; INV , ORG and ENV are the indexes representing individual, organizational, and environmental discretion at the end of year t , calculated as indicated in Section 3.2; INSTITUTIONAL is the total institutional ownership ratio in terms of market capitalization at the end of year t ; INDEPENDENCE is the ratio of independent directors on the board at the end of year t ; DUAL is a dummy variable equal to 1 if the CEO is also the chairman of the board at the end of year t , and 0 otherwise; CASHFLOW equals free-cash flow scaled by the firm's market value at the end of year t , where free cash flow is measured as cash inflows from operating; LEV equals the book value of total liabilities scaled by the firm's market value; BSIZE is the standard deviation of the number of board members in the period studied; GENDER equals the proportion of male directors at the end of year t ; NATION equals the proportion of directors from different countries at the end of year t ; and SUCCESSION is a measurement of the clustering of directors around retirement age at the end of year t .

The Hansen test has been used to test endogeneity and the null hypothesis of the validity of the instruments is accepted. The Arellano-Bond test has been used to test that there is no autocorrelation in the sample.

A Chow test is performed to check whether the coefficients of interest between high- and low-dissent firms' groups are equal.

TABLE 8. SOP effectiveness in high- versus low- institutional ownership

Variable	$\Delta\text{ALIG_CEO}_{it,t+1}$		Chow test	High-institutional	Low-institutional	Chow test
	ownership	ownership		ownership	ownership	
	(1)	(1')		(2)	(2')	
SOP^-_{it-1}	0.2125**	0.2019**	1.02	0.2749**	0.2595**	1.57
IND_{it}				-0.0034	-0.0482	
ORG_{it}				0.0278	0.0715	
ENV_{it}				0.1103	0.1078	
$\text{SOP}^-_{it-1} * \text{IND}_{it}$				-0.2244**	-0.2366***	2.01
$\text{SOP}^-_{it-1} * \text{ORG}_{it}$				0.2451**	0.2295**	1.68
$\text{SOP}^-_{it-1} * \text{ENV}_{it}$				0.2778**	0.2802**	1.75
$\text{INSTITUTIONAL}_{it}$	0.3712*	0.1148		0.1046	0.1296	
INDEPENDENCE_{it}	0.4249***	0.3052**		0.4411***	0.2561**	
DUAL_{it}	-0.1179	-0.1549		-0.1089	0.0795	
CASHFLOW_{it}	-0.0014	-0.0006		-0.0023	-0.0033	
LEV_{it}	0.0002	-0.0121		-0.0004	-0.0003	
BSIZE_{it}	-0.1057	-0.0046		0.0801	-0.0327	
GENDER_{it}	-0.1007	-0.1241		-0.3421**	-0.3279**	
NATION_{it}	0.2420**	0.3061**		0.2124*	0.2368**	
SUCCESSION_{it}	-0.3078*	-0.2996*		-0.5692**	-0.3963**	
Industry control	YES	YES		YES	YES	
Year control	YES	YES		YES	YES	
Observations	1,723	1,722		1,723	1,722	
Hansen J statistics	11.60	15.60		50.13	30.20	
(p-value)	0.478	0.522		0.624	0.999	
$\text{AR}(2)$	0.76	0.72		0.76	-0.31	

p-value: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

The dependent variable is $\Delta\text{ALIG_CEO}$, which is the change in aligned CEO compensation (estimated using the model of Core et al. (1999, 2008)) for a firm from year t to year $t + 1$. Independent variables are: SOP^- refers to the ratio of negative votes and abstentions out of the total at the end of year $t-1$; INV , ORG and ENV are the indexes representing individual, organizational, and environmental discretion at the end of year t , calculated as indicated in Section 3.2; INSTITUTIONAL is the total institutional ownership ratio in terms of market capitalization at the end of year t ; INDEPENDENCE is the ratio of independent directors on the board at the end of year t ; DUAL is a dummy variable equal to 1 if the CEO is also the chairman of the board at the end of year t , and 0 otherwise; CASHFLOW equals free-cash flow scaled by the firm's market value at the end of year t , where free cash flow is measured as cash inflows from operating; LEV equals the book value of total liabilities scaled by the firm's market value; BSIZE is the standard deviation of the number of board members in the period studied; GENDER equals the proportion of male directors at the end of year t ; NATION equals the proportion of directors from different countries at the end of year t ; and SUCCESSION is a measurement of the clustering of directors around retirement age at the end of year t .

The Hansen test has been used to test endogeneity and the null hypothesis of the validity of the instruments is accepted.

The Arellano-Bond test has been used to test that there is no autocorrelation in the sample.

A Chow test is performed to check whether the coefficients of interest between high- and low-institutional ownership firms' groups are equal.

TABLE A1. Estimation of aligned CEO compensation

Variable ^a	C_CEO _{it} (1)
TEN _t	0.1521***
SALES _{it-1}	0.2401***
FTSE100 _{it}	0.1742***
BTM _{it-1}	0.0011
RET _{it}	0.0105*
RET _{it-1}	-0.0001
ROA _{it}	0.0541**
ROA _{it-1}	-0.0426**
Intercept	1.142***
Industry control	YES
Year control	YES
Observations	3,445
R ²	0.6098

p-value: *p<0.05; **p<0.01; ***p<0.001

The dependent variable is C_CEO, which is the natural logarithm of the sum of salary (base annual pay in cash), bonus, other compensation, employers' defined contribution, and the value of equity (shares) awarded, estimated value of options awarded and the value of LTIP awarded, based on the closing stock price of the annual report at the end of year t . Independent variables are: TEN is the natural logarithm of the number of years the CEO has been in office at the end of year t ; SALES is the natural logarithm of company net sales at the end of year $t-1$; and FTSE100 is one if the firm is in the FTSE100 at the end of year t , and zero otherwise; BTM is the book value of equity divided by market capitalization at the end of year $t-1$; RET is the annual total return for years t and $t-1$; and ROA is calculated as the ratio of net income to the book value of the firm's total assets for years t and $t-1$. Fixed effects for year and 2-digit SIC codes are included in the regressions.