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The Influence of CEO Demographic Characteristics on Corporate Risk -Taking: Evidence from Chinese IPOs

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Abstract

We investigate the influence of CEOs' demographic characteristics (e.g. age, board experience, professional experience, education and gender) on corporate risk-taking for a sample of 892 IPOs floated in both the Shanghai and Shenzhen Stock Exchanges. Using fixed effects and system GMM models we find that younger and shorter tenured CEOs and those with postgraduate qualifications are more likely to consider risky decisions. We also find a highly significant and positive relationship between CEO previous board experience and corporate risk-taking. Interestingly and consistent with the recent literature, we find that female CEOs are not risk averse compared with their male counterparts. Moreover, we find that corporate risk-taking is higher the greater the proportion of state-ownership. Finally, our study may provide useful insights to shareholders as they generally seek to hire the most talented CEOs with the relevant set of skills to achieve shareholders' objectives and improve the Chinese competitiveness in the global market.

Key words: CEO characteristics; corporate risk- taking; corporate governance; Initial Public Offerings (IPOs); China.

JEL Classifications: G3;C3

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1. Introduction

Management quality has direct implications for corporate risk-taking and the decision making process (Li and Tang 2010; Sanders and Hambrick 2007). We believe that stock markets continually reflect the assessment of management quality including CEOs' demographic characteristics into stock prices. For instance, skilled and qualified CEOs may substantially reduce the uncertainty about management quality and this has implications for stock prices (Pan et al. 2013).

The existing body of the literature largely investigates the impact of CEOs' characteristics on corporate governance, R&D spending, acquisition and divestitures, the launch of innovative products, cash holdings and financial performance; see for example Hoskisson et al (1993); Sanders (2001); Barker and Mueller (2002); Greve (2003) ; Nelson (2005); Brookman and Thistle (2009); and Orens and Reheul (2013). In China, the literature mainly investigates the impact of CEO hubris on corporate takeover decisions (Li and Tang, 2010). We argue that CEOs' demographic characteristics are the main determinant of their hubris and overconfidence and this has implications for corporate risk-taking. Therefore, in this paper, we focus on CEOs' demographic characteristics and their impact on corporate risk- taking in China.

China has an increasing influence on the world economy although it has different socio-economic and cultural frameworks compared with western countries. Despite the global financial crisis, the Chinese economy has grown at a steady rate over the past few years; 9.3%, 7.8% and 7.7% in 2011, 2012, and 2013 respectively. Despite the weak legal system

and considerable proportion of non-tradable shares among listed firms, there were a total of 873 Initial Public Offerings (IPOs) made in China over the period 1994 - 2001. Moreover, there was a remarkable growth in the IPO market over the period 2001-2008 so that a total of RMB 508.6 billion was raised and around 414 IPOs were launched¹; therefore, China was declared the top country in the world in terms of the number of IPO new issues in 2007 (Xu and Oh, 2011). The momentum of IPO growth continued as RMB 103.4 billion and 183.1 billion were raised during 2008 and 2009 respectively. Surprisingly, in 2012 the IPO market witnessed a massive decline with funds raised down by more than 62% compared with 2011. Therefore, the China Securities Regulatory Commission (CSRC) restricted the approval of new IPOs in October 2012 due to concerns that new share offerings would further damage the market².

Therefore, it is interesting to understand the main characteristics of IPOs' boards and the demographic characteristics of their CEOs in particular. We agree with Boone et al (2007) and Hermalin and Weisbach (2003) that there are several advantages of studying IPOs' board characteristics. Firstly, the vast majority of the literature investigates well established companies and limited research has been carried out using IPOs. Secondly, the evolution of corporate boards can be monitored over time since the IPO year. Thirdly and most importantly, studying board characteristics around the time of the public offering is a particularly rich setting as usually IPOs are subject to significant changes with respect to the governance mechanisms (Baker and Gompers, 2003). Finally, IPOs are expected to adopt more value-maximising governance features compared with already listed companies (Gertner and Kaplan, 1996). Therefore, we believe that studying CEO demographic characteristics of the Chinese IPOs and their influence on corporate risk-taking is timely and may offer new insights to the literature in this area.

The main objective of this paper is to investigate the influence of the CEOs' demographic characteristics (e.g, age, board experience, professional experience, education, and gender) on corporate risk- taking. Using a sample of 892 IPOs floated in both the SSE and SZSE during 1999-2012, we find a negative and significant relationship between both CEO age and tenure and corporate risk- taking. However, we find a positive and significant relationship between both CEO higher education and their previous board experience and corporate risk- taking. Interestingly, and consistent with the findings of Berger et al (2012), and Adams and Funk (2012), we find that female CEOs are not risk averse.

Our paper has several incremental contributions; firstly, in addition to the influence of CEO gender, we investigate the broader concept of diversity including age, board experience, professional experience and education. Secondly, our paper is– to the best to our knowledge– the first to investigate the influence of CEOs' demographic characteristics and corporate risk-taking in China. Moreover, our study contributes to the IPO literature as it is the first to investigate the influence of CEO demographics on risk- taking for IPOs. Our study may provide useful insights to shareholders as they generally seek to hire the most talented CEOs with the relevant set of skills to achieve shareholders' objectives and improve Chinese competitiveness in the global market. The remainder of the paper is structured as follows. The next section discusses the literature review and hypotheses development. Sections 3 and 4 present a description of our dataset and the empirical modelling respectively. Section 5 presents the results of our empirical analysis and finally, section 6 summarises and concludes.

2. Literature review and hypotheses development

2.1 Theoretical perspectives

There are a number of theoretical perspectives with respect to CEO characteristics including upper echelons theory, resource dependence theory and human capital theory. The upper echelons theory states that “*organizational outcomes-strategic choices and performance levels-are partially predicted by managerial background characteristics*” (Hambrick and Mason 1984). Directors’ experience, values and characteristics have an influence on their perceptions and hence their decisions; this is the main premise of the upper echelons theory (Hambrick, 2007).

Drawing on the upper echelons theory, we argue that CEOs, amongst other decision makers are characterized by bounded rationality. This means that CEOs make decisions based on their social, behavioural and psychological characteristics (Hambrick and Mason 1984; Orens and Reheul 2013). The latter argue that CEOs’ demographic characteristics e.g. education, age, tenure and professional experience might be used as a proxy for their psychological characteristics. The upper echelons theory also assumes that CEOs’ discretion is largely influenced by cognitive, psychological and social factors. A number of studies have drawn on the upper echelons theory to explain the CEOs’ demographic characteristics in relation to cash holdings behaviour (Orens and Reheul 2013); corporate takeover decisions (Li and Tang 2010); innovation (Kitchell 1997); R&D spending (Barker and Mueller 2002); and financial disclosure (Bamber et al, 2010).

On the other hand, the resource dependence theory provides the basis and the theoretical argument with respect to board diversity. Board directors link their companies with external organisations and this help improve companies legitimacy and facilitate their access to

resources e.g. information, expertise, communication (Pfeffer and Salancik, 1978 and Carter et al, 2010). Therefore, different types of directors may bring to their companies different resources, hence more diverse boards are likely to bring to their companies different sets of intangible resources (Hillman et al., 2000). We argue that different CEO characteristics including gender and education bring to the board different perspectives, experience and backgrounds; therefore, the presence of women directors on the board, for instance, brings different benefits and resources to the company (Carter et al, 2010).

Terjesen et al (2009), using the human capital theory of Becker (1964), argue that individual's education, skills and experience frame their cognition and productivity and hence benefit the overall company. Therefore, according to the human capital theory, different types of directors or different human capital may bring different backgrounds and different experiences to the board (Hillman et al, 2000). We argue that more diverse boards may have better ability and better management quality which help the company to address different environmental dependencies. Moreover, Mateos de Cabo et al, (2012) state that female directors bring forward new opinions and perspectives that would not otherwise be demonstrated if the boards were homogeneous. Hillman and Dalziel (2003), drawing on agency theory, argue that to better exercise the monitoring role, boards should include an appropriate mix of experience and backgrounds in order to effectively evaluate management and assess business strategies.

2.2 CEO demographic characteristics

There has been an ongoing debate in the literature regarding the influence of CEO characteristics on corporate risk-taking proxies. Lin et al (2011) find a positive relationship between CEO characteristics (e.g. education, political connections, and professional

experience) and the innovation in private companies in China. Clayton et al (2005) find an increase in stock return volatility around CEO turnovers. Li and Tang (2010) using survey data from 2,790 CEOs of manufacturing companies in China find a positive relationship between CEO hubris and company risk-taking. They define CEO hubris as a CEO's exaggerated self-confidence. Hiller and Hambrick (2005), find that CEO overconfidence may lead to faster, less comprehensive, and more centralised decisions. Similarly, Simon and Houghton (2003) find a positive relationship between directors' overconfidence and corporate risk-taking.

Using psychometric tests Graham et al (2013) investigate the differences in CEO risk aversion and optimism and find that US CEOs differ significantly from non-US CEOs in terms of their underlying attitudes. They also find that the more the risk-tolerance of CEOs the more mergers and acquisitions initiated by their companies. Moreover, they find that more optimistic CEOs rely particularly on short-term debt. Nicolosi (2013) finds that higher dividend yields are associated with married, Republican, Christian CEOs. Kaplan et al (2012) find that CEOs' general ability e.g. interpersonal-related skills are the key determinants for subsequent success in a buyout. Malmendier et al (2011) find that CEOs with military experience follow a more aggressive strategy and prefer high leverage. Moreover, CEOs who grew up during the Great Depression period are more risk averse as they rely more on internal sources of finance.

2.2.1 CEO age

Bertrand and Schoar (2003) claim that older CEOs adopt less aggressive investment strategies and rely on traditional management styles. Orens and Reheul (2013) argue that, according to the upper echelons theory, older CEOs are more risk averse and conservative than younger CEOs. Therefore they are more likely to undertake corporate decisions which

are not aligned with the interests of shareholders. Furthermore, Bertrand and Schoar (2003) claim that older CEOs may have greater influence over the board. Therefore, their experience and knowledge may allow them to exert power over the board of directors and accordingly to take less risky decisions. Hence older CEOs may be seen as more conservative (Hambrick and Mason 1984) and risk-averse (MacCrimmon and Wehrung 1986) as they follow defensive rather than offensive strategies (Child 1974).

Equally, Graham et al (2013) find that younger CEOs are risk-tolerant and usually run fast growth companies. Beber and Fabbri (2012) argue that younger CEOs may focus on short term objectives in the hope of building their reputation. Therefore, they may take more risk compared with older CEOs. Barker and Mueller (2002) find that the younger the CEOs the greater the R&D spending. Yim (2013) finds that there is a negative link between CEO age and corporate acquisitions. Moreover, he finds no impact of CEO age on company's growth and capital expenditures. The above discussion suggests that older CEOs may prefer not to make risky decisions compared with younger CEOs who may be more inclined to make riskier decisions. Therefore older CEOs are more likely to undertake corporate decisions which are not aligned with the interests of shareholders and hence, we hypothesise the following:

H1: There is a negative relationship between CEO age and corporate risk-taking.

2.2.2 CEO board experience

Chen and Zheng (2014) argue that longer-tenured CEOs may imply greater managerial power and entrenchment. An entrenched CEO may enjoy other benefits e.g. more control; therefore they might be less motivated to make risky decisions (Bertrand and Mullainathan, 2003; John et al., 2008; Laeven and Levine, 2009; Chen and Zheng, 2014). Grimm and Smith (1991) find

a negative relationship between CEO tenure and changes in the company's strategy. This suggests that CEOs with a longer tenure might be seen as more committed to their plans and their views on how the company should be run (Hambrick and Fukutomi 1991). Moreover, the longer the CEO tenure the less likelihood of implementing changes as their job novelty may decrease and hence they may not have the required responses and reactions to changes in the external environment (Hambrick and Fukutomi, 1991 and Miller, 1991). Orens and Reheul (2013) argue that newly appointed CEOs are more likely to consider risky alternatives as they are externally focused and much more receptive to new business ideas compared with longer tenured CEOs. However, longer tenured CEOs have the ability- through their personal relationships - to influence directors' selection compared with shorter-tenured CEOs (Finkelstein and Hambrick 1996). Moreover, stakeholders believe that longer-tenured CEOs add to the company legitimacy (Orens and Reheul 2013).

On the other hand, Anderson et al (2011) argue that directors' decision making is influenced by the time spent serving as both a director on their company's board of directors and also as a director on other boards. They also argue that CEOs' previous board experience enables them to better understand corporate culture and group dynamics. Koellinger (2008) claims that CEOs with previous board experience have broader perspectives and are much more open to encourage innovative and risky ideas. Orens and Reheul (2013) argue that CEO experience expands their networks and this may improve their awareness of the most recent developments in business ideas. Finally, Anderson et al (2011) claim that previous board experience can be used as a proxy for directors' reputation and marketability in the job market.

Based on the above discussion, we argue, following Chaganti and Sambharya (1987) and Thomas et al (1991) that longer-tenured CEOs might be more interested in the stability and

efficiency of their companies as they have served on the board for a longer term and therefore may be less willing to make strategic decisions and hence may not take risky decisions.

Therefore, we expect that there might be a negative relationship between CEO tenure and corporate risk-taking. Moreover, we argue that CEOs with previous board experience provides them with different perspectives with respect to innovative business ideas and strategic decisions. Therefore, we expect that CEOs with previous board experience are likely to make more risky decisions and hence we formulate our second and third hypotheses as follows:

H2: There is a negative relationship between CEO tenure and corporate risk-taking.

H3: There is a positive relationship between CEO previous board experience and corporate risk-taking.

2.2.3 CEO professional experience

Professional experience provides CEOs with a clearer vision and knowledge of the external environment of the company including its customers and suppliers, in addition to corporate regulations (Anderson et al., 2011). This enables CEOs to evaluate potential investment opportunities through the trade-off between risk and return (Orens and Reheul 2013).

Professionally experienced CEOs are also more likely to have a better perception of company problems and this may enhance the communication and co-ordination in the company, thus facilitating better decision making. Herrmann and Datta (2006) argue that professional experience is one of the main determinants of CEOs' ability to make strategic decisions. Lin et al (2011) find a positive relationship between CEOs' professional background and private companies' innovation in China. CEOs professional experience has implications for their decisions, e.g. CEOs with Law backgrounds may have a better perception of legal aspects and regulations. Moreover, CEOs with Accounting backgrounds are more

knowledgeable about financial issues. This may enable CEOs to better communicate their viewpoint with other directors and related parties and this enhances the monitoring and advising roles to other directors (Anderson et al., 2011). Furthermore, Barker and Mueller (2002) find that CEOs' professional experience (in particular Marketing and/or Engineering) is positively related to R&D spending. We argue that CEOs' professional experience may bring to the board a pool of knowledge and expertise. Moreover, CEOs' professional experience enables them to be more self-confident, innovative and more open-minded to new business ideas and thus they are likely to be less risk averse compared with less professionally experienced CEOs. The literature on professional experience provides inconclusive results with respect to the influence of different professional backgrounds (Science, Engineering, Accounting, Finance, Economics, Marketing and Law) on corporate risk-taking. Therefore, we formulate our fourth hypothesis as follows:

H4: Corporate risk-taking is associated with CEO's professional experience.

2.2.4 CEO education

Anderson et al (2011) argue that different educational backgrounds (level of education e.g. postgraduate studies) may bring into the board different viewpoints, perspectives, cognitive paradigms, and different professional development. The literature on CEO education finds inconclusive results. Thomas et al (1991) and Barker and Mueller (2002) argue that highly educated CEOs are likely to lead more innovative companies. Orens and Reheul (2013) claim that, in addition to their psychological and social characteristics, CEOs' decisions reflect their education. They also find that highly educated CEOs are likely to be less risk averse, open-minded to new innovative business ideas and better informed about their external environment. Beber and Fabbri (2012) find that overconfident directors with an MBA degree may be willing to take more risk. Lin et al (2011) find a positive relationship between CEO's educational background and private companies' innovation in China. Barker and Mueller

(2002) find that CEOs with an advanced science degree are less risk averse and more likely to invest in R&D. Moreover, Tyler and Steensma (1998) argue that CEOs with advanced Science and Engineering degrees have better risk- taking skills.

On the other hand, Daellenbach et al (1999) did not find any significant relationship between CEO education and the level of R&D spending. Although the literature on CEOs' education provides mixed results, the main theme of the findings suggests that CEOs with postgraduate studies are likely to be more innovative and have better risk- taking skills. Therefore, we hypothesise the following:

H5: There is a positive relationship between CEO education and corporate risk- taking.

2.2.5 CEO gender

The resource dependence theory assumes that female directors bring to the board different perspectives and experience. The existing body of the literature documents that female directors are more risk averse. Jianakoplos and Bernasek (1998) and Sunden and Surette (1998) argue that the perception that women are less risk averse than men may explain the low proportion of females sitting on banks' boards. Muller-Kahle and Lewellyn (2011) find that companies with more gender diverse boards were less involved in sub-prime lending. Mateos et al (2012) argue that this stereotype of risk averse female directors is the main reason for the "Glass Ceiling" on the corporate promotion ladder. Graham et al (2013) find that female CEOs are less likely to have higher leverage ratios compared with their male counterparts. Similarly, Huang and Kisgen (2013) find that female CEOs are less likely to rely on long-term debt and to undertake acquisitions. They also find that female CEOs are likely to exercise stock options early compared with male CEOs and this suggests that male CEOs are more overconfident with respect to corporate decisions.

On the other hand, Berger et al (2012) find that a higher proportion of female board members is associated with an increase in risk-taking. Adams and Funk (2012) find that female directors are more benevolent and universally concerned but less power-oriented than their male counterparts. More importantly, they find that female directors are more risk-loving than male directors. Thus, having a woman on the board may not lead to more risk-averse decision-making (Adams and Funk 2012). The above discussion shows that there is a large strand in the existing literature which supports the negative association between the presence of female directors (including CEOs) and corporate risk-taking. Moreover, to the best of our knowledge, there are no other studies that investigate the impact of CEO gender on corporate risk-taking in China. Based on the above discussion we formulate our sixth hypothesis:

H6: There is a negative relationship between the presence of female CEOs and corporate risk-taking.

3. Data and sample

We collect data on corporate risk-taking, CEO characteristics, corporate governance, and other company specific variables for a sample of Chinese non-financial IPOs floated in the SSE and SZSE over the period 1999-2009. We track the changes in both CEO characteristics and corporate risk-taking measures over at least 4 years post IPO e.g if the company was floated in 2009, we then collect data on all sample firms until 2012 i.e. at the IPO year, IPO year+1, IPO year+2, and IPO year+3. In line with other studies (e.g., Peasnell et al, 2005; Anderson et al, 2011), we exclude companies in the financial sector as they have different governance characteristics and a different regulatory framework. Therefore, our final sample is an unbalanced panel that comprises 892 IPOs and 8006 company-year observations. Data

is collected from the China Stock Market and Accounting Research (CSMAR) database which is designed and developed by GTA Information Technology Corporation.

In China, the title of CEO was rarely used but companies have started to use it more recently. The most common titles that are historically used by Chinese companies are Chairman and General Manager. We agree with Xiao et al (2004); Wang (2010); Firth et al (2009); Fan et al (2007); Chang and Wong (2009); and Pessarossi and Weill (2013) among others that the general manager is the company's "top executive" who is equivalent to "Chief Executive Officer" (CEO) in Western countries³.

3.1 Corporate risk- taking measures

Prior studies have used different proxies for risk- taking including R&D intensity, innovation, and acquisitions and takeovers⁴. However following Anderson and Fraser (2000); Pathan (2009) and Low (2009), we estimate three different measures of corporate risk- taking namely total risk, company specific risk (unsystematic) and systematic risk. Total risk captures the overall variability in stock return and reflects the market perception about the company's financial position (Pathan 2009). Total risk is calculated using the annualised standard deviation of daily stock returns for each year. Daily stock returns are calculated as the first difference in the natural logarithm of the closing price over two consecutive trading days adjusted for dividends, stock dividends, and stock splits. We also calculate company specific risk (unsystematic) for each company- year. Company specific risk (unsystematic) is unique and related to their operating activities. We measure company specific risk as the annualised standard deviation of the daily abnormal returns generated by the market model and market adjusted model (as a robustness check) for each year. We use both SSE and SZSE composite market-value weighted indices as benchmarks for the Shanghai and Shenzhen

stock exchanges respectively. Finally, we calculate systematic risk as the difference between total risk and company specific risk.

3.2 CEO characteristics

We collect data on CEO characteristics namely age, board experience, professional experience, education, and gender. We identify CEO age and gender for each company over the sample period. Board experience takes into account the length of time served on the current board (tenure). We also use previous boards' memberships as another proxy for CEO board experience by specifying a dummy variable that takes the value of 1 if the CEO has previous board memberships and 0 otherwise. To measure CEO education, we create a dummy variable that takes the value of 1 if a CEO holds a postgraduate degree (e.g. Masters and/or PhD) and 0 otherwise.

Moreover, we collect data on professional experience and classify the professional backgrounds of CEOs into three main categories⁵ namely, Science/Engineering, Economics/Accounting and Law following Anderson et al (2011). Therefore, we create dummy variables taking the value of 1 if a CEO has a respective background in the relevant professional category and 0 otherwise. Finally, we create a dummy variable that takes the value of 1 if a CEO has a political background and 0 otherwise.

3.3 Corporate governance characteristics

We collect data on governance characteristics of the Chinese IPOs. These include board size, board independence, and ownership structure. Board size is measured by the total number of directors sitting on the board of directors (BoD). We measure board independence by the proportion of independent non-executive directors (INEDs) sitting on the BoD. Hillman et al

(2000) find that board structure (measured by size and independence) reduces company uncertainty when directors link the company with its external environment. Moreover, we measure CEO/chair duality as defined by a dummy variable that takes the value of 1 where the roles of the CEO and Chairman are conducted by the same person and 0 otherwise. We believe that combining the roles of CEO and Chair might be seen as an indication of power vested in a single individual.

Despite the economic reform and privatisation of many state-owned companies, the state still owns a majority of controlling shareholdings in Chinese listed companies (Sun and Tong 2003). This may have an impact on CEO discretion and thus corporate risk-taking (Li and Tang 2010). Therefore, we control for the ownership structure as measured by the proportion of state-owned shares. Chang and Wong (2009) claim that either the central or provincial government in China appoints senior directors including the CEO; whilst Li and Tang (2010) claim that the government also appoints the CEOs of non-state-owned companies to ensure their compliance with government policies (Li and Tang 2010). On the other hand, Barker and Mueller (2002) and May (1995) argue that the greater the CEO share ownership, the more risky the decisions they undertake. Therefore, we measure CEO share ownership⁶ by the proportion of shares owned by the CEO and expect that corporate risk-taking is higher in companies where CEOs have significant share ownership.

3.4 Company specific variables

We control for the financial performance of IPOs using both lagged return on assets (ROA) and lagged values of Tobin's Q (market value of equity, the book value of debt and the book value of preferred stocks divided by the book value of total assets). We expect a positive relationship between lagged financial performance and corporate risk-taking. We also

construct a number of company-specific variables which are the primary determinants of corporate risk-taking. We use companies' lagged total assets as a proxy for size. We also use lagged total debt to total assets ratio as a proxy for leverage. Moreover, we control for company age defined as the number of years since the IPO. We also control for the lagged ratio of intangible assets to total assets as a proxy for fast growth companies. Finally, we create a set of industry, stock exchange (SSE and SZSE) and year dummies to control for any potential inter-industry, listing exchange and time specific effects.

4. Empirical Modelling

Endogeneity may bias the estimation results and lead to spurious correlations due to the omitted unobservable company characteristics e.g. corporate culture, norms and management quality which are assumed to be time-invariant during the period of study (Adams and Ferreira 2009). To investigate the impact of CEO demographic characteristics on corporate risk-taking for the Chinese IPOs, we use a fixed effects model to control for company heterogeneity and any other unobservable company characteristics that may influence the results⁷. The advantage of a fixed effects model is that it controls for the potential omitted company characteristics that may lead to inconsistent estimation due to endogeneity issues.

However there is another source of endogeneity, namely reverse causality. In our empirical estimation, there might be a reverse causality between corporate risk-taking and board structure. Moreover, there might be a reverse causality between ownership structure and corporate risk-taking (Low 2009; Bhagat and Bolton 2008; Demsetz and Lehn 1985).

Therefore as a robustness test and following Low (2009), we estimate the dynamic panel data model of Blundell and Bond (1998) namely the system Generalized Method of Moments

(GMM) estimator which combines in a system the equation in first-differences with the same equation expressed in levels⁸ as in equation 1.

$$CRT_{it} = \alpha_0 + \omega_i CRT_{it-1} + \beta_i' CEOC_{it} + \gamma_i' x_{it} + \pi_i Year_t + v_i + \varepsilon_{it} \quad (1)$$

Where, CRT_{it} is the corporate risk-taking measures; CRT_{it-1} : is the lagged measures of corporate risk-taking ; $CEOC_{it}$ is a $1 \times k$ vector of CEOs' characteristics, x_{it} is a $1 \times k$ vector of corporate governance characteristics; financial performance; share ownership and other control variables in addition to company-and industry -specific effects. β' and γ' are a $1 \times k$ vector of parameters to be estimated, v_i is the panel unobservable heterogeneity (which may be correlated with the covariates), and ε_{it} is independent and identically distributed (i.i.d.) over the whole sample with variance σ_ε^2 . v_i and ε_{it} are assumed to be independent for each i over all t . We use lagged levels instruments for the regression in differences, and lags of the first-differenced variables for the equation in levels. Therefore, we use 4 lags of board size, board independence, CEO ownership and state ownership as instruments in the equation in first-differences, and 3 lags of their differences as instruments in the equation in levels. For all regression models, we control for time fixed effects and estimate clustered standard errors using the Windmeijer (2005) correction procedures to produce robust standard errors.

We argue that our study is less subject to selection bias due to the CSRC regulation - in particular article 12 in which there should not be significant change in the directors and senior management team of the issuer in the three years prior to an IPO⁹. Therefore, the reverse causality between directors' characteristics and risk taking behavior is unlikely in our paper.

5. Empirical results

Table 1 presents the summary statistics of the main variables used in the empirical analysis.

Table 1 illustrates that the mean value of total risk measured by the annualized standard deviation of daily stock returns is 70% while the average company specific risk measured by the annualized standard deviations of excess returns is 64%. Table 1 also shows that the mean value of systematic risk measured by the difference between total risk and company specific risk is 7%.

CEO age ranges from 24 to 77 years with a mean value of 47 years. CEO tenure ranges from 1 to 20 years with a mean value of 3.3 years. Moreover, 41% of the CEOs in our sample have previous board memberships. Table 1 also illustrates the professional background of the Chinese CEOs as 37% have a Science/Engineering background while 23% have an Economics/Accounting background. Table 1 also illustrates that 6% of CEOs have political backgrounds. Moreover, the average CEOs' share ownership is 2% with a maximum shareholding of 69%, while state ownership has a maximum shareholding of 86% with a mean value of 22%.

Furthermore, Table 1 presents the governance characteristics of the Chinese IPOs' boards of directors. The mean value of female CEOs is 5% while the chair and CEO roles are conducted by the same person in 17% of the Chinese IPOs. Board size ranges from 5 to 19 directors with a mean value of 9.4 directors with the percentage of INEDs being 33%. The average ROA and Tobin's Q are 7% and 1.8 respectively whereas the average company size, proxied by the natural logarithm of total assets, being 21.48 (2130 million RMB). Finally, 59% of IPOs are floated in the SSE while 41 % of IPOs are floated in the SZSE.

Insert Table 1 about here

Table 2 presents a comparison between CEO demographics, corporate governance characteristics and other control variables for IPOs floated in the SSE and the SZSE and for state –owned and non-state-owned IPOs. We notice that there is a significant difference at the 1% level between corporate risk- taking measures between SSE and the SZSE and between state owned and non –state owned IPOs. Table 2 also shows that both total risk and company specific risk are greater in the SZSE, however systematic risk is higher in the SSE. On the other hand, corporate risk- taking measures are higher for state-owned IPOs.

Table 2 shows that CEO’s previous board experience for non-state-owned IPOs is significantly higher than state-owned IPOs. We also find that CEOs with Science/Engineering backgrounds are significantly higher for state-owned IPOs. Moreover, 28.5% of the CEOs of non-state-owned IPOs have post-graduate qualifications compared with 22.1% for their state-owned counterparts. We also find that the proportion of politically connected CEOs is greater for state-owned IPOs. Interestingly, the proportion of female CEOs is higher (6%) for non-state-owned IPOs compared with 3% for state-owned IPOs. Furthermore, Table 2 also shows that, the proportion of CEOs with postgraduate degrees is significantly higher for the SZSE being 36% compared with the SSE at 18%. Moreover, CEOs board experience is greater in the SZSE as the proportions of CEOs with previous board memberships are 33% and 52% for the SSE and the SZSE respectively. Table 2 also shows that there is no significant difference between the proportions of female CEOs in either the SSE (4%) or the SZSE (5%). Finally, CEOs’ share ownership is greater in the SZSE (5%) compared with the SSE (0.5%).

Insert Table 2 about here

Table 3 presents the univariate analysis of the relationship between CEO demographic characteristics namely age, gender, education, board and professional experience and corporate risk- taking measures. We compare means based on median age (46 years) and tenure (3 years). The results show that there is a significant difference in both total risk and company specific risk between younger (77%) and older CEOs (65%). This suggests that younger CEOs are likely to make risky decisions compared with older CEOs.

The results also show that there is a significant difference in corporate risk-taking measures with respect to CEO gender. The average total risk for female and male CEOs is 88% and 69% respectively whereas the average company specific risk for female and male CEOs is 79% and 62% respectively. Moreover, the average systematic risk for female and male CEOs is 0.6% and 0.4% respectively. This suggests that female CEOs are not risk averse compared with their male counterparts in China. Finally, we find that CEOs with previous board memberships are likely to make risky decisions.

Insert Table 3 about here

Table 4 presents the correlation matrix for the main variables used in the empirical analysis. It is clear from Table 4 that there is no evidence of a multicollinearity problem as none of the correlations between the independent variables is significantly above 0.50.

Insert Table 4 about here

Table 5 presents the results of the fixed effects regressions of the influence of CEOs' demographic characteristics on corporate risk- taking measured by total risk, company

specific risk and systematic risk as presented in Panels A, B and C respectively. The findings presented in Table 5 show that there is a negative and significant (p value <5%) relationship between CEO age and both total risk and company specific risk as in panels A and B respectively. This suggests that older CEOs are more risk averse compared with younger CEOs. Therefore, younger CEOs are likely to make risky decisions. Our result is consistent with the upper echelons theory and the findings of Orens and Reheul (2013). Therefore, our first hypothesis is supported.

We also find a negative and highly significant relationship (P value <1%) between CEO tenure and both total risk and company specific risk respectively. However, the relationship between CEO tenure and systematic risk is also negative but marginally significant as in Panel C. This suggests that long tenured CEOs are less likely to consider risky decisions as they are internally focused and much less receptive to new business ideas compared with short-tenured CEOs. This result is consistent with Finkelstein and Hambrick (1996) and Orens and Reheul (2013). We argue that longer-tenured CEOs might be more interested in the stability and efficiency of their companies and hence may not make some risky decisions. The above result supports our second hypothesis.

Insert Table 5 about here

The results also show that there is a positive and highly significant relationship (p value <1%) between CEO board experience measured by CEO previous board memberships and corporate risk-taking measures. Our result is also consistent with Koellinger (2008) and Orens and Reheul (2013) as board experience provides CEOs with broader perspectives, more openness to encourage innovative and risky ideas and hence they are likely to make risky decisions. Therefore, the above results support our third hypothesis.

On the other hand, the results show that there is no significant relationship between CEOs professional experience namely Science/Engineering, Law, or Accounting and Economics backgrounds and corporate risk- taking measures. However, we find a negative and marginally significant (P value <10%) relationship between CEOs with a Law background and systematic risk. Moreover, our results show that there is a negative and significant (P value <5%) relationship between politically connected CEOs and systematic risk. Therefore, we may reject the fourth hypothesis with respect to the influence of CEOs professional backgrounds on both total risk and company-specific risk.

Our results also show that there is a highly significant and positive relationship between CEO higher education measured by CEOs who hold postgraduate degrees e.g. MSc, MBA and PhD, and corporate risk- taking. This result is consistent with Anderson et al (2011) and Orens and Reheul (2013) as they argue that different educational backgrounds may bring into the board different viewpoints, perspectives, cognitive paradigms, and different professional developments and this may encourage CEOs to make more risky decisions. Our result is also consistent with Beber and Fabbri (2012) as they find that overconfident directors with an MBA degree may take more risk. We argue that highly educated CEOs are less risk averse and are likely to be more open to innovative business ideas, and hence, they are better informed about their external environment. The above result supports our fifth hypothesis.

Interestingly, we find a positive and highly significant (p value <1%) relationship between female CEOs and both total risk and company specific risk. This result is in contrast with the existing body of the literature which documents that female directors are more risk averse (Jianakoplos and Bernasek 1998; Sunden and Surette 1998). However, our result is consistent with the recent studies of Berger et al (2012) and Adams and Funk (2012). They find that the

higher the proportion of female directors the more risk-taking. We argue that this result is consistent with human capital and resource dependence theories as female CEOs may bring to the board different viewpoints, perspectives, and different professional experiences and thus they may prefer to make more risky decisions. Based on the above results, we reject our sixth hypothesis.

Table 5 also indicates that there is no significant relationship between CEO share ownership and corporate risk-taking. Kim and Lu (2011) find that a high level of CEOs' ownership may discourage them from taking risk unless mitigated by strong external governance mechanisms. Furthermore, we find a positive and highly significant relationship between state share ownership and corporate risk-taking. The dominance of state ownership and control is one of the distinguishing features of the Chinese governance mechanism (Kato and Long 2006). Allen et al (2005) and Guariglia et al (2011) argue that there is preferential treatment to state-owned companies from financial institutions. Farag and Mallin (2015) find that state-owned IPOs have better financial performance. We argue that CEOs of state-owned companies are motivated to make risky decisions given the preferential treatment from the financial sector and the state.

As expected, we find a positive and highly significant relationship between financial performance measured by lagged ROA and corporate risk-taking. Moreover, consistent with Anderson and Fraser (2000), we find that larger companies are likely to have less total risk and company specific risk, though more systematic risk. Furthermore, we find a positive and significant relationship between both board size and independence and total risk and company specific risk respectively. Therefore, large and more independent boards are overall likely to make risky decisions. Moreover, when directors link the company with its external environment, board size and independence may reduce company uncertainty (Hillman et al.,

2000). Finally, the fixed effects models are well-specified as F-statistics are highly significant.

Sun and Tong (2003) claim that the Chinese government still owns a majority of controlling shareholdings in listed companies, despite the economic reform and privatisation programme adopted by the state. This may have an impact on CEO discretion and thus corporate risk-taking (Li and Tang 2010). In this section we address the concerns that the influence of CEOs demographics is particularly driven by state ownership. Therefore, we present the fixed effects regressions for both state-owned and non-state-owned IPOs as in Table 6.

Insert Table 6 about here

We find consistent results with those presented in Table 5 with respect to the influence of CEO tenure, previous board experience, and professional experience in addition to CEO ownership on corporate risk-taking for both state-owned and non-state-owned IPOs.

However, we notice that there is a negative and significant influence of CEO age on total risk and company specific risk for non-state-owned IPOs. Moreover, we find similar relationships - to those presented in Table 5- between both CEO gender and political connections and corporate risk-taking only for state-owned IPOs. With respect to CEO higher education, we find that there is a positive and significant relationship between CEO education and corporate risk-taking only for state-owned IPOs. Interestingly, we find that independent boards for non-state-owned IPOs are likely to make risky decisions; however, we find no impact of board size on total risk and company specific risk for both state-owned and non-state-owned IPOs. To sum up, the results presented in Table 6 show that the determinants of corporate risk-taking behaviour do significantly vary between state-owned

and non-state-owned IPOs with respect to the impact of CEO demographic characteristics namely age, gender, and education. Younger CEOs in non- state-owned IPOs are likely to make risky decisions, whereas in state-owned IPOs, CEOs with post-graduate qualifications and female CEOs are less risk averse and likely to take more risk. Moreover, the greater the board independence the more risk-taking in non-state-owned IPOs.

The results presented earlier in Table 2 show that there is a significant difference in CEOs demographics between both the SSE and SZSE. Table 7 presents the results of the fixed effects regressions of the influence of CEOs demographic characteristics on corporate risk-taking for IPOs listed in both SSE and SZSE as presented in Panels A and B respectively.

Insert Table 7 about here

Overall we find similar results to those presented in Table 5. We find a negative relationship between CEO age and corporate risk-taking measured by total risk and company specific risk. However, this relationship is significant only in the SZSE. We also find a negative and significant link between CEOs tenure and both total risk and company specific risk. Moreover, we find a positive relationship between CEO previous board experience and corporate risk- taking; however, this relationship is more significant in the SSE.

On the other hand, we find a significant and negative relationship between CEOs with Science/Engineering and Accounting/ Economics backgrounds and both total risk and company specific risk in the SSE. Furthermore, we find a significant and positive link between CEOs higher education and both total risk and company specific risk in the SZSE. Consistent with the results presented in Table 5, CEO share ownership has no influence on corporate risk- taking in both the SSE and the SZSE. However, we find a positive and

significant relationship between state-ownership and corporate risk-taking in both the SSE and the SZSE. Finally, the results show that female CEOs are not risk averse and are likely to make risky decisions in the SZSE.

In this section, we present the results of a number of robustness tests. CEO turnover may have an impact on corporate risk-taking, therefore, we control for CEO turnover to address the concern of selection bias¹⁰ and re-estimate the fixed effects models. On the other hand, Roodman (2009) argue that fixed effects models may produce biased results due to their econometrics problems such as serial correlation (our measure of corporate risk-taking measures may suffer from serial correlation). Therefore, we estimate the system GMM as a robustness check. Table 8 presents the results of these robustness tests as in Panels A and B.

Insert Table 8 about here

Overall, the results presented in Panel A are similar to those of Table 5. However, we find that the coefficient on CEO turnover is statistically insignificant for corporate risk-taking measures. Therefore, there is no influence of CEO turnover on corporate risk-taking for Chinese IPOs. Moreover, the results presented in Panel B are consistent with the fixed effects estimation with regard to the CEO age, tenure, and CEO previous board experience. However, we find a negative and significant link between CEOs with Law backgrounds and both total risk and company specific risk. This result suggests that CEOs with Law background are less likely to make risky decisions.

The results presented in Panel B also show a negative and highly significant relationship between politically connected CEOs and both total risk and company specific risk. We also

find similar results to those presented in Table 5 with respect to the influence of CEO gender and education on corporate risk-taking. Finally, the models are well specified as the Hansen test does not reject the over-identifying restrictions assumption and the results of the Arellano-Bond (1991) test for second order serial correlation is insignificant.

6. Summary and conclusion

The uncertainty about management quality is always a key issue for shareholders as stock markets continually reflect the assessments of CEOs' characteristics, skills and their risk profiles into stock prices. China has an increasing influence on the world economy although it has different socio-economic and cultural frameworks compared with western countries. Therefore studying the Chinese experience in relation to the CEOs' demographic characteristics and corporate risk-taking provides some unique insights and adds to the existing literature on corporate governance.

Using a sample of 892 IPOs floated in both the SSE and the SZSE during 1999-2009, the univariate analysis shows that there is a significant difference in total risk and company specific risk between younger and older CEOs and this suggests that younger CEOs are likely to make risky decisions compared with older CEOs. We also find that there is a significant difference in corporate risk-taking between female and male CEOs. This result is consistent with Berger et al (2012) and Adams and Funk (2012) and suggests that female CEOs are not risk averse compared with male CEOs in China. The fixed effects and system GMM estimations show that there is a negative and significant relationship between CEO age and corporate risk-taking in China. This suggests that older CEOs are more risk averse compared with younger CEOs. Our result is consistent with the upper echelons theory. We also find a negative and highly significant relationship between CEO tenure and corporate risk-taking

suggesting that long-tenured CEOs are less likely to consider risky decisions as they are internally focused and much less receptive to new business ideas compared with short-tenured CEOs. Moreover, longer-tenured CEOs might be more interested in the stability and efficiency of their companies and hence may not make risky decisions.

Consistent with Koellinger (2008) and Orens and Reheul (2013), we find a highly significant and positive relationship between CEO previous board experience and corporate risk-taking as board experience provides CEOs with broader perspectives, better understanding to corporate culture and group dynamics (Anderson et al., 2011) and hence they are likely to make risky decisions. Our results also show that there is a highly significant and positive relationship between CEO higher education and corporate risk-taking. We argue that highly educated CEOs are less risk averse and are likely to be more open to innovative business ideas, and hence, they are better informed about their external environment. Interestingly, and consistent with the results with Berger et al (2012) and Adams and Funk (2012), we find that female CEOs are not risk averse. We argue that female CEOs may bring to the board different viewpoints, different perspectives, and different professional experiences. Finally, we find a positive and highly significant relationship between state ownership and corporate risk-taking.

This paper has a number of policy implications; we believe that studying the demographic characteristics of the Chinese IPOs may provide useful insights to policy makers and shareholders. Policy makers and shareholders generally seek to hire the most talented CEOs with the relevant set of skills to achieve shareholders' objectives and improve the Chinese competitiveness in the global market. We argue that younger, short-tenured, and female CEOs and those with previous board experience and postgraduate qualifications are likely to

make risky decisions. Our empirical results provide support for the calls for broader board diversity in terms of age, gender, education and board experience. Furthermore, they provide support and encouragement for the recent recommendations to encourage board diversity as a feature of corporate governance best practice. An investigation of the impact of venture capital backed IPOs on CEO power, in addition to CEO compensation heterogeneity, are potential areas for future research.

Endnotes

¹ During 2010 and 2011, the IPO market also witnessed a sharp increase in terms of the number of IPOs (in the SZSE stock exchange in particular) as 345 and 278 IPOs were launched in the SSE and SZSE respectively. For more detail, see Ernst & Young, *Global IPO Trends Report 2010-2012: Prepare early, move fast*, 2012 and the websites of the Shanghai and Shenzhen stock exchanges.

² At the end of May 2013, 269 Chinese firms had withdrawn their IPO applications, while 666 firms had their IPO plans under review by the CSRC.

³ According to the Chinese Company Law and its amended version in 2006, the general manager is responsible for “*being in charge of managing the company's production and operation, and organizing the implementation of resolutions adopted by the board; organizing the implementation of annual operating plans and investment programs of the company; drafting the plan for the structure of the company's internal management; drafting the basic management scheme of the company; formulating detailed rules of the company; recommending for appointment or removal of the deputy general managers and the officer in charge of finance; appointing and removing officers of the company other than those to be appointed or removed by the board; other authorities prescribed by the articles of association and delegated by the board*”.

⁴ We could not find data on innovation, on CSMAR database and many missing data on R&D expenditure as alternative proxies for corporate risk-taking as not all IPOs invest in R&D.

⁵ According to the CSMAR database, there are other categories such as Academics. However, we used the classification of CEOs' professional experience following Anderson et al (2011).

⁶ Agency theory provides the basis and the rationale for the board's monitoring function on behalf of shareholders and entails that agents (the directors) are working in the best interests of shareholders. According to agency theory, executive share ownership may align long-term objectives of both shareholders and top executives. Therefore, share ownership may encourage CEOs and top executives to adopt wealth-enhancing objectives by making more risky decisions (Jensen 1993).

⁷ We also run the Hausman test to decide between fixed or random effects. The test result rejects the null hypothesis that errors are not correlated with regressors. Therefore we conclude that the fixed effects model is preferred against the alternative random effects model.

⁸ The system GMM allows for the use of lagged variables to control for endogeneity. It also assumes that the idiosyncratic error terms are heteroskedastic and serially correlated, and uncorrelated across companies (Roodman, 2009).

⁹ For more detail see http://www.csrc.gov.cn/pub/zjhpublic/zjh/200804/t20080418_14502.htm

¹⁰ We also excluded the observations where the company appoints a new CEO and re-estimate the fixed effects regressions. We find similar results to those presented in Table 5.

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Table 1: Descriptive Statistics for the Pooled Sample

	Mean	SD	Min	Max	Obs
T. Risk	0.703	1.208	0.002	40.465	7943
Unsys. Risk	0.635	1.158	0.000	40.465	7943
Sys. Risk	0.067	0.236	0.000	11.958	7943
CEO Age	46.672	6.701	24.000	77.000	7957
CEO Tenure	3.332	1.692	1.000	20.000	7874
CEO Exp.	0.406	0.491	0.000	1.000	8006
Science/Engineering	0.367	0.482	0.000	1.000	8006
Accounting/Economics	0.229	0.420	0.000	1.000	8006
Law	0.008	0.090	0.000	1.000	8006
PolconCEOs	0.061	0.076	0.000	1.000	8006
CEO edu	0.252	0.434	0.000	1.000	8006
Fem CEO	0.046	0.187	0.000	1.000	8006
CEO/Chair	0.173	0.379	0.000	1.000	8006
CEOOwn	0.022	0.076	0.000	0.691	7970
StateOwn	0.216	0.266	0.000	0.863	7970
ROA	0.068	0.089	-1.674	1.789	7906
Tobin's Q	1.786	1.188	0.464	15.929	7960
Bsize	9.401	2.005	5.000	19.000	8006
INED	0.328	0.102	0.000	0.801	7938
Ln TA	21.480	1.239	17.272	28.405	7988
Coage	9.632	4.189	1.000	25.000	8006
Debt/TA	0.452	0.198	0.003	0.891	7987
IA ratio	0.040	0.061	0.000	0.840	7981
Exchange	0.585	0.493	0.000	1.000	7943

T. Risk: annualized standard deviation of daily stock returns for each company year. Daily stock returns are calculated as the first difference in the natural logarithm of the closing price over two consecutive trading days adjusted for dividends, stock dividends, and stock splits. Unsys. Risk: Unsystematic (firm-specific) risk measured as the annualized standard deviation of the residuals of market model and market adjusted model for each company year. Sys. Risk: Systematic risk measured by the difference between total risk and firm-specific risk. We use both SSE and SZSE composite market-value weighted indices as benchmarks for the Shanghai and Shenzhen stock exchanges respectively. CEOAge: CEO age measured by years; CEO Tenure: the length of time served on the current board; CEO Exp: dummy variable takes the value of 1 if the CEO has previous board memberships and 0 otherwise; CEO Prof. Ex: dummy variable takes the value of 1 if the CEO has a background in Science/Engineering, Accounting/Economics and Law respectively and 0 otherwise. PolconCEO: dummy variable takes the value of 1 if the CEO is politically connected and 0 otherwise; CEO edu: dummy variable takes the value of 1 if the CEO holds a postgraduate degree (e.g. Masters and/or PhD) and 0 otherwise; Fem CEO: dummy variable takes the value of 1 if the CEO is female and 0 otherwise; CEO/Chair: dummy variable takes the value of 1 if the CEO and the Chair are the same person and 0 otherwise; CEOOwn: percentage of shares owned by CEOs; StateOwn: percentage of State share ownership; ROA: return on assets calculated as (net profits + financial expenses)/average total assets; Tobin's Q: Q ratio measured by (market value of equity, the book value of debt and the book value of preferred stocks divided by the book value of total assets); Bsize: board of directors' size; INED: percentage of independent non-executive directors ; LnTA: natural logarithm of company's total assets as a proxy for company size; Coage: company age since its establishment year; Debt/TA: total debt to total assets ratio as a proxy for leverage; IA ratio: Intangible assets intensity ratio measured by the proportion of intangible assets to total assets; Exchange: dummy variable takes the value of 1 if an IPO is floated in Shanghai Stock Exchange and 0 for Shenzhen Stock Exchange.

Table 2: CEO Demographics and Corporate Governance Characteristics for Shanghai and Shenzhen Stock Exchanges and for SOEs and non-SOEs

	Shanghai	Shenzhen	t- statistics	SOEs	Non SOEs	t- statistics
T. Risk	0.647	0.783	4.928***	0.767	0.635	-4.870***
Unsys. Risk	0.539	0.771	8.829***	0.691	0.576	-4.399***
Sys. Risk	0.107	0.011	-18.269***	0.758	0.058	-9.300***
CEO Age	46.566	46.868	1.877*	46.722	46.617	-0.702
CEO Tenure	3.246	3.452	5.351***	3.203	3.470	7.019***
CEOExp.	0.329	0.515	16.994***	0.324	0.493	15.595***
Science/Engineering	0.366	0.368	0.157	0.397	0.334	-5.829***
Accounting/Economics	0.225	0.235	1.132	0.235	0.221	-1.481
Law	0.008	0.008	0.013	0.007	0.008	0.168
PolconCEO	0.071	0.041	-1.716*	0.097	0.023	-4.196***
CEO edu	0.178	0.359	18.631***	0.221	0.285	6.743***
Fem CEO	0.042	0.049	1.553	0.030	0.062	6.893***
CEO/Chair	0.117	0.254	16.117***	0.116	0.235	14.211***
CEOOwn	0.005	0.047	25.347***	0.005	0.039	20.839***
ROA	0.062	0.075	6.357***	0.064	0.072	4.451***
Tobin's Q	1.710	1.892	6.729***	1.502	2.088	22.693***
Bsize	9.679	9.163	-11.418***	9.895	9.000	-20.333***
INED	0.325	0.333	10.417***	0.309	0.348	-17.305***
Ln TA	21.688	21.20	-17.856***	21.550	21.405	-5.272***
Coage	9.918	9.253	-7.000***	8.621	10.717	23.096***
Debt/TA	0.479	0.408	-10.512***	0.463	0.436	-6.175***
IA ratio	0.040	0.039	-0.722	0.035	0.044	6.199***

The table presents univariate analysis of a comparison between CEO Demographics and Corporate Governance Characteristics for IPOs floated in both the Shanghai and Shenzhen Stock Exchanges and for state owned companies (SOEs) and non-state owned companies (Non-SOEs) over the period 1999-2012 (sample period 1999-2009, with changes tracked until 2012). T. Risk: annualized standard deviation of daily stock returns for each company year. Daily stock returns are calculated as the first difference in the natural logarithm of the closing price over two consecutive trading days adjusted for dividends, stock dividends, and stock splits. Unsys. Risk: unsystematic (firm-specific) risk measured as the annualized standard deviation of the residuals of market model and market adjusted model for each company year. Sys. Risk: systematic risk measured by the difference between total risk and company-specific risk. We use both SSE and SZSE composite market-value weighted indices as benchmarks for the Shanghai and Shenzhen stock exchanges respectively. CEOAge: CEO age measured by years; CEO Tenure: the length of time served on the current board; CEO Exp: dummy variable takes the value of 1 if the CEO has previous board memberships and 0 otherwise; CEO Prof. Ex: dummy variable takes the value of 1 if the CEO has a background in Science/Engineering, Accounting/Economics and Law respectively and 0 otherwise. PolconCEO: dummy variable takes the value of 1 if the CEO is politically connected and 0 otherwise; CEO edu: dummy variable takes the value of 1 if the CEO holds a postgraduate degree (e.g. Masters and/or PhD) and 0 otherwise; Fem CEO: dummy variable takes the value of 1 if the CEO is female and 0 otherwise; CEO/Chair: dummy variable takes the value of 1 if the CEO and the Chair are the same person and 0 otherwise; CEOOwn: percentage of shares owned by CEOs; ROA: return on assets calculated as (net profits + financial expenses)/average total assets; Tobin's Q: Q ratio measured by (market value of equity, the book value of debt and the book value of preferred stocks divided by the book value of total assets); Bsize: board of directors' size; INED: percentage of independent non-executive directors ; LnTA: natural logarithm of company's total assets as a proxy for company size; Coage: company age since its establishment year; Debt/TA: total debt to total assets ratio as a proxy for leverage; IA ratio: Intangible assets intensity ratio measured by the proportion of intangible assets to total assets. *** and * indicate significance at the 1% and 10% levels respectively.

Table 3: Univariate analysis of the relationship between CEO demographic characteristics and risk taking

CEO characteristics	<i>Panel A: T. Risk</i>		<i>Panel B: Unsys. Risk</i>		<i>Panel C: Sys. Risk</i>	
	Mean	t- stat	Mean	t- stat	Mean	t- stat
CEO Age						
Age >= Median	0.645	-4.702***	0.579	-4.745***	0.0041	- 0.785
Age < Median	0.773		0.703		0.0045	
CEO Gender						
Male	0.689	-2.959***	0.623	-2.728***	.0041	-1.917*
Female	0.879		0.792		.0057	
CEO Education						
PG degree	0.692	0.605	0.643	0.593	0.0030	-0.088
Non-PG degree	0.668		0.620		0.0031	
CEO Board Experience						
CEO Tenure						
Tenure >= Median	0.707	0.824	0.639	0.796	0.0043	0.495
Tenure < Median	0.675		0.611		0.0041	
CEOExp						
CEO previous directorship	0.736	2.986***	0.663	2.536**	0.0046	2.868***
Non CEO previous directorship	0.654		0.595		0.0036	

The table presents the univariate analysis of the relationship between CEO demographic characteristics and corporate risk taking measured by stock returns volatility for a sample of Chinese IPOs during 1999-2012. The median of CEO age and tenure are 46 and 3 years respectively. T. Risk: annualized standard deviation of daily stock returns for each company year. Daily stock returns are calculated as the first difference in the natural logarithm of the closing price over two consecutive trading days adjusted for dividends, stock dividends, and stock splits; Unsys. Risk: unsystematic (firm-specific) risk measured as the annualized standard deviation of the residuals of market model and market adjusted model for each company year. Sys. Risk: systematic risk measured by the difference between total risk and company- specific risk. We use both SSE and SZSE composite market-value weighted indices as benchmarks for both Shanghai and Shenzhen Stock Exchanges respectively. ***, **,and * indicate significance at the 1%, 5% and 10% levels respectively.

Table 4: Correlation matrix

	T.Risk	Unsys. Risk	Sys. Risk	CEO Age	CEO tenure	CEO Exp.	CEO edu	CEO Own	Bsize	CEO/ Chair	INED	ROA	State Own
T.Risk	1.000												
Unsys. Risk	0.981	1.000											
Sys.Risk	0.302	0.111	1.000										
CEO Age	-0.032	-0.032	-0.007	1.000									
CEO tenure	-0.048	-0.046	-0.019	0.102	1.000								
CEO Exp.	0.034	0.028	0.032	0.107	0.075	1.000							
CEO edu	0.004	0.006	0.048	-0.088	0.037	0.169	1.000						
CEO Own	0.056	0.065	0.032	0.032	0.065	0.144	0.156	1.000					
Bsize	0.009	0.014	-0.023	0.079	0.002	-0.049	-0.031	-0.154	1.000				
CEO/Chair	0.052	0.062	-0.036	0.136	0.041	0.166	0.077	0.372	-0.144	1.000			
INED	0.191	0.185	-0.068	0.057	0.022	0.287	0.182	0.135	0.137	0.063	1.000		
ROA	0.078	0.080	0.007	0.038	0.036	0.057	0.051	0.096	0.036	0.040	-0.028	1.000	
State Own	0.054	0.046	0.046	0.021	-0.074	-0.208	-0.102	0.219	0.220	-0.169	0.162	-0.0001	1.000
Ln TA	-0.143	-0.152	0.038	0.187	0.077	0.159	0.100	-0.141	0.225	-0.124	0.130	0.090	0.089
Fem CEO	0.035	0.032	-0.022	0.001	0.006	-0.006	0.007	-0.030	-0.085	0.009	-0.017	0.014	-0.065
Coage	0.174	0.175	-0.029	0.120	0.059	0.187	0.037	-0.065	-0.053	-0.023	0.042	-0.071	-0.348
PolconCEO	-0.005	-0.004	-0.004	0.049	0.009	-0.026	0.024	-0.022	0.014	-0.004	0.016	-0.012	0.055
Law	0.013	0.013	-0.006	-0.010	-0.011	-0.001	0.028	-0.015	0.010	-0.042	0.002	-0.002	-0.011
Engineering	-0.003	-0.009	-0.027	-0.038	0.015	-0.032	0.019	-0.015	0.035	-0.026	0.011	0.001	0.077
Accounting	-0.008	-0.005	0.019	0.072	0.005	0.011	-0.016	-0.033	-0.011	-0.001	-0.030	0.009	0.010
Exchange	-0.055	-0.099	0.201	-0.022	-0.060	0.187	-0.205	-0.274	0.127	0.178	0.126	-0.072	0.174
IA ratio	-0.051	-0.051	-0.010	0.039	0.012	0.060	0.029	-0.001	-0.029	-0.004	0.030	-0.043	-0.102
Debt/TA	0.045	0.052	-0.026	0.075	-0.034	0.021	0.005	-0.125	0.127	-0.098	0.095	-0.051	0.105
Tobin's Q	0.021	0.031	0.043	0.002	0.002	0.078	0.035	0.073	-0.106	0.086	-0.025	0.162	-0.253

	Ln TA	Fem CEO	Co age	Polcon CEO	Law	Engineering	Accounting	Exchange	IA ratio	Debt/TA	Tobin's Q
Ln TA	1.000										
Fem CEO	-0.041	1.000									
Coage	0.221	0.018	1.000								
Polcon CEO	0.028	-0.017	-0.032	1.000							
Law	0.031	-0.020	0.027	-0.007	1.000						
Engineering	0.006	-0.057	-0.041	-0.058	-0.069	1.000					
Accounting	-0.025	0.019	-0.006	-0.041	-0.049	0.414	1.000				
Exchange	0.197	-0.017	0.078	0.019	-0.0001	-0.002	-0.013	1.000			
IA ratio	0.038	-0.020	0.153	-0.001	0.061	-0.073	0.003	0.008	1.000		
Debt/TA	0.375	-0.003	0.135	0.049	-0.002	0.047	0.0002	0.142	0.007	1.000	
Tobin's Q	-0.234	0.037	0.128	-0.016	-0.003	-0.037	-0.036	-0.075	0.199	-0.161	1.000

T. Risk: annualized standard deviation of daily stock returns for each company year. Daily stock returns are calculated as the first difference in the natural logarithm of the closing price over two consecutive trading days adjusted for dividends, stock dividends, and stock splits. Unsys. Risk: unsystematic (firm-specific) risk measured as the annualized standard deviation of the residuals of market model and market adjusted model for each company year. Sys. Risk: systematic risk measured by the difference between total risk and company-specific risk. We use both SSE and SZSE composite market-value weighted indices as benchmarks for the Shanghai and Shenzhen stock exchanges respectively. CEOAge: CEO age measured by years; CEO Tenure: the length of time served on the current board; CEO Exp: dummy variable takes the value of 1 if the CEO has previous board memberships and 0 otherwise; CEO Prof. Ex: dummy variable takes the value of 1 if the CEO has a background in Science/Engineering, Accounting/Economics and Law respectively and 0 otherwise. PolconCEO: dummy variable takes the value of 1 if the CEO is politically connected and 0 otherwise; CEO edu: dummy variable takes the value of 1 if the CEO holds a postgraduate degree (e.g. Masters and/or PhD) and 0 otherwise; Fem CEO: dummy variable takes the value of 1 if the CEO is female and 0 otherwise; CEO/Chair: dummy variable takes the value of 1 if the CEO and the Chair are the same person and 0 otherwise; CEOOwn: percentage of shares owned by CEOs; StateOwn: percentage of State share ownership; ROA: return on assets calculated as (net profits + financial expenses)/average total assets; Tobin's Q: Q ratio measured by (market value of equity, the book value of debt and the book value of preferred stocks divided by the book value of total assets); Bsize: board of directors' size; INED: percentage of independent non-executive directors ; LnTA: natural logarithm of company's total assets as a proxy for company size; Coage: company age since its establishment year; Debt/TA: total debt to total assets ratio as a proxy for leverage; IA ratio: Intangible assets intensity ratio measured by the proportion of intangible assets to total assets; Exchange: dummy variable takes the value of 1 if an IPO is floated in Shanghai Stock Exchange and 0 for Shenzhen Stock Exchange. Bold figures indicate significance at the 5% level or below.

Table 5: Fixed Effects regression of CEOs' Characteristics on Corporate Risk Taking

	<i>Panel A: Total Risk</i>		<i>Panel B: Unsys. Risk</i>		<i>Panel C: Sys Risk</i>	
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
CEO Age	-0.002** (0.001)	-0.002** (0.001)	-0.002** (0.001)	-0.002** (0.001)	-0.0001 (0.0001)	-0.0001 (0.0001)
CEO Tenure	-0.018*** (0.004)	-0.016*** (0.004)	-0.016*** (0.004)	-0.016*** (0.004)	-0.0005* (0.0003)	-0.0005* (0.0003)
CEOExp.	0.066*** (0.019)	0.067*** (0.019)	0.061*** (0.019)	0.062*** (0.018)	0.005*** (0.001)	0.004*** (0.001)
Science/Engineering	-0.029 (0.024)	-0.033 (0.024)	-0.028 (0.024)	-0.033 (0.023)	-0.001 (0.002)	-0.0002 (0.002)
Law	0.017 (0.102)	0.021 (0.101)	0.031 (0.101)	0.032 (0.101)	-0.014* (0.008)	-0.014* (0.008)
Accounting/Economics	-0.024 (0.026)	-0.028 (0.026)	-0.024 (0.026)	-0.029 (0.026)	0.001 (0.002)	0.001 (0.002)
PolconCEO	-0.034 (0.117)	-0.034 (0.117)	-0.015 (0.116)	-0.015 (0.116)	-0.018** (0.009)	-0.017** (0.008)
CEOedu	0.058*** (0.022)	0.064*** (0.022)	0.049** (0.022)	0.055** (0.022)	0.009*** (0.001)	0.008*** (0.001)
Fem CEO	0.267*** (0.049)	0.282*** (0.049)	0.271*** (0.049)	0.285*** (0.049)	-0.003 (0.004)	-0.003 (0.003)
L.CEOOwn	0.017 (0.221)	0.032 (0.221)	0.012 (0.219)	0.025 (0.219)	0.006 (0.018)	0.006 (0.017)
L.State Own	0.163*** (0.044)	0.162*** (0.042)	0.148*** (0.043)	0.145*** (0.043)	0.015*** (0.003)	0.017*** (0.003)
L.ROA	0.639*** (0.091)		0.606*** (0.090)		0.033*** (0.007)	
L.Tobin's Q		0.006 (0.005)		0.003 (0.005)		0.004*** (0.0004)
L.ln Bsize	0.103** (0.052)	0.108** (0.052)	0.111** (0.053)	0.113** (0.051)	-0.008 (0.006)	-0.005 (0.004)
CEO/Chair	0.066** (0.027)	0.066** (0.027)	0.070*** (0.027)	0.071*** (0.027)	-0.004** (0.002)	-0.004** (0.002)
L.INED	0.273*** (0.097)	0.274*** (0.097)	0.325*** (0.096)	0.305*** (0.097)	-0.053 (0.071)	-0.032 (0.073)
L.ln TA	-0.049*** (0.017)	-0.025* (0.014)	-0.055*** (0.017)	-0.032** (0.015)	0.006*** (0.001)	0.007*** (0.001)
Coage	0.004 (0.006)	-0.001 (0.006)	0.004 (0.006)	-0.002 (0.006)	-0.0003 (0.0005)	-0.0002 (0.0005)
L. Debt/TA	0.223*** (0.069)	0.137** (0.066)	0.240*** (0.068)	0.154** (0.067)	-0.017*** (0.005)	-0.018*** (0.005)
L.IA ratio	-0.101 (0.162)	-0.125 (0.161)	-0.103 (0.161)	-0.127 (0.160)	-0.0003 (0.013)	-0.001 (0.013)
Cons.	1.106*** (0.365)	0.669* (0.359)	1.126*** (0.363)	0.745** (0.357)	-0.021 (0.029)	-0.096*** (0.029)
Company Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Year Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummy	No	No	No	No	No	No
R-sq	0.042	0.033	0.041	0.032	0.082	0.072
F-stat	8.93***	6.68***	8.02***	6.39***	13.72***	15.08***
# obs	6685	6753	6685	6753	6685	6753

T. Risk: annualized standard deviation of daily stock returns for each company year. Daily stock returns are calculated as the first difference in the natural logarithm of the closing price over two consecutive trading days

adjusted for dividends, stock dividends, and stock splits. Unsys. Risk: unsystematic (firm-specific) risk measured as the annualized standard deviation of the residuals of market model and market adjusted model for each company year. Sys. Risk: systematic risk measured by the difference between total risk and company-specific risk. We use both SSE and SZSE composite market-value weighted indices as benchmarks for the Shanghai and Shenzhen stock exchanges respectively. CEOAge: CEO age measured by years; CEO Tenure: the length of time served on the current board; CEO Exp: dummy variable takes the value of 1 if the CEO has previous board memberships and 0 otherwise; CEO Prof. Ex: dummy variable takes the value of 1 if the CEO has a background in Science/Engineering, Accounting/Economics and Law respectively and 0 otherwise. PolconCEO: dummy variable takes the value of 1 if the CEO is politically connected and 0 otherwise; CEO edu: dummy variable takes the value of 1 if the CEO holds a postgraduate degree (e.g. Masters and/or PhD) and 0 otherwise; Fem CEO: dummy variable takes the value of 1 if the CEO is female and 0 otherwise; CEO/Chair: dummy variable takes the value of 1 if the CEO and the Chair are the same person and 0 otherwise; L.CEOOwn: lagged percentage of shares owned by CEOs; L.StateOwn: lagged percentage of State share ownership; ; L.ROA: lagged return on assets calculated as (net profits + financial expenses)/average total assets; L.Tobin's Q: lagged Q ratio measured by (market value of equity, the book value of debt and the book value of preferred stocks divided by the book value of total assets) as a proxy for growth opportunities; L.lnBsize: natural logarithm of lagged board of directors' size; L.INED: lagged percentage of independent non-executive directors ; L.lnTA: natural logarithm of lagged company's total assets as a proxy for company size; Coage: company age since its establishment year; L.Debt/TA: lagged total debt to total assets ratio as a proxy for leverage; L.IA ratio: lagged intangible assets intensity ratio measured by the proportion of intangible assets to total assets.. ***, **,and * indicate significance at the 1%, 5% and 10% levels respectively. Robust standard errors are presented between parentheses.

Table 6: Fixed Effects regressions for State-Owned vs Non-State-Owned Companies

	<i>Panel A: State-Owned Companies</i>			<i>Panel B: Non- State-Owned Companies</i>		
	<i>T. Risk</i>	<i>Unsys. Risk</i>	<i>Sys. Risk</i>	<i>T. Risk</i>	<i>Unsys. Risk</i>	<i>Sys. Risk</i>
CEO Age	-0.003 (0.003)	-0.003 (0.003)	-0.00001 (0.0002)	-0.002** (0.001)	-0.002** (0.001)	-0.0001 (0.0001)
CEO Tenure	-0.028** (0.011)	-0.027** (0.011)	-0.001 (0.001)	-0.010*** (0.002)	-0.009*** (0.002)	-0.0004 (0.0004)
CEOExp.	0.068* (0.041)	0.067* (0.040)	0.002 (0.003)	0.026*** (0.008)	0.023*** (0.008)	0.003 (0.002)
Science/Engineering	-0.040 (0.050)	-0.040 (0.050)	0.00003 (0.003)	-0.025* (0.014)	-0.021* (0.011)	-0.004 (0.003)
Law	-0.085 (0.231)	-0.064 (0.230)	-0.021 (0.015)	0.048 (0.041)	0.057 (0.039)	-0.009 (0.010)
Accounting/ Economics	-0.038 (0.056)	-0.034 (0.056)	-0.004 (0.004)	0.001 (0.012)	-0.001 (0.011)	0.002 (0.003)
PolconCEO	-0.053 (0.193)	-0.028 (0.193)	-0.025** (0.012)	0.015 (0.088)	0.035 (0.083)	-0.020 (0.022)
CEOedu	0.118** (0.047)	0.107** (0.046)	0.010*** (0.003)	0.002 (0.010)	-0.003 (0.009)	0.005* (0.003)
Fem CEO	0.728*** (0.112)	0.734*** (0.112)	-0.006 (0.007)	-0.004 (0.022)	0.005 (0.020)	-0.009 (0.007)
L.CEOOwn	0.851 (2.165)	0.778 (2.160)	0.075 (0.136)	0.058 (0.063)	0.054 (0.060)	0.005 (0.016)
L.ROA	1.293*** (0.180)	1.251*** (0.179)	0.042*** (0.011)	0.076** (0.037)	0.043 (0.037)	0.032*** (0.010)
L.ln Bsize	0.134 (0.108)	0.147 (0.108)	-0.014** (0.007)	0.034 (0.027)	0.034 (0.025)	-0.0001 (0.007)
CEO/Chair	0.199*** (0.071)	0.207*** (0.071)	-0.007 (0.005)	-0.004 (0.010)	-0.004 (0.010)	-0.0005 (0.003)
L.INED	-0.084 (0.186)	0.025 (0.185)	-0.110** (0.012)	0.500*** (0.050)	0.494*** (0.047)	0.006 (0.013)
L.ln TA	-0.077** (0.038)	-0.080** (0.038)	0.003 (0.002)	-0.035*** (0.008)	-0.038*** (0.008)	0.004** (0.002)
Coage	0.024 (0.018)	0.021 (0.018)	0.002** (0.001)	-0.015*** (0.002)	-0.013*** (0.002)	-0.002** (0.001)
L.Debt/TA	0.207 (0.151)	0.217 (0.150)	-0.011 (0.009)	0.204*** (0.031)	0.227*** (0.029)	-0.022*** (0.008)
L.IA ratio	-0.276 (0.354)	-0.256 (0.353)	-0.023 (0.022)	0.078 (0.092)	0.053 (0.087)	0.025 (0.024)
Cons	1.530* (0.800)	1.490* (0.798)	0.042 (0.051)	1.127*** (0.177)	1.129*** (0.167)	0.003 (0.045)
Company Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Year Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummy	No	No	No	No	No	No
R-sq	0.084	0.081	0.112	0.114	0.150	0.071
F-stat	8.44***	8.09***	11.63***	15.19***	15.12***	6.65***
# obs	3320	3320	3320	3365	3365	3365

T. Risk: annualized standard deviation of daily stock returns for each company year. Daily stock returns are calculated as the first difference in the natural logarithm of the closing price over two consecutive trading days adjusted for dividends, stock dividends, and stock splits. Unsys. Risk: unsystematic (firm-specific) risk measured as the annualized standard deviation of the residuals of market model and market adjusted model for each company year. Sys. Risk: systematic risk measured by the difference between total risk and company- specific risk. We use both SSE and SZSE composite market-value weighted indices as benchmarks for the Shanghai and Shenzhen stock exchanges respectively. CEOAge: CEO age measured by years; CEO Tenure: the length of time served on the current board; CEO Exp: dummy variable takes the value of 1 if the CEO has previous board memberships and 0 otherwise; CEO Prof. Ex: dummy variable takes the value of 1 if the

CEO has a background in Science/Engineering, Accounting/Economics and Law respectively and 0 otherwise. PolconCEO: dummy variable takes the value of 1 if the CEO is politically connected and 0 otherwise; CEO edu: dummy variable takes the value of 1 if the CEO holds a postgraduate degree (e.g. Masters and/or PhD) and 0 otherwise; Fem CEO: dummy variable takes the value of 1 if the CEO is female and 0 otherwise; CEO/Chair: dummy variable takes the value of 1 if the CEO and the Chair are the same person and 0 otherwise; L.CEOOwn: lagged percentage of shares owned by CEOs; L.ROA: lagged return on assets calculated as (net profits + financial expenses)/average total assets; L.lnBsize: natural logarithm of lagged board of directors' size; L.INED: lagged percentage of independent non-executive directors ; L.lnTA: natural logarithm of lagged company's total assets as a proxy for company size; Coage: company age since its establishment year; L.Debt/TA: lagged total debt to total assets ratio as a proxy for leverage; L.IA ratio: lagged intangible assets intensity ratio measured by the proportion of intangible assets to total assets.. ***, **, and * indicate significance at the 1%, 5% and 10% levels respectively. Robust standard errors are presented between parentheses.

Table 7: Fixed Effects regressions for Shanghai and Shenzhen Stock Exchanges

	<i>Panel A: Shanghai Stock Exchange</i>			<i>Panel B: Shenzhen Stock Exchange</i>		
	<i>T. Risk</i>	<i>Unsys. Risk</i>	<i>Sys. Risk</i>	<i>T. Risk</i>	<i>Unsys. Risk</i>	<i>Sys. Risk</i>
CEO Age	-0.0002 (0.0006)	0.0001 (0.0006)	-0.0002 (0.0002)	-0.007** (0.003)	-0.007** (0.003)	-0.0001 (0.0001)
CEO Tenure	-0.005** (0.002)	-0.004*** (0.001)	-0.001 (0.001)	-0.025** (0.011)	-0.025** (0.010)	-0.00004 (0.00003)
CEOExp.	0.035*** (0.008)	0.027*** (0.008)	0.008*** (0.002)	0.074* (0.044)	0.072* (0.043)	0.0001 (0.0001)
Science/Engineering	-0.021** (0.010)	-0.019** (0.009)	-0.002 (0.003)	-0.064 (0.065)	-0.069 (0.066)	-0.0004*** (0.0001)
Law	0.0002 (0.042)	0.020 (0.039)	-0.021* (0.012)	0.052 (0.278)	0.053 (0.279)	-0.0001 (0.0004)
Accounting/ Economics	-0.019* (0.011)	-0.018* (0.010)	-0.001 (0.003)	-0.031 (0.074)	-0.030 (0.076)	-0.0002** (0.0001)
PolconCEO	-0.018 (0.045)	0.004*** (0.001)	-0.024** (0.012)	0.047 (0.416)	0.049 (0.417)	-0.0003 (0.0007)
CEOedu	0.009 (0.010)	0.006 (0.009)	0.015*** (0.002)	0.099** (0.050)	0.099** (0.049)	-0.0004 (0.0006)
Fem CEO	-0.022 (0.021)	-0.018 (0.019)	-0.005 (0.006)	0.827*** (0.131)	0.824*** (0.132)	0.0002 (0.0002)
L.CEOOwn	-0.355 (0.217)	-0.374 (0.229)	0.019 (0.068)	0.059 (0.357)	0.058 (0.357)	0.001 (0.001)
L.State Own	0.116*** (0.018)	0.093*** (0.017)	0.023*** (0.005)	0.403*** (0.128)	0.402*** (0.123)	-0.0001 (0.0002)
L.ROA	0.121*** (0.040)	0.066* (0.037)	0.055*** (0.011)	1.395*** (0.222)	1.391*** (0.219)	0.0003 (0.0003)
L.In Bsize	-0.015 (0.024)	-0.005 (0.022)	-0.010 (0.007)	0.316** (0.132)	0.318** (0.131)	0.0001 (0.0002)
CEO/Chair	0.015 (0.012)	0.022** (0.011)	-0.077*** (0.012)	0.177*** (0.066)	0.175*** (0.064)	0.0002** (0.0001)
L.INED	0.268*** (0.043)	0.344*** (0.040)	-0.018*** (0.006)	0.048 (0.245)	0.045 (0.246)	-0.001** (0.0004)
L.In TA	-0.042*** (0.007)	-0.051*** (0.006)	0.008*** (0.002)	-0.045 (0.047)	-0.046 (0.043)	0.0002** (0.0001)
Coage	0.004 (0.003)	0.005* (0.003)	-0.001 (0.001)	0.019 (0.015)	0.019 (0.016)	0.0002 (0.0003)
L.Debt/TA	0.113*** (0.029)	0.138*** (0.027)	-0.025*** (0.008)	0.372** (0.183)	0.374** (0.182)	0.0003 (0.0003)
L.IA ratio	0.013 (0.062)	0.020 (0.057)	-0.009 (0.018)	-0.488 (0.596)	-0.487 (0.582)	-0.0002 (0.001)
Cons	1.154*** (0.155)	1.168*** (0.143)	-0.014 (0.045)	0.526 (0.992)	-0.519 (0.992)	0.006*** (0.002)
Company Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Year Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummy	No	No	No	No	No	No
R-sq	0.255	0.366	0.101	0.074	0.073	0.039
F-stat	9.02***	25.42***	13.22***	5.92***	5.90***	3.06***
# obs	3976	3976	3976	2709	2709	2709

T. Risk: annualized standard deviation of daily stock returns for each company year. Daily stock returns are calculated as the first difference in the natural logarithm of the closing price over two consecutive trading days adjusted for dividends, stock dividends, and stock splits. Unsys. Risk: unsystematic (firm-specific) risk measured as the annualized standard deviation of the residuals of market model and market adjusted model for each company year. Sys. Risk: systematic risk measured by the difference between total risk and company-specific risk. We use both SSE and SZSE composite market-value weighted indices as benchmarks for the Shanghai and Shenzhen stock exchanges respectively. CEOAge: CEO age

measured by years; CEO Tenure: the length of time served on the current board; CEO Exp: dummy variable takes the value of 1 if the CEO has previous board memberships and 0 otherwise; CEO Prof. Ex: dummy variable takes the value of 1 if the CEO has a background in Science/Engineering, Accounting/Economics and Law respectively and 0 otherwise. PolconCEO: dummy variable takes the value of 1 if the CEO is politically connected and 0 otherwise; CEO edu: dummy variable takes the value of 1 if the CEO holds a postgraduate degree (e.g. Masters and/or PhD) and 0 otherwise; Fem CEO: dummy variable takes the value of 1 if the CEO is female and 0 otherwise; CEO/Chair: dummy variable takes the value of 1 if the CEO and the Chair are the same person and 0 otherwise; L.CEOOwn: lagged percentage of shares owned by CEOs; L.StateOwn: lagged percentage of State share ownership; ; L.ROA: lagged return on assets calculated as (net profits + financial expenses)/average total assets; L.Tobin's Q: lagged Q ratio measured by (market value of equity, the book value of debt and the book value of preferred stocks divided by the book value of total assets) as a proxy for growth opportunities; L.lnBsize: natural logarithm of lagged board of directors' size; L.INED: lagged percentage of independent non-executive directors ; L.lnTA: natural logarithm of lagged company's total assets as a proxy for company size; Coage: company age since its establishment year; L.Debt/TA: lagged total debt to total assets ratio as a proxy for leverage; L.IA ratio: lagged intangible assets intensity ratio measured by the proportion of intangible assets to total assets.. ***, **,and * indicate significance at the 1%, 5% and 10% levels respectively. Robust standard errors are presented between parentheses.

Table 8: Robustness Tests

	Panel A: Fixed Effects			Panel B: System GMM		
	<i>Total Risk</i>	<i>Unsys. Risk</i>	<i>Sys. Risk</i>	<i>Total Risk</i>	<i>Unsys. Risk</i>	<i>Sys. Risk</i>
L.T. Risk				0.466 ^{***} (0.066)		
L.Unsys. Risk					0.433 ^{***} (0.008)	
L.Sys. Risk						0.541 ^{***} (0.105)
CEOTurnover	0.015 (0.017)	0.016 (0.017)	-0.0002 (0.001)			
CEO Age	-0.002 ^{**} (0.001)	-0.002 ^{**} (0.001)	-0.0001 (0.001)	-0.001 ^{***} (0.0002)	-0.001 ^{***} (0.0002)	0.0002 (0.0003)
CEO Tenure	-0.016 ^{***} (0.004)	-0.017 ^{***} (0.004)	-0.0005 [*] (0.0003)	-0.006 ^{***} (0.0007)	-0.007 ^{***} (0.001)	-0.005 ^{***} (0.001)
CEOExp.	0.066 ^{***} (0.019)	0.062 ^{***} (0.019)	0.005 ^{***} (0.001)	0.094 ^{***} (0.002)	0.098 ^{***} (0.003)	0.027 ^{***} (0.007)
Science/Engineering	-0.028 (0.024)	-0.027 (0.024)	-0.001 (0.002)	-0.004 (0.003)	-0.009 ^{**} (0.004)	-0.002 (0.003)
Law	0.018 (0.101)	0.032 (0.101)	-0.014 [*] (0.008)	-0.048 ^{***} (0.017)	-0.025 ^{**} (0.012)	0.002 (0.008)
Accounting/Economics	-0.023 (0.026)	-0.023 (0.026)	-0.0001 (0.002)	-0.012 ^{***} (0.004)	-0.002 (0.004)	-0.001 (0.003)
PolconCEO	-0.034 (0.117)	-0.015 (0.116)	-0.018 ^{**} (0.009)	-0.174 ^{***} (0.023)	-0.122 ^{***} (0.024)	0.041 (0.055)
CEO edu	0.058 ^{***} (0.022)	0.049 ^{**} (0.022)	0.009 ^{***} (0.001)	0.018 ^{***} (0.003)	0.016 ^{***} (0.002)	0.002 (0.003)
Fem CEO	0.268 ^{***} (0.049)	0.271 ^{***} (0.049)	-0.003 (0.004)	0.021 ^{***} (0.007)	0.036 ^{***} (0.009)	-0.004 (0.018)
CEO Own	0.013 (0.221)	0.007 (0.219)	0.006 (0.017)	-0.235 [*] (0.142)	0.017 (0.065)	-0.029 (0.084)
State Own	0.163 ^{***} (0.044)	0.148 ^{***} (0.043)	0.014 ^{***} (0.003)	0.162 ^{***} (0.005)	0.112 ^{***} (0.007)	0.012 (0.009)
ROA	0.643 ^{***} (0.091)	0.610 ^{***} (0.091)	0.032 ^{***} (0.007)	0.126 ^{***} (0.014)	0.129 ^{***} (0.016)	0.180 ^{**} (0.072)
CEO/Chair	0.067 ^{**} (0.027)	0.071 ^{***} (0.027)	-0.003 (0.002)	0.003 (0.004)	-0.004 (0.005)	0.005 (0.012)
lnBsize	0.103 ^{**} (0.052)	0.111 ^{**} (0.053)	-0.008 ^{**} (0.004)	0.003 (0.011)	-0.010 (0.010)	-0.028 (0.022)
INED	0.275 ^{***} (0.097)	0.327 ^{***} (0.096)	-0.053 ^{***} (0.007)	0.341 ^{***} (0.014)	0.428 ^{***} (0.019)	-0.207 ^{***} (0.048)
Ln TA	-0.049 ^{***} (0.017)	-0.055 ^{***} (0.017)	0.006 ^{***} (0.001)	-0.024 ^{***} (0.001)	-0.025 ^{***} (0.002)	0.009 ^{**} (0.002)
Coage	0.004 (0.006)	0.004 (0.006)	-0.0004 (0.0005)	0.001 (0.0008)	0.0003 (0.0009)	0.0003 (0.0006)
Debt/TA	0.224 ^{***} (0.069)	0.241 ^{***} (0.068)	-0.017 ^{***} (0.005)	0.253 ^{***} (0.012)	0.216 ^{***} (0.012)	-0.008 (0.021)
IA ratio	-0.101 (0.162)	-0.103 (0.161)	-0.0002 (0.013)	0.006 (0.023)	-0.001 (0.023)	-0.037 (0.023)
Cons	1.098 ^{***} (0.365)	1.119 ^{***} (0.363)	-0.021 (0.029)	0.416 ^{***} (0.044)	0.497 ^{***} (0.047)	0.033 (0.057)
Obs	6685	6685	6685	6792	6792	6792
Company Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummy	No	No	No	Yes	Yes	Yes

Year dummy	Yes	Yes	Yes	Yes	Yes	Yes
R-sq	0.042	0.040	0.066			
F-stat	8.14	7.79	13.28			
Wald test <i>p.value</i>				0.000	0.000	0.000
Arellano-bond test for AR(1) <i>p.value</i>				0.003	0.004	0.000
Arellano-bond test for AR(2) <i>p.value</i>				0.194	0.175	0.211
Hansen test <i>p.value</i>				0.497	0.519	0.183

T. Risk: annualized standard deviation of daily stock returns for each company year. Daily stock returns are calculated as the first difference in the natural logarithm of the closing price over two consecutive trading days adjusted for dividends, stock dividends, and stock splits. Unsys. Risk: unsystematic (firm-specific) risk measured as the annualized standard deviation of the residuals of market model and market adjusted model for each company year. Sys. Risk: systematic risk measured by the difference between total risk and company-specific risk. We use both SSE and SZSE composite market-value weighted indices as benchmarks for the Shanghai and Shenzhen stock exchanges respectively. CEOturnover: dummy variable takes the value of 1 if the company has a new CEO and 0 otherwise; CEOAge: CEO age measured by years; CEO Tenure: the length of time served on the current board; CEO Exp: dummy variable takes the value of 1 if the CEO has previous board memberships and 0 otherwise; CEO Prof. Ex: dummy variable takes the value of 1 if the CEO has a background in Science/Engineering, Accounting/Economics and Law respectively and 0 otherwise. PolconCEO: dummy variable takes the value of 1 if the CEO is politically connected and 0 otherwise; CEO edu: dummy variable takes the value of 1 if the CEO holds a postgraduate degree (e.g. Masters and/or PhD) and 0 otherwise; Fem CEO: dummy variable takes the value of 1 if the CEO is female and 0 otherwise; CEO/Chair: dummy variable takes the value of 1 if the CEO and the Chair are the same person and 0 otherwise; CEOOwn: percentage of shares owned by CEOs; StateOwn: percentage of State share ownership; ROA: return on assets calculated as (net profits + financial expenses)/average total assets; Tobin's Q: Q ratio measured by (market value of equity, the book value of debt and the book value of preferred stocks divided by the book value of total assets); Bsize: board of directors' size; INED: percentage of independent non-executive directors ; lnTA: natural logarithm of company's total assets as a proxy for company size; Coage: company age since its establishment year; Debt/TA: total debt to total assets ratio as a proxy for leverage; IA ratio: Intangible assets intensity ratio measured by the proportion of intangible assets to total assets;. ***, **,and * indicate significance at the 1%, 5% and 10% levels respectively. Robust standard errors are presented between parentheses.
