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Corporate governance, uncertainty and executive stock option plans**

The purpose of this paper is to understand the reasons that have led to the use of the stock option plans (SOPs) to reward Spanish CEOs and discuss whether the popularity of this type of incentive can be attributed to the power of the CEO in the Board of Directors. To this end, the study, besides analysing how the level of monitoring and uncertainty influences the use of CEO stock option plans (SOPs) in the 100 firms with the highest stock market capitalisation listed on the Madrid Stock Exchange for the period 1999–2001, it also aims to determine the influence of the level of uncertainty in the design of SOPs. We used both logit models and difference-of-means statistical techniques to analyse the data. The results reveal that 1) the use of SOPs increases as a) the level of monitoring decreases, and b) uncertainty increases; and 2) conventional stock options granted at the money or in the money become more frequent as the uncertainty increases. In light of these results, there is reason to support the approach to the managerial power view and, therefore, to think that in some cases CEOs use SOPs to extract rents from shareholders.

Key words: **CEO stock options, corporate governance, managerial power**
(JEL: J33, L21, M12, M52)

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1. Introduction

Over the past decade, the compensation packages of European CEOs have undergone an appreciable change. Stock option plans (SOPs), typical executive compensation systems of English-speaking countries, have rapidly spread throughout Europe. According to the Towers Perrin Consultancy report (2005), between 2001 and 2004, the use of stock options increased by 30% in Italy; 20% in Spain, Japan and Germany; 10% in the Netherlands and 5% in France.

As of 2005, the obligation to enter SOPs as expenditure has diminished their use, both in the USA and in Europe. Nevertheless, such changes do not reduce the interest of studying them since SOPs continue to be very popular. In Spain, several studies (Sánchez-Marin & Aragón, 2009; Towers Perrin, 2011) confirm that companies nowadays not only continue to use SOPs to reward their CEOs, but such incentives represent a high proportion of their total compensation.

Ironically, this popularity is given when SOPs are criticised by scholars and public opinion because they are costly to shareholders and motivate executives to behave opportunistically (Bebchuk & Fried, 2004; Zhen & Zhou, 2012). Facing the view of the agency theory that considers the SOPs a tool to minimise the agency conflict that exists between CEOs and shareholders, the managerial power theory raises that the executive stock options are mechanisms through which powerful entrenched CEOs extract rent from shareholders without upsetting the public opinion (Bebchuk et al., 2002; Bebchuk & Fried, 2004; Collins et al., 2010).

Consequently, based on the approaches of the agency theory and managerial power theory, the aim of this study is to understand the reasons that have led to the use of SOPs as compensation system for Spanish CEOs, and discuss whether their popularity can be attributed to the power of the CEO in the Board of Directors. In order to do so, this study, besides analysing how the monitoring of the Board of Directors and the uncertainty context influence the use the CEO stock option plans (SOPs) in the 100 firms with the highest stock market capitalisation listed on the Madrid Stock Exchange, it also aims to determine the influence of the level of uncertainty in the design of SOPs.

Investing this issue in the Spanish context, it is important for the following reasons: First, our study contributes to overcome the shortage of the existing studies in Europe, particularly in Spain. The empirical studies of managerial compensation have almost exclusively focused on the USA context and have used USA data (Fiss, 2006, p. 1013). According to Zattoni (2007), Zattoni & Minichilli (2009), and Festian & Sahkiants (2011), in Europe, there are still very few studies that have analysed the dissemination and characteristics of stock incentives. As for Spain, the number of studies is reduced even further. Only the study of Álvarez & Neira (2005), and Álvarez & Neira (2007) address the issue of executive stock option plans

Second, given the differences between the Spanish and the Anglo-Saxon context, the study contributes significantly to the international development of the literature, as it will help to understand if the managerial power view of compensations applies only to the US or if it is also globally relevant. The Spanish corporate governance system differs significantly from the Anglo-Saxon one and the companies are smaller and are

less internationalised. The Spanish corporate governance system is characterised by the following elements (Cuervo, 2002; De Miguel et al., 2004): (1) ownership is concentrated and, in consequence, shareholders exercise a close watch on managers (2) the Board of Directors is controlled by members linked to large shareholders; (3) capital markets are relatively illiquid and have limited control ability; (4) there is no active market for control; and (5) banks play a major role in corporate governance, through equity stakes, proxies given to them by small investors, and bankers' positions on the Boards of firms. These characteristics cause that the boards have a greater capacity to control the CEO and that the conflict between shareholders and executives, in Spain, is less relevant than in Anglo-Saxon countries.

Third, the Spanish case is interesting, "since it is highly representative of other institutional contexts that have not been considered in previous research. Specifically, Latin-American economies" (De Miguel et al., 2004, p. 1205).

The paper is structured as follows. In section two we discuss the theoretical framework for posing the hypotheses. Herein it is first analysed how the level of monitoring by the Board and the level of uncertainty influence the use of stock option plans (SOPs) to reward the CEO and , afterwards, it is addressed the influence of the level of uncertainty on the design of the CEO stock option plans (SOPs). In section three, we explain the methodology used. In the fourth and fifth section the results are set out and discussed. In the final section are established suggestions for future research development.

2. Theoretical background

2.1 Monitoring and executive stock option plans

The relation between the monitoring by the Board of Directors and the use of SOPs to reward the CEO can be analysed using the agency theory and managerial power theory approaches.

Agency theory suggests that boards have two mechanisms to solve agency conflict: monitoring and incentive alignment (Rutherford et al., 2007).

The level of monitoring by the Board of Directors is determined by the characteristic of governance corporate, such as outside blockholders and Board stockholdings, (Beatty & Zajac, 1994).

Outside blockholders

When equity ownership is widely dispersed, managers are left with a substantial level of discretion (Tosi et al., 1989). In these cases, managers are prone to act opportunistically and will try to institutionalise their power and control (Hunt, 1986). Different studies corroborate that problems of agency conflict occur more frequently in management-controlled firms. Specifically, the development of growth strategies – which justify higher compensation, but which may not create value for shareholders (Kroll et al., 1990) – and of strategies of unrelated diversification – which allow managers' risk to be diversified (Amihud & Lev, 1981) – are more frequent in management-controlled firms. Also, in this class of firms, the probability that a top manager is dismissed for poor performance is low (Salancif & Pfeffer, 1980).

Conversely, in the case of ownership concentration, as in Spain, major stockholders will have more influence (Gomez-Mejia et al., 1987; Tosi & Gomez Mejia, 1989), because they have the capacity to exercise control and incentives to carry it out. Demsetz (1983) suggested that the substantial wealth they have at risk implies that the benefits of monitoring will outweigh associated costs.

Different authors have corroborated the supervisory activity performed by non-executive shareholders who hold significant equity stakes. Kang & Shivdasani (1995) confirm the positive influence of large shareholders on managerial turnover in under-performing firms.

Outside board stockholdings

The Board of Directors is the internal control mechanism to which the shareholders delegate their power to control management decisions. The board is composed of inside and outside members. The main task of outsiders is the control of management. The empirical evidence suggests that the quality of the supervisory activity performed by the Board depends as much on the proportion of outside Board Directors as on their motivation. In many cases, the only motivation for the Board to defend the interests of shareholders derives from the threat of negative publicity from the media, or of their liability in Court for claims pursued by shareholders.

However, these incentives tend to make the Board concentrate more on reducing the risk of losses than on maximising the value of the firm. For this reason, a more powerful incentive would be participation in the capital of the firm. Cyert et al. (2002) find that the equity ownership of the Board of Directors is more important in managerial compensation control than other Board-related variables, such as Board size or the proportion of outside members. Various authors support the thesis of convergence, according to which the outside Directors' motivation to monitor the management increases proportionally to their participation in the firm's capital.

The second broad category of mechanisms the Board of Directors may implement in order to address the agency problem between owners and CEO is to engage in incentive contracting with the CEO. This incentive contracting can include two important devices. The first of these is performance contingent pay. In this category are included the SOPs. This type of incentives, by linking the CEO wealth to the performance of the firm, should induce CEO to take actions that create firm value. The second incentive alignment device is CEO equity ownership.

Both the normative and positive agency literature have addressed the relationship between managerial incentives and monitoring, revealing much of it that the desired level of monitoring is contingent on the magnitude of the incentive. For example, Beatty & Zajac (1994) reveal that a high level of monitoring is negatively related to performance-contingent compensation (stock options and cash bonuses) for chief executives. Kren & Kerr (1993) obtain the same results, though referring to division managers. These studies reveal that monitoring and the alignment of interests by means of incentives are substitutive and that organisations, to avoid duplication of costs, emphasise one or the other depending on their circumstances.

The agency theory also considers that equity ownership and stock options are substitutive incentive structures (Beatty & Zajac, 1994; Yermack, 1995). When manag-

ers own significant amounts of a firm's equity, their decisions are more likely to be aligned with the interests of shareholders, and the need to use option-based incentive plans will consequently be reduced (Jensen & Meckling, 1976). Coherently with these arguments, the studies carried out by Mehran (1995) and Bryan et al. (2000) revealed a negative relation between CEO equity ownership and option-based remuneration.

Therefore, based on the agency theory, it might be thought that use of SOPs increases as the level of monitoring by the Board decreases.

This negative relationship between the use of SOPs and the level of monitoring could also be explained by managerial power theory.

Unlike agency theory, the managerial power theory considered the SOPs an agency problem (Bebchuk & Fried, 2004). According to this theory, the SOPs are mechanisms through which powerful entrenched CEOs extract rent from shareholders without upsetting the public opinion.

According to Bebchuk et al (2002), and Bebchuk & Fried (2004) many of the current practices surrounding the granting of executive stock options can not be reconciled with the incentive alignment sought by optimal contracting. Among the practices that these authors claim and that are inconsistent with optimal contracting view, there are: the use of non-indexed options, the use of traditional options at the money and in the money, strike prices, and the lack of restrictions on unwinding incentives. In Spain, these practices are very common. The results of the study carried out by Álvarez & Neira (2005) show that a) indexed options are not used, b) only 20.5% of SOPs determine the right of exercise to prior achievement of certain objectives (e.g. ROE), c) from 69.2% of the SOPs we have counted as traditional options, 28.2% are granted "at the money" and 25.6% "in the money", d) in 77% of traditional options granted "at the money" or "in the money", the length of the exclusion period is less than three years, and f) only one of the SOPs limits the amount of the reward that the CEO can obtain. Therefore, these results permit us to conclude that the majority of SOPs designed by Spanish firms to reward CEO offer high potential gains.

There is evidence to support the hypothesis that the CEO takes advantage of the weakness of the firm's governance to achieve a system of compensation in accordance with his interests: high reward and low risk (Gomez Mejía & Balkin, 1992). Studies such as that by Tosi & Gomez-Mejía (1989) conclude that, in firms with dispersed ownership, the influence exercised by the CEO and external consultants on the process of CEO compensation is greater than in firms with concentrated ownership, and consequently the level of risk of the CEO's compensation package is also lower in firms with dispersed ownership. This result is coherent with those obtained by earlier studies (Gomez-Mejía et al., 1987) which reveal that, in owner-controlled firms, CEO's level of compensation is determined by the performance, while in management-controlled firms (with dispersed ownership), the most important determinant is size. Other studies (Boyd, 1994; Conyon & Peck, 1998) also found a negative relation among different aspects that enhance the effectiveness of the Board (e.g. the Board's participation in the capital of the firm) and the CEO's level of compensation.

In accordance with the agency theory and managerial power theory approaches, we put forward the following hypothesis:

Hypothesis 1: The use of SOPs is negatively associated with the percentage of stock held by outside blockholders.

Hypothesis 2: The use of SOPs is negatively associated with the outside Directors stockholdings

Hypothesis 3: The use of SOPs is negatively associated with the CEO's equity ownership

2.2 Uncertainty and executive stock option plans

From an agency perspective, the level of uncertainty affects both managerial risk and monitoring. In an uncertain context, managerial behaviour simultaneously figures more prominently in a firm's future and becomes more difficult to monitor, and the principal can not easily determine whether the agent's actions are being taken in pursuit of the principal's goals or are self-interested misbehaviour (Stroh et al., 1996; Rajagopalan & Finkelstein, 1992). Furthermore, the complexity of the CEO's job increases when the firm operates in unstable environments. Hence, the attraction and retention of executives who possess a broad array of knowledge, skills and perspectives are considered key factors for success in uncertain environments (Keck & Tushman, 1993). Consequently, Boards must seek ways of attracting and retaining talented managers and motivating them to undertake strategies that create shareholder value. SOPs can be considered effective mechanisms for achieving these objectives.

The results of different studies (Rajagopalan & Finkelstein, 1992; Crawford et al., 1995) reveal that the use of incentive plans, including stock options, is more frequent in firms that operate in a context of uncertainty.

The literature underlines several advantages of SOPs over other types of incentives. For example, as against annual incentive plans based on accounting measures, all stock based incentive plans (among them SOPs) stand out for their capacity to harmonise the interests of the top management with those of the shareholders because the share price is more objective than measures of an accounting nature. The implantation of annual incentive plans that link remuneration to accounting results (e.g. profits or ROE) may motivate managers to: 1) reduce expenditure on R&D, marketing, etc., which is necessary to improve competitiveness in the long term (Hoskisson et al., 1993, p. 2) manipulate the accounting measures (Healy, 1985); and 3) not consider the cost of the capital needed to finance the firm's investments (Buchman, 1991).

Regarding long term incentive plans based on accounting measures, the use of stock options permits the firm to reduce short term financial pressures and to liberate cash-flow that can be used for the development of resources and valuable capacities necessary to achieve or keep the competitive advantage.

Against other types of incentives based on market measures, e.g. the granting of restricted shares, SOPs have the advantage of their lower cost, as the firm only pays the appreciation over the exercise price. For a firm whose dividend return is the usual for the market and whose stock price is of average volatility, the value of an option represents 1/3 of the value of a share (Hall, 2000). This occurs because the holder of the option receives only the marginal appreciation over the exercise price, while the shareholder obtains the full value plus the dividends. For this reason, the firm, for the

same cost, can offer the manager a number of options that is three times that of restricted shares.

Furthermore, as the acquisition of a stock option requires no initial investment and CEOs are under no obligation to exercise stock options when underwater, stock options are argued to offer unlimited upside potential while limiting downside risk. Thus, stock options awards are argued to create strong incentives for CEOs to limit risk aversion and instead pursue wealth-maximising strategies (Devers et al., 2008).

Therefore, we expect a positive relationship between uncertainty and the use of SOPs, given that risk taking is more relevant in firms with growth opportunities, and these opportunities are limited among low risk firms. Thus, CEO's compensation to reinforce risk taking with low risk context would be economically irrational. The firm may have to pay a compensation premium to induce executives to accept SOPs when the opportunity to significantly improve performance outcome beyond anticipated levels is low. Wiseman & Bromiley (1996) argued that low performance variability may indicate that agents have few opportunities to capitalise on high risk- high-return strategies.

Hypothesis 4: The use of SOP to remunerate the CEO is positively associated with the context of uncertainty

Although many dimensions have to be decided upon to design a SOP, one of the most important is the determination of the exercise price and restrictions on vesting. In terms of this dimension, the following types of options can be obtained: (a) Traditional options: establish a fixed exercise price and the only condition for exercising the purchase of stock is that the beneficiary is required to remain in the firm; (b) Restricted stock options: conditioned to the achievement of goals (performance vested options) or to the possession of a certain number of shares, i.e. conventional options to which clauses have been added restricting the right of exercise; (c) Indexed options: establish an exercise price in terms of a pre-defined index (general or sector index or benchmark index).

Also, depending on whether the exercise price is equal to, lower than, or higher than the grant-date market price, the granting of options can be, respectively: 1) at the money; 2) in the money; and 3) out of the money.

Risk averse and undiversified executives perceive that stock option compensation is highly risky. However, the risk of SOPs can vary according to its design. Several works show that traditional options at the money and in the money have a greater likelihood of ending up with a positive payout than other types of options (traditional options out of the money, restricted stock options, and indexed options). Lambert et al. (1991), on the basis of the assumption that the profitability of the stock follows a probability distribution of log-normal type as assumed in the Black-Scholes model, estimate that the probability that a traditional option at the money will end up with a stock price that exceeds the exercise price is 93%. Also Hall & Murphy (2000), on the same basis, but considering different parameters, estimate a probability of 80%. In contrast, the probability of obtaining reward with other types of options is lower. For example, Murphy (2002) shows that the probability of obtaining a reward with in-

dexed options is less than 50%. Likewise, restricted stock options offer greater risk of loss, because the exercise of the option is subject to the fulfilment of objectives.

Therefore, among all the types of options, the most valued by managers are traditional options granted at the money and in the money. Hall & Murphy (2002) demonstrated that a risk-averse executive will prefer a small number of options with a low exercise price to a larger number of options with a higher exercise price.

However, the use of traditional stock options at the money or in the money to pay to CEOs of firms that operate in uncertainty context would be unacceptable from the point of view of the theory of optimal contracting.

First, the traditional stock options granted at the money or in the money violate a basic proposition in the incentive compensation literature: contracts should insure agents against uncertainty generated by common factors beyond their control, while retaining controllable, idiosyncratic effects to provide the appropriate incentives. Consistently, this type of options can cause the manager to obtain a high reward without having made any effort, simply taking advantage of a "stroke of luck" propitiated by outside forces, or can deprive him of the reward even when he deserves one (Bebchuk et al., 2002)

Second, the use of traditional stock options at the money or in the money, by providing high potential profits, will lead the manager to perceive the remuneration as a secure income, thus creating a situation of expectation of gains. According to behavioral agency model (Wiseman & Gomez-Mejia, 1998; Martin et al., 2013), in this case, executives will not take risks, but act conservatively to protect potential profits. Deya's study, (2004), by revealing a negative relation between the CEO's compensation through traditional stock option at the money and the Tobin index, confirms this approach. As a result, the use of traditional stock options at the money or in the money could encourage executives' behaviour contrary to the interests of shareholders. In order to achieve or maintain a competitive advantage, firms that operate in an uncertainty context, should develop proactive strategies (Rajagopalan & Finkelstein, 1992). Thus it is desirable that the CEO take risk to find and exploit new opportunities.

Therefore, from the point of view of optimal contracting, in uncertainty contexts it seems more advisable to use non-traditional options (indexed options, performance vested options) or traditional stock options out of the money to reward the CEO.

Stock options out of money and performance vested options, by linking CEO compensation to the achievement of a performance target, encourage the development of strategies that create value and avoid that the CEO gets rewarded, using just the right juncture of the market.

Likewise, Indexed options, by linking CEO compensation to the differential between the value of the company shares and the named index, encourage the manager to concentrate his efforts on exceeding the return of the index – return of certain competitors, average return of the industry, etc. Consequently, indexed options create a more powerful incentive per dollar value than conventional options (Johnson & Tian, 2000) and reward the manager for his efforts by isolating the part of share value arising from external factors beyond the manager's control (Kerr & Bettis, 1987).

Hence in uncertainty contexts the power of the CEO increases due to the difficulty of the Board to exercise control. According to the managerial power theory, this increase of the CEO power can be used to extract rents from the shareholders through the payout of stock options with high potential profits (e.g. traditional stock option at the money and in the money). Furthermore, the Board of Directors could easily legitimise the use of traditional stock options at the money or in the money and thereby avoid possible outrage cost, by referring to the need to attract and retain valuable executives to achieve a competitive advantage.

In accordance with these considerations we put forward the following hypothesis:

Hypothesis 5: The greater the environmental uncertainty, the greater the use of traditional stock options at the money or in the money

By contrast, since this type of stock options would not be justified under the optimal contracting view, it could also be hypothesised the opposite

Hypothesis 6: The greater the environmental uncertainty, the lower the use of traditional stock options at the money or in the money

3. Methodology

3.1 ***Sample and definition of variables***

To test the working hypotheses we constructed a data panel of the 100 firms with the highest stock market capitalisation listed on the Madrid Stock Exchange (representing 58% of Spanish quoted companies) for the period 1999–2001. The data panel has information about 295 SOPs for 100 firms. 285 SOPs correspond to 95 firms, as for every firm, information was available for each of the three years considered. The remaining 10 SOPs correspond to 5 firms for which information was only available on two of the three years considered. The structure of the panel is given in Table 1.

Table 1: Structure of the sample

Number of annual observations per company	Number of companies	Number of observations
3	95	285
2	5	10
Total	100	295

Table 2: Sample distribution by sector classification

Sector	No. of companies	% Companies
Oil and energy	10	10
Basic material, industry and building	26	26
Consumer goods	25	25
Consumer services	16	16
Financial services and real estate	15	15
Technology and telecommunication	8	8

Dependent variables

The dependent variable "use of stock options for compensation" takes value 1 when stock options are used to reward the CEO, and 0 when they are not used.

The dependent variable "use traditional option granted at the money or in the money" takes value 1 when are used traditional stock option granted at the money or in the money" to reward the CEO, and 0 when they are not used.

The information on this variable was obtained from the database of the National Commission of the Securities Market: "Summary report on stock option rights of companies owned or controlled by their Directors".

Independent variables

The level of monitoring was measured by means of the following variables: (a) outside blockholder, measured as the shareholding of the three largest external shareholders in the period before implantation of the SOP; (b) outside Directors' stockholdings, measured by the percentage of capital owned by the outside members in the period before implantation of the SOP; and (c) CEO equity ownership, measured by the percentage of capital owned by the CEO in the period before implantation of the plan.

The information on these variables was obtained from the "Significant stock holdings" data base of the National Commission of the Securities Market.

We used the annualised standard deviation of daily stock returns of a firm adjusted for average industry volatility as proxy for environmental uncertainty. This measure may be interpreted as collective assessment of uncertainty by stock market participants, as opposed to the assessment of managers (Agle et al., 2006). This objective measure of uncertainty is commonly used in accounting, finance, and strategy research (Agle et al., 2006).

Because a SOP may be affected by the firm's size, we control its effect by using the logarithm of the average net sales of three years prior to the implantation of the SOP.

4. Results

The results reveal that SOPs are not extensively used as a system of remuneration among the big Spanish firms. Only 23% of the 100 firms with the highest stock market capitalisation listed on the Madrid Stock Exchange, for the period 1999–2001, use a SOP to reward the CEO. This result shows that the popularity of SOPs in Spain is not comparable with that existing in the USA where SOP, as well as being widely used incentives (Conyon & Schwalbach, 2000; Murphy, 2002), make up an increasing proportion of the remuneration package (Yermack, 1995; McCall, 2004). This difference is consistent with the types of firm and the corporate ownership systems found in Spain and the US.

Of the 295 observations carried in the 100 firms with the highest stock market capitalisation listed on the Madrid Stock Exchange for the period 1999-2001, we find 51 executives SOPs (Table 3). The distribution of executive stock option plans is as follows: 60.78% are conventional options granted at the money or in the money (options that establish an exercise price equal to or lower than the stock price at the time

the options were granted, and the only condition for exercising the purchase of stock is to remain with the firm); 39.22% are traditional options granted out of the money or restricted stock options (conditioned to the achievement of goals or to the possession of a certain number of shares); and we have not identified any firm resorting to the mode of indexed options.

Table 3: Frequencies of option types

	Frequency	%
Traditional option granted at the money or in the money	31	60.78
Traditional option granted out of the money or restricted stock options	20	39.22
Total SOPs	51	100.0

In spite of their lower level of use in Spain, the SOP types used to compensate Spanish CEOs are fairly similar to those used in the USA. According to Murphy (1985), rewards by means of indexed options and options restricted to the achievement of objectives (performance vested options) are not common in the USA. For their part, Bebchuk et al. (2002) and Murphy (2002) maintain that granting conventional options at the money is the most frequent mode.

The correlation matrix (Table 4) shows a positive significant correlation between uncertainty and firm size. We also observe that: 1) "outside blockholder" presents a positive significant correlation with "outside Directors' stockholding"; and a negative and significant correlation with "CEO's equity ownership"; and 2) "outside Directors' stockholding" presents a negative and significant correlation with "uncertainty and firm size".

Table 4: Descriptive statistics and correlation

Variable	Mean	S.D.	1	2	3	4
1. Outside blockholder	54.12	27.20				
2. Outside Directors' stockholdings	10,17	15,67	.12 *			
3. CEO's equity ownership	5.20	13.87	-.18 **	.05		
4. Uncertainty	.13	.06	-.43	-.28 **	.09	
5. Size	6,07	1,68	-.07	-.31 **	-.10	.35 **

* p< .05, ** p< .01, *** p< .001, n= 295

The test of differences of means between the firms that use SOPs to compensate the CEO, and those that do not, shows that both the percentage of capital owned by the three largest external shareholders, and that owned by outside Directors and by the CEO, are significantly lower in the group of firms that use a SOP to remunerate their

CEO. On the other hand, uncertainty and firm size are significantly greater in the group of firms that use a SOP to remunerate the CEO (Table 5).

Table 5: A comparison of the use of SOPs at firms

	Use of SOP to remunerate CEO		
	Yes n= 51 Mean	No n=244 Mean	F
Outside blockholders	41.90	51,86	5.738 *
Outside directors' stockholdings	1.13	12.06	21.989 ***
CEO equity ownership	.75	6.13	6.447*
Uncertainty	.16	.10	43.846***
Size	7.04	5.87	21.672 ***

* p< .05, ** p< .01, *** p< .001

To test the hypotheses we used a logistic regression model. The results show that the probability that a SOP will be used increases as: 1) the shareholding of the three largest external shareholders decreases (β = - .017, p < .01), 2) the outside Directors' stockholding decreases (β = - .193, p< .01), 3) CEO equity ownership decreases (β = -.061, p < .10), and 4) the degree of uncertainty increases (β = 14.574, p < .001) (Table 6). These results support hypotheses 1, 2, 3 and 4.

Table 6: Logistic regression model

	"Use of stock options for compensation"	
	□	Wald (sig.)
Outside blockholder	-.017	6.964 (.008)
Outside Directors' stockholdings	-.193	9.158 (.002)
CEO equity ownership	-.061	3.747 (.053)
Uncertainty	14.574	14.341 (.000)
Size	.045	0.181 (.671)
Constant	-2.033	5.739 (.017)
	n= 295 Chi squared = 79.322 (.000) R nagelkerke .392	

We examined the differences in the uncertainty variable between the two sub-samples obtained, based on the use of conventional options granted at the money or in the money versus other types (traditional option out of the money and restricted stock option), by means of the Mann-Whitney non-parametric Z test (Table 7). The results show that the uncertainty is significantly greater in the group that use conventional options granted at the money or in the money *(*Z = -2.055, p < 0.05*)*. Additionally, to test the hypothesis 5 we used a logistic regression model. The results show that "uncertainty" variable positively influences the probability of use of conventional options

granted at the money or in the money ($\beta = 0.869$, $p < 0.05$). Therefore the hypotheses 5 is confirmed and the hypotheses 6 is not supported

Table 7: A comparison of the type of results of traditional options

	Traditional option stock, granted at the money or in the money n= 31	Traditional option stock, granted out of the money or restricted option n =20	
	Mean	Mean	Z (p-value)
Uncertainty	.17	.15	-2.055 (.04)

Table 8: Logistic regression model

	"Use of traditional option stock, granted at the money or in the money"	
		Wald (sig.)
Uncertainty	0.869	3.953 (.004)
Size	0.297	1.564 (.211)
Constant	1.728	1.081 (.299)
	n= 51	
	Chi squared = 8.504 (.01)	
	R nagelkerke 0.25	

5. Discussion

By examining the influence of monitoring and uncertainty on SOPs in the Spanish context, the study permits us to verify whether the results obtained in the English-speaking context can be generalised or not.

First of all, only 23% of the 100 firms with the highest stock market capitalisation listed on the Madrid Stock Exchange, for the period 1999–2001, use a SOP to reward the CEO. This result shows that the popularity of SOPs in Spain is lower than in the US and UK.

Recent information on the use of stock options in Spain (Watson Wyatt, 2007) shows that the highest percentage of use of stock options to reward the CEO was reached in 2004 (43.4% of the firms examined); this percentage decreased to 42.6% in 2005 and 39.5% in 2006. The reduction in the number of firms that use SOPs to reward their managers may be a consequence of the obligation to record SOPs as an expense, but also of their delegitimisation due to scandals around millionaire payouts to top management, and/or because Boards "begin to perceive a lack of utility of stock options (Brandes et al., 2005, p. 103), due to their incorrect design.

Second, the probability that Spanish firms will use SOPs to remunerate their CEO increases inversely to: 1) the percentage of stock held by outside blockholders, 2) the outside Directors' stockholdings, and 3) CEO equity ownership. It is confirmed that monitoring and SOPs are substitutive and that Spanish firms, to avoid duplication of costs, emphasise one or the other. This result shows that the difference in the

popularity of SOPs between Spain and the US can be explained by the difference in the level of monitoring by the Board of Directors between Spain and the Anglo-Saxon countries. In Spain, the proportion of firms with no controlling shareholder is 35 per cent for large listed companies and none for medium-sized listed companies, whereas in the US these percentages are 80 and 90, respectively (La Porta et al., 1999).

Furthermore, in Spain, families, companies, and banks are large shareholders. Control pyramids are quite frequent in this respect and stand at 38 per cent in the case of Spain, compared to 0 per cent in the US (Crespi et al., 2001). These differences cause the level of monitoring by the Board of Directors to be higher in Spain than in the English-speaking countries, and consequently the agency conflict between shareholders and managers is less important. In Spain, the most important conflict occurs between the controlling shareholders and the floating capital, since the controlling shareholders can use their position of power to expropriate the firm's income. When the controlling shareholders have a commercial relationship with the firm, they may establish agreements with the CEO to protect or advance their respective interests. De Miguel et al. (2004, p. 1200) argue that "firm value [...] decreases with ownership concentration at high levels (as a consequence of the expropriation effect)".

Third, our study finds a positive significant relation between uncertainty and the use of SOPs, and reveals that outcome uncertainty is significantly greater in firms that use traditional stock options granted at the money, or in the money, than in firms that use other types of options (traditional stock options granted out of the money and restricted options). A first interpretation of this result, considering the Board as the shareholders' loyal agent, could be that in uncertainty contexts, the Directors consider it more worthwhile to provide SOPs than to rely on harder and more imperfect monitoring, and that the most effective types of options for attracting and retaining competent CEOs are the traditional stock options granted at the money or in the money, because they are more likely to end up with a positive payout. The attraction and retention of executives who possess a broad array of knowledge, skills and perspectives are considered key factors for success in uncertain environments (Keck & Tushman, 1993).

Nevertheless, in the literature on remuneration we find reasons to question the capacity of traditional stock options granted at the money or in the money to align the interests of managers and owners. For example, the Behavioral Agency Model (BAM), developed by Wiseman & Gomez-Mejia (1998), questions the capacity of this type of options to encourage managers to take risks.

Traditional stock options granted at the money or in the money, offering high potential profits because there is a high probability that they will result in gains for the manager, will lead the manager to perceive the remuneration as a secure income, thus creating a situation of expectation of gains. According to the BAM, this encourages the manager, in order to protect these expected gains, not to undertake risky projects even when they are profitable for the shareholders. On this basis, therefore, conventional stock options granted at the money and in the money, rather than reducing the manager's aversion to risk, help to increase it.

Also, the traditional stock options granted at the money or in the money violate a basic proposition in the incentive compensation literature: contracts should insure agents against uncertainty generated by common factors beyond their control, while retaining controllable, idiosyncratic effects to provide the appropriate incentives. The influence of outside forces on the share price means that the executive who is remunerated with traditional options may obtain a high reward, even when the profitability of his firm does not exceed the industry average, or be deprived of reward, even when he achieves a higher profitability than his competitors (Johnson, 1999). From this point of view, therefore, we could question the capacity of traditional options granted at the money or in the money to act as incentives to exploit or seek new investment opportunities that offer higher profitability than the industry average. This type of options can cause the manager to obtain a high reward without having made any effort, simply taking advantage of a "stroke of luck" propitiated by outside forces, or can deprive him of the reward even when he deserves one (Bebchuk et al., 2002). The disadvantages of the above types can be overcome by using other types of stock options, such as indexed stock options and performance vested options.

In addition, Álvarez & Neira (2005) show that in 77 per cent of traditional options granted at the money or in the money to compensate the CEOs of Spanish firms, the length of the exclusion period is less than three years. This result calls into question the capacity of traditional options granted at the money or in the money to retain top Spanish executives and to encourage a long term orientation in strategic management. On the contrary, they clearly encourage a short-term orientation and may even offer an incentive to actions aimed at artificially increasing the share price (e.g. buying back shares of the firm that are on the market).

In our opinion, the positive significant relation between outcome uncertainty and the use of traditional stock options granted at the money or in the money found in this study supports the managerial power theory.

This thesis makes three central claims: (1) CEOs have some degree of power over their Boards of Directors, (2) CEOs use that power to extract economic rents from the corporation in the form of excessive pay packages that correlate poorly to managerial performance, and (3) extractable rents are ultimately limited by "outrage costs" (Bebchuck, 2002), hence the compensation needs to be rationalised and established through a process which appears to be legitimate.

The results of our study reveal that the use of stock options to reward the CEO occurs in firms where the CEO has the capacity to influence remuneration. Specifically, the evidence shows that compensation by means of stock options occurs in firms that are controlled by managers or whose controlling shareholders are other firms or banks that exercise their control through a very small stake in the capital and through the appointment of directors to represent them on the Board, and who presumably have a commercial relationship with the firm,

The presence of a controlling shareholder is interpreted as a source of power of the Board; however, this power can be used to support or to oppose the interests of the CEO. In the cases in which the controlling shareholder has a commercial relationship with the firm, to safeguard it and/or to be able to extract rents at the expense of

the floating capital, the controlling shareholder may support the CEO's obtaining of large rewards. This circumstance grants power to the CEO to be able to increase his pay through the design of options with high potential gains and low risk of loss (traditional options granted at the money and in the money) rather than cash, in an attempt to camouflage pay to mitigate external scrutiny and criticism. The uncertainty context can be used selectively to rationalise and legitimise this type of options. Hence the positive relationship found between the utilisation of traditional options granted at the money and in the money, and a context of uncertainty. The controlling shareholders and the directors who represent them on the Board could easily justify these features of option plans as optimal to the floating capital (small shareholders) and to the company in general, claiming that, in contexts of uncertainty: a) managerial behaviour simultaneously figures more prominently in a firm's future and becomes more difficult to monitor, and b) they need to attract and retain valuable executives in order to achieve a competitive advantage.

6. Directions for future research

The results of this study stimulate the debate around stock options in European countries, in many of which at least some powerful actors are opposed to them, as shown by Sanders & Tuschke (2007) in their model of adoption of institutionally contested organisational practices. This model can be related to the proposal of Kostova (1997), for whom national differences are conditioned, as well as by institutions, by people's knowledge and by their beliefs and values.

To reinforce the conclusions of our study, future research could complement our model: 1) by analyzing the determinants of SOPs in various types of industries (e.g. manufacturing versus service), 2) by introducing new variables to permit analysis of the influence of other sources of CEO power and the internal and external contingencies of the firm in the use and in the design of option plans, and 3) by analysing the influence of the different types of stock options on the decisions made by the CEO and on the firm's performance. The subject of stock options has been little studied in the European countries that follow the insider system of governance. Some studies carried out in the Anglo-Saxon sphere (Bryan et al., 2000; Kato et al., 2005) revealed wide differences. In the US it is evident that SOPs contribute to reducing dividend payouts (Lambert et al., 1991), and have little impact on CEO ownership levels (Ofek & Yermack, 2000; McGuire & Matta, 2003). In contrast, Kato el al. (2005) found that in Japan the SOP increases the overall ownership of the board and found no evidence of dividend reductions. Can these differences in managers' behaviour be attributed to the type of options used? The literature shows that the design of share options differs notably between countries. Conventional options at-the-money are the most frequently granted in the USA (Bebchuk et al., 2002; Murphy, 2002), whereas options restricted to the achievement of objectives (performance vested options) are not common, only 5% of the USA's 250 largest listed firms having them (Levinshon, 2001). On the other hand, performance vested options are very frequent in Germany, Sweden and the Netherlands (Pilv, 2003; Tower Perrin, 2005). In Japan, conventional stock options granted "out of the money" predominate (Kato et al., 2005).

Our study reveals notable differences between the SOPs used by Spanish firms and those applied in other countries characterised by an "insider" system of governance. Paradoxically, the types of options used by Spanish firms differ from those used in European countries (Germany, Sweden and the Netherlands) and Japan, which like Spain follow the insider system of governance and resemble those used in the Anglo-Saxon countries, which follow the market-oriented system of governance. Thus, we consider that future studies should attempt to answer the following questions: What are the causes of these differences? What factors affect the design of SOPs in other European countries? In which countries is CEO power a determinant of the design of SOPs?

The "insider system/market-oriented system" dichotomy has served as an effective device for highlighting some of the differences in national systems of corporate governance and conceptions of the firm. However, it is a simplified classification scheme that can obscure the amount of variation that actually exists across countries. For example, although the systems of Spain, Denmark, Finland, Germany, and the Netherlands are often placed in the same category, their differences are evident. Unlike Spain, which has a one-tier system (with a board) and the duality of Chairman/CEO, Denmark, Finland, Germany and the Netherlands have two-tiered board structures, with both a supervisory board and a management board. If CEO compensation is set by the supervisory board, then it may be more difficult for the CEO to influence the compensation process, and the process will certainly be different from American and Spanish practices. It would therefore seem appropriate for future studies to identify with precision the elements specific to each national system, to make a greater typological effort and to analyse in greater depth the implications of each institutional type on CEO compensation.

Finally, in recent years, in Europe, some codes of good governance have been published that establish a set of "best practice" recommendations regarding the behaviour and structures of the board of directors. Thus, another important theme to investigate is the repercussion of compliance with the codes of conduct on the design of SOPs in different European countries.

Although the codes of good governance published in the different countries agree in their general recommendations - to include a significant number of independent directors, to reduce the size of the Board, no CEO/Chairman duality, transparency of remuneration, and so on – they present some differences that could have repercussions for the design of SOPs.

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