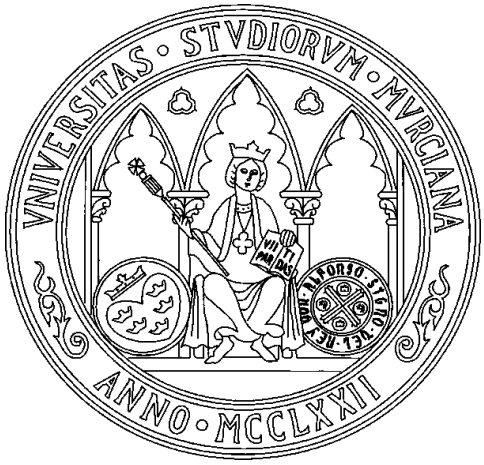

UNIVERSIDAD DE MURCIA

ESCUELA INTERNACIONAL DE DOCTORADO

Say-on-Pay, corporate governance, and executive compensation

Say-on-Pay, gobierno corporativo y retribución de directivos

D. Gabriel Lozano Reina

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TESIS DOCTORAL

Presentada por: **D. Gabriel Lozano Reina**

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A Dios y a mi familia

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SUMMARY IN SPANISH

La retribución de los directivos es uno de los temas de investigación de mayor interés y que más controversia ha suscitado en la literatura económica y de gestión. Las elevadas retribuciones recibidas por los directivos y su escasa vinculación a los resultados empresariales han impulsado la especial atención de los investigadores a este fenómeno, especialmente desde la recesión económica de 2008, que ha evidenciado situaciones de fuertes desajustes retributivos y de gran inequidad salarial. En el ámbito específico de los directivos de las grandes empresas cotizadas, se ha puesto de manifiesto la escasa eficacia mostrada por los mecanismos tradicionales de gobierno corporativo –como consejo de administración–, en su función supervisora y de diseño de paquetes retributivos alineados con los intereses de dichas empresas.

En este contexto, en los últimos años han surgido nuevas formas y mecanismos complementarios de gobierno corporativo en las empresas cotizadas centrados en superar las ineficacias de los mecanismos tradicionales y que han merecido la atención de los investigadores. Uno de los más relevantes es el Say-on-Pay (SOP), a cuyo análisis está dedicada esta tesis doctoral. El SOP tiene como objetivo principal incrementar el poder de los accionistas a la hora de decidir sobre la idoneidad de los diseños retributivos de los directivos de las empresas cotizadas mediante una votación realizada en junta general de accionistas en la que los accionistas emiten su opinión (a través de un voto a favor, en contra o una abstención) sobre las retribuciones de sus directivos. El SOP trata de lograr una mejora en el buen gobierno corporativo de las empresas cotizadas mediante un ejercicio de corresponsabilidad y de transparencia en relación con las decisiones retributivas que afectan a los directivos y en la línea de establecer retribuciones más alineadas con los intereses de la

empresa y de los propios accionistas. La implantación del SOP supone complementar las funciones del consejo de administración y reforzar la neutralidad en las decisiones retributivas, promoviendo mayor participación de los accionistas en las mismas. Desde una perspectiva de agencia, supone la potencial reducción de conflictos de interés entre los diversos *stakeholders* organizacionales, proporcionando un adecuado vehículo de expresión de los accionistas sobre la dirección ejecutiva de la empresa.

El SOP fue implantando por primera vez en el Reino Unido en 2002. Desde entonces, multitud de países (entre ellos, Estados Unidos, España, Australia, Japón, Italia y Francia, entre los más destacados) han llevado a la práctica esta votación. Una peculiaridad del SOP es la variedad de formas de implementación existentes que, dependiendo del país considerado, se concretan en recomendaciones de buen gobierno u obligaciones normativas para las empresas tanto a nivel de voto (obligatorio o no) como a nivel de resultados obtenidos en la votación (votación consultiva o vinculante), implicando toda esta variedad, por tanto, diversos niveles de eficiencia que precisan de análisis e investigaciones exhaustivas. Es en esta reciente e interesante línea de investigación en la que se enmarca esta tesis doctoral, tratando de aportar conocimiento sobre la eficiencia del SOP como mecanismo de gobierno corporativo en términos de su capacidad para diseñar retribuciones para los directivos suficientemente bien alineadas a los intereses globales de la organización.

El hasta ahora escaso consenso existente en la literatura sobre el impacto del SOP en el gobierno corporativo de las empresas cotizadas y la ausencia de evidencias concluyentes sobre su eficiencia en el ámbito de la retribución de los directivos invitan, considerando la existencia de múltiples factores de influencia e interactuación, a la necesidad de profundizar en el análisis y estudio del SOP. Esta tesis doctoral trata de ser una respuesta a las llamadas

de la literatura a investigaciones teóricas y empíricas más amplias y contextualizadas que permiten avanzar en el grado de conocimiento sobre el impacto del SOP en la mejora del gobierno corporativo de las empresas cotizadas.

Considerando los principales desafíos marcados en la literatura del SOP, cuatro son los propósitos principales que se pretenden abordar con esta tesis doctoral. En primer lugar, realizar una revisión sistemática de la literatura para analizar y sintetizar los estudios más relevantes sobre el SOP, de cara a poder establecer patrones comunes acerca de su eficiencia en términos de alineación retributiva de los directivos e identificar las principales líneas de investigación que deben ser abordadas en futuros estudios. En segundo lugar, analizar el impacto del SOP en las retribuciones de los directores generales o CEOs (*chief executive officers*) examinando el efecto moderador que ejercen el consejo de administración y la estructura de propiedad. En tercer lugar, examinar la influencia de la discrecionalidad directiva en la relación existente entre el SOP y el diseño retributivo de los CEOs. Finalmente, estudiar la influencia de la naturaleza familiar de la empresa en el comportamiento de voto de los accionistas y en los resultados del SOP. Además de abordar estos cuatro objetivos, en esta tesis doctoral se introducen análisis comparativos en función de la tipología del SOP –consultivo versus vinculante– y del modelo gobierno corporativo –modelo continental versus anglosajón.

En particular, el **primer capítulo** abarca una revisión sistemática de la literatura. Aunque existe ya un considerable número de estudios relacionados con el SOP, la evidencia acerca de su eficiencia no está clara. Las diferentes formas de implantación del SOP, los diversos contextos en los que se ha estudiado, las variadas metodologías empleadas y las numerosas muestras y modelos estadísticos utilizados dificultan el conocimiento sobre el

impacto del SOP. Así, en este capítulo se plantea examinar, resumir y organizar de forma sistemática la literatura más relevante sobre el SOP para, sobre la base de dicha revisión, establecer patrones comunes sobre la eficiencia del SOP sobre el diseño de retribuciones más alineadas a los intereses empresariales e identificar lagunas de conocimiento y oportunidades de investigación de interés para futuros estudios que permitan extender el conocimiento de este campo de investigación, a la vez se contribuye a aclarar la influencia del SOP.

Esta revisión sistemática de la literatura emplea una metodología específica para localizar los estudios más relevantes, así como para seleccionar y evaluar las contribuciones hechas por cada estudio, analizando y sintetizando sus datos, y reportando las evidencias obtenidas con la finalidad de extraer conclusiones sobre lo que se conoce –y lo que no– en la línea de investigación sobre el SOP. Para ello, se sintetiza y analiza la conceptualización del SOP, sus fundamentos teóricos, las principales cuestiones de tipo metodológico, y los factores determinantes y las consecuencias (a nivel retributivo y de empresa) relacionadas con esta votación. Además, para encontrar patrones comunes sobre la eficiencia del SOP, se utiliza un análisis categórico de componentes principales (CATPCA). A partir de los patrones identificados, se proporciona una guía para desarrollar investigaciones futuras que aborden los más importantes gaps, a la vez que se destacan algunas implicaciones clave para los académicos y profesionales de la gestión empresarial.

El **segundo capítulo** se centra en el impacto del SOP en la retribución del CEO y en el papel moderador que desempeñan los mecanismos de gobierno corporativo. Dado que el análisis de la eficiencia del SOP, considerando las características específicas del gobierno corporativo de la empresa, ha sido poco explorado, en esta parte de la tesis doctoral se trata de analizar este fenómeno y cubrir parte de las deficiencias de conocimiento existentes en

este ámbito. Específicamente, se examinan tanto los efectos directos del SOP en el diseño de las retribuciones, así como los efectos moderadores considerando la interacción que tiene con otros mecanismos principales de gobierno corporativo: el consejo de administración y la estructura de propiedad.

El desarrollo empírico se basa en una metodología de datos de panel y un conjunto de regresiones lineales para el periodo 2013-2016, utilizando una muestra de 114 empresas cotizadas españolas (excluyendo el sector financiero). Los datos se obtuvieron de varias fuentes de información: la *Comisión Nacional del Mercado de Valores*, la base de datos *SABI* y la base de datos *DataStream*. Los resultados muestran que el SOP generalmente aumenta la alineación de las retribuciones de los CEOs, aunque su efectividad se reduce en aquellas empresas con presencia de CEOs retribuidos en exceso y en empresas controladas de forma mayoritaria por sus propietarios.

En el **tercer capítulo** se analiza el efecto moderador de la discrecionalidad directiva –tanto individual como contextual– en la relación entre el SOP y la retribución del CEO. Se trata con ello de introducir, en el análisis de la eficiencia del SOP, un factor de gran impacto potencial. La discrecionalidad directiva es la libertad de acción del directivo en relación con la toma de decisiones estratégicas. Los niveles de discrecionalidad de los que dispone un CEO pueden determinar de forma importante los resultados de la empresa y, por ende, su retribución. Por ello, la influencia de la discrecionalidad directiva y sus diferentes dimensiones puede contribuir a entender mejor la eficiencia del SOP como mecanismo de gobierno y de alineación retributiva.

El desarrollo empírico de este capítulo se basa en una metodología de datos de panel para el periodo 2003-2017, sobre una muestra de empresas cotizadas del Reino Unido. Los

datos para el análisis estadístico se obtuvieron de varias fuentes de información: *Manifest Ltd*, *BoardEx*, *Worldscope*, *Factset Ownership* y *DataStream*. Los resultados muestran que el SOP es un mecanismo efectivo para aumentar el grado de alineación de las retribuciones de los CEOs con los intereses empresariales, tendiendo los consejos de administración a ajustar dichas retribuciones cuando los accionistas emiten un resultado de desfavorable en el SOP. Además, se evidencia que la discrecionalidad directiva desempeña un papel moderador importante en la relación anterior, ejerciendo la discrecionalidad individual (o "latitud de objetivos") un efecto moderador negativo y la discrecionalidad contextual (o "latitud de acción") un efecto moderador positivo sobre la efectividad del SOP.

Finalmente, el **cuarto capítulo** se centra en analizar el comportamiento de voto de los accionistas en el SOP en el contexto de las empresas familiares cotizadas ante diversas configuraciones de propiedad, gestión y generación caracterizadoras del gobierno familiar de la empresa. En este capítulo se aporta un elemento nuevo que puede permitir avanzar en el entendimiento del SOP y del comportamiento de voto del accionista. El estudio de las empresas familiares es de especial importancia debido a las especificidades y heterogeneidad de estas organizaciones, lo que puede impactar en el funcionamiento de los mecanismos de gobierno corporativo y, más específicamente, en el comportamiento de voto seguido en el SOP.

El desarrollo de la investigación empírica de este capítulo se basa en una metodología de datos de panel para el periodo 2007-2017, utilizando una muestra de empresas cotizadas del Reino Unido. Los datos para el análisis se obtuvieron de varias fuentes de información: *Manifest Ltd*, *NRG Metrics*, *BoardEx*, *Worldscope* y *DataStream*. Los resultados muestran que la propiedad familiar ayuda a concentrar el sentido de la votación. Además, si bien esta

relación es intensificada cuando la familia está involucrada en la gestión de la empresa, no se obtienen evidencias con relación al grado de involucración de la familia en el gobierno de la empresa. Además, mientras estos efectos son muy evidentes en la primera etapa generacional, los mismos van difuminándose a medida que la empresa avanza hacia generaciones posteriores.

En definitiva, sobre la base de la estructura y objetivos descritos anteriormente, esta tesis doctoral pretende contribuir a la literatura sobre el SOP en diversos planos. En primer lugar, mediante el análisis y revisión del estado de literatura sobre el SOP, integrando todas las evidencias obtenidas hasta la fecha en un modelo que ilustra las principales relaciones existentes y plantea los diversos patrones comunes acerca de la efectividad del SOP. En segundo lugar, aumentando el conocimiento existente sobre la eficiencia de esta votación en el diseño de las retribuciones de los directivos, y contrastando si el SOP realmente mejora –y en qué contextos y en qué condiciones– la alineación de estas retribuciones con los intereses empresariales y los intereses de los accionistas. En tercer lugar, examinando y comprobando como el consejo de administración, la estructura de propiedad y la discrecionalidad directiva son factores relevantes que ejercen una significativa influencia en la eficiencia del SOP en relación con su capacidad de diseño de retribuciones alineadas para los CEOs. Finalmente, ampliando el escaso conocimiento existente sobre el comportamiento de voto seguido por los accionistas en el SOP y concretando dicho análisis en el caso específico de las empresas familiares y cómo su diversa configuración en términos de gobierno corporativo –propiedad, gestión, generación– puede determinar los resultados del SOP.

INTRODUCTION

INTRODUCTION

Executive compensation is one of the research topics to arouse both the greatest interest as well as the most controversy in economic and management literature. The high compensation received by managers and its low linkage to business results has prompted researchers to pay special attention to this topic, particularly since the last economic recession, which evidenced situations of major pay misalignment and high wage inequality. In the specific field of executives in large listed companies, the scarce effectiveness shown by traditional corporate governance mechanisms – such as the board of directors – has been brought to light, and their supervisory role regarding the design of compensation packages aligned with company interests is questionable.

In this context, new complementary corporate governance mechanisms that focus on overcoming the inefficiencies shown by traditional mechanisms have emerged in recent years in listed companies and have attracted the attention of researchers. One of the most relevant mechanisms is Say-on-Pay (SOP), and is the topic to which this doctoral thesis is devoted. The main goal of SOP is to increase shareholder power – when deciding on the suitability of executive pay design in listed companies – through a vote cast at the general shareholders' meeting in which shareholders express their opinion on executive compensation (by voting in favor, against or by abstaining). SOP seeks to secure enhanced corporate governance in listed companies by exercising co-responsibility and transparency with regard to pay decisions that affect managers and by aiming to establish compensation that is more aligned with company and shareholder interests. Implementing SOP complements the functions of the boards and reinforces neutrality in pay decisions, promoting greater shareholder participation therein. From an agency perspective, it encourages the reduction of conflicts of

interests between all stakeholders, and provides an adequate vehicle for shareholders to air their views on executive decisions.

SOP was first implemented in the United Kingdom (UK) in 2002. Since then, a multitude of countries (including the United States (US), Spain, Australia, Japan, Italy, and France among the most prominent) have implemented this vote. One peculiarity of SOP is the different ways in which it may be implemented – depending on the country in question– , which may be specified as good governance recommendations or regulatory obligations for companies, both at the voting level (i.e., mandatory or not) and at the level of results obtained in the SOP (i.e., advisory or binding voting). This variety may imply different levels of efficiency that require exhaustive analysis and research. Based on this recent and interesting line of inquiry, this doctoral thesis aims to provide precise knowledge about the effectiveness of SOP as a corporate governance mechanism in terms of its ability to design executive compensation that is properly aligned with company interests as a whole.

The current lack of consensus in the literature vis-à-vis the impact of SOP on the corporate governance of listed companies, coupled with the absence of any conclusive evidence concerning its effectiveness in executive compensation, advocates the need to deepen the analysis into SOP by considering multiple influencing and interacting factors. This doctoral thesis seeks to provide a response to literature calls for more comprehensive and contextualized theoretical and empirical research that allows progress to be made in this research field on how SOP might improve corporate governance in listed companies.

Considering the main motivations and challenges stated by SOP-related literature, four main goals are addressed in this doctoral thesis: first, to carry out a systematic literature review so as to analyze and summarize relevant studies on SOP, and thus find common

patterns about SOP effectiveness in terms of executive pay alignment and thereby identify the main lines of research to be addressed in future studies; second, to test the impact of SOP on CEO (chief executive officer) compensation by examining the moderating role played by boards of directors and ownership structure; third, to test the influence of managerial discretion in the existing relationship between SOP and executive compensation design; finally, to examine the influence of the family firm in shareholders' voting behavior and SOP voting. In addition to addressing these four objectives, this doctoral thesis compares SOP typology – advisory versus binding – and corporate governance models – continental versus Anglo-American model.

In particular, the **first chapter** encompasses a systematic literature review. Although there are many studies related to SOP, the evidence regarding its effectiveness remains unclear. Moreover, the difficulties involved in understanding its impact are exacerbated due to differences in how the voting is implemented, diversity in the methods used, and the numerous samples and statistical models developed. In this sense, this chapter seeks to systematically examine, summarize, and organize all the literature on SOP. Based on this review, the knowledge acquired allows us to establish common patterns about SOP effectiveness in relation to designing compensation that is more aligned to business interests, and to identify some gaps that are of interest for future research and which may clarify SOP's influence on aligned compensation designs.

This systematic literature review employs a specific methodology to locate research as well as to select and evaluate the contributions made by each study, analyze and synthesize the data, and to report the evidence so that it clarifies the conclusions reached about what is and what is not known about SOP-related literature. For this purpose, the main

conceptualization, theoretical foundations, methodological issues, and antecedents as well as derived outcomes related to SOP are summed up and analyzed. In addition, in order to find some common patterns in SOP effectiveness, we use Categorical Principal Components Analysis (CATPCA).

The **second chapter** focuses on the impact of SOP on CEO compensation and the moderating role played by corporate governance mechanisms. Given that analysis of SOP effectiveness considering specific corporate governance characteristics has been scarce, this chapter explores this phenomenon and covers this gap stated by prior literature. Specifically, we examine both the direct effects of SOP on CEO compensation design and the moderating effects of other key governance mechanisms: the board of directors, and ownership structure. The analysis in this chapter is based on a sample of 114 Spanish listed-companies (excluding financial firms) for the period 2013-2016.

The **third chapter** analyzes the moderating effect of managerial discretion – individual and contextual – in the relationship between SOP and executive compensation. This chapter introduces a potentially key factor into the analysis of SOP effectiveness; namely, managerial discretion, which is the freedom of action available to managers in relation to strategic decision making. The levels of discretion available to a CEO may significantly affect firm performance and, therefore, CEO compensation. The influence of managerial discretion and its different dimensions may thus contribute to a better understanding of SOP effectiveness as a proper mechanism of governance and pay alignment. The analysis addressed in this chapter is based on a sample of large UK listed-companies from 2003 to 2017.

Finally, the **fourth chapter** focuses on shareholder voting behavior with regard to SOP in family listed firms by considering different configurations of ownership, management, and generation that characterize family firm governance. This chapter provides a new element that may provide insights into understanding SOP and shareholder voting behavior. Studying family firms is particularly relevant given the specificities and heterogeneity of these businesses, which might impact the functioning of corporate governance mechanisms and, specifically, voting behavior. The analysis addressed in this chapter is also based on a sample of large UK listed-companies for the period 2007-2017.

Overall, based on the objectives described above, this doctoral thesis aims to contribute to this research field in the following ways: first, by analyzing and reviewing the state of SOP-related literature, by integrating all the evidence obtained in a model that illustrates the main existing relationships, in addition to stating some common patterns regarding SOP effectiveness; second, by increasing existing knowledge on the effectiveness of this vote in executive compensation design, and by testing whether SOP really does improve – and in what contexts and conditions – compensation alignment with business and shareholder interests; third, by examining and verifying how the board of directors, ownership structure, and managerial discretion are relevant factors that exert a significant influence on SOP effectiveness in relation to its ability to design more aligned pay for CEOs; and finally, by expanding the scant current knowledge on shareholder voting behavior in SOP by contextualizing this analysis in the specific case of family businesses and how their diverse corporate governance configurations – in terms of ownership, management, and generation – may affect SOP results.

Finally, this doctoral thesis concludes with a summary of the main findings obtained, their implications for theory and practice, and future lines of research.

CHAPTER 1: SAY-ON-PAY AND EXECUTIVE COMPENSATION: A SYSTEMATIC REVIEW AND SUGGESTIONS FOR DEVELOPING THE FIELD[*]

[*] An earlier version of this chapter was presented at the XXVIII ACEDE conference (Spain) (June 2018) and the 3th Doctoral workshop held at the Escuela Internacional de Doctorado, Universidad de Murcia (Spain) (Mayo 2017). This chapter was published in the *Human Resource Management Review*, co-authored with Dr. Gregorio Sánchez-Marín:

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CHAPTER 1: SAY-ON-PAY AND EXECUTIVE COMPENSATION: A SYSTEMATIC REVIEW AND SUGGESTIONS FOR DEVELOPING THE FIELD

1.1 INTRODUCTION

Say-on-Pay (SOP) is a vote in the annual general meeting where shareholders express their opinions on executive compensation (Conyon & Sadler, 2010). It is a mechanism that presumably complements the board of directors' monitoring role (Core, Holthausen, & Larcker, 1999) and other mechanisms of shareholder activism (e.g., compensation-related shareholder proposals and just vote no campaigns) through which shareholders may influence the decisions of executives (Hirschman, 1970; Mangen & Magnan, 2012). SOP empowers shareholders to increase their control over executive compensation, potentially contributing to a reduction in the classic agency conflicts inherent to large listed corporations (Alissa, 2015; Brunarski, Campbell, & Harman, 2015; Cai & Walkling, 2011; Kimbro & Xu, 2016), which, in turn, may contribute to the improvement of the management, responsibility and transparency of companies.

SOP is an initiative launched by the United Kingdom (UK) in 2002 because of the public outcry regarding large increases in executive compensation, lack of transparency and the weak pay-for-performance link (Conyon & Sadler, 2010). Since then, the spread of SOP has been spectacular, particularly since the most recent financial crisis (Gregory-Smith, Thompson, & Wright, 2014). This initiative has been extended to other countries, including the Netherlands (2004), Australia (2005), the United States (US) (2011), Italy (2011), Spain (2011), Belgium (2012) and France (2014) (Stathopoulos & Voulgaris, 2016b), with very different characteristics, depending on whether the voting is voluntary or compulsory and

whether the voting results are advisory or binding for companies (Sanchez-Marin, Lozano-Reina, Baixauli-Soler, & Lucas-Perez, 2017; Stathopoulos & Voulgaris, 2016b).

The significance and relevance of SOP, together with the need to design executive compensation that is more aligned with stakeholder and company interests (Murphy, 2013), have motivated several scholars to start a deeper exploration on this topic. Despite the significant number of studies in this field, the evidence regarding SOP effectiveness – which is mainly defined as the ability of this voting to align executive compensation with shareholders' interest (Correa & Lel, 2016), that is, if a firm's response to the vote results really encourages an improvement in executive compensation (Ferri & Oesch, 2016) – is not clear yet, not only because of the different ways in which SOP is implemented in the various corporate governance contexts but also because of variations in the antecedents or outcomes related to SOP that have been examined. For example, regarding SOP outcomes, while some research indicates that SOP is an effective mechanism for aligning executive compensation levels (e.g., Balsam, Boone, Liu, & Yin, 2016; Ferri & Maber, 2013; Kimbro & Xu, 2016; Martin-Tapia, Aragon-Correa, & Guthrie, 2009), other studies find no clear effects of SOP on executive pay (Armstrong, Gow, & Larcker, 2013; Conyon & Sadler, 2010; Cuñat, Giné, & Guadalupe, 2016), and some others even highlight reverse effects, finding an institutionalization effect of SOP on excessive or misaligned executive compensation (Brunarski et al., 2015; Sanchez-Marin et al., 2017). There is also mixed evidence in relation to other outcomes (e.g., governance effectiveness, market reactions, and stakeholder acceptance) as well as antecedents (e.g., governance mechanisms, firm demography characteristics, and individual characteristics of executives) that suggest that further explorations of such topics are needed.

In this vein, the reviews by Stathopoulos & Voulgaris (2016b) and Obermann & Velte (2018) have tried to clarify some important aspects related to SOP antecedents and effectiveness. Specifically, Stathopoulos & Voulgaris (2016b) analyze the effectiveness of SOP, focusing mainly on the comparison between voluntary and mandatory SOP, and conclude that the evidence on SOP effectiveness remains unclear and that this mechanism is not a panacea for all corporate problems related to inefficient pay. The review by Obermann & Velte (2018), which analyzes the main antecedents and outcomes of SOP – together with other types of shareholder activism related to compensation –, identifies five important groups of SOP determining factors. Additionally, they indicate that the key assumptions of neoclassical principal agent theory are not always consistent with the empirical evidence.

Since we still do not know enough about SOP effectiveness, it becomes particularly important to more deeply understand in what contexts, conditions and environments SOP works more effectively. Therefore, our aim is to identify common patterns to increase our knowledge on SOP effectiveness as a corporate governance mechanism oriented towards the alignment of executive compensation with corporate performance in listed companies. To address this issue, we conduct a systematic literature review of the forty-four articles published in peer-reviewed journals related to SOP. The following research questions guide our review and coincide with the main sections of this chapter: (1) *How has SOP been conceptualized and studied?* (2) *What do we know about the factors influencing SOP and the outcomes related to SOP?* (3) *Are there common patterns of SOP effectiveness?* and (4) *What areas and lines of research need to be explored to advance our knowledge about the impact of SOP?* These research questions are intended to address three specific objectives. First, we carry out an analysis of SOP conceptualization and methodologies, as well as the theoretical

basis used in previous studies to construct and explain their arguments and hypotheses. Second, after describing the main antecedents and consequences of this voting, we establish common patterns where SOP is more effective in the design of executive compensation. Finally, we propose future research directions that will allow progress in this area, with a view to intensify the knowledge and provide more information about the real effects of SOP (Booth, Papaioannou, & Sutton, 2011; Jesson, Matheson, & Lacey, 2011).

This chapter contributes to the literature in four different ways. First, it complements the reviews of Stathopoulos & Voulgaris (2016b) and Obermann & Velte (2018), identifying and synthesizing issues of conceptualization, theoretical frameworks and methodologies related to SOP. Additionally, this study enriches the knowledge on the current state of SOP-related research, including an overview of the main mediating and moderating factors in the relationships between antecedents and SOP results and between SOP voting results and outcomes. Second, since the literature to date has shown a large discrepancy regarding SOP effectiveness (Sanchez-Marin et al., 2017; Stathopoulos & Voulgaris, 2016b), this chapter contributes to increasing our knowledge about the functioning and effectiveness of SOP as a mechanism of governance and optimization of executive compensation. Third, this study advances the identification of common patterns in SOP effectiveness and the contexts and conditions in which SOP works best. In particular, it highlights the relationships between corporate governance contexts and SOP regulations from the perspective of SOP effectiveness, balancing recommendations and normative obligations and their influence on SOP effectiveness. Finally, it identifies research gaps and proposes some promising avenues for future research, which may encourage human resources management (HRM) academic and professional progress in this area. These future challenges, which focus on both

theoretical and methodological areas of research, may help to develop new knowledge to better understand SOP as a governance mechanism.

1.2 REVIEW SCOPE AND CODING INFORMATION

The systematic literature review (SLR) employs a specific methodology to locate research, to select and evaluate the contributions made by each study and analyze and synthesize the data. Then, through the analysis and synthesis of data, evidence is reported to clarify the conclusions reached about what is and is not known (Denyer & Tranfield, 2009). Contrary to a traditional literature review, systematic reviews are characterized by methodological rigor and thoroughness (Sageder, Mitter, & Feldbauer-Durstmuller, 2018) and require reviewers to summarize all available information about an event in a thorough and unbiased manner (Denyer & Tranfield, 2009). This approach is a replicable, scientific, explicit and transparent method to locate, assess and synthesize previous literature (Booth et al., 2011; Fink, 2010).

In conducting the SLR, we followed the five stages suggested by Denyer & Tranfield (2009) as follows: Stage I establishes the focus of the SLR through our research questions. Stage II locates and selects the literature that is relevant to the particular research questions. Stage III includes the set of explicit selection criteria to assess the relevance of each study found (see Table 1). Stage IV consists in breaking down research into relevant parts and making associations between these parts identified. Stage V includes a summary and the report of the review.

Table 1. Criteria for inclusion

Characteristics	**Inclusion criteria**
Publication medium	Scientific, peer-reviewed journals that meet the following quality threshold: We included articles listed in the Journal Citation Report (JCR) and/or Scimago Journal Rank (SJR) Books, conference papers and working papers are excluded
Language	English
Period	From 2002 to 2018 (inclusive)
Research design	Empirical or conceptual
Content	Studies connected to the research questions that analyze SOP legal articles are excluded
Source	Databases:
	Business Source Premier-EBSCO, EconLit-EBSCO, Emerald Fulltext, Science Direct-Elsevier, Scopus-Elsevier, Web of Science-ISI, Wiley Online Library, Sage Journals, ProQuest, and Google Scholar
Method	Boolean search in the title of the publication, abstract and keywords

After defining the research questions (Stage I), Stage II identifies the keywords and search terms connected with the research questions, which must be carefully selected and combined to identify the most relevant articles within our research field. We followed the recommendations of Ortenblad (2010) and incorporated terms similar to SOP to offer flexibility and capture the relevant literature, regardless of whether SOP was explicitly mentioned or not. Using these search terms, scientific databases from business and social science were used to identify the papers for this review (see Table 1). Following Wang & Chugh (2014), we searched the title, abstract and keywords using the defined Boolean search terms. The database search resulted in 100 articles.

Next, in Stage III, these sources were screened for the fit of their research objectives with the selection criteria (publication medium, language, cover period, research design and content), as reflected in Table 1. Specifically, the articles were checked for their *publication media* after removing duplicates, and the search was focused on scientific journals with peer-

review processes. To provide a quality threshold, we only included articles listed in the Journal Citation Report (JCR) and/or Scimago Journal Rank (SJR)[1]. Conference and working papers are excluded due to the limited peer review process (Nolan & Garavan, 2016; Sageder et al., 2018). Next, the *language* of the article was determined, and only articles in English were used in this review (Sageder et al., 2018). The *cover period* is from 2002 to 2018. Concerning the *research design*, both conceptual and empirical articles are included because this SLR is intended to provide a comprehensive global overview (Hakala, 2011). Finally, the papers and their *contents* were screened for their fit with our research questions, and articles that were exclusively focused on the legal aspects were excluded.

In this review, we only incorporate those publications that meet all the inclusion criteria and which manifest none of the exclusion criteria. As decisions regarding inclusion and exclusion are often subjective, they are conducted by two reviewers (Tranfield, Denyer, & Smart, 2003), and they are based on the procedures used in previous studies (Gregoire, Corbett, & McMullen, 2011; Nolan & Garavan, 2016; Sageder et al., 2018). The final list of papers included 36 articles. As suggested by Fink (2010), with the aim of reducing the risk of losing relevant papers, the references included in these selected publications were assessed using the inclusion and exclusion criteria defined. This additional search resulted in 8 articles,

[1] These indicators are usually used to assess the quality of papers based on their impact factor through specific algorithms (Durach, Wieland, & Machuca, 2015; Keupp & Gassmann, 2009; Martineau & Pastoriza, 2016). In particular, the Journal Citation Reports (JCR) is an index that allows journals to be assessed and compared based on impact factors using the citation data drawn from scholarly and technical journals contained in the Web of Science (Clarivate Analytics). The Scimago Journal Rank (SJR), which is a publicly available portal that includes the journals from the information contained in the Scopus database (Elsevier B.V.), also uses a similar methodology to assess and compare the journals.

which were included in the SLR. In the end, 44 articles were included in the subsequent analysis[2].

In Stage IV, we follow the procedure of Feliu & Botero (2016) to code the information related to the background data, SOP conceptualizations and measurements, theoretical frameworks, and empirical findings. In this way, two researchers, who continuously discussed the meaning of the texts, independently coded each article to ensure consistency in the coding of information (Bouncken, Gast, Kraus, & Bogers, 2015; Yin, 2014). We then compared the codes completed by the researchers and, when inconsistencies arose, the coders made a joint determination (Feliu & Botero, 2016). Following this, Stage V is developed in the next sections.

1.3 RESULTS

1.3.1 General sample characteristics

SOP is a young field of research, and the first papers to explore this topic appeared in 2010 (Conyon & Sadler, 2010; Yermack, 2010), and approximately 60% of the studies were published between 2015 and 2018. Although SOP came into force in 2002 in the UK, the first articles do not appear until 2010 for the following two main reasons: (1) insufficient data in the first years; and (2) it is from 2010 onwards that SOP was implemented in most countries. Most of the studies were published in finance and accounting journals (N=28), while business and management journals included another 10 articles. Only four studies were

[2] The Appendix A contains the complete summary of sources used in this review.

published in economics journals, and two studies were published in the business ethics category.

Most studies take a quantitative approach (N=39, 88%) and a few take a conceptual approach (N=5, 12%). Among the quantitative studies, 32 analyze archival data, and most deal with stock-listed companies (e.g., S&P 1500, S&P 500, FTSE 350 or Russell 3000 index), three give a descriptive picture of SOP (Bordere, Ciccotello, & Grant, 2015; Conyon, 2014; Van der Elst & Lafarre, 2017), and four studies follow an experimental approach, drawing their conclusions from research designs with MBA students (Kaplan, Samuels, & Cohen, 2015; Kaplan & Zamora, 2018; Krause, Whitler, & Semadeni, 2014). In addition, most studies are cross-sectional, and longitudinal research is scarce because only a few studies analyze SOP effectiveness over time (N=5) (Borthwick, Jun, & Ma, 2018; Conyon & Sadler, 2010; Correa & Lel, 2016; De Falco, Cucari, & Sorrentino, 2016; Stathopoulos & Voulgaris, 2016a).

Most studies (N=38[3]) investigate antecedents (N=31, 82%) and outcomes (N=22, 58%) related to SOP, highlighting the influence of this mechanism on executive compensation design. Moreover, most studies focused on the pay of the CEO (N=33), while a few studies focused on other executives or employees (N=3). For example, Burns & Minnick (2013) focused on other executives and directors, Conyon (2014) focused on non-

[3] The total number of publications is not equal to the sum of publications from each subset (antecedents and outcomes), because one study may address both the antecedents and outcomes of SOP. The same is true in relation to the theoretical frameworks and dimensions related to the antecedents and outcomes of SOP. The percentages related to empirical characteristics are calculated for the total of the empirical articles.

CEO executives, and Hitz & Müller-Bloch (2015) focused on other executives and employees.

Finally, in relation to geographical regions, the UK and the US are the countries with the most research activity (N=26, 68%; 7 studies used samples from the UK and 18 from the US). However, it is paradoxical that, while SOP was introduced in the UK eight years earlier than in the US, the number of studies carried out in the US is almost three times that for the UK. The remaining studies are based in Australia, the Netherlands, Germany and Spain (N=10; 26%). In addition, three studies use a cross-country approach, which encompasses information about many countries (Correa & Lel, 2016; De Falco et al., 2016; Hitz & Lehmann, 2018).

1.3.2 SOP conceptualization

The conceptualization of SOP used by most authors is quite similar; they define it as a vote where shareholders can vote (for, against or abstain) on executive compensation. In general, when shareholders are not satisfied with executive compensation, they cast a negative vote or an abstention (Hooghiemstra, Kuang, & Qin, 2015). Some of the literature also considers SOP more broadly, viewing it as a mechanism that allows shareholders to express their views on company management, beyond expressing their satisfaction with executive compensation (Armstrong et al., 2013; Gregory-Smith et al., 2014).

The SOP typology and its measurement differ from study to study. First, the nature of SOP is not the same in all countries, so different types can be distinguished as follows: the conduct of the vote may be *voluntary* or *mandatory* and the SOP results can be *binding* or *advisory* (Stathopoulos & Voulgaris, 2016b). In our review, SOP is mandatory and advisory

in most studies (N=22) (studies focused on the UK and the US). In 5 studies, SOP is voluntary because they focus on Germany (Eulerich, Kalinichenko, & Theis, 2014; Hitz & Müller-Bloch, 2015) or because these papers analyze SOP proposals just before SOP legislation came into force (Burns & Minnick, 2013; Cai & Walkling, 2011; Cuñat et al., 2016). Finally, SOP is mandatory and binding in three studies because one focuses on the Netherlands (Van der Elst & Lafarre, 2017) and the others analyze the shareholder votes on equity-based compensation plans (Armstrong et al., 2013; Balachandran, Joos, & Weber, 2012). In addition, some countries have incorporated specific rules related to SOP. For example, Australia introduced the "two-strikes" rule in 2011 (N=5) (Borthwick et al., 2018; Faghani, Monem, & Ng, 2015; Grosse, Kean, & Scott, 2017; Liang, Moroney, & Rankin, 2018; Monem & Ng, 2013), and the UK transformed the non-binding nature of SOP to binding in 2013 (Stathopoulos & Voulgaris, 2016b).

Second, regarding SOP measurement, most studies operationalize SOP by percentage of votes (for, against or abstention) over total (N=26). Specifically, the "SOP dissent" measure is used by 17 studies, which equals to the percentage of votes against (sometimes including abstentions) scaled by total votes cast, while 9 studies used the "SOP support" measure, which equals the percentage of votes in favor over the total. In addition, SOP is also measured using dummy variables (N=12), such as "high dissent" (Correa & Lel, 2016; Hooghiemstra et al., 2015; Stathopoulos & Voulgaris, 2016a) and "high support" (Hadley, 2017).

Moreover, regarding theoretical frameworks, as shown in Table 2, SOP has been studied from different theoretical perspectives.

Table 2. Main theoretical frameworks in SOP research

Theory	Target	Number of studies	References
Agency theory	Positive view: SOP reduces agency costs and encourages efficient compensation designs.	42	(Alissa, 2015; Brunarski et al., 2015; Burns & Minnick, 2013; Cai & Walkling, 2011; Hadley, 2017; Kimbro & Xu, 2016; Liang et al., 2018; Mangen & Magnan, 2012; Monem & Ng, 2013; Sanchez-Marin et al., 2017)
	Negative view: companies can use "impression management" when they face high SOP dissent. Moreover, shareholders cannot have enough incentive and knowledge to vote on CEO compensation.	16	(Alissa, 2015; Brunarski et al., 2015; Hooghiemstra et al., 2017; Levit & Malenko, 2011; Sanchez-Marin et al., 2017)
Prospect theory	Shareholders adjust their voting behavior according to a reference framework (based on CEO compensation and business performance).	2	(Krause et al., 2014; Liang et al., 2018)
Organizational justice theory	The perception of the fairness of a compensation package has an influence on the SOP results, i.e., the SOP results vary depending on the shareholder perceptions about executive pay.	2	(Kaplan et al., 2015; Kaplan & Zamora, 2018)
Institutional theory	Positive view: SOP modifies the current compensation to adopt new efficient designs.	1	(Mangen & Magnan, 2012)
	Negative view: when shareholders cast a huge approval for suboptimal compensation, they are legitimizing that compensation.	3	(Brunarski et al., 2015; Mangen & Magnan, 2012; Sanchez-Marin et al., 2017)
Stakeholder theory	SOP favors the commitment of the boards towards a more efficient compensation design that takes into consideration all stakeholders.	2	(Kaplan & Zamora, 2018; Mangen & Magnan, 2012)

Agency theory has been the main theoretical framework employed (Jensen & Meckling, 1976) (N=42), from which two different visions can be distinguished. The

research focusing on a *positive view* (linked to power approach) (N=42) is based on a perception of SOP as a mechanism to reduce agency conflicts and enhance shareholder wealth by increasing the alignment of interests between principals and agents, in addition to ensuring that more efficient (performance based) compensation arrangements are in place (Alissa, 2015; Brunarski et al., 2015; Hooghiemstra, Kuang, & Qin, 2017; Kimbro & Xu, 2016; Liang et al., 2018; Sanchez-Marin et al., 2017). On the other hand, articles based on a *negative view* (linked to the optimal contracting approach) (N=16) argue that SOP may be ineffective because companies that receive low SOP support occasionally try to placate shareholders through impression management or symbolic compliance policies (Brunarski et al., 2015; Mangen & Magnan, 2012; Sanchez-Marin et al., 2017). In addition, it is possible that SOP can generate division or be influenced by special interests (Mangen & Magnan, 2012) or that some shareholders are not able to properly assess executive compensation packages (Sanchez-Marin et al., 2017).

Prospect theory (Kahneman & Tversky, 1979) has also been used to understand shareholders' voting behavior (N=2). This theory relaxes the assumption of rational utility maximization and states that shareholders adjust their voting behavior to a reference framework (Krause et al., 2014; Liang et al., 2018). In particular, Krause et al. (2014) note that this reference framework is based on CEO compensation and business performance (Krause et al., 2014), where it is expected that shareholders show their approval in the SOP when they vote from a "gain position", while their disapproval is expected when voting from a "loss position". A "loss position" is concerned with situations in which, simultaneously, the CEO received high compensation and business performance is low; and a "gain position" is when business performance is high, regardless of CEO compensation (Krause et al., 2014).

In a similar vein, Liang et al. (2018) studied whether a strike in the previous year, combined with current pay levels, impact shareholders' voting behavior.

Kaplan et al. (2015) and Kaplan & Zamora (2018) used the *organizational justice theory* (Colquitt, Conlon, Wesson, Porter, & Ng, 2001) to explain SOP and shareholders' voting behavior. These authors indicate that perceptions of the fairness of compensation packages have an influence on the SOP results. In this theoretical framework, stakeholders take action to punish the company when they perceive that their company has treated them unfairly, while stakeholders take action to support the company when they perceive that their company has treated them fairly (Kaplan & Zamora, 2018).

Another theoretical framework is *institutional theory* (Oliver, 1992) (N=3). Two different views are distinguished. The *positive view* (N=1) predicts that, with SOP implementation, de-institutionalization is a way to modify the current compensation design to adopt new and more efficient designs when shareholders vote against the current compensation (Mangen & Magnan, 2012). Other articles base their SOP conceptualizations on the *negative view* (N=3), which suggests that shareholders cast a huge vote of approval for sub-optimal compensation (Brunarski et al., 2015; Mangen & Magnan, 2012; Sanchez-Marin et al., 2017). In such cases, executive compensation is institutionalized when shareholders legitimize it with their favorable votes (Dacin, Goodstein, & Scott, 2002), making it difficult to change and requiring high social, functional and political pressure to alter it in the future (Mangen & Magnan, 2012; Morgan, Poulsen, & Wolf, 2006).

Finally, *stakeholder theory* (Freeman & Reed, 1983) has been useful for the understanding of SOP consequences by some researchers (N=2). The firms' decision making should take stakeholder preferences and interests into account. From a stakeholder

perspective, executive pay is optimal when the board considers the interests of all stakeholders during pay setting – rather than those of shareholders alone – (Mangen & Magnan, 2012). SOP encourages boards to commit to more efficient compensation designs that take into consideration all parties involved (Kaplan & Zamora, 2018; Mangen & Magnan, 2012). In this theoretical framework, minority shareholders and employees might also benefit because it is unusual to take them into account when executive compensation is designed.

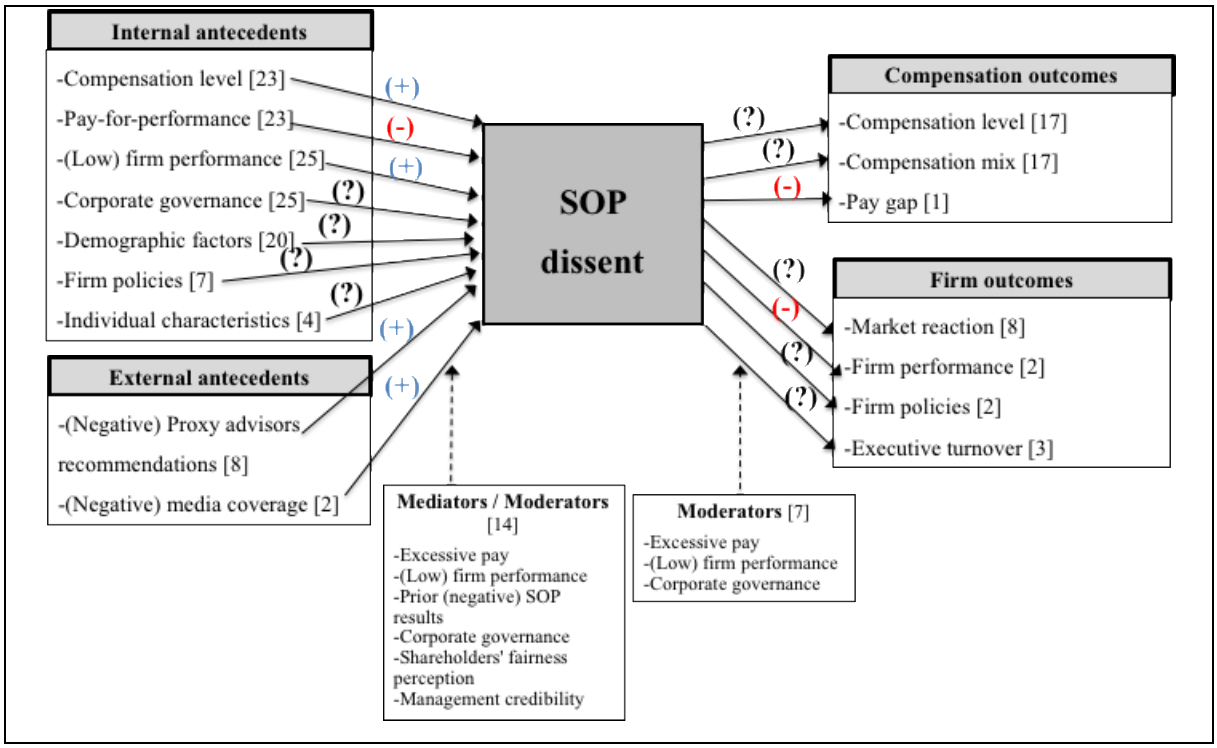
In summary, in spite of the homogeneity in the definition of SOP, the typologies and measures of this mechanism have been framed very differently in different studies, which can impact its effectiveness and functioning. Furthermore, the literature reports the use of many theoretical frameworks to analyze the impact and effectiveness of SOP. Although agency theory is the main theoretical framework used, there is an increasing tendency to use new and emerging theories (such as prospect theory, stakeholder theory and organizational justice theory). This proliferation of sociological and psychological theories emphasizes the shareholders' voting behavior and allows the main factors that shareholders consider when casting their votes to be identified. In addition, these theories may explain why the executive decisions after the SOP results vary among companies and contexts and on what basis boards modify business policies.

1.3.3 SOP antecedents and outcomes

The main antecedents, outcomes and mediating and moderating effects related to SOP are shown in Figure 1. SOP antecedents (N=29; 81%) can be classified into the following

two major groups: internal and external. The SOP outcomes (N=21; 58%) can be classified into the following two groups: compensation outcomes and firm outcomes.

Figure 1. Antecedents and outcomes of SOP



Note: this figure represents the direct effects (continuous line) and the indirect and interactive effects (dashed line). The number of studies that analyze each relationship is indicated after the name of each antecedent and outcome. Additionally, regarding the direct effects, above each arrow, whether the literature has generally found a positive effect (+), a negative effect (-) or if the effect is not clear (?) are indicated.

Internal antecedents (N=29). First, related to *compensation characteristics* (N=23), the literature notes that high levels of executive compensation – especially, excessive compensation – and misaligned compensation imply less likelihood of obtaining a favorable SOP result (e.g., Alissa, 2015; Cai & Walkling, 2011; Conyon & Sadler, 2010; Cullinan, Mahoney, & Roush, 2017; Kimbro & Xu, 2016; Liang et al., 2018). Second, in relation to *firm performance characteristics* (N=25), companies with better performance indicators (such as, firm performance, ROA or stock returns) are more likely to receive SOP

approval and they tend to be less attractive to activists (e.g., Alissa, 2015; Balsam et al., 2016; Bordere et al., 2015; Brunarski et al., 2015; Ertimur, Ferri, & Oesch, 2013; Kimbro & Xu, 2016; Krause et al., 2014). However, high leverage, as well as a greater uncertainty or volatility in performance indicators, increase SOP dissent (Grosse et al., 2017; Kimbro & Xu, 2016).

Third, *firm governance characteristics* (N=25) are extensively examined. Regarding ownership characteristics (N=21), SOP dissent is reduced when ownership concentration increases (Conyon & Sadler, 2010), especially when insider ownership is greater (Cullinan et al., 2017; Ertimur et al., 2013; Malenko & Shen, 2016), when board ownership increases (Conyon & Sadler, 2010; Hooghiemstra et al., 2015) and when the stock holding of outside directors grows (Cai & Walkling, 2011; Cullinan et al., 2017). However, the majority presence of independent owners increases executive pay monitoring and the likelihood of high SOP dissent (Cai & Walkling, 2011). In relation to board monitoring (N=10), board size is positively related with SOP approval (Cai & Walkling, 2011), while board independence is associated with a greater likelihood of dissent in SOP (Larcker, McCall, & Ormazabal, 2015). Finally, SOP support is negatively related to duality (i.e., the same person being chair of the board and chief executive) (Faghani et al., 2015; Larcker et al., 2015).

Fourth, among *firm demographic characteristics* (N=20), firm size has received the most attention (N=17) but has not produced any clear evidence of a relationship. Some authors find a positive impact on SOP support (e.g., Ertimur et al. 2013; Larcker et al. 2015) while others have found no significant (e.g., Alissa, 2015; Conyon & Sadler, 2010) or negative impact (e.g., Hooghiemstra et al., 2017; Kimbro & Xu, 2016). Fifth, little attention has been given to *firm policies* (N=7). For example, Brunarski et al. (2015) find that increases

in leverage may favor a subsequent favorable vote by shareholders. Conyon & Sadler (2010) and Ferri & Oesch (2016) note that the recommendations of managers influence SOP results, and Cullinan et al. (2017) state that corporate social responsibility (CSR) policies (specifically, CSR strengths) are positively associated with a favorable SOP.

Finally, *individual characteristics* have only been included in a few studies (N=4), among which is the study of Kaplan et al. (2015), which concludes that there is less support for CEO compensation in companies where there are social ties between the CEO and other members of the compensation committee and when the CEO has a poor reputation because shareholders have less confidence in the him or her.

External antecedents (N=10). Only the factors related to proxy advisors and media coverage have been analyzed. The recommendations of proxy advisors (N=8) in companies have a significant impact on voting behavior, i.e., there is a negative association between the proxy advisors' recommendations to vote against and shareholder approval (e.g., Balsam et al., 2016; Ertimur et al., 2013; Hitz & Lehmann, 2018; Larcker et al., 2015; Malenko & Shen, 2016). Hooghiemstra et al. (2015, 2017) analyze the impact of media coverage on SOP (N=2), indicating that more negative votes are received after negative coverage, especially when this negative coverage is from the financial and business press.

Compensation outcomes (N=17). The evidence is mixed, with three different streams of results. Most studies (N=10) find that SOP enhances the process of executive monitoring and has a positive impact on executive pay, reducing pay levels and increasing linkages with business performance (e.g., Alissa, 2015; Clarkson, Walker, & Nicholls, 2011; Correa & Lel, 2016; Ferri & Maber, 2013; Kimbro & Xu, 2016). A few researchers (N=3) do not find a significant impact of SOP on compensation designs (either positive or negative) (Armstrong

et al., 2013; Conyon & Sadler, 2010; Cuñat et al., 2016). For example, Conyon & Sadler (2010) do not find that executive compensation is associated with prior SOP results, and Cuñat et al. (2016) do not detect any change in the compensation mix and level after implementing this vote. Finally, a number of studies (N=5) find a negative impact of SOP on executive compensation alignment. For example, Gregory-Smith et al. (2014) indicate that moderate levels of SOP dissent act as a stimulus to increase executive compensation, and high levels of dissent are needed if SOP is to be effective (Gregory-Smith et al., 2014), which is consistent with the argument of Bebchuk & Fried (2004) regarding the threshold of "public outrage". Brunarski et al. (2015) and Sanchez-Marin et al. (2017) note that in companies with overpaid CEOs who receive huge SOP support, this inefficient compensation is legitimized (Brunarski et al., 2015; Sanchez-Marin et al., 2017). On the other hand, related to the pay gap (N=1), Correa & Lel (2016) note that SOP favors the reduction in the pay dispersion between CEOs and executives – in particular, they note a reduction in the pay gap of approximately 10%.

Firm outcomes (N=12). First, with regard to *market reaction* (N=8), the evidence is also mixed. While some research finds a positive market reaction to SOP implementation (Cai & Walkling, 2011; Correa & Lel, 2016; Cuñat et al., 2016; Ferri & Maber, 2013), other authors find a negative market reaction (Brunarski et al., 2015; Hitz & Müller-Bloch, 2015; Larcker et al., 2015) or even no market reaction (Ertimur et al., 2013). Second, SOP influences the *firm performance* (N=2) because a SOP approval leads to improvements in long-term profitability and performance (Balachandran et al., 2012; Cuñat et al., 2016), so companies with favorable SOP results experience higher overall yields. Third, *firm policies* (N=2) have rarely been examined to date, even though companies may undertake

many changes after a SOP vote. For example, Brunarski et al. (2015) find that when firms receive low SOP support due to the presence of excessive compensation, managers tend to increase dividends per share and decrease leverage, and Grosse et al. (2017) find that a company increases its compensation disclosure when it receives a "strike". Finally, other studies point to the impact of SOP on *executive turnover* (N=3), but only the study by Alissa (2015) finds that the probability of CEO turnover is greater when shareholders are unsatisfied; also, the impact is greater when companies are going through consecutive years of poor performance (Alissa, 2015).

Mediating and moderating effects related to antecedents (N=14) *and outcomes* (N=7). Regarding some antecedents, some moderating factors are found (N=10). For example, Brunarski et al. (2015) find moderating effects of ROA and stock returns on the relationship between CEO pay and SOP dissent. Stathopoulos & Voulgaris (2016a) state an increase in favorable votes in companies with a high proportion of long-term investors because long-term investment is negatively associated with cases of abnormal pay. Ferri & Oesch (2016) find that the impact of management recommendations on SOP results is greater when management credibility increases. Additionally, the influence of the proxy advisors' recommendations is affected by the presence of institutional investors that have less incentive to make their own judgements (Ertimur et al., 2013; Larcker et al., 2015; Malenko & Shen, 2016), by the standards of investor protection and by the level of corporate governance (Hitz & Lehmann, 2018). The main mediating factor (N=4) is the shareholders' perception of fairness, which mediates the relationship between some internal factors and the likelihood of approving the compensation (Krause et al. 2014; Kaplan et al. 2015; Kaplan & Zamora 2018).

Related to the moderating effects in the relationship between SOP and its outcomes (N=7), the literature shows that the impact of SOP on CEO compensation is greater in firms with poor performance (Correa & Lel, 2016), in companies with weak corporate governance mechanisms in the pre-SOP period (Correa & Lel, 2016), and in companies with more independent boards and non-duality structures (Sanchez-Marin et al., 2017). In terms of market reaction (N=4), SOP creates more value in firms with weak corporate governance mechanisms and weak penalties in cases of low performance (Cai & Walkling, 2011; Ferri & Maber, 2013). However, Brunarski et al. (2015) find a negative market reaction in companies whose CEOs are overcompensated and have shareholders that legitimize their compensation with high SOP support.

In summary, the main SOP antecedents are related to compensation, firm performance and corporate governance. While there is relatively broad agreement on the impact of compensation and firm performance on SOP voting results, there is less agreement about corporate governance characteristics, which may be because most of these characteristics are studied in isolation and there is some disagreement (e.g., the impact of institutional investors or CEO ownership). Related to SOP outcomes, the voting impact on subsequent compensation designs is highlighted, although the evidence is still inconclusive. In addition, there are other important outcomes, such as market reaction, where the evidence is mixed and unclear, or firm performance, where some studies indicate that SOP favors financial indicators, although this evidence is still sporadic and partial.

1.4 SOP EFFECTIVENESS: SOME COMMON PATTERNS

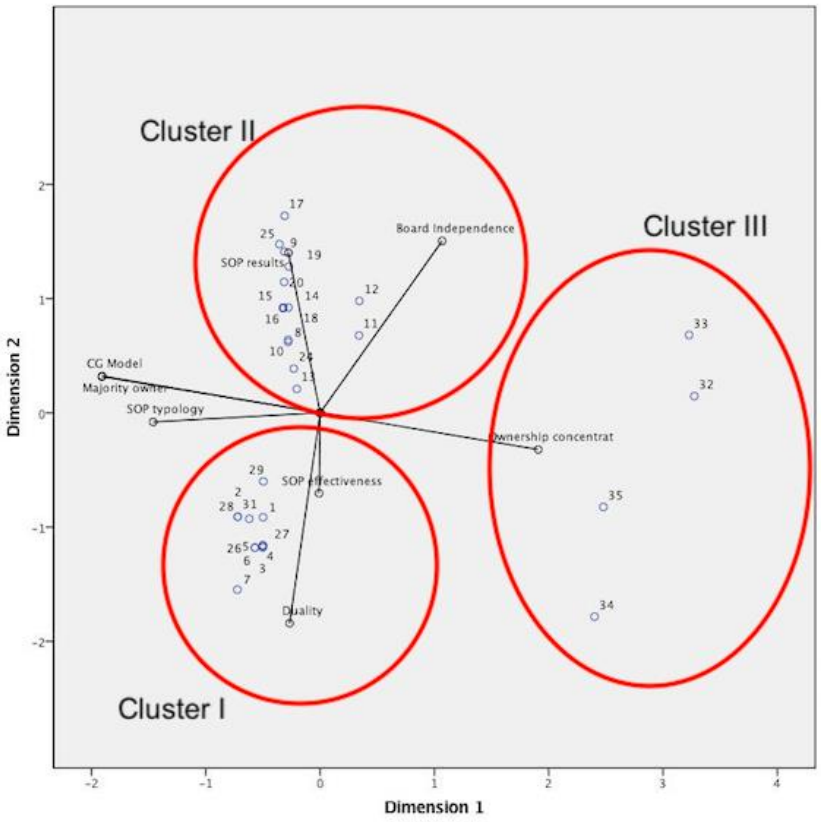
The lack of conclusive results regarding SOP effectiveness stimulates examination of which typologies, models and contexts increase this effectiveness. For this purpose, we analyze papers selected in our SLR using a methodology based on a Categorical Principal Components Analysis (CATPCA)[4] (Linting, Meulman, Groenen, & Van der Koojj, 2007; Meulman, Van der Kooij, & Heiser, 2004). This analysis is very useful for interpreting the data through the reduction of a broad set of categorical variables into a smaller set of components (Meulman et al., 2004), which is ultimately interpreted as specific clusters that identify different SOP behaviors (Correia, do Valle, & Moco, 2007; Kneebone, Fielding, & Smith, 2018; Pendleton & Robinson, 2010; Siu, 2008).

The main strengths of this analysis – compared to other techniques for reducing data – are as follows (Linting et al., 2007; Meulman et al., 2004): (i) CATPCA allows the inclusion of categorical variables, which is particularly relevant in our case; (ii) in addition to its ability to deal with nominal, ordinal or numeral variables, all of them can be handled at the same time without requiring recoding prior to analysis; (iii) in contrast to other techniques of principal component analysis, a specific scaling may be assigned to individual variables; (iv) CATPCA allows the non-linear relationships between variables to be discovered and handled; and (v) CATPCA is able to explain a higher variance in the data than other techniques for reducing data. Based on these strengths, this analysis fits very well to our

[4] To perform this analysis, the sample is comprised of 35 studies because 9 papers are excluded – 6 theoretical papers and 3 cross-country studies because of the difficulty of isolating the effectiveness of SOP in each of the countries. In addition, the following two variables groups are used in this analysis: *institutional variables* – which are related to SOP typology and corporate governance – and *firm variables* – which includes SOP results and SOP effectiveness. These variables are operationalized as indicated in the Appendix B. The Appendix B contains specific information on the method used in this CATPCA analysis.

purpose of studying the relevant relation between the institutional and governance contexts and SOP characteristics and effectiveness, with the aim of determining under what conditions the SOP promotes a greater pay alignment.

Figure 2. Two-dimensional CATPCA solution



Through the CATPCA analysis, we obtain, as shown in Figure 2, three main clusters of studies that have particular characteristics regarding variations of SOP effectiveness. In particular, the first cluster of articles includes studies from the UK and Australia (N=13), which are *common law countries* and their corporate governance system is *Anglo-Saxon* (La Porta, Lopez-De-Silanes, & Shleifer, 1999). At an institutional level, SOP initially arises with a mandatory and advisory nature, but subsequently, this voting is toughened in both countries, as noted above. Regarding SOP effectiveness, the studies in this cluster show

dissent levels below 10% (Conyon & Sadler, 2010; Ferri & Maber, 2013; Hooghiemstra et al., 2017) that lead to an unsystematic – or selective – reactions after SOP implementation in UK companies (Conyon & Sadler, 2010), resulting in a greater benefit for companies with more scope for improvement – for example, firms whose performance is low or companies with controversial compensation practices and low penalties in the case of poor performance – (Alissa, 2015; Ferri & Maber, 2013; Gregory-Smith et al., 2014). Similarly, Australian companies improve their pay-for-performance mainly when they receive a first "strike" and they wish to avoid a second one (Grosse et al., 2017; Monem & Ng, 2013).

The second cluster includes all studies conducted in the US (N=18), which is also a *common law country* and its corporate governance system is *Anglo-Saxon* (La Porta et al., 1999). At an institutional level, SOP is mandatory but not binding. Regarding SOP effectiveness, studies in this second cluster find, as in the UK and Australia, dissent levels of approximately 10%, (Balsam et al., 2016; Cullinan et al., 2017) and higher (Brunarski et al., 2015; Hadley, 2017; Kimbro & Xu, 2016). These dissent levels are related to a more general improvement in the pay-for-performance executive compensation (Balsam et al., 2016; Burns & Minnick, 2013; Kimbro & Xu, 2016), partially due to the added influence of proxy advisors' recommendations (Ertimur et al., 2013; Larcker et al., 2015).

The third cluster includes studies performed in Germany, Spain and the Netherlands (N=4), which are characterized by the *civil law system* and their corporate governance system is *Continental* (La Porta et al., 1999). At an institutional level, there are a variety of SOP typologies within this cluster, i.e., this vote is voluntary in Germany, is mandatory but not binding in Spain, and is mandatory and binding in the Netherlands. Regarding SOP effectiveness, the average dissent in these countries is usually not higher than 10% (Eulerich

et al., 2014; Sanchez-Marin et al., 2017; Van der Elst & Lafarre, 2017), which is related differently with compensation and firm outcomes depending on the national context. For example, in the Spanish context, Sanchez-Marin et al. (2017) show a double face of SOP related to compensation design (one more positive and one more negative), and Van der Elst & Lafarre (2017) state that SOP in the Netherlands enhances the influence and dialogue between shareholders and boards, which promotes more effective compensation designs.

In summary, although SOP legislation has been gradually strengthening in the UK and Australia (Cluster 1), the response of companies to SOP is systematically more effective (homogeneous) in US firms (Cluster 2), while it is more selective in the UK and Australia. There may be some reasons related to the corporate governance environment that can explain these responses. First, the greater level of ownership dispersion in the US increases the interaction and power of minority shareholders, whose role becomes more active and their impact on executive compensation alignment is increased (Aguilera, Williams, Conley, & Rupp, 2006). Second, board regulations in the US – unlike in the UK and Australia – require that more than half the directors are independents (OECD, 2017), which guarantees a greater representation of minority shareholders who can have a positive influence on SOP effectiveness. Thus, SOP effectiveness is more clearly related to the existence of an independent and balanced corporate governance structure than more restrictive SOP legislation.

1.5 DIRECTIONS FOR FUTURE RESEARCH

There are some undeveloped areas regarding conceptual, theoretical, or methodological issues, whose development by future studies may help to provide a better

explanation of some unknown and inconclusive evidence regarding SOP effectiveness. Among them, we are focused on the following priority areas:

Theoretical frameworks explaining SOP. Although most SOP-related literature is based on firm-level agency theory (Obermann & Velte, 2018; Stathopoulos & Voulgaris, 2016b), other theoretical frameworks that are adopting new perspectives – such as prospect theory and institutional theory – are emerging in this field (Krause et al., 2014; Sanchez-Marin et al., 2017). Future research analyzing SOP should, thus, integrate economic theories, to focus on the macroeconomic or enterprise levels (e.g., agency or institutional theory), with sociological and psychological theories, to focus on the group or individual levels (e.g., prospect, organizational justice or stakeholder theories). These integrative frameworks may be useful to better explain the functioning and effectiveness of SOP, to enrich the theoretical foundations of this field, and to study other external, organizational and individual factors regarding the SOP (such as institutional context, stakeholder pressure activism, HRM policies, CSR policies, legitimacy, managerial power or risk behavior). For example, institutional theory is an appropriate theoretical framework to study the potential de-institutionalization of misaligned compensation as a result of changes in the rules, norms and beliefs regarding executive pay (Mangen & Magnan, 2012; Oliver, 1992). Prospect theory helps us to clarify the reference frames that determine shareholders' voting behavior as well as the taking into account the SOP results (Krause et al., 2014). Stakeholder theory can contribute to explaining in depth how to achieve a balance between the SOP's policies and the interests of all interested parties within a company (Mangen & Magnan, 2012). Since SOP is a governance mechanism affecting several levels in the organization, these mentioned theoretical frameworks can be useful for expanding our knowledge about this vote.

SOP regulation, institutional context and corporate governance. The SOP voting process is not a standard mechanism since it is closely linked to national regulatory policies, thus different typologies are distinguished among different contexts (Stathopoulos & Voulgaris, 2016b). The differences arising from these regulations are important in terms of SOP effectiveness since they determine whether the conduct of the SOP is compulsory or not and whether SOP results are binding for companies or not (Sanchez-Marin et al., 2017). While SOP regulation has been strengthened in countries such as the UK and Australia – with the aim to increase its effectiveness –, our results show that SOP effectiveness is more related to the existence of balanced corporate governance structures in companies – as is the case of the US. Thus, this issue must be addressed in the future research, and corporate governance characteristics and SOP regulations should be clearly integrated. For example, the analysis of the new binding SOP in the UK is particularly interesting since the latest research in this context still analyzes the advisory SOP period (Hooghiemstra et al., 2017).

Since SOP regulations are determined by institutional contexts, future studies should analyze how institutional contexts influence the SOP results and its effectiveness. Institutionalism seeks to regulate the behavior of individuals, with rules, norms and beliefs as the main institutions that govern social and economic relations (Oliver, 1992). These main institutions result in normative, mimetic and coercive pressures, which may have an impact on pay designs and, in fact, on SOP effectiveness (La Porta et al., 1999; Mangen & Magnan, 2012; Sanchez-Marin et al., 2017). In addition, the effectiveness of corporate governance, which is directly affected by the normative and economic aspects surrounding the firm, is another important antecedent of the SOP results to be considered. Future research should study both internal and external governance mechanisms from the viewpoint of institutional

specificities affecting the SOP results and effectiveness. In particular, further efforts are necessary regarding several aspect related to the internal mechanisms that have not been sufficiently addressed by SOP literature, as follows: how different ownership structures affect the alignment of executive pay, the role of external consultants and independent directors within boards and compensation committees, and the effect of the presence of family versus non-family owners, among others. Moreover, external governance mechanisms, such as labor markets characteristics or corporate control markets peculiarities, should be integrated in the analysis of SOP (Cai & Walkling, 2011; Ertimur et al., 2013; Larcker et al., 2015).

Longitudinal and cross-country studies. Most SOP-related studies are cross-sectional (Alissa, 2015; Armstrong et al., 2013; Balsam et al., 2016; Brunarski et al., 2015; Ferri & Maber, 2013; Kimbro & Xu, 2016), making it difficult to establish cause-effect relationships or to analyze incidence levels (Bowen & Wiersema, 1999; Lindell & Whitney, 2001). The mixed results obtained by the prior literature may be influenced by the cross-sectional nature of these studies since the SOP's nature is essentially dynamic. Addressing these problems requires longitudinal designs that establish the long-term effects of SOP voting on the alignment of executive compensation. An effort should be made to conduct longitudinal studies to obtain a more realistic picture of SOP effectiveness over time, analyzing the capacity of SOP to adjust executive compensation, which is essentially the purpose of the SOP mechanism.

Furthermore, most of the SOP-related literature has focused on a single country (e.g., Alissa, 2015; Balsam et al., 2016; Ferri & Maber, 2013; Hooghiemstra et al., 2017; Kimbro & Xu, 2016), which limits the extension of results to other not homogeneous contexts. As

Correa & Lel (2016) suggest, new cross-country studies may be useful to highlight differences related to SOP effectiveness between contexts with and without SOP legislation, and between contexts with different SOP typologies – voluntary versus mandatory, and advisory versus binding. Cross-country studies will allow researchers to delve into the specificities related to each context (Xavier, 2014) and understand how differences among institutional and cultural contexts, regulatory policies and corporate governance mechanisms impact SOP effectiveness.

Executive compensation schemes. There are three main challenges regarding this topic. First, while it is clear that executive compensation is an important antecedent of SOP voting, future research must seek to determine the longer-term effects of SOP effectiveness as an outcome on executive pay, both in level and mix. In this sense, as indicated above, longitudinal studies may be an appropriate research design to address this issue. Second, other compensation schemes beyond pay level (e.g., pension schemes, equity compensation plans, or severance pay received by executives after leaving the company) should also be analyzed considering the potential effect of SOP in restructuring the pay mix. Third, future research should test in which contexts companies respond systematically or selectively to SOP results when executive compensation is designed. A systematic response occurs when, after receiving an unfavorable SOP, most companies undertake changes in their pay policies to align them to business interests, while a selective response occurs when a group of companies (e.g., companies with poor performance, companies with misaligned compensation, companies with poor corporate governance mechanisms, etc.) makes changes in their pay policies. In this way, although our results indicate that while companies tend to

respond selectively in the UK and systematically in the US, new research is required to obtain more conclusive results.

Managerial discretion. The study of managerial discretion, which is regarded as the latitude of action available to senior managers in strategic decision-making (Hambrick & Finkelstein, 1987; Wangrow, Schepker, & Barker, 2015), is really interesting because the effectiveness of SOP is increased or decreased depending on how discretion is used by executives. In addition, many firm policies (in particular, pay polices) are often influenced by discretion issues (Finkelstein & Boyd, 1998). In this way, managerial discretion offers a transversal approach of individual, organizational and external items that integrate many factors (objective and subjective) that summarize the influence of executives on the SOP – in particular, their power, discretion and constraints –, both in terms of antecedents and outcomes. This transversal approach could explain the non-significance obtained in relation to some of these factors individually tested. For example, despite its relevance (Grabke-Rundell & Gomez-Mejia, 2002), the literature has not found a conclusive impact of executive power (through its ownership) (Cai & Walkling, 2011; Kimbro & Xu, 2016). This might also be influenced because three quarters of the current SOP-related literature has focused on the CEO; thus, future multilevel studies are also necessary to focus on directors or other executives (apart from the CEO). In particular, the study of top management team (TMT) compensation is relevant given its high impact on business performance (Balkin & Swift, 2006). Thus, future research should study, from this transversal approach, the role of individual, organizational and environmental discretion in shareholders' voting behavior as well as in its effectiveness.

HRM policies (recruitment, retention, and extinction). Several HRM policies can be affected by the likelihood of obtaining unfavorable SOP results, which may have negative consequences for executives (e.g., loss of reputation or wage cuts) in addition to being a handicap to selecting or retaining executives – in particular, in contexts where the voting is binding. Future studies should check to what extent recruitment and retention policies are influenced in addition to defining specific actions to avoid these unfavorable consequences – since it is necessary to make these policies more attractive for executives, especially in companies with greater risk of receiving unfavorable SOP results. Moreover, extinction policies are also impacted by SOP implementation because, after several negative SOP results, executives can be forced to leave the company. A few studies have analyzed the impact of SOP on CEO turnover (Alissa, 2015; Armstrong et al., 2013; Cuñat et al., 2016), but have produced limited evidence. New efforts are necessary in this line to check how extinction policies are impacted by SOP results and, in particular, to differentiate between voluntary and forced turnover, also analyzing whether severance pay varies depending on the reasons for exit.

CSR policies. SOP may influence firm policies since companies often undertake changes in these policies as a response to negative or unexpected SOP voting results. Particularly, little attention has been paid to policies related to CSR. Cullinan et al. (2017) state that CSR policies positively impact the SOP results. After receiving an unfavorable SOP, firms may seek an increase in their reputation and social legitimacy through active CSR policies oriented to a better alignment of the executive compensation. However, Brunarski et al. (2015) finds that the changes undertaken by firms are merely "window dressing" because they do not make substantive changes to the firm; thus, they are not meant to rectify the

anomalous situation (i.e., CEOs who have misaligned compensations may try to pacify shareholders by superficial acts that do not really involve changes that affect their wealth or the firm's value). Therefore, future research should address this lack of clear evidence by analyzing whether companies mostly use these policies appropriately or as an artifice to avoid obtaining an unfavorable SOP result or to avoid restructuring executive compensation after receiving an SOP dissent. For example, the existence and consequences of practices related to "window dressing", symbolic compliance and other efforts to mask an unfavorable business situation, which may imply "changes to the firm's capital structure and/or its distribution of corporate profits" (Brunarski et al., 2015, p. 135), are especially interesting for subsequent investigations.

Shareholder activism and proxy advisors. A recent article in the *Financial Times* shows that the UK's largest companies have doubled their shareholder rebellions in recent times as a result of high executive pay; thus companies are taking steps by restructuring executive compensation (Mooney, 2018). In particular, shareholder activism increases SOP dissent, and this is positively related to the design of more aligned compensation after receiving the SOP results. Based on this, new efforts are necessary to determine the role played by compensation activism (Cullinan et al., 2017; Ertimur et al., 2013). This activism may be very important in shaping voting results; in some cases, a strong shareholder activism can increase the awareness of shareholders to assess executive compensation and, based on this assessment, cast a rational vote; and, in other cases, because of the passivity of many shareholders (Alissa, 2015; Sanchez-Marin et al., 2017), they can simply vote in the same way as in previous years, or their decision is strongly influenced by trade unions.

On the other hand, the role of proxy advisors is key in the result and effectiveness of SOP (e.g., Barr, 2018). A large majority of shareholders and investors use the services of proxy advisors in forming their own views due to the proxy advisors' accurate analyzes that they perform before issuing their recommendation. Thus, the proxy advisors' recommendations are usually reliable and valid for shareholders who mostly base their vote decision on them (Ertimur et al., 2013; Larcker et al., 2015). In this way, it is important to analyze the impact of these recommendations on SOP effectiveness since the few studies that have analyzed this issue (e.g., Ertimur et al., 2013; Larcker et al., 2015; Malenko & Shen, 2016) have mainly focused on the impact of the proxy advisor's recommendations on SOP voting results, and the following challenges must be addressed: to delve into the magnitude of votes that are influenced by proxy advisors, to explore how business decisions are influenced by these intermediaries, and to understand how governance mechanisms work within this field. Moreover, most evidence regarding proxy advisors is from the US, and only Hitz & Lehmann (2018) analyze their impact in Europe; thus, future studies should focus on European contexts to strengthen our knowledge about proxy advisors, checking whether these recommendations modify executive compensation before the voting takes place, and what their impact is after voting results.

1.6 CONCLUDING REMARKS AND HRM IMPLICATIONS

This research provides an extensive review of what we know to date about the SOP research and how we could usefully develop this topic in the coming years. It also identifies some common patterns of SOP effectiveness. As SOP is increasingly attracting attention in the literature on executive compensation and corporate governance, the review is timely and

provides a comprehensive picture of how scholars have defined and studied SOP, the main methodological considerations, the main areas of research related to the SOP (antecedents, outcomes, and moderating and mediating effects), and the common patterns that can be seen in SOP effectiveness. Based on this, some insights and guidelines for future research have also been provided. In addition, this study provides the interesting conclusion that SOP effectiveness can be more influenced by the strength of corporate governance systems than SOP legislation.

In summary, based on the answer to our four research questions, this review can provide academics with the specific knowledge about SOP antecedents and outcomes, outlining numerous and interesting research possibilities for developing the field. Specifically, researchers might test the effects of SOP more globally and longitudinally, using emerging theoretical frameworks and a multilevel analysis. Additionally, the research should consider the role of regulation policies, institutional contexts and corporate governance because they are some of the important antecedents of SOP results as well as its effectiveness (e.g., some potential challenges are to study whether SOP legislation has a significant impact on SOP effectiveness and to analyze whether the existence of a strong corporate governance structure is more important). Future research should also consider some controversial compensation issues, especially the long-term effects of SOP on compensation design as well as whether the firm's response is systematic or selective. Moreover, other important factors that determine the SOP results and affect its effectiveness are the HRM policies, CSR policies and managerial discretion. Finally, the study of shareholder activism and the role of proxy advisors may be of particular interest within this field.

Our contributions also provide valuable suggestions for HRM practitioners. This review offers a better understanding of SOP and may help companies to design aligned and optimal compensation for executives from the viewpoint of shareholder and stakeholder value, which should ultimately lead to better firm performance. Based on this, companies should pay close attention to compensation designs since the evidence has clearly shown that executive compensation is a very important antecedent to SOP results. Thus, if a firm wants to avoid an unfavorable result, it has to implement efficient pay designs. Human resources departments and boards of directors play a particularly important role in achieving compensation designs aligned to shareholder interests. Linked with the above implication, transparency and pay information become more important after SOP implementation because companies place more emphasis on these aspects to achieve greater agreement of their shareholders. Moreover, when companies receive an unfavorable result in the SOP, it is very important to analyze the cause of this dissent and undertake necessary restructuring in compensation designs as well as other changes in other corporate policies that may also be affected by SOP. For example, recruitment and retention policies as well as policies on employee termination must be carefully analyzed because, after SOP implementation, they can be substantially affected, as indicated above. In this sense, these policies should pay attention to the boards' decisions since they are responsible for proposing pay designs.

For policy makers, this review shows the need for governments to continue working to improve their normative and legislation regarding compensation designs and corporate governance. Additionally, they should encourage balanced corporate governance systems, given that they play a very important role in complementing the SOP and in achieving greater SOP effectiveness. Going further, supranational institutions, such as the European Union, are

encouraging their members to adopt SOP legislation, and each country is free to choose the specific typology of SOP that best suits their needs. On the other hand, the evidence is not clear on the need or not to strengthen SOP legislation; thus, it is necessary to wait until future research shows more conclusive results in this sense.

Despite our efforts to identify the publications to include in this review to provide a comprehensive picture of SOP and to adopt a rigorous methodology and approach to the analysis of these papers, there are several limitations. First, our literature search may not have captured all the sources that address the subject of this review since we only included sources at the JCR – SJR threshold. Therefore, this review may suffer from a general limitation of SLRs, which is the exclusion of relevant studies, conference papers and book chapters due to the rigorous inclusion and exclusion criteria established, and that might limit creativity and innovation (Nolan & Garavan, 2016; Wang & Chugh, 2014). Second, in this review, two independent coders carefully clustered the findings of the analyzed studies, although other authors might have organized factors differently. Third, although we opted to exclude legal articles because they are not directly linked to our research questions, some of them might make important contributions to this research field. Despite these limitations, this paper is a first attempt to provide a global picture of SOP, and its antecedents, effectiveness and implications.

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APPENDIX

Appendix A. Characteristics and main findings of SOP articles

	Reference	Purpose of research	Theoretical framework[5]	Research design	SOP conceptualization	SOP determinants	SOP consequences	Mediating & moderating effects	Main results
1	Conyon & Sadler (2010) *Corporate Governance: An International Review*	The determinants of shareholder voting and its relation to CEO.	Agency theory.	44,787 resolution-firm-year observations over period 2002 to 2007. UK. Instrumental variable analysis and panel data methods (GLS and GMM). Longitudinal study.	<u>*Typology*</u>: Mandatory and advisory. <u>*Measurement*</u>: -Shareholder dissent: fraction of votes against plus abstaining.	<u>*Internal*</u>: -Compensation factors: pay levels and mix. -Firm performance factors: firm profitability. -Firm demographic factors and policies: firm size and management recommendations. -Firms governance factors: ownership and board of directors' characteristics.	<u>*Compensation outcomes*</u>: -Compensation design.	None.	-Shareholder dissent is low (about 7-10%). -More likely to vote against pay resolutions, compared to non-pay related resolutions. -Little evidence that SOP has consequences for subsequent CEO pay.
2	Yermack (2010) *Annual Review of Financial Economics*	Review of recent research in the area of shareholder voting.	Not applicable.	Conceptual.	Not applicable.	Not applicable.	Not applicable.	Not applicable.	-Some evidence from working papers regarding SOP is collected. -Shareholders have more power through voting rights, which can limit executive compensation. -When a company receives a high SOP dissent it tends to reduce executive compensation and increase the performance sensitivity of pay.

[5] In relation to theoretical frameworks, we have indicated both the theoretical framework expressly indicated by authors to argue their hypotheses and/or arguments and also the theoretical frameworks that have been used implicitly in those studies.

	Reference	Purpose of research	Theoretical framework[5]	Research design	SOP conceptualization	SOP determinants	SOP consequences	Mediating & moderating effects	Main results
3	Cai & Walking (2011) *Journal of Financial and Quantitative Analysis*	To examine whether SOP initiatives create shareholder wealth.	Agency theory.	1,270 firms over period 2006 to 2007 (1st experiment); 136 shareholder proposals during the period 2006-2008 (2nd experiment); and 2511 proposals vote on at 1,853 shareholder meetings during the 2003-2008 period (3rd experiment). US. Event study methodology. Multivariable regression. Cross-sectional study.	*Typology*: Voluntary and advisory (SOP bill). *Measurement*: -SOP proposals: dummy equal to 1 if the company receives an SOP proposal. -The level of votes that a proposal receives.	*Internal*: -Compensation factors: pay levels and mix, pay-for-performance sensitivity and excessive pay. -Firm performance factors: firm performance. -Firm governance factors: ownership and board of directors' characteristics.	*Firm outcomes*: -Market reaction.	Moderating effect of "corporate governance mechanisms" in the relationship between SOP implementation and market reaction.	-Positive market reaction, which is stronger for: firms with weak governance and firms that are more willing to improve compensation practice. -Targeted firms by shareholder proposals are not overpaying their CEOs. -Shareholders vote as if they care about level of abnormal executive compensation.
4	Clarkson, Walter & Nicholls (2011) *Journal of Contemporary Accounting & Economics*	To investigate the effect of increased shareholder oversight and disclosure about executive pay on the pay-performance relation.	Agency theory.	240 firms between 2001-2009. Australia. Annual regression models. Cross-sectional study.	*Typology*: Mandatory and advisory. *Measurement*: -Dissent: total number of 'no' votes divided by the sum of total 'no' and total 'yes' votes.	None.	*Compensation outcomes*: -Compensation design.	Moderating effect of "stock returns" in the relationship between SOP and compensation design.	-The increased sensitivity of CEO pay to firm performance is mainly related to the enhanced compensation disclosure and the shareholder voting. -Enhanced oversight over the executive pay brought about by regulatory change appears to have positively impacted the executive compensation process.
5	Levit & Malenko (2011) *Journal of Finance*	If SOP may lead management to respond or to ignore shareholder concerns as reflected in the nonbinding vote.	Not specified, but agency theory is applied.	Conceptual. A formal model of nonbinding vote is proposed.	Not applicable.	Not applicable.	Not applicable.	Not applicable.	-In the absence of managerial discipline, nonbinding voting often fails to convey shareholder views. -Nonbinding votes become effective if the company's management is subject to the threat of a proxy fight by an activist investor because he/she has real authority

	Reference	Purpose of research	Theoretical framework[5]	Research design	SOP conceptualization	SOP determinants	SOP consequences	Mediating & moderating effects	Main results
									(only if the conflict of interest between the activist and shareholder is large).
6	Balanchandran, Joos & Weber (2012) *Contemporary Accounting Research*	To examine the equity-based pay plans with or without seeking formal approval from their shareholders via a proxy vote.	Agency theory.	976 equity-based pay plans for 419 firms between 1999-2003. US. Probit and OLS regressions. Cross-sectional study.	<u>*Typology*</u>: Mandatory and binding <u>*Measurement*</u>: -Plan put to shareholder vote: indicator equal to 1 if firms put a shareholder vote. -Shareholder approval: indicator equal to 1 if the firm adopted the equity-based pay plan with shareholder approval.	<u>*Internal*</u>: -Firm performance factors: diluted earnings-per-share, returns, book to market. -Firm demographic factors and policies: firm size. -Firm governance factors: ownership and board of directors' characteristics.	<u>*Firm outcomes*</u>: -Firm performance.	None.	-There are differences between firms that bring plans to a shareholder vote and firms that avoid shareholder ratification. In particular, firms are more likely to adopt plans without shareholder approval when performance is poor, when there is duality and a larger proportion of insiders on the boards, and in companies with presence of beneficial owners that are not institutional investors. -Firms whose plans have shareholder approval have better future performance.
7	Mangen & Magnan (2012) *Academy of Management Perspectives*	Whether SOP can solve problems that cause suboptimal pay (directors who fail to advance shareholder's interests; and directors with lack information relevant for pay setting).	Institutional, agency, stakeholder and resource dependence theories.	Conceptual.	Not applicable.	Not applicable.	Not applicable.	Not applicable.	-SOP can reduce pay deficiencies (can provide a counterweight to powerful CEOs) and mitigates information problems, such as groupthink and status quo preference. -SOP is no panacea. Powerful shareholders may lobby for pay plans that advance their own interests.
8	Armstrong, Göw & Larcker (2013) *Journal of Accounting Research*	The impact of shareholder voting outcome on corporate policy (specifically, on equity-based	Not specified, but agency theory is applied.	9,420 votes on stock-based plans over the period 2001 to 2010. US. Instrumental variable and	<u>*Typology*</u>: Mandatory and binding. <u>*Measurement*</u>: -% For pay plan: percentage of	<u>*Internal*</u>: -Compensation factors: pay levels. -Firm performance factors: firm performance and profitability, stock	<u>*Compensation outcomes*</u>: -Compensation designs. <u>*Firm outcomes*</u>: -CEO turnover.	None.	-No evidence that shareholder voting for equity plans is an effective mechanism for influencing executive compensation. -No evidence that lower shareholder support leads to

	Reference	Purpose of research	Theoretical framework[5]	Research design	SOP conceptualization	SOP determinants	SOP consequences	Mediating & moderating effects	Main results
		compensation plans).		regression discontinuity research design. Cross-sectional regression.	shareholder votes in favour of pay plan.	returns, book to market. -Firm governance factors: shareholder dilution. -Individual factors: CEO tenure.			decrease in future CEO incentive compensation.
9	Burns & Minnick (2013) *The Financial Review*	How SOP legislation affects companies in the subsequent years.	Agency theory.	137 SOP proposals over the period 2007-2008. US. Difference-in-difference approach. Logistic regressions. Cross-sectional study.	*Typology*: Voluntary and advisory. *Measurement*: -Likelihood of receiving a SOP proposal: dummy equal to 1 if the company receives an SOP proposal.	*Internal*: -Compensation factors: pay levels and mix. -Firm performance factors: firm profitability, stock return, debt ratio, market to book. -Firm demographic factors and policies: firm size. -Firm governance factors: ownership and board of directors' characteristics.	*Compensation outcomes*: -Compensation design.	None.	-CEO pay has increased dramatically compared to the salary of the average worker. -Although total compensation increases insignificantly less for SOP firms, SOP companies use more incentive-based compensation and less cash-based compensation. -Executive compensation decreases in SOP firms.
10	Ertimur, Ferri & Oesch (2013) *Journal of Accounting Research*	To examine the economic role of proxy advisors.	Not specified, but agency theory is applied.	1,275 firms with annual meetings between January 2011 and November 2011. S&P 1500 index. US. Event study. OLS and logistic regression. Cross-sectional study.	*Typology*: Mandatory and advisory. *Measurement*: -SOP voting dissent: votes cast against scaled by all votes cast. -Prior SOP vote: equal to 1 if the firm had a prior SOP vote.	*Internal*: -Compensation factors: pay levels. -Firm performance factors: firm profitability, stock return, prior SOP vote. -Firm demographic factors and policies: firm size. -Firm governance factors: ownership characteristics, past compensation activism. *External*: Proxy advisor's role.	*Compensation outcomes*: -Compensation design. *Firm outcomes*: -Market reaction.	Moderating effect of "ownership structure" in the relationship between proxy advisors' impact and SOP.	-Proxy advisors have significant influence on voting outcomes. -This influence varies with the institutional ownership structure (moderating effect is found). -Many firms with a negative recommendation make compensation changes. -No evidence of market reaction following pay changes.

	Reference	Purpose of research	Theoretical framework[5]	Research design	SOP conceptualization	SOP determinants	SOP consequences	Mediating & moderating effects	Main results
11	Ferri & Maber (2013) *Review of Finance*	The effects of SOP on shareholder value and executive pay practices.	Not specified, but agency theory is applied.	301 firms in 2001 (1st analysis). 3,305 firms-year observations over the period 2000-2005 (2nd and 3rd analysis). FTSE 350 index. UK. Event study. OLS regressions. Cross-sectional study.	*Typology*: Mandatory and advisory. *Measurement*: -Voting dissent: votes against plus abstention (scaled by all votes cast).	None.	*Compensation outcomes*: -Compensation design. *Firm outcomes*: -Market reaction.	Moderating effect of "compensation policies" in the relationship between SOP implementation and market reaction.	-Positive market reaction to SOP in firms with controversial CEO pay. -Firms respond to high voting dissent by removing controversial provisions. -SOP reduces the level of CEO compensation only conditional upon poor performance. -Increase in the sensitivity of CEO pay to poor performance.
12	Monem & Ng (2013) *Journal of Contemporary Accounting & Economics*	The effect of the Remuneration Amendment Act (2011) on the pay-performance link in Australian firms.	Agency theory.	111 firms in 2011 and 1054 firms in 2012. Australia. Annual regression models. Cross-sectional study.	*Typology*: Two-strikes rule. *Measurement*: -Dissent: the ratio of number of 'no' votes to the sum of total 'no' and total 'yes' votes. -Strike: a binary variable equal to 1 for firms that received a 'first strike'. -Two strikes: a binary variable equal to 1 for firms that received a 'two strikes'.	None.	*Compensation outcomes*: -Compensation design.	None.	-CEO pay changes are negatively related to the level of SOP dissent. Also, the pay-performance link has been increasing with the level of SOP dissent in the "first-strike" firm. -Positive effect of the "two-strikes" rule on the pay-performance link in Australian firms.
13	Conyon (2014) *The Economic Journal*	To investigate US executive compensation and governance.	Agency theory.	469 firms. S&P 500. US. Descriptive analysis.	*Typology*: Mandatory and advisory. *Measurement*: -Votes in favor: the percentage of 'votes for' plus 'votes against' plus 'votes abstained'.	Not applicable.	Not applicable.	Not applicable.	-Empowering shareholders, through SOP voting, has been seen as a potentially important mechanism to reduce excessive pay. -The high approval levels does not mean that SOP has no influence on executive compensation design or the relationship between shareholders and board

	Reference	Purpose of research	Theoretical framework[5]	Research design	SOP conceptualization	SOP determinants	SOP consequences	Mediating & moderating effects	Main results
									members. Indeed, SOP increases dialogue between shareholders, boards and compensation committee, so more efficient pay packages might be designed in advance of SOP vote.
14	Eulerich, Kalinichenko & Theis (2014) *Journal of Management and Control*	To examine the influence of company characteristics and performance measures on SOP votes.	Agency theory.	204 firms during 2010-2013. Germany. Logistic and probit regression. Cross-sectional study.	*Typology*: Voluntary and advisory. *Measurement*: -Likelihood of holding a SOP vote.	*Internal*: -Firm performance factors: firm profitability and leverage. -Firm demographic factors and policies: firm size. -Firm governance factors: ownership characteristics.	None.	None.	-The likelihood of holding a SOP vote is increased in large companies and in companies with high levels of minor shareholders. -There is a negative trend in the use of SOP votes. However, when undertaken, the approval rates are decreasing. -In the future, legislation should be regulating a mandatory SOP in Germany.
15	Gregory-Smith, Thomson & Wright (2014) *Economic Journal*	The role of shareholder voting in executive pay setting, by incorporating the post-crisis years.	Agency theory.	All companies that entered the FTSE 350 index with any financial year end between 1998 and 2012. UK. Quantile regressions. Cross-sectional study.	*Typology*: Mandatory and advisory. *Measurement*: -Dissent: number of votes against and abstentions, as a percentage of total votes cast.	*Internal*: -Compensation factors: pay levels. -Firm performance factors: stock return. -Firm demographic factors and policies: firm size. -Firm governance factors: ownership characteristics.	*Compensation outcomes*: -Compensation design.	Moderating effect of "post break" in the relationship between SOP determinants and SOP.	-SOP does constrain pay, but only when it exceeds a threshold of dissent. -Not find a strengthening of this impact in the aftermath of the financial crisis (moderating effect is not significant). -SOP encourages corporate governance advisors to take a view on appropriate pay.
16	Krause, Whitler & Semadeni (2014) *Academy of Management Journal*	The responses of shareholders to a CEO pay, developing and testing a model of shareholder SOP voting.	Agency and prospect theories.	93 MBA students (1st experiment) and 88 MBA students (2nd experiment). US. Experimental study.	*Typology*: Mandatory and advisory. *Measurement*: -Probability that a shareholder votes to approve the compensation of the CEO.	*Internal*: -Compensation factors: pay levels. -Firm performance factors: firm performance.	None.	Mediating effect of "agency-normative assessment" in the relationship between CEO reward/firm performance and SOP voting.	-Agency losses loom large for shareholders, who react to CEO rewards only when facing a potential loss, not when facing a potential gain. -Following prospect theory, high CEO pay only has a negative impact on shareholders' votes when business performance is weak. Following agency theory, high CEO pay

	Reference	Purpose of research	Theoretical framework[5]	Research design	SOP conceptualization	SOP determinants	SOP consequences	Mediating & moderating effects	Main results
									usually has a negative impact on shareholders' votes regardless of business performance. -The relations are mediated by shareholders' agency-normative assessment.
17	Alissa (2015) *European Accounting Review*	To evaluate the first decade of the SOP regulation and its impact on shareholder and boards.	Agency theory.	217 companies during the 2002-2012 period, FTSE 350 index. UK. OLS regressions. Cross-sectional study.	*Typology*: Mandatory and advisory. *Measurement*: -Shareholder dissatisfaction: fraction of votes against over total votes. -Discretion: votes for which shareholders have given their power to proxy advisors to vote as they choose.	*Internal*: -Compensation factors: pay levels and mix, expected vs excessive pay. -Firm performance factors: firm profitability and stock returns. -Firm demographic factors and policies: firm size. -Firm governance factors: ownership characteristics.	*Compensation outcomes*: -Compensation design. *Firm outcomes*: -CEO turnover.	None.	-Shareholders use SOP to reflect their dissatisfaction over excessive pay, exhibiting sophistication. -No evidence of a systematic pay-based reaction, evidencing a selective reaction. -Positive relation between the dissatisfaction vote and CEO turnover.
18	Bordere, Ciccotello & Grant (2015) *Current Issues in Auditing*	To explore how SOP requirement impacts the audit environment.	Not specified, but agency theory is applied.	72 companies, of which 36 receive majority of "no" votes in January through June 2011. US. Descriptive analysis (paired t-test analysis).	*Typology*: Mandatory and advisory. *Measurement*: -Majority of 'no' votes: negative votes greater than 50%.	*Internal*: -Compensation factors: pay levels and mix. -Firm performance factors: firm profitability, stock returns. -Firm governance factors: financial quality statement, internal control environments and audit fees.	None.	None.	-Firms which suffer a rejection in SOP had poorer financial and market performance, and higher compensation in years before the vote (specially, in the previous year). -The above firms also had relatively poor financial statement quality, weaker internal control environments, as well as higher audit fees in the period prior to the vote. -Auditors should use a negative vote as an input to their risk assessment.
19	Brunarski, Campbell &	To provide direct evidence of the economic	Agency theory and	1,250 firms over the period 2010-	*Typology*: Mandatory and advisory.	*Internal*: -Compensation factors: pay levels,	*Compensation outcomes*:	Moderating effects of "ROA", "stock	-When firms receive low SOP support, executive decisions are affected.

	Reference	Purpose of research	Theoretical framework[5]	Research design	SOP conceptualization	SOP determinants	SOP consequences	Mediating & moderating effects	Main results
	Harman (2015) *Journal of Corporate Finance*	impact of SOP vote aftermath by documenting management's response to SOP vote outcome.	institutional theory.	2011. S&P 1500 index. US. OLS and logistic regressions. Cross-sectional study.	<u>*Measurement*</u>: -Low SOP support: indicator variable equal to 1 if the firm receives less than 70% support. -High SOP support: above 70% support.	optimal vs excessive pay. -Firm performance factors: firm profitability, stock returns. -Firm demographic factors and policies: R&D, capital expenditures, dividend and leverage. -Firm governance factors: prior SOP vote.	-Compensation design. <u>*Firm outcomes*</u>: -Firm value. -Firm policies (leverage, capital expenditures, dividends and R&D policies).	return" and "dividend yield" in the relationship between CEO excess pay / CEO optimal pay and SOP; and moderating effect of "compensation policies" in the relationship between SOP and market reaction.	-Shareholders are rational and vote against excess pay. -SOP does not create sufficient incentives for boards to limit excessive CEO pay. -No impact on the market value (except in firm with overcompensated CEO and a high SOP support). -Positive support for inefficient compensation exacerbates agency problems.
20	Faghani, Monem & Ng (2015) *Corporate Ownership & Control*	The impact of shareholders' voting dissent on the level and structure of CEO pay, focusing on the "two-strike" rules.	Not specified, but agency theory is applied.	234 firms from 2012 to 2013. Australia. "Difference-in-difference" approach. OLS regressions. Cross-sectional study.	<u>*Typology*</u>: Two-strikes rule. <u>*Measurement*</u>: -Dissent: the ratio of the number of 'no' votes to the sum of total 'no' and total 'yes' votes. -First strike: binary variable equal to 1 for 'first-strike' firms that avoided a 'second strike'.	<u>*Internal*</u>: -Compensation factors: pay levels and performance-based pay. -Firm performance factors: stock return. -Firm governance factors: ownership and board of directors' characteristics.	None.	None.	-The changes in CEO pay are positively associated with the changes in the level of SOP dissent. -Specifically, in "first-strike" firms that avoided the "second-strike", shareholder dissent is reduced when CEO total pay is lower and when the proportion of CEO's performance-based pay is greater.
21	Hitz and Müller-Bloch (2015) *European Accounting Review*	To investigate market reactions to the regulation of executive compensation in Germany.	Agency theory.	203 firms from 2005 to 2009 period, listed in the Prime Standard of the Frankfurt stock. Germany. Event study. OLS regressions. Cross-sectional study.	<u>*Typology*</u>: Voluntary and advisory <u>*Measurement*</u>: None.	None.	<u>*Firm outcomes*</u>: -Market reaction.	None.	-Weak evidence of an average negative market reaction. -Regulation was not considered beneficial from a shareholder perspective, because it imposes inefficient contractual arrangements for some firms.

	Reference	Purpose of research	Theoretical framework[5]	Research design	SOP conceptualization	SOP determinants	SOP consequences	Mediating & moderating effects	Main results
22	Hooghiemstra, Kuang & Qin (2015) *European Accounting Review*	Whether negative media coverage of CEO pay can predict shareholder voting on CEO pay.	Agency theory and impression formation research.	253 firms during the 2002-2009 period. FTSE 350 index (40 firms are included from the FTSE SmallCap too). UK. OLS regressions. Cross-sectional study.	*Typology*: Mandatory and advisory. *Measurement*: -Dissent: percentage of votes against plus abstentions. -High dissent: indicator equal to 1 if the firm's voting dissent rate is greater or equal to 20%.	*Internal*: -Compensation factors: compensation levels and mix. -Firm performance factors: firm profitability, stock return, market to book. -Firm demographic factors and policies: firm size. -Firm governance factors: ownership and board of directors' characteristics. *External*: -Media coverage effect.	None.	None.	-Total compensation is positively related to dissent. -Negative media coverage is associated with negative votes or abstentions on the SOP. -The above relation is more associated with coverage in the financial and business press than coverage in the general press.
23	Larcker, McCall & Ormazabal (2015) *Journal of Law & Economics*	The outsourcing of voting to proxy advisors' firms.	Not specified, but agency theory is applied.	2,008 firms that held their shareholder meetings in 2011. Russell 3000 index. US. Recursive-partitioning analysis. OLS, probit and doubly-censored regression. Cross-sectional study.	*Typology*: Mandatory and advisory. *Measurement*: -Voting support: percentage of votes in favour.	*Internal*: -Compensation factors: pay levels. -Firm performance factors: s firm profitability, stock return, leverage, book to market. -Firm demographic factors and policies: firm size. -Firm governance factors: board of directors' characteristics. *External*: -Proxy advisors' role.	*Firm outcomes*: -Market reaction.	Moderating effect of "passive investors" in the relationship between proxy advisors' impact and SOP.	-Proxy advisory firms' recommendations have a substantial impact on SOP voting outcomes. -Negative recommendations have a greater impact on SOP when there are a higher proportion of passive investors. -Many boards change their compensation programs before formal votes. -The stock market reaction is negative to these changes.
24	De Falco, Cucari &	To explore which corporate governance	Agency theory and path-	120 firms between 2012 and 2014 of three	*Typology*: Mandatory and advisory.	*Internal*: -Compensation factors: pay levels	None.	None.	-The results are different depending upon the context of analysis, so SOP dissent

	Reference	Purpose of research	Theoretical framework[5]	Research design	SOP conceptualization	SOP determinants	SOP consequences	Mediating & moderating effects	Main results
	Sorrentino (2016) *Corporate Ownership & Control*	variables can influence the direction of the vote and if they change depending on the country.	dependence theory.	different contexts: Italy, Australia and US (cross-country study). Panel data regressions. Longitudinal study.	*Measurement*: -Shareholder dissent: percentage of "no" votes.	and mix. -Firm governance factors: ownership characteristics, size of compensation committee.			is related to different variables depending upon the context. -Results show the importance of understanding what factors facilitate dissent in specific institutional contexts. Thus, corporate governance cannot be studied in isolation from legislation, culture and institutional contexts.
25	Kimbro & Xu (2016) *Journal of Accounting and Public Policy*	The impact of SOP (e.g., characteristics of firms with a negative SOP, the react of boards to SOP votes, factors associated with SOP votes...).	Not specified, but agency theory is applied.	2,235 firms with SOP vote in 2011 and 2,384 firms in 2012. Russell 3000 index. US. OLS regressions. Cross-sectional study.	*Typology*: Mandatory and advisory. *Measurement*: -Percentage of SOP approval votes: SOP approval votes divided by the sum of approval plus dissent SOP votes (not include abstention votes in denominator.)	*Internal*: -Compensation factors: pay levels and mix, excessive pay. -Firm performance factors: firm profitability, stock return, leverage, earning quality. -Firm demographic factors and policies: firm size. -Firm governance factors: ownership characteristics. *External*: -Proxy advisors' role.	*Compensation outcomes*: -Compensation design.	None.	-Shareholders identify firms with excessive and abnormal pay and they cast a negative vote. -Boards respond by reducing the growth of executive pay. -Negative votes are more sensitive to some equity than to cash pay.
26	Balsam, Boone, Liu & Yin (2016) *Journal of Accounting and Public Policy*	The changes made by companies in their executive compensation programs in advance of the initial SOP.	Agency theory.	981 affected firms and 569 unaffected firms during 2010. US. OLS and tobit regressions. Cross-sectional study.	*Typology*: Mandatory and advisory. *Measurement*: -Percentage of SOP against: number of votes against divided by total shares eligible to vote.	*Internal*: -Compensation factors: pay levels and mix, excessive pay. -Firm performance factors: firm profitability, stock returns, leverage, market to book. -Firm demographic factors and policies:	*Compensation outcomes*: -Compensation design.	None.	-Firms modified their compensation packages with an eye toward winning shareholder approval in SOP. -Shareholder voting on SOP is not random, but systematically related to compensation practices. -Firms who reduced their compensation have higher approval percentages.

	Reference	Purpose of research	Theoretical framework[5]	Research design	SOP conceptualization	SOP determinants	SOP consequences	Mediating & moderating effects	Main results
						firm size, and the readability, the tone and the formatting of the CD&A. -Firm governance factors: ownership and board of directors' characteristics. *External*: -Proxy advisors' role.			-The tone and prominence of the CD&A are associated with the vote, as is the recommendation of proxy advisors.
27	Cuñat, Giné & Guadalupe (2016) *Review of Finance*	SOP effect on shareholder value, firm performance and CEO pay.	Not specified, but agency theory is applied.	250 shareholder-sponsored proposals vote on at annual meetings from 2006 until 2010. S&P 1500 index. US. Event study. Regression discontinuity estimation. Cross-sectional study.	*Typology*: Voluntary and advisory *Measurement*: -The median vote for all SOP votes below the majority threshold. -The median vote for votes above the majority threshold. -+5% and -5% from the majority threshold.	None.	*Compensation outcomes*: -Compensation designs. *Firm outcomes*: -Market reaction. -Firm performance, profitability and overheads/capital expenditures. -CEO turnover.	None.	-SOP appears to lead to more efficiency and better firm performance. -Little evidence that SOP has consequences for subsequent CEO pay (level and mix). -Losing SOP vote is a signal that increases the likelihood of future shareholder actions.
28	Correa & Lel (2016) *Journal of Financial Economic*	The changes in CEO pay policies around the passage of SOP laws.	Agency theory.	17,614 firms from 38 countries (cross-country study) over the period 2001-2012. Panel data regression. Longitudinal study.	*Typology*: Multiple. *Measurement*: -SOP law dummy: equals to 1 for the time period following the staggered passage of SOP laws. -High shareholder dissent: equals to 1 for firms with a voting dissent of greater than 20%.	None.	*Compensation outcomes*: -Compensation design. -Pay gap. *Firm outcomes*: -Firm value.	Moderating effects of "firm performance" and "governance environment" in the relationship between SOP and total CEO compensation; and moderating effect of "compensation policies" in the relationship	-CEO pay growth is lower in the period following the adoption of SOP laws. The links between CEO pay and firm performance become stronger. -The results are stronger for firms with problematic pay practices and weak governance. -Firm value increases for firms subject to SOP laws. -The pay gap among executives is reduced following the passage of SOP laws.

	Reference	Purpose of research	Theoretical framework[5]	Research design	SOP conceptualization	SOP determinants	SOP consequences	Mediating & moderating effects	Main results
								between SOP and market reaction.	
29	Ferri & Oesch (2016) *Contemporary Accounting Research*	Influence of management recommendations on frequency vote.	Not specified, but agency theory is applied.	1,365 firms with annual meeting in 2011. S&P 1500 index. US. OLS and logistic regression. Cross-sectional study.	*Typology*: Mandatory and advisory. *Measurement*: -SWOP votes for triennial: percentage of votes cast in favour of holding a biennial or triennial SOP vote. -SOP voting dissent: votes against scaled by all votes cast. -Triennial adopter: indicator equal to 1 if a company adopted a triennial SOP frequency.	*Internal*: -Firm performance factors: firm profitability, stock returns. -Firm demographic factors and policies: firm size, and management recommendations. -Firm governance factors: ownership characteristics.	*Compensation outcomes*: -Compensation design.	Moderating effect of "management credibility" in the relationship between management recommendations and SOP results.	-Management recommendation is associated with more voting support for that frequency. -Management credibility is a key determinant of management influence. -Firms that adopted a triennial frequency are less likely to change their compensation policies in response to adverse SOP votes. Thus, a less frequent vote reduces management responsiveness to shareholders.
30	Kaplan & Zamora (2016) *Journal of Business Ethics*	The interaction effect of two current incomes attributes (the consistence of meeting or beating analyst earning expectations and the income source) on SOP votes.	Agency and stakeholder theories and fairness-based perspective.	85 evening MBA students. US. Experimental study.	*Typology*: Mandatory and advisory. *Measurement*: -The participant response whether she/he (dis)agrees with the non-binding, advisory resolution stating approval of the CEO's pay.	*Internal*: -Firm performance factors: consistency of meeting/beating analyst earnings expectations, and the firm's income source.	None.	Mediating effect of "the participant's perceptions about the fairness of the CEO's compensation" in the relationship between income attributes and SOP results.	-SOP support is higher when the firm meets/beats analyst earnings forecasts and when net income did not include nonrecurring gains. -Perceptions about the fairness of the CEO pay mediated the relationship between the two incomes attributes and SOP votes.
31	Malenko & Shen (2016)	To quantify the casual effect of proxy advisors on SOP voting outcomes.	Not specified, but agency theory is applied.	2,020 SOP proposals from 2010 to 2011 and 404 observations in the 5%	*Typology*: Mandatory and advisory. *Measurement*:	*Internal*: -Compensation factors: pay levels and mix.	None.	Moderating effect of "ownership structure" in the relationship	-Strong effect of proxy advisors' recommendations on SOP voting, moving 25% SOP votes.

	Reference	Purpose of research	Theoretical framework[5]	Research design	SOP conceptualization	SOP determinants	SOP consequences	Mediating & moderating effects	Main results
	The Review of Financial Studies			bandwidth around the cut-off. US. Regression discontinuity design. OLS regressions. Cross-sectional study.	-The percentage of votes in favour of a SOP proposal.	-Firm performance factors: firm profitability, stock return, market to book. -Firm demographic factors and policies: firm size. -Firm governance factors: ownership characteristics. <u>*External*</u>: -Proxy advisors role.		between proxy advisors' impact and SOP.	-The influence of proxy advisors is greater in firms with large institutional ownership, firm where institutional ownership is more dispersed, and where a larger fraction of shares in held by institutions with small or high turnover.
32	Stathopoulos & Voulgaris (2016a) *Corporate Governance: An International Review*	To discuss and critically evaluate existing research on SOP and also provides suggestions for future research.	Not apply, although agency, prospect and stakeholders' theories are used to explain some evidence.	Conceptual.	Not applicable.	Not applicable.	Not applicable.	Not applicable.	-Evidence about SOP impact on executive pay remains unclear. -The majority of the extant literature takes an agency theory perspective and oriented towards the Anglo-Saxon setting, and new approaches are needed. -Lack of studies focusing on the unintended consequences of SOP. -Other future lines of research are proposed.
33	Stathopoulos & Voulgaris (2016b) *British Journal of Management*	The impact of shareholder investment horizon on SOP voting patterns.	Not specified, but agency theory is applied.	2,782 firms during the 2003-2011 period. FTSE 350 index. UK. Panel data methods. Longitudinal study.	<u>*Typology*</u>: Mandatory and advisory. <u>*Measurement*</u>: -Voting dissent: ratio of negative votes to the sum of negative and positive votes. -High voting dissent: dummy that takes the value 1 if negatives votes higher than 20%.	<u>*Internal*</u>: -Compensation factors: excessive pay. -Firm performance factors: firm profitability, stock return, leverage, market to book. -Firm demographic factors and policies: firm size. -Firm governance factors: ownership and board of	None.	Moderating effect of "abnormal pay" in the relationship between investment horizon and SOP results.	-Short-term investors are more likely to cast an abstaining vote because they avoid incurring any monitoring costs. However, long-term investors are more likely to vote in favour. -Short-term investors usually vote against in cases of highly excessive CEO pay.

	Reference	Purpose of research	Theoretical framework[5]	Research design	SOP conceptualization	SOP determinants	SOP consequences	Mediating & moderating effects	Main results
					-High abstaining vote: dummy that takes the value 1 for firms in the top 33rd percentile of abstaining vote.	directors' characteristics. -Individual factors: CEO tenure and CEO age.			
34	Cullinan, Mahoney & Roush (2017) *Journal of Contemporary Accounting and Economics*	To analyze whether shareholders may also consider CSR activities when voting in director elections and SOP votes.	Agency theory.	5,953 SOP votes from 2013 to 2015. US. OLS regressions. Cross-sectional study.	*Typology*: Mandatory and advisory. *Measurement*: -SOP votes: number of votes cast in favor of executive pay as a percentage of total votes cast.	*Internal*: -Compensation factors: pay levels. -Firm performance factors: firm profitability, stock return. -Firm demographic factors and policies: firm size, CSR policies and anti-takeover score. -Firm governance factors: ownership characteristics, compensation activism. *External*: -Proxy advisors role.	None.	Moderating effect of "financial performance" in the relationship between CSR policies and SOP results.	-CSR policies (in particular, CSR strengths) are positively associated with votes in favour of executive compensation. -In addition, the environmental aspect of CSR strengths are the most important component associated with higher support for executive compensation and not the social component. -Moderating effect studied is not significant, so financial performance not affect the relationship between CSR policies and SOP results.
35	Grosse, Kean & Scott (2017) *Accounting and Finance*	To investigate the determinants of shareholder SOP voting results, and its effects on future CEO pay and compensation disclosure.	Not specified, but agency theory is applied.	474 firms from 2011 to 2012. Australian. OLS and logit regressions. Cross-sectional study.	*Typology*: Two-strikes rule. *Measurement*: -Dissent: percentage of votes against the compensation resolutions. -Strike: a binary variable equal to 1 if firm receive a strike (more than 25% votes against).	*Internal*: -Compensation factors: pay levels. -Firm performance factors: stock return, leverage, book to market. -Firm demographic factors and policies: compensation disclosure. -Firm governance factors: ownership and board of directors' characteristics.	*Compensation outcomes*: -Compensation design. *Firm outcomes*: -Firm policies (compensation disclosure).	None.	-When companies receive a strike, CEO bonus is reduced. However, authors point out that some firms that received a strike could have an optimal compensation. Therefore, the legislation may have had the unintended consequence of reducing CEO pay, rather than specifically targeting excess pay. -Moreover, when companies receive a strike, compensation disclosure is increased. However, increasing this disclosure

	Reference	Purpose of research	Theoretical framework[5]	Research design	SOP conceptualization	SOP determinants	SOP consequences	Mediating & moderating effects	Main results
									may be an ineffective response to shareholder discontent because, when authors analyze this as a determining factor, results show that compensation disclosure is not associated with the likelihood of receiving a strike.
36	Hadley (2017) *Managerial Finance*	The impact of disclosure of alternative pay measures on the external support for compensation through subsequent SOP results.	Agency theory.	1,500 firms between 2012 and 2014. S&P 500. US. OLS and multinomial logistic regressions. Cross-sectional study.	*Typology*: Mandatory and advisory. *Measurement*: -The level of SOP support. -The likelihood of receiving more than 70 percent of SOP approval.	*Internal*: -Compensation factors: pay levels and mix, excessive pay. -Firm performance factors: firm profitability, stock return. -Firm demographic factors and policies: firm size. -Firm governance factors: disclosure of alternative pay measures, and prior SOP vote *External*: -Proxy advisors' role.	None.	Moderating effects of "prior low SOP support" and "negative proxy advisor's recommendation" in the relationship between disclosures of alternative compensation measures and SOP.	-Disclosure of alternative pay measures increases SOP approval (specifically, the likelihood of receiving more than 70% percent approval) only in firms with prior low SOP support. -There is no evidence of a significant relationship between disclosure of alternative pay measures and the likelihood of receiving a negative proxy advisors' recommendation.
37	Hooghiemstra, Kuang & Qin (2017) *Accounting and Business Research*	To assess whether reducing "readability" of pay disclosures is an effective obfuscation strategy to influence the level of SOP dissent.	Agency theory. Also, decision-making literature and research based on the incomplete revelation hypothesis.	1,426 firm-year observations from 247 firms from 2003 to 2009. FTSE 350 index. UK. Pooled OLS regressions. Cross-sectional study.	*Typology*: Mandatory and advisory. *Measurement*: -Dissent: percentage of votes against plus votes abstained from in the SOP resolutions.	*Internal*: -Compensation factors: pay levels and mix, excessive pay. -Firm performance factors: firm profitability, stock return, market to book. -Firm demographic factors and policies: firm size and age, and obfuscation	None.	Moderating effect of "shareholder sophistication" (through institutional ownership) in the relationship between obfuscation and SOP.	-A less readable pay report is related to lower levels of SOP dissent in firms with excessive CEO pay, so the obfuscation strategy is effective. -The effects of this readability on SOP are not uniform. Its effect diminishes as institutional ownership increases. Thus, the effectiveness of obfuscation decreases with

	Reference	Purpose of research	Theoretical framework[5]	Research design	SOP conceptualization	SOP determinants	SOP consequences	Mediating & moderating effects	Main results
						strategy. -Firm governance factors: ownership characteristics. -Individual factors: CEO power, CEO's letter. *External*: -Media coverage effect.			an increase in shareholder sophistication.
38	Sánchez-Marín, Lozano-Reina, Baixauli-Soler & Lucas Pérez (2017) *Business Research Quarterly*	The effectiveness of SOP as a mechanism for aligning CEO compensation, examining the role of corporate governance.	Agency and institutional theories.	114 firms during the 2013-2016 period. Spain. OLS regression. Cross-sectional study.	*Typology*: Mandatory and advisory. *Measurement*: -Low SOP support: percentage of negative votes and abstentions. -High SOP support: percentage of positive votes. -Shareholder satisfaction: dummy that takes the value 1 when the percentage of positive votes is below to the median.	None.	*Compensation outcomes*: -Compensation design.	Moderating effects of "board monitoring" and "ownership structure" in the relationship between SOP and aligned CEO compensation.	-SOP generally increases the alignment of CEO compensation, although its effectiveness is reduced in companies with overcompensated CEOs and in owner-managed companies. -A moderating effect of corporate governance mechanisms was found.
39	Van der Elst & Lafarre (2017) *European Business Organization Law Review*	Shareholder behaviour regarding pay issues, providing insights into the impact of SOP in the Netherlands.	Agency theory.	44 companies from 2004 to 2014. The Netherlands. Descriptive analysis.	*Typology*: Mandatory and binding. *Measurement*: -Percentage of total SOP opposition (votes against). -Percentage of outsider shareholder opposition (votes against).	*Internal*: -Compensation factors: pay levels and mix. -Firm governance factors: ownership characteristics.	None.	None.	-The right to adopt (amendment to) the compensation policy has significantly increased shareholders' engagement. -SOP opposition is positively related to outsider shareholder, and negatively related to insider shareholders. -Shareholders tend to vote against proposals that are not

	Reference	Purpose of research	Theoretical framework[5]	Research design	SOP conceptualization	SOP determinants	SOP consequences	Mediating & moderating effects	Main results
									transparent or not in line with the Dutch Code.
40	Borthwick, Jun & Ma (2018) *Accounting and Finance*	To test whether CEO pay is modified by the change from advisory SOP to "two-strikes" rule.	Agency theory.	2,074 firms-years from 2005 to 2015. Australian firms. OLS regressions. Longitudinal study.	*Typology*: Two-strikes rule. *Measurement*: -Dissent: number of "no" votes divided by the sum of "no" and "yes" votes. -Legislation change: a dummy variable equal to 1 after implementing "two-strikes" rule.	*Internal*: -Compensation factors: total compensation. -Firm performance factors: shareholder return. -Firm demographic factors and policies: firm size. -Firm governance factors: board of directors' characteristics, remuneration committee, investor concentration.	*Compensation outcomes*: -Compensation design. *Firm outcomes*: -Market reaction.	None.	-CEO pay and firm performance are important determinant of shareholder votes. While CEO impact positively impact, firm performance negatively impact. -After implementing the "two-strikes" rule, dissent levels are lower compared to non-binding period. -Under the "two-strikes" rule, CEO compensation decreases. -There is a positive market reaction after implementing "two-strikes" rule. However, the reaction is negative when high dissent levels are received.
41	Kaplan, Samuels & Cohen (2015) *Journal of Business Ethics*	Whether social ties and CEO's reputation influence judgments about CEO pay.	Agency theory and organizational justice theory.	147 evening MBA students. US. Experimental study.	*Typology*: Mandatory and advisory. *Measurement*: -Participants' response to whether they agree or not with the resolution stating approval of the CEO pay.	*Internal*: -Individual factors: CEO reputation and CEO social ties.	None.	Mediating effect of "perceived fairness" in the relationship between CEO reputation / CEO social ties and SOP.	-The existence of social ties and bad CEO's reputation affected negatively SOP judgments. -The relations are mediated by perception about fairness of the CEO's compensation.
42	Liang, Moroney & Rankin (2018) *Accounting and Finance*	To study shareholder voting behaviour under different pay-performance links, and under a prior strike.	Agency and prospect theories.	479 MBA students. Australia. Experimental study.	*Typology*: Two-strikes rule. *Measurement*: -First strike: is manipulated at two levels: "yes" and "no".	*Internal*: -Compensation factors: pay-performance link. -Firm governance factors: prior SOP vote.	None.	None.	-Shareholders are more prone to cast a positive vote when the pay-performance link is strong and when there is not a strike in the previous year. -A first strike reduces the impact of the pay-performance link on shareholder voting.

	Reference	Purpose of research	Theoretical framework[5]	Research design	SOP conceptualization	SOP determinants	SOP consequences	Mediating & moderating effects	Main results
43	Hitz & Lehmann (2018) *European Accounting Review*	To provide comprehensive empirical evidence on the role of proxy advisors in 14 European countries.	Not specified, but agency theory is applied.	14,036 meetings-years between 2008-2010 (1st analysis); 12,765 voting recommendations in 2010 (2nd analysis); and 6,780 voting recommendations in 2010 (3rd analysis). 14 European countries (cross-country study). Event study. OLS and logit regressions. Cross-sectional study.	*Typology*: Multiple. *Measurement*: -Voting results: percentage of votes cast in favour.	*External*: -Proxy advisors' role.	None.	Moderating effect of "corporate governance factors" in the relationship between proxy advisors' recommendations and SOP results.	-The supply of proxy advisors' services across European countries is higher when country-level investor protection standards are relatively weak. In addition, firms covered by proxy advisors are larger and have a high free float, high ownership by investment companies and low insider control. -The negative voting recommendations are negatively associated with SOP results. -The negative recommendations are associated with negative capital market reactions.
44	Obermann & Velte (2018) *Journal of Accounting Literature*	To analyse the determinants and outcomes of executive compensation-related shareholder activism and SOP votes.	Not apply, although agency theory is used to explain some evidence.	Conceptual.	Not applicable.	Not applicable.	Not applicable.	Not applicable.	-This paper identifies some SOP determinants (executive compensation, firm characteristics, corporate governance, shareholders and stakeholders) and SOP outcomes (executive compensation, firm characteristics and corporate governance).

Appendix B. CATPCA analysis: method

The initial sample comprises the set of 44 studies of our SLR. However, we exclude 6 studies whose approach is only theoretical or conceptual, and 3 cross-country studies since they are focus on several countries and it is difficult to isolate SOP effectiveness in each of the countries. Therefore, the final sample comprises 35 studies.

As shown in Table B1, the variables included in this analysis can be grouped into two main groups: institutional variables and firm variables. In particular, among institutional variables, *SOP typology* refers to the nature of the SOP in each country; *corporate governance model* refers to a governance and legal environment that characterize each country; *ownership concentration* represents the degree of ownership concentration within a country; *majority owner* represents who has a higher ownership concentration within companies; and *board independence* and *duality* indicate whether there is any regulation or recommendation about these corporate governance mechanisms in each country (La Porta et al., 1999; OECD, 2017). Among firm variables, *SOP results* show the level of voting dissent received by companies; and *SOP effectiveness* indicates the impact of SOP on executive compensation and market reaction (e.g., Alissa, 2015; Brunarski et al., 2015; Conyon & Sadler, 2010; Kimbro & Xu, 2016; Stathopoulos & Voulgaris, 2016b).

The measurement of the above variables is based on different sources. To code SOP typology, voting results and SOP effectiveness we used studies included in our SLR (e.g., Alissa, 2015; Brunarski et al., 2015; Conyon & Sadler, 2010; Kimbro & Xu, 2016). To code corporate governance models and variables related to ownership structure and boards, different studies and reports were used (e.g., Aguilera et al., 2006; La Porta et al., 1999; OECD, 2017).

Table B1. Measures of variables included in CATPCA analysis

	Variables	Codification
Institutional variables	SOP typology	01=Voluntary 02=Mandatory and non-binding 03=Mandatory and non-binding with special rules (like Australia) 04=Mandatory and binding
	Corporate governance model	01=Continental – French law 02=Continental – German law 03=Anglo-Saxon – Common law
	Ownership concentration	01=Dispersed 02=Mixed 03=Concentrated (low) 04=Concentrated (high)
	Majority owner	01=Families 02=Companies 03=Banks 04=Institutional (banks are excluded)
	Board independence	01=Non-established 02=Recommended 03=Binding (around o less than 50%) 04=Binding (more than 50%)
	Duality	01=Non-established 02=Recommended 03=Binding
Firm variables	SOP results	01=Low dissent (<5%): 02=Neutral dissent (5-8%) 03=High dissent (9-12%) 04=Huge dissent (>12%)
	SOP effectiveness	01=Low pay-for-performance or negative market reaction 02=Nor pay changes or not market reaction 03=High pay-for-performance or positive market reaction (selectively response) 04=High pay-for-performance or positive market reaction (systematically response)

CHAPTER 2: SAY-ON-PAY EFFECTIVENESS, CORPORATE GOVERNANCE MECHANISMS, AND CEO COMPENSATION ALIGNMENT[*]

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CHAPTER 2: SAY-ON-PAY EFFECTIVENESS, CORPORATE GOVERNANCE MECHANISMS, AND CEO COMPENSATION ALIGNMENT

2.1. INTRODUCTION

CEO compensation in large listed companies remains one of the most relevant and controversial topics in current academic debate (Murphy, 2013). Regular, large payments to CEOs highlight the potential for misalignment with firm performance that is generally associated with managerial opportunism (Core, Holthausen, & Larcker, 1999; Gomez-Mejia & Wiseman, 1997; Jensen & Murphy, 1990; Tosi, Werner, Katz, & Gomez-Mejia, 2000). In response to this danger, a set of corporate and institutional mechanisms have been developed to help companies to reduce potential agency conflicts brought about by CEO compensation (Holmstrom, 1979; Jensen & Meckling, 1976; Young, Peng, Ahlstrom, Bruton, & Jiang, 2008). At company level, boards of directors (and compensation committees), the primary and most important governance mechanisms monitoring CEO compensation, have not traditionally been very effective in aligning CEO compensation with firm performance (Hermalin & Weisbach, 2003; Ingley & van der Walt, 2005; Sanchez-Marin, Baixauli-Soler, & Lucas-Perez, 2010). At an institutional level, the implementation of Codes of Good Governance across different countries (e.g., *Cadbury Code*, 1992; *Final NYSE Corporate Governance Rules*, 2003), bringing together a set of recommendations to encourage CEO compensation alignment, have not also brought about greater linkage between CEO compensation and firm performance either (Aguilera & Cuervo-Cazurra, 2004).

These inefficiencies have stimulated the emergence of new mechanisms of corporate governance, among which Say-on-Pay (SOP) is one of the most noteworthy

(Conyon & Sadler, 2010; Ferri & Maber, 2013; Stathopoulos & Voulgaris, 2016). SOP is an initiative launched by the United Kingdom (UK) by the *Directors' Remuneration Report* (2002), in which, with the purpose of greater compensation transparency (Conyon & Sadler, 2010), the board of directors is required to submit CEO compensation to vote at the annual shareholder meeting. A number of countries have followed the UK with the introduction of similar legislation, including the United States (US), Australia, the Netherlands, Norway, Switzerland, and Sweden. In the European Union, 19 countries have already introduced the SOP mechanism, generally as a legal requirement (European Commission, 2010), and Spain has not been immune to this tendency, introducing compulsory SOP voting in the Sustainable Economy Act (*Ley 2/2011, de 4 de marzo, de Economía Sostenible*, 2011).

Although the result of SOP voting is not usually binding – with the exceptions of Scandinavian countries, Netherlands, Switzerland and Japan, which have enforced a binding model, most Continental European countries as well as Anglo-Saxon countries have implemented advisory systems (albeit the UK implemented the binding model in 2014) –, shareholders can show their (dis)satisfaction and their opinion will be one element in the board's considerations when designing CEO compensation (Conyon & Sadler, 2010; Ertimur, Ferri, & Oesch, 2013). Thus, the implementation of SOP could limit the potential discretion and lack of independence of the board designing CEO compensation, promoting transparency by providing a new means for shareholders to express themselves (Conyon & Sadler, 2010), and hence improving corporate governance efficiency in terms of aligning executive compensation with shareholders' interests (Deane, 2007; Mangen & Magnan, 2012; Pagnattaro & Greene, 2011).

The literature analyzing the effects of SOP is recent and, as such, still sparse. Specific studies examining the consequences of SOP in terms of CEO pay setting process generally has reported mixed results. While some research indicates that SOP is an effective mechanism to align CEO compensation (Cai & Walkling, 2011; Ferri & Maber, 2013; Kimbro & Xu, 2016), others do not find clear influences (Alissa, 2015; Conyon & Sadler, 2010), and they may even be directly critical, showing reverse effects of SOP on CEO compensation alignment (Armstrong, Gow, & Larcker, 2013; Levit & Malenko, 2011). In addition, the effectiveness of SOP within the overall corporate governance framework of the firm remains largely unexplored, and its interaction with other governance mechanisms (e.g., managerial ownership, board independence), as well as with the CEO's power (e.g., entrenchment) has not yet been properly examined. Moreover, the extant literature is largely focused on the Anglo-Saxon environment, with most of papers centered either on the UK (Alissa, 2015; Conyon & Sadler, 2010; Ferri & Maber, 2013; Gregory-Smith, Thompson, & Wright, 2014) or the US (Armstrong et al., 2013; Balsam, Boone, Liu, & Yin, 2016; Brunarski, Campbell, & Harman, 2015; Cai & Walkling, 2011; Kimbro & Xu, 2016), which limits the knowledge about the effects of SOP on executive compensation, and its interaction with other aspects of the institutional context of corporate governance with different conditions of ownership structure, shareholders protection, voting rights and capital markets.

Therefore, considering these gaps, and with the aim of drawing a more comprehensive picture of SOP, the purpose of this research is to analyze the effectiveness of SOP as a mechanism for aligning CEO compensation. Specifically, we examine, over a set of 114 Spanish listed companies between 2013 and 2016, both the direct effects of SOP on CEO compensation design and its moderating effects considering the interactive

influence of other firm governance mechanisms – represented by the board monitoring effectiveness and the ownership structure characteristics. We thus contribute with this research to the literature on shareholder activism, firstly, by increasing the still scarce and contradictory knowledge about the impact of SOP on firm decision-making processes in terms of executive compensation alignment (Krause, Whitler, & Semadeni, 2014; Mangen & Magnan, 2012). Secondly, by responding to calls regarding the need to include other firm's corporate governance mechanisms in the analysis of SOP effectiveness (Stathopoulos & Voulgaris, 2016). Thirdly, by answering the calls concerning the need to incorporate the influence of the institutional environment in the examination of SOP effects on executive compensation practices across countries (Correa & Lel, 2016). Our study analyzes the impact of SOP in Spain, a representative model of the Continental European system of corporate governance, contributing to a better understanding of SOP consequences by offering a comparison with those in the Anglo-Saxon environment.

The chapter is structured as follows. First, the theoretical aspects are set out, leading to the formulation of hypotheses. Then, the methodology is described, to show how the variables are measured and the empirical analyses are performed. Finally, the results are presented and discussed in terms of both academic and practical implications.

2.2. THEORETICAL BACKGROUND AND HYPOTHESIS

2.2.1 Positive effects of Say-on-Pay

Agency theory proposes that owners of companies should establish governance mechanisms to safeguard their interests in order to minimize conflicts derived from the separation of ownership and management (Holmstrom, 1979; Jensen & Meckling, 1976). Among these mechanisms, SOP has been adopted recently for listed firm with the main

purpose of monitoring executive compensation (Alissa, 2015; Cai & Walkling, 2011; Ferri & Maber, 2013). There are four arguments that support the shareholder-alignment hypothesis (Brunarski et al., 2015) regarding the positive association between a negative SOP voting results and the alignment of CEO compensation with firm performance and interest as a response to ultimately correct agency problems and increase shareholder wealth.

First, SOP reduces information asymmetries, providing more information to shareholders – in order to cast their votes at the annual shareholder meeting – about the CEO compensation policies (Greenstone, Oyer, & Vissing-Jorgensen, 2006). Based on this information, the potential adverse publicity and loss of reputation for the CEO, caused by a lack of support shown by SOP, favor a more efficient design of CEO compensation (Ertimur et al., 2013; Grundfest, 1993). In addition, the SOP increases communication between the compensation committee and shareholders encouraging the former to design executive compensation more carefully based on performance (Correa & Lel, 2016; Deane, 2007). Thus, although the vote is usually advisory, the board of directors does consider SOP voting results in the CEO pay setting process.

Second, shareholders are able to identify and penalize – with a negative vote – CEOs who receive misaligned compensation (Balsam et al., 2016; Kimbro & Xu, 2016). Brunarski et al. (2015) state that shareholders act rationally voting against CEO compensation when it is high – in terms of pay level – but especially when it is misaligned – in terms suboptimal compensation that is only loosely linked to firm performance. This reasoning increases at the extent on which shareholders perceive more potential agency conflicts in their companies in terms of rent expropriations through disproportionate payment levels usually poorly linked with the value of the firm (Alissa, 2015; Young et

al., 2008). If companies in this scenario do not react to a low SOP support by aligning CEO compensation, shareholders perceive it negatively, voting against CEO compensation in subsequent SOP processes, in the end forcing the alignment of his/her compensation (Brunarski et al., 2015).

Third, SOP presence increases sensitivity to "rewarding underperformance". This sensitivity is greater in companies with a high SOP voting dissent and in companies whose executive are compensated without clear performance references (Ferri & Maber, 2013), which leads to a stronger link between CEO compensation and firm performance. This tendency is revealed in the study of Ferri & Maber (2013) who point out that a low SOP support involves a decrease of cases of invariable CEO compensation – by means of removing the most controversial compensation provisions – as well as a significant decline of pay levels together with increases in the alignment of CEO compensation in situations of firm failure. Likewise, Gregory-Smith et al. (2014) report a significant change in executive compensation arrangements (primarily a more aligned compensation) only in cases with high percentages of negative voting.

Finally, although CEO appointment is usually made by the board of directors, he/she is ultimately elected by shareholders. In this context, part of the literature shows that CEO turnover is also influenced by SOP voting results (Alissa, 2015; Armstrong et al., 2013), decreasing when shareholders give a massive SOP support or when, in spite of high levels of SOP dissent, the CEO redirects his/her behavior according to shareholders interests. Since shareholders are usually interested in the proper alignment of executive compensation, boards of directors and CEOs tends to accept and implement measures to align the CEO pay setting process in order to mitigate agency conflicts.

On the basis of the above arguments, and considering that empirical studies mainly show a significant impact of low SOP support on the CEO compensation setting process (Balsam et al., 2016; Cai & Walkling, 2011; Ertimur et al., 2013; Ferri & Maber, 2013; Kimbro & Xu, 2016; Stathopoulos & Voulgaris, 2016), we expect high levels of negative voting to contribute to a greater alignment of CEO compensation to firm performance and interest, thereby reducing agency conflicts. Therefore:

Hypothesis 1: *Low SOP support influences positively the alignment of CEO compensation.*

2.2.2 Negative effects of Say-on-Pay

Critics of SOP claim, based on the agency theory, that shareholders cannot have enough information, incentives and knowledge to reasonably decide on CEO compensation (Alissa, 2015; Gordon, 2009). On the basis of this idea, some authors suggest that it is better for the CEO pay setting process to be left to the board and compensation committee, on the grounds that they are more qualified for this task (Bainbridge, 2009; Loveira, 2011). Since most of shareholders are not able to assess both the CEO compensation package and the pay setting process properly, they often merely accept CEO compensation by assenting in SOP voting (Bainbridge, 2009; Loveira, 2011). Consequently, an important proportion of shareholders cast their vote without a genuine knowledge of how their actions will affect the alignment of CEO compensation with the firm's interests.

Moreover, the effort to understand and discuss CEO compensation can be seen as futile by most shareholders – who are too small to have any significant effect on corporate decisions – because of their belief that their SOP votes will not have enough influence on

the board to trigger a significant reaction (Alissa, 2015). For the average shareholder, given the length and complexity of corporate disclosure documents, especially regarding executive compensation, the opportunity cost entailed in becoming informed before voting is quite high (Bainbridge, 2009). Accordingly, the necessary ex-ante investment of time and effort in making informed SOP voting decisions simply is not worthwhile.

Furthermore, from an institutional viewpoint (Oliver, 1992), some studies warn of the influence of some powerful executives or boards in convincing shareholders to vote in favor of CEO compensation, even though this compensation is misaligned, so that SOP fails in its primary role (Levit & Malenko, 2011; Morgan, Poulsen, & Wolf, 2006). The firm can engage in "impression management" (or "symbolic compliance") by biasing information about executive compensation, taking the board largely symbolic, rather than substantive, actions in response to shareholder activism (Berrone & Gomez-Mejia, 2009; David, Bloom, & Hillman, 2007; Westphal & Zajac, 1994, 1998; Zajac & Westphal, 1995). This behavior supports the window-dressing hypothesis (Brunarski et al., 2015), based on the idea that a CEO who has misaligned compensation, after receiving a low level of SOP voting support, will try to appease shareholders by superficial acts that do not really involve changes that affect their wealth or the value of the company. Mangen & Magnan (2012) point out that misaligned executive compensation that is legitimized by shareholders through a positive SOP result will become institutionalized and socially recognized and, consequently, difficult to change without considerable social, functional or political pressure.

These undesirable effects of SOP may occur mostly in firms with overcompensated CEOs – those who receive suboptimal compensation, significantly misaligned from firm performance – receiving a high level of SOP support. In these firms,

research has concluded that favourable SOP results generate more misaligned CEO compensation packages in subsequent years (Brunarski et al., 2015; Conyon & Sadler, 2010). As Morgan et al. (2006) suggest, firms with overcompensated CEOs receiving a high proportion of SOP approval might view the vote as a strong endorsement of the boards monitoring and/or their CEOs performance. The vote may signal to the CEO and to the board – which has already signaled their commitment to the overcompensation of the CEO – that shareholders have abdicated their monitoring responsibilities (Brunarski et al., 2015), which may substantially exacerbate further expropriations and agency costs.

All the above arguments lead us to expect that a high level of SOP support in companies with overpaid CEOs will legitimate board of directors pay setting processes, aggravating the subsequent misalignment of CEO compensation with firm performance.

Hypothesis 2: *High SOP support influences negatively the alignment of CEO compensation in companies with an overcompensated CEO*.

2.2.3 Moderating influence of firm's governance mechanisms

Based on the arguments cited in connection with our first hypothesis, which support a positive impact of SOP on pay arrangements conducive to a better alignment of CEO compensation, it is important to analyze the role played by other governance mechanisms. When SOP works as it is intended, the board of directors and the ownership structure – the two most relevant internal governance mechanisms of a firm – may act as drivers of SOP, either weakening or strengthening its effects on the alignment of CEO compensation. It is expected that the effectiveness of board monitoring, as well as the characteristics of the ownership structure, can have important implications for the effectiveness of SOP in securing alignment in CEO compensation. However, few studies

have explicitly investigated the potential interactive effects of SOP together with these other governance mechanisms (Stathopoulos & Voulgaris, 2016).

Regarding board monitoring, Ertimur et al. (2013) indicate that shareholders are likely to be increasingly active when casting their vote if they perceive that there are more independent directors on the board, expecting thus these boards to be more receptive to their views on the alignment of CEO compensation. In addition, Alissa (2015) indicates that the dissatisfaction shown by shareholders in SOP, together with the proportion of independent directors, relates positively to CEO turnover. Concerning ownership structure, Cai & Walkling (2011) and Kimbro & Xu (2016) indicate that ownership concentration and the majority presence of external owners or institutional investors increases monitoring of executive pay and the probability that overpaid CEOs will find little support in SOP voting.

Partially combining the effectiveness of board monitoring and the ownership structure (using both as control variables), Conyon & Sadler (2010) find an inverse relationship between the concentration of ownership, the effectiveness of board monitoring and SOP dissension. They show a higher level of SOP support – that is, a more investor approval of the CEO compensation setting processes – as the concentration of institutional ownership and board independence (in terms of growing representation of institutional directors) increases, which ultimately is also correlated with firm performance, indicating an improvement of CEO compensation alignment. This is consistent with the findings of Alissa (2015), who suggests that company boards seem to respond to shareholder dissatisfaction by adjusting CEO compensation decisions, but only to a certain extent, which depends on the structure of ownership and the power of the main shareholders.

From the above we can infer, on a more general level, that the effect of SOP on CEO compensation is moderated by the effectiveness of board monitoring which ultimately depends on the type of majority shareholder. Based on the ownership classification of firms differentiating owner–controlled (OC) companies from owner–managed (OM) companies (Baixauli-Soler & Sanchez-Marin, 2011, 2015; Tosi & Gomez-Mejia, 1994; Young et al., 2008)[6], Stathopoulos & Voulgaris (2016) maintain that the lower level of board monitoring found in OM companies involves less aligned CEO compensation which, paradoxically, is not necessarily associated with greater dissension in the SOP vote. On the contrary, SOP support is usually higher in OM than in OC companies, because in the former the controlling shareholders, who form part of the firm management team, are voting for their own compensation and usually have the power to secure approval. Accordingly, in OM firms, managers increase rent extraction through executive payments, resulting in both higher and misaligned CEO compensation.

Considering these arguments, it is expected that the effectiveness of board monitoring positively influences the relationship between a low level of SOP support and the alignment of CEO compensation, the relationship being stronger in OC companies than in OM companies. Therefore:

> Hypothesis 3a: *The effectiveness of board monitoring exerts a positive moderating effect in the relationship between low SOP support and the alignment of CEO compensation.*

[6]OC companies are owned by large shareholders that are not linked to the firm's management (Young et al., 2008) and are characterized by strong board monitoring of CEOs that emphasizes the alignment of CEO compensation (Sanchez-Marin et al., 2011; Tosi & Gomez-Mejia, 1994). In OM companies, ownership is concentrated mainly in large shareholders who take part in the firm's management (Young *et al*., 2008), where board monitoring is limited, resulting in less aligned CEO compensation (Lambert, Larcker, & Weigelt, 1993; Sanchez-Marin et al., 2011).

Hypothesis 3b: *Low SOP support influences the alignment of CEO compensation more positively in OC companies than in OM companies*.

2.3. METHODOLOGY

2.3.1 Sample and data collection

This analysis focuses on listed Spanish companies. This feature of the research is particularly relevant as the previous literature has focused on US and UK listed firms (Brunarski et al., 2015; Conyon & Sadler, 2010; Ferri & Maber, 2013; Mangen & Magnan, 2012), all representatives of the Anglo-Saxon model of corporate governance. The Spanish system of corporate governance, representative of continental European models, is characterized by a high concentration of ownership, the existence of cross-holdings, low protection of minority shareholders, an underdeveloped capital market and a low degree of liquidity, and the presence of a one-board structure in which a single governing body simultaneously performs supervision and direction (Baixauli-Soler & Sanchez-Marin, 2015; de Andres, Azofra, & Lopez, 2005; La Porta, Lopez-De-Silanes, & Shleifer, 1999). As a result, in Spanish companies, rather than principal–agent conflict (Jensen and Meckling, 1976), principal–principal conflict occurs between majority and minority shareholders (Baixauli-Soler & Sanchez-Marin, 2015; La Porta et al., 1999). In addition, since external or market-based mechanisms of corporate governance are practically non-existent (Sanchez-Marin & Baixauli-Soler, 2014), the type of majority owner, which has a major impact on the effectiveness of the board's monitoring, can influence (and differentiate) the effects of SOP results on the CEO compensation setting process.

Our study comprises 114 firms, from sectors other than the financial sector, and all listed Spanish companies (twelve companies were excluded because their information about SOP or CEO compensation was not available). The study covers the period from 2013 (the first year with available information about SOP voting results) to 2016. Three main sources of information were used for collecting data. First, the *Spanish Securities and Exchange Commission* (*Comisión Nacional del Mercado de Valores*), which publishes the Corporate Governance Reports and the Directors Compensation Reports for listed companies annually. The Corporate Governance Reports provide information on corporate governance characteristics including those related to ownership structure and boards of directors. The Directors Compensation Reports provide information on SOP voting results and on CEO compensation. Second, the *SABI* (*Sistema de Análisis de Balances Ibéricos*) database provided the economic and financial information of companies. And, third, the *DataStream* database was used to collect the stock returns of companies.

2.3.2 Variables

CEO compensation (C_CEO). CEO compensation was measured through two variables: (1) *CEO cash compensation* (cash C_CEO), which is the sum of fixed compensation (sum of fixed cash compensation, compensation for attending commissions, and compensation for membership of other group companies), short-term variable compensation (short-term variable compensation in cash), long-term variable compensation (total of long-term variable compensation in cash and exercised stock options obtained during the year) and payment in kind (total of allowances and other benefits); and (2) *CEO total compensation* (total C_CEO), which is the CEO cash

compensation, plus stock options and shares granted (total market value of stock options and shares granted) and long-term incentive plans (total value of long-term incentive plans). This study uses the natural logarithm of C_CEO to reduce dispersion (Armstrong et al., 2013; Core et al., 1999; Kimbro & Xu, 2016).

Aligned CEO compensation (ALIG_CEO). To estimate the degree of alignment of CEO compensation with firm performance and interest, we follow the procedure used by Core and colleagues (Core et al., 1999; Core, Guay, & Larcker, 2008), that has been extensively used in measuring expected compensation (Alissa, 2015; Armstrong et al., 2013; Balsam et al., 2016; Brunarski et al., 2015; Cai & Walkling, 2011; Correa & Lel, 2016; Ferri & Maber, 2013), and which is obtained by regressing the natural logarithm of CEO compensation on proxies for economic and financial determinants of CEO compensation. The estimation is shown in the Appendix C. Specifically:

$$ln(C\_CEO_{it}) = \beta_0 + \beta_1 \cdot ln(TEN_{it}) + \beta_2 \cdot ln(SALES_{it-1}) + \beta_3 \cdot ROA_{it} + \beta_4 \cdot ROA_{it-1} + \beta_5 \cdot RET_{it} + \beta_6 \cdot RET_{it-1} + \beta_7 \cdot BTM_{it-1} + n_i + d_t + \psi_i + e_{it} \quad (1)$$

Where *CEO compensation* (C_CEO) is measured alternatively as cash compensation (cash C_CEO) and total compensation (total C_CEO); *tenure* (TEN) is the number of years the CEO has been in office at the end of year *t*. We expect that an increase in the tenure indicates an increase in the CEO's influence on the board when designing their compensation (Core et al., 1999); *sales* (SALES) is the natural logarithm of sales of the company; *return on assets* (ROA) is calculated as the ratio of net income to the book value of the firm's total assets; *stock returns* (RET) is the 52 week total return for years *t* and *t−1*; and *book-to-market* (BTM) is the book value of equity divided by market capitalization at the end of year *t−1*. Finally, we control for the industry of each company through dichotomous variables (ψ_i), calculated from the primary Standard Industrial

Classification (SIC) associated with each of them, and we also control the time effect (d_t), again controlled through dichotomous variables.

CEO overcompensation. The previous literature argues that CEO overcompensation is an indicator of significant deviations of compensation regarding company performance (Alissa, 2015; Ferri & Maber, 2013). Taking this into account, from aligned CEO compensation, we subsequently can estimate CEO overcompensation (OVERC_CEO), calculated as shown in Model 2 (Alissa, 2015; Brunarski et al., 2015): the logarithm of CEO compensation – considering alternatively cash compensation (cash C_CEO) and total compensation (total C_CEO) – divided by aligned CEO compensation – also considering alternatively cash aligned compensation (cash ALIG_CEO) and total aligned compensation (total ALIG_CEO).

$$OVERC\_CEO_{it} = ln\left(\frac{C\_CEO_{it}}{ALIG\_CEO_{it}}\right) \quad (2)$$

Furthermore, following the procedure of Brunarski et al. (2015), CEOs are classified through a dichotomous variable: DOVERC_CEO, which takes the value 1 when the CEO is overcompensated – that is, when his/her compensation is above the median – and 0 otherwise.

Say-on-Pay support. Considering that SOP support is a positive assessment of CEO compensation when shareholders vote in favor and a negative assessment when shareholders vote against or abstain (Conyon & Sadler, 2010; Ferri & Maber, 2013; Hooghiemstra, Kuang, & Qin, 2015), we measured SOP through (1) SOP support and (2) shareholder satisfaction. First, *SOP support* considers the percentage of votes (positive, negative and abstentions) from the total number of votes that each company receives in each period. From this definition, we create two variables: low SOP support (SOP^{-}), defined as the sum of the percentage of negative votes and abstentions over total votes,

and high SOP support (SOP^{+}), defined as the percentage of positive votes over total votes (Conyon & Sadler, 2010; Correa & Lel, 2016; Ferri & Maber, 2013). Second, *shareholder satisfaction* is based on the proportion of favorable votes regarding the appropriateness of CEO compensation (Brunarski et al., 2015; Pagnattaro & Greene, 2011). We create from this approach a dichotomous variable, DSOP, which takes the value 1 when the percentage of favorable votes is below to the median value for positive votes (dissatisfied shareholders), and takes the value 0 when the percentage of favorable votes is equal to or higher than the median (satisfied shareholders). We use this dummy variable to segment the sample between companies with dissatisfied shareholders and companies with satisfied shareholders.

Firm's governance mechanisms. We operationalized firm's governance mechanisms through both the effectiveness of monitoring by the board and the characteristics of the ownership structure. The *effectiveness of board monitoring* is proxied by two variables representing the degree of independence of boards in taking decision about CEO pay (Balsam et al., 2016; Ertimur et al., 2013; Ferri & Maber, 2013): (1) board independence (INDEP), a variable that measures the number of independent directors as a proportion of the total number of directors (Conyon & Peck, 1998); and (2) duality (DUAL), a dichotomous variable that takes the value 1 when the same individual is chairman of the board and CEO of the company, and 0 otherwise (Boyd, 1994). *Ownership structure* is represented by the type of majority shareholder control in the company, measured following the procedure used by Tosi & Gomez-Mejia (1994). Companies are classified into three groups: owner-controlled companies (OC), owner-managed companies (OM) and manager-controlled companies (MC). If any single individual or institution outside the firm owns 5% or more of the company's stock, the

classification is OC. The firm is classified as OM if any individual within the firm (including the CEO) owns 5% or more of the company's stock. If the above criteria are not met, the company is considered to have dispersed ownership, and the classification is MC.

Control variables. In addition to the variables that indirectly control for CEO compensation in Model 1, we consider some additional variables that potentially influence CEO compensation. The *percentage of ownership in the CEO´s hands* (OWN_CEO), indicates the extent of CEO power to influence the design of his/her own compensation (Core et al., 2008; Tosi et al., 2000). *Ownership concentration* (HERF) is measured by the Herfindahl index (Baixauli-Soler & Sanchez-Marin, 2011). This index is the sum of the squares of the market shares of the four largest shareholders expressed as fractions, and ranges from 0 (dispersed ownership) to 1 (concentrated ownership). *Business complexity* (COMPL), measured by the logarithm of the ratio of intangible assets to the firm total assets (Finkelstein & Boyd, 1998). *Leverage* (LEV), is calculated as the long-term and current debt divided by the book value of equity (Armstrong & Vashishtha, 2012). Finally, *business diversification* (DIV), proxied by the number of four-digit secondary SIC codes associated with the company (Miller, Wiseman, & Gomez-Mejia, 2002).

2.3.3 Models and analyses

To test the hypotheses, we use a regression analysis on Equations 3, 4 and 5, considering alternatively as dependent variables cash and total compensation. The base years used are 2015 and 2016, since we can analyze the effects after two periods – there are thus two delays.

First, we test the influence of a low SOP support on alignment of CEO compensation. Equation 3 is estimated using first the whole sample of companies and subsequently dividing the sample into two subgroups: (1) companies with dissatisfied shareholders (DSOP takes the value 1); and (2) companies with satisfied shareholders (DSOP takes the value 0). The dependent variable is aligned CEO compensation, which we estimate with the model of Core et al. (1999, 2008)) (see Equation 1). The independent variables are low SOP support (SOP^{-}) and the control variables. We expect β_2 and β_3 indicate a significant and positive influence on aligned CEO compensation, mainly in companies with dissatisfied shareholders. However, we do not expect β_1 to have any effect, because this effect is deferred to subsequent periods (Cai & Walkling, 2011; Ertimur et al., 2013; Ferri & Maber, 2013; Kimbro & Xu, 2016).

$$ALIG\_CEO_{it} = \beta_0 + \beta_1 \cdot SOP^{-}_{it} + \beta_2 \cdot SOP^{-}_{it-1} + \beta_3 \cdot SOP^{-}_{it-2} + \beta_4 \cdot Control\ variables_{it} + e_{it} \quad (3)$$

Second, to test the second hypothesis we formulate Equation 4, which is estimated using the whole sample of companies and, subsequently, dividing the sample into two subgroups: (1) companies whose CEOs are overcompensated (DOVERC_CEO takes the value 1); and (2) companies whose CEOs are not overcompensated (DOVERC_CEO takes the value 0). The dependent and independent variables are the same as used previously, with the exception of SOP which is measured through high SOP support (SOP^{+}). We expect β_2 and β_3 to have a significant and negative influence on alignment of CEO compensation when the sample is restricted to the subgroup of companies whose CEOs are overcompensated. Meanwhile, as in the previous model, we do not expect β_1 to have any effect (Brunarski et al., 2015; Conyon & Sadler, 2010).

$$ALIG\_CEO_{it} = \beta_0 + \beta_1 \cdot SOP^{+}_{it} + \beta_2 \cdot SOP^{+}_{it-1} + \beta_3 \cdot SOP^{+}_{it-2} + \beta_4 \cdot Control\ variables_{it} + e_{it} \quad (4)$$

Finally, Equation 5 is formulated to test Hypothesis 3. In this model, we add the moderating effect of effectiveness of board monitoring. The dependent variable is the alignment of CEO compensation, and the independent variables are low SOP support (SOP^{-}), the effectiveness of board monitoring – measured by the degree of independence of the board and duality –, the interaction effect between low SOP support and supervisory effectiveness of the board, and the control variables. To test Hypothesis 3a, first, we estimate using the whole sample of companies that are controlled by owners or managers and, subsequently, to test Hypothesis 3b, two subgroups are distinguished to analyze the effectiveness of board monitoring: OC companies (59 firms) and OM companies (52 firms), removing MC companies of our analyses due to their insignificance representativeness (only 3 firms). We expect the same signs for β_1, β_2 and β_3 as we obtained in Equation 3. In addition, we expect a positive and significant influence for β_4, β_8 and β_{10} on alignment of CEO compensation, because board independence favors the alignment of CEO compensation. In contrast, we expect a significant and negative influence for β_5, β_9 and β_{11} because duality limits the alignment of CEO compensation. As in the previous models, we do not expect β_6 and β_7 to have any effect. In addition, we compare OC and OM expecting the moderating effect of the effectiveness of board monitoring to be greater in OC companies than OM companies.

$$
\begin{aligned}
ALIG\_CEO_{it} = \beta_0 + \beta_1 & \\
& \cdot SOP^{-}_{it} + \beta_2 \cdot SOP^{-}_{it-1} + \beta_3 \cdot SOP^{-}_{it-2} + \beta_4 \cdot INDEP_{it} + \beta_5 \cdot DUAL_{it} + \beta_6 \\
& \cdot (INDEP_{it} \cdot SOP^{-}_{it}) + \beta_7 \cdot (DUAL_{it} \cdot SOP^{-}_{it}) + \beta_8 \cdot (INDEP_{it} \cdot SOP^{-}_{it-1}) \\
& + \beta_9 \cdot (DUAL_{it} \cdot SOP^{-}_{it-1}) + \beta_{10} \cdot (INDEP_{it} \cdot SOP^{-}_{it-2}) + \beta_{11} \\
& \cdot (DUAL_{it} \cdot SOP^{-}_{it-2}) + \beta_{12} \cdot Control\ variables_{it} + e_{it}
\end{aligned}
\tag{5}
$$

2.4 RESULTS

2.4.1 Descriptive statistics and correlations

Table 1 contains a description of basic statistics. Regarding CEO compensation, the values (in logarithms) shown in Table 1 indicate that the average CEO cash compensation amounts to one million euros, rising to one and a half million euros when total compensation is considered. In addition, the standard deviations indicate the existence of a large compensation gap between CEOs. Regarding aligned CEO compensation, as shown in the previous literature (Alissa, 2015; Brunarski et al., 2015), the total compensation for CEOs is, on average, more than what may be considered optimal. Furthermore, overcompensated CEOs receive a high level of excess compensation, as CEOs obtain additional payments not linked to the economic and financial indicators of the company. However, the large standard deviation indicates that compensation excess (or deficit) varies depending on the firm. Regarding SOP voting results, more than 92% of shareholders approve CEO compensation, while about 8% show their dissatisfaction by casting a negative vote or abstaining. These results are consistent with evidence given in the literature (Conyon & Sadler, 2010). In relation to corporate governance variables, the average proportion of independent directors on boards is 37%, ranging from 5% to 75%. The average duality is 0.45, indicating that a half of the companies have the CEO and chairman positions occupied by the same person. Concerning the type of majority owner, although there is certain balance between OC and OM companies, OC companies (59 firms) predominate over OM companies (52 firms).

Table 1. Summary of sample characteristics (2013-2016)

	Variable	Mean	Median	Standard deviation	Minimum	Maximum
CEO compensation[a]	Cash C_CEO	13.896	13.262	1.590	10.120	15.940
	Total C_CEO	14.082	13.381	1.668	10.120	16.120
	Cash ALIG_CEO	12.968	12.307	1.780	9.630	16.285
	Total ALIG_CEO	13.224	12.721	1.934	9.829	17.045
	Cash OVERC_CEO	0.103	0.101	1.019	-0.605	0.445
	Total OVERC_CEO	0.175	0.179	1.020	-0.630	0.557
Say-on-Pay[b]	Positive votes	92.821	95.924	9.362	33.333	100.00
	Negative votes	4.363	1.956	5.838	0.000	29.818
	Abstentions	2.816	0.166	7.758	0.000	66.667
Governance mechanisms[c]	INDEP	36.636	34.672	14.756	4.761	74.885
	DUAL	0.456	0.333	0.434	0.000	1.000
	Majority owner	1.448	1.000	0.499	1.000	2.000

[a]Cash C_CEO is the logarithm of cash compensation received by the CEO and the total C_CEO is the logarithm of total compensation received by the CEO; ALIG_CEO is the logarithm of estimated compensation through the model of Core et al. (1999, 2008) (cash and total); and OVERC_CEO is the logarithm of CEO overcompensation (cash and total); [b]SOP is measured as a percentage of the total votes cast; [c]Independence (INDEP) is measured by the percentage of independent outside directors on the board of directors, duality (DUAL) is measured by a dummy – 1 if duality exists and 0 otherwise, and majority owner is measured by another dummy – 1 for OC companies and 2 for OM companies.

Table 2 contains correlations between the set of variables. Panel A shows correlations of variables that use the model of Core et al. (1999, 2008) to estimate the alignment of CEO compensation. Panel B shows correlations of variables related to the hypothesis testing. In Panel A, the high negative correlation between ALIG_CEO and OVERC_CEO is striking as well as the correlations between compensation variables and ROA. Moreover, sales are negatively correlated with ALIG_CEO and OVERC_CEO. In Panel B, compensation variables (ALIG_CEO and OVERC_CEO) and SOP variables (SOP^+ and SOP^-) are negatively correlated to each other. In addition, the correlation between board independence/duality and SOP variables is also significant. The correlation between the remaining explanatory variables is not high. Also, VIF values are less than 5 and condition indexes are less than 30, indicating an absence of significant multicollinearity between independent variables (Hair, Anderson, Tatham, & Black, 1998).

Table 2. Correlations between variables[a]

Panel A: Estimation of aligned CEO compensation and CEO overcompensation

	1	2	3	4	5	6	7
(1) ALIG_CEO	1.000						
(2) OVERC_CEO	-0.902***	1.000					
(3) TEN	-0.130	0.085	1.000				
(4) SALES	-0.137*	-0.193**	0.017	1.000			
(5) ROA	0.944***	-0.822***	-0.193**	-0.165*	1.000		
(6) RET	-0.036	-0.040	0.178*	0.124	-0.112	1.000	
(7) BTM	-0.01	-0.67	-0.017	-0.064	-0.017	0.374***	1.000

Panel B: SOP support and aligned CEO compensation

	1	2	3	4	5	6	7	8	9	10	11
(1) ALIG_CEO	1.000										
(2) OVERC_CEO	-0.902***	1.000									
(3) SOP+	0.010	-0.082	1.000								
(4) SOP-	-0.010	0.082	-0.78***	1.000							
(5) INDEP	-0.022	0.059	-0.212**	0.212**	1.000						
(6) DUAL	0.051	-0.005	-0.126*	0.126*	0.211**	1.000					
(7) OWN_CEO	-0.101	0.107	0.164*	-0.164*	0.099	0.279***	1.000				
(8) HERF	-0.030	0.046	-0.036	0.036	-0.016	-0.128	-0.012	1.000			
(9) LEV	-0.007	0.032	0.109	-0.109	-0.064	-0.157*	0.067	0.037	1.000		
(10) COMPL	0.021	-0.092	-0.084	0.084	-0.087	-0.117	-0.074	-0.027	0.009	1.000	
(11) DIV	-0.142	0.146*	0.031	-0.031	0.094	-0.104	-0.021	-0.082	-0.005	-0.061	1.000

p-value: *p<0,10; **p<0,05; ***p<0,01

[a]ALIG_CEO is the logarithm of estimated compensation through the model of Core et al. (1999, 2008); OVERC_CEO is the logarithm of CEO overcompensation; SOP^+ is the percentage of positive votes received by each company in the SOP; SOP^- is the sum of the percentage of negative votes and abstentions received by each company in the SOP; INDEP is measured by the percentage of independent outside directors on the board of directors; DUAL is measured by a dummy – 1 if there is duality and 0 otherwise; TEN is the logarithm of the time, in years, the CEO has spent in office; SALES is logarithm of sales, in euros, of each company; ROA is the return on assets; RET is the 52 week total return; BTM represents the book to market ratio, considered as the book value of assets divided by market capitalization; OWN_CEO is the percentage of ownership in the hands of the CEO; HERF measures the degree of concentration of ownership through Herfindahl index; LEV represents the degree of leverage of the company; COMPL refers to the level of business complexity; DIV measures the degree of diversification of the company.

2.4.2 Testing the hypotheses

Table 3 shows the regressions of Model 3 to test Hypothesis 1. First, we estimate the model using the whole sample, obtaining a significant and positive influence of low SOP support on aligned CEO compensation in the following years, which indicates that SOP results influence CEO compensation arrangements in the following years. Second, in order to analyze the moderating effects of shareholder satisfaction with CEO compensation, the sample was divided into two subgroups – companies with dissatisfied shareholders and companies with satisfied shareholders.

In companies with dissatisfied shareholders results are similar to those for the whole sample. In contrast, in companies with satisfied shareholders, the effect of a low SOP support on the alignment of CEO compensation is not significant because shareholders do not feel the need to change compensation packages. These results are consistent and confirm Hypothesis 1. Regarding the control variables, CEO ownership is the variable with the greatest influence on the design of aligned compensation. In particular, its impact is negative, which means that an increase in CEO ownership implies greater CEO power; thus, a decrease in aligned compensation. In addition, company diversification has a negative impact on aligned compensations, while the company complexity had a positive impact in 2015, but in 2016 the impact of complexity was only significant in Panel A.

Table 3. Low SOP support and aligned CEO compensation[a]

Panel A: All companies

Variable[b]	**2015**				**2016**			
SOP^{-}_{it}				0.063				0.028
SOP^{-}_{it-1}		0.263***	0.214**	0.196*		0.257***	0.120*	0.105*
SOP^{-}_{it-2}	0.251***		0.202**	0.151	0.352***		0.289**	0.283**
OWN_CEO_{it}	-0.130*	-0.188*	-0.192*	-0.193*	-0.135*	-0.199**	-0.142*	-0.140*
$HERF_{it}$	-0.044	-0.110	-0.071	-0.071	0.007	-0.013	0.021	0.024
$COMPL_{it}$	0.179*	0.170*	0.172*	0.173*	0.160*	0.190**	0.151*	0.152*
LEV_{it}	-0.031	-0.067	-0.061	-0.059	0.071	-0.008	0.054	0.053
DIV_{it}	-0.110	-0.139*	-0.126*	-0.126*	-0.050	-0.082	-0.050	-0.049

Panel B: Companies with dissatisfied shareholders

Variable[b]	**2015**				**2016**			
SOP^{-}_{it}				-0.416				-0.123
SOP^{-}_{it-1}		0.266*	0.208*	0.229*		0.113**	0.093*	0.240**
SOP^{-}_{it-2}	0.480***		0.455**	0.492***	0.315**		0.325*	0.329*
OWN_CEO_{it}	-0.207*	-0.062	-0.153	-0.169*	-0.003	-0.053	-0.002	-0.006
$HERF_{it}$	0.133	0.053	0.200*	0.100	0.100	0.103	0.095	0.081
$COMPL_{it}$	0.104	0.086	0.057	0.127	0.078	0.117	0.081	0.087
LEV_{it}	0.118	0.144	0.102	0.099	0.18	0.085	0.186	0.194
DIV_{it}	0.048	0.011	-0.187*	-0.180*	0.096	0.042	0.095	0.086

Panel C: Companies with satisfied shareholders

Variable[b]	**2015**				**2016**			
SOP^{-}_{it}				0.417				0.316
SOP^{-}_{it-1}		-0.261	-0.328	-0.389		0.074	0.079	0.041
SOP^{-}_{it-2}	-0.212		0.075	0.155	0.131		0.134	0.063
OWN_CEO_{it}	-0.204**	-0.123*	-0.131*	-0.151**	-0.211*	-0.239*	-0.218*	-0.156
$HERF_{it}$	-0.076	-0.075	-0.058	-0.030	0.046	0.030	0.043	0.033
$COMPL_{it}$	0.203*	0.212*	0.217*	0.235*	0.094	0.123	0.077	0.075
LEV_{it}	-0.076	-0.074	-0.073	-0.082	-0.013	-0.033	-0.014	-0.008
DIV_{it}	-0.164*	-0.174*	-0.177*	-0.177*	-0.193	-0.201	-0.194	-0.176

p-value: *p<0.10; **p<0.05; ***p<0.01

[a] The dependent variable is aligned total compensation. Results obtained for cash compensation are similar to these. The whole sample is 114 companies – 57 are companies with unsatisfied shareholders and 57 are companies with satisfied shareholders; [b]SOP^{-} is the sum of the percentage of negative votes and abstentions received by each company in the SOP; OWN_CEO is the percentage of ownership in the hands of the CEO; HERF measures the degree of ownership concentration through the Herfindahl index; COMPL refers to the level of business complexity; LEV represents the degree of leverage of the company; DIV measures the degree of diversification of the company.

Table 4 shows the regressions of Model 4 to test Hypothesis 2, where we analyze the influence of a high level of SOP support on overcompensated CEOs. When we estimate the model using the whole sample, the effect of a high level of SOP support on aligned CEO compensation is not significant. However, in the subsample of companies with overcompensated CEOs, we find that a high level of SOP support from shareholders in previous years has a significant and negative influence on aligned CEO compensation. In these companies, although it makes that there should be a negative vote – because the CEOs are overcompensated – shareholders legitimize this inefficient compensation, which leads to more misaligned designs of CEO compensation in the future. In companies with CEOs who are not overcompensated, the influence of a high level of SOP support is also significant, but positive, which indicates that shareholders agree with the aligned design of CEO compensation.

These results confirm Hypothesis 2. SOP does not have a significant influence in the same year, which is consistent with our expectations. In addition, regarding the control variables, CEO ownership is again the variable with the greatest influence (negative) on the design of aligned CEO compensation. On the other hand, in Panel A, complexity has a positive effect and diversity has a negative effect in 2015. In 2016 neither complexity nor diversity are significant. In Panel B, complexity has a positive influence on aligned compensation in both years. Finally, in Panel C, diversity has a negative influence in 2016.

Table 4. High SOP support and aligned CEO compensation[a]

Panel A: All companies

Variable[b]	**2015**				**2016**			
SOP^{+}_{it}				-0.099				-0.028
SOP^{+}_{it-1}		0.008	0.093	0.103		-0.057	-0.120	-0.105
SOP^{+}_{it-2}	-0.051		-0.115	-0.109	-0.152		-0.189	-0.083
OWN_CEO_{it}	-0.141*	-0.136	-0.155*	-0.147*	-0.135*	-0.199**	-0.142*	-0.140*
$HERF_{it}$	-0.061	-0.088	-0.058	-0.041	0.007	-0.013	0.021	0.024
$COMPL_{it}$	0.178*	0.179*	0.186**	0.172*	0.060	0.090	0.051	0.052
LEV_{it}	-0.027	-0.031	-0.026	-0.023	0.071	-0.008	0.054	0.053
DIV_{it}	-0.121*	-0.122*	-0.125*	-0.122*	-0.050	-0.082	-0.050	-0.049

Panel B: Companies with overcompensated CEOs

Variable[b]	**2015**				**2016**			
SOP^{+}_{it}				-0.057				-0.110
SOP^{+}_{it-1}		-0.186**	-0.184*	-0.305**		-0.255**	-0.241*	-0.167*
SOP^{+}_{it-2}	-0.212**		-0.247**	-0.163*	-0.445***		-0.432***	-0.432***
OWN_CEO_{it}	-0.227*	-0.247*	-0.251*	-0.264**	-0.153*	-0.303**	-0.156*	-0.142*
$HERF_{it}$	-0.034	-0.030	-0.029	-0.050	0.056	0.039	0.061	0.077
$COMPL_{it}$	0.230*	0.218*	0.214*	0.253*	0.206*	0.223*	0.203*	0.206*
LEV_{it}	0.014	0.018	0.021	0.002	0.040	-0.117	0.029	0.030
DIV_{it}	0.030	0.021	0.019	0.012	0.067	-0.002	0.063	0.060

Panel C: Companies with not overcompensated CEOs

Variable[b]	**2015**				**2016**			
SOP^{+}_{it}				-0.236				-0.089
SOP^{+}_{it-1}		0.380**	0.236*	0.110		0.357**	0.269**	0.220*
SOP^{+}_{it-2}	0.496***		0.410***	0.325**	0.314**		0.139*	0.109
OWN_CEO_{it}	-0.153*	-0.179*	-0.223**	-0.219**	-0.240*	-0.351**	-0.238*	-0.233*
$HERF_{it}$	0.129	-0.025	0.151	0.142	-0.173	-0.156	-0.140	-0.134
$COMPL_{it}$	0.006	-0.038	-0.040	-0.056	-0.111	-0.105	-0.123	-0.117
LEV_{it}	0.131	0.188	0.133	0.141	0.184	0.165	0.178	0.169
DIV_{it}	-0.044	-0.061	-0.030	-0.052	-0.234*	-0.217*	-0.212*	-0.201*

p-value: *p<0.10; **p<0,05; ***p<0,01

[a] The dependent variable is aligned total compensation. Results obtained for cash compensation are similar to these. The whole sample is 114 companies – 57 of them are companies with overcompensated CEOs; [b]SOP^{+} is the percentage of positive votes received by each company in the SOP; OWN_CEO is the percentage of ownership in the hands of the CEO; HERF measures the degree of ownership concentration through the Herfindahl index; COMPL refers to the level of business complexity; LEV represents the degree of leverage of the company; DIV measures the degree of diversification of the company.

Finally, Table 5 contains the regressions of Model 5 to test Hypothesis 3. For this purpose, we use the sample of 111 concentrated companies, which are respectively controlled by owners (OC firms) or managers (OM firms). Using the whole sample to test Hypothesis 3A, we find a positive and significant effect of a low level of SOP support in previous voting on aligned CEO compensation, as was also found in relation to Hypothesis 1. In addition, we find a moderating effect of the effectiveness of board monitoring. The degree of board independence and non-duality structure positively moderate the relationship between a low level of SOP support and the alignment of CEO compensation, thus confirming Hypothesis 3A.

Table 5. Moderating effects of board monitoring and ownership structure[a]

	All companies		OC companies		OM companies	
Variable[b]	**2015**	**2016**	**2015**	**2016**	**2015**	**2016**
SOP^{-}_{it}	-0.012	0.081	-0.003	0.167	0.233	0.248
SOP^{-}_{it-1}	0.168*	0.118*	0.220*	0.242*	-0.128	0.219
SOP^{-}_{it-2}	0.418**	0.159**	0.283**	0.332**	0.322	0.004
$INDEP_{it}$	0.199**	0.193*	0.283**	0.280*	0.135	0.135
$DUAL_{it}$	-0.185*	-0.204**	-0.196*	-0.201*	-0.126	0.113
$INDEP_{it} * SOP^{-}_{it}$	-0.310	0.025	0.078	0.039	0.089	0.113
$DUAL_{it} * SOP^{-}_{it}$	-0.117	0.032	-0.135	0.290	-0.138	-0.182
$INDEP_{it} * SOP^{-}_{it-1}$	0.309**	0.468***	0.224*	0.417**	0.067	-0.063
$DUAL_{it} * SOP^{-}_{it-1}$	-0.377**	-0.176*	-0.395**	-0.363*	-0.489	-0.418
$INDEP_{it} * SOP^{-}_{it-2}$	0.189**	0.236**	0.354*	0.492**	-0.067	0.018
$DUAL_{it} * SOP^{-}_{it-2}$	-0.180*	-0.053	-0.410**	-0.418**	-0.151	0.148
OWN_CEO_{it}	-0.261***	-0.186*	-0.074	-0.104	-0.120*	-0.127**
$HERF_{it}$	0.138	0.081	-0.153	-0.042	-0.131	-0.274*
$COMPL_{it}$	0.163*	0.106	0.217*	0.103	0.122	0.167
LEV_{it}	-0.015	0.064	0.189*	0.182*	-0.164*	0.003
DIV_{it}	-0.075	-0.038	0.032	0.108	-0.173**	-0.290*

p-value: *p<0.10; **p<0.05; ***p<0.01

[a] The dependent variable is aligned total compensation. Results obtained for cash compensation are similar to these. The sample used is 111 companies –59 are OC companies and 52 are OM companies. MC firms have been removed from the analyses; [b]INDEP is measured by the percentage of independent outside directors on the board of directors; DUAL is measured by a dummy – 1 if there is duality and 0 otherwise; OWN_CEO is the percentage of ownership in the hands of the CEO; HERF measures the degree of ownership concentration through the Herfindahl index; COMPL refers to the level of business complexity; LEV represents the degree of leverage of the company; DIV measures the degree of diversification of the company.

The sample of companies was divided into the two subgroups, 59 OC firms and 52 OM firms, to test Hypothesis 3B. As can be seen in Table 5, in OC companies there is a positive and significant effect of a low level of SOP support on aligned CEO compensation. Meanwhile, in OM companies, the results are not significant, indicating that in these firms a low level of SOP support has no influence on subsequent CEO compensation alignment. Regarding the moderating role played by the effectiveness of board monitoring, in OC companies we observe that the proportion of independent directors on the board has a significant and positive effect on aligned CEO compensation, and that the interaction between SOP and board independence is significant. We also note that, as expected, duality has a significant and negative effect on aligned CEO compensation, as well as the interaction term. Moreover, in OM companies, the effectiveness of board monitoring has no impact on the relationship between SOP and aligned compensation. In short, the moderating effect of the supervisory effectiveness of the board is greater in OC companies than OM companies (where SOP results do not have any influence on the alignment of CEO compensation), thus confirming Hypothesis 3B. Finally, regarding the control variables, in OM firms, CEO ownership is the most influential variable, with a negative impact on aligned compensation.

2.5 DISCUSSION AND CONCLUSIONS

SOP is “a mechanism that allows shareholders to influence CEO pay, by giving them an advisory vote regarding the remuneration report” (Hooghiemstra et al., 2015, p. 775). This study focuses on the role of SOP in promoting the effectiveness of corporate governance by providing an additional channel for the expression of shareholder "voice" (Stathopoulos & Voulgaris, 2016) regarding CEO compensation arrangements. Using a

sample of 114 listed companies from 2013 to 2016, this study contributes to the literature in several ways. First, it extends our knowledge about the real effectiveness of SOP as a mechanism for adjusting and aligning CEO compensation (Krause et al., 2014; Mangen & Magnan, 2012). Second, it shows how important the internal governance mechanisms of companies are (such as the board of directors and the ownership structure) as elements exercising an moderating influence on the effectiveness of SOP in terms of CEO compensation arrangements (Stathopoulos & Voulgaris, 2016). And third, it highlights the peculiarities of SOP in a particular context of Spanish listed companies. The Spanish case is representative of the continental European system of corporate governance and is significantly different from Anglo-Saxon schemes of governance (Correa & Lel, 2016; Sanchez-Marin, Samuel Baixauli-Soler, & Lucas-Perez, 2011).

Our results indicate that SOP plays an important role in Spanish listed companies, although we can distinguish two contrasting faces of this mechanism. A positive version indicates that a low level of SOP support, in companies with dissatisfied shareholders, allows the view of shareholders to be taken into consideration in designing more aligned CEO compensation in following years. This is consistent with previous findings (Balsam et al., 2016; Cai & Walkling, 2011; Kimbro & Xu, 2016), confirming the shareholder-alignment hypothesis. In addition, the results show the significant impact of low levels of SOP support from all the previous years analyzed. In addition, as expected, in companies with satisfied shareholders a low level of SOP support has no significant influence on the alignment of CEO compensation.

A negative version of the SOP occurs in companies with overcompensated CEOs who receive a high level of SOP support. In these cases, by voting overwhelmingly in favor, shareholders legitimize suboptimal payments, which remain at these undesirable

levels over time. Firms in this scenario seems to take largely symbolic, rather than substantive, action on compensation arrangements in response to shareholder activism (Westphal & Zajac, 1994, 1998; Zajac & Westphal, 1995). We thus confirm the window-dressing hypothesis (Brunarski et al., 2015) about the legitimizing effect of SOP, which negatively affects the alignment of CEO compensation (David et al., 2007; Mangen & Magnan, 2012). Our results add that this negative effect is not observed in companies whose CEOs are not overcompensated, where a high level of SOP support has a positive influence on the alignment of CEO compensation.

Furthermore, we find a moderating effect of corporate governance mechanisms – board and ownership structure – in the relationship between SOP results and CEO compensation alignment. Our results indicate that the positive effect of a low level of SOP support on CEO compensation alignment is reinforced in companies with more independent boards and no duality (Alissa, 2015; Ertimur et al., 2013). In addition, combining ownership structure with board monitoring, in OC companies we find a positive moderating effect of the effectiveness of board monitoring on the influence of a low level of SOP support on CEO compensation alignment (Conyon & Sadler, 2010). In OM companies, as expected, this moderating effect is not significant, as large shareholders usually take the side of the firm's management (Sanchez-Marin et al., 2011; Young et al., 2008) and this limits the effectiveness of board monitoring when they vote for their own (suboptimal) compensations in SOP. These firms respond to a low level of SOP support by increasing entrenchment and rent extraction, particularly driven through excessive levels of compensation.

In line with the findings of Mangen & Magnan (2012), our results confirm a negative effect of SOP when it is combined with entrenchment problems, usually

associated with OM firms. Entrenchment can lead to collusion of large owner-managers with other shareholders – usually minority shareholders – and stakeholders, supporting suboptimal CEO pay arrangements. In the context of high concentration of ownership, this misaligned compensation can encourage conflicts among principals and increase agency costs (Baixauli-Soler & Sanchez-Marin, 2011; Young et al., 2008). The board of directors may try to minimize shareholders' negative reactions and potential SOP voting dissent both by managing symbolic pay arrangements (Westphal & Zajac, 1998), and by limiting disclosure of compensation plans (Mangen & Magnan, 2012), with the subsequent potential negative long-term impact on the proper alignment of executive compensation in the firm.

In summary, this research contributes academically by finding, in agreement with most of the relevant literature, an effective impact of SOP on cases of suboptimal executive pay, where SOP contributes to the alignment of CEO compensation through both the reduction of pay levels and the increase of compensation linked to company performance (Alissa, 2015; Cai & Walkling, 2011; Conyon & Sadler, 2010; Ferri & Maber, 2013; Gregory-Smith et al., 2014; Kimbro & Xu, 2016). Second, the effectiveness of SOP is significantly determined by the firm's governance mechanisms, both the board monitoring and ownership structure. In companies with low levels of board independence, and where the board is controlled by managers, high levels of SOP support act as a legitimation mechanism that perpetuates rent extraction and agency costs in terms of misaligned CEO compensation (Levit & Malenko, 2011; Morgan et al., 2006). This finding highlights the importance of shareholders' information before voting, in order to reasonably assess the degree of alignment of CEO compensation. The voting of well-

informed shareholders could convert SOP results into a "wake-up call" for firms and managers (Brunarski et al., 2015).

Regarding practical implications, the findings of this research suggest that companies should design properly aligned executive compensation in order to avoid having to restructure payments after receiving a low level of SOP support. Unfavorable SOP outcomes might have undesirable consequences for the company, including negative publicity, the exit of competent executives, and costs of changes in compensation packages (Cai & Walkling, 2011; Correa & Lel, 2016). Special attention should be paid to compensation policies in OM companies and in companies with overcompensated managers. Strengthening SOP support in this context should help to balance the power of owners-managers to promote tunneling activities by means of misaligned compensation with the desirable protection of minority shareholders (Baixauli-Soler & Sanchez-Marin, 2015; La Porta et al., 1999). Such companies should seek alternative mechanisms of governance, with the ultimate objective of reducing agency costs and protecting themselves with greater independence, transparency and reputation.

Finally, this research has some limitations that, in turn, offer interesting opportunities for future research. First, the time period is short, because the information on SOP is available for Spanish listed companies only since 2013. Future studies should extend examination of these SOP effects by increasing the time horizon and checking whether changes adopted by companies, especially following negative SOP voting results, attract the approbation of shareholders in subsequent votes. Second, this study only analyzes the indirect effects of the board of directors and ownership structure in the relationship between the SOP and CEO compensation. Future research should consider other internal and external mechanisms of governance that might interact with SOP and

influence executive compensation, with particular emphasis on diverse types of shareholders and how they act and vote in SOP. Similarly, future studies should consider, from a stakeholder perspective, how the involvement of different groups of stakeholders in specific voting proposals could affect shareholder voting behavior. Lastly, this research focuses on the Spanish context, representing as it does the continental European model of corporate governance. But the population of listed companies in Spain is relatively small. Future research should extend the scope of this research by comparing the effectiveness of SOP on countries with different systems of corporate governance, as between Anglo-Saxon and continental European systems, or between jurisdictions where SOP is either advisory or binding.

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APPENDIX

Appendix C.- Estimation of aligned CEO compensation

Regarding estimation of 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 & Lel, 2016; Ferri & Maber, 2013; Sanchez-Marin et al., 2017). Specifically, as shown in Table C1, we use panel data methodology in order to control for the unobservable heterogeneity, preventing biased results. In view of the Hausman test results (Hausman, 1978), we can better estimate aligned CEO compensation using the random effects approach.

TABLE C1. Estimation of aligned CEO compensation

	Cash C_CEO	Total C_CEO
Variable[a]	(1)	(2)
TEN_t	0.128**	0.129***
$SALES_{t-1}$	0.228***	0.247***
ROA_t	0.102*	0.102*
ROA_{t-1}	-0.003*	-0.003*
RET_t	0.001	0.001
RET_{t-1}	0.001	0.001
BTM_{t-1}	0.001	0.008
Intercept	7.625***	7.312***
Industry control	YES	YES
Year control	YES	YES
R^2	0.542	0.552

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

The dependent variable is measured alternatively as cash compensation (cash C_CEO) and total compensation (total C_CEO). 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–l*; 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*; RET is the 52 week total return for years *t* and *t–1*; and BTM is the book value of equity divided by market capitalization at the end of year *t–l;* Fixed effects for year and 2-digit SIC codes are included in the regressions.

Our results, shown in Table C1, indicate that the main determinants are the length of CEO tenure, the company sales in the previous year and the ROA in the current and

previous years. These results are similar to those of Core et al. (2008) and Brunarski et al. (2015). Based on aligned CEO compensation, we calculate CEO overcompensation, using Equation 2, which represents the excess in CEO compensation based on the ratio between CEO compensation and aligned CEO compensation. As shown in Table 1, the results indicate that approximately 10% of CEO cash compensation is overcompensation, while this excess rises to 20% if we consider CEO total compensation

CHAPTER 3: MANAGERIAL DISCRETION, SAY-ON-PAY, AND CEO COMPENSATION[*]

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CHAPTER 3: MANAGERIAL DISCRETION, SAY-ON-PAY, AND CEO COMPENSATION

3.1 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, Kuang, & Qin, 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 & Sadler, 2010). Since 2002, many countries have followed in the footsteps of the UK and have implemented such a voting system (e.g., the United States (US), Australia, Japan, South Africa, the Netherlands, France, Italy, or Spain) (Stathopoulos & Voulgaris, 2016).

Despite it only having been implemented recently, many studies have focused on SOP effectiveness, considering this effectiveness to be this voting's capacity to get that boards and compensation committees to promote more aligned compensation with firm interests (Lozano-Reina & Sánchez-Marín, 2020); i.e., compensation designs more aligned with the main economic and financial determinants (Core, Holthausen, & Larcker, 1999; Core, Guay, & Larcker, 2008). The evidence regarding the impact of SOP on executive compensation has proved inconclusive (Lozano-Reina & Sánchez-Marín, 2020): while most of the research has focused on the main effects that SOP has on executive compensation, some factors might modulate its influence and, in turn, may lie behind the inconclusive results to emerge. However, few studies have explored this matter, and SOP literature offers little theoretical insight and empirical evidence on the

issue. To date, only firm performance as well as certain corporate governance factors have been explored (Correa & Lel, 2016; Sanchez-Marin, Lozano-Reina, Baixauli-Soler, & Lucas-Perez, 2017). Correa & Lel (2016) find that SOP effectiveness is greater in firms with poor performance as well as in companies with weak corporate governance mechanisms in the pre-SOP period. Sanchez-Marin et al. (2017) state that SOP effectiveness is greater in owner-controlled companies with more independent boards and non-duality structures. These studies show the importance of examining the interactive effects related to SOP effectiveness, since they may explain some controversial results and shed fresh light on the SOP issue.

As a result, taking other possible moderating factors into account is an important area that merits further investigation in order to better explain SOP effectiveness as a governance mechanism and so clarify some unknowns (Obermann & Velte, 2018; Sanchez-Marin et al., 2017). Following the suggestion of Lozano-Reina & Sánchez-Marín (2020), analysis of managerial discretion, regarded as the latitude of action available to senior managers in strategic decision-making (Hambrick & Finkelstein, 1987), proves extremely interesting given that SOP effectiveness increases or decreases depending on how discretion is used by executives. Specifically, many company policies (in particular, pay polices) are often influenced by discretion issues (Finkelstein & Boyd, 1998; Rajagopalan & Finkelstein, 1992; Van Essen, Otten, & Carberry, 2015; Wangrow, Schepker, & Barker, 2015), such that managerial discretion may be a key moderating factor.

Considering that SOP seeks to encourage boards to link executive compensation to shareholder and company interests (Alissa, 2015; Correa & Lel, 2016; Ferri & Maber, 2013), exploring managerial discretion is necessary since the purpose of SOP may be

either enhanced or worsened depending on how discretion appears and how it is used by executives. Based on this, we posit a differing impact of the various dimensions of discretion on SOP effectiveness. From the *economic perspective* (Williamson, 1963), we expect a negative moderating impact of individual discretion (as a latitude of objectives) on SOP effectiveness. This is because, under this dimension, CEOs take advantage of their power in order to influence the pay decisions adopted by boards from SOP results in an effort to secure compensation designs that are linked with their own interests (even if such designs are not aligned to company interests). However, from a *strategic perspective* (Hambrick & Finkelstein, 1987), we expect a positive moderating impact of environmental and organizational discretion (as a latitude of action) on SOP effectiveness since these dimensions, in addition to being out of CEOs' hands, encourage decisions and company policies that are more closely linked to business interests, thus favoring the functioning of SOP and its impact on pay designs.

This research therefore seeks to examine how managerial discretion and, in particular, its different dimensions (individual, environmental and organizational) (Hambrick & Finkelstein, 1987) moderate the impact of SOP voting on the design of more aligned compensation. Specifically, we examine the direct effects of SOP on CEO compensation designs in addition to analyzing the interactive (moderating) influence of managerial discretion, using a sample of UK listed-companies (specifically, 3,445 firm-year observations) from 2003 to 2017. It is worth noting that the UK provides a particularly important context, since the nature of SOP changed in October 2013 (from advisory to binding), thus enabling us to explore the impact of this legal change within said country.

This chapter contributes to the debate surrounding SOP effectiveness in several ways. First, the study expands existing knowledge concerning SOP's impact on executive compensation – a field that has thus far yielded mixed evidence (Sanchez-Marin et al., 2017) – through innovative research that dynamically assesses a company's capacity to design more aligned compensation over time. Second, we test how managerial discretion as a whole, and its three dimensions in particular, modulate SOP effectiveness (Obermann & Velte, 2018), gauging their importance in promoting more aligned CEO compensation designs subsequent to an adverse SOP result. Specifically, when the overall index of managerial discretion is used, we find that the positive effect from environmental and organizational discretion makes up for the negative effect from individual discretion. Competitive contexts therefore make CEOs less powerful and weaken their ability to achieve opportunistic pay designs by enhancing SOP effectiveness. Third, we expand theoretical frameworks, beyond agency theory (Stathopoulos & Voulgaris, 2016), to study the impact of SOP voting on executive compensation from the perspective of managerial discretion, using accounting and strategic literature viewpoints to explain these relationships. Finally, this study also makes progress in the methodological field by employing several measures of managerial discretion that are more powerful and accurate compared to the less sophisticated measures used in prior literature (Wangrow et al., 2015). Specifically, we use three different measures related to dimensions of managerial discretion, in addition to operationalizing the concepts of "latitude of objectives" and "latitude of action" proposed by Shen & Cho (2005).

This chapter is structured as follows. After this introduction, the second section describes the theoretical framework and hypotheses. In the methodology section, the sample, data, and variables are described, as are the models and analysis used. The results

are described in the fifth section, and finally, the conclusions, discussion, implications and lines of future research are set out.

3.2. THEORETICAL BACKGROUND AND HYPOTHESES

3.2.1 SOP and executive compensation

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 & Zajac, 2006). In this sense, when it comes to implementing SOP, the UK has led the way in taking measures to curb executives' power as well as their high and inefficient compensation (Stathopoulos & Voulgaris, 2016). After introducing 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, Campbell, & Harman, 2015; Kimbro & 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 enhances the process of executive monitoring and has a positive impact vis-à-vis designing more aligned or efficient executive compensation (Alissa, 2015; Clarkson, Walker, & Nicholls, 2011; Correa & Lel, 2016; Ferri & Maber, 2013; Kimbro & Xu, 2016). However, other papers fail to find any significant impact of SOP on compensation designs (either positive or negative) (Armstrong, Gow, & Larcker, 2013; Conyon & Sadler, 2010; Cuñat, Giné, & Guadalupe, 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.

Although the evidence remains inconclusive, most SOP-related literature establishes that SOP promotes more compensation designs more aligned (Lozano-Reina & Sánchez-Marín, 2020). Correa a Lel (2016), who carry out a prominent cross-country study, point out that in countries where SOP has been adopted it seems to have proven effective since its implementation, and has led to an overall improvement in executive compensation compared to countries that have not adopted it. Similarly, several studies report an increase in pay-for-performance after implementing SOP (e.g., Balsam et al., 2016; Correa & Lel, 2016; Monem & Ng, 2013), as well as an improvement in CEO compensation when an unfavorable SOP is received (Alissa, 2015; Kimbro & Xu, 2016). Ferri & Maber (2013) point out that boards tend to remove controversial pay practices when high SOP dissent is received at the general meeting, and Burns & Minnick (2013) evidence that boards modify the pay mix after implementing SOP, tending towards designs that are more in line with company interests. This voting not only stands out for the effect of high dissent on subsequent pay designs, but also for the persuasive effect that SOP-related legislation has on boards and compensation committees, which might even improve the linkage between compensation and shareholders' interests before voting takes place (Lozano-Reina & Sánchez-Marín, 2020).

Based on this evidence, and on the following four agency arguments (Jensen & Meckling, 1976), we posit the positive impact of SOP on aligned CEO compensation designs. First, SOP reduces the agency problems caused by the separation between ownership and business management, thus favoring CEO compensation designs that are more linked with company interests (Alissa, 2015). Likewise, SOP increases board

sensitivity towards pay-for-performance, in addition to promoting the eradication of high compensation in the event of underperformance or failure – this sensitivity proving to be substantially greater when high SOP dissent is received from shareholders and in firms where boards had previously designed misaligned compensation (Ferri & Maber, 2013). Second, SOP reduces information asymmetries since it increases information dissemination regarding compensation policies (Greenstone, Oyer, & Vissing-Jorgensen, 2006), and improves communication between boards, compensation committees and shareholders, thereby promoting more aligned compensation (Correa & Lel, 2016; Deane, 2007). Similarly, shareholders voting behavior is affected by the language and reliability of the remuneration report (Hooghiemstra, Kuang, & Qin, 2017; Laksmana, Tietz, & Yang, 2012), and SOP tends to clarify the language and increase the reliability of these reports – which is often very difficult for shareholders to understand – in an attempt to reduce information asymmetries.

Third, given that shareholders tend to act rationally, they usually vote against executive compensation, not when it is high, but when shareholders feel it to be misaligned or inefficient. This rationality is increased due to the need to solve the agency conflicts that exist within firms (Alissa, 2015). Fourth, SOP provides an incentive for boards to promote more aligned compensation in order to avoid any negative publicity about themselves and so prevent possible loss of reputation (Sanchez-Marin & Baixauli-Soler, 2014), particularly when an unfavorable SOP is received (Ertimur, Ferri, & Oesch, 2013; Grundfest, 1993). Moreover, SOP affects executive turnover, since this rate decreases when high SOP support is received or when CEOs act in line with shareholders' views (Alissa, 2015; Armstrong et al., 2013), thus reducing agency conflicts, specifically those linked to misaligned compensation.

Therefore, in an effort to gain further insights, we expect SOP dissent to promote the design of more aligned compensation in subsequent years.

Hypothesis 1: *An unfavorable SOP has a positive impact on aligned CEO compensation*.

3.2.2 The moderating role of managerial discretion

Managerial discretion determines whether the shape and fate of a company are totally beyond executive control, completely under its control, or somewhere in between (Finkelstein & Boyd, 1998; Mackey, 2008). Broadly speaking, under higher levels of discretion, executives face greater risks, their jobs prove more complex and they can make a greater contribution to the company, which tends to increase the impact executives have on firm performance and which, in turn, usually impacts pay policies (Finkelstein, 2009; Finkelstein & Boyd, 1998). In this context, managerial discretion may impact SOP effectiveness depending on whether said discretion is being used for opportunistic purposes or as a means to increase company value (Finkelstein & Peteraf, 2007). We draw on the *economic approach* (and specifically on the *agency theory*) to explain the impact of individual discretion as a way for executives to pursue individual and opportunistic behaviors; and we draw on the *strategic approach* to illustrate the effect of contextual discretion as a means to promote firm competitiveness and value.

3.2.2.1 SOP effectiveness and individual discretion

Individual discretion is defined as "the degree to which the chief executive personally is able to envision or create multiple courses of action" (Hambrick & Finkelstein, 1987, p. 379). From the *economic approach* (Williamson, 1963), and based

on *agency theory* (Jensen & Meckling, 1976), individual discretion is closely associated with the concept of "latitude of objectives" (Shen & Cho, 2005), which describes managers' freedom to pursue their personal objectives beyond those of the shareholders. In this way, executives (in particular, CEOs) may use certain managerial practices and their power to persuade boards to play down the negative results of voting, thereby resulting in misaligned pay designs (Fields, Lys, & Vincent, 2001; Iatridis, 2018). This is also a way to achieve additional rents that are not linked to business performance (Roth & ODonnell, 1996; Werner & Tosi, 1995).

Related to this dimension, the literature stresses the particular importance of power base[7] (Mackey, 2008; Wangrow et al., 2015), which Hambrick & Finkelstein (1987) positively relate to individual discretion. This dimension is considered as a CEO's additional power source (Carpenter & Golden, 1997) since it is associated with executives' deliberate actions that increase their freedom to pursue their own goals coupled with the existence of moral hazard (Holmstrom, 1979). In fact, most of the literature points out that an executive's power base encourages the proliferation of opportunistic behaviors and rent expropriations (Bebchuk, Fried, & Walker, 2002; Finkelstein, 1992; Iatridis, 2018; Shin, 2016).

Powerful executives have a strong impact on board decisions – in particular, on the setting and design of pay policies (Abernethy, Kuang, & Qin, 2015; Bebchuk et al., 2002; Core, Guay, & Thomas, 2005). In this sense, the effectiveness of SOP voting may

[7] As regards individual discretion, we rely on power base since, in addition to being one of the most important determining factors of individual discretion (Carpenter & 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 & 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.

prove ineffective if executives manipulate key economic and financial issues (Laux & Laux, 2009) or if they take advantage of their power to influence boards by negotiating for higher pay that is not linked to business interests (Bebchuk & Fried, 2004; Shin, 2016; Van Essen et al., 2015). The existence of information asymmetries between executives and shareholders may also affect SOP effectiveness since the more difficult it is for shareholders to observe and assess management behavior, the greater the opportunity for executives (and particularly CEOs) to pursue opportunistic behaviors when boards design their pay packages (Ndofor, Wesley, & Priem, 2015).

In this sense, greater individual discretion allows executives to take advantage of their status within companies through their influence on boards and compensation committees, in order to pursue their own interests – rather than encouraging executive actions that are adjusted to shareholder interests. This particularistic use of pay policies arising from SOP results, specifically when voting dissent increases, will lead to designing executive pay that is not linked to company interests (Bebchuk & Fried, 2004; Core et al., 2008). Thus, in these contexts SOP voters may be expected to react by voting more negatively in subsequent years, whereas CEOs will seek to reduce the effectiveness of SOP by taking advantage of their discretion levels and by pressuring boards (Iatridis, 2018; Shin, 2016), thus turning all of this into a <<vicious circle>>. Therefore, individual discretion does not help the SOP to meet its main goal, since it serves as a discretionary mechanism for providing CEOs with higher levels of pay. Based on this, we expect this dimension to negatively moderate the impact of an unfavorable SOP on the design of more aligned compensation in subsequent years.

Hypothesis 2: *Individual discretion – or latitude of objectives – negatively moderates the relationship between an unfavorable SOP and aligned CEO compensation*.

3.2.2.2 SOP effectiveness and contextual discretion

Contextual discretion comprises environmental and organizational discretion. Environmental discretion is defined as "the degree to which an environment enables variety and change" (Hambrick & Finkelstein, 1987, p. 379); and organizational discretion is considered as "the degree to which the organization itself is amenable to an array of possible actions and empowers chief executives to formulate and execute those actions" (Hambrick & Finkelstein, 1987, p. 379). Based on the *strategic approach* (Hambrick & Finkelstein, 1987), these two dimensions are close to the concept of "latitude of action" (Shen & Cho, 2005), which describes the range of strategic options available to executives who strive to achieve business results that are aligned with shareholder interests (Shen & Cho, 2005). Under this approach, contextual discretion seeks to enhance company competitiveness and success, which encourages managers to support board policies that are linked to company interests since this ultimately proves beneficial to all stakeholders (by including executives) (Finkelstein & Boyd, 1998; Jing, Wan, & Gao, 2010; Yan, Chong, & Mak, 2010).

On the one hand, the environmental dimension is positively associated with product differentiability, market growth and demand instability, and negatively associated with industry concentration (Finkelstein & Boyd, 1998; Hambrick & Abrahamson, 1995; Hambrick & Finkelstein, 1987; Wangrow et al., 2015). Considering the nature of these determining factors, this dimension increases business competitiveness through its ability to provide executives with a wider array of actions to innovate and enhance firm performance (Youssef, Hussein, & Christodoulou, 2019). At the same time, these determining factors tend to increase executive monitoring and limit executive

capacity to opportunistically influence board policies (in particular, policies arising from SOP), which frees boards from executive pressure, thus allowing boards (and compensation committees) to freely negotiate pay designs on behalf of shareholders with the aim of protecting their wealth and interests (Finkelstein, 2009; Jing et al., 2010). Based on these issues, executive compensation designed after SOP tends to be linked with business interests; specifically, it is influenced by the risks these executives take and their marginal impact on firm performance – rather than being influenced by executive power (Finkelstein, 2009; Finkelstein & Boyd, 1998; Zou, Zeng, Lin, & Xie, 2015).

On the other hand, the organizational dimension is greater in firms with abundant transferable resources, lower capital intensity and a more disperse ownership structure (Hambrick & Finkelstein, 1995; Key, 2002; Werner & Tosi, 1995). This dimension, by amplifying the quality of business opportunities (Gupta, Mortal, & Yang, 2018), encourages greater leeway to involve executives in a decision-making process more oriented towards maximizing firm interests. As with environmental discretion, the factors determining organizational discretion, in addition to being associated with the increase in firm value and competitiveness, are beyond opportunistic managerial behavior (Li & Kuo, 2017; Youssef et al., 2019). This favors that shareholders' views will be taken into consideration by boards, and thus the alignment of compensation packages with firm interests increases over time (Rajagopalan & Finkelstein, 1992; Yan et al., 2010). In particular, the relationship between SOP and pay-for-performance is strengthened under greater organizational uncertainty (Rajagopalan & Finkelstein, 1992) as well in firms that evidence greater growth potential (Li & Kuo, 2017).

Although compensation packages may initially reflect elements related to environmental and organizational discretion (Wangrow et al., 2015), their relevance

within this field lies in their ability to moderate SOP effectiveness. Based on the previous arguments, in contexts of high competitiveness (i.e., contexts characterized by high environmental and organizational discretion), executive decisions are usually subject to greater monitoring and control by owners, which reduces managerial opportunism and promotes policies linked to company interests (Mustakallio, Autio, & Zahra, 2002). Thus, as regards SOP voting, when an unfavorable result is received, boards are prone to act in accordance with this result rather than attempting to mask it as indicated in individual discretion. This will ultimately favor compensation design that is more closely linked to shareholder interests (Finkelstein, 2009; Jing et al., 2010; Li & Kuo, 2017; Yan et al., 2010).

In essence, SOP effectiveness is expected to intensify in these contexts because, in addition to the positive impact of SOP dissent on aligned CEO compensation (Alissa, 2015; Brunarski et al., 2015), the favorable impact of contextual discretion is added. Given the alignment of pay designs with firm interests which is promoted in such contexts, executives seek to maximize business results in order to increase their earnings, which ultimately benefits all stakeholders. Going further, the resulting pay policies are also more consistent with the interests of all shareholders, who tend to prefer compensation designs that are linked to company interests as a form of monitoring, since monitoring CEOs' work proves more difficult in high discretion contexts (Boyd & Salamin, 2001; Finkelstein & Boyd, 1998). Therefore, we expect environmental and organizational dimensions to positively moderate the impact of an unfavorable SOP on the design of more aligned CEO compensation in subsequent years.

Hypothesis 3: *Contextual discretion – or latitude of action – positively moderates the relationship between an unfavorable SOP and aligned CEO compensation*.

3.3 METHODOLOGY

3.3.1 Sample and data collection

This analysis focuses on large UK listed companies. The UK provides a particularly important context for two reasons: first, the UK was the first country where SOP was implemented (2002) such that there is more data available than in other contexts; second, the UK was also the first country to change the nature of SOP from non-binding to binding in 2013 (Stathopoulos & Voulgaris, 2016). After matching valid observations across the different databases and after limiting extreme values in our data in order to reduce the effect of possible spurious outliers (specifically, we have removed observations three standard deviation away from the mean), our final sample comprises 3,445 firm-year observations from 2003 (the first year that data on SOP voting was available) to 2017.

Five main sources of information are used to collect data on SOP, CEO compensation, and managerial discretion: *Manifest Ltd*, an independent shareholder voting and corporate governance support service, is used to collect data on SOP; *BoardEx*, a database containing biographical data on most board members and senior executives around the world, provides 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, provides information about economic, financial, and contextual variables (concerning organizational and environmental discretion); *Factset Ownership*, a firm providing institutional, stakeholder, mutual fund and float-related share ownership information for equities worldwide, provides information about ownership; finally, *DataStream*, a financial time series database, provides information on stock returns.

3.3.2 Variables

Aligned CEO compensation (ALIG_CEO). Following the procedure used by Core *et al*. (Core et al., 1999, 2008), aligned CEO compensation is obtained by regressing CEO compensation on its major determinants. This procedure is useful for obtaining an appropriate measure of estimated or aligned compensation (Brunarski et al., 2015; Sanchez-Marin et al., 2017), which estimates executive pay packages using economic and financial indicators closely linked to firm interests. It is used extensively in SOP-related literature (e.g., Alissa, 2015; Balsam et al., 2016; Brunarski et al., 2015; Correa & Lel, 2016; Ferri & Maber, 2013; Sanchez-Marin et al., 2017). The estimation is shown in the Appendix D. After estimating it, we calculate the change in aligned CEO compensation for a firm from year *t* to year *t + 1* (ΔALIG_CEO).

The variables required to calculate aligned CEO compensation are: *CEO compensation* (C_CEO), which is the natural logarithm of the sum of salary (base annual pay in cash), bonus, other compensation (value of annual ad hoc cash payment such as relocation or fringe benefits awarded during the period), and employers' defined contribution (employers' defined retirement / pension contribution) at the end of year *t*; *tenure* (TEN) is the natural logarithm of the number of years the CEO has been in office at the end of year *t*; *sales* (SALES) is the natural logarithm of net sales of the company at the end of year *t–1*; the FTSE100 index (FTSE100) is one if the firm is in the FTSE100 at the end of year t, and zero otherwise; *book-to-market* (BTM) is the book value of equity divided by market capitalization at the end of year *t–l*; *stock performance* (RET) is the annual total return for years *t* and *t–1*; and *return on assets* (ROA) is calculated as the ratio of the net income to the book value of the firm's total assets for years *t* and *t–1*. Finally, we control for the industry of each company through dichotomous variables (ψ_i),

calculated from the primary Industrial Classification (SIC) associated with each of them. We also control the time effect (d_t), again through dichotomous variables.

Say-on-Pay voting. This refers to the percentage of votes cast by shareholders at the general meeting, and is measured as a continuous variable, considering percentages of votes in favor, against, and abstentions out of the total (Conyon & Sadler, 2010; Ferri & Maber, 2013; Hooghiemstra et al., 2015). In particular, in accordance with prior literature (Conyon & Sadler, 2010; Hooghiemstra et al., 2015, 2017; Sanchez-Marin et al., 2017), we measure unfavorable SOP (SOP^{-}) by the fraction of votes against and abstentions over total votes – where *Against* is the total number of negative votes cast in year *t*; *Abstain* is the total number of abstentions in year *t*; and *Total* includes positive, negative and abstention votes.

Managerial discretion. This variable is measured through different indexes based on the three sources of discretion. Similar to Haleblian and Finkelstein (1993), we standardized the indicators related to each dimension and removed extreme values (i.e. values three standard deviation away from the mean). Using principal component analysis, the component of greatest common variance is chosen in order to yield an overall measure of individual, environmental, and organizational discretion. Indicators whose impact is negative are reverse-scored (Haleblian & Finkelstein, 1993).

First, the *individual discretion index* (IND), which represents CEOs' power base (Finkelstein, 1992), is calculated through the following indicators: (1) *CEO education* (Key, 2002; Li & Tang, 2010), measured by the number of qualifications the CEO holds at the end of year *t*; (2) *CEO wealth*, measured by the total value of equity-linked wealth over market capitalization in the period analyzed (Finkelstein, 1992); and (3) *CEO overconfidence*, which also influences CEO power for corporate decision-making

(Malmendier & Tate, 2005), calculated on the basis of four sub-indicators (Schrand & Zechman, 2012): (a) excess investment, which is the firm's residual from a regression of total asset growth on sales growth residual in the period studied; (b) acquisitions made by the firm in the period analyzed; (c) debt-to-equity ratio, equals the long-term debt scaled by the market value of the firm in the period studied; and (d) convertible debt or preferred stock over total assets in the period analyzed (Schrand & Zechman, 2012). To calculate this index, all the indicators have a positive impact on individual discretion.

As regards this individual dimension, our measures are based on a CEO's power base, representing the following dimensions developed by Finkelstein (1992): ownership power, expert power, and prestige power. Structural power is not included within this dimension, since it is indirectly controlled in our models when considering CEOs' position and their compensation. On the basis of our data availability, and following Finkelstein (1992), *ownership power*, which is determined by the strength of a CEO's position in the agent-principal relationship, is represented by CEO wealth; *expert power*, which states CEOs' ability to contribute to business success and to deal with environmental contingents, is represented by CEO overconfidence; and *prestige power* is represented by CEO education since an important source of power is status and CEOs' personal prestige.

Second, the *environmental discretion index* (ENV) is calculated through four indicators: (1) *product differentiability*, measured by the industry median of sales, general and administrative expenses, which includes advertising expenses, scaled by the firm sales of all the companies in the industry during the period studied (Finkelstein & Boyd, 1998); (2) *market growth*, measured by the industry median sales growth in the period analyzed (Boyd, 1990; Hambrick & Abrahamson, 1995); (3) *demand instability*,

measured by the industry standard deviation of annual sales growth (five-year average) in the period studied (Boyd, 1990; Hambrick & Abrahamson, 1995); and (4) *industry structure*, measured by the level of industry concentration in the period examined (based on market shares) through the Herfindahl index (Finkelstein, 2009; Finkelstein & Boyd, 1998)[8]. To calculate this index, only the impact of industry structure on environmental discretion is negative, while the impact of the remaining indicators is positive.

Third, the *organizational discretion* index (ORG) is obtained through the following indicators: (1) *capital intensity*, measured by total property, plant and equipment over total employees in the period analyzed (Finkelstein & Boyd, 1998; Finkelstein & D'Aveni, 1994); (2) *resource availability*, measured by the ratio of R&D expenditures on firm sales in the period studied (Li & Tang, 2010); and (3) *ownership structure* (Singh & Harianto, 1989; Werner & Tosi, 1995), measured by the ownership concentration ratio in the period analyzed (through the Herfindahl index, which is calculated on the four largest shareholders within a firm). To calculate this index, only the impact of resource availability on organizational discretion is positive, while the impact of the remaining indicators is negative.

Moreover, based on these three indexes, we differentiate three further indexes: latitude of action, latitude of objectives, and total discretion. *Latitude of action* (L_ACT) is calculated as an average of environmental and organizational discretion indexes; *latitude of objectives* (L_OBJ) is equivalent to the individual discretion index; and *total discretion* (TD) is calculated as an average referring to latitude of action and latitude of objectives.

[8] 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.

Control variables. In addition to the variables indirectly controlled when estimating aligned CEO compensation (e.g., tenure, sales, book-to-market ratio, or stock performance), we consider others that the literature has identified as variables which might influence SOP effectiveness, specifically: *institutional ratio* (INSTITUTIONAL), which is the total institutional ownership (independent institutions) ratio in percentage terms of market capitalization at the end of year *t* (Alissa, 2015); *cash flow* (CASHFLOW), measured by free-cash flow scaled by the firm's market value in the period analyzed, where free cash flow is measured as cash inflows from operating (Balsam et al., 2016; Burns & Minnick, 2013); *leverage* (LEV), which equals the book value of total liabilities scaled by the firm's market value in the period analyzed (Balsam et al., 2016); finally, some board characteristics are controlled such as *board size* (BSIZE), which is the standard deviation of the number of board members in the period studied (Conyon & Sadler, 2010); *gender ratio* (GENDER), which equals the proportion of male directors in the period studied; *nationality mix* (NATION), which equals the proportion of directors from different countries in the period studied; and *succession factor* (SUCCESSION), which is a measurement of the clustering of directors around retirement age in each period studied.

3.3.3 Models and analyses

This research uses a panel data method in the analysis. In addition to facilitating improvements in the estimation and econometric specifications, this method examines the dynamics of cross-sectional populations by providing more information and more efficiency than other methods (Balgati, 2001). Moreover, the panel method controls for unobservable heterogeneity, preventing biased results, since certain features that are

difficult to measure can affect CEO compensation. Furthermore, since an unfavorable SOP may be endogenous, a generalized method of moments (GMM) estimator is used in the following models to make our analysis less likely to suffer from self-selection or endogeneity bias (Greene, 2007). Thus, similar to Conyon & Sadler (2010), the lag of this variable is used to avoid endogeneity bias. As shown in the result tables, this lag of the SOP constitutes a valid instrument given its non-correlation with the error term (Hansen, 1982)[9].

Related to Hypothesis 1, Equation 1 is developed, whose dependent variable is the change in aligned CEO compensation ($\Delta ALIG\_CEO_{it,it+1}$) for a firm from year *t* to year *t + 1*, indicating the firm's capacity to link CEO compensation to business interests. The independent variables are the prior unfavorable SOP results (SOP^{-}_{it-1}) and control variables. We expect β_1 to exert a significant and positive influence on firms' capacity to design more aligned CEO compensation (Cai & Walkling, 2011; Ertimur et al., 2013; Ferri & Maber, 2013; Kimbro & Xu, 2016). Specifically:

$$\Delta ALIG\_CEO_{it,it+1} = \beta_0 + \beta_1 \cdot SOP^{-}_{it-1} + \beta_2 \cdot Control\ variables_{it} + n_i + d_t + e_{it} \quad (1)$$

Subsequently, we apply Equation 2 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

[9] The annual design of executive compensation is greatly influenced by SOP results referring to the previous year (Lozano-Reina & Sánchez-Marín, 2020; Stathopoulos & 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, has been 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 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).

compensation ($\Delta ALIG\_CEO_{it,it+1}$). The independent variables are prior unfavorable SOP results (SOP^{-}_{it-1}), the three indexes of managerial discretion, the interaction term between SOP^{-}_{it-1} 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:

$$\begin{aligned}\Delta ALIG\_CEO_{it,it+1} &= \beta_0 + \beta_1 \cdot SOP^{-}_{it-1} + \beta_2 \cdot ENV_{it} + \beta_3 \cdot ORG_{it} + \beta_4 \cdot IND_{it} + \beta_5 \cdot (SOP^{-}_{it-1} \cdot ENV_{it}) + \beta_6 \cdot (SOP^{-}_{it-1} \cdot ORG_{it}) + \beta_7 \cdot (SOP^{-}_{it-1} \cdot IND_{it}) + \beta_8 \cdot Control\ variables_{it} + n_i + d_t + e_{it}\end{aligned} \quad (2)$$

3.4 RESULTS

3.4.1 Descriptive statistics and correlations

Table 1 provides a description of the basic statistics. As regards CEO compensation, the values (in logarithms) shown in this table indicate that observed compensation received by CEOs is, on average, the same as they should have received based on the firm's economic determinants. However, Table 1 shows a high standard deviation in the case of compensation pay issues, which indicates, beyond the coincidence in prior average value, the existence of a large pay gap among CEOs. 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. As for SOP voting results, according to SOP-related literature (Conyon & Sadler, 2010; Sanchez-Marin 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 six managerial discretion indexes (three indexes related to environmental, organizational, and individual discretion, two indexes related to latitude of objectives and latitude of action, and a global index of managerial discretion), the main descriptive statistics are shown in Table 1.

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

	Variable	Mean	Median	Standard deviation	p25	p75
CEO compensation[a]	C_CEO	6.979	6.981	0.778	6.480	7.482
	ALIG_CEO	6.979	7.001	0.297	6.820	7.181
Say-on-Pay[b]	SOP^{+}	90.915	95.491	11.853	88.700	98.400
	SOP^{-}	8.492	3.970	11.540	1.300	10.210
Managerial discretion[c]	IND	-1.71e-10	-0.202	1.107	-0.514	0.226
	ORG	-1.20e-10	-0.032	0.731	-0.034	0.035
	ENV	-8.82e-10	-0.190	1.077	-0.727	0.594
	L_OBJ	-1.71e-10	-0.202	1.107	-0.514	0.226
	L_ACT	-3.97e-11	-0.051	0.647	-0.399	0.388
	TD	-0.430	-0.456	0.324	-0.630	-0.237

[a]C_CEO is the natural logarithm of the sum of salary (base annual pay in cash), bonus, other compensation, and employers' defined contribution; and ALIG_CEO is the annual variation of the natural logarithm of estimated compensation using the model of Core et al. (1999, 2008); [b]SOP^{+} refers to the percentage of positive votes over the total; and SOP^{-} refers to the percentage of negative votes and abstentions over the total. [c]INV, ORG and ENV are the indexes representing individual, organizational, and environmental discretion, calculated as indicated in Section 3.2; L_OBJ and L_ACT are the indexes representing latitude of objectives and latitude of action. In particular, the index referring to latitude of objectives is equivalent to the individual discretion index; while the index referring to latitude of action is calculated as an average of environmental and organizational discretion indexes; TD is the index representing total discretion, calculated as an average of indexes referring to latitude of objectives and latitude of action.

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). Moreover, the high correlation between SOP^{-} and institutional ownership is also highlighted. The correlation between the remaining explanatory variables is not high. Moreover, condition indexes are below 30 and VIF values are below 5, suggesting an absence of significant multicollinearity between independent variables (Hair, Anderson, Tatham, & Black, 1998).

Table 2. Correlations between variables

Variables[a]	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
(1) ΔALIG_CEO	1.000											
(2) SOP-	0.0649**	1.000										
(3) ENV	0.3114**	-0.0485**	1.000									
(4) ORG	0.4050**	0.0268	0.0126	1.000								
(5) IND	-0.1201*	0.0370*	0.0364*	0.1541**	1.000							
(6) INSTITUTIONAL	0.0582	0.1352**	-0.0229	-0.1011***	0.1025**	1.000						
(7) CASHFLOW	0.1782	0.0205	0.0028	0.1035	0.0128	0.0432	1.000					
(8) LEV	-0.0452*	0.0401*	0.0034*	0.0864*	0.1260**	-0.0322	0.0395*	1.000				
(9) BSIZE	0.1309	0.0348*	0.0078	0.0952	0.0564	0.0270	0.0446**	0.0370*	1.000			
(10) GENDER	-0.3446**	-0.0163	0.0736**	-0.0983**	-0.0641*	-0.2130**	-0.0040*	-0.0097	-0.0313*	1.000		
(11) NATION	0.3521**	0.0474**	-0.1182*	0.0887*	0.1885*	-0.0134	0.0054	0.0495*	0.1389***	-0.1745***	1.000	
(12) SUCCESSION	-0.2601*	-0.0240	0.1132**	-0.0595***	-0.0168	-0.2226***	0.0027	-0.0267	-0.0783***	0.0123	-0.1136***	1.000

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

[a]ΔALIG_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 percentage of negative votes and abstentions over the total; 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 (independent institutions) ratio in percentage terms of market capitalization; 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.

3.4.2 Testing the hypotheses

Table 3 shows the regressions of Model 1 to test Hypothesis 1 (regression 1). 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 are consistent and confirm our Hypothesis 1. As regards the control variables, we find that this change in aligned CEO compensation is influenced by board characteristics; specifically, while 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.

Moreover, Table 3 also contains the regressions of Model 2 to test Hypotheses 2 and 3, where the moderating role of managerial discretion is analyzed. We find a positive and significant impact of an unfavorable SOP on the design of more aligned compensation (regressions 2-6), as was also found in relation to Hypothesis 1. We also find a moderating effect of managerial discretion. In particular, while individual discretion negatively moderates the relationship between an unfavorable SOP and the design of more aligned compensation, environmental and organizational discretion positively moderate this relationship, whereas the direct effects of these dimensions are not significant – these results are robust since they remain on the same terms regardless of whether they are tested individually (regressions 3-5) or collectively (regression 6). These findings, which confirm Hypothesis 2 and Hypothesis 3, are in line with our theoretical foundations, since we stated that environmental and organizational discretion encourage CEOs to achieve business results

that are aligned with shareholder interests, thereby enhancing SOP effectiveness. Moreover, under individual discretion, we expected SOP effectiveness to be reduced because CEOs take advantage of their power to exert pressure on boards in order to secure higher pay (not linked to company interests) and rent extractions. As for the control variables, we also find a significant impact of board characteristics, similar to the first hypothesis.

Table 3. SOP effectiveness and moderating effects of managerial discretion (environmental, organizational, and individual dimensions)

	$\Delta ALIG\_CEO_{it,it+1}$					
Variable	(1)	(2)	(3)	(4)	(5)	(6)
SOP^{-}_{it-1}	0.2198*	0.4191**	0.1762*	0.3731**	0.4879**	0.2989**
IND_{it}		-0.2564	0.0082			-0.0631
ORG_{it}		0.4276		0.1147		0.0204
ENV_{it}		0.7426			0.1283	0.0114
$SOP^{-}_{it-1} * IND_{it}$			-0.1131*			-0.3555***
$SOP^{-}_{it-1} * ORG_{it}$				0.4353**		0.3149**
$SOP^{-}_{it-1} * ENV_{it}$					0.2299*	0.2033*
$INSTITUTIONAL_{it}$	0.7119	0.9624	0.2312	0.0982	0.6953	0.2360
$CASHFLOW_{it}$	-0.0048	-0.0063	-0.0008	-0.0015	-0.0012	-0.0009*
LEV_{it}	-0.0037	-0.0070	-0.0016	-0.0032	-0.0034	-0.0017
$BSIZE_{it}$	0.1189	0.9393	0.1436	0.0289	0.1756	0.0845
$GENDER_{it}$	-0.7410*	-0.3316	0.2520	-0.5491*	-0.1886	-0.6277*
$NATION_{it}$	0.6250**	0.7359*	0.7172*	0.5959*	0.7097*	0.5012***
$SUCCESSION_{it}$	-0.4677*	-0.3181	-0.7081	-0.2047**	-0.3680	-0.9170***
Industry control	YES	YES	YES	YES	YES	YES
Year control	YES	YES	YES	YES	YES	YES
Observations	3,445	3,445	3,445	3,445	3,445	3,445
Hansen J statistics	25.68	39.74	15.68	12.64	7.94	39.46
(p-value)	0.107	0.267	0.109	0.244	0.635	0.404
AR(2)	1.33	1.34	0.59	1.60	1.58	0.78

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

The dependent variable is ΔALIG_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 percentage of negative votes and abstentions out of the total at the end of year *t–l*; 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 (independent institutions) ratio in percentage terms of market capitalization at the end of year *t*; 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; and the Arellano-Bond test has been used to test that there is no autocorrelation in the sample.

In an effort to complement the analysis on the above moderating effects, we retest them through complementary indexes (i.e., latitude of objectives, latitude of action and total discretion). As shown in Table 4, we also find a positive and significant impact of an unfavorable SOP on the design of more aligned compensation, which again supports our first hypothesis. As regards the moderating effect, we find a negative moderating effect of latitude of objectives and a positive moderating effect of latitude of action, whereas the direct effects of these indexes are not significant. These findings are in line with our expectations and reinforce our previous results, since latitude of objectives is equal to the negative moderating effect of individual discretion (in line with Hypothesis 2), and latitude of action encompasses the positive moderating effects of environmental and organizational discretion (in line with Hypothesis 3). Furthermore, when using an overall managerial discretion index, we cannot anticipate its effect on aligned pay designs since the overall effect of managerial discretion depends on the strength of each dimension. We find that total discretion exerts a positive moderating role, thus favoring the design of more aligned compensation. This indicates that organizational and environmental discretion are of great importance and atone for the negative effect of individual discretion. As regards the control variables, we again find a significant impact of board characteristics, as stated below.

Table 4. SOP effectiveness and moderating effects of managerial discretion (latitude of action, latitude of objectives, and total discretion)

	$\Delta ALIG\_CEO_{it,it+1}$				
Variable	(1)	(2)	(3)	(4)	(5)
SOP^{-}_{it-1}	0.3235*	0.1762*	0.4771**	0.3243**	0.4636***
L_OBJ_{it}	-0.0989	0.0082		-0.1049	
L_ACT_{it}	0.2516		0.1453	0.1234	
TD_{it}					-0.3259
$SOP^{-}_{it-1} * L\_OBJ_{it}$		-0.1131*		-0.2182*	
$SOP^{-}_{it-1} * L\_ACT_{it}$			0.2803*	0.4267**	
$SOP^{-}_{it-1} * TD_{it}$					0.5054*
$INSTITUTIONAL_{it}$	0.9784	0.2312	0.2567	0.1427	0.7050
$CASHFLOW_{it}$	-0.0038	-0.0008	-0.0007	-0.0012	-0.0004
LEV_{it}	-0.0039	-0.0016	-0.0039	-0.0027	-0.0043
$BSIZE_{it}$	0.1533	0.1436	0.0935	0.0277	0.0871
$GENDER_{it}$	-0.4553*	0.2520	-0.9554**	-0.5199*	-0.7809*
$NATION_{it}$	0.9200*	0.7172*	0.4655*	0.3725**	0.4771*
$SUCCESSION_{it}$	-0.5138	-0.4253	-0.2347	-0.7253*	-0.7688*
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	13.21	15.68	6.64	6.61	6.57
(p-value)	0.247	0.109	0.487	0.530	0.765
AR(2)	1.45	0.59	-0.69	-0.75	-0.82

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

The dependent variable is ΔALIG_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 percentage of negative votes and abstentions out of the total at the end of year *t–l*; L_OBJ and L_ACT are the indexes representing latitude of objectives and latitude of action at the end of year *t*. In particular, the index referring to latitude of objectives is equivalent to the individual discretion index; while the index referring to latitude of action is calculated as an average of the environmental and organizational discretion indexes; TD is the index representing total discretion at the end of year *t*, calculated as an average of indexes referring to latitude of objectives and latitude of action; INSTITUTIONAL is the total institutional ownership (independent institutions) ratio in percentage terms of market capitalization at the end of year *t*; 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; and the Arellano-Bond test has been used to test that there is no autocorrelation in the sample.

3.4.3 Robustness analyses

In this section, we examine the robustness of our results. Firstly, we consider whether our findings might be affected by the change in SOP-related legislation implemented by the UK in 2013. Secondly, we use pay-for-performance sensitivity as an alternative dependent variable to check the robustness of the results obtained previously. Thirdly, we compare the effectiveness of SOP by comparing high-dissent firms versus low-dissent firms. Finally, in order to test the role played by institutional ownership, we study whether SOP effectiveness when designing more aligned compensation differs between firms with high institutional ownership and firms with low institutional ownership.

First, it should be noted that the nature of SOP has evolved in countries over the years. Initially, such voting tended to emerge as a corporate governance recommendation in most countries, and had a non-mandatory nature. Although holding a vote later became law, the results of the vote were often used merely for consultation purposes and were not binding (Lozano-Reina & Sánchez-Marín, 2020). Some countries have subsequently implemented new legal changes (by applying more stringent legislation related to SOP) with the aim of increasing its effectiveness. In this sense, the UK changed the nature of SOP from merely advisory to binding in 2013 (Stathopoulos & Voulgaris, 2016). This change in the nature of SOP in the UK increased the coercive pressure stemming from legal mandates, and this greater coercive pressure might favor the de-institutionalization of implemented pay policies within firms in order to increase their linkage to shareholder interests (Mangen & Magnan, 2012). To test this issue, as shown in Table 5, we draw on a similar equation used by Ferri & Maber (2013), which captures any post-regulation changes in SOP effectiveness.

Table 5. Impact of changes in SOP on SOP effectiveness

Variable	$\Delta ALIG\_CEO_{it,it+1}$			
	Advisory period		Binding period	
	(1)	(2)	(3)	(4)
$POST_{it}$	-	-	0.2072	0.1354
SOP^{-}_{it-1}	0.2722**	0.3384**	0.1295	0.1019
IND_{it}		-0.0178		-0.0461
ORG_{it}		0.0412		0.0781
ENV_{it}		0.0349		0.0075
$SOP^{-}_{it-1} * IND_{it}$		-0.2825**		0.0491
$SOP^{-}_{it-1} * ORG_{it}$		0.2002		-0.2761*
$SOP^{-}_{it-1} * ENV_{it}$		0.2464**		0.0925
$INSTITUTIONAL_{it}$	0.8291***	0.2151	0.3332	0.4160
$CASHFLOW_{it}$	-0.0040*	-0.0005	-0.0032*	-0.0009
LEV_{it}	-0.0215	-0.0004	-0.0072	-0.0008
$BSIZE_{it}$	-0.3714	0.0618	-0.0852	-0.0457
$GENDER_{it}$	-0.3382*	0.7449**	-0.2480*	-0.4251**
$NATION_{it}$	0.9129***	0.5439***	0.9143**	0.5211**
$SUCCESSION_{it}$	-0.9283***	-0.8465***	-0.2062	-0.3449
Industry control	YES	YES	YES	YES
Year control	YES	YES	YES	YES
Observations	2,305	2,305	1,140	1,140
Hansen J statistics	8.71	16.78	5.83	20.45
(p-value)	0.649	0.201	0.212	0.430
AR(2)	-1.26	0.14	0.39	-0.11

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

Similar to Ferri & Maber (2013), we use an equation that captures any post-regulation changes in SOP effectiveness. Specifically, we use an indicator variable, Post, which equals 0 for observations in the period 2003–2013 (advisory SOP), and 1 for those in the period 2014–2017 (binding SOP). Specifically, we interact unfavorable SOP results (and the remaining variables) with Post and with (1 – Post), and we essentially stack two panel data regressions (Ferri & Maber, 2013): the first where the observations are from the advisory period (2003–2013) and the second where the observations are from the binding period (2014–2017).

The dependent variable is ΔALIG_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 percentage of negative votes and abstentions cast out of the total at the end of year *t–l*; 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 (independent institutions) ratio in percentage terms of market capitalization at the end of year *t*; 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; and the Arellano-Bond test has been used to test that there is no autocorrelation in the sample.

As shown in Table 5, by differentiating between SOP effectiveness (on the design of more aligned pay) during advisory periods as compared to binding periods, we only find a positive and significant impact of an unfavorable SOP when SOP was advisory, whereas the impact of SOP does not prove significant when SOP is binding. Similar results are obtained when moderating effects of managerial discretion are considered –only organizational discretion has a positive (and significant) moderating role, whereas the impact of the other dimensions is not significant. These results thus suggest that a toughening of SOP legislation does not promote the design of more aligned compensation, since this effect is blurred when SOP changes from advisory to binding. As regards the control variables, in both periods, we find a significant impact of board characteristics and cash flow. In addition, in the advisory period, we find that the institutional ownership ratio has a positive impact – and that this higher proportion of institutional ownership is linked to pay designs more aligned with business interests.

Second, beyond using the change in aligned CEO compensation as a proper dependent variable to test the influence of SOP dissent, we use the change in pay-for-performance sensitivity to complement our previous results. In this way, we use the annual change in the value of total stock (i.e., value of equity awarded), option (i.e., estimated value of options awarded) and LTIP (i.e., long term incentive plans value) awards based on the closing stock price of the annual report. Using this pay-for-performance sensitivity measure, as shown in Table 6, we obtain similar results to the use of aligned compensation – based on

Core et al. (1999, 2008). In particular, in all regressions, we obtain a positive impact of an unfavorable SOP on the increase experienced by pay-for-performance (consistent with our Hypothesis 1). In addition, we see the moderating role played by managerial discretion – which is negative in the case of individual discretion (or latitude of objectives) and positive in the case of contextual discretion (or latitude of action) (consistent with our Hypotheses 2 and 3). These results highlight the real effectiveness of SOP in promoting compensation design that is more closely linked to business performance and shareholder interest.

Table 6. SOP effectiveness and pay-for-performance sensitivity

	$\Delta PPS\_CEO_{it,it+1}$					
Variable	(1)	(2)	(3)	(4)	(5)	(6)
SOP^{-}_{it-1}	0.5820**	0.3912*	0.3306*	0.3179*	0.2950*	0.4005**
IND_{it}		-0.0890	-0.0122			-0.0031
ORG_{it}		0.0478		0.0281		0.0016
ENV_{it}		0.1337			0.1153	0.0046
$SOP^{-}_{it-1} * IND_{it}$			-0.1432*			-0.3132**
$SOP^{-}_{it-1} * ORG_{it}$				0.2347**		0.2105*
$SOP^{-}_{it-1} * ENV_{it}$					0.2811**	0.4370***
$INSTITUTIONAL_{it}$	0.4079	0.4381	0.4520	0.5247	0.4306	0.2437*
$CASHFLOW_{it}$	-0.0019	-0.0009	-0.0001	-0.0001	-0.0001	-0.0004
LEV_{it}	0.0044	-0.0067	-0.0001	-0.0014	-0.0024	-0.0007
$BSIZE_{it}$	-0.0500	-0.0405	-0.0093	-0.0102	-0.0117	0.0013
$GENDER_{it}$	-0.4712*	-0.7505**	-0.6738*	-0.4767*	-0.5051**	-0.3132**
$NATION_{it}$	-0.098	0.1241	0.3146*	0.1034	0.0788	0.3965*
$SUCCESSION_{it}$	-0.4523**	0.3973	-0.6819**	-0.4212*	-0.5046*	-0.4244*
Industry control	YES	YES	YES	YES	YES	YES
Year control	YES	YES	YES	YES	YES	YES
Observations	3,445	3,445	3,445	3,445	3,445	3,445
Hansen J statistics	22.13	21.43	5.85	6.92	12.23	47.45
(p-value)	0.571	0.613	0.998	0.995	0.876	0.812
AR(2)	1.55	1.53	0.53	1.26	1.73	1.17

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

The dependent variable is ΔPPS_CEO, which is the change in the value of total stock (i.e., value of equity awarded), option (i.e., estimated value of options awarded) and LTIP (i.e., long term incentive plans value) awards based on the closing stock price of the annual report for a firm from year *t* to year *t + 1*. Independent

variables are: SOP^{-} refers to the percentage of negative votes and abstentions out of the total at the end of year *t–l*; 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 (independent institutions) ratio in percentage terms of market capitalization at the end of year *t*; 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; and the Arellano-Bond test has been used to test that there is no autocorrelation in the sample.

Third, boards (and compensation committee) might only react to SOP results when dissent levels are high – since low dissent might not involve any change in pay policies. In this sense, it is necessary to test whether SOP effectiveness changes when distinguishing between firms which received high dissent and firms which received low dissent. Among the different measures used by prior studies to distinguish between high and low dissent, we consider the median value as an adequate threshold of high SOP dissent (Sanchez-Marin et al., 2017) to divide the sample between high- and low-dissent firms. The results, shown in Table 7, reveal that firms react to dissent levels received by shareholders in both groups – both when dissent is deemed to be high and when it is viewed as low. Managerial discretion exerts a moderating influence in the same terms as stated above. In addition, there are no significant differences between the coefficient reported between these groups. In this way, it is possible to state that, after implementing SOP, boards remain likely to improve compensation designs, by linking them to shareholder and business interests, even in firms where voting dissent is not high.

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

Variable	$\Delta ALIG\_CEO_{it,it+1}$			
	High-dissent firms		Low-dissent firms	
	(1)	(2)	(3)	(4)
SOP^{-}_{it-1}	0.5341**	0.5615***	0.3735*	0.5165**
IND_{it}		-0.0268		-0.0088
ORG_{it}		0.1161		0.1141
ENV_{it}		0.0171		0.1522
$SOP^{-}_{it-1} * IND_{it}$		-0.2127**		-0.1694*
$SOP^{-}_{it-1} * ORG_{it}$		0.2449**		0.2500**
$SOP^{-}_{it-1} * ENV_{it}$		0.4194***		0.1821*
$INSTITUTIONAL_{it}$	0.1402	0.0481	0.1746	0.0254
$CASHFLOW_{it}$	-0.0160	-0.0003*	-0.0307	-0.0021
LEV_{it}	-0.0150	-0.0004	-0.0024	-0.0008
$BSIZE_{it}$	0.0434	-0.1016	0.1847	0.1291
$GENDER_{it}$	-0.6363**	-0.6071**	-0.5973**	-0.7184**
$NATION_{it}$	0.7127**	0.4629***	0.4871*	0.5536***
$SUCCESSION_{it}$	-0.2884	-0.8973***	0.3859	-0.7408***
Industry control	YES	YES	YES	YES
Year control	YES	YES	YES	YES
Observations	1722	1722	1723	1723
Hansen J statistics	18.31	43.43	27.07	42.91
(p-value)	0.247	0.133	0.103	0.168
AR(2)	1.34	-1.42	0.85	1.00

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

The dependent variable is ΔALIG_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 percentage of negative votes and abstentions out of the total at the end of year *t–l*; 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 (independent institutions) ratio in percentage terms of market capitalization at the end of year *t*; 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; and the Arellano-Bond test has been used to test that there is no autocorrelation in the sample.

Finally, institutional investors play an important monitoring role within businesses, and SOP-related literature has highlighted their relevance (Lozano-Reina & Sánchez-Marín,

2020; Stathopoulos & Voulgaris, 2016). It is thus interesting to test whether the likelihood of designing more aligned compensation by boards after SOP results is affected by the role played by institutional ownership. To test this (Table 8), following Hooghiemstra et al. (2017), we divide our sample into firms with high institutional ownership – where institutional ownership is above 50% – and firms with low institutional ownership – where institutional ownership is equal to or below 50%.

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

Variable	$\Delta ALIG\_CEO_{it,it+1}$			
	High Institutional Ownership		Low Institutional Ownership	
	(1)	(2)	(3)	(4)
SOP^{-}_{it-1}	0.3183*	0.4032**	0.2742*	0.3304**
IND_{it}		-0.0741		0.0299
ORG_{it}		0.0231		0.0964
ENV_{it}		0.1018		0.1131
$SOP^{-}_{it-1} * IND_{it}$		-0.2888**		-0.1680*
$SOP^{-}_{it-1} * ORG_{it}$		0.1767*		0.1427*
$SOP^{-}_{it-1} * ENV_{it}$		0.2007*		0.1679*
$INSTITUTIONAL_{it}$	0.6122*	0.7479**	-0.4991	0.2252
$CASHFLOW_{it}$	-0.0039	-0.0002	-0.0017	-0.0002
LEV_{it}	-0.0347	-0.0001	-0.0085	-0.0001
$BSIZE_{it}$	0.2181	-0.1268	0.3332	0.1941
$GENDER_{it}$	-0.3142	-0.6308**	0.1077	-0.8930***
$NATION_{it}$	0.5065**	0.5086**	0.7243**	0.5145**
$SUCCESSION_{it}$	-0.6147*	-0.7313***	-0.4461*	-0.7838***
Industry control	YES	YES	YES	YES
Year control	YES	YES	YES	YES
Observations	2,440	2,440	1,005	1,005
Hansen J statistics	23.34	15.91	13.18	14.43
(p-value)	0.138	0.998	0.282	1.000
AR(2)	1.70	0.48	0.91	1.04

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

The dependent variable is ΔALIG_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 percentage of negative votes and abstentions out of the total at the end of year *t–l*; 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 (independent institutions) ratio in percentage terms of market capitalization at the end of year *t*; 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; and the Arellano-Bond test has been used to test that there is no autocorrelation in the sample.

The results, shown in Table 8, evidence that the impact of an unfavorable SOP on the design of more aligned pay is significantly positive, both in firms with high institutional ownership and firms with low institutional ownership (and that there are no significant differences between these groups). This implies that, beyond the important supervisory and monitoring role these institutional investors play, SOP is useful *per se*. Similarly, in both groups, individual discretion has a negative moderating effect, and contextual discretion exerts a positive moderating effect.

3.5 DISCUSSION AND CONCLUSIONS

SOP is an activism mechanism that allows shareholders to vote on executive compensation, thereby providing an additional channel for them to express their opinion and so increase their influence and power over CEO compensation agreements (Sanchez-Marin et al., 2017; Stathopoulos & Voulgaris, 2016). Using a sample of large UK listed-companies (specifically, 3,445 firm-year observations) from 2003 to 2017, this study contributes to SOP-related literature by extending, both theoretically and empirically, current knowledge about SOP's capacity to design more aligned CEO compensation, whilst also showing how different dimensions of managerial discretion influence SOP effectiveness (Wangrow et al.,

2015). We do this by dynamically exploring this voting in order to gain a more realistic picture of how it functions and of its effectiveness.

Results show that SOP plays a key role in UK listed companies since an unfavorable SOP enhances a board's capacity to design more aligned compensation in addition to linking said compensation to business performance, which ultimately corrects agency problems and increases shareholder wealth. These findings help to clarify the doubts concerning SOP effectiveness raised by certain studies and are also consistent with the shareholder-alignment hypothesis (Brunarski et al., 2015; Cai & Walkling, 2011; Kimbro & Xu, 2016). Therefore, boards take shareholders' views into consideration when designing more aligned CEO compensation, thereby fostering greater compensation transparency.

Moreover, this chapter takes managerial discretion, as a potential moderating factor, into account, offering a transversal approach to environmental, organizational and individual factors that integrate the many dimensions which affect SOP effectiveness. This explains the non-significance obtained in other studies (within the SOP-related field) when some of these factors have been tested individually (Lozano-Reina & Sánchez-Marín, 2020). CEOs often influence board policies arising from SOP in order to ensure compensation that is consistent with their opportunistic interests. Given that these CEOs take advantage of their power to neutralize the impact of a potentially unfavorable SOP, individual discretion tends to exert a negative moderating effect. However, the role of environmental and organizational discretion is the opposite, since the determining factors of contextual discretion are associated with business competitiveness and success (in addition to being far removed from CEO opportunism). CEO action thus seeks to maximize firm value, which ultimately encourages

boards to take SOP results into consideration and thus leads to more aligned compensation as well as one which is linked to firm performance.

In addition to proving robust when considering managerial discretion as latitude of action and latitude of objectives, our results also show a positive moderating effect regarding the overall index of managerial discretion, stating that the positive effect from environmental and organizational discretion is greater and indeed makes up for the negative effect from individual discretion. In other words, the strength of latitude of objectives is partially blurred in favor of latitude of action. One possible explanation is that competitive contexts make CEOs less powerful and diminish their ability to achieve opportunistic pay designs by enhancing SOP effectiveness. In this way, CEO freedom of action – provided by their power base – is restricted, as is their chance of influencing boards when pursuing their own opportunistic goals (Shen & Cho, 2005). Meanwhile, the range of strategic options – provided by contextual discretion – increases CEO monitoring and control, and encourages CEOs to promote company competitiveness (Mustakallio et al., 2002), which also urges boards to act diligently when establishing pay packages (Finkelstein, 2009; Li & Kuo, 2017).

With regard to robustness analyses, four main considerations are worthy of note. First, as regards changes in the nature of SOP, our findings indicate that a toughening of SOP legislation does not improve the design of more aligned compensation since this effect is blurred when SOP changes from advisory to binding. Advisory SOP therefore proves to be a good (and appropriate) mechanism for aligning CEO compensation with firm interests, while stricter SOP legislation fails to enhance SOP effectiveness. One reason explaining this result may be based on the literature addressing symbolic and substantive responses to institutional or stakeholder pressures. When SOP becomes mandatory, boards adopt 'in form'

and it becomes more symbolic. However, when SOP is advisory, there is greater 'buy in' to the concept (Fiss & Zajac, 2006; Zattoni & Cuomo, 2008). Other reasons might be based on progressive changes, since the change to a binding SOP happens many years after the adoption of advisory SOP. As a result, this advisory SOP has to some extent already influenced CEO pay.

Second, SOP encourages boards to set more aligned compensation and also arouses greater pay-for-performance sensitivity. This contributes to SOP-related literature by showing that SOP enhances the process of executive control and monitoring, in addition to removing controversial pay practices and increasing SOP linkage to business performance (Alissa, 2015; Ferri & Maber, 2013; Kimbro & Xu, 2016). Third, it should be noted that boards' propensity to design more aligned compensation occurs both in companies which receive high dissent and in companies which receive lower dissent, showing that the persuasive effect of this voting remains in all those firms which receive a certain percentage of dissent votes from shareholders. In this way, SOP-related legislation really does imply shareholders' continuous monitoring of executive pay, while increasing board or director caution when designing such compensation (Lozano-Reina & Sánchez-Marín, 2020). Fourth, given the fiduciary duty of institutional investors towards business owners, one might think that SOP effectiveness could be influenced by the role of these investors, who usually vote according to shareholder interests (Larcker, McCall, & Ormazabal, 2015; Obermann & Velte, 2018). However, our results maintain that this voting works well *per se* – both in firms with high institutional ownership and in firms with low institutional ownership –, by showing how this voting constitutes a self-sustaining and useful monitoring tool beyond institutional ownership.

In summary, in agreement with most of the relevant literature, this study contributes academically by finding an effective impact of SOP on cases of misaligned CEO compensation, where an unfavorable SOP promotes pay designs that are more aligned with firm interests over time (Alissa, 2015; Cai & Walkling, 2011; Ferri & Maber, 2013; Gregory-Smith, Thompson, & Wright, 2014; Kimbro & Xu, 2016). This study thus makes significant progress in SOP-related literature by providing innovative knowledge and information and by conducting a longitudinal and contextual study that sheds light on certain unknowns concerning SOP effectiveness. Second, this article furthers current understanding of which factors modulate SOP effectiveness. In particular, it shows that SOP effectiveness is significantly determined by managerial discretion, where each dimension exerts a different impact although, broadly speaking, managerial discretion positively moderates SOP effectiveness on more aligned CEO compensation. Finally, this chapter introduces new theoretical foundations from the strategic and economic standpoints. Specifically, the *strategic approach* proves useful vis-à-vis explaining the positive impact of environmental and organizational discretion, and the *economic approach* allows the negative impact of individual discretion to be explored.

As regards practical repercussions, our findings offer various implications. First, companies should design executive compensation that is more closely linked to firms' interests so as to avoid restructuring compensation designs after receiving an unfavorable SOP, which might have some undesirable consequences for the firm (e.g., negative publicity, costs of changes in pay packages or loss of competent executives) (Cai & Walkling, 2011; Correa & Lel, 2016). Second, companies should pay attention to factors that determine managerial discretion, given that it has a huge impact on SOP effectiveness. In particular,

factors related to individual discretion must be considered since they often increase executive power and negatively impact SOP effectiveness. Third, any toughening of SOP legislation needs to be rethought since our results have shown that applying more stringent measures fails to improve the way SOP functions. In this way, governments should think more about implementing balanced corporate governance systems rather than tightening up SOP legislation (Almadi & Lazic, 2016).

Finally, this study has some limitations which, in turn, also offer interesting opportunities for future research. First, this study focuses on the UK because we preferred to focus on a single country with a specific government structure in an effort to obtain robust results that can be extended to other countries with a similar corporate governance model. In any case, future studies should extend the evidence provided in this study by comparing SOP effectiveness among countries. In particular, it would be interesting to compare countries with different corporate governance systems (Anglo-American versus continental European systems) and to look at this type of voting in hitherto unexplored contexts (e.g., Japan, South Africa or Germany). Second, we do not include qualitative determining factors regarding individual discretion, but merely consider the moderating effects of managerial discretion. In addition, we use a proxy for measuring CEO power based on Finkelstein (1992), which includes all dimensions of CEO power stated by this author – although the measure is not exactly the same as the original one[10]. Future studies should examine other mechanisms that moderate the relationship between SOP and executive compensation. Third, from a

[10] We have performed a robustness analysis regarding this issue by retesting our models using CEO ownership as a measure of power base, and the results were quite similar.

stakeholder perspective, future studies should consider how the behavior of different kinds of stakeholders affects SOP results and its effectiveness. Fourth, this research does not look at the role of proxy advisors, the media or other potentially important gatekeepers, which future research might take into consideration. Finally, since this study is the first to study the effects of changes in SOP legislation, new evidence is required to complement our results.

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APPENDIX

Appendix D. 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 & Lel, 2016; Ferri & Maber, 2013; Sanchez-Marin et al., 2017). Specifically, following the estimation of the authors mentioned, we use pooled cross-sectional OLS regression for the logarithm of CEO compensation, as shown in Table D1.

TABLE D1. Estimation of aligned CEO compensation

	C_CEO_{it}
Variable[a]	(1)
TEN_t	0.1459***
$SALES_{it-1}$	0.2298***
$FTSE100_{it}$	0.1625***
BTM_{it-1}	0.0008
RET_{it}	0.0004*
RET_{it-1}	-0.0001
ROA_{it}	0.0020*
ROA_{it-1}	-0.0028**
Intercept	1.0892***
Industry control	YES
Year control	YES
Observations	3,445
R^2	0.5862

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, and employers' defined contribution 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–l*; 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–l;* 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.

Our results, shown in Table D1, indicate that the main pay determinants are CEO tenure, company sales in the previous year, and the FTSE 100 index. Moreover, ROA in both the current as well as in the previous year has a significant impact on aligned CEO compensation. These results are similar to prior literature (Brunarski et al., 2015; Core et al., 2008; Sanchez-Marin et al., 2017). In addition, we also estimate aligned CEO compensation using a panel data method, and these results were quite similar.

CHAPTER 4: SAY-ON-PAY VOTING DISPERSION AND FAMILY GOVERNANCE[*]

[*]An earlier version of this chapter will be presented at the XX EURAM Conference (Dublin) (December 2020) and the XXX ACEDE conference (Spain) (September 2020). A version of this chapter was submitted to the *Journal of Family Business Strategy* (February 2020).

CHAPTER 4: SAY-ON-PAY VOTING DISPERSION AND FAMILY GOVERNANCE

4.1 INTRODUCTION

Say-on-Pay (SOP) is a voting system whereby shareholders in listed firms express their views on executive pay at the annual general meeting through a positive or negative vote, or by abstaining (Hooghiemstra, Kuang, & Qin, 2015; Lozano-Reina & Sánchez-Marín, 2020; Stathopoulos & Voulgaris, 2016). In addition to complementing traditional corporate governance mechanisms, SOP primarily seeks to increase shareholder influence on compensation issues (Alissa, 2015; Conyon & Sadler, 2010; Ferri & Maber, 2013; Sanchez-Marin, Lozano-Reina, Baixauli-Soler, & Lucas-Perez, 2017). Analysis of this system of voting is an important and emerging topic in corporate governance literature, and recent research has increasingly been calling for research to determine which factors prove key to shaping shareholder behavior in SOP voting (Lozano-Reina & Sánchez-Marín, 2020). In an effort to gain further insights, this paper studies shareholder behavior in SOP voting on CEO compensation design in a family business context due to the specificities and heterogeneity these businesses display, and which might impact the functioning of corporate governance mechanisms (Baek & Fazio, 2015; Bartholomeusz & Tanewski, 2006; Kumar & Zattoni, 2016; Mazur & Wu, 2016; Saravanan, Srikanth, & Avabruth, 2017).

Family firms, which concentrate a high level of family ownership, are characterized by their adaptability, flexibility and their particularistic governance decision-making (Gomez-Mejia, Nunez-Nickel, & Gutierrez, 2001). The "family" can be considered as an additional corporate governance mechanism that complements traditional monitoring mechanisms (Saravanan et al., 2017), and where family values and

goals influence governance and strategic decisions (Stavrou, Kassinis, & Filotheou, 2007). Family members must balance family and firm needs and goals (de Castro, Aguilera, & Crespi-Cladera, 2017), and display different philosophies about how to best manage businesses compared to non-family members (de Castro et al., 2017). Specifically, family members identify more closely with their businesses, where interpersonal interaction, common goals, and a common history become important and lead to organizational identification (Block, 2010).

In this sense, family ownership has a potential impact on the firm's governance practices (Aguilera & Crespi-Cladera, 2012), which also specifically impacts shareholder behavior in SOP voting regarding CEO compensation design. This might be affected by the lower agency costs (Baek & Fazio, 2015; Michiels, Voordeckers, Lybaert, & Steijvers, 2013) as well as the degree of stewardship orientation of their members (Barontini & Bozzi, 2018). All of this translates into strong ties (both family and emotional) between shareholders as well as greater family commitment and a tendency for shareholders to follow a collectivist orientation in decision-making (Block, 2010; Chu, 2011), which ultimately impacts SOP dispersion – which is considered as the degree of concentration (or variability) of SOP votes cast by shareholders on executive compensation by showing whether shareholders' votes are concentrated towards a certain common pattern (favorable or unfavorable with regard to pay designs) or not.

Moreover, strategic decision-making may be influenced by the degree of family involvement in management and governance[11] (Cheng, Lin, & Wei, 2015; Garcia-Castro

[11] Broadly speaking, *family governance* refers to the study of corporate governance within family businesses (by including family ownership, family management, and family control). However, in a restrictive sense, *family governance* refers to family control. In this study, we use family governance as a synonym of family control.

& Aguilera, 2014) as well as by family generation (Sciascia, Mazzola, & Kellermanns, 2014). In particular, voting ownership as an essential corporate governance mechanism may vary due to the heterogeneous nature of these firms (Achleitner, Kaserer, & Kauf, 2012). Therefore, the different degrees of family involvement imply the existence of heterogeneity, which is likely to affect shareholder behavior in SOP voting vis-à-vis CEO compensation. Shareholders are more prone to vote en bloc when a family is more involved in management and governance and when a firm is in the early generational stages, since the pursuit of family interests becomes more important, and emotional and family ties are stronger (Chrisman, Chua, Pearson, & Barnett, 2012; Sciascia et al., 2014; Stavrou et al., 2007). In sum, this paper aims to study the specific role played by family firms – and family involvement within organizations as well as family generation – in shareholder behavior in SOP voting, focusing on a sample of large UK listed companies (specifically, 1,531 firm-year observations) from 2007 to 2017.

Our study contributes to SOP-related literature in three main ways: first, by examining a prominent corporate governance mechanism – SOP –, this paper adopts a novel approach to exploring for the first time the role played by family firms in SOP voting behavior, thereby expanding the scarce current knowledge concerning shareholders reactions on CEO compensation design (Lozano-Reina & Sánchez-Marín, 2020); second, this study explores how shareholder behavior in SOP voting is greatly influenced by family values, culture and ties, which promote the formation of homogeneous blocs when shareholders cast their votes at the annual general meeting; third, by testing how different degrees of family involvement (in particular, family management and governance) as well as family generation affect the impact of family ownership on voting dispersion, this paper contributes to the debate on how family firm

heterogeneity can lead to variations in corporate governance decision-making (Soleimanof, Rutherford, & Webb, 2018).

This research is organized as follows. The next section contains the theoretical framework related to SOP dispersion and family firm context, and hypotheses are formulated based on this framework. In the methodology section, the sample, data and variables are described, together with the models and analyses used. The results are shown in the fifth section, and finally, the conclusions and discussion are provided.

4.2. THEORETICAL BACKGROUND AND HYPOTHESES

4.2.1 Say-on-Pay voting dispersion in family versus non-family firms

SOP is a way of monitoring compensation, and concerns the extent of executive supervision with regard to their compensation designs (Sánchez-Marín, Carrasco-Hernández, & Danvila-del-Valle, 2019). However, shareholder behavior in SOP voting may differ between family and non-family firms since, while affective compensation monitoring (based on emotional incentives and welfare issues) is to be expected in family firms, instrumental compensation monitoring (based on economic incentives and accountability results) is to be expected in non-family firms (Sánchez-Marín et al., 2019). These differences may be due to the special features of family firms, which are characterized by reduced owner-manager conflict, where family ownership might partially be viewed as a complement to traditional corporate governance mechanisms (Mazur & Wu, 2016). In addition, compared to non-family businesses, information asymmetries and self-interest are less in evidence in family firms because of the altruism[12]

[12] Altruism increases the alignment of interests and promotes commitment and generosity among family members, by creating a sense of collective ownership (Sánchez-Marín et al., 2019).

between CEO and family members, which ultimately increases their commitment and loyalty (Gomez-Mejia, Larraza-Kintana, & Makri, 2003; Sánchez-Marín et al., 2019).

By acting as stewards, family managers are often more intrinsically motivated than their peers by higher-level needs, which entails acting in the general interest of their businesses (by even behaving altruistically for the benefit of shareholders) (Block, 2010; Chu, 2011; Miller, Le Breton-Miller, & Lester, 2011). Due to their family and emotional ties, they are family members who are emotionally connected with the firm (Miller et al., 2011) and often obtain higher utility from collectivistic behavior than from opportunistic behavior (Chu, 2011), which then may affect shareholder behavior in SOP voting on executive compensation. Similarly, in contrast to non-family members, family owners often have much at stake within these companies (e.g., their reputation, relationship between family members, their invested wealth) due to the close connections between the family and the firm (Sciascia, Mazzola, Astrachan, & Pieper, 2013). Thus, in a family firm, the relational contract (between firm and family) implies a common commitment and a set of expectations that are based on sentiments, ties and emotions (Gomez-Mejia et al., 2001), which leads them to adopt a common stance in strategic decision-making.

Family members are thus more committed to and identify more closely with their firms than non-family members do, with family ownership shaping the basis of the family business culture and governance (Chrisman et al., 2012; Stavrou et al., 2007). In this way, family firms are more likely to adopt a collectivist orientation when voting (i.e., family shareholders tend to vote en bloc), an orientation that will be enhanced by family ownership, and which will result in less dispersion in SOP results compared to non-family firms. This collectivist orientation results from the greater commitment, loyalty and interdependence towards the family's long-term success (Azizan & Ameer, 2012), and

translates into voting agreements wherein family shareholders pool their voting rights by removing the wedge between the ratio of votes controlled and the ratio of votes owned (Villalonga & Amit, 2009). Voting agreements imply that one shareholder "cedes" her/his voting power to another shareholder (or more specifically to a family group), a feature which is common among family members (Villalonga & Amit, 2009).

In sum, family shareholders promote the existence of voting blocs, which are formal agreements that intensify the influence of family ownership concentration, with these coalitions serving as a commitment device. The formation of voting blocs among family shareholders implies the existence of homogeneous voting positions – in contrast to non-family firms where the formation of voting agreements is more difficult given that there are fewer family and emotional ties (Azizan & Ameer, 2012; Villalonga & Amit, 2009). Based on this, we consider that family firms (influenced by family ownership) tend to follow a greater collectivist orientation when casting their vote compared to non-family firms, such that lower dispersion in SOP results may be expected. Thus, the first hypothesis is stated as follows:

Hypothesis 1: "*Voting dispersion in SOP results is lower in family firms than in non-family firms*".

4.2.2 Say-on-Pay voting dispersion and family ownership

The common denominator of family firms is their high degree of ownership concentration (Aguilera & Crespi-Cladera, 2012), with family ownership playing an important role in large firms worldwide (La Porta, Lopez-De-Silanes, & Shleifer, 1999; Maury, 2006). This ownership, which suggests the distribution of control and power in a company, becomes more complex in family firms due to the familial and social ties as

well as the need to prevent any action that might prove detrimental to the reputation of the firm, the owners, and the managers (Block, 2010; Goel, Mazzola, Phan, Pieper, & Zachary, 2012). In addition to being a way to distinguish family firms from their peers, family ownership provides a means for families to exert strong control and influence over corporate decisions (Aguilera & Crespi-Cladera, 2012; de Castro et al., 2017). When a family controls a firm, to some extent it becomes responsible for its governance practices (de Castro et al., 2017). Family ownership thus has a huge impact on the business's governance decisions (Aguilera & Crespi-Cladera, 2012).

Family firms often vary depending on the mode and extent of family influence found in the organization (Garcia-Castro & Aguilera, 2014), where the percentage of family ownership might affect corporate governance and strategic decision-making since not all family firms have the same incentives to preserve their control. In listed family firms, voting based on ownership represents a key governance mechanism, a construct which is influenced by the heterogeneity of these businesses (Achleitner et al., 2012). Identifying and considering shareholder heterogeneity may shed light on some of the prior conflicting evidence to emerge concerning SOP-related literature (Stathopoulos & Voulgaris, 2016), and which is particularly noticeable in the family firm context since the literature has shown these firms to be more heterogeneous than homogeneous (Berrone, Cruz, & Gomez-Mejia, 2012; Mullins, 2018). Although voting dispersion is generally lower in family firms, when family ownership increases, the likelihood of following homogeneous behavior in SOP voting is thus greater, which tends to further reduce voting dispersion.

4.2.2.1 The moderating role of family involvement in management and governance

Another source of family heterogeneity stems from family involvement in management and governance (Aguilera & Crespi-Cladera, 2012). This family involvement is important because the greater the role of the family in management and governance, the more likely the firm is to strive to preserve its family control (Gomez-Mejia, Haynes, Nunez-Nickel, Jacobson, & Moyano-Fuentes, 2007). Family values are also affected by family involvement; i.e., when a family is involved to a greater extent, the pursuit of family goals and interests becomes more important, and emotional and family ties prove crucial in decision-making (Chrisman et al., 2012; Stavrou et al., 2007). Family members also have a strong incentive to monitor (based on emotional incentives and welfare issues) due to the large share of their wealth which they have invested in the firm (Boubaker, Nguyen, & Rouatbi, 2016; Sánchez-Marín et al., 2019). In this sense, the struggle to preserve family control depends on the level of family involvement through management and governance (Berrone et al., 2012), which affects how strong ties are between family shareholders as well as their commitment to establish voting agreements in order to reach a common stance on compensation issues. Specifically:

Family involvement in management. In addition to increasing the alignment of firm and family interests, it promotes active business management, which is enhanced by the impact of family ownership (Chu, 2011; Sánchez-Marín et al., 2019). One key feature of family businesses is that a family member often serves as CEO and/or that other family members usually occupy top management positions (Berrone, Cruz, Gomez-Mejia, & Larraza-Kintana, 2010; Feldman, Amit, & Villalonga, 2016; Naldi, Cennamo, Corbetta, & Gomez-Mejia, 2013). Family members serving as CEOs and/or managers are usually large shareholders who are actively involved in managing their firms and who have more

direct control over business policies. Moreover, their power leads them to exercise greater discretion when influencing corporate decisions that are designed to preserve such control (Berrone et al., 2012; Feldman et al., 2016; Mullins, 2018).

Family CEOs and family managers are more likely to encourage a common identity and a stronger "family vision" within the business – which is greatly influenced by the strong family ties, the reference to a common family history or the shared family name (Barnett, Long, & Marler, 2012). There is greater interaction between stakeholders and the owning family when family members are directly involved in these important managerial positions (Pittino, Visintin, Lenger, & Sternad, 2016), which tempers the impact of family ownership on shareholder voting behavior by promoting more coordinated positions on matters related to pay decisions. In addition to further mitigating agency costs (due to their aligned interests with the owners), a family CEO or family manager acts as a steward by strongly identifying with the firms and by considering the firm as an extension of themselves (Chu, 2011). They therefore forge common identities and interests and often play a dual role by being both owner and manager (Anderson & Reeb, 2003; Berrone et al., 2010; Jiang & Peng, 2011), in addition to having the authority to commit shareholders without the need for formal or written agreements (Naldi et al., 2013). Based on this, we expect that as family involvement in management increases (through the presence of family members who hold a CEO or managerial position), the influence of family ownership vis-à-vis reducing voting dispersion will intensify. The second a) hypothesis is thus stated as follows:

Hypothesis 2a: "*Family involvement in management negatively moderates the impact of family ownership on voting dispersion in SOP results*".

Family involvement in governance. Family members are often board of director presidents or have a seat as board members. As a result, family governance is often manifested through the presence of the family on the board of directors (Cruz, Larraza-Kintana, Garces-Galdeano, & Berrone, 2014; Gomez-Mejia, Makri, & Larraza Kintana, 2010; Vandemaele & Vancauteren, 2015). Control via supervisory board participation implies greater family power, promotes family involvement and facilitates pro-organizational behavior (Kraiczy, Hack, & Kellermanns, 2015; Sciascia et al., 2014). Firms with family-dominated boards would therefore be more inclined to avoid strategic decisions that might threaten family interests and motivation (Vandemaele & Vancauteren, 2015). Stewardship theory states that the main function of boards is to support management and to advise, such that families often place their members on the board (Chu, 2011). When the proportion of family members on boards is higher, family influence is more stable, family ties are increased (Achleitner et al., 2012), and stewardship behavior proves easier (Kraiczy et al., 2015).

This greater desire to preserve firm control leads family members on boards to follow a collectivist orientation in decision-making (Block, 2010; Chu, 2011), which might specifically support like-minded voting positions. For instance, families may use the board of directors as a vehicle to justify or legitimize their strategic decisions (de Castro et al., 2017; Gomez-Mejia, Cruz, Berrone, & De Castro, 2011). In this way, we suggest that as family involvement in governance increases (through family representation on the board), family members tend to act as a single bloc in decision-making, and that the influence of family ownership with regard to adopting a single common position is greater, thereby reducing voting dispersion. Thus, the second b) hypothesis is stated as follows:

Hypothesis 2b: "*Family involvement in governance negatively moderates the impact of family ownership on voting dispersion in SOP results*".

4.2.2.2 The moderating role of family generation

Family generation constitutes another source of family heterogeneity since family members' behavior and features are different when a firm is in the first generational stage as opposed to subsequent generational stages (Aguilera & Crespi-Cladera, 2012). Specifically, family business literature has shown that family commitment and identification are greater in the first generation, and tend to decrease as the organization moves into subsequent stages (Gomez-Mejia et al., 2007; Pittino et al., 2016). Similarly, over time, family commitment and values might also erode because family ownership passes to new family generations (Sciascia et al., 2014), and ownership is spread over a greater number of family stakeholders, which affects both strategic and government decision-making. Thus, passing from earlier generations to subsequent generations implies different changes in firm management and policies, which ultimately translates into the existence of another source of heterogeneity (Kellermanns, Eddleston, Barnett, & Pearson, 2008; Le Breton-Miller & Miller, 2006).

In the first generation, family firms tend to be more concerned about preserving company control, and the individuals involved are often members of a single core family where the founder plays a leading role (Arregle, Hitt, Sirmon, & Very, 2007). However, as the firm moves into subsequent stages (second or later generations), the overlap between "family" and "firm" diminishes, and the identification and emotional attachment of family members becomes progressively weaker (Gomez-Mejia et al., 2007). Thus, although the desire to maintain control over the company is stronger in the early stages (or generations), said desire tends to fade as the firm moves into later stages (Gomez-

Mejia et al., 2007). Therefore, the generational stage is expected to affect shareholders' collectivist orientation to vote en bloc. Therefore, we expect the impact of family ownership on the formation of voting agreements – and the moderating role exerted by family management and governance – to be strongly evident in the first generational stage (where the greater desire to preserve company control leads family members to encourage a common stance on executive compensation). However, this effect will lessen as the firm moves through successive generations. Thus, the third hypotheses are stated in the following terms:

Hypothesis 3a: "*Family ownership leads to a higher reduction in voting dispersion when a family firm is in the first generation*".

Hypothesis 3b: "*Family involvement in management and governance lead to a higher reduction in voting dispersion when a family firm is in the first generation*".

4.3 METHODOLOGY

4.3.1 Sample and data collection

This study focuses on large UK listed companies (both family and non-family firms). The UK, which is representative of the Anglo-American model of corporate governance, provides a particularly important context because this country was the first to implement SOP-related legislation. It is therefore possible to study shareholder behavior in SOP voting regarding CEO compensation design using a longer time horizon (as more data are available than in other contexts). In this sense, unlike other countries, the UK has long-running experience in this voting process, thus making it an ideal context in which to examine how it works. After matching valid observations across the different

databases, the final sample is composed of 1,531 firm-year observations from 2007 to 2017. Of the observations, 711 refer to family firms and 820 to non-family firms.

Five main sources of information are used to collect data on SOP, family firms, the different degrees of family involvement, and the control variables: *Manifest Ltd*, an independent shareholder voting and corporate governance support service, is used to collect data on SOP voting. *NRG Metrics*, an integrated corporate governance and ownership database, provides data on family firms. *BoardEx*, a database that contains biographical data on most board members and senior executives around the world, provides data on corporate governance and compensation. *Worldscope* and *DataStream*, databases which offer fundamental data on the world's leading public and private companies, provide information about economic and financial variables.

4.3.2 Variables

Voting dispersion (SOP_DISP). It is based on SOP results, which are calculated from percentages of votes in favor, against, and abstentions out of the total (Conyon & Sadler, 2010; Ferri & Maber, 2013; Hooghiemstra et al., 2015). In this way, we use the variance of a binominal distribution as an appropriate measure of SOP dispersion since it measures whether shareholders' votes are more concentrated or more dispersed. It thus proves useful for testing whether shareholders follow a collectivist orientation when voting. Specifically, we distinguish between the two following events: (a) the likelihood of receiving a favorable vote; and (b) the likelihood of receiving a dissent vote, which includes negative votes and abstentions (Conyon & Sadler, 2010; Ferri & Maber, 2013; Hooghiemstra, Kuang, & Qin, 2017). Thus, the maximum value of the variance is 0.25 –

when a firm receives 50% positive votes and 50% dissent votes). Otherwise, the variance will be zero when all the votes are concentrated either on the positive or the dissent side.

Family firm (FF). We use a dummy variable to distinguish between family and non-family firms. We consider a company to be a family business when a family owns a minimum of 5% of the firm's shares, with at least one family member serving as a member of the board of directors or as a top-level executive; this variable is set at 1. However, we consider a company to be a non-family firm if family ownership is less than 5% and/or no family member is involved in executive or board leadership; this variable is set at 0 (Berrone et al., 2010; Gomez-Mejia et al., 2010; Gomez-Mejia, Patel, & Zellweger, 2018).

Family ownership (FF_OWN). We use a continuous variable that measures family ownership, which represents a family's ability to control the company (Chrisman & Patel, 2012; Gomez-Mejia et al., 2018; Patel & Chrisman, 2014). We apply a restriction by considering only businesses that own a minimum of 5% of the firm's shares, with at least one family member serving on the board of directors or as a top-level executive (Berrone et al., 2010; Gomez-Mejia et al., 2010, 2018). In this sense, this continuous variable is only valid when family ownership stands at 5% at the very least and when there is at least one family member involved in leadership (Chrisman & Patel, 2012; Gomez-Mejia et al., 2018; Patel & Chrisman, 2014).

Family involvement in management (FF_MAN). Following prior literature, two different measures are used to represent families' ability to impact the day-to-day management of organizations: first, the existence of a family CEO (FF_MAN_1), which is equal to a dummy variable that differentiates between family CEOs and non-family CEOs. Specifically, this variable takes the value 1 when the CEO is a member of the

family and 0 otherwise (Naldi et al., 2013; Vandemaele & Vancauteren, 2015); second, the percentage of family ownership in a firm's management team (FF_MAN_2) (Sánchez-Marín et al., 2019; Sciascia et al., 2014).

Family involvement in governance (FF_GOV). This represents a family's power through its representation on the board, and is therefore measured as a continuous variable that comprises the percentage of family ownership on the board (Cruz et al., 2014; Gomez-Mejia et al., 2010; Vandemaele & Vancauteren, 2015).

Family generation (FF_GEN). This is related to the generation of family members involved in the firm, and is measured through the age of the firm. Age might be an appropriate indicator for the family generation stage since a founder-controlled firm tends to be younger than a successor-controlled firm (Gottardo & Moisello, 2019; Zellweger, Kellermanns, Chrisman, & Chua, 2012). Zellweger et al. (2012) show that, although firm age and firm stage are not identical, they are highly correlated, with the former serving as a relevant proxy. Specifically, and following prior literature (Blanco-Mazagatos, de Quevedo-Puente, & Castrillo, 2007; Gottardo & Moisello, 2019), we use a dummy variable to differentiate between firms in the first generational stage and firms in subsequent generations, using 25 years old as a cut-off point – since this point is an approximation of when the second generation usually enters the company (Gottardo & Moisello, 2019; Xi, Kraus, Filser, & Kellermanns, 2015). Based on this, it is assumed that firms which are less than 25 years old are in the first generation – and the dummy takes the value 1, and 0 otherwise.

Control variables. We consider some factors which the literature has identified as variables that might influence shareholders' voting results. Specifically: (1) *CEO compensation* (CEO_PAY), which is the sum of the salary (base annual pay in cash),

bonus, other compensation (value of annual ad hoc cash payments such as relocation or fringe benefits awarded during the period), employers defined contribution (employers defined retirement / pension contribution), and the value of shares awarded. We use the natural logarithms of this variable to reduce heteroskedasticity (Armstrong, Gow, & Larcker, 2013; Kimbro & Xu, 2016). (2) *Firm size* (SIZE), which is the natural logarithm of company net sales. (3) *Return on assets* (ROA), which is calculated as the ratio of the net income to the book value of the firm's total assets. (4) *Institutional ratio* (INSTITUTIONAL), which is the total institutional ownership ratio in percentage terms of market capitalization (Alissa, 2015). (5) *Cash flow* (CASHFLOW), measured by free-cash flow scaled by the firm's market value in the period analyzed, where free cash flow is measured as cash inflows from operating (Balsam, Boone, Liu, & Yin, 2016; Burns & Minnick, 2013). (6) *Board size* (BSIZE), which is the standard deviation of the number of board members (Conyon & Sadler, 2010). (7) *Leverage* (LEV), which equals the book value of total liabilities scaled by the firm's market value (Balsam et al., 2016).

4.3.3 Models and analyses

In order to facilitate improvements in our estimations and econometric specifications, this research uses a panel data method. This method examines the dynamics of cross-sectional populations and provides greater efficiency and more information than other methods (Balgati, 2001). In addition, it controls for unobservable heterogeneity, preventing biased results, since there are certain features that are difficult to measure, and which may affect CEO pay.

Equation 1 is developed to test Hypothesis 1, whose dependent variable is the dispersion in SOP voting (DISP_SOP), indicating shareholder capacity to establish voting

agreements and adopt a collectivist orientation. The independent variables are the consideration of an organization as a family or non-family firm (FF), and control variables. We expect β_1 to exert a significant and negative influence on the degree of SOP dispersion because this dispersion tends to be lower in family firms compared to non-family firms. Specifically:

$$SOP\_DISP_{it} = \beta_0 + \beta_1 \cdot FF_{it} + \beta_2 \cdot Control\ variables_{it} + n_i + d_t + e_{it} \quad (1)$$

Moreover, we use Equation 2 to test the moderating role of family involvement in management and governance (Hypotheses 2). In this case, we only focus on family firms. The dependent variable is the degree of SOP dispersion (DISP_SOP). The independent variables are family ownership (FF_OWN), variables related to family involvement in management and family governance, interaction terms between family ownership and family heterogeneity, and control variables. We expect β_1 to have the same impact as in Hypothesis 1. In addition, we expect β_4 and β_5 to have a significant and negative moderating impact since voting dispersion tends to diminish when the family's involvement in management and/or governance increases. Specifically:

$$\begin{aligned} SOP\_DISP_{it} = {} & \beta_0 + \beta_1 \\ & \cdot FF\_OWN_{it} + \beta_2 \cdot FF\_MAN_{it} + \beta_3 \cdot FF\_GOV_{it} + \beta_4 \cdot (FF\_OWN_{it} \cdot FF\_MAN_{it}) \\ & + \beta_5 \cdot (FF\_OWN_{it} \cdot FF\_GOV_{it}) + \beta_6 \cdot Control\ variables_{it} + n_i + d_t + e_{it} \end{aligned} \quad (2)$$

Finally, we also use Equation 2 to test the moderating role of family generation (Hypotheses 3) by re-dividing our sample into two different groups: the first group includes family firms which are in the first generation (i.e., family firms which are less than 25 years old); and the second group includes family firms which are in the second or subsequent generations (i.e., family firms that are 25 years old or more). We expect the impact of family ownership (and the moderating effect of family involvement and

governance) on voting concentration to be greater when family firms are in the first generation, while it is blurred when a company moves into subsequent generations.

4.4 RESULTS

4.4.1 Descriptive statistics and correlations

Table 1 shows the basic statistics. Panel A, by distinguishing between family and non-family firms, shows that the mean of voting dispersion is greater in non-family firms (0.0731) than in family firms (0.0660), which a priori indicates a greater tendency to concentrate voting results from SOP within family firms. Panel A also shows the main descriptive regarding control variables. Among these, we find that CEO pay is often lower, size is lower, performance is greater, and that the proportion of institutional investors is lower in family firms compared to non-family organizations. Moreover, Panel B shows statistics regarding family firm variables. We note that family ownership is about 34.32%, there is a greater proportion of family firms without a family CEO, and the average percentage of family ownership on the management team and boards is 14.86% and 19.14%, respectively. The standard deviation value of these variables indicates the existence of certain differences among firms.

Table 2 shows the correlations between our main variables. We highlight the negative correlation between voting dispersion and family ownership, and the negative correlation between CEO compensation and family ownership. In addition, correlations between family firm variables are worthy of note. The correlations between the remaining exploratory variables are not high. In addition, our tests show an absence of multicollinearity between our explanatory variables since VIF values are below 5 and condition indexes are below 30 (Hair, Anderson, Tatham, & Black, 1998).

Table 1. Summary of sample characteristics (2007-2017)

Panel A – SOP dispersion and control variables

	Non-family firms					Family firms				
Variable[a]	Mean	Standard deviation	Median	Min	Max	Mean	Standard deviation	Median	Min	Max
SOP_DISP	0.0731	0.0689	0.0476	0.0000	0.2499	0.0660	0.0750	0.0284	0.0000	0.2489
CEO_PAY	8.5941	0.6705	8.5889	5.8972	10.5993	8.0219	0.7835	8.1077	5.7652	9.4468
SIZE	21.4123	1.5917	21.2539	16.4546	26.2039	20.6887	1.2041	20.8186	17.9098	22.9425
ROA	7.4105	19.0652	6.5800	-87.2711	69.1080	7.7706	14.5766	8.5533	-77.1707	66.9497
INSTITUTIONAL	39.0822	11.5571	38.7299	2.6698	76.2453	27.2466	10.9109	28.1722	1.1168	53.5723
CASHFLOW	13.7070	10.8606	10.7647	-23.2243	65.4390	15.8149	10.1308	12.5374	-6.4662	49.6618
BSIZE	1.0488	0.4328	1.0000	0.0000	4.7000	1.1073	0.8273	1.0000	0.3000	4.6000
LEV	25.8448	16.9316	24.8746	0.0000	75.7673	23.9403	18.0649	22.7375	0.0000	85.4843

Panel B – Family firm variables

Variable[b]	Mean	Standard deviation	Median	Min	Max
FF_OWN	34.3211	20.3947	31.0000	5.0000	90.0000
FF_MAN_1	0.3211	0.4691	0.0000	0.0000	1.0000
FF_MAN_2	14.8552	21.5547	47.0000	0.0000	64.0700
FF_GOV	19.1404	20.7110	10.1700	0.0000	64.0700
FF_GEN	0.5963	0.4929	1.0000	0.0000	1.0000

[a]SOP_DISP refers to voting dispersion; CEO_PAY, which is the natural logarithm of the sum of salary, bonus, other compensation, employers' defined contribution and the value of shares awarded; SIZE is the natural logarithm of company net sales; ROA is the ratio of net income to the book value of the firm's total assets; INSTITUTIONAL is the institutional ownership ratio in percentage terms of market capitalization; CASHFLOW is the free cash-flow scaled by the firm's market value; BSIZE is the standard deviation of the number of board members; and LEV equals the book value of total liabilities scaled by the firm's market value.

[b]FF_OWN refers to the percentage of family ownership in the firm (when family ownership is at least 5% and when at least one family member is involved in leadership); FF_MAN_1 is a dummy variable that takes the value 1 when the CEO is a member of the family, and 0 otherwise; FF_MAN_2 is the percentage of family ownership on a firm's management team; FF_GOV refers to the percentage of family ownership on the board; FF_GEN is a dummy variable that takes the value 1 when firms are less than 25 years old (i.e., when firms are in the first generation), and 0 otherwise.

Table 2. Correlations between variables (2007-2017)

Variable[a]	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
(1) SOP_DISP	1.0000													
(2) FF	-0.0348	1.0000												
(3) FF_OWN	-0.0666*	0.8426***	1.0000											
(4) FF_MAN_1	0.0349	0.3210***	0.2583***	1.0000										
(5) FF_MAN-2	-0.0312	0.5391***	0.6811***	0.2204***	1.0000									
(6) FF_GOV	-0.0512	0.6507***	0.7253***	0.2712***	0.9342***	1.0000								
(7) FF_GEN	0.0863**	0.1757***	0.2042***	0.1756***	0.2176***	0.1757***	1.0000							
(8) CEO_PAY	0.0956**	-0.2739***	-0.2343***	-0.1263**	-0.3029***	-0.3308***	-0.0672*	1.0000						
(9) SIZE	0.0418	-0.1586**	-0.0894**	-0.2678***	-0.1105**	-0.1220**	-0.1641***	0.6020**	1.0000					
(10) ROA	-0.0272	0.0067	0.0038	0.0488	0.0263	0.0231	0.0717**	0.0128	-0.0374	1.0000				
(11) INSTITUTIONAL	-0.0557*	-0.3335***	-0.3081***	-0.0579	-0.2008***	-0.2271***	0.0083	0.0487	-0.1160**	0.0775*	1.0000			
(12) CASHFLOW	0.0361	0.0659	0.0981*	0.2676***	0.1421**	0.1157*	0.2423***	0.0096	-0.2416***	0.1956***	0.0192	1.0000		
(13) BSIZE	0.0594*	0.0397	0.1220**	0.0442	0.0991*	0.0692	0.1797***	0.0562	0.0483	-0.0140	-0.0549	0.1369**	1.0000	
(14) LEV	-0.0825	-0.0378	-0.0038	-0.1661***	-0.1037**	-0.0557	-0.0193	0.0571	0.1997***	-0.1330**	-0.1637***	-0.0216	0.1038**	1.0000

p-value: * p<0.10; ** p<0.05; ***p<0.01

[a]SOP_DISP refers to voting dispersion; FF is a dummy variable that takes the value 1 when a family owns a minimum of 5% of a firm's shares and there at least one family member serving on the board of directors or as a top-level executive; and 0 otherwise; FF_OWN refers to the percentage of family ownership in the firm (when family ownership is at least 5% and when at least one family member is involved in leadership); FF_MAN_1 is a dummy variable that takes the value 1 when the CEO is a member of the family, and 0 otherwise; FF_MAN_2 is the percentage of family ownership on a firm's management team; FF_GOV refers to the percentage of family ownership on the board; FF_GEN is a dummy variable that takes the value 1 when firms are less than 25 years old (i.e., when firms are in the first generation), and 0 otherwise; CEO_PAY, which is the natural logarithm of the sum of salary, bonus, other compensation, employers' defined contribution and the value of shares awarded; SIZE is the natural logarithm of company net sales; ROA is the ratio of net income to the book value of the firm's total assets; INSTITUTIONAL is the institutional ownership ratio in percentage terms of market capitalization; CASHFLOW is the free cash-flow scaled by the firm's market value; BSIZE is the standard deviation of the number of board members; and LEV equals the book value of total liabilities scaled by the firm's market value.

4.4.2 Testing the hypotheses

The regressions of Model 1 for testing Hypothesis 1 are shown in Table 3. We find that family owners – in contrast to non-family owners – tend to concentrate their positions when casting their SOP votes (regression 1), thereby reducing voting dispersion within family businesses. Going further, focusing only on family firms, we find that family ownership has a negative and significant impact on voting dispersion (regression 2), allowing us to affirm that when family ownership increases, shareholders tend to concentrate their votes – forming a homogeneous voting bloc. These results are in line with our Hypothesis 1, and reflect the importance of emotional and familial ties within family businesses when shareholders assess executive compensation and cast their votes. With regard to the control variables, we find the importance of institutional ownership and leverage, which negatively impact SOP dispersion. However, we find no significant impact of CEO pay on voting dispersion.

Table 3. Family ownership and shareholder behavior in SOP voting regarding CEO compensation design

	SOP_DISP_{it}	
Variable	(1)	(2)
FF_{it}	-0.1029**	
FF_OWN_{it}		-0.1557**
CEO_PAY_{it}	-0.0085	-0.0012
$SIZE_{it}$	-0.0069	0.0024
ROA_{it}	0.0001	-0.0001
$INSTITUTIONAL_{it}$	-0.1095***	-0.0634**
$CASHFLOW_{it}$	0.0001	0.0002
$BSIZE_{it}$	0.0086	0.0083
LEV_{it}	0.0002	-0.0002*
CONSTANT	0.3004	0.0522
Year control	Yes	Yes
Industry control	Yes	Yes
N	1,531	771
R-squared	0.1332	0.2178

p-value: * p<0.10; ** p<0.05; *** p<0.01

The dependent variable is SOP_DISP, which refers to voting dispersion at the end of year *t*. The independent variable is FF, which is a dummy variable that takes the value 1 when a family owns at least

5% of a firm's shares and there is at least one family member serving on the board of directors or as a top-level executive; and 0 otherwise; and FF_OWN, which refers to the percentage of family ownership in the firm at the end of year *t* (when family ownership is greater than 5% and one family member is involved in leadership). The control variables are CEO_PAY, which is the natural logarithm of the sum of salary, bonus, other compensation, employers' defined contribution and the value of shares awarded at the end of year *t*; SIZE is the natural logarithm of company net sales at the end of year *t*; ROA is the ratio of net income to the book value of the firm's total assets at the end of year *t*; INSTITUTIONAL is the institutional ownership ratio in percentage terms of market capitalization at the end of year *t*; CASHFLOW is the free cash-flow scaled by the firm's market value at the end of year *t*; BSIZE is the standard deviation of the number of board members at the end of year *t*; and LEV equals the book value of total liabilities scaled by the firm's market value at the end of year *t.* All standard errors are robust.

In addition, the regressions of Model 2 for testing Hypotheses 2 are shown in Table 4, where the moderating role of family involvement in management and governance is analyzed. First, we test the moderating role exerted by family management and governance individually (regressions 1-3), and then retest their influence jointly in a single regression (regression 4). As regards *family involvement in management*, when testing the influence of a family CEO as well as the presence of family on the management team (regression 1, 2 and 4), we obtain a negative moderating effect on the relationship between family ownership and voting dispersion. This implies that the likelihood of concentrating SOP voting within family businesses is intensified by the presence of family members who are the CEO or who hold managerial positions. These results confirm our Hypothesis 2 a). However, with regard to *family involvement in governance* (regressions 3 and 4), we find no significant impact of the presence of family ownership on the board; i.e., there is no evidence to support whether the presence of family members on the board intensifies or not the relationship between family ownership and voting dispersion. These results do not support our Hypothesis 2 b). As for the control variables, in all regressions, we highlight the negative and significant impact of institutional investors – similar to the results obtained in Table 3 –, and the positive and significant impact of board size.

Table 4. Moderating effect of family involvement in management and governance

	SOP_DISP_{it}			
Variable	(1)	(2)	(3)	(4)
FF_OWN_{it}	-0.1770**	-0.1138*	-0.1242**	-0.1459**
$FF\_MAN\_1_{it}$	-0.0872			-0.0118
$FF\_MAN\_2_{it}$		-0.0190		0.0007
FF_GOV_{it}			-0.0045	-0.0017
FF_OWN_{it} * $FF\_MAN\_1_{it}$	-0.1629**			-0.1023*
FF_OWN_{it} * $FF\_MAN\_2_{it}$		-0.2017***		-0.1355**
FF_OWN_{it} * FF_GOV_{it}			-0.0077	-0.0075
CEO_PAY_{it}	-0.0211	-0.1750	-0.1907	-0.0177
$SIZE_{it}$	-0.0162	-0.0121	-0.0157	-0.0268
ROA_{it}	-0.0002	-0.0002	-0.0002	-0.0004
$INSTITUTIONAL_{it}$	-0.1220*	-0.1471**	-0.1032*	-0.1618**
$CASHFLOW_{it}$	0.0012	0.0026	0.0028	0.0029
$BSIZE_{it}$	0.0583*	0.0541*	0.0539**	0.0624**
LEV_{it}	0.0003	0.0003	0.0003	0.0004
CONSTANT	0.3419	0.2688	0.3818	0.5314
Year control	Yes	Yes	Yes	Yes
Industry control	Yes	Yes	Yes	Yes
N	771	771	771	771
R-squared	0.2211	0.2238	0.2301	0.2556

p-value: * p<0.10; ** p<0.05; ***p<0.01

The dependent variable is SOP_DISP, which refers to voting dispersion at the end of year *t*. The independent variables are: FF_OWN, which refers to the percentage of family ownership in the firm at the end of year *t* (when family ownership is at least 5% and at least one family member is involved in leadership); FF_MAN_1 is a dummy variable that takes the value 1 when the CEO is a member of the family, and 0 otherwise; FF_MAN_2 is the percentage of family ownership on a firm's management team; FF_GOV refers to the percentage of family ownership on the board. The control variables are CEO_PAY, which is the natural logarithm of the sum of salary, bonus, other compensation, employers' defined contribution and the value of shares awarded at the end of year *t*; SIZE is the natural logarithm of company net sales at the end of year *t*; ROA is the ratio of net income to the book value of the firm's total assets at the end of year *t*; INSTITUTIONAL is the institutional ownership ratio in percentage terms of market capitalization at the end of year *t*; CASHFLOW is the free cash-flow scaled by the firm's market value at the end of year *t*; BSIZE is the standard deviation of the number of board members at the end of year *t*; and LEV equals the book value of total liabilities scaled by the firm's market value at the end of year *t*. All standard errors are robust.

The regression of Model 2 for testing Hypotheses 3 are shown in Table 5 by distinguishing between first generation (regressions 1-5) and second and subsequent generations (regressions 1'-5'). Our results show that family generation plays an important role in the impact of family ownership on shareholder behavior in SOP voting with regard to CEO compensation design. While in the first family generation, we find

that family ownership has a great impact on voting concentration, this effect is not significant when the company moves into the second or subsequent generations, thus confirming our Hypothesis 3 a). We therefore see how the strength of family ties and family identification becomes blurred over time. In addition, a similar effect is observed in relation to the moderating role of *family involvement in management*, since the existence of a family CEO as well as family presence on the management team only intensify the concentration of votes in family businesses that are in the first generation, while this effect turns non-significant when the company is in the second or subsequent generations. Based on this result, it would be interesting to test the differences between a founder-family CEO and a descendent-family CEO (discussed below). Finally, in relation to the role of *family involvement in governance*, attention should be drawn to one interesting result: while the moderating role of the presence of family members on the board is not significant in firms that are in the first generation (consistent with the results obtained for our Hypothesis 2 b)), it does prove to be significant and indeed "positive" in companies that are in the second or subsequent family generation (discussed below). These results partially support our Hypothesis 3 b).

Table 5. The impact of family generation

	SOP_DISP_{it}									
	First family generation					Second or subsequent family generation				
Variable	(1)	(2)	(3)	(4)	(5)	(1')	(2')	(3')	(4')	(5')
FF_OWN_{it}	-0.1141**	-0.1755***	-0.1277**	-0.1309**	-0.1432**	-0.0269	-0.0117	-0.0302	-0.0291	0.0828
$FF\_MAN\_1_{it}$		-0.0568			-0.0011		-0.0418			-0.0608
$FF\_MAN\_2_{it}$			0.0029		-0.0072			-0.0152		0.0907
FF_GOV_{it}				-0.0023	0.0107				-0.0157	-0.0923
$FF\_OWN_{it} * FF\_MAN\_1_{it}$		-0.1199*			-0.1222*		0.0779			0.0581
$FF\_OWN_{it} * FF\_MAN\_2_{it}$			-1.5199**		-0.1478*			-0.0378		-0.0381
$FF\_OWN_{it} * FF\_GOV_{it}$				-0.0040	-0.0491				0.1274**	0.3927**
CEO_PAY_{it}	-0.0277	-0.0303	-0.0271	-0.0274	-0.0277	-0.0413	-0.0422	-0.0617	-0.0052	-0.0760
$SIZE_{it}$	-0.0524	-0.0528	-0.0519	-0.0501	-0.0441	-0.0829	-0.0727	-0.0281	-0.0278	-0.0427
ROA_{it}	-0.0004	-0.0004	-0.0005	-0.0005	-0.0003	0.0001	0.0001	0.0003	-0.0002	-0.0002
$INSTITUTIONAL_{it}$	-0.1337**	-0.1232*	-0.1326**	-0.1311**	-0.1187*	-0.1822**	-0.1844**	-0.1916***	-0.1267**	-0.1574**
$CASHFLOW_{it}$	0.0031	0.0031	0.0032	0.0032	0.0028	0.0027	0.0016	0.0009	-0.0024	0.0034
$BSIZE_{it}$	0.0390*	0.0468*	0.0400*	0.0421*	0.0543*	0.0251	0.0209	0.0243	0.0312	0.0119
LEV_{it}	-0.0002	-0.0003	-0.0003	-0.0003	-0.0002	-0.0002	-0.0003	-0.0004	-0.0001	-0.001
CONSTANT	0.1903	0.1521	0.1889	0.1659	0.1934	0.1385	0.1369	0.1139	0.1328	0.1584
Year and industry control	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	299	299	299	299	299	472	472	472	472	472
R-squared	0.3400	0.3613	0.3423	0.3454	0.3864	0.1050	0.0987	0.0953	0.1345	0.1419

p-value: * p<0.10; ** p<0.05; ***p<0.01

The dependent variable is SOP_DISP, which refers to voting dispersion at the end of year *t*. The independent variables are: FF_OWN, which refers to the percentage of family ownership in the firm at the end of year *t* (when family ownership is at least 5% and at least one family member is involved in leadership); FF_MAN_1 is a dummy variable that takes the value 1 when the CEO is a member of the family, and 0 otherwise; FF_MAN_2 is the percentage of family ownership on a firm's management team; FF_GOV refers to the percentage of family ownership on the board. The control variables are CEO_PAY, which is the natural logarithm of the sum of salary, bonus, other compensation, employers' defined contribution and the value of shares awarded at the end of year *t*; SIZE is the natural logarithm of company net sales at the end of year *t*; ROA is the ratio of net income to the book value of the firm's total assets at the end of year *t*; INSTITUTIONAL is the institutional ownership ratio in percentage terms of market capitalization at the end of year *t*; CASHFLOW is the free cash-flow scaled by the firm's market value at the end of year *t*; BSIZE is the standard deviation of the number of board members at the end of year *t*; and LEV equals the book value of total liabilities scaled by the firm's market value at the end of year *t*. All standard errors are robust.

As mentioned above, it is necessary to check whether the loss of significance regarding *family involvement in management* when a firm moves from the first to later generations may also be related to the fact that the CEO is a founder or descendant. While a founding CEO has a profound influence on corporate decisions and has greater discretion in their actions (by virtue of their role as a head of the family), when the CEO position is occupied by a descendant, said attachment to the organization diminishes (Stockmans, Lybaert, & Voordeckers, 2010; Vandemaele & Vancauteren, 2015). Founding CEOs seek to promote and protect family business reputation and to perpetuate their lineage, which is in line with their strong family vision and reinforces the collectivist orientation within these firms (Barnett et al., 2012). The likelihood of following a homogeneous orientation by voting en bloc will thus be greater when the family CEO is also the founder, while this likelihood might decrease as family generations progress – since the influence and identification on business management tend to decrease when a firm moves into later generations.

In this sense, the presence of a founder CEO ("founder") is measured through a dummy variable that takes the value 1 when a family CEO is in turn founder of the firm (and 0 otherwise); and the existence of a descendant CEO ("descendant") is measured through a dummy variable that takes the value 1 when a family CEO is a descendant (and 0 otherwise) (Stockmans et al., 2010; Vandemaele & Vancauteren, 2015). As shown in Table 6, the impact of a founder CEO and descendant CEO is not the same. Specifically, the existence of a founder CEO intensifies the negative impact of family ownership on voting dispersion (i.e., a founder CEO has a negative moderating effect). However, the presence of a descendent CEO blurs the negative impact of family ownership on voting dispersion since its impact is not significant. These results are also consistent with our results presented in Table 4 by

showing how the strength of family ties, identification and commitment become blurred over time, in addition to contributing to the idea of professionalization of family firms.

Table 6. Influence of a founder- and descendant-family CEO

	SOP_DISP_{it}
Variable	(1)
FF_OWN_{it}	-0.1497**
$FF\_MAN\_F_{it}$	0.0145
$FF\_MAN\_D_{it}$	0.0323
FF_OWN_{it} * $FF\_MAN\_F_{it}$	-0.2278***
FF_OWN_{it} * $FF\_MAN\_D_{it}$	0.0361
CEO_PAY_{it}	-0.1770
$SIZE_{it}$	-0.1752
ROA_{it}	-0.0002
$INSTITUTIONAL_{it}$	0.1004*
$CASHFLOW_{it}$	0.0025
$BSIZE_{it}$	0.0605**
LEV_{it}	0.0003
CONSTANT	0.3522
Year control	Yes
Industry control	Yes
N	711
R-squared	0.3375

p-value: * p<0.10; ** p<0.05; ***p<0.01

The dependent variable is SOP_DISP, which refers to voting dispersion at the end of year *t*. The independent variables are: FF_OWN, which refers to the percentage of family ownership in the firm at the end of year *t* (when family ownership is at least 5% and at least one family member is involved in leadership); FF_MAN_F is a dummy variable that takes the value 1 when a family CEO is in turn the founder at the end of year *t*, and 0 otherwise; and FF_MAN_D is a dummy variable that takes the value 1 when a family CEO is a descendant at the end of year *t*, and 0 otherwise. The control variables are CEO_PAY, which is the natural logarithm of the sum of salary, bonus, other compensation, employers' defined contribution and the value of shares awarded at the end of year *t*; SIZE is the natural logarithm of company net sales at the end of year *t*; ROA is the ratio of net income to the book value of the firm's total assets at the end of year *t*; INSTITUTIONAL is the institutional ownership ratio in percentage terms of market capitalization at the end of year *t*; CASHFLOW is the free cash-flow scaled by the firm's market value at the end of year *t*; BSIZE is the standard deviation of the number of board members at the end of year *t*; and LEV equals the book value of total liabilities scaled by the firm's market value at the end of year *t*. All standard errors are robust.

4.5 DISCUSSION AND CONCLUSIONS

SOP is a novel corporate governance mechanism that increases shareholder power on executive compensation design by allowing shareholders to cast a positive or dissent vote at

the general meeting (Stathopoulos & Voulgaris, 2016). While the study of SOP effectiveness on executive pay has attracted substantial attention from SOP-related literature, recent studies have called for research aimed at ascertaining which relevant factors might shape shareholder voting behavior (Lozano-Reina & Sánchez-Marín, 2020). In an effort to fill said gap, this paper analyzes the general role played by family firms in shareholder behavior in SOP voting on CEO compensation design using a sample of large UK listed companies (in particular, 1,531 firm-year observations) from 2007-2017. This paper contributes to SOP-related literature by exploring in a novel way the nature of shareholder behavior in SOP voting within the family firm context, by considering for the first time – as far as we know – the role of family ownership on voting dispersion regarding executive compensation, and the moderating effects of family involvement in management and governance as well as family generation.

Our results highlight the importance of family firms as well as family ownership on shareholder voting behavior, since the likelihood of forming strong voting blocs tends to proliferate when family ownership increases. This is consistent with prior literature, which has underpinned the importance of values, culture and ties within family businesses (Chrisman et al., 2012; Stavrou et al., 2007), and which affects the assessment of company policies and the adoption of a uniform shareholder position on compensation issues, by contributing to lower dispersion in SOP results. With regard to family involvement, we find a negative moderating role of *family involvement in management*, which is consistent with greater family commitment and attachment in these contexts (Vandemaele & Vancauteren, 2015). Also, this is in line with the tendency of merging voting rights within family organizations as the family gains control of the company (both in terms of ownership and

management) (Sánchez-Marín et al., 2019), thereby increasing voting concentration. However, contrary to our expectations, we find no significant effect of *family involvement in governance*. This adverse result might be explained by the current trend towards the professionalization of boards in family businesses (Dibrell, Marshall, Palar, & Gentry, 2019) – which tends to safeguard company interests from family goals and may counterbalance the influence of family members and ownership on the board, which would ultimately affect shareholder behavior in SOP voting when it comes to CEO compensation design.

In addition, by looking at how the passage from earlier to later family generations might modulate the impact of family ownership on shareholder voting behavior, we find that the influence of family ownership (and the moderating role exerted by family involvement in management) becomes blurred over time, which is consistent with the lower impact of family and emotional ties, family culture and family identification shown by prior studies (Gomez-Mejia et al., 2007; Pittino et al., 2016). Similarly, by differentiating between the role played by a founder CEO and a descendant CEO, we find that the influence of family ownership on voting concentration only intensifies when the CEO is in fact the founder of the company, while it is blurred when this CEO is a family descendant. Moreover, consistent with the idea of board professionalization, rather than promoting the formation of voting blocs, we find that the presence of family members on the board in firms in the second or subsequent generations favors voting dispersion. This positive moderating effect may also be influenced by restricting family member governance positions to a certain degree in order to promote the firm's external social capital base (Arregle et al., 2007; Sciascia et al., 2013), which is consistent with the decline in the ratio of family ownership on the board in our sample from 2007 to 2017. Moreover, this positive impact of family involvement in

governance may also be due to family conflicts when a firm is in the second or subsequent generation (Blanco-Mazagatos et al., 2007), since family ownership is dispersed among a greater number of family members, whose interests may be contradictory, which favors the dispersion of SOP vote.

Overall, our study offers several theoretical implications. First, it offers an interesting step forward in SOP-related literature by conducting a contextual and longitudinal study that provides clarification for certain unknowns concerning SOP determining factors. Specifically, by showing family ownership to be a relevant determining factor, we reveal how voting behavior is strongly influenced by family ownership. Second, by showing the importance of considering the heterogeneity of family firms, this paper states how shareholder behavior in SOP voting regarding CEO compensation design is strongly impacted by family involvement. We thus help to fill an important gap in the literature concerning which determining factors are involved in shareholder voting behavior (Lozano-Reina & Sánchez-Marín, 2020). Third, this paper contributes to family business literature (Gomez-Mejia et al., 2007; Pittino et al., 2016) by showing how the blurring of family identification, influence and investments – when firms move from first to subsequent generations – also affects shareholder voting behavior.

As regards practical repercussions, our findings offer several implications. First, family businesses should know that their decision-making is greatly influenced by family ties, involvement and goals. As regards SOP voting, shareholders often follow a collectivist orientation when annually assessing executive pay – which aligns them with a positive or negative result depending on the influence exerted by powerful/majority/controlling family members. Second, family businesses should be aware of the danger of following a single

homogeneous position when family shareholders simply <<cede their vote right>> without conducing a proper assessment of pay policies. For instance, shareholders might follow the view of a founder CEO or a controlling owner – influenced by emotional and family ties –, even though this view may not be right and may not actually reflect the business reality. Third, family firms' strategic behavior towards good governance compliance will be affected by the influence of each country's institutions and by how such institutions are able to discipline controlling shareholders (de Castro et al., 2017). In this way, if governments wish to control this issue and to improve the functioning and effectiveness of SOP, they should think more about complementing this voting with a balanced corporate governance system.

Finally, this paper has some limitations that offer interesting opportunities for future studies. First, this paper establishes the existence of low voting dispersion within family firms, particularly when family ownership increases. However, we do not test whether these shareholders are more prone to cast a positive or a dissent vote within family businesses. In family firms, the degree of voting dissent, in addition to depending on pay designs (Lozano-Reina & Sánchez-Marín, 2020), may be affected by family ownership and the heterogeneity of these companies. It might be assumed that a favourable SOP result is more likely when family ownership is intensified, when the family is directly involved in management and governance, and when a firm is in the first generation since ties between family members and family commitment are greater. In any case, future studies should focus on checking this issue. Second, based on prior literature, we choose some important indicators regarding family involvement in management and governance, and family generation (e.g., Chrisman & Patel, 2012; Cruz et al., 2014; Gomez-Mejia et al., 2018; Vandemaele & Vancauteren, 2015). However, other indicators should be considered (e.g., the presence of family members

in the TMT (top management team), or family duality), which may complement our results. In addition, future studies should deepen this dialogue by analyzing the effects of family ownership dispersion on the consensus achieve in the SOP vote. Third, we test how shareholder voting behavior is affected within family businesses and the impact of family involvement and generation. However, it would be interesting to explore how SOP results impact the design of subsequent executive compensation within family businesses, an issue which poses a major challenge for future research. Finally, it is not clear whether such a voting system might lead to increased or reduced minority shareholder rights since these are not always adequately protected (Goel et al., 2012). Future research should thus consider the role of minority shareholders and propose different ways to ensure their rights as a core governance issue.

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CONCLUSIONS

CONCLUSIONS

The high compensation received by managers and its low linkage to business results, as well as the scarce effectiveness shown by traditional corporate governance mechanisms, has prompted researchers to pay special attention to this topic. To address this issue, new complementary corporate governance mechanisms have emerged in recent years in listed companies, focusing on overcoming the inefficiencies shown by traditional mechanisms. Say-on-Pay (SOP) is one of the most relevant of these mechanisms and is the topic which this doctoral thesis focuses on. SOP is a vote held at the annual general meeting whereby shareholders express their views about executive compensation. This voting seeks to improve good corporate governance in listed companies by exercising co-responsibility and transparency with regard to pay decisions that affect managers, and it aims to establish compensation that is more closely aligned to company as well as shareholder interests.

The hitherto scant consensus in the literature regarding the impact of SOP on corporate governance in listed companies coupled with the absence of conclusive evidence concerning its effectiveness vis-à-vis executive compensation designs advocates the need to explore SOP in greater depth by considering the existence of multiple influencing and interacting factors. This doctoral thesis seeks to provide a response to calls for more comprehensive and contextualized theoretical and empirical research that will allow for progress within the field; namely, what impact SOP might have in improving corporate governance in listed companies. In light of this overall aim, and in an effort to contribute to the increasing knowledge about SOP as a corporate governance mechanism as well as its effectiveness and impact in terms of executive compensation alignment and firm

performance, this doctoral thesis addresses four specific and relevant objectives which are linked to each of the four chapters into which it has been structured. The main findings regarding these four objectives are summarized below.

Discussion of the main findings

The systematic literature review set out in **chapter 1**, linked to the first objective of this doctoral thesis, is timely and provides a comprehensive picture of how scholars have defined and studied SOP. Specifically, this review shows that, although there is some homogeneity when defining SOP, this mechanism's typologies and measures have been framed very differently in the various studies, which can impact its effectiveness and functioning. Also, although agency theory is the main theoretical framework used, there is an increasing tendency to use new and emerging theories (such as prospect theory, stakeholder theory, and organizational justice theory). Moreover, the main SOP antecedents are related to compensation, firm performance, and corporate governance, while the main SOP outcomes are related to the voting impact on subsequent compensation designs and market reaction, and show mixed and unclear evidence.

Based on this review, some common patterns may be seen in SOP effectiveness. These provide evidence that, although SOP legislation has gradually strengthened in the UK and Australia, company response to SOP is systematically more effective (homogeneous) in US firms, while it is more selective in the UK and Australia. Thus, SOP effectiveness is more clearly related to the existence of an independent and balanced corporate governance structure than to more restrictive SOP legislation. Finally, this review provides an extensive

appraisal of what we know so far about SOP research and how the topic might develop in the coming years.

The second objective is addressed in **chapter 2** where SOP is shown to play an important role in Spanish listed companies, although two contrasting sides to this mechanism can be seen. A positive version indicates that a low level of SOP support, in companies with dissatisfied shareholders, allows said shareholders' views to be taken into consideration when designing CEO compensation that will be more closely aligned in the following years. This is consistent with previous findings confirming the shareholder-alignment hypothesis. A negative version of SOP occurs in companies with overcompensated CEOs who receive a high level of SOP support. In these cases, by voting overwhelmingly in favor, shareholders legitimize suboptimal payments, which remain at these undesirable levels over time. Firms in this scenario seem to take largely symbolic, rather than substantive, action on compensation arrangements in response to shareholder activism. We thus confirm the window-dressing hypothesis about the legitimizing effect of SOP, which negatively affects CEO compensation alignment.

Moreover, we find a moderating effect of corporate governance mechanisms – board and ownership structure – in the relationship between SOP results and CEO compensation alignment. Our results indicate that the positive effect of a low level of SOP support for CEO compensation alignment is reinforced in companies with more independent boards and no duality. In addition, when combining ownership structure with board monitoring, in owner-controlled companies (OC firms) we find a positive moderating effect of the effectiveness of board monitoring on the influence of a low level of SOP support for CEO compensation

alignment. In owner-managed companies (OM firms), this moderating effect is not significant, as large shareholders usually take the side of the firm's management, thereby limiting the effectiveness of board monitoring when voting for their own (suboptimal) compensations in SOP. These firms respond to a low level of SOP support by increasing entrenchment and rent extraction, which is particularly driven through excessive levels of compensation.

Chapter 3 addresses the third objective of this doctoral thesis by showing that – similar to what is evidenced in chapter 2 for a group of Spanish firms – SOP plays a key role in UK listed companies, since an unfavorable SOP enhances a board's capacity to design more aligned compensation in addition to linking said compensation to business performance. These results are useful in terms of clarifying the doubts concerning SOP effectiveness raised by certain studies and are also consistent with the shareholder-alignment hypothesis. Going further, in the case of Spanish companies we find that SOP generally proves to be an effective mechanism for achieving compensation that is more aligned with firm interests, although this effectiveness is blurred in companies that are mainly controlled by managers (i.e., in OM firms) and in those with over-compensated CEOs who receive huge SOP support. In the case of UK companies, there is also a general improvement in pay designs after SOP dissent. However, this effectiveness is lost when legislation is tightened, thus reinforcing the idea that SOP effectiveness is more influenced by the strength of corporate governance systems than by toughening up SOP legislation (as indicated in chapter 1).

Moreover, this paper takes managerial discretion as a potential moderating factor into

account, offering a transversal approach to environmental, organizational, and individual factors that integrate the many dimensions impacting SOP effectiveness. Given that these CEOs take advantage of their power to neutralize the impact of a potentially unfavorable SOP, individual discretion (or "latitude of objectives") tends to exert a negative moderating effect. However, the role of contextual discretion (or "latitude of action") has a positive moderating effect, since the determining factors of contextual discretion are associated with business competitiveness and success in addition to being far removed from CEO opportunism.

Finally, the findings in **chapter 4**, linked to the fourth objective of this doctoral thesis, highlight the importance of family firms as well as family governance in shareholder voting behavior. Family ownership contributes to less dispersion of SOP results since the likelihood of forming strong voting blocs tends to proliferate when family ownership increases. This is consistent with prior literature, which has underpinned the importance of values, culture and ties within family businesses, and which affects the assessment of company policies and the adoption of a uniform shareholder position on compensation issues by contributing to lower dispersion in SOP results. With regard to family involvement, we find a negative moderating role of family involvement in management, which is consistent with greater family commitment and attachment in these contexts. However, we find no significant effect of family involvement in governance. This adverse result might be explained by the current trend towards the professionalization of boards in family businesses – which tends to safeguard company interests from family goals and may counterbalance the influence of family members and ownership on the board, which would ultimately affect shareholder

behavior in SOP voting when it comes to CEO compensation design.

When looking at how the passage from earlier to later family generations might modulate the impact of family ownership on shareholder voting behavior, we find that the influence of family ownership (and the moderating role exerted by family involvement in management) becomes blurred over time, which is consistent with the lower impact of family and emotional ties, family culture, and family identification shown by prior studies when a firm moves through successive generations. Similarly, by differentiating between the role played by a founder CEO and a descendant CEO, we find that the influence of family ownership on voting concentration only intensifies when the CEO is in fact the founder of the company, while it is blurred when this CEO is a family descendant. Moreover, consistent with the idea of board professionalization, rather than promoting the formation of voting blocs, we find that the presence of family members on the board in second or subsequent generation firms favors voting dispersion. This positive moderating effect may also be influenced by restricting family member governance positions to a certain degree in order to promote the firm's external social capital base.

Academic contributions and implications for practice

For *academics*, this doctoral thesis makes important contributions to the literature on human resources management (HRM) and corporate governance, as indicated in the different chapters. First, it theoretically and empirically tests how SOP is proving to be an effective corporate governance mechanism, and how its implementation by a large number of countries is promoting pay policies that are more aligned with firm and shareholder interests. The

evidence for this is strong since the thesis focuses on different contexts – which are representative of different corporate governance models – and conducts both longitudinal as well as integrative studies that shed light on certain unknowns concerning SOP effectiveness in relation to pay designs.

Second, the thesis shows which factors impact the functioning and effectiveness of SOP. This effectiveness is strongly determined by the firm's governance mechanisms – both the board of directors and ownership structure – and by managerial discretion, which offers a transversal and integrative approach by including many factors that sum up the influence on SOP effectiveness. Our evidence also reinforces the idea that SOP effectiveness is more influenced by the strength of corporate governance systems than by toughening up SOP legislation. In a similar vein, this thesis adopts a novel approach by exploring for the first time the role played by family firms in SOP voting behavior, and by revealing how voting behavior is strongly influenced by family firms and their specific corporate governance configurations, thereby expanding the scarce current knowledge concerning shareholder reaction to CEO compensation design.

For *practitioners*, this doctoral thesis provides a better understanding of SOP effectiveness, thus helping them to identify and manage the relevant constraints and challenges they face when making decisions about pay designs. Specifically, companies should pay close attention to compensation designs since the evidence has clearly shown that executive compensation is a key antecedent to SOP results. In this way, if companies wish to avoid having to restructure payments after receiving a low level of SOP support, they should design and correctly align executive compensation with firm and shareholder

interests. Human resources departments and boards of directors play a particularly important role in achieving compensation designs aligned to shareholder interests. Linked to this implication, transparency and pay information have become more important since the implementation of SOP because companies are now placing greater emphasis on these aspects in an effort to secure greater shareholder agreement.

Nevertheless, SOP is not a panacea and alternative governance mechanisms should be implemented in companies where SOP effectiveness may be blurred (e.g., OM firms, companies located in countries with a weak corporate governance system, companies where individual discretion is high …), in order to ultimately reduce agency costs, increase their independence, transparency and reputation, and protect minority shareholders. Similarly, family businesses should be aware of the danger of following a single homogeneous position when family shareholders simply <<cede their voting rights>> without properly appraising pay policies. For instance, shareholders might follow the view of a founder CEO or a controlling owner – influenced by emotional and family ties – even though this view may not be correct and may not actually reflect the business reality.

For *policy makers*, this doctoral thesis shows the need for governments to continue working to improve their rules and legislation regarding compensation designs and corporate governance. Additionally, they should encourage balanced corporate governance systems, given that they play a vital role in complementing SOP and in achieving greater SOP effectiveness. Moreover, it is important to point out that any toughening of SOP legislation needs to be rethought since our results have shown that applying more stringent measures fails to improve the way in which SOP functions. In this way, governments should think

more about implementing balanced corporate governance systems rather than tightening up SOP legislation.

Limitations and future research directions

Finally, this doctoral thesis also raises fresh concerns that could prove interesting for future research in the field. In Chapter 1, numerous research possibilities can be identified from our systematic literature review. Specifically, researchers might test the effects of SOP more globally and longitudinally, using emerging theoretical frameworks and multilevel analysis. Additionally, future inquiry should consider the role played by regulation policies, institutional contexts, and corporate governance since these are some of the important antecedents of SOP results as well as its effectiveness (e.g., some potential challenges involve exploring whether SOP legislation has a significant impact on SOP effectiveness and analyzing whether the existence of a strong corporate governance structure is more important). Future research should also consider some controversial compensation issues, especially the long-term effects of SOP on compensation design as well as whether the firm's response is systematic or selective. Other important factors that determine SOP results and which may affect its effectiveness are HRM policies and CSR policies. Finally, examining shareholder activism and the role of proxy advisors may also be of particular interest within this field.

Other research possibilities are formulated in the three empirical chapters when discussing their main limitations. For instance, future research should consider other internal and external governance mechanisms that might interact with SOP and influence executive

compensation, placing particular emphasis on diverse types of shareholders and how they act and vote in SOP. Similarly, from a stakeholder perspective, future studies should consider how the involvement of different groups of stakeholders in specific voting proposals might affect shareholder voting behavior. Future studies should also extend the evidence provided in this doctoral thesis by comparing SOP effectiveness among countries. In particular, it would be interesting to compare countries with different corporate governance systems (Anglo-American versus continental European systems) and to look at this type of voting in hitherto unexplored contexts (e.g., Japan, South Africa or Germany).

In addition, future studies should examine other mechanisms that moderate the relationship between SOP and executive compensation. Also from a stakeholder perspective, future studies should consider how the behavior of different kinds of stakeholders affects SOP results and SOP effectiveness. Lastly, the fourth chapter establishes the existence of low voting dispersion within family firms, particularly when family ownership increases. Based on this, future studies should focus on analyzing whether shareholders are more likely to cast either a positive or a dissenting vote within family businesses. In family firms, the likelihood of receiving negative results in the SOP may, in addition to pay designs, be affected by family ownership and by each company's specific corporate governance configuration, and is an issue that should be looked at in future research.