## Social Security Funds Ownership and Firm Performance:

# The Evidence from Chinese Public Listed Companies

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### **ABSTRACT**

In the recent year, the Chinese government begins to dismiss the limitation of investing social security funds in the stock market. Social security funds as Institutional investors start to play an important role in Chinese capital market. It can not only solve the owner-manager agency problem but also relieve majority and minority problem. The shareholder's activism makes us aware that the healthy development of Chinese Plcs needs the social security funds. This study tests the influence of social security funds on the firm performance, through a sample of 2200 Chinese Plcs. It finds that the social security funds have a positive impact on firm performance. This result is robust.

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### **Keywords**

Institutional Ownership, Social Security Funds, Firm Performance, Chinese Plcs, Corporate Governance

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 $9^{th}$  IBA Bachelor Thesis Conference, July  $5^{th}$ , 2017, Enschede, The Netherlands. Copyright 2017, University of Twente, The Faculty of Behavioural, Management and Social sciences.

### 1. INTRODUCTION

Nowadays, Chinese newspapers often mention that it is important to develop institutional investors and encourage the pension funds, mutual funds as institutional investors to participate the corporate governance of listed companies. The influence of institutional investors on firm performance through corporate governance is always the concerning point. Bhagat and Bolton (2008) have found the phenomenon that the better corporate governance can bring a better operating performance of the company.

Specifically, agency problem has been the major problems for corporate governance, existing in the listed company. Thomsen and Conyon (2012) found that Ownership structure becomes one of mechanism to improve firm performance by solving the agency problem. This is because the conflict between the shareholders and management brings huge agent cost. Ownership identity and structure are the bullet points here. The institutional owners as important owners have strong motivations to monitor management because of their high ownership concentration and profit seeking aim (Jiang and Kim, 2015). They can exercise their rights as a board member to take an active part in the operation of the listed companies.

The major- minority problem is another point. As we all know, the minority shareholders are always weak compared with the majority shareholders. Especially, in the emerging market, like China, Malaysia, the minorities are composed of more individual investors who are more speculative and the short-term orientation. Those big number of free-riders intensify the agency problems because they always tend to sell their shares instead of attending corporate governance.

With the rapid growth in Chinese capital market, the agency problems inevitably emerge between the publicly listed company and shareholders. The ownership structure is very complicated including the state-owner, institutional owners and individual owners. In the past several years, the state-owners were one of the dominant ownership types in chines PLCS (Jiang and Kim, 2015). However, with the reform of state-owned enterprises (SOEs), social security funds start to replace the state-owner and embark on participating operation of firms. The monitoring and pressure from powerful shareholders on corporate governance changed the past situation.

The Chinese institutional investors start to protect their interests through intervening the company operation. For instance, due to the institutional investors veto the motion of corporate restructuring against the Eastern Airlines and Singapore Airlines, the plan from China Eastern Airline of the private placement for introducing of new shareholders, broke down(Wang, 2008).

In recent years, Chinese institutional shareholders have been actively involved in solving owner-management problem as well. In 2012, the Second Extraordinary General Meeting of Huahai Pharmaceutical reviewed the proposal of dismissing the general manager Chen Baohua for bringing the loss to the company. Since the institutional investors actively voted, the proposal got adopted. The success of the case makes people aware that institutional shareholders are affecting the healthy

development of the company through participating corporate governance.

There are lots of research about the influence of institutional ownership from western scholars. Recently, there are already many types of research about the mutual fund's influence. Zheng (1999) examined that the mutual funds had a little significant influence on its firm performance in the long period. Yuan et al (2007) Studied that the equity ownership by mutual funds has a positive effect on firm performance.

Gillan and sharks (2000) study the shareholder's activism from the perspective of institutional investors. According to the classification of institutional investors, the pension funds accounted for a considerable proportion based on the amount of shareholders proposals in the United States. The New York Public pension agencies accounted for 36%, the US California Civil Service Retirement Fund (CALPERS) accounted for 19%. We can see that the pension funds play a more and more important role in corporate governance. For the Chinese market, the social security funds influence is still a new part which needs to examine.

Here this study takes the Chinese social security funds as the research objective in that it is a significant institutional investor in China and it becomes more and more crucial with its further enlarging investment in stock market. Regarding the amount of investment, the holding market value of Chinese social security funds in the stock market in 2016 is five times than in 2012. It has already reached 170 billion RMB (Liu, 2017). And also Chinese social security funds have a very high incentive to monitor the firm because it will meet a very serious asset and liability problem in the future when the Chinese society is quickly stepping into an aging era (Zheng, 2014).

The Research objective here is to investigate if social security funds ownership can influence the firm performance. Therefore, the research question is following: How do Chinese social security funds as institutional investors affect the performance of Chinese publicly listed companies?

### 2. LITERATURE REVIEW & HYPOTHESIS DEVELOPMENT:

The Institutional investors refer to an entity that pools the money from individual investors to buy various financial assets. That includes banks, insurance companies, pensions, hedge funds, REITs, investment advisors, endowments, and mutual funds. They trade securities in many shares that bring lower commission fees and diversification advantage compared with the small money.

By literature, first, this study will talk about the two types of agency problems and then demonstrates three primary opinions towards to the effect of institutional investors on firm performance, the performance improvement and performance reduction and none performance. Last, I make an analysis on the present situation of Chinese social security funds.

These three arguments provide opposite views on the potential effect that an institutional investor will bring to the firm performance. Moreover, following empirical findings give a detailed support in these studies.

### 2.1 Firm Performance Improvement Argument

### 2.1.2 Relieve Owner-Manager Problem

Agency problem says the separation of ownership and management will bring the agency cost that influences the firm performance. Smith (1996) finds that institutional shareholders can reduce the agency problem to improve firm performance through supervising the operation of enterprises.

First, they have the incentives to do that. As institutional investors who hold the vast amount shares of the company. They will not directly sell the firm shares when it performs worse because it will bring huge transaction cost for its big amount of shares compared with small investors (Ferreira, Matos, 2008). They tend to help to drive the firm in the right way to keep their investment get profit instead of directly selling shares. Because of the incentive, they have sufficient motivation to evaluate and intervene, especially for mutual funds and social security funds which seek for the best return.

Then they have the ability to do that. There are two ways support them to realize the supervision in the stock market. One is the voting power. As a significant shareholder, institutional investors can veto any decisions made by the management to prevent them harming the interest of the company. Second, they can decide the compensation for the management, which aligns the interest of managers and the shareholders. The moral hazard problem can be reduced with the stock options for good performance offering to managers.

Hence, Institutional investors increase company efficiency by providing monitors. Moreover, they solved the free-rider problem by collecting power from small individuals in that the bargaining power of investors will be strong enough to conduct effective monitoring on controlling shareholders and their agents as well (Aggarwal et al, 2011). Some previous studies provide empirical evidence for supporting this argument. Muniandy et al. (2016) find institutional investors significantly improve the short-term performance of Australian listed firms.

### 2.1.2 Relieve Majority-Minority Problem

Nevertheless, except for solving the usual agency problems, the majority-minority problem (type II) can be improved as well. This type II agency problem refers to the situation that, the majority shareholders control the firm to realize the goal that is only good for themselves and damaging the interest of the minority. Especially for Chinese stock market, the large number of speculators cause the interest of individual investors are usually ignored. Moreover, the still incomplete regulation system intensify these problems happen.

However, this circumstance is being improved right now. Lin and Fu (2017) researched that the institutional ownership significantly and positively protect the minority by stopping managers from manipulating stock price. Hsu and Wang (2014) analyzed 647 companies listed in the Taiwan. The empirical results proved that institutional ownership have potential supervision power on the majority.

We can conclude that institutional investors can improve the firm performance to solve the agency problems through positive corporate governance and supervising the operation of a firm. Therefore, we see that Institutional shareholders can be a positive factor.

### 2.2 Firm Performance Reduction Argument

About reducing firm performance opinion, it said institutional investors might be short-termism instead of long terms (Yuan et al (2007)). There are two short-run horizons.

One is that institutional investors may require more dividend from the invested firm (Thomsen& Conyon.2012). Furthermore, another is that as a significant shareholder, they probably ask for expenditure cut down to increase the return on equity. The R&D expenditure usually would be reduced because it is a big burden for the company and will not bring money in the short run. This phenomenon means institutional investors will ignore the long-term healthy development. Hence, the cost of R&D will be cut down as well to fulfil the low return requirement (Marginson, Mcaulay, 2008).

Another point is that some institutional investors like bank or insurances companies will bring the conflict of interest problem (Thomsen& Conyon.2012). This situation is because they have many related transactions with the objective company. For instance, China Minsheng Bank was requested to rectify its huge amount of related loan to the listed enterprises that own its shares, by China Banking Regulatory Commission (CBRC).

### 2.3 No Influence On The Firm Performance Argument

The monitor can be achieved only with large shareholders and long-run vision (Chen et al, 2007). This can be considered as a prerequisite to solve the agency problem and improve firm performance. However, Chinese market may not meet that requirement. Jiang and Kim (2015) point out that the Chinese institutional investors have a rather little proportion in the percentage of shareholdings. Although the total shares held by institutional investors have already reached 17.4% of total shares in 2012, for a single mutual fund, it holds only 0.067% in 2011(Jiang and Kim, 2015). This small amount of holdings dramatically impairs the power of institutional investors. Eventually, they cannot monitor the listed companies.

### **2.4 Status Quo Of Chinese Social Security Funds**

The National Social Security Fund has experienced a development process from past to now. While the scale of investment has grown further, the level of investment and operation has been further improved. In 2013, social security fund total funds reached 12415.64 billion yuan than the beginning of the establishment of an increase of 10 times. As of the end of 2014, China Social Security Fund total assets is more than 1.5 trillion yuan, the annual equity investment return rate of 11.43%, which is more than GDP growth, the absolute return is 139 billion yuan (Liu, 2017).

The contribution of funds is mainly from the central budget, but after a series of reforms, the national social security fund financing channels have been widening. In 2001, the Chinese government gave part of the lottery to the national social

security fund. In 2009, the state-owned shares in the domestic stock market implemented the transfer to the National Social Security Fund.

The investment range of the Social Security Fund adopts the combination of stock/equity investment and fixed income investment based on National social security funds annual report. In 2011, the National Social Security Fund took out 3 billion yuan of trust loans, investing in Nanjing affordable housing projects. The majority of domestic and foreign stock investment is carried out by hired investment manager. The social security funds have a committee especially responsible for that investment including attending the invested firm's corporate governance. This manager is directly responsible for the social security funds. The fixed income products are operated directly by the social security fund. Direct investment is managed directly by the Social Security Fund, which includes bank deposits, trust loans, transfer of state-owned shares and indexed equity investments.

However, the social security funds are facing insufficient money problem shortly(Qiang, 2003). First, the aging of the population has increased the pressure on the expenditure of the China Social Security Fund. Second, inflation will result in devaluation of the accumulated social security funds, which will lead to an increase in social security fund spending. As inflation comes from the growth in the cost of living, the result is that people living on social security funds have to pay more insurance to maintain their basic life. To offset the impact of inflation, it can only try to keep the value of the Fund, without increasing the burden on the source of funds.

### 2.5 Role Of Chinese Social Security Funds As Institutional Investors.

### 2.5.1 Decrease Agency Cost

Chinese SOEs have severe agency problems. In fact, the agent does not suffer the risk of state-owned equity profit and loss because their position is not given on firm performance but political reason. Therefore, the abuse of power will come. For instance, the Tsinghua group was questioned for the management buyout (MBO), which sold the shares of SOE with an underestimated price.

The fundamental reason of phenomenon is the management structure. As China's state-owned listed companies take a straight line management from top to bottom which is the National People's Congress, the central government, local government and then State-owned asset management companies. Although each level has a regulatory responsibility, the actual operation process is not fully supervised, due to the unclear property right definition.

The Social Security Funds changed the situation here. Recently, Social Security funds have been given a large number of state-owned shares, which make Property rights more clear to fill the vacant influence of the state-owned shares. Compared to the state-owned shares before, the passive investment status, social security funds as important stakeholders, have sufficient incentives to ensure the value of its assets.

The situation of weak shareholders and strong managers will be broken. The social security fund's the external resources advantages and pressure on public opinion will force managers to consider the benefits of social security funds in the decision-making process (Qiang, 2003). For instance, they can suggest ideas to the management and communicate with managers privately. If that action does not work well, social security funds will use the power of votes and change the structure of board to replace the useless directors. Furthermore, the compensation will be changed as well. Social Security funds can link the firm performance with the salary to motivate the managers.

#### 2.5.2 Relieve Short-Term Orientation

That short-term phenomenon is widespread in the Chinese stock market. According to the survey 'Chinese stock investors investigation', 78.6% investors are seeking for earning money from the price difference, 11.7% seeking for earning money from dividend and only 4% investors pursue corporate governance. This tendency causes the listed companies lose the consideration of firm long-term development as well.

Social Security funds can relieve the short-term market orientation with holding stocks for a long period. Yan (2004) found that social security funds normally hold the A shares for at least 6 months, and for small investors, their average holding time is less than 2 months. With the longer holding period, the social security funds will have the long-term goal of the firm development that offset the speculators.

### 2.6 Hypothesis:

By three perspectives, the firm improvement argument is dominant. By solving the owner-manager and majority-minority problem, the firm can save huge agent cost. Furthermore, the social security funds' long-term strategy help the company to create more value in the future instead of making stock price rise in the short-term. And also the empirical evidence demonstrates that there is a potentially positive relationship between institutional ownership and firm performance. Therefore, it assumed that the Chinese social security funds ownership also has a positive influence on firm performance.

H0: Social Security Funds ownership has a positive influence on firm performance.

### 3. RESEARCH DESIGN

This research uses the Ordinary Least Square (OLS) regression to test the relationship between firm performance and institutional ownership. However, endogeneity problems have to be considered. For instance, the high firm performance might cause the increased ownership of social security fund, which hinders the investigation on the influence of social security fund on the firm. To consider that, I regressed the firm performance on one year lag of the social security fund ownership and other control variables. Through this lag, the effect of the change from social security fund ownership on future firm performance can be explained. This method is used from the Yuan (2008)'s paper.

$$\begin{split} Perform_{it} &= \alpha_0 + \beta_1 InsOwn_{i(t-1)} + \beta_2 SIZE_{i(t-1)} \\ &+ \beta_3 Leverage_{i(t-1)} \\ &+ \beta_4 tangibility_{i(t-1)} + \varepsilon_{it} \end{split}$$

**Table 1. Definition Of Regression Variables** 

Varibles	Definition	Measures
InsOwn	Social security	Percentage of A shares
	fund	held by Social security
	Ownership	funds
ROA	Return on	Net income/total asset
	assets	
ROE	Return on	Net
	equity	income/shareholders'
		equity

### 3.1 Independent Variable: Social Security Funds Ownership

The social security ownership can be directly measured by the percentage shares held by the social security funds.

### 3.2 Dependent Variable: Firm Performance

Regarding the firm performance, the stock price of the company is frequently measured by the individual investors. However, the stock price is not a good measure here because in the stock price is more related to the future expectation on the firm from investors. This future expectation is usually full of many speculations, especially in Chinese stock market. Therefore, for the firm performance, the stock price will not be taken as an indicator.

To some extent, Firm performance refers to the ability to create more revenue and net profit based on a certain asset. Therefore, the firm performance can be measured by the return on asset and return on equity. These two indicators will be used in assessing the firm performance.

However, the Chinese PLCs often manipulated the bottom-line reported profit figures (Yuan et al, 2007). To avoid that possibility, I take Tobin's Q and EBIT as the alternative variables to measure the firm performance. These two can be seen as a good proxy for measuring the profitability of a firm (Cornett et al., 2007). Tobin's Q has been widely used as a measure of firm performance. It is defined as the ratio of total market value divided by total assets value, where the total market value is calculated by the sum of the market value of equity and the market value of net debt.

### 3.3 Control Variable:

### 3.3.1 Firm Size

Firm size is calculated by the natural logarithm of firm's sales (Anderson, Reeb, 2003). The firm size normally has a negative impact on company performance in that the bigger the firm is, the more overheads cost it has to pay. Especially, Chinese listed

Tobin's Q	Firm	Market value of
	performance	equity/book value of
		total asset
EBIT	Earnings before	Earnings-interests-
	interest and	taxes
	taxes	
Size	Size of Listed	the natural logarithm of
	companies	firm sales
Leverage	Leverage	Total debt/total assets
Tangiblity	Tangibility of	Total value of tangible
	assets	assets/ book value of
		total asset

companies probably have more bureaucratic inefficiency when the size of the firm increase.

### 3.3.2 Leverage

Leverage can influence firm performance in both ways. One is that leverage can create a tax shield for the company to decrease the taxable revenue and indirectly improve the performance of a firm. From another side, the risk of firm increase as well. It will be much dangerous when the firm has a very high leverage because the capital chain will be broken if the unexpected event happens (Ebaid, 2009). The leverage can be measured as debt to asset ratio.

### 3.3.3 Tangibility

Tangibility is a measure of the net value of the tangible asset of the firm. It can influence the capital market and firm performance (Yuan et al, 2008). Usually, those companies with low tangibility tend to have a high profitability. Wiwattanakantang (1999) said that the tangible asset can be a good control variable in the firm structure which influence the managerial decision.

### 4. SAMPLE SELECTION

This study focuses on the 2200 Chinese companies listed in Shanghai Stock exchange and Shenzhen stock exchange in 2013-2016. The collected firms have several criteria. The firm should not be a financial firm like banks, insurance companies or investment banking companies because their capital structures and operation mechanisms are quite different with traditional industries firms. And to examine the influence Chinese social security funds bring to the companies, the firms which are just listed only a year are excluded, because this period is too short for social security funds to monitor the performance of these firms. The Chinese social security funds' ownership data and financial information of the firms can be found through China Stock Market Accounting Research System (CSMAR). And for those firm data which are still not incomplete, the website eastmoney.com can be a supplement, which is a financial and stock information provider.

### 5. EMPIRICAL RESULT

### **5.1 Descriptive Statistics**

Table 2 demonstrates all the variable used in the methodology. As the summary statistics show, the average ROE and ROA are 4.327% and 2.668% which decline in a quite low position compared with the average ROE and ROA of 6.5% and 7.7% in 2005 from the Yu's research. This is because of the recession of Chinese economy in the past several years. From the perspective of the stock market, this market experienced a big financial crisis in 2015 in which Shanghai stock exchange composite index dropped from 5166 to 2763, almost 50 percent decreased. Furthermore, the average leverage of Chinese Plcs was around 42%. It illustrates the high leverage tendency of Chinese firms. For social security funds ownership, we can see that the average holding percent was 1.7% which was too low

to influence the firm. The social security funds' plan to continue investing in the market in the future can change that situation.

In the Panel B, it shows that the EBIT experienced a huge decrease from 10.380 to 6.756. The almost 30% drop reflected that the profitability of listed firm is increasingly slowdown. Because of the bull market, The Tobin's Q in 2015 climbed to near 56, 25 times than last year. However, it only lasted for one year. The Tobin's Q declined back to 2.591 in 2016 with the financial crisis approaching. Although the stock market experienced dramatically rose and down, it showed that the social security funds ownership kept around 0.018 in these years, which represented the long-term investment strategy of institutional investors than short-term speculation.

Table 2
Descriptive Statistics (2013-2016)

Panel A: descriptive statistics on pooled sample

Variables	Mean	Median	Standard Deviation	Minimum	Maximum
ROE (%)	4.327	4.075	5.178	-50.617	35.992
EBIT	8.933	1.541	.457	-1.174	10.7
ROA (%)	2.668	2.223	2.790	-10.671	19.879
Tobin's Q	15.266	2.208	25.793	.067	96.957
SocialOwn	.017	.0144	.0129	.001	.116
Lev (%)	42.196	41.069	20.389	2.139	94.320
Tang (%)	21.680	18.385	15.810	.049	89.577
Size	21.322	21.145	1.795	16.450	27.978

Panel B: Mean value of firm performance, social security funds ownership by year

Variable	2013	2014	2015	2016
ROE (%)	4.235	4.640	4.451	3.812
ROA (%)	2.670	2.850	2.689	2.489
EBIT	9.971	10.380	9.572	6.758
Tobins'q	1.512	2.041	56.377	2.591
SocialOwn	.018	.018	.017	.017

**Table 3. Correlation Coefficients** 

	ROE	ROA	EBIT	Tobin's Q	SocialOwn	Lev	Tang	Size
ROE	1.000							
ROA	.822**	1.000						
EBIT	.103**	.049*	1.000					
Tobin's Q	.021	.093**	.046*	1.000				
SocialOwn	.087**	.082**	062**	.004	1.000			
Lev	073**	345**	.116**	229**	040	1.000		
Tang	076**	065**	.046*	054*	015	.081**	1.000	
Size	.204**	.049	.450**	438**	037**	.570**	.14**	1.000

<sup>\*</sup>Correlation is significant at 5% level.

### 5.2 Correlation Analysis

Pearson correlation was calculated by the table 3. We can see that the correlation of each pairwise variable is not strong. First, it can be found that the ROA and ROE has a quite high positive relationship because this two variable can be seen as endogeneity variables. However, the Tobin's Q and EBIT which is also used to measure the firm performance has a fragile relationship with ROA and ROE. The correlation between ROE and Tobin's Q is even at 0.021. It might have two reasons. One is the investors have the overvaluation on the market value of equity with the low earning ability. Another is that the stock market might be manipulated which mistook the investors with an unbelievable indicator about the Chinese PLCs (Yuan, 2007).

Regarding the SocialOwn namely social security funds ownership, it has relatively positive correlated with ROA of 0.082. This indicated that the more social security funds have

the ownership of firms, the more good firm performance it will be

With regards to size, tangibility and leverage, the Size has the only positively correlated both with ROA, ROE and EBIT in this three variables. The reason of this might be that there are more SOEs companies with large size in the stock market who have the monopoly position. That characteristic help them to earn money quite easy so that they have high profitability. However, the relationship between size and Tobin's Q is quite negative with -0.438. That phenomenon probably can be explain that the speculators do not prefer the big company. Since the stock price of the small business is easier to go up compared to big company. The correlation coefficient of Leverage and tangibility with social security ownership are -0.04 and -0.015 each. It explained the fact that social security funds are not prefer the companies with high debt in that the high risk it will exist in the firm. Furthermore, the huge fixed asset normally means the low increase on ROE, Which is not fit with the aim of social security funds to seek for high return.

**Table 4. Regression Results** 

	ROE	ROA	Tobin's Q	EBIT
	Model 1	Model 2	Model 3	Model4
SocialOwn	.099***	.092***	005	.023
	(4.716)	(4.668)	(226)	(1.100)
LEV	279***	534***	232	176***
	(-11.121)	(-22.651)	(-1.679)	(-7.431)
Tang	122***	079***	037*	020
	(-5.732)	(-3.942)	(-1.679)	(-1.021)
Size	.363***	.357***	.010	.531***
	(14.314)	(14.975)	(.384)	(22.240)
Constant	-21.110***	-7.148***	25.728***	-28.311***
	(-11.146)	(-8.957)	(3.184)	(-21.769)
F	63.965***	138.671***	28.470***	134.727***
Adjusted-R2	.111	.214	.052	.209
N	8205	8205	8205	8205

<sup>\*</sup>Significance at 10% level.

<sup>\*\*</sup> Correlation is significant at 1% level

<sup>\*\*</sup>significance at 5% level.

<sup>\*\*\*</sup>significance at 1% level.

### 5.3 Regression Analysis

The regression model displayed in Table 4. It includes four measures of firm performance with ROA, ROE, Tobin's Q and EBIT. To test the hypothesis, I use 4 models with different indicators for firm performance including all control variables.

The adjusted R square is 0.214 and 0.209 with the firm performance variable ROA and EBIT in Model 2 and 4. the adjusted R-square means to some extent the independent variable can explain the dependent variables. This two big r square illustrates that the social security funds have great ability to describe the firm performance. The result is consistent with the idea that social security funds have the enough incentives and ability to intervene the corporate governance and improve the firm performance. Furthermore, for these two models, the coefficient of social security ownership means that when the social security funds ownership increase 1 percent, the ROA, EBIT will be improved by 0.092 % and 0.022 %. compared with Yu(2008)'s paper, the social security has less influence on the firm performance. It can be explained that the social security funds have less ownership in the Chinese PLCs than other mutual funds.

As for the control variables, the standardized coefficients shows that the leverage and tangible have a negative effect on firm performance, and it is statistically significant in the regressions. It is reasonable that the firm with higher debt probably have a high operating risk.

For size, we can see that it is positively correlated with firm performance in 4 models, but for Tobin's q it is almost zero and not significant. The phenomenon here is because the most large size companies in China are SOEs and they have higher ROE form their advantage to doing business in China in contrast to the small private-owned companies. Meanwhile, this SOEs have less attractive to the investor given these companies less future growth prediction. The big companies are too predictive. Therefore, they have less market value and larger total asset. Moreover, reversely, for small enterprises, they have larger market value given the same total asset in that they have more growth potential.

### **5.4 Robustness Checks**

The robustness of the results is displayed in Table 5, the database of variable is adjusted. The firm without social security funds ownership has been excluded here.

In contrast to the previous results, the adjusted R-square in robustness test increase in Model 3. For other three models, the r square decreases a little. And the Social Security funds ownership in the model 1 and 4 is not significant which means the influence of SocialOwn on firm performance is not clear. It might because of the low percentage of shareholdings from social security funds. However, the consequence still shows that the social security funds can explain the firm performance very well in the Model 2 and Model 3. The social security funds ownership are positively correlated with Firm performance. With 1 percent increase in social security funds, the ROA and Tobin's Q will rise 0.062 % and 0.047 %.

Table 5. Robustness Test: Regression Results

	ROE	ROA	Tobin's Q	EBIT
	Model 1	Model 2	Model 3	Model4
SocialOwn	.003	.062***	.047***	.022
	(.163)	(3.196)	(2.851)	(1.090)
LEV	208***	350***	.595***	.025
	(-9.019)	(-18.205)	(36.317)	(1.240)
Tang	093***	128***	024	015
9	(-4.411)	(-6.567)	(-2.267)	(732)
Size	.221***	.188***	295***	.269***
	(9.347)	(9.492)	(-17.615)	(12.759-)
Constant	-28.924***	-5.549***	15.013***	-78.87***
	(-10.654)	(-6.650)	(18.078)	(-12.357)
F	33.961***	125.964***	402.353***	43.707***
Adjusted-R2	.057	.183	.429	.071
N	2200	2200	2200	2200

<sup>\*</sup>Significance at 10% level.

<sup>\*\*</sup>significance at 5% level.

<sup>\*\*\*</sup>significance at 1% level.

### 6. CONCLUSION

This paper uses panel data analysis combining the cross-sectional data and time series data. Through applying Ordinary Least Square Regression techniques, the thesis tests the relationship between and social security funds and firm performance. From 2200 firms during 2013-2016 excluding the Chinese financial PLCs. The result shows that there is a positive correlation between social security funds and firm performance.

Agency Theory suggests that the social security funds can decrease agency cost and protect the interest of minorities. The evidence confirms the theory even though this effect is not that strong. The reason might be that the shares of social security fund hold are still not significant so that the intervening and supervision on the corporate operation is limited. However, it still gives the target company management an intangible regulatory pressure. Meanwhile, when the social security fund holding positions' information is published, it will be widespread because of the investors' concern, it can also be said that the social security funds create the supervision of public opinion.

With robustness check, it appears that the influence of social security funds on firm performance is robust. As the other institutional investors, social security funds play a crucial role in corporate governance. It is necessary to encourage social security funds to invest more money into the stock market. The investment will produce a virtuous circle that social security funds achieve return and firm performance gets improved. And then social security funds will have more money to invest.

### 7. LIMITATION AND RESEARCH RECOMMENDATIONS

This study aims to examine whether the social security funds have a positive influence on firm performance. However, there are three main limitations of this paper. First of all, it is still too small for the proportion of social security funds shares in the Chinese PLCs. Its influence may not that strong compared to other institutional ownership. Secondly, the Chinese complex structure of shareholders cut down the influence as well. The government more influences the SOEs companies instead of institutional investors. The way how social security funds deal with the SOEs needs to further research. Third, the variable used to measure firm performance might still not be accurate. More variables can be used to test the relationship.

### 8. ACKNOWLEDGEMENT

I acknowledge the support from my supervisor Dr. Xiaohong Huang who instruct me to finish this whole paper.

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