



## Corporate social responsibility and CEO risk incentives from the behavioral agency model perspective Implications for idiosyncratic risk

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Submit: 30/10/2019    Accept: 05/06/2020

### ABSTRACT

The purpose of this research is to develop an behavioral agency model by focusing on the moderating role of corporate social responsibility on the relationship between CEO risk incentives and corporate idiosyncratic risk. The main. This research has been carried out using annual data of companies accepted in Tehran Stock Exchange during the period of 2012-2018. For testing of research hypotheses, multivariate linear regression has been used based on panel data. Empirical results show that CEO risk incentives has a positive and significant effect on firm idiosyncratic risk only in low CSR firms that attempt to maximize only investing stakeholders' interests. In high CSR firms, that attempt to balance the interests of both investing and non-investing stakeholders, CEO risk incentives has no effect on firm idiosyncratic risk. The findings of our paper contribute to enrich the corporate social responsibility /CEO risk incentives literature, and provide academics and managers a clearer understanding of the effect brought about by the corporate social responsibility and CEO risk incentives on corporate idiosyncratic risk.

### Keywords:

Corporate social responsibility, CEO risk incentives, idiosyncratic risk.

## 1. Introduction

Integrating prospect and agency theories, the behavioral agency model developed by Wiseman and Gomez-Mejia (1998), provided a new paradigm on how executive risk-taking behavior is influenced by the incentive system. The concept of Corporate Social Responsibility (CSR) has attracted a great deal of attention from researchers and experts as companies face pressure from multiple internal and external stakeholders to incorporate CSR into their activities and operations. (Borghesi et al. 2014, Crifo and Forget 2015). Corporate social responsibility is defined as the voluntary activities undertaken by companies to achieve social goals (McWilliams & Siegel 2001, Taleghani 2011). International empirical research has extensively examined the relationship between CEO incentives for performance performance and firm risk. Most of this research has focused on how CEO incentives (net components of remuneration packages (salaries, bonuses, stock bonuses, and stock options)) encourage risk. When it comes to separating ownership from control, the interests of the manager are not always compatible with those of the stakeholders. The theory of representation (Jensen and Meckling 1976), states that linking managerial reward to corporate performance helps to align managerial and stakeholder interests. Managers' wealth sensitivity to changes in the volatility of equity or Vega's rate of return has generally been used in sources as an indicator of CEO risk aversion. Several studies have shown that higher Vega Managers adopt more idiosyncratic risky financing and investment policies and policies (Chakraborty et al 2018). Managing managers is generally considered to be risk averse and non-diversified (Rajgopal & Shevlin 2002). In this regard, the board of directors' challenge to shareholders, the choice of high levels of incentives and incentives. It is too much for the CEO to take sufficient risk and value others without imposing risk. As the value of the company increases with the price of the stock (delta of compensation), Shareholders provide managers with the incentives to make the best effort. At the same time, these incentives may lead to inappropriate investment decisions (Amihud and Lev, 1981; Smith and Stulz, 1985), as they put managers at greater corporate risk. The value of these options also increases as stock fluctuates due to their perceived costs. This work (known as the Vega Reward), motivates managers for corporate risk and encourages managers to increase the idiosyncratic risk of the company. Although there is conflicting evidence on how Delta impacts corporate idiosyncratic risk, almost all

studies have found a positive relationship between Vega and corporate idiosyncratic risk (see for example Tufano, 1996; Guay, 1999; Rajgopal and Shevlin, 2002; Coles et al., 2006). Research has been conducted in the country on incentives for senior executives, but most of these are based on the theory of agency theory (Jensen and Meckling 1976), which considers maximizing stakeholder profits as the primary goal of the firm. Recent research on corporate social responsibility suggests that this monopoly focus on maximizing stakeholder profits is changing; partly because of corporate social activities. These studies show that companies that invest in CSR are deliberately trying to balance the interests of all stakeholders (Freeman 1984). These include investor stakeholders (shareholders) and non-investor stakeholders (employees, suppliers, customers and the community, etc.). Since no research has been undertaken in the country so far, this study examines whether this broader CSR goal focuses on the strong relationship between manager incentives to do risk and the idiosyncratic risk of firms listed on the stock exchange Tehran is having an impact. Specifically, it examines whether the effect of a manager's reward bonus on firm idiosyncratic risk varies across firms with high CSR. This is important because companies with a high CSR are different from companies with a low CSR, so the manager's response to a change in vega may be different in these companies.

The 2 part of this article is devoted to explaining the theoretical foundations and hypotheses and background of the research. In the 3 part, the research method and in the 4 part of the empirical model of research and measurement of variables, in the 5 part, statistical analysis and hypothesis testing results are presented and finally, discussion and conclusions are presented.

## 2. Literature Review

Behavioral agency model combines elements of classical agency theory with behavioral perspectives of decision-making to study the effect of Vega Reward grants on executive behavior (Wiseman and GomezMejia, 1998). According to traditional financial theory, the primary purpose of companies is to maximize the interests of shareholders. Likewise, managers are considered shareholder brokers who own the corporations. Managers have complete control over the operations of their companies and make all major financial and investment decisions. Since managers are not the owners of the company they control, the interests of managers are not the same as those of shareholders.

According to agency theory (Jensen and Meckling 1976), linking managers' rewards and incentives with firm performance is an important way of reconciling managerial and shareholder interests. Linking a manager's reward to a firm's performance helps align the interests of shareholders and managers, but at the same time puts managers at greater risk for the company. Because managers are risk averse and have little financial diversification. Because most of their wealth and financial and human capital are tied to their companies. But shareholders have a great deal of financial diversification because they can invest in many of their respective assets. As a result, managers may take high risks and invest in positive NPV projects because capitalists want managers to accept such investments (Amihud and Lev, 1981; Smith and Stulz, 1985).

Most of the empirical studies find no significant relation between the delta of managerial compensation and firm idiosyncratic risk (e.g., Coles et al., 2006; Low, 2009). There are a number of studies that find a positive association between vega (the sensitivity of CEO wealth to volatility), and managerial risk taking (see for example Tufano, 1996; Guay, 1999; Rajgopal and Shevlin, 2002;). The first hypothesis of this study examines whether there is a positive relationship between compensation vegas and firm idiosyncratic risk. Hence, the first hypothesis is as follows:

**Hypothesis 1:** Vega of CEO compensation is positively related to corporate idiosyncratic risk.

In the last few years, firms have been paying greater attention to CSR and have increasingly been considering it as part of their overall strategy (e.g., McWilliams et al., 2006; Erhenjamts et al., 2013). The empirical literature testing the relation between CSR and financial performance is however inconclusive, with various studies showing a positive, negative or insignificant relation (e.g., Garcia-Castro et al., 2010; Margolis and Walsh, 2003; McWilliams and Siegel, 2001; Orlitzky and Benjamin, 2001; Orlitzky et al., 2003; Van Beurden and Gossling, 2008). Two general views on CSR prevail in the literature. The agency theory, which is based on the assumption of shareholder wealth maximization, considers CSR as an agency problem (Friedman 1970), and a misuse and misappropriation of firm resources by managers to extract private benefits (Barnea and Rubin, 2010). According to the agency theory, CSR is undertaken at the expense of shareholders and therefore results in lower firm value (Friedman, 1998; Cronqvist et al., 2009; Pagano and Volpin, 2005). The opposite view of

CSR is represented by the stakeholder theory (Freeman, 1984), which contends that investment in CSR increases shareholder wealth because it increases other stakeholders' willingness to contribute with resources and efforts to the firm by balancing their interests. This theory is in line with the classical contract theory and theory of the firm (Freeman, 1984; Jensen, 2001; Freeman and McVea, 2001; Freeman et al., 2004) which view firms as a nexus of explicit and implicit contracts between shareholders and other stakeholders. CSR contributes to an increase in a firm's reputation for keeping implicit commitments and consequently improves the firm's relationships with its stakeholders. CSR therefore increases firm value by managing the interests of both investing (shareholders), and noninvesting (employees, suppliers, customers, community, etc.), stakeholders. Risk management theory, like agency theory, states that CSR generates ethical capital and proportional wealth from stakeholder relationships (Godfrey 2005). This ethical capital creates a goodwill reserve that, when operating poorly, has a protective function of insurance and reduces negative evaluations of stakeholders (Godfrey, 2005; Luo and Battacharya, 2009). One implication of this view is that CSR has a negative impact on corporate risk. Several empirical studies have examined the relationship between CSR and risk, most of which have found a significant negative relationship

(Orlitzky and Benjamin, 2001; Lou and Bhattacharya, 2009; El Ghoul et al., 2011; Oikonomou et al., 2012; Jo and Na, 2012; Bouslah et al., 2013; Harjot and Laksmana, 2016). The second hypothesis of this study examines whether CSR is associated with corporate risk. The hypothesis is as follows:

**Hypothesis 2:** CSR has a significant negative relationship with corporate idiosyncratic risk.

Studies have examined the relationship between CSR and reward incentives for senior executives and corporate performance in CSR (McGuire et al., 2003; Mahoney and Thorne, 2005; Mahoney and Thorne, 2006; Decktop et al., 2006; Cai et al., 2011; Bouslah et al., 2018). McGuire et al (2003), find a positive relationship between the amount of cash that senior executives receive as rewards and incentives and CSR activities. Mahoney and Thorne (2006), report a positive relationship between CEO's and CSR stock options, and Deck et al (2006), found a negative relationship between short-term CEO and CSR rewards, and a positive relationship between CSR and short-term reward incentives. Bossallah et al (2018), examined the impact of senior executives' rewards and

incentives on irresponsible social activities and found a positive relationship in the pre-crisis period and a negative relationship in the post-crisis period.

Companies with a high CSR do not basically focus on maximizing shareholder wealth and strive to balance the interests of all stakeholders (Freeman 1984; Mason & Simmons 2014). The optimal level of risk in companies with high CSR may be different from the risk level in companies with low CSR. Traditional agency theory argues that the risk level of risk-averse managers is often lower than the optimal level. According to agency theory, the idiosyncratic risk level of companies with a high CSR should be closer to the optimal level. Herujotu and Laxmana (2016), for example, empirically show that stronger CSR performance is associated with fewer deviations from the optimal idiosyncratic risk level. They argue that resource balancing between investor and noninvestor shareholders will lead to better risk management by reducing excessive risk aversion and reducing excessive idiosyncratic risk aversion. Noninvesting stakeholders can influence managers so that they can use their power to restrict access to the resources they control and reduce idiosyncratic risk to near optimal levels while investing as they move towards more risky investments. This is important because companies with high social responsibility are different from those with low social responsibility, and so the managerial response to vegan change can be different in these companies. Companies that invest in CSR generate ethical and social capital that acts as insurance when negative events occur (Godfrey et al. 2009). Because Vega also encourages risk-averse managers to hedge against risk aversion, the additional protection CSR provides may replace vegan protection and reduce the impact of vegas on corporate idiosyncratic risk. In addition, managers of companies with high CSR may benefit from monetary and nonmonetary incentives ((Fabrizi et al., 2014; Jha and Cox, 2015). If managers of companies with high CSR have different personality traits in terms of motivation

and willingness to take risks, the impact of the vegan on companies with higher CSR may be weaker.

Therefore, this study investigates the different effects of Vega on firm idiosyncratic risk in firms with high and low CSR. As a result, companies with a higher CSR should expect a weaker or lower Vega impact on corporate idiosyncratic risk.

**Hypothesis 3-A:** Vega of CEO compensation has no significant positive effect on corporate idiosyncratic risk in firms that perform high on CSR. **Hypothesis 3-b:** Vega of CEO compensation has a significant positive effect on corporate idiosyncratic risk in firms that perform low on CSR.

### 3. Methodology

The statistical population of this research includes all companies that were present in Tehran Stock Exchange during the period of 2012-2018. The statistical sample of this study are those listed on the stock exchange that are selected through screening.

#### 3.1. Model of the first and second research hypotheses

$$ID\_RISK_{it} = \beta_0 + \beta_1 \Delta_{it} + \beta_2 Vega_{it} + \beta_3 CSR_{it} + \beta_4 Controls_{it} + \epsilon_{it}$$

Model (1)

#### 3.2. Model of the third research hypothesis

$$ID\_RISK_{it} = \beta_0 + \beta_1 High\ CSR_{it} + \beta_2 High\ CSR_{it} * Vega_{it} + \beta_3 Low\ CSR_{it} * Vega_{it} + \beta_4 \Delta_{it} + \beta_5 Controls_{it} + \epsilon_{it}$$

Model (2)

**Table 1 - Definitions of Variables**

<p>Net score on CSR calculated by subtracting total CSR concerns from total CSR strengths in five categories (community, diversity, employees, product and environment. (see Table 2)). In this study, CSR is considered high if the net CSR score of the company is higher than the average net CSR score of the sample companies and if the CSR score is lower than the average net score of the sample firms, the CSR of the company is low.</p>	<p>CSR net score Based on Social Responsibility</p>
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Standard deviation of the residuals from the Fama-French 5-factor market model.  $R_{it} - R_{ft} = \alpha_i + \beta_1 MKTFR_t + \beta_2 SMB_t + \beta_3 HML_t + \beta_4 RMW_t + \beta_5 CMA_t + \varepsilon_{it}$ Model (3) Where $R_{it}$ is the return of stock $i$ in period $t$ , $R_{ft}$ is the risk-free rate for period $t$ and $MKT$ is the excess market return in period $t$ , and $SMB$ , $HML$ , $RMW$ and $CMA$ stand for the size, value, profitability and investment risk factor returns, respectively. Idiosyncratic risk of stock $i$ is now measured as the standard deviation of residuals from (3), $ID\_RISK (FAMA-FRENCH) = \sqrt{Var(\varepsilon_{it})}$ Model (4)	ID_RISK (Idiosyncratic Risk)
Defined as the change of the CEO's compensation to Stock Return fluctuations (Payment Risk Sensitivity)	Vega
Defined as the change of the CEO's compensation to Stock Price fluctuations (Payment Performance Sensitivity)	Delta
Sum of board salaries and bonuses to total bonuses	Cash compensation
Log of total assets	Size
Debt to asset ratio	Financial Leverage
(Market value of equity + book value of debt)/total assets	Ratio of market value to book value
Investment in Fixed Assets / Total Assets	Capital expenditure
The natural logarithm of the number of years of company activity	Age of Company
Number of years of CEO activity (tenure)	The duration of the Director's activity
Number of Board Members	Board size
Ratio of outside directors to total directors on the board	Board independence

Table 2 - Social Responsibility

concerns	Strengths	Dimensions
<ul style="list-style-type: none"> <li>Lack of union relations</li> <li>Health and safety concerns</li> <li>Reduce workforce</li> <li>Weakness in retirement payments</li> </ul>	<ul style="list-style-type: none"> <li>Cash dividend sharing</li> <li>Employee participation</li> <li>The power of retirement benefits</li> <li>Health and safety</li> </ul>	Employee relations
<ul style="list-style-type: none"> <li>Disagreement</li> <li>Lack of representation</li> </ul>	<ul style="list-style-type: none"> <li>Continuing CEO presence</li> <li>Grade promotion</li> <li>Providing Board activity history</li> <li>Work / life benefits</li> <li>The presence of women and contracting minorities in the company</li> <li>Employment of people with disabilities</li> </ul>	Variety
<ul style="list-style-type: none"> <li>Product safety</li> <li>Financial problems</li> </ul>	<ul style="list-style-type: none"> <li>Research and Development / Innovation</li> <li>Contract marketing / partnerships</li> </ul>	the product
<ul style="list-style-type: none"> <li>Not supporting health and safety issues</li> <li>Unsupported housing</li> </ul>	<ul style="list-style-type: none"> <li>Helping charities</li> <li>Investment disputes</li> <li>Training support</li> </ul>	Society
<ul style="list-style-type: none"> <li>Hazardous waste</li> <li>Regulatory problems</li> <li>Purification of chemicals</li> <li>greenhouse gas emissions</li> <li>Release of agricultural chemicals</li> <li>Climate change</li> </ul>	<ul style="list-style-type: none"> <li>Prevention of environmental pollution</li> <li>recycling</li> <li>clean energy</li> <li>Property, machinery and equipment</li> <li>Power management system</li> </ul>	the environment

## 4. Results

Descriptive statistics of the observed research variables are as follows.

In Table 3, the main central index is the mean, which represents the equilibrium point and the center of gravity of the distribution, and is a good indicator of the centrality of the data. For example, the Social Responsibility Index has an average value of 10.07

indicating that most data are focused around this point. In general, the dispersion parameters are the criteria for determining the dispersion of each other or their dispersion relative to the mean. One of the most important dispersion parameters is standard deviation. The value of this parameter for the financial lever variable is (0.20).

**Table 3. Descriptive statistics of the observed research variables**

Idiosyncratic Risk	CSR	Financial Leverage	Ratio of market value to book value	CSR low	High CSR	Vega	Delta	Cash Bonus	Capital expenditure	Board independence	Board size	Age Company	CEO tenure	Size	
4/42	10/05	0/55	2/59	0/54	0/45	0/03	0/25	0/19	0/25	0/56	5/04	3/49	2/37	14/13	Mean
0/93	15/00	0/99	17/17	1/00	1/00	2/22	5/60	10/00	0/74	0/1	7	7/14	7	18/37	max
32/55	1/00	0/01	0/00	0/0	0/0	-0/17	0/02	0/00	0/00	0/00	3	2/09	1	10/15	min
2/43	1/81	0/21	2/10	0/49	0/49	0/09	0/42	0/43	0/17	0/18	0/32	0/52	1/45	1/51	sd

### 4.1. The results of the first and second hypothesis

Table 4 shows less than 5%, so we conclude that the model is generally statistically acceptable, and the high value of the Fisher statistic indicates that there is a strong relationship between variables in this model. As the coefficient of determination and the adjusted coefficient of determination indicate, it confirms the high power of model explanation. From the value provided by the Watson-Durbin statistic, which can be confirmed by the lack of correlation in the model, there is no need to review this statistic due to the short period of time. Now considering the significant confirmation of the whole fitted model, the meaningful analysis of each of the explanatory variables is discussed. As shown in the table below, for each coefficient variable, standard error, t statistic, and finally, the value of p is given. For meaning, each of the variables in the model is referenced to the p column or the same level of significance. Now, with respect to the value of p, if the arbitrary error  $\alpha$  is compared with the values of p, one can consider the meaning of each of the variables. Table 4 shows the

results of multivariate regression of idiosyncratic risk on corporate social responsibility scales and manager incentives for risk taking. Endorses the hypothesis that manager's reward bonus has a positive relationship with corporate idiosyncratic risk. The coefficients of corporate social responsibility are significant and negative for all model characteristics, indicating that corporate social responsibility reduces corporate idiosyncratic risk. These results support our second hypothesis. The coefficients of control variables in Table 4 show that the delta of manager's remuneration and cash rewards have a significant negative relationship with corporate idiosyncratic risk. Age of company has a negative relationship with corporate idiosyncratic risk. On the other hand, CEO tenure has a positive and significant relationship with corporate idiosyncratic risk. Company characteristics in the model also have expected signs. Corporate idiosyncratic risk measures have a significant negative relationship with corporate leverage, whereas leverage has a positive relationship with corporate idiosyncratic risk. Capital expenditures also do not affect company Idiosyncratic Risk.

**Table 4: Estimation of the coefficients of the model.1**

ID_ RISK <sub>it</sub> = β <sub>0</sub> +β <sub>1</sub> Deltat+β <sub>2</sub> Vega+β <sub>3</sub> CSR <sub>t</sub> + β <sub>4</sub> Controls <sub>it</sub> + ε <sub>it</sub>			
Probability	t-statics	Coefficient	Variables
0.0000	-6.296264	-110.8603	C
0.0249	2.243837	19.54685	CSR
0.0000	19.40734	18.65055	Vega
0.0000	-8.645484	-66.79755	Delta
0.0002	-3.711532	-0.121602	cash compensation
0.0000	4.648292	54.22359	Size
0.0000	4.742786	3.348317	LEV
0.8753	-0.156931	-0.829472	Market-to-book
0.0000	6.648722	25.88061	Capital expenditures
0.0000	-5.619556	-15.16847	age
0.0030	2.971568	0.728907	CEO tenure
0.0054	-2.338489	-2.554890	Board size
0.3027	-1.031204	1.789150	independence
9.633377	F-statistic		
0.000000	F-probability level		
0.48144	Adjusted R-squared		
1.864211	Durbin-Watson		

#### 4.2. The results of the third hypothesis

Table 5 shows the results of the third hypothesis (H3-A and H3-B); these assumptions predict a weaker positive effect of incentives given by senior executives to take risks; this effect by CEO's rights and benefits on corporate idiosyncratic risk High corporate social responsibility and the very positive impact of Vega on corporate risk has been measured in low corporate social responsibility. Interactive variables were constructed in order to achieve the effect of Vega in low and high corporate social responsibility companies; in this study, high corporate social responsibility was considered if the corporate social responsibility score of the company was higher than the net average score. The social responsibility of the sample companies is low and if the corporate social responsibility score is lower than the average net score of the sample companies, the social responsibility of that company is low. Since the interactive variables of each corporate social responsibility are considered high and low with Vega and the total Sample covers, vega in the face of CSR is not present. This property provides an easy way to interpret the coefficients of the interactive variables. High Vega Interaction and Corporate Social Responsibility Coefficients show Vega's impact on corporate idiosyncratic risk in high corporate social responsibility companies, and Low Corporate Interaction and Corporate Social

Responsibility coefficients indicate Vega's impact on corporate idiosyncratic risk in low corporate social responsibility. Here, in line with previous research, it is found that the relationship between Vega and firm idiosyncratic risk is positive and significant in companies with low corporate social responsibility. The high interactive coefficients of Vega and high corporate social responsibility are negligible, indicating that Vega does not affect firms with high corporate social responsibility. The coefficients of control variables in Table 5 show that the delta of managerial rewards and cash rewards are negatively and significantly correlated with corporate idiosyncratic risk. On the other hand, CEO tenure has a positive and significant relationship with corporate idiosyncratic risk. Specifications of the model also have expected signs. Corporate idiosyncratic risk measures have a significant negative relationship with corporate leverage, whereas leverage has a positive relationship with corporate idiosyncratic risk. Capital expenditures also have a negative impact on company idiosyncratic risk.

Table 5: Estimation of the coefficients of the model.2

ID_ RISK <sub>it</sub> = α + β <sub>1</sub> High CSR <sub>it</sub> + β <sub>2</sub> High CSR <sub>it</sub> * Vega <sub>it</sub> + β <sub>3</sub> Low CSR <sub>it</sub> * Vega <sub>it</sub> β <sub>4</sub> Deltat + β <sub>5</sub> Controls <sub>it</sub> + ε <sub>it</sub>			
Probability	t-statics	Coefficient	Variables
0.0000	-6.284781	-5.135430	C
0.0000	4.583860	0.836902	High CSR
0.0700	1.812423	2.193681	High CSR* Vega
0.0000	15.21650	0.678631	Low CSR* Vega
0.0000	4.447866	1.594837	Delta
0.0220	-2.290021	-1.239732	cash compensation
0.0013	-3.211427	-2.902702	Size
0.0000	8.023789	0.800063	LEV
0.3104	-1.014403	-3.122901	Market-to-book
0.0000	-4.797010	-4.575858	Capital expenditures
0.0005	-3.459041	-2.772975	age
0.0035	2.923978	1.603564	CEO tenure
0.0000	6.120329	2.471895	Board size
0.0000	-5.996507	-1.679412	independence
2.518083	F-statistic		
0.007649	F-probability level		
0.418776	Adjusted R-squared		
1.829186	Durbin-Watson		

## 5. Discussion and Conclusions

Behavioral agency model has been widely used to study the influence of CEO incentive options on risktaking behavior. Agent theory states that maximizing shareholder wealth is the primary purpose of a company and ignores the other stakeholders that are essential to the long-term survival and profitability of the company. Stakeholder theory holds that companies invest in corporate social responsibility to balance the interests of all stakeholders, including shareholders. It is important, therefore, to distinguish between companies that rank high in social performance and those that rank low. This distinction is important because companies with high corporate social responsibility intentionally aim to serve the interests of the investor (the shareholders) and the non-investor (the customers, the employees, the community) rather than the investor. Balance. The purpose of maximizing stakeholder interests is to moderate the relationship between Vega and company idiosyncratic risk, as corporate social responsibility creates more constraints for senior executives to risk. In addition, corporate social responsibility plays a protective role in lowering financial performance and weakening the vega's impact on corporate idiosyncratic risk. The experimental results obtained in this study are consistent with these predictions. Only in companies that maximize the interests of the investor stakeholder and make it their primary target and their rank in corporate social responsibility is low is there a positive relationship between Vega and corporate idiosyncratic risk. On the other hand, companies that maximize the interests of all stakeholders gain high rankings in corporate social responsibility, the risk of such companies being ineffective and leading to a negligible relationship. Taken together, these results suggest that the positive relationship between Vega and firm idiosyncratic risk, as stated in previous research, appears to be influenced by, or originates from, corporate social performance. These results are consistent with previous empirical research showing that Vega is positively associated with managerial risk taking (see, for example, Tofano 1996; Guay 1999; Rajgopal & Schulin 2002; Coales et al. 2006; Lu 2009). It also confirms studies that explain the impact of corporate social responsibility on idiosyncratic risk reduction (Orlitsky & Benjamin 2001; Lu & Batacharya 2009; Alghul et al. 2011; Okonomo et al. 2012; Jo & Na 2012; Bussella et al. 2013; Harjut et al. Laxamana 2016). And that impact can be explained by a higher level of support for the corporate stakeholder

area of better corporate social responsibility. The findings of this research have implications for the board of directors. In particular, boards should consider corporate social performance goals and design managers' reward packages to mitigate the risk of agency-related risk issues. Companies with high corporate social responsibility may not need to provide their managers with high vega incentives. This study contributes two major contributions to research on corporate social responsibility, corporate idiosyncratic risk and incentives for senior executives to take risks. The first contribution to research in this area is that corporate social responsibility alters the relationship between Vega and corporate idiosyncratic risk. (That is, companies that seek to maximize the interests of investor interests only), But on the other hand, Vega's managerial reward is at the risk of companies with high corporate social responsibility. That is, companies that try to maximize the interests of investor and noninvestor stakeholders.

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