



Journal of Financial Economic Policy

CEO power, corporate risk taking and role of large shareholders
Junaid Haider, Hong-Xing Fang,

Article information:

To cite this document:

Junaid Haider, Hong-Xing Fang, "CEO power, corporate risk taking and role of large shareholders", Journal of Financial Economic Policy, <https://doi.org/10.1108/JFEP-04-2017-0033>

Permanent link to this document:

<https://doi.org/10.1108/JFEP-04-2017-0033>

Downloaded on: 07 February 2018, At: 06:17 (PT)

References: this document contains references to 0 other documents.

To copy this document: permissions@emeraldinsight.com



Access to this document was granted through an Emerald subscription provided by emerald-srm:393177 []

For Authors

If you would like to write for this, or any other Emerald publication, then please use our Emerald for Authors service information about how to choose which publication to write for and submission guidelines are available for all. Please visit www.emeraldinsight.com/authors for more information.

About Emerald www.emeraldinsight.com

Emerald is a global publisher linking research and practice to the benefit of society. The company manages a portfolio of more than 290 journals and over 2,350 books and book series volumes, as well as providing an extensive range of online products and additional customer resources and services.

Emerald is both COUNTER 4 and TRANSFER compliant. The organization is a partner of the Committee on Publication Ethics (COPE) and also works with Portico and the LOCKSS initiative for digital archive preservation.

*Related content and download information correct at time of download.

CEO power, corporate risk taking and role of large shareholders

Abstract

Purpose

This study investigates whether a powerful CEO impacts corporate risk taking in the distinctive institutional and market setting of China? Secondly, in case such relationship exists, we further investigate whether the presence of large shareholders affects it? And lastly, whether this effect of large shareholders varies in state owned and non-state owned enterprises?

Research Design

We used sample of 1502 Chinese firms listed on Shanghai and Shenzhen stock exchanges. Sample period is 2008 to 2013. Besides conventional fixed effect regression, Dynamic panel data estimation (GMM) is applied to address the potential endogeneity.

Findings

We found that CEO power is negatively related with corporate risk taking in two risk proxies i.e. total risk and idiosyncratic risk. Secondly, presence of large shareholders significantly affects this relationship, but doesn't change the primary negative relationship between CEO power and corporate risk taking. Lastly, our results show that the relationship between CEO power and corporate risk taking is different in State owned and non-state owned enterprises. Our findings contend the organizational and behavioral theory viewpoint that individual decisions are more extreme.

Practical Implications

This study provides useful implication for policy makers and suggests that while evaluating CEO's performance, institutional and market settings should be considered.

Originality / Value

This study provides new insights on the impact of CEO power on corporate risk taking under the two distinctive features in a developing country i.e. presence of large shareholders and state owned enterprises.

Keywords: CEO, Ownership concentration, Corporate risk, China, State owned enterprises, GMM

1. Introduction

Chief Executive Officer (CEO) is the top executive of a firm, who is responsible for running the business and reducing the uncertainty in corporate environment. However in some organizations CEO makes all the major decisions while in other firms ultimate decisions are outcome of group decision making involving CEO and other executives. Group decision making and organizational theory suggests that individual decisions are more risky while outcomes of group decision making are more moderate because of diversification of opinions. Considering this philosophy, it is expected that in organizations, where outcomes are result of CEO's individual's judgment, results would be more extreme. However, this largely depends on how much influence does CEO have on decision making process. In other words, how powerful CEO is in his position to influence the corporate decision making. A powerful CEO is generally considered to be detrimental for corporate success. Previous studies provide evidences that powerful CEO exacerbate the agency problems. For instance, Bebchuk *et al.* (2011) found that CEO power leads to poor accounting profitability and lower stock returns. Similarly, bondholders demand higher yield from firms wherein CEO has influence over decision making, because it becomes difficult for them to monitor the managers in presence of powerful CEO (Liu and Jiraporn, 2010).

However, how CEO power impacts the corporate risk taking is largely ignored area in academic research. A few studies have found that CEO power is associated with performance variability of a firm. A seminal study in this vein is by Renee B. Adams *et al.* (2005). They found that firms wherein CEO has significant decision making power, stock returns are more volatile. In another study, Cheng (2008) stated that CEO power increases the performance variability of a firm. However, these studies have certain limitations: First, they are conducted in developed market context and haven't considered the institutional and market settings that could affect the CEO decision making. Secondly, they do not exclusively consider the corporate risk taking when investigating the influence of CEO power on variability of performance. Lastly, mostly studies on CEO power have measured the 'power' from a CEO insider or CEO duality perspective, ignoring the other dimensions of power. This study aims to fill these voids in extant literature by making following contributions:

First, we have taken the exhaustive proxies for corporate risk taking. Unlike previous studies, that analyzed only the performance variability, we explored the impact of CEO power on total risk, idiosyncratic risk and systematic risk of a firm.

Secondly, we believe CEO power does not only come from their formal position (structural power) or ownership power as is considered in some previous studies. In addition to CEO's structural power, following Finkelstein (1992), we have taken into account ownership power, expert power and prestige power in measuring CEO power. Moreover, some recent studies (Faccio *et al.*, 2016; Farag and Mallin, 2016) suggest that CEO's age and gender also effects a firms performance. Therefore, we have included them under the category of demographic power as a fifth source of power. Thus our study measures CEO power from multi-dimensions sources of power. Besides, we used Principal Component Analysis (PCA) to narrowly examine the underlying structure of CEO power proxies and find the most relevant variable, which best embodies the CEO power.

Thirdly, significant contribution of this study is to address the potential endogeneity. Since CEO power is closely connected with board structure, it has great potential to be endogenously determined. To address all forms of endogeneity, in addition to fixed effect regression we used dynamic panel data estimation, namely Generalized Method of Moments (GMM).

Lastly, we incorporated the institutional framework of Chinese market in examining the relationship between CEO power and corporate risk taking. Previous studies on CEO power and corporate risk are mostly done in developed market context with quite different market characteristics. We believe distinctive feature of Chinese capital markets, like presence of large shareholders and state influence will provide new useful insights on the relationship between CEO power and corporate risk.

The rest of the article is organized as follows. Next, we provide an overview of corporate governance in China, particularly highlighting the distinctive features. In chapter 3, we review the previous studies and present our hypothesis. Chapter 4 is research design, which describes our sample and econometric model. Results are presented and discussed in chapter 5. Chapter 6 concludes the study.

2. Corporate Governance in China

Corporate governance in China is distinctive from the rest of the world because of its historical and political background. China had been a state control economy over a long period of its history, although from the financial reforms of 1970's it has, to some extent, transformed itself from a centrally planned to market based economy (Wei and Geng, 2008). The influence of state on the corporate environment is still dominant but the dynamic business environment is influencing the market mechanisms to function independently. Chinese Securities Regulatory Commission (CSRC) regulates the listed firms in China. China's two stock exchanges i.e. Shanghai and Shenzhen stock exchange were established in 1992 and soon after it CSRC introduced the first code of corporate governance for all listed firms in 1992 (Krivogorsky and Grudnitski, 2010).

The unique features of Chinese firms, which are more relevant to our study because of their potential influence on CEO, are the board, presence of large shareholders and state influence. We discuss each of these features and their possible relationship with our study. In principle, China has two-tier board like many other continental law countries. But in practice there is no hierarchy between board of directors and supervisory board. Moreover, in China both boards are appointed by and report to shareholders, thus making the supervisory board trivial (Chen and Al-Najjar, 2012). Secondly, CSRC requires that board size of each listed firm should be in between 5 and 19. The minimum threshold is unlike any other country, which forces the firms to make their board according to law and not according to firm needs (Jiang and Kim, 2015). Regarding board independence, Chinese company law requires all the firms to have at least one third of their directors as independent. However, the 'independence' of independent directors is dubious, as most of the independent directors come from a political background and are under state influence. Another feature of Chinese boards is the CEO duality i.e. CEO also holding the positions of board chairman. Although CEO duality is common in United States and other developed markets, its not severe in China. As Jiang and Kim (2015) state that in Chinese state owned enterprises (SOEs) only less than 10% firms have CEO and chairman the same person, whereas in non-state owned enterprises (NSOEs) this ratio is high at around 27%.

An important event in China history that drastically changed the ownership pattern was split share reforms in 2005. Before 2005, shares of Chinese listed firms were categorized

into tradable and non-tradable shares (Krivogorsky and Grudnitski, 2010). Most of the tradable shares were held by the state in order to keep control on the firms. However, in 2005 Chinese government launched split share reforms and gradually all non-tradable shares were transformed into tradable shares, after certain arrangements. Today most the shares of Chinese listed firms are tradable. Owing to this background, today firms in China have higher ownership concentration. High ownership concentration shows the presence of large shareholders. In China, top 5 shareholders hold more than 50% shares (Liang and Useem, 2009). Besides, over the last few years, investors' composition has changed. In recent years, shareholdings of institutional investors have been on the rise, while share of individual investors is declining. However, these institutional shareholders are not the largest shareholders at firm level (Jiang and Kim, 2015). Nevertheless, large shareholders have the tendency to influence the management decisions by exerting their influence on CEO.

3. Literature Review & Hypothesis Development

Two genres of previous literature provide foundation about the impact of CEO power on corporate outcomes. One genre can be classified as Organizational theory viewpoint and other from Management and Economics viewpoint. Under the first theoretical lens, *Organizational behaviour and group psychology theorist* suggest that individual decisions are more extreme and risky as compared to group decisions. Proponents of these theories argue that it is much more difficult to convince a large group of people to make potentially risky decision because of *diversification of opinion* effect. Therefore, the final decision of group is more moderate representing a compromise between individual group members to arrive at a consensus (Kogan and Wallach, 1965; Sah and Stiglitz, 1986; Wu *et al.*, 2011).

On the other hand, the Economics and Management perspective, establishes how an increase in individual decision making power would affect the outcomes. Resource dependence theory (RDT) and stewardship theory (ST) provide counter narrative in this regard. The main idea behind RDT is that by giving more power to executives, organizations can reduce uncertainty in external environment and gain valuable resources (Hillman *et al.*, 2009). While the Stewardship theory suggests, giving more authority and power to executives would reduce the agency conflicts and enable them to better perform their duties (Muth and Donaldson, 1998).

Different researchers have found empirical support for these notions over the years. For instance, (Haider and Fang, 2016a) showed that with an increase in number of directors on a board reduces corporate risk taking. Daily and Dalton (1994) found that decision of the firms wherein CEO also holds the position of chairperson are considerably extreme and therefore are more prone to bankruptcy. Similarly Renee B. Adams *et al.* (2005) empirically found that firms in USA wherein CEO has influence over decision making power, as a result of their power, have significant variation in their corporate performance. (Cheng, 2008) assert that CEO power increases with an increase in board size. He argued that in larger boards agency conflicts like directors' free rider problem and lack of coordination and communication makes CEO more independent and powerful. Therefore there is more variability in corporate performance of firms with larger board size. Likewise, Jensen (1993) said that when the board size is larger than seven of eight members, it becomes easier for CEO to control and make his own decisions. More recently, (Chintrakarn *et al.*, 2015) found that a CEO, who has higher compensation relative to other top executives, makes more risky strategies. All these studies show that a powerful CEO makes more risky decisions. On these empirical evidences, we hypothesize that there is positive relationship between CEO power and corporate risk taking.

H1: *CEO power is positively related with corporate risk taking*

How a CEO would impact the corporate risk taking also depends on the particular institutional and market settings. For instance, a firm's ownership structure determines how powerful and independent a CEO is, in taking risky decisions. From agency theory perspective ownership concentration has often been seen as an effective external control mechanism to oversee managers activities. The view of agency theory implies that ownership concentration can mitigate the principal agent conflict by keeping a close eye on actions and behaviors of management. According to Jensen and Meckling (1976), ownership structure determines how business decisions are made and how management is monitored and compensated therefore, it can have significant effect on risk of the firm. Higher ownership concentration shows few shareholders have the large quantity of shares. Demsetz and Lehn (1985) argue that main reason for existence of large shareholders is better oversight and control. Likewise, Laporta *et al.* (1997) showed that large shareholders have the power, resources and incentives to monitor their firm. Similarly, ownership concentration improves performance by reducing their monitoring cost

(Shleifer and Vishny, 1986). Another study by (Haider and Fang, 2016b) concluded that large shareholders in China impact future risk of a firm. On the other hand, some authors contend that ownership concentration can be detrimental to a firm. Large shareholders may use their power to expropriate wealth from minority shareholders. This agency problem is most common in developing economies (Zou and Adams, 2008). In line with this argument Zeitun and Tian (2007) found that firms with more concentrated ownership structure have more risk of default. On the basis of these opposing arguments, we can hypothesize that presence of large shareholders could influence the CEO's decisions of corporate risk taking. In case of China ownership concentration is high. Average percentage of shares held by top 5 shareholders is 53.20 . Moreover, the mean of shares held by individual investors is 25.33% while the rest of shares are held by different institutional investors including mutual funds, insurance firms, qualified foreign institutional investors and other institutional investors (Jiang and Kim, 2015). Considering all these evidences we conjecture, because of their large vested interests, large shareholders will influence the relationship between CEO power and corporate risk taking through active monitoring and control.

H2: *Large Shareholders influence the relationship between CEO power and corporate risk taking*

A firm's choice of business strategy and risk preferences depends upon objective and preferences of its owner. Different types of corporate owners have different objectives. Previous literature shows that there are various performance differences between state owned enterprises (SOEs) and non-state owned enterprises (NSOEs). As Zou and Adams (2008) said that different ownership type in Chinese capital market affects the governance and business decisions differently and therefore affects the firm's risk differently. **Li et al. (2009)** in their empirical study on Chinese listed firms found that NSOEs are more apprehensive about their performance than SOEs.

The moderating role of ownership concentration on relationship between CEO power and corporate risk taking will also depend on the type of ownership. SOEs have more severe agency conflicts and operational problem than NSOEs. First, the most vital issue for SOEs is "owner's absence" that is, no one takes the responsibility or ownership of state owned assets, this makes CEO and other executives more powerful. Secondly, basic

agency conflict increases in SOEs because government and bureaucrats do not have the same economic incentives to increase the value of the firm. Thirdly, SOEs normally belong to people therefore their ownership is much more disperse than NSOEs, this makes monitoring and control more challengeable. Zou and Adams (2008) found that in China SOEs has higher stock volatility than NSOEs because of the three main issues. First, voting rights and cash flow rights are segregated. Secondly, SOEs have higher social and political cost that is state; being the largest shareholder, have to pursue other goals than only firm value maximization like subsidies and social welfare. Third, CEO and other executives in SOEs are hired on their social and political connection rather than solely on their education and skills. In the long run, incompetent management is likely to increase a firm's financial risk. On these facts we assume that owners in NSOEs will be more active in monitoring the CEO's actions and decisions.

H3: *The impact of large shareholders on relationship between CEO power and corporate risk is stronger in NSOEs than SOEs.*

4. Research Design

4.1 Sample

The sample of our study includes all the Chinese A-listed firms on Shanghai and Shenzhen stock exchanges over the period 2008 to 2013. However, financial firms are excluded due to their distinctive characteristics. Firms for which data were unavailable or missing are also excluded. Our final sample consists of 1502 firms and 9012 firm year observations. Financial data is taken from RESSET financial research database while data regarding CEO power is acquired from Chinese Securities Market Accounting Research (CSMAR) and WIND database. Following table 1 provides an overview of all the variables.

{Insert Table 1 here}

Table 2 presents correlation matrix of all our variables. All our variables show low correlation thus depicting no multicollinearity issues.

{Insert Table 2 here}

4.2 Econometric Model

Our basic model to test the impact of CEO power on corporate risk taking is as follows. This model has previously been used in governance-risk context.

$$\begin{aligned} \text{Risk}_{it} = & \alpha_0 + \alpha_1 (\text{CEO}_p)_{it} + \alpha_2 \ln(\text{Board size})_{it} + \alpha_3 (\text{Indp. Directors})_{it} + \alpha_4 (\text{Ownership} \\ & \text{Concentration})_{it} + \alpha_5 (\text{Management Shareholdings})_{it} + \alpha_6 (\text{RoA})_{it} \\ & + \alpha_7 (\text{RoA}_{t-1})_{it} + \alpha_8 (\text{Leverage})_{it} + \alpha_9 (\text{Firm Size})_{it} + \alpha_{10} (\text{CAPEX})_{it} + \alpha_{11} \\ & (\text{Cash flows})_{it} + \alpha_{12} (\text{Market-to-Book})_{it} + \alpha_{13} (\text{Firm's Age})_{it} + \alpha_{14} (\text{SOE}) + \\ & (\text{CEO}_p * \text{Ownership}) + (\text{CEO}_p * \text{Ownership} * \text{SOE}) + \text{Year}_{it} + \text{Industry}_{it} + \epsilon_{it} \end{aligned} \quad (1)$$

In above equation (1), the dependent variable is corporate risk taking denoted by 'Risk' on the left side of the equation while our main independent variable is CEO power denoted by 'CEO_p' on the right side of the equation. All other control variables are taken in accordance with previous literature, which shows their potential effect on corporate risk taking.

Measurement of the main dependent and independent variable is explained below while all the variables are described in table 3.

{Insert Table 3 here}

Measure of Corporate Risk Taking

Following previous studies (Farag and Mallin, 2015; Low, 2009; Pathan, 2009), we measured corporate risk using three proxies. First we measured total risk. Total risk measures the overall variability in firm's performance and captures the market perception of firm's performance. Total risk is calculated as annualized value of standard deviation of daily stock returns. Second proxy we used is idiosyncratic or firm specific risk. Idiosyncratic risk measures the volatility peculiar to firm's operating activities. We measured idiosyncratic risk as standard deviation of residuals of following Fama and French Three Factor model. In order to obtain residuals, we first regressed following equation 2 on each firm for each year.

$$R_{i,t} - R_f = \alpha_i + \beta_i (RM_t - RF_t) + \beta_i (HML) + \beta_i (SMB) + \epsilon_{i,t} \quad (2)$$

Then in second step, we took standard deviation of residuals and regressed it on the right hand side of our main model equation 1. The model becomes:

$$\varepsilon_{i,t} = \alpha_0 + \alpha_1 (\text{CEO}_p)_{it} + \alpha_2 \ln (\text{Board size})_{it} + \alpha_3 (\text{Indp. Directors})_{it} + \alpha_4 (\text{Ownership Concentration})_{it} + \alpha_5 (\text{Management Shareholdings})_{it} + \alpha_6 (\text{RoA})_{it} + \alpha_7 (\text{RoA}_{t-1})_{it} + \alpha_8 (\text{Leverage})_{it} + \alpha_9 (\text{Firm Size})_{it} + \alpha_{10} (\text{CAPEX})_{it} + \alpha_{11} (\text{Cash flows})_{it} + \alpha_{12} (\text{Market-to-Book})_{it} + \alpha_{13} (\text{Firm's Age})_{it} + \alpha_{14} (\text{SOE}) + (\text{CEO}_p * \text{Ownership}) + (\text{CEO}_p * \text{Ownership} * \text{SOE}) + \text{Year}_{it} + \text{Industry}_{it} + \epsilon_{it} \quad (3)$$

Besides, we used systematic risk as the third proxy for measuring corporate risk. We calculated systematic risk as the difference between total risk and idiosyncratic risk of a firm.

Measure of CEO Power

Previous studies suggest that CEO power is a multifaceted variable and some of its constructs are latent and difficult to measure (Renee B. Adams *et al.*, 2005). Most noteworthy sources of individual powers in top management are floated by Finkelstein (1992). He proposed four sources that can provide power to an individual in top management and that are structural power, ownership power, expert power and prestige power. *Structural power* comes from organizational structure and hierarchy. CEO has structural power to influence and control the decisions of his subordinates. Secondly, *ownership power* accrues if the manager has shareholdings in firms or has close connection with the founder. Third *expert power* is derived from the manager's relevant expertise and experience to cope with organizational needs. While *prestige power* refers to managers individual standing to external organizations and it comes from managers level of education and his connection with other organizations boards. Different studies over the years have used one or more of these dimensions as a basis for measuring CEO power e.g. (Renée B. Adams *et al.*, 2005; Luo, 2015; Pathan, 2009; Wu *et al.*, 2011). However, some of the recent studies have found that CEO's age and gender also impact corporate risk taking (Faccio *et al.*, 2016; Farag and Mallin, 2015; Serfling, 2014). Therefore, in addition to structural power, ownership power, expertise power and prestige power (Finkelstein, 1992), we included demographic power which consists of age and gender of CEO, as a fifth source of power in our proxy of CEO power. Details of our five sources of power and variables used to measure them are explained in table 4. We then used Principal Component Analysis (PCA) to find out which of the power sources are more relevant in our case. PCA indicated four factors with eigenvalues greater than 1, and these four factors accounted for 66 percent of the variance. Besides, the appropriateness of PCA was

confirmed by the KMO statistic, which came around 0.83 well above the recommended level of 0.6 (Kaiser, 1974).

{Insert Table 4 here}

Fixed-effect and GMM Estimation

Recent studies in corporate finance and particularly in governance and ownership framework have shown concerns regarding the existence of potential endogeneity bias. Conventionally Fixed-effect estimation has been used to cope with unobserved heterogeneity, which is one type of endogeneity. Following this pattern we also used fixed-effect estimation, as our primary model because we believe individual risk preferences of CEOs, which may vary from firm to firm remains constant over the study period, hence we used firm Fixed-effect. Fixed-effect will provide consistent estimates for these time invariant factors.

However, some recent studies, for instance (Nguyen et al., 2015; Wintoki et al., 2012), have pointed out two other forms of endogeneity i.e. dynamic endogeneity and simultaneity. Dynamic endogeneity exists when present values of independent variables are as a result of past performance. For instance, Linck et al. (2008) suggest that firms with more performance variations prefer to operate with smaller and less independent boards. Likewise In our case, it is plausible that the firm's present board structure i.e. board size, independent directors etc. is a consequence of it's past performance or risk. While simultaneity occurs when the two variables are simultaneously determined and each variable may affect other simultaneously (Schultz et al., 2010). As Demsetz and Lehn (1985) argue that high risk firms have high ownership concentration because the returns for active monitoring are substantial. Similarly, in our case a firm forecasting more uncertainty may give more power to CEO to better deal with the future risk. So, dynamic endogeneity and simultaneity could lead to biased estimates. Therefore to cope with dynamic endogeneity and simultaneity, following (Haider and Fang, 2016b; Nguyen et al., 2015; Schultz et al., 2010; Wintoki et al., 2012) we used GMM estimation proposed by (Arellano and Bond, 1991; Blundell and Bond, 1998).

Main idea behind the use of GMM is the relaxation of strong exogeneity assumption, which is not the case in OLS and Fixed-effect estimation. According to Wintoki et al. (2012), GMM handles the dynamic endogeneity by allowing the current governance structure to be influenced by past performance. Moreover, if the underlying economic phenomenon is dynamic in nature i.e. if current board structure is a result of past performance, then being a dynamic estimator in nature GMM allows using valid combination of instruments within the firm's system to cope with simultaneity. Hence, one of the strength of GMM estimation is that it uses internal instruments from the panel itself i.e. past/lagged values of the variables. Some recent studies used GMM estimation and concluded that GMM is the most appropriate and robust model for corporate governance research e.g. (Haider and Fang, 2016b; Nguyen et al., 2015; Schultz et al., 2010).

5. Results & Discussion

Table 5, 6 and 7 reports the relationship between CEO power and three proxies of *Corporate Risk Taking* using Fixed-effect and GMM. Three sub columns of each model in each table show the results according to three hypotheses. Sub-columns ‘I’ of each table provide standard estimates to examine first hypothesis i.e. relationship between CEO power and corporate risk taking. While sub-columns ‘II’ provide estimates with interaction term of CEO power multiplied by ownership concentration, to investigate second hypothesis i.e. whether large shareholders play any moderating role. Sub-column III tests the third hypothesis and investigates the differences on the role of large shareholders in SOEs and NSOEs. And presents estimates of second interaction term i.e. CEO power multiplied by ownership concentration multiplied by SOE.

Table 5 shows the estimates of relationship between CEO power, *total Risk* and moderating role of large shareholders using Fixed effect and GMM estimation. In this model dependent variable is total risk of a firm. In column I, coefficient of CEO power is negative and significant at 5% confidence level. This shows that CEO power reduces the total risk of firm. Although the impact is very small but it holds in GMM model as well. Moreover, when the interaction term is added in column II to examine how the presence of large shareholders will affect the relationship between CEO power and total risk of a firm, coefficient of CEO power remained significant. Furthermore, the interaction term of CEO power and ownership concentration comes out to be significant at 5% level, depicting that the presence of large shareholders does affect the relationship between CEO power and total risk of a firm. However, the primary relationship i.e. CEO power and total risk still holds negative, validating our first hypothesis. In column III, we added another interaction term to examine whether the impact of large shareholders on relationship between CEO power and total risk is stronger in NSOEs than SOEs. Although, the coefficient of CEO power still remains negative but our interaction term also comes out to be significant. This demonstrates that relationship between CEO power and total risk is significantly different in state owned and non-state owned enterprises. More specifically, the positive coefficient shows that influence of large shareholders is greater in SOEs than NSOEs. Thus hypothesis three is rejected that the impact of ownership concentration on relationship between CEO power and total risk is stronger in NSOEs than SOEs.

{Insert Table 5 here}

Table 6 displays the results of relationship between CEO power, idiosyncratic Risk and moderating role of large shareholders. In this model dependent variable is *idiosyncratic risk* of a firm. In column I, our main independent variable i.e. CEO power is significant at 5% confidence level and has a negative sign. This demonstrates that CEO power reduces the idiosyncratic risk of a firm. Next we added an interaction term i.e. CEO power multiplied by ownership concentration in column II to test whether large shareholders would influence the relationship between CEO power and idiosyncratic risk of a firm. This interaction term turns out to be significant showing that ownership concentration influences the relationship. Moreover, the interesting finding is that after the addition of interaction term the coefficient of CEO power remained significant and negative, this demonstrates that presence of large shareholders influences the association between CEO power and idiosyncratic risk. It can be stated that even in presence of large shareholders, with an increase in CEO power due to CEO power, idiosyncratic risk of firm decreases. Column III presents the results of the third hypothesis with an addition of interaction term of product of CEO power, ownership concentration and SOEs. This interaction term also turns out to be significant showing that ownership significantly impacts the relationship between CEO power and idiosyncratic risk of firm. Moreover, the primary relationship still held significant validating the robust of relationship. However, the positive coefficient of interaction term shows that influence of large shareholders is greater in SOEs than NSOEs. Thus we reject the third hypothesis that the impact of ownership concentration on relationship between CEO power and total risk is stronger in NSOEs than SOEs.

{Insert Table 6 here}

Table 7 presents the results of relationship between CEO power, systematic risk and moderating role of large shareholders using GMM estimation. In this model dependent variable is systematic of a firm. Coefficient of our main independent variable, CEO power is negative and insignificant. Besides, the same negative relationship holds in column II and III, wherein we added the interaction terms to test our hypothesis 2 and 3 respectively. Therefore, we reject our hypothesis 2 and 3 and conclude that presence of large shareholders do not affect the relationship between CEO power and systematic risk of a firm in either SOEs or NSOEs.

{Insert Table 7 here}

Overall, the results indicate that CEO power is negatively associated and statistically significant with corporate risk taking when measured as total risk and idiosyncratic risk of a firm, proposing that the Chinese CEO's despite having additional powers take less risky decisions. These findings challenge the *Organizational behaviour and group psychology theories* viewpoint that individuals decisions are more extreme and are in contrast with the findings of (Renée B. Adams *et al.*, 2005; Pathan, 2009), which found that CEO power increases the corporate risk. Nevertheless, these contrasting findings highlight the distinctive institutional and market settings of China that play their part in relationship between CEO power and corporate risk taking. One apparent reason for this negative relationship is the fact that, in order to maintain their position and goodwill CEOs don't prefer to take risky decisions. Instead they would be keen to carry on the routine business so that they continue to enjoy their perks and positions. This phenomenon is more likely in Chinese SOEs, where CEOs usually come from state department for a fixed term. Therefore, instead of taking risky decisions they prefer to complete their tenure and then go back to their original departments. Even NSOEs hire CEOs from political connections in order to secure resources from the external environment, like finances from state banks etc.

Another reason that can be attributed to negative impact of CEO power on corporate risk taking can be analyzed considering the role of independent directors in China. Although, independent directors are considered to be effective in monitoring the CEO's decisions impartially and for this reason powerful CEO's do not like them because of their strong monitoring role (Jiraporn *et al.*, 2016). However, Considering the fact that in China Independent directors make one third of the board as per legal requirement one may wonder the low risk taking by CEO. This is due to the fact that, most of the independent directors come from a political background and are under state influence therefore 'independence' of independent directors is dubious and they are not effective in influencing the CEO's decisions. Although the role of independent directors is getting effective with the passage of time, but still they are not at a level where they can counter the CEO power decisions. Therefore, even in firms where CEO is powerful, there is less variability in corporate risk taking.

Secondly, the role of large shareholders is more critical as they influence the relationship between CEO power and corporate risk taking. These large shareholders, through their resources and power, induce the CEO to take risky decisions. These results are in line with the implicit notion of agency theory that large shareholders play a monitoring role in disciplining the executives (Jensen and Meckling, 1976). However, despite of their influence on relationship between CEO power and corporate risk taking they don't change the primary negative relationship. These findings are in line with the recent study of Haider and Fang (2016b), which concluded that large shareholders in China affects future firm risk. Lastly, Impact of large shareholders on relationship between CEO power and corporate risk taking is significantly different in state owned and non-state owned enterprises. These findings are in line with the study of (Zou and Adams, 2008), which says that in Chinese capital markets, different ownership type affect the business decisions and firm's risk differently. These findings provide evidence that in corporate decision making process institutional and market settings affect the individual's decisions.

6. Conclusion

CEO is a key personnel in top management of an enterprise, who makes key business decisions. However, CEO's decision making power varies in different firms and depends on how powerful is he in an organization. In some firms CEO makes all the relevant decisions, while in other firms CEO and other group of executives make decisions together. Group behaviour and organizational theory assert that individual decisions are extreme, while group decision making is more moderate. Considering the notion of group behaviour and organizational theory, we investigated how CEO power is associated with corporate risk taking in distinctive setting of Chinese capital market.

It is found that, CEO power is significantly and negatively associated with total risk and idiosyncratic risk of a firm. This finding contends the Group behaviour and organizational theory viewpoint and highlights the importance of institutional and market settings that affect the individual decision making. Secondly, our results show that presence of large shareholders does significantly affect total risk and idiosyncratic risk. However, despite of their influence on relationship between CEO power and corporate risk taking they don't change the primary negative relationship. Nevertheless, influence of large shareholders is consistent with the notion of agency theory, which suggests that large shareholders can monitor and influence the management. Lastly, this study found evidence that large shareholders impact on relationship between CEO power and corporate risk taking is different in SOEs and NSOEs. This finding highlights the differences between functioning and performance of SOEs and NSOEs.

This study provides useful implications for different regulators and policymakers. First, while examining the risk of a firm, managerial power and structure of decision making must be considered. Moreover, the impact of CEO power on corporate risk taking and other corporate outcomes should be analyzed considering the specific institutional and market settings. However, how the individual risk preferences of CEO could affect corporate risk taking can be an intriguing question for future research.

References

- Adams, R. B., Almeida, H. and Ferreira, D. (2005), "Powerful CEOs and Their Impact on Corporate Performance", *The Review of Financial Studies*, Vol. 18 No. 4, pp. 1403-1432.
- Adams, R. B., Almeida, H. and Ferreira, D. (2005), "Powerful CEOs and Their Impact on Corporate Performance", *Review of Financial Studies*, Vol. 18 No. 4, pp. 1403-1432.
- Arellano, M. and Bond, S. (1991), "Some Tests of Specification for Panel Data: Monte Carlo Evidence and an Application to Employment Equations", *The Review of Economic Studies*, Vol. 58 No. 2, pp. 277-297.
- Bebchuk, L. A., Cremers, K. J. M. and Peyer, U. C. (2011), "The CEO pay slice", *Journal of Financial Economics*, Vol. 102 No. 1, pp. 199-221.
- Blundell, R. and Bond, S. (1998), "Initial conditions and moment restrictions in dynamic panel data models", *Journal of Econometrics*, Vol. 87 No. 1, pp. 115-143.
- Chen, C. H. and Al-Najjar, B. (2012), "The determinants of board size and independence: Evidence from China", *International Business Review*, Vol. 21 No. 5, pp. 831-846.
- Cheng, S. (2008), "Board size and the variability of corporate performance", *Journal of Financial Economics*, Vol. 87 No. 1, pp. 157-176.
- Chintrakarn, P., Jiraporn, P. and Tong, S. (2015), "How do powerful CEOs view corporate risk-taking? Evidence from the CEO pay slice (CPS)", *Applied Economics Letters*, Vol. 22 No. 2, pp. 104-109.
- Daily, C. M. and Dalton, D. R. (1994), "Bankruptcy and Corporate Governance: The Impact of Board Composition and Structure", *The Academy of Management Journal*, Vol. 37 No. 6, pp. 1603-1617.
- Demsetz, H. and Lehn, K. (1985), "The Structure of Corporate Ownership: Causes and Consequences", *Journal of Political Economy*, Vol. 93 No. 6, pp. 1155-1177.
- Faccio, M., Marchica, M.-T. and Mura, R. (2016), "CEO gender, corporate risk-taking, and the efficiency of capital allocation", *Journal of Corporate Finance*, Vol. 39, pp. 193-209.
- Farag, H. and Mallin, C. (2015), "The Impact of the Dual Board Structure and Board Diversity: Evidence from Chinese Initial Public Offerings (IPOs)", *Journal of Business Ethics*, pp. 1-17.
- Farag, H. and Mallin, C. (2016), "The influence of CEO demographic characteristics on corporate risk-taking: evidence from Chinese IPOs", *The European Journal of Finance*, pp. 1-30.

- Finkelstein, S. (1992), "Power in Top Management Teams: Dimensions, Measurement, and Validation", *The Academy of Management Journal*, Vol. 35 No. 3, pp. 505-538.
- Haider, J. and Fang, H. (2016a), "Board Size and Corporate Risk: Evidence from China", *Journal of Asia-Pacific Business*, Vol. 17 No. 03, pp. 229-248.
- Haider, J. and Fang, H. (2016b), "Board Size, Ownership Concentration and Future Firm Risk", *Chinese Management Studies*, Vol. 10 No. 4, pp. 692-709.
- Hillman, A. J., Withers, M. C. and Collins, B. J. (2009), "Resource Dependence Theory: A Review", *Journal of Management*, Vol. 35 No. 6, pp. 1404-1427.
- Jensen, M. C. (1993), "The Modern Industrial Revolution, Exit, and the Failure of Internal Control Systems", *The Journal of Finance*, Vol. 48 No. 3, pp. 831-880.
- Jensen, M. C. and Meckling, W. H. (1976), "Theory of the firm: Managerial behavior, agency costs and ownership structure", *Journal of Financial Economics*, Vol. 3 No. 4, pp. 305-360.
- Jiang, F. and Kim, A. K. (2015), "Corporate governance in China: A modern perspective", *Journal of Corporate Finance*, Vol. 32, pp. 190-216.
- Jiraporn, P., Jumreornvong, S., Jiraporn, N. and Singha, S. (2016), "How do independent directors view powerful CEOs? Evidence from a quasi-natural experiment", *Finance Research Letters*, Vol. 16, pp. 268-274.
- Kaiser, H. F. (1974), "An index of factorial simplicity", *Psychometrika*, Vol. 39 No. 1, pp. 31-36.
- Kogan, N. and Wallach, M. (1965), "Risk taking: A study in cognition and personality", *The American Journal of Psychology*, Vol. 78 No. 3, pp. 516-519.
- Krivogorsky, V. and Grudnitski, G. (2010), "Country-specific institutional effects on ownership: concentration and performance of continental European firms", *J Manag Gov* Vol. 14, pp. 167–193.
- Laporta, R., Lopes-De-Silanes, F., Shleifer, A. and Vishny, W. R. (1997), "Legal Determinants of External Finance", *THE JOURNAL OF FINANCE*, Vol. LII, No. 3, pp. 1131-1150.
- Liang, N. and Useem, M. (2009), "Corporate governance in China", *Nankai Business Review*.
- Linck, J. S., Netter, J. M. and Yang, T. (2008), "The determinants of board structure", *Journal of Financial Economics*, Vol. 87 No. 2, pp. 308-328.
- Liu, Y. and Jiraporn, P. (2010), "The effect of CEO power on bond ratings and yields", *Journal of Empirical Finance*, Vol. 17 No. 4, pp. 744-762.

- Low, A. (2009), "Managerial risk-taking behavior and equity-based compensation", *Journal of Financial Economics*, Vol. 92 No. 3, pp. 470-490.
- Luo, Y. (2015), "CEO power, ownership structure and pay performance in Chinese banking", *Journal of Economics and Business*, Vol. 82, pp. 3-16.
- Muth, M. and Donaldson, L. (1998), "Stewardship Theory and Board Structure: a contingency approach", *Corporate Governance: An International Review*, Vol. 6 No. 1, pp. 5-28.
- Nguyen, T., Locke, S. and Reddy, K. (2015), "Ownership concentration and corporate performance from a dynamic perspective: Does national governance quality matter?", *International Review of Financial Analysis*, Vol. 41, pp. 148-161.
- Pathan, S. (2009), "Strong boards, CEO power and bank risk-taking", *Journal of Banking & Finance*, Vol. 33 No. 7, pp. 1340-1350.
- Sah, R. K. and Stiglitz, J. E. (1986), "The Architecture of Economic Systems: Hierarchies and Polyarchies", *The American Economic Review*, Vol. 76 No. 4, pp. 716-727.
- Schultz, E. L., Tan, D. and Walsh, K. (2010), "Endogeneity and the corporate governance - performance relation", *Australian Journal of Management* Vol. 35 No. 2, pp. 145-163.
- Serfling, M. A. (2014), "CEO age and the riskiness of corporate policies", *Journal of Corporate Finance*, Vol. 25, pp. 251-273.
- Shleifer, A. and Vishny, R. W. (1986), "Large Shareholders and Corporate Control", *Journal of Political Economy*, Vol. 94 No. 3, pp. 461-488.
- Wei, G. and Geng, M. (2008), "Ownership structure and corporate governance in China: some current issues", *Managerial Finance*, Vol. 34 No. 12, pp. 934-952.
- Wintoki, M. B., Linck, J. S. and Netter, J. M. (2012), "Endogeneity and the dynamics of internal corporate governance", *Journal of Financial Economics*, Vol. 105 No. 3, pp. 581-606.
- Wu, S., Quan, X. and Xu, L. (2011), "CEO power, disclosure quality and the variability of firm performance", *Nankai Business Review International*, Vol. 2 No. 1, pp. 79-97.
- Zeitun, R. and Tian, G. G. (2007), "Does ownership affect a firm's performance and default risk in Jordan?", *Corporate Governance: The international journal of business in society*, Vol. 7 No. 1, pp. 66-82.
- Zou, H. and Adams, M. B. (2008), "Corporate ownership, equity risk and returns in the People's Republic of China", *Journal of International Business Studies* Vol. 39, pp. 1149-1168.

Biographies:

Junaid Haider is a PhD in Financial Management from Dongbei University of Finance & Economics, Dalian, China and holds a Master degree in Finance from Umea University, Sweden. His research interests include corporate governance, risk and financial Management. He can be reached at junaidhaider@gmail.com.

Hong-Xing Fang is professor of Accounting at School of Accounting, Dongbei University of Finance & Economics, Dalian, China. He has published extensively in top tier journals. His research mainly focuses on internal control and corporate governance. He can be contacted at hxfang@dufe.edu.cn.

Table 1: The Descriptive Statistics

Variable	Mean	SD	P10	P50	P99
Total Risk	0.0585	0.0482	0.0211	0.0282	0.0540
Idiosyncratic Risk	0.0315	0.0346	0.0283	0.0537	0.1487
Systematic Risk	0.0251	0.0134	0.0036	0.0232	0.0429
Indp. Directors	34.9862	9.1226	23.8100	33.3300	60.0000
Board Size	10.7762	3.7371	7.0000	10.0000	15.0000
Management Shareholdings	0.0353	0.1101	0.0000	0.0000	0.5969
Ownership Concentration	0.6100	0.1883	0.3499	0.6276	1.0000
RoA _t	3.6688	6.6311	-1.5829	3.2591	23.8124
RoA _{t-1}	4.0771	6.8839	-0.8341	3.5914	25.6993
CAPEX	0.0448	0.1701	-0.0500	0.0216	0.9712
Cash Flows	0.0406	0.1104	-0.0869	0.0428	0.1693
Market-to-Book	0.5102	0.5321	0.2312	0.4980	0.8910
Size	21.1418	1.2803	19.7295	21.0581	24.7058
Leverage	51.8276	21.6561	23.1729	51.9145	125.1700
Age	14.8987	4.7799	9.0000	15.0000	21.0000

This table shows the descriptive statistics of our sample. Total risk is the standard deviation of daily stock returns. Idiosyncratic risk is standard deviation of Fama & French three factor model residuals for firm i in year t . Systematic risk is the difference between total risk and idiosyncratic risk. Indp. Dir. is percentage of independent directors. Board size is measured as the total number of directors in a board. Management Shareholdings are percentage of shares owned by the management. Ownership concentration is percentage of shares owned by top 5 shareholders. RoA is return on assets and RoA_{t-1} is return on assets of previous year. CAPEX is capital expenditure scaled by sales. Cash flows are from operations. Market-to-Book is market value of assets divided by book value of assets. Size is natural logarithm of total shareholders' equity. Leverage is ratio of the firm's total debt to the book value of assets. Age is the number of years since a firm is established.

Table 2: Correlation Matrix

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Total Risk (1)	1															
Idiosyncratic Risk (2)	0.0353*	1														
System. Risk (3)	0.0504*	-0.5604*	1													
CEO _p (4)	0.1374	0.2641	0.0214	1												
Indp. Directors (5)	-0.0047	-0.0235*	-0.0001	0.2868	1											
Board Size (6)	0.0075	-0.0112	0.0029	-0.2817*	0.1846	1										
Management Shareholdings (7)	0.001	0.0261*	-0.0066	0.1068*	-0.2314*	0.0243	1									
Ownership Concentration (8)	-0.0447*	-0.0928*	-0.0033	-0.0013	-0.0339*	0.1038*	0.0271*	1								
RoA _t (9)	0.0165	-0.0108	-0.0102	0.0115	-0.0773*	0.3186	0.1247*	0.0317*	1							
RoA _{t-1} (10)	0.0071	-0.0125	-0.0008	0.0142	-0.0825*	0.1284	0.1492*	0.0163	0.5017*	1						
CAPEX (11)	-0.0058	0.0143	0.0035	0.0021	0.0167	0.0671*	0.0422*	-0.008	0.0778*	0.1068*	1					
Size (12)	-0.0176	-0.1372*	-0.0022	0.0235*	0.1350*	0.1844*	-0.1305*	0.017	0.1785*	0.1953*	0.1396*	1				
Leverage (13)	-0.0006	0.0321*	0.0022	-0.0779*	0.1645*	0.2543*	-0.1615*	-0.0004	-0.4006*	-0.3826*	-0.0097	0.0363*	1			
Age (14)	-0.0227	-0.0652*	-0.0109	-0.1505*	0.1850*	0.1864	-0.2803*	0.0418*	-0.0920*	-0.1358*	-0.0644*	0.0218*	0.1533*	1		
Cash Flows (15)	-0.0314*	0.0412*	0.0461	0.0132	0.0442	0.0312	0.0413*	0.0441*	0.0321	0.0422	0.0524	0.0241	0.0423	0.0312	1	
Market-to-Book (16)	0.0472*	0.0456*	0.0576	0.0458	-0.1231	0.0842	0.0421	0.0321	0.0112	0.0348	-0.0682	0.0321	0.0448	0.0324	0.0211	1

This table shows the correlation matrix of our sample. Total risk is the standard deviation of daily stock returns. Idiosyncratic risk is standard deviation of Fama & French three factor model residuals for firm i in year t . Systematic risk is the difference between total risk and idiosyncratic risk. Indp. Directors is percentage of independent directors. Board size is measured as the total number of directors in a board. Management Shareholdings are percentage of shares owned by all management. Ownership concentration is percentage of shares owned by top 5 shareholders. RoA is return on assets and RoA_{t-1} is return on assets of previous year. CAPEX is capital expenditure scaled by sales. Size is natural logarithm of total shareholders' equity. Leverage is ratio of the firm's total debt to the book value of assets. Age is the number of years since a firm is established. Cash flows are from operations. Market-to-Book is market value of assets divided by book value of assets.

Table 3: Definition of Variables

Total Risk	Annualized value of Standard deviation of daily stock returns
Idiosyncratic Risk	Residuals of Fama & French three factor model
Systematic Risk	Difference between total risk and systematic risk
CEO _p	CEO power, calculated using Principal Component Analysis (PCA) see table 4
Board Size	Total number of directors in a board
Indp. Directors	Percentage of Independent directors in a board
Management Shareholdings	Percentage of shares owned by Management
Ownership Concentration	Percentage of shares held by the first five shareholders
RoA _t	Net profit / Average total assets*100%
RoA _{t-1}	ROA at the end of previous year
CAPEX	Capital Expenditure = Δ net fixed assets + depreciation / total assets
Cash Flows	Net cash flow from operations
Market-to-Book	Market value of assets divided by book value of assets
Size	Natural logarithm of Total shareholder's equity
Leverage	Total debt / total assets
Age	Number of years since a firm is established
SOE	Dummy Variable, if SOE = 1, otherwise 0
Industry	Two digits CSRC Industrial classification code

Table 4: Measures of CEO Power

Power Structure	Variables	Definition
Structural Power	Duality	If CEO and Chairman are the same = 0, otherwise 1
	Inside Director	If CEO is also on board = 0, otherwise 1
Ownership Power	CEO share	If CEO has Shareholdings=1, otherwise 0
	Institutional Share	If Institutional investors' shareholdings of a firm is higher than the average of industry=1, otherwise 0
Expertise Power	Certificate	If CEO has a professional certificate=1, otherwise 0
	Tenure	IF CEO tenure is longer than the median tenure of industry= 1, otherwise 0
Prestige Power	Education	If CEO has a Master degree or above =1, otherwise 0
	Outside service	If CEO serves on other firms' boards =1, otherwise 0
Demographic Power	Age	CEO's age in number of years
	Gender	If CEO male =1, otherwise 0

This table presents the five dimensions of power structure; we used to proxy CEO power. All variables are standardized as dummy variables, in order to apply Principal Component Analysis (PCA).

Table 5: Relationship Between CEO Power, Total Risk and Moderating Role of Large Shareholders

Total Risk	Fixed-Effect			GMM		
	I	II	III	I	II	III
CEOp	-0.0014 (-2.42)**	-0.0016 (-2.34)**	-0.0002 (-1.89)*	-0.0016 (2.31)**	-0.0034 (1.67)*	-0.0066 (1.71)*
Board Size	-0.0123 (-2.34)**	-0.0104 (-2.38)**	-0.0201 (-2.35)**	0.0024 (-2.01)**	0.0113 (2.34)*	0.0030 (2.02)**
Indp. Directors	0.0034 (1.14)*	0.0032 (1.05)	0.0031 (1.05)	0.0234 (1.52)*	0.1348 (1.71)*	0.0681 (1.22)
Ownership Concentration	-0.0049 (-1.98)**	-0.0057 (-3.15)***	-0.0048 (-1.76)*	-0.5311 (-8.28)***	-0.5569 (-7.63)***	-0.5641 (-7.81)***
Management Shareholdings	-0.0125 (-3.22)***	-0.0123 (-3.22)***	-0.0124 (-3.21)***	0.8047 (2.01)**	0.8179 (2.04)**	0.8047 (2)**
RoA	-0.0002 (-2.21)**	-0.0002 (-2.22)**	-0.0002 (-2.21)**	-0.0010 (2.01)**	0.0011 (1.82)*	0.0005 (1.91)*
RoA _{t-1}	-0.0001 (-1.15)	-0.0001 (-1.14)	-0.0001 (-1.11)	-0.0044 (-1.19)	-0.0436 (-1.2)	-0.0041 (-1.14)
Leverage	-0.0001 (-2.1)**	-0.0001 (-2.1)**	-0.0001 (-2.09)**	-0.0026 (-1.68)*	-0.0026 (-1.18)	-0.0025 (-1.15)
Size	-0.0006 (-1.74)*	-0.0026 (-1.76)*	-0.0017 (-1.64)*	0.0145 (2.01)**	0.0136 (1.77)*	0.0129 (1.84)*
CAPEX	0.0017 (1.13)	0.0018 (1.15)	0.0017 (1.13)	-0.0873 (-0.92)	-0.0849 (-0.9)	-0.0810 (-0.86)
Cash_flows	0.0023 (1.67)*	0.0011 (0.24)	0.0003 (0.26)	-0.0088 (-1.83)*	-0.0088 (-1.84)*	-0.0887 (-1.84)*
Market-to-Book	0.0062 (1.86)*	0.0063 (1.67)*	0.0061 (1.69)*	0.1088 (1.91)*	0.0012 (1.73)*	0.0011 (1.71)*
Age	0.1764 (1.72)*	0.1326 (1.33)	0.1134 (1.68)*	0.1337 (1.75)*	0.1400 (1.47)	0.1267 (1.83)*
SOE	0.1316 (1.37)	0.1320 (1.67)	0.1316 (1.42)	0.0970 (0.85)	0.0938 (0.82)	0.0924 (0.79)
CEOp * Ownership		0.0314 (2.47)**			0.0690 (2.08)**	
CEOp * Ownership * SOE			0.0052			0.0606

Total Risk	Fixed-Effect			GMM		
	I	II	III	I	II	III
			(2.51)**			(2.65)**
No. of observations	7852	7806	7652			
R ²	0.1822	0.1946	0.1736			
Firm Fixed-effect	YES	YES	YES			
Sargan				20.4874	20.31347	20.7932
Wald chi ²				491.15	501.11	501.49
Arellano-Bond test				0.7861	0.7706	0.7663

Note:

Table 5 shows the relationship between CEO power, Total Risk and moderating role of Large Shareholders *using fixed effect and GMM*. The dependent variable is total risk, calculated as the *annualized value of standard deviation of daily stock returns*. CEO_p denotes CEO power, measured using Principal Component Analysis (PCA) from table 4. *Ownership Concentration is the percentage of shares owned by top 5 shareholders of firm. Management Shareholdings is the percentage of shares owned by the management in firm. RoA is return on assets. Leverage is total debt scaled with total assets. Size is total equity. CAPEX is capital expenditures. Cash flows are from operations. Market-to-Book is market value of assets divided by book value of assets. Age is number of years since a firm is established. SOE is dummy for State owned enterprises. CEO_p * Ownership, is an interaction term obtained as a product of CEO_p and Ownership concentration. CEO_p * Ownership * SOEs is second interaction term calculated as a product of CEO_p, Ownership concentration and SOEs. Wald chi² is a test for joint significance of the variables and Arellano-Bond AR test is a test for serial autocorrelation. Significance level of 10%, 5% and 1% is represented by *, ** and *** respectively. Robust t-stats are given below each coefficient in parenthesis in case of fixed effect model while robust z-stats are provided in case of GMM.*

Table 6: Relationship Between CEO Power, Idiosyncratic Risk and Moderating Role of Large Shareholders

Idiosyncratic Risk	Fixed-Effect			GMM		
	I	II	III	I	II	III
CEOp	-0.0123 (1.97)**	-0.0184 (1.98)**	-0.0528 (1.91)*	-0.0134 (2.01)**	-0.0476 (1.93)*	-0.0412 (1.94)*
Board Size	-0.0076 (-1.68)*	-0.0077 (-1.66)*	-0.0077 (-1.67)*	-0.0029 (-1.56)*	-0.0031 (-0.59)	-0.0033 (-0.63)
Indp. Directors	0.0214 (1.81)*	0.0284 (1.77)*	0.0462 (1.62)	0.0043 (1.92)*	0.0621 (1.68)*	0.0244 (1.71)
Ownership Concentration	-0.0138 (-5.82)***	-0.0149 (-5.86)***	-0.0142 (-5.91)***	-0.1858 (-5.58)***	-0.0189 (-5.18)***	-0.0187 (-5.1)***
Management Shareholdings	-0.0005 (-0.03)	-0.0002 (-0.02)	-0.0011 (-0.07)	0.8195 (0.27)	0.0085 (0.28)	0.0095 (0.31)
RoA	0.0042 (2.02)**	0.0001 (1.64)*	0.0001 (1.66)*	0.0051 (2.26)**	0.0001 (2.27)**	0.0001 (0.29)**
RoA _{t-1}	-0.0002 (-1.05)	-0.0002 (-1.07)	-0.0002 (-1.03)	-0.026 (-1.09)	-0.0003 (-1.09)	-0.0003 (-1.13)
Leverage	0.0001 (1.59)	0.0001 (1.59)	0.0001 (1.68)*	0.0126 (1.09)	0.0001 (1.08)	0.0001 (1.08)
Size	0.0003 (2.36)**	0.0003 (2.27)**	0.0003 (2.16)**	0.1688 (1.84)*	0.0017 (1.82)*	0.0017 (1.82)*
CAPEX	0.0030 (0.98)	0.0032 (1.02)	0.0030 (0.97)	-0.0495 (-0.13)	-0.0005 (-0.12)	-0.0005 (-0.12)
Cash_flows	0.0064 (1.67)*	0.0063 (1.67)*	0.0064 (1.68)*	0.8628 (1.72)*	0.0084 (1.17)	0.0082 (1.14)
Market-to-Book	0.0124 (2.08)**	0.0242 (2.01)**	0.0189 (1.88)*	-0.1172 (-1.91)*	-0.1109 (-1.85)*	-0.1115 (-0.86)*
Age	-0.0376 (-9.11)***	-0.0375 (-8.99)***	-0.0376 (-9.02)***	-0.0305 (-4.24)***	-0.0305 (-4.23)***	-0.0303 (-4.18)***
SOE	0.1484 (1.85)*	0.1488 (1.66)*	0.1487 (1.67)*	-0.0207 (-0.71)	-0.02 (-0.71)	-0.02 (-0.73)

Idiosyncratic Risk	Fixed-Effect			GMM		
	I	II	III	I	II	III
CEO _p * Ownership		0.0028			0.0025	0.0016
		(2.26)**			(2.21)**	(0.37)*
CEO _p * Ownership* SOE			0.0028			0.0035
			(2.32)**			(-0.77)**
No. of observations	7852	7806	7652			
R ²	0.1892	0.1695	0.1874			
Firm Fixed-effect	YES	YES	YES			
Sargan				20.4874	20.31347	20.7932
Wald chi ²				90.44	90.44	91.16
Arellano-Bond test				0.5839	0.5891	0.5835

Note: Table 6 shows the relationship between CEO power, idiosyncratic risk and moderating Role of large shareholders using fixed effect and GMM. Dependent variable idiosyncratic risk is measured as the standard deviation of residuals of Fama and French three factor model. CEO_p denotes CEO power, measured using Principal Component Analysis (PCA) from table 4. Ownership Concentration is the percentage of shares owned by top 5 shareholders of firm. Management Shareholdings is the percentage of shares owned by the management in firm. RoA is return on assets. Leverage is total debt scaled with total assets. Size is total equity. CAPEX is capital expenditures. Cash flows are from operations. Market-to-Book is market value of assets divided by book value of assets. Age is number of years since a firm is established. SOE is dummy for State owned enterprises. CEO_p * Ownership, is an interaction term obtained as a product of CEO_p and Ownership concentration. CEO_p * Ownership*SOEs is second interaction term calculated as a product of CEO_p, Ownership concentration and SOEs. Wald chi² is a test for joint significance of the variables and Arellano-Bond AR test is a test for serial autocorrelation. Significance level of 10%, 5% and 1% is represented by *, ** and *** respectively. Robust t-stats are given below each coefficient in parenthesis in case of fixed effect model while robust z-stats are provided in case of GMM.

Table 7: Relationship Between CEO Power, Systematic risk and Moderating Role of Large Shareholders

Systematic Risk	Fixed-Effect			GMM		
	I	II	III	I	II	III
CEOp	-0.0121 (-0.34)	-0.0286 (-0.07)	-0.0472 (-0.28)	-0.0193 (0.14)	-0.0011 (0.35)	-0.007 (0.24)
Board Size	0.0003 (1.89)*	0.0002 (1.91)*	0.0011 (1.88)*	0.0017 (1.71)*	0.0019 (1.2)	0.0016 (1.81)*
Indp. Directors	0.0017 (1.91)*	0.0019 (0.12)	0.0016 (1.82)*	0.0418 (1.92)*	0.0634 (2.16)**	0.0411 (1.82)*
Ownership Concentration	0.0044 (1.72)*	0.0046 (1.67)*	0.0045 (1.68)*	0.0028 (1.82)*	0.0033 (1.94)*	0.0029 (1.81)*
Management Shareholdings	-0.0194 (-1.21)	-0.0195 (-1.21)	-0.0193 (-1.21)	0.0032 (0.14)	0.0026 (0.11)	0.0012 (0.05)
RoA	-0.0421 (-2.04)**	-0.0426 (-2.05)**	-0.0486 (-2.04)**	-0.0347 (-1.66)*	-0.0388 (-1.68)*	-0.0339 (-1.67)*
RoA _{t-1}	0.0001 (0.48)	0.0001 (0.48)	0.0001 (0.48)	0.0235 (1.07)	0.0002 (1.07)	0.0002 (1.08)
Leverage	-0.0002 (-1.81)*	-0.0002 (-1.81)*	-0.0002 (-1.81)*	-0.0001 (-0.62)	-0.0001 (-0.63)	-0.0001 (-0.55)
Size	-0.0043 (-4.25)***	-0.0041 (-4.13)***	-0.0039 (-3.05)***	-0.0051 (-4.08)***	-0.0044 (-4.06)***	-0.0043 (-4.08)***
CAPEX	0.0087 (2.31)**	0.0081 (2.29)**	0.0067 (2.11)**	0.0059 (1.71)*	0.0059 (1.68)*	0.0060 (1.74)*
Cash_flows	-0.0069 (-1.78)*	-0.0065 (-1.73)*	-0.0071 (-1.8)*	-0.0121 (-2.06)**	-0.0119 (-2.01)**	-0.0118 (-1.99)**
Market-to-Book	0.0182 (1.84)*	0.2314 (1.71)*	0.1917 (1.68)*	0.0157 (1.68)**	0.2111 (1.75)*	0.1816 (1.73)*
Age	-0.0112 (-1.68)*	-0.0111 (-1.61)	-0.0114 (-1.69)*	0.0099 (1.83)*	0.0098 (1.82)*	0.0097 (1.21)
SOE	0.1238 (5.13)	0.1238 (5.11)	0.1238 (5.12)	0.0023 (0.08)	0.0023 (0.08)	0.0015 (0.05)
CEOp * Ownership		-0.0042 (-0.11)			-0.0013 (-0.37)	-0.0020 (-0.55)
CEOp * Ownership* SOE			-0.0084 (-0.1)			0.0043 (0.84)

Systematic Risk	Fixed-Effect			GMM		
	I	II	III	I	II	III
No. of observations	7852	7806	7652			
R ²	0.1994	0.1992	0.1996			
Firm Fixed-effect	YES	YES	YES			
Sargan				20.4874	20.31347	20.7932
Wald chi ²				32.73	33.32	34.02
Arellano-Bond test				0.3965	0.3911	0.4037

Note: Table 7 shows regression results of relationship between CEO power, systematic risk and ownership concentration using fixed effect and GMM. Dependent variable systematic risk is the difference between total risk and idiosyncratic risk of a firm. CEO_p denotes CEO power, measured using Principal Component Analysis (PCA) from table 4. Ownership Concentration is the percentage of shares owned by top 5 shareholders of firm. Management Shareholdings is the percentage of shares owned by the management in firm. RoA is return on assets. Leverage is total debt scaled with total assets. Size is total equity. CAPEX is capital expenditures. Cash flows are from operations. Market-to-Book is market value of assets divided by book value of assets. Age is number of years since a firm is established. SOE is dummy for State owned enterprises. CEO_p * Ownership, is an interaction term obtained as a product of CEO_p and Ownership concentration. CEO_p * Ownership*SOEs is second interaction term calculated as a product of CEO_p, Ownership concentration and SOEs. Wald chi² is a test for joint significance of the variables and Arellano-Bond AR test is a test for serial autocorrelation. Significance level of 10%, 5% and 1% is represented by *, ** and *** respectively. Robust t-stats are given below each coefficient in parenthesis in case of fixed effect model while robust z-stats are provided in case of GMM.