DOES CEO POWER INFLUENCE CORPORATE RISK AND PERFORMANCE? EVIDENCE FROM GREECE AND HUNGARY

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Abstract

We intend to investigate the impact of chief executive officers' (CEO) powers on corporate decisions made by firms in the context of board oversight (BO) and market competition (MC). From 2007 to 2017, we applied a quantitative approach to a sample of two stressed European markets (i.e., Hungary and Greece). We found that CEO power has a negative impact on corporate risk and firm performance. Furthermore, results also reveal no sign of moderation effect for MC with corporate decisions, whereas BO moderated the CEO power and corporate decisions in the Hungarian market. However, the results of moderation for the Greek market are diametrically opposed to those of the Hungarian market. Our study indicates that in stressed markets, the CEO power is suppressed and does not increase the corporate risk and firm performance despite the good governance and high market competition. The study can help boards in the optimal delivery of power to the CEO to perform well in a stressed environment.

Keywords: CEO Power, Corporate Risk, Board Oversight, Market Competition, Firm Performance

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1. INTRODUCTION

Power is "the capacity of individual actors to exert their will" (Finkelstein, 1992, p. 506). The firms consider a CEO position as a powerful source (Hamori & Kakarika, 2009). Once the CEO strongly identifies himself with the firm, he works for its best interest (Khan, Nijhof, Diepeveen, & Melis, 2018). A CEO makes critical decisions regarding financing and plays a pivotal part in dealing with corporate decisions like corporate risk and firm value. This ability to take effective decisions depends upon how much power a CEO holds as compared to others. Researchers study CEO in management, finance, and accounting, often have some references to social psychology. However, until now, its relationship with corporate risks has not been thoroughly analyzed and explained yet. Indeed, CEO power often comes with great responsibility and risks. A powerful CEO has the potential to offer the firm a strong sense of direction and speedy decision-making, but, at the same time, slight overconfidence and lack of oversight, or unfair use of power, might lead even to destructions (Bergh et al., 2016).

From the briefly above reported indications, we aim to understand CEO power roles and "influence" upon corporate risk (CR) and firm value. When dealing with such a phenomenon, we started considering that the theoretical frameworks refer to agency theory, power prospect, and social psychology in most of the studies.

According to the agency theory (Jensen & Meckling, 1976), CEO power and CR variables are inverse in a relationship. The theory focuses on the CEOs' risk-aversive and risk-neutral behaviours and ignores the risk-seeking behaviour in certain conditions (Sanders & Hambrick, 2007). From this perspective, the CEOs become poorly diversified and take less risk than the more diversified ones (Holmström, 1999). Conversely, the prospect theory (Kahneman & Tversky, 1979) argues that individuals make their preferences while observing the risk. They may seek or avoid risk as and when they find a need, which depends on situations as CEO, may seek risk when they face losses or vice versa. Thus, according to prospect theory, CEO power and CR are directly proportional to each other. Lastly, from the social psychological perspective, CEOs who possess more power than the other board members, are optimistic about the decision's outcomes and thus ignore the possible dangers while observing risky decisions (Anderson & Galinsky, 2006; Ejaz, Jalal, & Fayyaz, in press). When CEOs possess more power, the likelihood of the outcomes like firm performance (FP) and CR tends to become very high (Hirshleifer, Low, & Teoh, 2012).

Alongside the theoretical base, we also consider that the empirical evidence for the powerful CEOs, CR, and FP relationships are limited and mixed (Lewellyn & Muller-Kahle, 2012). Further, no unified theory explains its immediate effect on CR and FP. Moreover, we see the power mechanisms with internal mechanisms taking inputs like board composition and structure, board demography, and output variables like performance. However, it lacks the intermediate processes that can impact the relationships (Forbes & Milliken, 1999).

Therefore, the present research aims to find the answer to the questions, *Does CEO power impact the firms' corporate decisions and which theory best complement the relationship?* and *Which intermediate process influence the CEO power, CR, and FP relationship?* Therefore, the study implies board oversight (BO) and competition in the market as the intermediate processes in CEO power, CR, and FP relationship. BO and market competition are essential to be studied as they impose internal and external forces while making the CEO's decisions in a firm (Fama, 1980).

Market competition (MC) is essential as it influences corporate power, CR, and FP. Whether it is high or low, MC influences CEOs' decision-making and ultimately affects CR and FP. The higher the MC, the higher will be the CR. Powerful CEOs have the potential to make risky decisions based on the MC. In markets with high competition, the CEO's power becomes more beneficial for the firm value (Li, Lu, & Phillips, 2019). According to Sheikh (2019), powerful CEOs and CR have a positive association with each other. Moreover, this relationship remains significant in markets where there are high competition and strong corporate governance structures.

Likewise the MC, this study also argues that BO plays a pivotal part in accelerating the association of powerful CEOs, CR, and FP. BO encompasses board independence, board size, and some other variables (Malik & Makhdoom, 2016). Powerful CEOs without the BO can produce a negative impact on corporate performance. Greater BO may result in greater FP in the presence of a powerful CEO, but FP may decrease if low BO combines with the high CEO power (Haynes, Zattoni, Boyd, & Minichilli, 2019). In doing so, the present study examines how BO serves as an intermediate process in influencing the association of powerful CEO, CR, and FP.

We considered that single country analysis limits other firms' generalizability, particularly in other countries (Haynes et al., 2019). Earlier studies and empirical literature explored the governance mechanisms and problems to address the issues prevailing in one country, for example, the US and the UK (Kumar & Zattoni, 2013). Studies based on the mature markets do not reflect all countries' uniform behaviour and results across the globe (Aguilera, Desender, Bednar, & Lee, 2015). When carried in the Anglo-American countries, such as the US and the UK with large, listed companies, corporate governance studies may not consider the markets and institutional environment of most countries across the world because these economies are strong, well developed, and the disclosure of the information is rich. In contrast to these, economies across the globe are not very strong and efficient in terms of the conditions mentioned above (Kumar & Zattoni, 2016). To test how CEO power impacts the corporate decisions under MC and BO influence, we collect data from European markets, namely Hungary and Greece firms from 2008 to 2017. We then use four CEO powers (i.e., personal, expertise, ownership, and structural), the total risk for CR, return on assets as FP measures. Then for the MC, we use the Herfindahl-Hirschman index (HHI) and BO; we use board independence and the number of non-executive directors.

The results of the present study are opposite to those of the developed markets. CEO power is significant but negative with CR and FP in the Hungary market, indicating that high power does not influence high CR or FP. For Greece, this relationship is also negative for risk and insignificant for performance. The negative relationship has its support by both agency theory, the power prospect, and social psychology, which states that CEOs follow the behavioural inhibition system of avoiding the situations that lead to destructive outcomes. Moreover, MC does not have a moderating effect on the relationship of CEO power and corporate decisions in Hungary, whereas, for Greece, it has a moderating influence on the ownership and structural power of CEO with CR and personal power with FP. Lastly, BO moderate CEOs' personal and ownership power with risk and expertise power to performance only in Hungary and Greece; it did influence the relationship of CEO power and corporate decisions.

The present study contributes to the existing literature on CEO power, and corporate decisions are threefold. First, it shows that the results of developed markets cannot be generalized for the globe. This study explores the cross-national analysis to reveal the possible generalizability of

the relationships across economies, and our results indicated variations for both markets. Previous studies examined these relationships separately, for example, powerful CEOs and CR (Chintrakarn, Jiraporn, Tong, & Chatjuthamard, 2015), CEO power and performance (Tanikawa & Jung, 2019), market competition and risk (Sheikh, 2019), powerful CEOs and BO (DeBoskey, Luo, & Zhou, 2019). Secondly, the study indicates that in stressed European markets, the CEO power is suppressed and does not increase the corporate risk and firm performance despite the good governance and high market competition. Lastly, the study leads to the important revelation that it is not just the agency theory to be considered while studying the CEO's power and risk behaviour. Apart from the traditional agency theory, the power prospect, social psychology, and behavioural systems also explain the CEO's power concerning corporate decisions.

The remainder of the paper is structured as follows. Section 2 provides the literature review and theoretical framework. Section 3 describes the detailed research method, techniques and analysis. Section 4 reports study results and discussion, and lastly, Section 5 discusses the conclusion, contribution, limitations and future research avenues.

2. THEORETICAL FRAMEWORK AND HYPOTHESES DEVELOPMENT

2.1. CEO power and corporate risk (CR)

The CEO is an influential figure, holds a powerful place, has the ultimate responsibility to run the business effectively and minimize the corporate environment's uncertainty (Haider & Fang, 2018). Theories explain mixed associations of power and performance; for instance, agency theory argues that CEOs always exacerbate agency problems, and power is ruinous for corporate success. Hence, the agency theory predicts an inverse association between powerful CEOs and risk (Bebchuk, Cremers, & Peyer, 2011). Furthermore, CEOs can influence the board's decision-making for their benefit; in turn, they tend to reduce the risk (Victoravich, Buslepp, Xu, & Grove, 2011). Agency theory is exiguous to consider how the CEO's psychological behaviour impacts the corporate decision, making itself a limitation to serve as the possible and satisfactory means to explain the given relationship (Lewellyn & Muller-Kahle, 2012).

Some studies explain and prove that power "transforms the basic psychological processes" of individuals from the stream of power prospect and social psychology. There are behavioural systems in social psychology that explain different behavioural types for different situations; these are approach and inhibition (Magee & Galinsky, 2008). Previous studies find these two systems working differently and depends on which system is in action (Karniol & Ross, 1996). When an approach system is in play, the individual focuses only on the positive outcomes. However, in the inhibition system, the individual avoids the situations linked with the destructive outputs (Keltner, Gruenfeld, & Anderson, 2003). Considering the systems mentioned above, the literature also confirms that powerful CEOs are optimistic with high intrinsic payoffs due to

the risky decisions and can bring down any perceived threat in their investment decision (Anderson & Galinsky, 2006). Therefore, the CEO's overconfidence and risk of increased investment in the risky project (Hirshleifer et al., 2012). Researchers also find stable relationships between CEO power and risk (Wang, Lin, Fung, & Chen, 2015), and greater CEO power results in a smaller negative impact on risk exposure. The power is given to the CEO results in excessive confidence and thus directs the firm towards increased corporate risk (Sayari & Marcum, 2018).

To summarize the above discussion and arguments, the agency theory finds CEOs as risk aversive. They tend to take the conservative decisions that are right for the firm and, in turn, reduce the CR. Here, the agency theory's challenge is by the social-psychological stream, behavioural system, and power prospect that contend the CEOs do take high CR when required (Sanders & Hambrick, 2007). The agency theory does not explain the social psychological behaviours that influence the CEO to choose while taking CR. On the contrary, the social-psychological stream, the behavioural system, and the power prospect well explain the association. We thus propose the following hypothesis:

H1: Powerful CEOs and firm's CR are positively related to each other.

2.2. CEO power and firm performance (FP)

Within a firm, the CEO takes all the momentous decisions; therefore, it serves as the research target to measure FP (Peni, 2014). Generally acting as the leaders (Papadakis, 2006), CEOs associate to FP changes (Adams, Almeida, & Ferreira, 2005). However, to date, no theory provides unanimity on the linkage between CEO power and performance.

Agency theory (Jensen & Meckling, 1976) explains the powerful CEO phenomenon that CEO enhances agency problem, creates disagreements, and further misalign the principal and agent's interest. The theory argues that powerful CEOs use this ability to gain their benefits at the expense of shareholders, thus lowering the FP. On the contrary, the other organizational and behavioural theories posit that the CEO in power tries to make quick decisions to raise the firm value and are responsive to the changing market conditions, thus not harmful to FP (Boyd, 1995). Based on the behavioural perspective, powerful CEOs are optimistic about the outcomes and become overconfident while making decisions. Such an attempt sometimes leads to extreme performance. Therefore, the net effect, either positive or negative, concerning powerful CEOs and FP relies on the relative cost strength and benefit (Sah & Stiglitz, 1986).

Empirical evidence in support of the CEO power and FP association are mixed. Few studies reveal the negative association (Caton, Goh, & Ke, 2019; Serra, Três, & Ferreira, 2016). According to Han, Nanda, and Silveri (2016), the powerful CEOs are worse than the other CEOs, resulting in the outcomes. Contrariwise, studies have shown a positive linkage between CEO power and FP (Cheng, 2008; Sheikh, 2019). Except for these, a few studies have shown no relationship between the two (Hermalin & Weisbach, 1991; Mehran, 1995). From the theoretical perspective and the empirical literature, we find a relationship

between CEO power and FP. However, the non-unanimous perspectives do not reflect the relationship, making it still an open question to examine. Considering the optimism of the CEOs from the behavioural, social psychological theories and the power prospect, we formulate the present study hypothesis as:

H2: CEO power and FP are positively related to each other.

2.3. CEO power and CR: Market competition (MC)

Likewise, in the internal discipline, there are external disciplines like competition in a market that influence the association of CEO power and risk. The MC can influence the managers to increase the firm risk and enforce them to apply more efforts to attain the desired target (Schmidt, 1997). In such markets, the projects' success merely depends on efficiency in decision-making. There is no chance for the CEOs to make mistakes, which is likely possible in less competitive markets (Sheikh, 2019). Prior literature shows that an increase in competition increases the chances of failure and, at the same time, makes the firm more attractive for takeovers (Paligorova & Yang, 2014). CEOs become careful while making high MC decisions because of thin profit margins, significantly affecting the risk and the firm's profitability. Therefore, the MC's combined effect on the CR, either high or low, depends on each incentive strength (Sheikh, 2019). Furthermore, Hicks (1995) argues that individuals adopt risk aversive behaviour in low or no competition and make low or risk-free investments.

However, the behavioural models (Wiseman & Gomez-Mejia, 1998), incorporating the prospect theory concept, argue that the individual tends to accept and invest in high-risk projects to avoid loss. As the individual decides based on the insights they feel about the associated internal and external conditions (Kahneman & Tversky, 1979), the MC allows the CEOs to make decisions that call for risky investment to gain more benefits (Laksmana & Yang, 2015). This offers the board to give the CEOs more power when they are in a highly competitive market (Sheikh, 2019). For the risk-averse CEOs, the high MC brings extreme variability in the performance-related turnovers, which tends to increase the chances of losses. This fear of facing financial, human capital, and job loss enforces the CEOs to become confident enough to take high MC risky investments.

Competitive markets affect the CEO power and corporate risk association either way. MC, being one of the organization's external disciplines, plays its role in inducing the CEO power to take the risk or vice versa. Thus, we established the following hypothesis:

H3: High MC moderates the association of CEO power and corporate risk.

2.4. CEO power and FP: Market competition (MC)

Competitive conditions sometimes become responsible for CEO power's impact on the performance of a firm. They play a role in resolving agency problems (Sah & Stiglitz, 1986). According to Han et al. (2016), the more power the CEO possesses, the worse s/he performs in the competitive markets than the less powerful CEOs. However, Liu, Qu, and Haman (2018)

argue that product market conditions, high market fluidity, and a highly competitive market depict power to impact FP. Competitive product market conditions impact CEO power and FP. When in high product MC, the investors are in favour of granting more power to the CEOs. Thus, powerful CEOs increase FP, market value, sales growth in highly competitive markets. Prior literature finds the association of CEO power and the IPO performance positive if it is in high competition (Huang, Jain, & Shao, 2019). The powerful CEOs in competitive markets take quick decisions in response to the changing market conditions. Thus, we propose:

H4: High MC moderates the association between CEO power and FP.

2.5. CEO power and CR: Board oversight (BO)

CEO power and risk in the agency perspective are inverse in the relationship, which means that, when the CEO power is high, s/he may become risk aversive or risk-neutral, relying on the existing stable position in the market (Felício, Rodrigues, Grove, & Greiner, 2018; Gormley & Matsa, 2016). However, in literature, the power prospect and social psychology explain that the CEO uses his/her power and takes the decision based on the conditions surrounded (Karniol & Ross, 1996). Board serves as central to the governance framework (Terjesen, Aguilera, & Lorenz, 2015) and carries the potential to influence the essential corporate decisions (Luo, Wan, Cai, & Liu, 2013). For this reason, the board plays a vital role in making strategic decisions and taking a corporate risk. Limited studies have considered BO's insight for the CR and found its influence on CEOs while taking risky decisions (Cheng, 2008; Nakano & Nguyen, 2012).

Nevertheless, the direction and intensity of this relationship are still unknown. No prior study directly explores the moderating relationship in the context. Thus, the present study applies the internal intermediate process, i.e., BO as a moderator to check its impact. Therefore, we hypothesize:

H5: BO moderates CEO power and corporate risk association.

2.6. CEO power and FP: Board oversight (BO)

Studies view any organization's board as the rubber stamp the management uses for the strategic choices with little or no contribution to strategy formulation (Jalal, Zeb, Khan, & Fayyaz, 2016; Westphal & Fredrickson, 2001). The board formulation performs a pivotal part in the final output of a firm. The direct association of power and performance is slightly inconclusive and mixed (Bergh et al., 2016). From the agency theory perspective, the board plays a significant part in monitoring the firm's top managers to prevent opportunistic behaviour and make sure that they are fulfilling the interests of the shareholders. Thus, the board has the legal responsibility to monitor managerial behaviours (Fama & Jensen, 1983).

According to Boyd, Haynes, and Zona (2011), board oversight may seem to as performing the vital function in the monitoring, creating a balance of CEO power and other board outputs. The board receives the firm-specific information by interacting with the CEOs and all the attained information.

Thus, it plays its part in the strategy formulation, decision-making related to various firm outputs, and it is the board that plays its part and makes the firm's major decisions (Boivie, Bednar, Aguilera, & Andrus, 2016).

Firms with effective boards are likely to yield increased operational performance and efficient capital investments (Boateng, Bi, & Brahma, 2017). Internal board features like board independence, the number of meetings attended by the members, the attendance characterizes BO (Malik & Makhdoom, 2016). Independent boards enhance BO's effectiveness, improve the monitoring functions, and so do the FP (Fama, 1980). When a firm tends to increase board meetings in a year, it improves its performance in the subsequent years (Vafeas, 2005). Board size is a critical attribute of any firms' board and plays a significant role in the oversight function (Finkelstein & Mooney, 2003). Large boards mean difficulties in decision-making and in reaching a solution timely (Boivie et al., 2016) and may restrain the powerful CEOs (Frankforter, Becton, Stanwick, & Coleman, 2012). Evidence provides a clear picture that besides the powerful CEO, the useful board plays a remarkable role in influencing the powerful CEOs. Based on them, we predict that BO might influence the association of the above-stated variables. Therefore, we hypothesize:

H6: BO moderates the association between CEO power and FP.

3. METHODOLOGY

We collected data from Hungary and Greece firms from 2008–2017. Out of the rest of the European Union economies, both markets face much distress after the 2008 financial crisis. The analysis's total population comprises the non-financial public listed companies in Greece (Athens Stock Exchange) and Hungary (Budapest Stock Exchange) during 2008–2017. We dropped the firms with no financial and governance data from both markets during the period. Firms' disclosure reports and pertinent stock exchanges were used to measure the CEO power and BO. Firm financial information was gathered through the Bureau van Dijk (BvD) AIDA database.

Table 1. Data collection procedure during 2008–2017

Population	Athens Stock Exchange	Budapest Stock Exchange
Total number of public listed non-financial firms	180	27
*Firms excluded due to non-availability of data	59	11
Final sample	121	16

*Note: * Firms with missing information related to financial and corporate governance were excluded from the analysis.*

3.1. Measurements

CEO power
Studies have used different CEO power measures and claimed that it is multi-dimensional, but some of its features are still hidden and difficult to measure. For example, CEO power can be seen as CEO status as the chair of the board (Adams et al., 2005; Villalonga & Amit, 2006). The most important source of power was carried in the management field by Finkelstein (1992). He argued that power is derived from four primary sources. The CEO's structural power is derived from the structure and hierarchy of the firm. The ownership power is derived when s/he holds the share or has close bonding with its founder. The expert power comes to the CEO when s/he possesses the relevant expertise and experience to deal with the organizational issues, and at the end, the prestige power is developed when the CEO establishes his/her standing in the external environment and possesses the right education and connection with the boards of other organizations. Previous studies have used these multi-dimensional proxies to explain CEO power (Han et al., 2016; Luo, 2015). Recent studies also considered gender and demographic power as CEO power measures (Faccio, Marchica, & Mura, 2016; Haider & Fang, 2018). Based on Finkelstein's (1992) reliability sources for measuring CEO power, the present study uses multiple measures (ownership, expertise, prestige, structural, and personal power) of CEO power. Moreover, we combined prestige power and demographic power as CEO personal power because gender, age, and education are personal attributes, in which gender and age are not decidable. The measurements of proxies' CEO power are listed in Table 2.

Table 2. CEO power measures

CEO power sources	Proxies for measurement	Criteria
Ownership power	CEO shares	If the CEO has shareholdings = 1, otherwise 0.
Expertise power	CEO tenure	If tenure > than the median of industry = 1, otherwise 0.
Structural power	CEO/Chairman duality	If CEO & Chairman are same = 1, otherwise = 0.
Personal power	Age, gender, and education	CEO age in number. If CEO male = 1, otherwise 0; Education is measured if the CEO has a Master's degree level = 1, otherwise = 0. Further, we take an average and then median to measure higher personal power.

Board oversight (BO)

The literature indicates three proxies to measure BO for the analysis; a percentage of board independence, meetings held by the board, and meetings percentage (DeBoskey et al., 2019). Boards with independent directors are generally considered effective in monitoring CEO power (Bhagat & Black, 2002). Some studies have also used the board's size and direct shareholders' presence (Combs, Ketchen, Perryman, & Donahue, 2007; Haynes et al., 2019). We use two proxies to measure BO, i.e., board independence and the number of non-executive directors. We created a dummy of board independence by taking average independence and then took the median of the market to create a higher and lower independence dummy. If the independence level is lower than the median, we recorded it as "0", indicating lower independence, and if it is "1", it means higher independence. Also, we recorded non-executive directors' presence as "1" and their absence from the board as "0". Further, we averaged both proxies and measured the median to create BO. If the average of both is lower than the median, it means that the firm has lower BO, and if it is higher or equal to the median, it means that it has a higher BO.

Market competition (MC)

To gauge the firm's market power, we found an appropriate and suitable way in the HHI. It is a well-accepted and preponderantly used market concentration measure (Laksmana & Yang, 2015). HHI is the square of the market share of the individual firm operating in a market.

We created a categorical variable naming it a higher market competition by using 1-HHI. We calculated the median value to create higher and lower competition categorical variable. If the value is equal or greater than the median, it is a higher MC recorded as "1", otherwise "0" indicating lower MC.

Corporate risk (CR)

Previous studies used total and idiosyncratic risk to measure CR (Cain & McKeon, 2016; Ferris, Javakhadze, & Rajkovic, 2019). We used the total risk to measure the FP variability and the FP's market perception to measure corporate risk. It is the natural log of annualized value of the monthly stock's standard deviation over returns (Jiraporn et al., 2015).

Firm performance (FP)

We use return on assets as a suitable proxy for performance (Lin & Shen, 2012).

Control variables

We include control variables besides the CEO power, which can intentionally or unintentionally affect the linkage of CEO power, CR, and FP. Firm size, which is likely to cause a negative impact on CR (Low, 2009) and firm age on the FP (Haynes et al., 2019).

4. RESULTS

Since the final sample consisted of panel data from 2008 to 2017 from Athens and Budapest stock exchanges, we used fixed effects regression to test our variables. The econometric model for the study is, therefore, the following:

$$CR_{it} = \beta_0 + \beta_1 CP_{it} + \beta_2 BO_{it} + \beta_3 MC_{it} + \beta_4 Control + \varepsilon_{it} \qquad (1)$$

$$FP_{it} = \beta_0 + \beta_1 CP_{it} + \beta_2 BO_{it} + \beta_3 MC_{it} + \beta_4 Control + \varepsilon_{it} \qquad (2)$$

4.1. Hungarian market

Table 3 provides the description and correlations for all variables. The average mean value for ownership power is 92.2%, expertise power 54.9%, structural power 40.8%, and for personal power, the average mean value is 64%, respectively. On average, the Hungarian sample's firm size is $5.090 billion, whereas the firm age is 1.552. Mean BO for the Hungarian market is 69.7%, and MC is 51.4%. Lastly, for total risk and FP, the average mean value is –1.081 and 5.339, respectively. With the correlation

matrix's help, we tried to check whether the independent variables have a higher level of correlation to predict multicollinearity. Whereas results indicate no strong association among independent variables, only personal power and expertise power have a high association. However, the association among them is logical and natural because these are interlinked with the CEO as an individual. However, there is no concern of multicollinearity in this case, as all these powers are regressed separately as a measure of CEO power.

Table 3. Descriptive and correlation analysis (Hungary)

	Mean	Std.	1	2	3	4	5	6	7	8	9	10
1. Personal power	0.640	0.481	1									
2. Expertise power	0.549	0.499	0.708***	1								
3. Ownership power	0.922	0.268	-0.162**	-0.209***	1							
4. Structural power	0.408	0.493	0.203***	-0.024	-0.295***	1						
5. Firm age	1.552	0.400	0.494***	0.496***	-0.290***	0.151*	1					
6. Firm size	5.090	1.151	0.217***	0.056	0.014	0.573***	0.250***	1				
7. High market competition	0.514	0.501	0.065	0.167**	0.034	0.033	-0.012	-0.047	1			
8. Board oversight	0.697	0.461	0.017	0.019	0.382***	0.204***	0.114	0.551***	-0.027	1		
9. Performance	5.339	8.588	0.214***	0.202***	0.112	-0.110	0.080	-0.166*	0.125	0.050	1	
10. Corporate risk	-1.081	0.277	-0.053	-0.117	0.076	-0.154*	-0.083	-0.252***	-0.188**	-0.406***	-0.220***	1

*Note: * p < 0.1, ** p < 0.05, *** p < 0.01.*

Table 4 reports the fixed effect regression analysis of CEO power and CR in the Hungarian market. We have used four CEO power measures (personal power, expertise power, ownership power, and structural power) to analyze its relationship with CR. Model 1 in Table 4 represents the effect of personal power, a combination of the CEO's age, gender, education. The results indicated a significant

but negative (β = -0.245, p = 0.000) direct relationship of the CEO's personal power with CR. Model 2 represents the CEO's expertise power, reflecting the CEO's tenure in a particular firm. The results indicated a negative and statistically significant (β = -0.189, p = 0.000) association between the CEO's expertise power and CR. Model 3 represents the CEO s ownership power, which is a CEO's shareholding in a firm. The results indicated a positive and statistically significant (β = 0.250, p = 0.076) relationship between CEO ownership power and CR. Lastly, Model 4 in Table 4 represents the CEO's structural power, explained by the CEO-chairman duality. The results indicated that the CEO's structural power positively affects CR in the Hungarian market but is statistically insignificant.

Moreover, Table 4 also reports the direct effect of control variables with CR. Firm size has been found insignificant with the CR for all the power measures except for structural power in moderation. We find firm age to be insignificant. The BO's direct effect is negative and significant (β = 0.129, p = 0.091) only for structural power with CR. The direct effect of high MC is significant and negative (β = -0.116, p = 0.000) with CR for structural power. Table 4 also showed the moderating effect of BO and MC with the CEO power and CR. BO moderates the relationship between personal power (β = -0.237, p = 0.012) and ownership power with CR (β = -0.250, p = 0.080), whereas high MC does not moderates the relationship of CEO power and CR.

Table 4. Fixed effect regressions: Measures of CEO power (independent) and CR (dependent)

Variable	1		2		3		4	
CEO power	-0.245***	-0.001	-	-	-	-	-	-
	(0.058)	(0.086)						
Personal power	-	-	-0.189***	-0.060	-	-	-	-
			(0.029)	(0.114)				
Expertise power	-	-	-	-	0.250*	0.256*	-	-
					(0.139)	(0.135)		
Ownership power	-	-	-	-	-	-	0.090	0.083
							(0.088)	(0.077)
Firm size	0.017	0.014	0.020	0.019	0.009	0.010	0.26	0.029*
	(0.026)	(0.027)	(0.020)	(0.020)	(0.025)	(0.025)	(0.287)	(0.016)
Firm age	0.012	-0.038	0.077	0.045	-0.373	-0.426	-0.002	-0.008
	(0.347)	(0.320)	(0.269)	(0.280)	(0.396)	(0.406)	(0.097)	(0.068)
Board oversight	-0.110	-0.076	-0.096	-0.078	-0.086	-0.331	-0.129*	-0.150*
	(0.114)	(0.115)	(0.116)	(0.116)	(0.116)	(0.207)	(0.075)	(0.080)
High market competition	-0.060	-0.060***	-0.052	-0.053***	-0.063	-0.193	-0.116***	-0.102***
	(0.039)	(0.018)	(0.037)	(0.016)	(0.044)	(0.140)	(0.026)	(0.030)
CEO power × Board oversight	-	-0.273**	-	-0.162	-	0.250*	-	0.104
		(0.107)		(0.106)		(0.142)		(0.080)
CEO power × High market competition	-	0.002	-	0.008	-	0.141	-	-0.048
		(0.057)		(0.050)		(0.121)		(0.035)
R²	0.536	0.554	0.542	0.558	0.481	0.479	0.524	0.524
Fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Durbin-Watson	2.258	2.326	2.278	2.234	2.151	2.174	1.986	2.014

*Notes: The standard error is in the parenthesis. Where * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.*

Table 5 reports the fixed effect regression analysis of CEO power and FP in the Hungarian market. Model 1 in Table 5 represents the effect of personal power, which is a combination of CEOs' age, gender, and education. The results indicated a significant but negative (β = -3.731, p = 0.047) direct relationship of CEO personal power with FP. Model 2 represents the CEO's expertise power, which reflects the CEO's tenure in a particular firm. The results indicated a negative but statistically insignificant (β = -1.224, p = 0.401) association between the CEO's expertise power and FP. It means that the CEO's expertise does not affect the FP in the Hungarian market. Model 3 in Table 5 represents the CEO's ownership power. The results indicated a positive but statistically insignificant (β = 0.669, p = 0.850) association between CEO ownership power and FP. Lastly, Model 4, still in Table 5, represents the CEO's structural power, which is explained by the CEO-

chairman duality. The results indicated that CEOs' structural power negatively (β = -7.921, p = 0.069) affects FP in the Hungarian market and is statistically significant. Moreover, Table 5 also reports the control variable's direct effect on FP. Firm size has been found significant and negative with FP for all the power measures. Firm age is insignificant to all power measures, reflecting no effect on CEO power and FP's relationship in the Hungarian market. Board oversight is also insignificant with FP. High MC has been found positive and significant with FP. Table 5 also showed the moderating effect of BO and MC with CEO power. BO has been significant with the expertise power only (β = -5.173, p = 0.073), which means the board plays its role in influencing the CEO's expertise to improve FP. In contrast, market competition does not affect the relationship between CEO power and FP in the Hungarian market.

Table 5. Fixed effect regressions: Measures of CEO power (independent) and firm performance (dependent)

Variable	*1*		*2*		*3*		*4*	
Personal power	-3.731**	-3.315	-	-	-	-	-	-
	(1.863)	(5.874)						
Expertise power			-1.224	2.697	-	-	-	-
			(1.454)	(2.495)				
Ownership power	-	-	-	-	0.669	0.654	-	-
					(3.554)	(3.655)		
Structural power	-	-	-	-			-7.921*	-2.587
							(4.335)	(5.898)
Firm size	-4.811***	-4.669***	-4.702***	-4.691***	-4.772***	-4.476***	-4.712***	-4.504***
	(1.004)	(1.016)	(1.018)	(1.013)	(1.019)	(1.024)	(1.006)	(1.015)
Firm age	0.635	0.332	1.003	0.253	0.952	0.950	1.234	0.761
	(2.453)	(2.485)	(2.474)	(2.494)	(2.567)	(2.576)	(2.451)	(2.468)
Board oversight	0.699	1.127	-0.221	0.349	-0.105	-0.698	1.452	3.862
	(3.672)	(3.856)	(3.696)	(3.685)	(3.702)	(5.228)	(3.756)	(4.345)
High market competition	2.049**	3.272**	1.945**	2.749**	1.675*	1.141	1.908**	2.930***
	(0.862)	(1.469)	(0.904)	(1.321)	(0.862)	(2.960)	(0.854)	(1.106)
CEO power × Board oversight	-	0.417	-	-5.173*	-	0.598	-	-8.139
		(6.074)		(2.865)		(3.650)		(8.638)
CEO power × High market competition	-	-1.875	-	-1.338	-	0.285	-	-2.482
		(1.821)		(1.799)		(3.096)		(1.774)
R²	0.640	0.643	0.631	0.641	0.629	0.630	0.638	0.645
Fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Durbin-Watson	2.213	2.232	2.155	2.213	2.130	2.127	2.164	2.204

*Notes: The standard error is in the parenthesis. Where * p < 0.1, ** p < 0.05, *** p < 0.01.*

4.2. Greece market

Table 6 provides descriptive and correlations results for all the variables for the Greece market. The average mean value for ownership power is 68.2%, expertise power 59.6%, structural power 37.2%, and for personal power, the average mean value is 85.2%, respectively. On average, the firm size in Greece's sample is \$5.610 billion, whereas the firm age is 1.565. Mean BO for the Greek market is 49.4%, and MC is 49.9%. Lastly, for total risk and FP, the average mean values are -0.857 and 0.087, respectively. We identify no high correlations between independent variables indicating that multicollinearity does not exist.

Table 6. Descriptive and correlation analysis (Greece)

	Mean	Std.	1	2	3	4	5	6	7	8	9	10
1. Personal power	0.85	0.35	1									
2. Expertise power	0.59	0.49	0.307***	1								
3. Ownership power	0.68	0.46	-0.017	0.182**	1							
4. Structural power	0.37	0.48	0.073***	0.255***	0.189**	1						
5. Firm age	1.56	0.21	0.073***	0.095**	-0.040	-0.091***	1					
6. Firm size	5.61	0.59	0.072***	0.007*	-0.160***	0.029	0.041	1				
7. Market competition	0.49	0.50	0.043	0.040	-0.014	0.030	0.033	-0.035	1			
8. Board oversight	0.49	0.50	-0.031	-0.050*	-0.054**	0.174***	-0.077*	-0.012	-0.020	1		
9. Performance	0.08	6.84	0.116***	0.140***	-0.018	0.109***	-0.012	0.112***	0.119***	-0.040	1	
10. Corporate risk	-0.85	0.31	-0.114***	-0.052*	0.015	0.053*	0.039	0.125***	-0.044	-0.037	0.054*	1

*Note: * p < 0.1,** p < 0.05, *** p < 0.01.*

Table 7 represents a fixed effect regression analysis of CEO power and corporate risk in the Greece market. Model 1 in Table 7 represents the effect of personal power, which is a combination of CEOs' age, gender, and education. The results indicated an insignificant but negative direct relationship of the CEO's personal power with corporate risk. Model 2 represents CEOs' expertise power, which reflects CEOs' tenure in a particular firm. The results indicated a negative and statistically significant (β = -0.057, p = 0.001) association between the CEO's expertise power and corporate risk. Model 3 represents CEOs' ownership power, which is a combination of CEOs' shareholding, particularly the firm and its presence in other boards if any. The results indicate a positive and statistically significant (β = 0.172, p = 0.055) relationship between CEO ownership power and corporate risk. Lastly,

Model 4, still in Table 7, represents the CEO's structural power, which is explained by the CEO-chairman duality. The results indicated that the CEO's structural power is insignificant to corporate risk in the Greek market. Moreover, Table 7 reports also the direct effect of control variables with corporate risk. We also find firm size significant and positive, whereas firm age found insignificant with corporate risk for all the power measures. The direct effect of BO was negative but insignificant. The direct effect of high MC was significant and negative for all powers with corporate risk except ownership power. Table 7 also showed the moderating effect of BO and MC. BO does not moderate CEO powers and risk, whereas high MC only moderates the relationship of CEO's ownership power (β = -0.050, p = 0.074) and structural power (β = -0.034, p = 0.075) with CR.

Table 7. Fixed effect regressions: Measures of CEO power (independent) and corporate risk (dependent) (Greece)

Variable	1		2		3		4	
Personal power	-0.024	-0.35	-	-	-	-	-	-
	(0.027)	(0.032)						
Expertise power	-	-	-0.057***	-0.048*	-	-	-	-
			(0.018)	(0.026)				
Ownership power	-	-	-	-	0.172*	0.061	-	-
					(0.090)	(0.104)		
Structural power	-	-	-	-	-	-	0.005	-0.008
							(0.030)	(0.037)
Firm size	0.161	0.156	0.168***	0.171***	0.207**	0.220**	0.169***	0.165***
	(0.052)	(0.053)	(0.051)	(0.051)	(0.096)	(0.098)	(0.052)	(0.052)
Firm age	-0.403***	-0.399	-0.321***	-0.314***	-0.394**	-0.374**	-0.416***	-0.403***
	(0.114)	(0.114)	(0.114)	(0.116)	(0.176)	(0.175)	(0.113)	(0.115)
Board oversight	-0.004	-0.032	-0.002	0.010	-0.003	-0.064	-0.005	-0.028
	(0.021)	(0.037)	(0.021)	(0.030)	(0.035)	(0.060)	(0.022)	(0.031)
High market competition	-0.021**	-0.016	-0.022**	-0.023	-0.008	-0.041*	-0.021**	-0.006
	(0.009)	(0.019)	(0.009)	(0.016)	(0.014)	(0.023)	(0.009)	(0.012)
CEO power × Board oversight		0.035	-	-0.020	-	0.107	-	0.046
	-	(0.040)		(0.032)		(0.072)		(0.041)
CEO power × High market competition	-	-0.007	-	0.001	-	0.050*	-	-0.034*
		(0.022)		(0.020)		(0.028)		(0.012)
R²	0.621	0.623	0.636	0.629	0.547	0.579	0.621	0.636
Fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Durbin-Watson	1.772	1.771	1.792	1.793	1.749	1.738	1.772	1.781

*Notes: The standard error is in the parenthesis. Where * p < 0.1,** p < 0.05, *** p < 0.01.*

Table 8 reports the fixed effect regression analysis of CEO power and FP in the Greek market. We used four CEO power measures (personal power, expertise, power, ownership power, and structural power) to analyze its relationship with FP. The results indicate both positive (personal and expertise power) and negative (ownership and structural power) relationship of CEO powers with FP but statistically insignificant. Moreover, Table 8 also reports the direct effect of control variables with FP. Firm size, as well as age, are also insignificant to FP in the Greek market. The direct effect of BO is also insignificant with FP. High MC has been found significant and positively associated with FP. BO does not moderate the relationship between CEO power and FP in the Greek market, whereas MC only moderates the relationship for the CEO's personal power in Greece.

Table 8. Fixed effect regressions: Measures of CEO power (independent) and firm performance (dependent) (Greece)

Variable	1		2		3		4	
Personal power	0.303	-1039	-	-	-	-	-	-
	(0.171)	(1.565)						
Expertise power	-	-	0.182	-0.317	-	-	-	-
			(0.863)	(1.237)				
Ownership power	-	-	-	-	-0.617	-0.956	-	-
					(1.707)	(2.010)		
Structural power	-	-	-	-	-	-	-1.325	-2.058
							(1.192)	(1.624)
Firm size	-2.902	-3.122	-2.908	-2.835	-4.406	-3.945	-3.080	-3.063
	(2.397)	(2.399)	(2.397)	(2.399)	(2.860)	(2.915)	(2.399)	(2.401)
Firm age	6.461	5.873	6.531	6.287	-2.228	-1.980	7.032	6.974
	(5.309)	(5.316)	(5.291)	(5.298)	(4.708)	(4.733)	(5.210)	(5.214)
Board oversight	-0.474	-0.970	-0.476	-0.440	-0.059	-0.723	-0.315	-0.640
	(.861)	(1.572)	(0.861)	(1.221)	(0.813)	(1.297)	(0.873)	(1.169)
High market competition	1.594***	0.011	1.595***	0.905	1.382***	1.741**	1.599***	1.328**
	(0.461)	(0.994)	(0.461)	(0.802)	(0.411)	(0.710)	(0.461)	(0.630)
CEO power × Board oversight		0.655		-0.118		1.079		0.696
		(1.715)		(1.420)		(1.631)		(1.648)
CEO power × High market competition		1.984*		1.023		1.079		0.558
		(1.106)		(0.969)		(0.834)		(0.888)
R²	0.436	0.438	0.436	0.437	0.552	0..553	0.437	0.437
Fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Durbin-Watson	1.96	1.973	1.966	1.969	1.810	1.806	1.969	1.971

*Notes: The standard error is in the parenthesis. Where * p < 0.1, ** p < 0.05, *** p < 0.01.*

5. DISCUSSION

Our analysis indicates a significant association of all CEO powers except structural one with corporate risk, but this association is negative for Hungary. For Greece, it is also significant but negative except for personal and structural power. For the present study, *H1* (CEO power positively impacts the corporate risk) is not supported. However, on the other side, it indicates the adaption of inhibition system by the CEOs on both markets as they are comfortable with the market condition and observe unlike outcomes and consequences if they take risky decisions (Kahneman & Tversky, 1979).

The macroeconomic conditions of both countries may be the reason due to which CEO personal factors have a weak impact on firm corporate risk. In a stressed and pressured situation at the macro-level when the economy is either in crisis or going toward crisis individual factors may not cause significant difference (Hermalin & Weisbach, 1991).

Furthermore, results indicate that each power has an impact on FP. In Hungary, from all power measures, only the CEO's personal power, representing the CEO's personal attributes, is negative. We find negative results as the Hungarian market is composed of more old-aged CEOs. Thus, it might indicate that they are likely to prefer low-risk investments policies over a higher one to avoid potential losses (Nguyen, Rahman, & Zhao, 2018; Serfling, 2014). Structural power (CEO duality) has a negative and significant impact on FP (Bhagat & Bolton, 2008; Duru, Iyengar, & Zampelli, 2016). In Greece, this relationship does not exist (Hermalin & Weisbach, 1991; Mehran, 1995). Though these results do not support our *H2* (CEO power is positively related to FP), they still support the power prospect and social psychology, which states the two behavioural systems (approach and inhibition) adapted by individuals while making important decisions. In the present case, for the Hungarian market, CEOs were following the inhibition system and tend to avoid the situation, leading to destructive outputs (Dacher et al., 2000; Karniol & Ross, 1996).

The results indicate that board oversight does not impact corporate risk in Hungary. However, in Greece, it negatively impacts the CEO's structural power, whereas, in FP, the relationship is statistically insignificant for both markets. Market competition, another similar categorical variable, predicts a significant and negative relationship between CEO powers and corporate risk in both markets. It indicates that the CEOs are expected to bear the loss in wealth and job in higher competitive markets, therefore, preferring to be risk aversive. However, for FP, the positive higher level of market competition in Hungary and Greece indicates that high market competition results in increased accounting returns.

H3 indicates the moderating effect of MC. From our regression analysis, the moderating effect of high competition stands insignificant for all power measures and CR in Hungary, whereas in Greece, we find MC to moderate CEO's ownership and structural power with CR. The hypothesis stands not supported for Hungary whereas, appears to be significantly supported for only two powers in Greece. Moreover, we found no moderation of MC for CEO power and FP in Hungary, whereas, for Greece, the MC only moderates the CEO's personal power and FP. These results do not support *H4*.

BO moderates CEO personal power and ownership power with CR in Hungary, whereas we identify no moderating effect for Greece. Results posit that *H5* is supported in Hungary, whereas for Greece, it stands not supported. Finally, for FP, BO has only moderated the CEO's expertise power and FP in Hungary. No moderation between the other power measures with FP may reflect that the board does not have access to the CEO's personal, ownership, and structural power attributes. Whereas, for Greece, the relationship remains insignificant. These results indicate that BO can influence the CEO power and FP in Hungary, whereas it does not

influence the CEO power to make critical corporate decisions in Greece. Thus, from the above-stated results, *H6* is not supported for Greece.

6. CONCLUSION

We aimed this study to answer the questions, *Does CEO power impact the firms' corporate decisions?* and *Which theory best complements the relationship?* We also aimed to find which intermediate process influences the CEO power, CR, and FP relationship. We found that CEO power had a negative impact on risk and firm performance. Additionally, the results reveal no sign of moderation in the case of MC, about corporate decisions, in the Hungarian market. The results of moderation for the Greek market are opposed to those in Hungary. The results of our study show that in a stressed market, the CEO power is suppressed and has no influence on the corporate risk and firm performance. It is not always true that CEO power predicts higher performance or increases or decreases the risk. In the present study scenario, we observed exciting and mixed responses from different CEO power measures. In both markets, CEO power originating from his/her personal factors or expertise tends to decrease the impact of corporate risk. In contrast, ownership and structural power may increase risk exposure. Second, we observed that CEO powers have a negative effect on the influence of internal and external intermediate processes. It links with the market competition as higher competition may increase the performance and reduce the corporate risk. However, it is right in an ideal situation as both markets are stressed. Thus, even little competition can reduce corporate risk and, at the same time, boost the performance, but it does not ensure that it controls the power-based relationship with corporate risk. Further, the governance structure and free decision can impact the market risk. As we employ the BO to examine its influence on CEO power and corporate decisions, results find that it may be crucial to control the risk in Hungary and play no role in Greece's case due to more harsh macroeconomic conditions. Thus, CEO powers and governance mechanisms may vary concerning macroeconomic conditions, ensuring market stability. Lastly, apart from the traditional agency theory approach, there are other theoretical frameworks of power prospect and social psychology that proclaim the CEO behaviour and its application of powers while making important corporate decisions.

Our sample has the limit of not including countries with a large number of listed companies. As stated in the previous paragraph, we decided to start from samples not huge and thus able to give us the possibility to manage data for testing six hypotheses. The above-reported results indicate that future research might consider samples with a more significant number of listed firms in developing, emerging, and developed economies. Since behaviour and individual insight is essential while taking critical corporate decisions, researchers should also consider prominent cultural, human, and psychological factors that affect CEOs' ability to respond in a particular situation. Therefore, starting from the results, future research might also study other CEOs' attributes, like social networking, to measure power influence on corporate decisions.

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