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## ***Abbreviations***

CCER	China Center for Economic Research
CEO	Chief executive officer
CG	Corporate Governance
CSRC	China Securities Regulatory Commission
NGO	Nongovernmental organizations
RMB	Ren min bi (unit of Chinese currency)
ROA	Return on assets
SOE	State-owned enterprises
SSE	Shanghai Stock Exchange
SZSE	Shenzhen Stock Exchange



## **Abstract**

This study investigates the situation of Corporate Governance in China, and tries to find out the relation between Corporate Governance and firm performance of public-listed firms on Chinese stock markets. The dataset comprises a panel of 13,553 firm-year observations of Corporate Governance during the period of 1998-2008, and a panel of 15,396 firm-year observations of financial sheets from 1994-2008. These two panel data represent 1,575 A-share firms listed on the Shanghai and Shenzhen stock exchanges in China.

From this study we can see that the ownership of state-owned firms on Chinese stock markets are highly concentrated and these firms still play the roll as economic giants in China. On the other side, family firms grow fast from 1998 to 2008, and share more stocks with management compared with state-owned firms.

Regressing Tobin's  $q$ , the results show that the ownership concentration isn't beneficial, indicating the entrenchment effect of ownership concentration on firm performance. This kind of negative influence is even more obvious in family firms, likely because of insider expropriation. Concerning the impact of managerial stock incentives on firm performance, regression results reveal that the shareholding of CEO and board chair both have greater effects on firm performance in family firms compared with non-family firms, which suggests that equity-based compensation has greater positive impact for family members in family firms since CEO and board chair of family firms are probably just family members.

Regarding industry effects on firm performance, we find for family intensive industries, the shareholding of the largest shareholder has positive and significant impact on firm performance while this statement cannot hold for those industries in which the proportion of family firms is below the average.



## **1. Introduction**

This study investigates the situation of Corporate Governance in China, and tries to find out the relation between Corporate Governance and firm performance of public-listed firms on Chinese stock markets. The hypotheses are based on literature about the impact of different Corporate Governance factors on firm performance. I basically focus on the issues like whether family ownership has significant effects on performance, how ownership concentration impacts firm performance, the relation between equity based managerial compensation and firm performance and the influence of duality of CEO and board chair.

China is going through an era of economic boom, so it is on the stock markets. By now, a total of 1628 companies have gone public by the end of July 2009, and the volume of equity market capitalization totaled 23.57 trillion RMB (about 2.12 trillion Euro<sup>1</sup>), ranking the third place in the world. Despite the rapid growth, Corporate Governance is still very weak in China. Insider control and self-dealing are so rampant in China that made Chinese stock markets “a casino without rules”.

The poor Corporate Governance in China has historical reasons. China has been undergoing a transition from a planned economy to a market-oriented economy, although related government agencies have issued various laws, rules, regulations, and standards aimed at laying the foundation for a sound Corporate Governance framework, Corporate Governance problems like concentrated state-ownership, insider trading or false fiscal disclosure are difficult to conquer in a short time.

In this paper the relation between Corporate Governance variables and firm performance has been investigated using the data of China’s listed companies from 1994 to 2008. Two measures of firm performance are used, namely Tobin’s  $q$  and return on assets (ROA). These are dependent variables. Explanatory variables are the family dummy variable, ownership concentration, restraint of ownership concentration, board size, shareholding of CEO, shareholding of board, shareholding of Board Chair, duality of CEO and Board Chair, debt to equity ratio,  $\ln$  (total assets)

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<sup>1</sup> Calculated with exchange rate of Bank of Austria on 22<sup>nd</sup> March, 2010.

and sales growth. Results of regression to the two performance measures are very different, the very likely reason could be the insider expropriation on ROA in family-controlled firms.

Regression results of sub samples of family firms and non-family firms as well as different industrial firms are also shown in this study. Taking sub samples of family intensive industries including those above and below average level, using Tobin's  $q$  as dependent variable, the regression is furthermore performed.

The paper is organized as follows. Section 2 introduces the literature on the relation between Corporate Governance and firm performance. Section 3 gives an overview on Corporate Governance in China. Section 4 describes the data and variables. Section 5 presents the main results. In Section 6 concludes the findings.

## **2. Literature Review**

Researchers worldwide have already discussed the relation between family firm performance and Corporate Governance. In general, researchers held the view that the factors that influence family firm performance are basically industry, characteristics of the firm, Corporate Governance, managerial factors and personality of founder. Some of the Chinese researchers also did some valuable investigations in this area; they mainly focused on the impact of factors like shareholding structure, board of directors, managerial structure, contractual governance and relation governance, to the family firm performance. I divide these research points into five fields trying to connect to the factors investigated in this survey.

### **2.1. State-Ownership and Firm Performance**

Shleifer and Vishny (1997)<sup>1</sup> suggested that, in some situations where non-shareholder constituencies such as managers, employees, and consumers are left with too few benefits, and too little incentive to make relationship-specific investments, concentrated ownership is not optimal. In these situations, cooperatives might be a more efficient ownership structure. A similar argument is used to justify state ownership of firms. Where monopoly power, externalities, or distributional issues raise concerns, private profit-maximizing firms may fail to address these concerns.

Nonetheless, the reality of state ownership is broadly inconsistent with this efficiency argument. From the view of Shleifer and Vishny, first, state firms do not appear to serve the public interest better than private firms do. Second, state firms are typically extremely inefficient, and their losses result in huge drains on their countries' treasuries.

This view of Corporate Governance helps explain the principal elements of the behavior of state firms. While in theory these firms are controlled by the public, the de

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<sup>1</sup> Shleifer, A., and Vishny, R. W. (1997) A survey of corporate governance, *Journal of Finance* 52(2), 737–783.

facto control rights belong to the bureaucrats. These bureaucrats can be thought of as having extremely concentrated control rights, but no significant cash flow rights because the cash flow ownership of state firms is effectively dispersed amongst the taxpayers of the country. State ownership is then an example of concentrated control with no cash flow rights and socially harmful objectives. Viewed from this perspective, the inefficiency of state firms is not at all surprising.

The recognition of enormous inefficiency of state firms, and the pressures on public budgets, have created a common response around the world in the last few years, namely privatization. In most cases, privatization replaces political control with private control by outside investors. At the same time, privatization in most countries creates concentrated private cash flow ownership to go along with control. The result of the switch to these relatively more efficient ownership structures is typically a significant improvement in performance of privatized firms (Megginson et al., 1994<sup>1</sup>; Lopez-de-Silanes, 1994<sup>2</sup>).

Megginson et al. survey pre and post-privatization operating performance of 61 companies from 18 countries and 32 industries that experienced full or partial privatization during the period 1961 to 1990 and find that the mean and median profitability, real sales, operation efficiency, and capital investment spending all increase significantly after privatization.

Likewise, Boardman and Vining (1989)<sup>3</sup> find for the 500 largest non-US mining and manufacturing companies in 1983 that private corporations are both more profitable and more efficient than either completely or partially state-owned companies.

Corroborating evidence is provided by Gorton and Schmidt (1996) for Germany, and Gugler (1998) for Austria. Other literature concerning the relation between family-ownership and firm performance will be also introduced in the next part of this Section.

There are also some researches about the influence of state-ownership to firm performance. Xu and Wang (1999)<sup>4</sup> still support the inefficiency of state ownership.

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<sup>1</sup> Megginson, W., Nash, R.C, and Van Randerborgh. (1994), The Financial and Operating Performance of Newly Privatized Firms: An International Empirical Analysis, *Journal of Finance* 49, 403-452.

<sup>2</sup> Lopez-de-Silanes, F., Shleifer, A., Vishny, R.W. (1995) Privatization in the United States., *Rand Journal of Economics* 28.

<sup>3</sup> Boardman, A. E. and Vining, A. R.(1989) Ownership and Performance in Competitive Environments: A Comparison of the Performance of Private, Mixed, and State-Owned Enterprises." *Journal of Law and Economics*, 32(1), 1-33.

<sup>4</sup> Xu, X. and Wang, Y. (1999) Ownership structure and corporate governance in Chinese stock companies, *China Economic Review* 10 (1999) 75-98.

Sun et al. (2002)<sup>1</sup>, however, find a positive impact on partially privatised state-owned enterprises. But this relationship is non-linear and shows an inverted U-shape. They argue that too much government ownership is indeed bad for enterprises, but too little government ownership is either not good probably because of lack of political support and business connections. Le and Buck (2009)<sup>2</sup> survey more than 1000 Chinese listed firms, 2003-2005, and find a positive association between state ownership and firm performance. From their perspective, state ownership in the Chinese context may represent a strategic asset rather than an agency burden.

## 2.2. Family-Ownership and Firm Performance

Economists in the past discussing the family shareholding and firm performance have divergence of views (Kirehhof and Kirchhof, 1987; Gorriz and Fumas, 1996; Wall 1998; Palia and Lichtenberg, 1999; Barth etc., 2005; Kim, 2006)

Some researchers observe that family firms are more efficient than non-family firms.

The reasons are firstly, the most important structural character of family firms is that the founder and his family keep the ownership and the management control, and the family will in most cases keep the control after generations. Therefore, some researchers believe that family control with long-term tenure and constant objectives can efficiently solve the problem of classic owner-manager conflict.

Secondly, family organization in terms of incentives and monitoring, and the special roles of altruism and loyalty in the family and between family members are typical features of family firms. Pollack (1985)<sup>3</sup> and Coleman (1990)<sup>4</sup> stress that those features of family firms are beneficial for the flexibility of decision-making and simplicity of decision-making procedure, those features also restrict the related personnel to acquit their responsibilities.

Furthermore, the pursuit of family reputation of the owner-controller, the relation and connection between families, are all factors that give family leadership long-term inspiration. All the factors mentioned above are beneficial for firm performance.

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<sup>1</sup> Sun, Q., Tong, J. and Tong, W. (2002) How Does Government Ownership Affect Firm Performance? Evidence from China's Privatization Experience, *Journal of Business Finance and Accounting* (29) 1-27.

<sup>2</sup> Le, T.V. and Buck, T.(2009) State ownership and listed firm performance: a universally negative governance relationship? *Journal of Management and Governance*, working paper

<sup>3</sup> Pollack, R.A.(1985) A Transaction cost approach to families and households *Journal of Economic Literature*(23) 581-608.

<sup>4</sup> Coleman, J.S. (1990) Foundations of Social Theory Cambridge The Belknap Press of Harvard University Press .

Some empirical studies also support this viewpoint. Gorriz and Fumas (1996)<sup>1</sup> investigate family firms in Spain, they choose return on net assets (RONA) and productivity as the index of firm performance. The results turn out that family firms have higher productivity but the profitability is not significantly higher. Through an empirical study on Chinese listed family firms, Deng and Gu (2007)<sup>2</sup> show that, the productivity as well as the profitability of family firms surpass those of non-family firms in China.

On the other side, there are other researchers who hold the contrary opinion. They document that the family firms have weaker performance.

Firstly, there are internal conflicts in family firms. Especially during the period of market growth, the unclearness of the property rights will induce severe conflicts between family members, since they have different objectives and values. According to the research by Schulze (2003)<sup>3</sup>, ownership dispersion in family firms will separate the interest of the members who manage the firm and other family members. Since small shareholders within the family would choose to free ride through not taking responsibilities, asking for high return on even extra benefit etc.

Secondly, concentrated ownership leads to more conservative attitude in financial risk and higher cost of capital (Demsetz and Lehn, 1985)<sup>4</sup>, as a result, family owners would be more prudential when new investment is invited. Besides, they don't want to bear too much debt neither accept new investors (Agrawal and Nagarjan, 1990<sup>5</sup>; Gallo and Vilaseca, 1996<sup>6</sup>). This prudential policy will limit technology upgrade and therefore pull down performance. Using data of 506 family firms in Western New York, (holding all factors of production constant), Wall (1998)<sup>7</sup> concludes that family firms in Western New York generate 18 percent less in sales on average than non-family small firms. Thus within the small business sector, family firms contribute less

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<sup>1</sup> Gorriz ,C.G.and Fumas, V. S.(1996) Ownership Structure and Firm Performance -Some Empirical Evidence from Spain *Managerial and Decision Economics*(17) 575-586.

<sup>2</sup> Deng, D. and Gu, Q. (2007) Efficiency Evaluation and Improvement on China Family Public Firms, *Research on Financial and Economic Issues* 2007 (5) 42-47.

<sup>3</sup> Schulze, W. G. ,Lubatkin, M. H., and Dino, R. N.(2003) Exploring the Agency Consequences of Ownership Dispersion Among the Directors of Private Family Firms, *Academy of Management Journal* 46 (2)179-194.

<sup>4</sup> Demsetz, H. an d Lehn, K. (1985) The Structure of Corporate ownership :Causes and Consequences, *Journal of political Economy*(93) 1155-1177.

<sup>5</sup> Agrawal, A. and Nagarjan, N. J. (1990) Corporate Capital Structure, Agency Costs and Ownership Control: the Case of all Equity Firms, *Journal of Finance*(45) 1325-1331.

<sup>6</sup> Gallo, M. A. and Vilaseca, A. (1996) Finance in Family Business, *Family Business Review*(9) 387-401.

<sup>7</sup> Wall, A. R.(1998) An Empirical Investigation of the Production Function of the Family Firm, *Journal of Small Business Management*(25) 24-32.

per firm than non-family small businesses to the production and income capabilities of the regional economy. Besides, some researchers suggest that family firms are effective substitution of institutional and market environment. Since the trust among family members can be regarded as the substitution of contract governance; family control as the substitution of the protection on investors (Bellow, 2003<sup>1</sup>; Burkart etc. 2003<sup>2</sup>).

There are also some Chinese researchers who agree with this opinion, like Chen(1998)<sup>3</sup> suggests, family corporation and company network are characteristics of Asian firm organization, which in some certain situations are more efficient and have competitive strength.

In this study, with panel data of the Corporate Governance of Chinese listed companies from 1998 to 2008, searching for the relationship between family ownership and firm performance, I raise the hypothesis which follows the first viewpoint:

Hypothesis 1: Family-owned firms have higher Tobin's  $q$  on average than non-family firms in the last ten years on the Chinese stock markets .

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<sup>1</sup> Bellow, A. (2003) In Praise of Nepotism : A History of Family Enterprise from King David to George W .Bush , *New York Anchor Books*.

<sup>2</sup> Burkart, M., Panunzi, F. and Shleifer, A. (2003) Family Firms *Journal of Finance*(58) 2167-2202.

<sup>3</sup> Chen, L. (1998) Information Factors, Transaction Cost and Family Corporation *Economic Research Journal* 1998 (7).

## 2.3. Shareholding Structure and Firm Performance

The effect of ownership structure on Corporate Governance and furthermore on the value of firms have been researched extensively, with the role of large investors receiving special attention. There are basically two views: incentive and entrenchment effect of large shareholders.

From the first perspective, the most direct way to align cash flow and control rights of outside investors is to concentrate shareholdings. Some economists argue that concentration of shareholding or existence of large shareholders is good for management motivation, effective supervision and reduction of agency cost. Jensen and Meckling (1976)<sup>1</sup> point out that outside managers are opportunists, so that the firm value is determined by the shareholding of inside shareholders.

They think raising the shareholding of inside managers is beneficial to reduction of agency cost and is also good to conquer the dilemma of the separation of ownership and management. In the same way, Grossman and Hart (1980)<sup>2</sup> point out that if the shareholding is highly dispersed, shareholders won't have enough motivation to supervise outside managers. Morck, Shleifer, and Vishny (1988b)<sup>3</sup> present evidence on the relationship between cash flow ownership of the largest shareholders and profitability of firms, taking Tobin's  $q$  as dependent variable. They use 371 Fortune 500 firms for 1980 as a cross-section sample and find that  $q$  first rises as management ownership increases to 5%, then falls when ownership is from 5% to 25%, and rises again but slightly as ownership level goes higher. One interpretation of this finding is that, consistent with the role of incentives in reducing agency costs, performance improves with higher manager and large shareholder ownership at first. The achievement of Yeh Yin-hua (2005)<sup>4</sup> supports the viewpoints as mentioned above. It shows that among the family firms in Taiwan, firms with concentrated shareholding perform better than those having lower levels of concentration.

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<sup>1</sup> Jensen, M. and Meckling, W. (1976) Theory of the Firm: Managerial Behavior Agency Cost and Ownership Structure, *Journal of Financial Economics*(3): 305-360.

<sup>2</sup> Grossman, S. J. , and Hart, O. D, (1980) Takeover Bids, the Free-Rider Problem and the Theory of the Corporation, *Bell Journal of Economics* (11): 42-64.

<sup>3</sup> Morck, R., Shleifer, A. and Vishny, R.(1988b), Management Ownership and Market Valuation: An Empirical Analysis, *Journal of Financial Economics* (20):293-315.

<sup>4</sup> Yeh, YH. (2005) Do Controlling Shareholders Enhance Corporate Value, *Corporate Governance* Vol.13(2): 313-325.

There is also a negative effect of the high levels of shareholding concentration, which is the entrenchment effect. Shleifer and Vishny (1997)<sup>1</sup> point out although concentrated ownership makes large shareholders have more incentives to supervise the manager and the agency cost as well as the supervision cost will be reduced, they want also inefficiently redistributed wealth from other investors to themselves. They argue that as ownership gets beyond a certain point, the large owners gain nearly full control and are wealthy enough to prefer to use firms to generate private benefits of control that are not shared by minority shareholders. Thus there are costs associated with high ownership and entrenchment, as well as with exceptionally dispersed ownership. DeAngelo and DeAngelo (2000)<sup>2</sup> argue that concentrated shareholders take out private rents in terms of special dividends, while Claessens et al (2000)<sup>3</sup> find that founding families can expropriate the interest of minority shareholders through excessive compensation schemes and related-party transactions.

Empirical researchers in China don't reach a united solution either. The research by Li (2005)<sup>4</sup> argues, firm value increases with the shareholding ratio of the largest shareholder in Chinese family firms. The empirical study from the panel data of Shenzhen stock exchange from 1996 to 1999 by Chen and Xu (2001)<sup>5</sup> shows that the shareholdings of the largest shareholder and firm performance (ROA, profit margin, RONA) are positively related, and the affect of ownership concentration on firm performance varies in different industries. Wang and Zhou (2006)<sup>6</sup> shows that for start-up family firms, a negative correlation is found between the shareholdings of the largest shareholder and market value. Nevertheless the research by Jin and Jiao (2007)<sup>7</sup> indicates the correlation between shareholdings of largest shareholder of family firms and firm performance is insignificant.

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<sup>1</sup> Shleifer, A. and Vishny, R. W. (1997) A Survey of Corporate Governance, *Journal of Finance* (52): 737-783.

<sup>2</sup> DeAngelo, H. and DeAngelo, L. (2000), Controlling Stockholders and the Disciplinary Role of Corporate Payout Policy: A study of the Times Mirror Company, *Journal of Financial Economics* (56): 153-207.

<sup>3</sup> Claessens, S., Djankov, S. and Lang, L. (2000), The Separation of Ownership and Control in East Asian Corporations, *Journal of Financial Economics*, (58): 81-112.

<sup>4</sup> Li, C. (2005) Empirical Evidence of Influential Factors to Family Firms in China, *Statistical Research* 2005 (11)

<sup>5</sup> Xu, X. and Chen, X. (2003) Analysis of Influence of First Largest Shareholder to Corporate Governance and Firm Performance, *Economic Research Journal* 2003(2)

<sup>6</sup> Wang, M. and Zhou, S. (2006), Types of Controlling Family, Double and Triple Agency and Firm Value, *Management World* 2006(8).

<sup>7</sup> Jin, L. and Jiao, J. (2007), An Empirical Study of the Effect on Performance Generated by Shareholding Proportion of the Largest Shareholder of Family Business *Technology Economics* 2007(11): 121-124.

In this study, I take the largest shareholding ratio as the measure of ownership concentration and try to find out how it relates to firm performance on Chinese stock market.

## **2.4. Duality of CEO and Board Chair Influences Firm Performance**

Concerning the influence of leadership structure on firm performance, researchers have discussed this problem from the perspectives of agency cost and decision-making process. The duality hypothesis says that there is a mechanism defect if leadership of firm is dual, meaning that CEO and chairman of board of directors is the same person; it will harm the independence of board of directors; the board will be controlled by managers and then they will gradually increase their rights; so separating the positions will reduce agency costs in corporations and improve performance.

Fama and Jensen (1983)<sup>1</sup> and Dalton and Kesner (1987)<sup>2</sup> believe that the board controlled by managers cannot conduct legal governance functions. On the other side, Modern Stewardship Theory (Donaldson and Davis 1991)<sup>3</sup> argues that, for CEOs who are stewards, their pro-organizational actions are best facilitated when the Corporate Governance structures give them high authority and discretion. Structurally, this situation is attained more readily if the CEO chairs the board of directors. Such a structure would be viewed as dysfunctional under the agency theory model. However, under the stewardship model, stewards maximize their utility as they achieve organizational rather than self-serving objectives. The CEO-chair is unambiguously responsible for the fate of the corporation and has the power to determine strategy without fear of any retraction by an outside chair of the board.

Besides, the Resource-Based View argues the leadership structure should be decided by the environment firms are facing. An efficient board would consider whether the

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<sup>1</sup> Fama, E. and Jensen M.C. (1983) Separation of Ownership and Control, *Journal of Law and Economics*(26): 301-325.

<sup>2</sup> Dalton,D.R. and Kesner,I.F.(1987) Composition and CEO Duality in Boards of Directors: An International Perspective, *Journal of International Business Studies*, (18): 33-42.

<sup>3</sup> Donaldson, L. and Davis, J.(1991) Stewardship Theory or Agency Theory, *Australian Journal of Management*(16):49-64.

benefit from duality of board chair and CEO exceeds the potential cost of this structure (Brickley etc 1997)<sup>1</sup>.

Yang(2007)<sup>2</sup> raises the point that the advantage of immediate decision-making by relatively smaller family firms that have absolute authority would compensate their risk of subjective and one-sided decision; in contrast, for larger family firms with absolute authority, the risk of loss is hard to be made up by fast decision-making process, firm performance would be reduced; the empirical study by the author also proves this viewpoint.

To sum up the above arguments, the influence of duality of board chair and CEO on firm performance is ambiguous.

Therefore, I raise the second hypothesis:

Hypothesis 2: Duality of CEO and board chair has no influence on firm performance.

## **2.5. Executive Compensation and Firm Performance**

There are basically three representative viewpoints on the effect of the executive compensation on firm performance.

Firstly, some researchers document that executive compensation influences firm performance, although they prove this relation in different ways.

After the survey of the executive compensation structure of 153 randomly-selected manufacturing firms in 1979–1980, Mehran (1995)<sup>3</sup> provides evidence supporting advocates of incentive compensation, and also suggests that the form of compensation motivates managers more to increase firm value rather than the level of compensation. Firm performance is positively related to the percentage of equity held by managers and to the percentage of their compensation that is equity-based. He also finds that firms in which a higher percentage of the shares are held by insiders or outside block holders use less equity-based compensation.

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<sup>1</sup> Brickley, J., Coles, J. and Jarrell, G. (1997) Leadership Structure: Separating the CEO and Chairman of the Board, *Journal of Corporate Finance* (3):189-220.

<sup>2</sup> Yang, L. (2007) Controlling Right Effects in Family Firms and Empirical Studies, *Modern Management Science* 2007(1): 84-86.

<sup>3</sup> Mehran, H. (1995) Executive Compensation Structure, Ownership, and Firm Performance *Journal of Financial Economics* (38):163-184.

Different from the monotonous relation of executive compensation and firm performance, McConnell and Servaes (1990)<sup>1</sup> find a significant curved relation between Tobin's  $q$  and management ownership. A sample of 1,173 firms in 1976 and a sample of 1,093 firms in 1986 have been taken to investigate the cross-sectional relation between firm performance and management equity ownership. Their findings show that  $q$  increases firstly, and then decreases, as the management ownership gets more and more concentrated.

Secondly, as opposite to the first view point: firm performance is a determinant of management ownership. Kole (1996)<sup>2</sup> presents that there is a causality reversal in the relation of ownership and performance and this relation is more sensitive in research-incentive firms.

Third, executive compensation and firm performance are jointly determined.

Chung and Pruitt (1996)<sup>3</sup> recognize that the firm's Tobin's  $q$ , executive stock ownership and executive compensation are jointly determined. Stock ownership and compensation are the mechanisms by which executives are bonded in order to act in the best interests of the shareholders. They find that CEO ownership and Tobin's  $q$  are strongly positively correlated, which supports the joint hypothesis that firms with higher levels of intangible assets require higher levels of managerial ownership as a bonding mechanism, and at the same time firms with higher managerial ownership have higher market values. They also find a positive correlation between Tobin's  $q$  and executive compensation, which they interpret as showing that it is optimal for firms with more intangible assets to attract (and pay more to) managers with higher talent.

There is no identical view on this subject in China.

Through an empirical study on the relation between the internal restriction to China's enterprise managers' behavior and enterprise operating performance, Gao (2001)<sup>4</sup>

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<sup>1</sup> McConnell, J., and H. Servaes (1990) Additional Evidence on Equity Ownership and Corporate Value, *Journal of Financial Economics*(27): 595-612.

<sup>2</sup> Kole, S R.(1996) Managerial Ownership and Firm Performance: Incentive or Reward, *Advance in Financial Economics*, 1996(2): 119-149.

<sup>3</sup> Chung, K.H., and S.W. Pruitt, (1996) Executive Ownership, Corporate Value and Executive Compensation: A uniting frame work. *Journal of Banking and Finance* 1996(10):1135-1159.

<sup>4</sup> Gao, M. On the Relativity Between the Internal Restriction to China's Enterprise Managers, Behavior and Enterprise Operating Performance: A Case Study of Public Companies, *Nankai Business Review* 2001(5):6-13.

thinks the relation between them does not exist. This means the organic relations between the internal restriction to managers' behavior and enterprise operating performance have not been established.

Some researchers argue that there is a relation between executive compensation and firm performance.

The study by Liu and Wang (2000)<sup>1</sup> shows that the performance of listed companies is negatively related to the scale of state-ownership and salaries of managers. Liu, Zhang and Zhang (2009)<sup>2</sup> suggest that there exists a nonlinear relationship between senior management shareholding ratio and company operating performance; company scale obviously affects senior management shareholding and company operating performance.

Based on the results showed above, I have the third hypothesis:

Hypothesis 3: Executive stock incentive and firm performance are significantly positively related.

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<sup>1</sup>Liu, G. and Wang, J. Positive Analysis of Listed Companies: Equity Structures, Incentive Systems and Performances. *Economic Theory and Business Management* 2000(5):41-45.

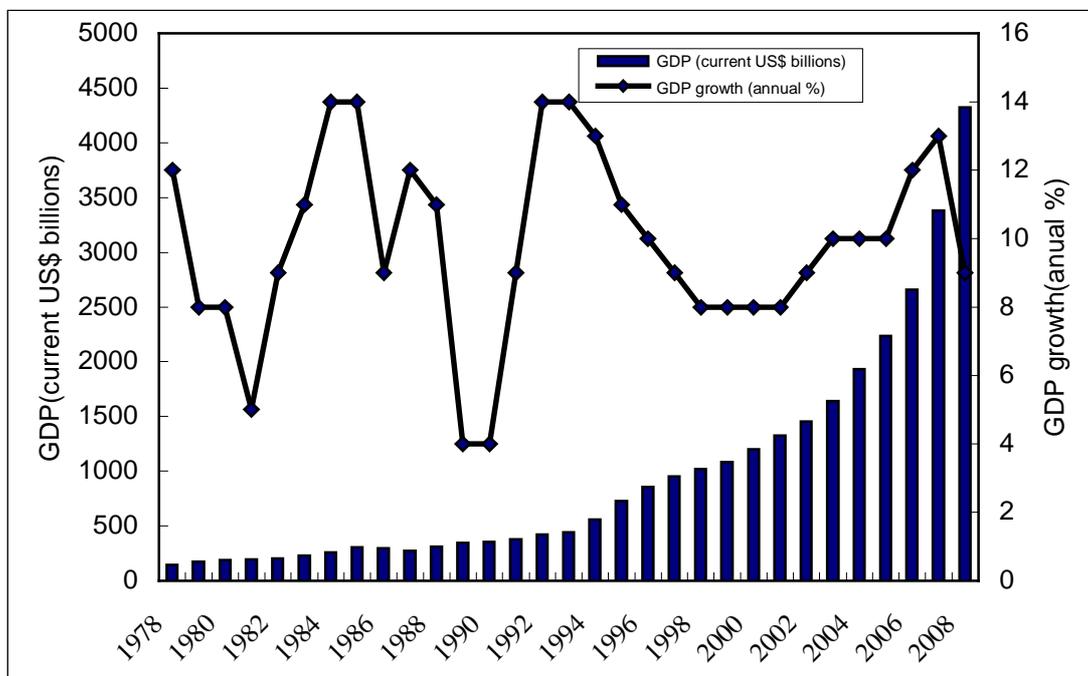
<sup>2</sup> Liu, Z., Zhang, J. and Zhang, K.(2009) The Relationship Research between Equity Incentive and Operating Performance in Listed Companies. *Journal of Shandong University of Science and Technology*, 2009(2): 51-56.

### 3. Corporate Governance in China:

#### 3.1. China Economy and Stock Market Boom

Since China started its economic reform in the late 1970s, its gross domestic product has been growing at an average annual rate of 9.73 percent.

Figure 1: China's Economic Growth

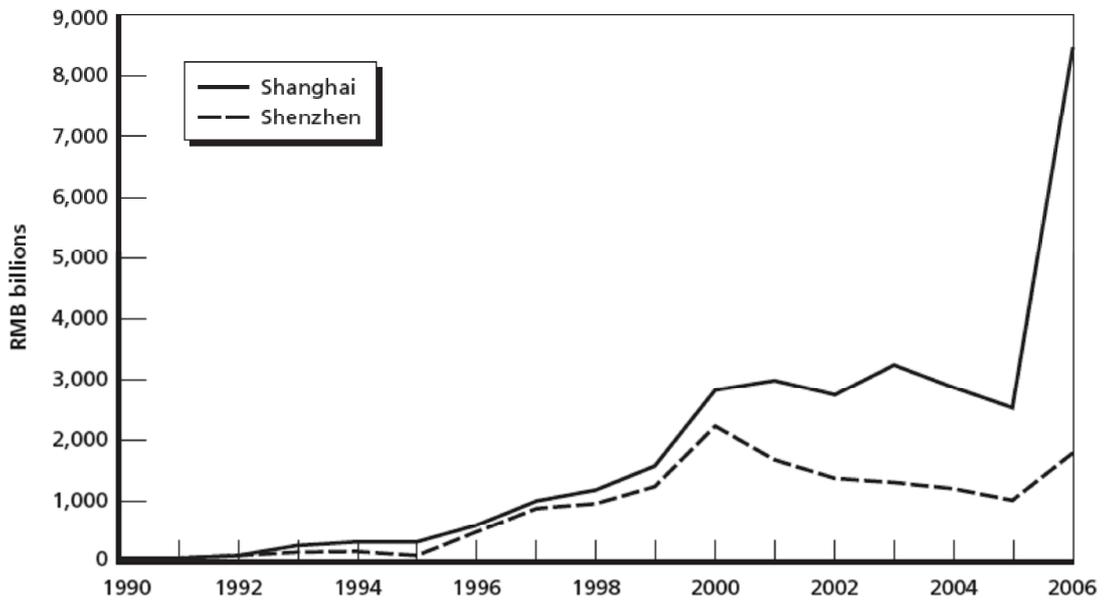


SOURCE: World Development Indicator, the World Bank Group (various years)

Chinese stock markets have also been growing rapidly. China had opened its two stock markets, Shanghai Stock Exchange (SSE) and Shenzhen Stock Exchange (SZSE) by the end of 1990. At that time, there were only eight issued stocks and the total market capitalization was a mere 260 million Chinese *yuan* (RMB). By the end of 1991, only 14 companies had gone public. However, the number of listed companies has grown 115 times bigger in 18 years. Especially since late 2005, when the share merger reform (*gu quan fen zhi gai ge*) started, Chinese stock markets have been going through a period of advance in development by leaps and bounds. This reform will gradually release previously non-tradable shares into the market and help

improve the liquidity of the Chinese capital markets. By now, a total of 1628 companies had gone public by the end of July 2009, and the volume of equity market capitalization totaled 23.57 trillion RMB, ranking the third place in the world, according to data released by China Securities Regulatory Commission (CSRC) on August 25<sup>th</sup> 2009. The volume of equity market capitalization by the end of July was equivalent to 95.4 percent of China's GDP in 2008.<sup>1</sup>

**Figure 2: Market Capitalization of SSE and SZSE**



Source: Wind Data (2007)

<sup>1</sup> By People's Daily Online China's equity market capitalization world's 3rd August 26, 2009  
<http://english.peopledaily.com.cn/90001/90778/90857/90859/6739534.htm>

### 3.2. The Importance and Poor Performance of Corporate Governance in China

Despite this rapid growth, Corporate Governance has been very weak in China. The World Economic Forum did a survey where China listed in 44<sup>th</sup> place out of 49 studied countries concerning Corporate Governance (Liu, 2006). Insider manipulation and self-dealing are so wild in Chinese listed firms that a famous Chinese economist Wu Jinlian once called the Chinese stock markets in one of his books “a casino without rules.”<sup>1</sup>

**Table 1: Ranking of Corporate Governance Around the World (2003)**

Rank	Economy	Score
1	United Kingdom	6.34
6	Sweden	5.98
7	USA	5.94
8	Singapore	5.91
9	Germany	5.78
13	Hong Kong	5.59
21	Malaysia	5.27
23	Taiwan	4.96
28	Thailand	4.72
31	Japan	4.59
32	India	4.59
33	Korea	4.59
43	Philippines	3.89
<b>44</b>	<b>China</b>	<b>3.80</b>
46	Indonesia	3.62

SOURCE: LIU (2006)

Although there is a perception that private entrepreneurs in China operate under incompetent checks and balances and lack transparent financial reporting, such weak Corporate Governance practices are contradictory with the fact that Chinese businessmen are not just seeking domestic leadership for their businesses but also

<sup>1</sup> Wu, J. L., *Modern Companies and Enterprise Reform*, Tianjin, China: *People Press*, 1994.

setting their sights higher. They seek to become influential multinational companies. The International Financial Corporation (IFC) noted that a growing number of Chinese managers and entrepreneurs show willingness and desire to improve their Corporate Governance practices. They are becoming aware that a commitment to good Corporate Governance (i.e., well-defined shareholder rights, a solid control environment, high levels of transparency and disclosure, an empowered board of directors, etc.) makes a company more attractive to both investors and lenders and ultimately more profitable.<sup>1</sup>

The mandate to improve the Corporate Governance of Chinese companies as part of the government's efforts to develop financial markets has become a top priority for the Chinese national agenda. As a result, over the past few years, China has made significant strides on the Corporate Governance front. Related government agencies have issued various laws, rules, regulations, and standards aimed at laying the foundation for a sound Corporate Governance framework.

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<sup>1</sup> China Corporate Governance Survey page1

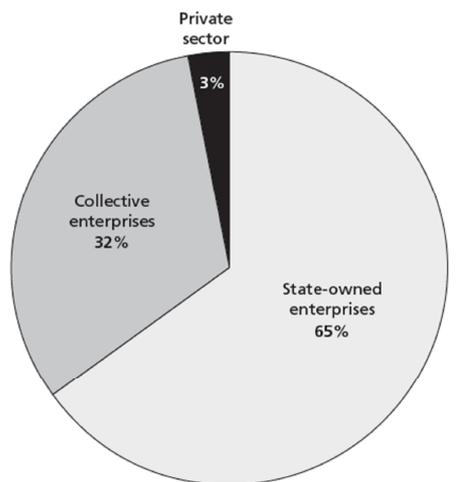
### **3.3. Historical Evolution of Chinese Corporate Governance**

The historical Evolution of Chinese Corporate Governance has gone through four stages.

The first stage is from 1949, the founding of People's Republic of China, to the year of 1983. During this period, the state-owned enterprises (SOEs) dominated in Chinese economy. The Government controlled nearly every economic sectors. Western thoughts of Corporate Governance was not introduced into any Chinese company yet.

The second stage is from 1984 to 1993, the main target of this period is the separation of government and enterprise in China. In October 1984, the Communist announced the decisions of the Central Committee on Economic Structural Reform, marking the beginning of enterprise reform. The reform was not intended to change the state's ownership, but rather to remedy the inefficiency of SOEs. At this stage, China established the Shanghai Stock Exchange (SSE) and Shenzhen Stock Exchange (SZSE). In addition, in October 1992, the State Council Securities Commission and the China Securities Regulatory Commission (CSRC) were set up. This marks the reunification of China's securities market regulatory systems. State Council Securities Commission is the government body of the macro-management of a unified stock markets. China Securities Regulatory Commission is the instrumentality of the State Council Securities Committee and it supervises the securities market in accordance with laws and regulations.

**Figure 3: China's Industrial Output, by Ownership, in 1985**



SOURCE: National Bureau of Statistics of People of Republic of China (2008)

The third stage is from 1994 to 2005, during this period, the modern enterprise management system in China began to build up experimentally. The first Company Law was passed, which was the first law that detailed the responsibility and the authority of modern Chinese corporations. Although this Company Law had a significant influence on the evolution of Corporate Governance in China, the Government shareholders still enjoy more interests than individual shareholders.

The final stage is from 2006 until now. Corporate Governance in China has undergone continuous development and progress. A series of laws and regulations were introduced, focusing on the balance of right and power between the Government and individual shareholders.

Most of the studies on Corporate Governance in China focus on the protection of investors' interest. As China is transiting from a centrally planned to a market-based economy, privatizing state enterprises and granting property rights to individuals have been the key elements of economic reform. Prior to the early 1980s, individuals used to have no ownership in state enterprises, and their compensations were not linked with companies' performance. As a product of the reforms, especially after the establishment of Chinese capital markets, individual and families are gradually gaining property rights and becoming investors in companies. However, China is still working to build up its market economy, and individual investors' interest is poorly protected and often expropriated by controlling shareholders and management. A

well-known Chinese economist defines Corporate Governance as the relationship among owners, boards of directors, and management, and stresses the checks and balances on control and incentives (Wu, 1994).

### **3.4. Problems of Corporate Governance in China<sup>1</sup>**

Despite a series of recent reforms in Corporate Governance controls and institutions in China, there exist still a number of problems.

First, the concentration of state ownership. About 70% of companies listed in the SSE and SZSE are still state-owned enterprises, in forms of direct government body or through a brokerage firm, which is not efficient in capital allocation.

Second, the board of directors lack independence. This problem is the immediate result of state ownership concentration. Since the Government still holds the dominance over the board of directors in SOEs, the supervisory board has an insignificant impact on Corporate Governance.

Third, insider trading is a very serious problem in Corporate Governance in China. This problem is due to the traditional enterprise culture, the hiding ability of insider trading, highly concentrated ownership, lack of securities laws and etc. Insider trading have interfered the normal trading order and seriously infringed on the benefits of small and medium investors.

Fourth, the nonstandard exposure of trading information and the incorrect disclosures of financial situation by companies. According to a random check by the Ministry of Finance, about 98.7% of Chinese companies overstated their earnings in annual reports in 2001<sup>2</sup>.

Last but not least, the immaturity of capital markets in China. Chinese banks still treat SOEs and other kind of firms unequally. Issuing corporate bonds is problematic for companies and the preferred shares are still absent in Chinese domestic stock markets<sup>3</sup>.

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<sup>1</sup> Kang, Y., Shi, L., Brown, E. D.(2008) Chinese Corporate Governance - History and Institutional Framework

<sup>2</sup> <http://www.zaobao.com/stock/pages7/china240501.html>

<sup>3</sup> China's Company Law which is revised in 2005 increased possibilities for the adoption of a "preferred stock" structure. However, there is no explicit two-class stock structure under China's corporate law regime. And private domestic companies are disallowed to issue preferred shares.

### **3.5. Institutional Roles of Corporate Governance in China**

There are many entities that play important roles in shaping companies' behaviors in China. They can be roughly categorized into two main groups: those operating inside the company, and those operating outside the company.

The group of entities which operates inside the company consists of the shareholders' general meeting, boards, and management. All three are engaged in the operation of the company and are directly responsible for its governance. Outside the company are regulators (main player of which is CSRC), stock exchanges (which is composed of Shanghai Stock Exchange and Shenzhen Stock Exchange), the legal system, the auditing system, and institutional investors.

These external players mentioned above have a considerable influence on companies' Corporate Governance, and they mainly function through conventions, Company Law, certification of financial reports, etc. Besides these institutional organizations and systems, there are other agents that also have an effect on Corporate Governance, for instance, customers, suppliers, employee committees, the press, and nongovernmental organizations (NGOs).

## **4. Sample and variables**

### **4.1. Sample**

The sample of this research comprises a panel of 13,553 firm-year observations during the period of 1998-2008, for which the ownership and financial data needed for the analysis are available, and the other panel of 15,396 firm-year observations of financial sheets from 1994-2008. These two panel data represent 1,575 A-share firms listed on the Shanghai and Shenzhen stock exchanges in China. A share on Shanghai and Shenzhen stock exchanges refers to those that are traded in Renminbi, the currency in mainland China.

Financial data and Corporate Governance data for the research are obtained from China Center for Economic Research (CCER), which is one of the leading data providers in China, which collects financial and Corporate Governance information from company annual reports as well as from the Chinese stock exchanges.

Since 2007, listed firms are asked by the China Security Regulatory Commission (CSRC, the stock market's regulatory authority) to disclose information about their ultimate controllers. Before the enactment of this regulation, ultimate controllers were difficult to identify because of lack of transparency. Thanks to the disclosure of the ultimate controller of firms, we can get a clear overview of the distribution of different types of firms. There are all in all six different types of firms categorized. The weights of each type of firm for the ten years and for each year are shown as follows in Table 2 and Table 3. We can see that state-owned firms take about three-fourth of all the 12804 observations, which disclose their ultimate controllers. In the early years like late 1990<sup>th</sup>, this percentage is even larger, in 1998 it is almost 90%. Nevertheless this percentage decreases over years and the openness of the stock market. In 2008, this ratio is 60%. In contrary, the type of family-owned firms takes the second place in all samples and also in each year. From the data we can see the incomparably growth of family firms – the ratio increases steadily all the way from 6% in 1998 to 37% in 2008.

**Table 2: The Frequency of Types of Ultimate Controller From 1998-2008**

Type	Freq.	Percent	Cum.
0.State-owned	9,098	71.06	71.06
1.Family-owned	3,028	23.65	94.70
2.Foreign owned	106	0.83	95.53
3.Collective owned	245	1.91	97.45
4.Social organization	70	0.55	97.99
5.Employee controlled	95	0.74	98.73
6.Not to recognize	162	1.27	100.00
Total	12,804	100.00	

\*Types of ultimate controller are the types of the largest shareholder of the firm.

**Table 3: The Frequency of Types of Ultimate Controller Each Year From 1998-2008**

Year	Type of Ultimate Controller							Total
	State-owned	Family-owned	Foreign founded	Collective owned	Social organization	Employee controlled	Not to recognize	
1998	71	5	0	2	1	0	2	81
	87.65	6.17	0	2.47	1.23	0	2.47	100.00
1999	763	67	9	31	8	7	32	917
	83.21	9.12	0.98	3.38	0.87	0.76	3.49	100.00
2000	863	96	9	33	7	8	37	1,053
	81.96	9.12	0.85	3.13	0.66	0.76	3.51	100.00
2001	920	120	8	33	6	8	35	1,113
	81.42	10.62	0.71	2.92	0.53	0.71	3.10	100.00
2002	923	184	10	28	5	7	35	1,192
	77.43	15.44	0.84	2.35	0.42	0.59	3.10	100.00
2003	917	270	8	28	7	8	11	1,249
	73.42	21.62	0.64	2.24	0.56	0.64	0.88	100.00
2004	928	351	7	23	20	12	2	1,343
	69.10	26.14	0.52	1.71	1.49	0.89	0.15	100.00
2005	928	372	6	17	5	13	1	1,342
	69.15	27.72	0.45	1.27	0.37	0.97	0.07	100.00
2006	918	454	7	18	5	15	4	1,421
	64.60	31.95	0.49	1.27	0.35	1.06	0.28	100.00
2007	919	530	10	28	4	13	1	1,505
	61.06	35.22	0.66	1.86	0.27	0.86	0.07	100.00
2008	948	579	32	4	2	4	2	1,571
	60.34	36.86	2.04	0.25	0.13	0.25	0.13	100.00
Total	9,098	3,028	106	245	70	95	162	12,804
	71.06	23.65	0.83	1.91	0.55	0.74	1.27	100.00

## 4.2. Variables

Table 4 introduces all the variables going to be used in the analyses.

**Table 4: Descriptions of All the Variables Used in the Analyses**

Variable	Description
Family-controlled firm	Since 2007, listed firms are asked by the China Security Regulatory Commission (the stock market's regulatory authority) to disclose information about their ultimate controllers. Before the enactment of this regular, ultimate controllers were difficult to identify because of lack of transparency. This so-called ultimate controller is actually the type of the largest shareholder. In this survey family firm is a dummy variable. 1-family firm, 0-non-family firm. Source: CCER.
State-controlled firm	The same way to identify as family firms, the ultimate controller is Chinese Government. They are either directly controlled or through a brokerage firm.
ROA	Return on assets. Computed as net income over average of total assets at the beginning and at the end of year. Source: CCER.
Total assets	The sum of current and long-term assets owned by the company. Source: CCER
Tobin's $q$	Ratio of the market value of a company's stock with the value of a company's equity book value. Since Chinese situation is more complicated, because of the non-tradable shares in the past, Tobin's $q$ value here is calculated as (tradable market value+ non-tradable share value+ current debt+long-term debt)/total assets. Source: CCER
Sales growth	Growth rate of sales. The difference of revenue of this year and revenue of last year, divided by last year's revenue. Source: CCER
Ln(total assets)	Natural logarithm of total assets. Source: CCER
Ownership concentration	Shareholding ratio of the largest shareholder of the firm. Source: CCER
Restraint of ownership concentration	Sum of the second to tenth largest shareholding ratios divided by the largest shareholding ratio. Source: CCER
Board size	Number of people on the board of directors of the firm. Source: CCER
Shareholding of CEO	Shareholding ratio of the CEO of the firm. Source: CCER
Shareholding of board	Shareholding ratio of board of directors of the firm. Source: CCER
Shareholding of board Chair	Shareholding ratio of the chairman of the board of directors of the firm. Source: CCER
Duality	Dummy variable, whether CEO and chairman or vice-chairman of board of directors is the same person. Yes-1, no-0. Source: CCER
Debt to equity ratio	Ratio of the sum of long-term Debt and current debt to total book value of equity. Source: CCER

Two measures of firm performance are used, namely Tobin's  $q$  and return on assets (ROA). These are the dependent variables. Explanatory variables are the family dummy variable, ownership concentration, restraint of ownership concentration, board size, shareholding of CEO, shareholding of board, shareholding of Board Chair, duality of CEO and Board Chair, debt to equity ratio,  $\ln$  (total assets) and sales growth. The effects of different industries, family intensiveness are also checked in the regressions which will be presented later on.

## **5. Main Result**

### **5.1. Descriptive Statistics**

Table 5 provides descriptive statistics for the whole sample, divided by family firms and non-family firms. Observations are firm-year data.

#### **5.1.1 Measures of firm performance**

Since the Tobin's  $q$  displays a large kurtosis and is also highly skewed, to reduce the weight of extreme values, I cap Tobin's  $q$  at the 1<sup>st</sup> and 99<sup>th</sup> percentiles, so that the range of Tobin's  $q$  is from 0.4 to 10. Average Tobin's  $q$  of family firms is 1.54, which is 0.27 higher than for non-family firms, and the difference is statistically significant at the 1% level. Family firms outperformed non-family firms in the period of 1998 to 2008 if Tobin's  $q$  is taken as the metric of firm performance, which supports the first hypothesis I raised: Family-owned firms have higher Tobin's  $q$  on average than non-family firms in the last ten years on the Chinese stock markets. This result also coincides with the findings by Anderson and Reed (2003) and Villalonga and Amit (2004). Actually, Tobin's  $q$  is not widely used among Chinese researchers, because on the one side, it is hard to calculate the replacement value of firms, and on the other side, the stock market efficiency is still not high which gives rise to Tobin's  $q$  exaggeration on Chinese stock markets.

The other measure of firm performance I choose is ROA (return on asset), computed as net income over average of total assets at the beginning and at the end of year - I also set the first and the last percentile as outliers - is more popular among Chinese stock analysts. Family firms' ROA is two percentage points lower than this measure of non-family firms. The  $t$  test also shows that the difference is statistically significant at the 1% level.

Both Tobin's  $q$  and ROA are measures of firm performance but from different perspectives. Tobin's  $q$  shows the market expectations on the company, while ROA reflects how profitable a company is relative to its total assets. Tobin's  $q$  is widely

used as the firm performance measure for international Corporate Governance research, while Chinese economists prefer ROA.

Tobin's  $q$  ratio is not statistically related to past profitability - proxied by ROA, the reasons may on one hand because family firms have better reputation on Corporate Governance transparency in China, investors have more market expectations of future profitability on family firms and on the other side, family firms have incentives for monitoring expropriation, which leads to lower level of profitability represented by ROA.

In this study, I choose both Tobin's  $q$  and ROA to see how listed firms perform and try to find out how Corporate Governance variables influence these two performance measures separately.

In terms of economic magnitude, the most significant difference can be shown in total assets: family firms' assets average 1.65 billion Yuan, while non-family firms average 4.43 billion Yuan – almost three times larger. If we take a look into history, we can see that the difference is more striking in the early years. Obviously the largest companies in the country still remain under state control.

In contrast to economic magnitude, both the sales and asset growth rates of non-family firms are lower than those of family firms, although the differences are not statistically significant.

The average debt to equity ratio of family firms is higher than that of non-family firms.

**Table 5: Family and Non-Family Firms: Descriptive Statistics**

Means, standard deviations, and tests of differences in means between family and non-family firms in their firm performance variables, financial characteristics and corporate governance variables. T-test is used to test the hypothesis that their means are equal. Family firms are defined as those their ultimate controller disclosed are families or private persons. The sample comprises a panel of 13,553 firm-year observations of Corporate Governance during the period of 1998-2008, for which the ownership and financial data needed for the analysis are available, and the other panel of 15,396 firm-year observations of financial sheets from 1994-2008. These two panel data represent 1,575 A-share firms listed on the Shanghai and Shenzhen stock exchanges in China. Asterisks denote statistical significance at 1%(\*\*\*),5%(\*\*) or 10%(\*) level, respectively.

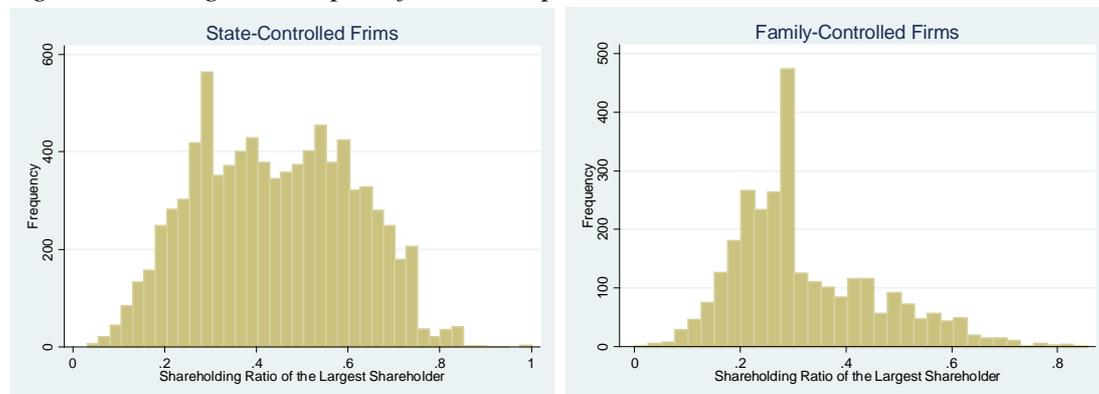
Variable	(a)family firms			(b)non-family firms			(c)all firms			Diff. In Means	
	Obs	Mean	Std.Dev.	Obs	Mean	Std.Dev.	Obs	Mean	Std.Dev.	(a)-(b)	t-stat.
Tobin's q	2958	1.54	1.03	9699	1.27	0.72	15218	1.29	0.77	0.27	15.95***
ROA	2939	0.01	0.07	9699	0.03	0.06	15106	0.03	0.07	-0.01	-8.32***
Total assets(RMB billion)	3027	1.65	2.37	9776	4.43	24.70	15395	3.35	19.80	-2.77	-6.17***
Ln(assets)	3027	20.74	1.00	9776	21.29	1.07	15395	21.04	1.09	-0.55	-25.04***
Asset growth	2881	0.16	0.83	9272	0.15	0.60	14085	0.16	0.63	0.00	0.25
Sales growth	2976	0.21	0.77	9694	0.19	0.60	15179	0.18	0.70	0.02	1.46
Debt to equity ratio	2909	1.21	1.38	9610	1.15	1.13	15103	1.12	1.14	0.06	2.51**
Ownership concentration	2860	0.32	0.14	9304	0.44	0.17	12911	0.41	0.17	-0.11	32.87***
Restraint of ownership concentration	2860	0.97	0.74	9304	0.54	0.61	12911	0.65	0.67	0.44	32.07***
Shareholding of CEO	3009	0.01	0.06	9750	0.0004	0.01	13511	0.00	0.03	0.01	22.64***
Board size	3027	6	2	9769	7	2	13553	7	2	-1	-27.27***
Shareholding of board	3009	0.05	0.14	9750	0.0012	0.01	13511	0.01	0.07	0.05	34.82***
Shareholding of chairman	3009	0.03	0.09	9750	0.0005	0.01	13511	0.01	0.04	0.03	31.86***

### 5.1.2 Corporate Governance variables

Besides some data describing the performance and development of firms, there are also some variables which show the basic Corporate Governance situation of all sample firms.

The variable of shareholding concentration represents the shareholdings of the largest shareholder. For both types of family and non-family firms, the largest shareholder owns over one-third of total shares. Since in China, one-share-one-vote rule is required by China Securities Regulatory Commission (CSRC)<sup>1</sup>, the largest shareholders of Chinese listed companies have considerably large control right on their firms. The largest shareholders of non-family firms – most of which are state-controlled firms – have on average higher shareholdings (44%) than family firms (32%), showing that ownership is more concentrated in non-family firms than in family firms (Figure 4). The Chinese government is still grasping economic lifeline of the country.

Figure 4: Histogram Graphs of Ownership Concentration



Accordingly, another variable, restraint of ownership concentration, which is computed as the sum of the second to tenth largest shareholding ratios over the largest shareholding ratio, is profoundly different between family and non-family firms. For family-controlled firms, this restraint ratio is 0.97, and for non-family controlled firms is 0.54. This result indicates that the balance mechanism of family firms is more effective than non-family firms. The other large shareholders still have equivalent

<sup>1</sup> Code of Corporate Governance for Listed Companies in China chapter1 (1)

shareholding power against the largest shareholder in family-firms, while for state-controlled firms, the other large shareholders have only half of the control rights compared with the largest shareholder, which is most often the Chinese Government.

Another variable, board size, shows how many members are there on the board of directors. Jensen (1993) and Lipton and Lorsch (1992) suggest that large boards can be less effective than small boards. The idea is that when boards become too big, agency problems (such as director free-riding) increase within the board and the board becomes more symbolic and less a part of the monitoring process. There are also some researchers who tested this view empirically and supported it. In general, it is a fairly clear picture: board size and firm value are negatively correlated.

However, most of the studies are based on U.S. or European scenarios, where the board is generally larger than in China. For family firms there are 6 board members and for non-family firms 7. In comparison, Wu(2004)<sup>1</sup> takes 350 sample firms from 1988 to 1995 in the U.S. and finds that the average board size decreased from 12 in the 1980s to 11 in the 1990s; Kang and Shivdasani (1995)<sup>2</sup> use a sample which consists of 270 non-financial Japanese firms in Moody's International Manual as of fiscal year-end 1984 and the average board size is about 25.

Executive compensation is another Corporate Governance issue. In this study, I don't choose salary compensation but the insider ownership like shareholding ratio of CEO, board and board chair as the indexes of equity incentives. Interestingly, the difference between family firms and non-family firms in those variables is quite notable. For non-family firms – mostly state-controlled firms – the average shareholding of CEO, board and board chair are all very small (I reserve four digits after the decimal point for accuracy), meaning that the management of state-owned firms can seldomly enjoy the ownership with the government but only the control rights and pay compensation. In contrary, family firms share more ownership rights with the management, especially with the board chair. It could be that in family firms, the management is just family member(s) and also the largest shareholder(s). From this sample I also find out that the salary of management of state-controlled firms is on average much higher than that of family firms.

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<sup>1</sup> Wu Y. The impact of public opinion on board structure changes, director career progression, and CEO turnover: evidence from CalPERS' corporate governance program *Journal of Corporate Finance* 10 (2004) 199– 227

<sup>2</sup> J.-K. Kang, A. Shivdasani. Firm performance, corporate governance, and top executive turnover in Japan *Journal of Financial Economics* 38 (1995) 29-58

For all the Corporate Governance variables, the differences of the means between family and non-family firms statistically significant are at the 0.01 level.

### 5.1.3 Industry distribution

Table 6 shows the industry distribution of family firms. Although family firms are now very active in all sectors of the economy in China, they are not uniformly distributed across industries. There are all in all 61 six-digit GICS industries in the sample, 5 six-digit GICS code industries in which there are no family firms (Aerospace & Defense, Airlines, Consumer Finance, Diversified Telecommunication Services and Gas Utilities), 15 in which family firms have a smaller than 10% share, 3 in which family firms have more than 50% share (Software, Office Electronics and Semiconductors & Semiconductor Equipment).

These differences suggest that it is important to take industry effects into account in the later analyses.

**Table 6: Number and Percent of Firm-Year by Six-Digit GICS Code**

GICS Code	Industry definition	Family firms	All firms	Family firms in industry
101010	Energy Equipment & Services	7	24	0.29
101020	Oil, Gas & Consumable Fuels	22	248	0.08
101030	Oil & Gas Refining & Marketing	4	56	0.07
151010	Chemicals	235	1453	0.16
151020	Construction Materials	37	304	0.12
151030	Containers & Packaging	26	70	0.37
151040	Metals & Mining	88	855	0.1
151050	Paper & Forest Products	47	275	0.17
201010	Aerospace & Defense	0	72	0
201020	Building Products	40	162	0.24
201030	Construction & Engineering	40	241	0.16
201040	Electrical Equipment	114	389	0.29
201050	Industrial Conglomerates	65	344	0.18
201060	Machinery	180	1025	0.17
201070	Trading Companies & Distributors	52	274	0.18
202010	Commercial Services & Supplies	40	148	0.27
203010	Air Freight & Logistics	14	39	0.35
203020	Airlines	0	42	0
203030	Marine	3	104	0.02
203040	Road & Rail	4	116	0.03
203050	Transportation Infrastructure	24	354	0.06
251010	Auto Components	61	346	0.17

251020	Automobiles	40	310	0.12
252010	Household Durables	118	441	0.26
252020	Leisure Equipment & Products	11	73	0.15
252030	Textiles, Apparel & Luxury Goods	192	668	0.28
253010	Hotels, Restaurants & Leisure	37	285	0.12
253020	Diversified Consumer Services	12	26	0.46
254010	Media	17	126	0.13
255010	Distributors	90	460	0.19
255030	Multiline Retail	37	502	0.07
255040	Specialty Retail	18	39	0.46
301010	Food & Staples Retailing	16	126	0.12
302010	Beverages	53	289	0.18
302020	Food Products	130	596	0.21
303010	Household Products	5	50	0.1
303020	Personal Products	9	20	0.45
351010	Health Care Equipment & Supplies	13	61	0.21
351020	Health Care Providers & Services	8	48	0.16
352010	Biotechnology	34	81	0.41
352020	Pharmaceuticals	270	864	0.31
402010	Diversified Financial Services	1	8	0.12
402020	Consumer Finance	0	9	0
402030	Capital Markets	1	2	0.5
404030	Real Estate Management & Development	267	1005	0.26
451010	Internet Software & Services	7	7	1
451020	IT Services	37	139	0.26
451030	Software	103	165	0.62
452010	Communications Equipment	107	412	0.25
452020	Computers & Peripherals	52	229	0.22
452030	Electronic Equipment & Instruments	134	502	0.26
452040	Office Electronics	3	5	0.6
452050	Semiconductor Equipment & Products -- Discontinued effective 04/30/2003.	17	80	0.21
453010	Semiconductors & Semiconductor Equipment	9	13	0.69
501010	Diversified Telecommunication Services	0	3	0
501020	Wireless Telecommunication Services	4	12	0.33
551010	Electric Utilities	26	476	0.05
551020	Gas Utilities	0	29	0
551030	Multi-Utilities	4	57	0.07
551040	Water Utilities	7	72	0.09
551050	Independent Power Producers & Energy Traders	1	25	0.04
	Not to recognized	35	140	0.25
<hr/>				
	<b>Total</b>	<b>3028</b>	<b>15396</b>	<b>0.19</b>

## **5.2. Relation Between Corporate Governance and Firm Performance**

### *5.2.1 Correlations of variables*

Table 7 shows the correlation matrix for the sample used here. The negative and significant correlation between ROA and Tobin's  $q$  should be noted.

As explained before in descriptive statistics, ROA and Tobin's  $q$  are measures for firm performance from different perspectives. ROA shows how efficiently a company can squeeze profit from its assets. A high ROA is a sign of solid financial and operational performance, whereas the value of Tobin's  $q$  demonstrates the market expectations of investors on future profits. ROA and Tobin's  $q$  are in most studies positively correlated.

The correlations between shareholding of CEO and shareholding of board and board chair are both high. It seems that CEO has a successful bargaining position about their ownership rights of the firm if the board itself has equity ownership of this firm.

**Table 7: Correlation Matrix**

	Tobin's <i>q</i>	ROA	Ln(assets)	Sales growth	Debt to equity ratio	Ownership concentration	Restraint of ownership concentration	Shareholding of CEO	Board size	Shareholding of board	Shareholding of chairman	Duality
Tobin's <i>q</i>	1.0000											
ROA	-0.0775*	1.0000										
Ln(assets)	-0.2903*	0.0178*	1.0000									
Sales growth	-0.0125	0.1175*	0.1181*	1.0000								
Debt to equity ratio	-0.0907*	-0.3099*	0.2245*	0.0719*	1.0000							
Ownership concentration	-0.2310*	0.1990*	0.2008*	0.0350*	-0.0666*	1.0000						
Restraint of ownership concentration	0.1526*	-0.0766*	-0.1713*	-0.0156	0.0179*	-0.7367*	1.0000					
Shareholding of CEO	0.0403*	0.0189*	-0.0621*	-0.0062	-0.0495*	-0.0670*	0.1500*	1.0000				
Board size	-0.0417*	0.1189*	0.0329*	-0.0115	-0.0382*	0.0888*	-0.0329*	-0.0814*	1.0000			
Shareholding of board	0.0337*	0.0461*	-0.0710*	0.0161	-0.0522*	-0.1028*	0.2102*	0.6931*	-0.1085*	1.0000		
Shareholding of chairman	0.0423*	0.0357*	-0.0608*	0.0183*	-0.0424*	-0.0738*	0.1453*	0.6405*	-0.1102*	0.9079*	1.0000	
Duality	0.0106	0.0046	-0.0048	-0.0095	-0.0099	-0.0239*	0.0143	-0.0032	-0.0303*	0.0052	0.0038	1.0000

Asterisk denotes statistical significance at 5% and less.

### 5.2.2 Regression results

In this section, the relationship between firm performance and Corporate Governance is analyzed.

In Table 8, Tobin's  $q$  and ROA are separately analyzed as dependent variables, ordinary least squares (OLS) regression, firm fixed effects regression, and two-stage least squares (2SLS) regression are performed.

Taking Tobin's  $q$  as performance metric, the family ownership dummy variable, in the first three columns, presents positive results (0.08, 0.07, 0.41), and shows that family firms significantly outperform the firms controlled by other types of owners, the coefficient is even higher especially using an instrumental-variables 2SLS model<sup>1</sup>. The results provide evidence on the benefits of family control compared to control by non-family owners, plausibly due to lower agency costs, in family firms on Chinese stock markets. When ROA is the performance metric (column 4 to column 6), family ownership doesn't generate higher performance and the coefficients are slightly lower than zero (-0.00, -0.00, -0.01), and the levels of significance of the results are not very high. As explained before, Tobin's  $q$  and ROA represent firm performance in different ways, and are also influenced by different micro- and macro-environmental factors.

The effects of ownership concentration and restraint of ownership concentration to Tobin's  $q$  are both significantly negative (-0.91, -1.92, -0.79). Ownership concentration defined as the shareholding ratio of the largest shareholder cannot improve the market expectations of firms and neither can the restraint of ownership concentration (-0.06, -0.20, -0.08) computed as the sum of the second to tenth largest shareholding over the largest. When ROA is the dependent variable, on the contrary, both the ownership concentration and the restraint of ownership concentration show positive effects (0.07, 0.11, 0.07; 0.01, 0.01, 0.01).

Concerning managerial ownership, the shareholding of CEO and board chair show positive influences on Tobin's  $q$  (0.71, 0.34, 0.79; 1.34, 3.83, 1.20), whereas negative effects on ROA (-0.06, -0.05, -0.06; -0.04, -0.30, -0.03), the results are significant,

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<sup>1</sup> Instrumented variable is family ownership dummy, instrument variables are ownership concentration, restraint of ownership concentration, shareholding of CEO, shareholding of board, shareholding of board chair, board size, duality, debt to equity ratio, log of total assets, sales growth and industry dummies.

supporting the hypothesis 3: Executive stock incentive and firm performance have statistically significant relation. The variable board size of firms improve firm performance slightly both for Tobin's  $q$  and ROA (0.01, 0.02, 0.02; 0.00, 0.00, 0.00). This result is contrary to some studies (Jensen (1993) and Lipton and Lorsch (1992) ), likely because the board size in Chinese firms is on average – only 7 people – much smaller than in USA or Japan, which are hotly discussed among researchers. So that the results of the correlation between board size and firm performance are then not comparable.

The duality of CEO and board chair has very small positive effect on Tobin's  $q$  (0.02, 0.03, 0.02) and ROA (0.00, 0.00, 0.00) but not statistically significant, which supports the hypothesis 2: duality of CEO and board chair has no influence on firm performance.

Debt to equity ratio and log of total assets both have significantly negative relationship with dependent variables Tobin's  $q$  and ROA, in contrast, sales growth is positively related to  $q$  and ROA, though the results of the regression to Tobin's  $q$  are not significant.

The models' fit – presented by adjusted R-squared – of the firm fixed effects regression is the best of these three regressions (0.35; 0.33).

**Table 8: Regression Results 1**

Regression results of Tobin's  $q$  and ROA on family ownership, ownership concentration and other Corporate Governance variables. Asterisks denote statistical significance at 1%(\*\*\*), 5%(\*\*), or 10%(\*) level, respectively.

	Tobin's $q$			ROA		
	OLS	Fixed Effects	2SLS	OLS	Fixed Effects	2SLS
	OLS	OLS	2SLS	OLS	OLS	2SLS
Family ownership dummy	0.08*** (4.74)	0.07*** (2.87)	0.41*** (4.76)	-0.00*** (-0.59)	-0.00 (-0.28)	-0.01* (-1.75)
Ownership concentration	-0.91*** (-15.65)	-1.92*** (-17.78)	-0.79*** (-11.73)	0.07*** (16.46)	0.11*** (13.18)	0.07*** (13.74)
Restraint of ownership concentration	-0.06*** (-3.98)	-0.20*** (-8.11)	-0.08*** (-4.87)	0.01*** (8.90)	0.01*** (6.49)	0.01*** (8.97)
Shareholding of CEO	0.71** (2.29)	0.34 (0.57)	0.79*** (2.48)	-0.06* (-2.38)	-0.05 (-1.00)	-0.06*** (-2.47)
Shareholding of board	-1.14*** (-4.87)	-3.21*** (-5.63)	-1.55*** (-5.95)	0.08*** (4.43)	0.30 (6.47)	0.09*** (4.71)

Shareholding of board chair	1.34*** (3.95)	3.83*** (3.83)	1.20*** (3.48)	-0.04* (-1.48)	-0.30 (-3.73)	-0.03 (-1.30)
Board size	0.01*** (3.71)	0.02*** (5.33)	0.02*** (5.33)	0.00*** (7.90)	0.00*** (7.69)	0.00*** (4.63)
Duality	0.02 (0.71)	0.03 (1.26)	0.02 (0.95)	0.00 (1.45)	0.00* (1.66)	0.00 (1.35)
Debt to equity ratio	-0.04*** (-6.53)	-0.05 (-7.46)	-0.04 (-7.24)	-0.02*** (-36.10)	-0.01*** (-22.45)	-0.02*** (-33.78)
Ln(total assets)	-0.23*** (-33.59)	-0.25*** (-16.29)	-0.21*** (-24.95)	0.00*** (15.16)	-0.02*** (-13.22)	0.01*** (11.56)
Sales growth	0.01 (1.45)	0.01 (1.04)	0.01 (0.72)	0.01*** (17.89)	0.01*** (7.18)	0.01*** (17.82)
Intercept	6.43*** (44.51)	7.51*** (21.57)	5.87*** (28.38)	-0.17*** (-15.78)	0.14*** (5.56)	-0.16*** (-10.08)
R-squared	0.16	0.44	0.13	0.17	0.42	0.17
Adj R-squared	0.16	0.35	0.13	0.17	0.33	0.17

Table 9 takes Tobin's  $q$  as dependent variable and there are two more independent variables than in Table 8 which is ROA and the interaction effect of ROA and family dummy. The interaction effect variable is formed by multiplying a dummy variable (family dummy) ROA. This variable equals ROA for family firms and zero for non-family firms. This interaction term is then included in the regression predictors. OLS regression, firm fixed effects regression, and 2SLS regression are performed.

Coefficients of other independent variables are more or less the same with the results table 8 shows. The interaction of ROA and family dummy is negatively related with the  $q$  value (-0.71, -0.39, -1.59) and the results are also statistically significant, suggesting that, relative to listed family firms on Chinese stock market, ROA and Tobin's  $q$  also have negative relation.

**Table 9: Regression Results 2**

Regression results of Tobin's q on family ownership, ownership concentration, interaction of ROA and family dummy and other Corporate Governance variables. Asterisks denote statistical significance at 1%(\*\*\*), 5%(\*\*), or 10%(\*) level, respectively.

	<b>Tobin's q</b>		
	OLS	Fixed Effects	2SLS
Family ownership dummy	0.08*** (4.55)	0.06*** (2.49)	0.45*** (4.93)
Ownership concentration	-0.90*** (-15.71)	-1.93*** (-17.96)	-0.78*** (-11.84)
Restraint of ownership concentration	-0.06*** (-4.44)	-0.21*** (-8.24)	-0.08*** (-5.46)
Shareholding of CEO	0.72** (2.36)	0.30 (0.57)	0.77* (2.47)
Shareholding of board	-0.98*** (-4.25)	-3.15*** (-5.54)	-1.34*** (-5.35)
Shareholding of board chair	1.26*** (3.80)	3.76*** (3.79)	1.07*** (3.13)
Board size	0.01*** (3.44)	0.02*** (6.44)	0.02*** (5.29)
Duality	0.01 (0.57)	0.03 (1.11)	0.02 (0.81)
Debt to equity ratio	0.00 (0.21)	-0.00 (-0.98)	0.00 (0.15)
Ln(total assets)	-0.23*** (-35.90)	-0.26*** (-17.57)	-0.21*** (-26.55)
Sales growth	0.02* (1.69)	0.01 (1.29)	0.01 (0.74)
ROA	0.20* (1.65)	0.31** (2.31)	0.52*** (3.54)
ROA*family dummy	-0.71*** (-3.13)	-0.39*** (-1.66)	-1.59*** (-5.07)
Intercept	6.45*** (46.46)	7.58*** (22.59)	5.85*** (29.11)
R-squared	0.16	0.42	0.12
Adj R-squared	0.16	0.33	0.12

Table 10 represents the results of firm fixed effects regression, trying to find out the relation between Corporate Governance influence and shareholder value in family and non-family firms. In column 1, consistent with earlier empirical research, we pool all firms in our sample.

Columns 2 and 3 present the regression results when delineating the sample based on the type of ultimate controller of companies disclosed since 2007. Column 2 shows the results with family firms and Column 3 with non-family firms.

Ownership concentration and restraint of ownership concentration in family firms bears more negative significant relation to shareholder value than in non-family firms (-2.54, -1.62; -0.36, -0.16), likely because of the insider expropriation in family firms. Shareholding of CEO has positive coefficient for family firms (1.81) while negative for non-family firms (-1.57), suggesting firm value increases as the shareholding of CEO increases in family firm, but decreases in non-family firms. It seems that stock incentives for CEO have positive influence on  $q$  in family-controlled firms but not in non-family firms. In contrast, the coefficient of shareholding of board is negative in family firms (-3.41) but positive in non-family firms (1.09). However the influence of shareholding of board to Tobin's  $q$  in non-family firms is not significant.

The coefficient estimates on shareholding of board chair in family and non-family firms are both positive (3.51, 0.54) though in non-family firms not significant. The influence of shareholding of board chair to firm value in family firms is much greater than that in non-family firms. Since the CEO and board chair in family firms are probably just the members of the family, and regression results shows that the shareholding of CEO and board chair both have greater effects on firm performance in family firms compared with non-family firms, it suggests that the executive stock incentives have greater positive impact for family members in family firms.

The relations between board size and Tobin's  $q$  in family and non-family firms are opposite. Board size has positive relation to firm value in non-family firms (0.03) but negative relation in family firms (-0.01).

Duality of board chair and CEO has no significant relation to Tobin's  $q$  both in family and non-family firms.

**Table 10: Regression Results 3**

Regression results of Tobin's  $q$  on family ownership, ownership concentration and other Corporate Governance variables, using sub samples of family firms and non-family firms. Asterisks denote statistical significance at 1%(\*\*\*), 5%(\*\*), or 10%(\*) level, respectively.

	<b>Tobin's <math>q</math></b>		
	(1)	(2)	(3)
	<b>all firms</b>	<b>family firms</b>	<b>non-family firms</b>
Family ownership dummy	0.06*** (2.55)	- -	- -
Ownership concentration	-1.86*** (-17.67)	-2.54*** (-7.08)	-1.62*** (-14.86)
Restraint of ownership concentration	-0.21*** (-8.50)	-0.36*** (-5.43)	-0.16*** (-5.64)
Shareholding of CEO	0.30 (0.52)	1.81** (2.18)	-1.57*** (-8.36)
Shareholding of board	-2.95*** (-5.31)	-3.41*** (-4.26)	1.09 (0.43)
Shareholding of board chair	3.59*** (3.70)	3.51*** (2.46)	0.54 (0.08)
Board size	0.02*** (7.16)	-0.01*** (-0.85)	0.03*** (7.88)
Duality	0.03 (1.18)	0.02 (0.33)	0.03 (1.10)
Debt to equity ratio	-0.04*** (-4.92)	-0.07*** (-3.97)	-0.04*** (-5.21)
Ln(total assets)	-0.21*** (-13.72)	-0.43*** (-9.20)	-0.15*** (-9.21)
Sales growth	0.01 (1.54)	-0.02 (-0.99)	0.02* (1.91)
Intercept	6.51*** (18.93)	1.18*** (11.71)	5.04*** (13.85)
R-squared	0.43	0.50	0.48
Adj R-squared	0.34	0.32	0.39

To check the impact of Corporate Governance on firm performance in different industries, I select three types of industries, which are financial and technology firms(GICS 40,45), energy and material firms(GICS 10,15) and industrial firms(GICS 20), the regression results are displayed in Table 11.

For these three industry types, the family dummy has no significant relation to firm performance, but the impacts of ownership concentration are all significantly negative to  $q$  in these three industries (-1.52, -1.31, -1.96). The coefficients of shareholding of

CEO are all positive (1.79, 2.42, 2.95) while those of shareholding of board are all negative (-1.81, -4.33, -2.78). In financial and technology firms the shareholding of board chair has negative relation with firm value (-7.22) while in the other two industry areas this kind of influence are positive (4.76, 2.01). Board size has slightly positive influence on firm value (0.01, 0.01, 0.01).

**Table 11: Regression Results 4**

Regression results of Tobin's  $q$  on family ownership, ownership concentration and other Corporate Governance variables, using sub samples of financial and technology firms, energy and material firms and industrial firms. Asterisks denote statistical significance at 1%(\*\*\*), 5%(\*\*), or 10%(\*) level, respectively.

	<b>Tobin's <math>q</math></b>		
	Financial and technology firms	Energy and material firms	Industrial firms
Family ownership dummy	0.09 (1.45)	-0.02 (-0.38)	0.08 (1.37)
Ownership concentration	-1.52*** (-4.75)	-1.31*** (-6.85)	-1.96*** (-7.62)
Restraint of ownership concentration	-0.10 (-1.47)	0.00 (0.09)	-0.24*** (-4.14)
Shareholding of CEO	1.79* (1.83)	2.42** (2.14)	2.95* (1.45)
Shareholding of board	-1.81* (-1.71)	-4.33*** (-2.55)	-2.78** (-2.20)
Shareholding of board chair	-7.22*** (-1.58)	4.76** (1.96)	2.01 (0.86)
Board size	0.01* (1.51)	0.01** (2.09)	0.01* (1.68)
Duality	-0.09* (-1.56)	-0.08* (-1.69)	0.06 (1.13)
Debt to equity ratio	-0.00 (-0.32)	-0.00 (-0.69)	0.00 (0.66)
Ln(total assets)	-0.61*** (-16.58)	-0.23*** (-8.01)	-0.28*** (-8.90)
Sales growth	0.02 (1.16)	-0.01 (-0.56)	0.06*** (2.81)
Intercept	1.49*** (0.83)	6.60*** (9.99)	8.09*** (11.10)
R-squared	0.54	0.43	0.49
Adj R-squared	0.44	0.32	0.38
Number of Observations	1919	2642	2594

Table 12 presents the regression results using sub samples of family intensive industries, and other industries. Family intensive industries are those that family firms take more than the average percent in Table 6, meaning that industries in which family firms take over and equal to 19% are family intensive industries the rest are other industries.

For family intensive industries, family ownership have greater and significant influence on  $q$  (0.08). Interestingly, the coefficients of ownership concentration and restraint of ownership concentration on  $q$  for family intensive industries and other industries are quite different. Ownership concentration in family intensive industries has positive impact (2.33) on  $q$  and negative influence (-1.56) on  $q$  for other industries suggesting that for these family intensive industries, the shareholding of the largest shareholder has positive and significant impact on firm performance while this statement doesn't hold for those industries in which family firms don't play an important role.

Concerning the impact of restraint of ownership concentration on firm performance, in family intensive industries, this variable has negative coefficient (-0.32), while in other industries positive (0.11). That means for family intensive industries, it's better to have less restraint on ownership concentration and for other industries, restraint of ownership concentration is good for firm performance.

The coefficients of shareholding of board are both negative for family intensive industries and other industries (-2.87, -2.99). On the contrary, the coefficients of shareholding of board chair are both positive (2.88, 3.09). And the board size of family intensive industries has greater positive impact on  $q$  than that of other industries (0.17, 0.02).

**Table 12: Regression Results 5**

Regression results of Tobin's q on family ownership, ownership concentration and other Corporate Governance variables, using sub samples of family intensive industries, and other industries. Asterisks denote statistical significance at 1% (\*\*\*) , 5% (\*\*), or 10% (\*) level, respectively.

	<b>Tobin's q</b>	
	Family intensive industries	Other industries
Family ownership dummy	0.08** (1.93)	0.05 (1.30)
Ownership concentration	-2.33*** (-12.25)	-1.56*** (-12.08)
Restraint of ownership concentration	-0.32*** (-7.78)	-0.11*** (-3.17)
Shareholding of CEO	-0.30 (-0.38)	1.99** (1.96)
Shareholding of board	-2.87*** (-3.91)	-2.99*** (-2.78)
Shareholding of board chair	2.88* (1.60)	3.09** (1.92)
Board size	0.17*** (2.67)	0.02*** (5.16)
Duality	0.05 (1.36)	-0.01 (0.17)
Debt to equity ratio	-0.05*** (-4.77)	-0.05*** (-5.42)
Ln(total assets)	-0.43*** (-15.79)	-0.13*** (-6.70)
Sales growth	0.01 (0.76)	0.01 (-0.66)
Intercept	1.14*** (19.18)	4.62*** (10.60)
R-squared	0.46	0.49
Adj R-squared	0.35	0.40
Number of Observations	5029	6603

## **6. Conclusion**

This study surveys the dataset which comprises a panel of 13553 firm-year observations during the period of 1998-2008, and the other panel of 15396 firm-year observations of financial sheets from 1994-2008. These two panel data represent 1575 A-share firms listed on the Shanghai and Shenzhen stock exchanges in China.

Results from the descriptive statistics show that family firms' Tobin's  $q$  value is higher than non-family firms' but the situation is opposite if ROA is taken as the firm performance measure. And ownership concentration in non-family firms – mostly state-owned companies – is 12% higher than in family firms.

The regression results are also very different when Tobin's  $q$  and ROA are dependent variables. Taking  $q$  as firm performance metric, family ownership has a positive and significant effect on performance, but there is negative and significant correlation between ownership concentration – represented by the shareholdings of the largest shareholder – and performance. In contrast, if ROA is the dependent variable, family ownership has a slightly negative impact on this performance measure and ownership concentration positively affects ROA.

Concerning managerial ownership, in family firms, the shareholding ratio of the CEO is positively related to Tobin's  $q$ , but negatively related to ROA, so is the shareholding of board chair.

The duality of CEO and board chair has no significant relation to performance, just like most of the literature shows.

Using two more explanatory variables which are ROA and the product of ROA and family dummy variable, the regression to  $q$  is performed in order to find the interaction effect of ROA and family dummy on  $q$ . The interaction is negatively related with Tobin's  $q$  and the results are also statistically significant, suggesting that, relative to listed family firms on Chinese stock market, ROA and Tobin's  $q$  also have negative relation.

Using sub-samples of family firms and non-family firms, I also regress Tobin's  $q$  on Corporate Governance variables and find that ownership concentration and restraint of ownership concentration in family firms bears more significant negative relation to  $q$  than in non-family firms, likely because of the insider expropriation in family firms. Regression results also show that the shareholding of CEO and board chair both have greater effects on firm performance in family firms compared with non-family firms, which suggests that the executive stock incentives have greater positive impact for family members in family firms.

Board size has positive relation to firm value in non-family firms but negative relation in family firms and the duality of board chair and CEO has no significant relation to Tobin's  $q$  both in family and non-family firms.

To check the impact of Corporate Governance on firm performance in different industries, two regression are performed. Firstly I select three types of industries, which are financial and technology firms(GICS 40,45), energy and material firms(GICS 10,15) and industrial firms(GICS 20) and compare the coefficients. Secondly, industries are divided into two groups, which are family intensive industries, which are industries in which family firms take over and equal to 19%, and the rest of industries.

For these three industry types, the family dummy has no significant relation to firm performance, but the impacts of ownership concentration are all significantly negative to  $q$  in these three industries, showing the entrenchment effects in these three types of industries. The coefficients of shareholding of CEO are all positive while those of shareholding of board are all negative. To be noticed is in financial and technology firms the shareholding of board chair has negative relation with firm value while in other two industries this influence is positive.

For family intensive industries, family ownership have greater and significant influence on  $q$ . Ownership concentration in family intensive industries has positive impact on  $q$  and negative influence on  $q$  for other industries, suggesting that for these family intensive industries, the shareholding of the largest shareholder has positive and significant impact on firm performance while this statement cannot hold for those industries in which family firms don't play an important role.

The coefficients of shareholding of board are both negative for family intensive industries and other industries. On the contrary, the coefficients of shareholding of board chair are both positive.

From this study we can see that the ownership of state-owned firms on Chinese stock markets are highly concentrated and these firms still play the roll as economic giants in China. On the other side, family firms grow fast from 1998 to 2008, and share more stocks with management compared with state-owned firms.

Regressing Tobin's  $q$ , the results show that the ownership concentration isn't beneficial, indicating the entrenchment effect of ownership concentration on firm performance. This kind of negative influence is even more obvious in family firms, likely because of the insider expropriation. Concerning the impact of managerial stock incentives on firm performance, regression results reveal that the shareholding of CEO and board chair both have greater effects on firm performance in family firms compared with non-family firms, which suggests that the equity-based compensation have greater positive impact for family members in family firms since CEO and board chair of family firms are probably just family members.

Regarding to the industry effects on firm performance, we find for family intensive industries, the shareholding of the largest shareholder has positive and significant impact on firm performance while this statement cannot hold for those industries in which the proportion of family firms is below the average.

All in all, Corporate Governance is a precondition of any modern financial market where the base is credibility and confidence; without such a base, it would be difficult for China's market to attract and gain the trust of both domestic and international investors.

However, Corporate Governance in China is still in an embryonic stage, and there are plenty of problems to be solved, as show in the empirical analysis, like low efficiency due to highly concentrated ownership in state-owned firms, entrenchment effect of ownership concentration and insider expropriation in family-firms. It calls for Corporate Governance reforms building up an environment where the elements of a well functioning financial market (e.g. well-defined legal system, efficient regulatory agencies, rigorous law enforcement) are in place.

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## **Anhang I**

### **Zusammenfassung**

Diese Arbeit untersucht die Situation der Corporate Governance in China und versucht die Beziehung zwischen der Corporate Governance und der Unternehmensperformance der öffentlich gelisteten Unternehmen der Chinesischen Börsenmärkte zu analysieren. Diese hier gesammelten Daten beinhalten eine Liste von 13553 firm-year observations von Corporate Governance im Zeitraum von 1998-2008 und eine Liste von 15396 firm-year observations von financial sheets im Zeitraum von 1994-2008. Diese beiden Listen repräsentieren 1575 A-share Unternehmen der Shanghai und Shenzhen Börsenplätze in China.

Durch diese Arbeit wird ersichtlich, dass das Eigentum der staatlichen Unternehmen am Chinesischen Börsenmarkt sehr hoch ist und dass diese Unternehmen noch immer eine große Rolle als wirtschaftliche Giganten in China spielen. Jedoch befinden sich im Zeitraum von 1998-2008 die Familienunternehmen im schnellen Wachstum und beteiligen sich mehr an Aktien mit Management als staatliche Unternehmen. Die Ergebnisse des Regressing Tobin's  $q$  zeigen, dass sich die Konzentration an Eigentum nicht positiv auswirkt, was auf einen entrenchment effect der Konzentration von Eigentum auf die Unternehmensperformance hinweist. Diese negativen Auswirkungen machen sich noch stärker in Familienunternehmen erkennbar, höchstwahrscheinlich durch Enteignung von Familienmitgliedern. Hinsichtlich des Einflusses der Aktienmotivation für Manager auf die Unternehmensperformance lässt sich sagen, dass die Regressionsergebnisse darauf hinweisen, dass das shareholding von CEO und Vorstandsvorsitz größere Auswirkungen auf die Unternehmensperformance in Familienunternehmen zu haben scheinen, als dies in nicht durch eine Familie geführten Unternehmen der Fall ist. Dies deutet auf einen größeren positiven Effekt der equity basierenden Entlohnung für Familienmitglieder innerhalb von Familienunternehmen hin, da CEO und Vorstandsvorsitz der Familienunternehmen höchstwahrscheinlich nur durch Familienmitglieder besetzt werden.

Die Auswirkungen der Industrie auf die Unternehmensperformance betreffend lässt sich feststellen, dass in einer Familien starken Industrie das shareholding des größten shareholders einen positiven und signifikanten Einfluss auf die Unternehmensperformance hat, während diese Aussage nicht auf eine Industrie zutrifft, in der das Verhältnis der Familienunternehmen unter dem Durchschnitt liegt.

## **Anhang II**

### **Lebenslauf**

# **YINING LI**

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Englisch:                         Fließend

Deutsch:                         Fließend