ISSN 1923-841X [Print] ISSN 1923-8428 [Online] www.cscanada.net www.cscanada.org

Relationship Between Government and Enterprises in the Face of Risk Pension Insurance Fund Under the Background of Aging

WANG Juan^{[a],*}; WANG Bowen^[a]

Received 29 March 2015; accepted 25 May 2015 Published online 30 June 2015

Abstract

At present, China's population aging is accelerating. The aging population problem is a stern challenge to pension insurance. This paper explore the risk of problems pension fund faces from two aspects of the government and enterprises, and to analyze the relationship between government and enterprises in the face of risk of the oldage insurance fund, namely the game relationships and partnerships. Finally, put forward the countermeasures and suggestions for the risk of pension funds.

Key words: Pension insurance fund; Government; Enterprises

Wang, J., & Wang, B. W (2015). Relationship Between Government and Enterprises in the Face of Risk Pension Insurance Fund Under the Background of Aging. *International Business and Management*, 10(3), 151-156. Available from: http://www.cscanada.net/index.php/ibm/article/view/7138 DOI: http://dx.doi.org/10.3968/7138

INTRODUCTION

China has entered into aging society in 1999, and is one of the developing countries in the world to enter the aging society prematurely. China will become an aging society in 21st Century, and the trend is irreversible. According to the prediction of the United Nations, by the middle of the 21st century, China will become a country of most oldage population in the world, accounting for 1/5 of the total elderly population in the world. By the second half of the 21st century, China will become the second-largest

old-age population country in the word, second only to India. Severe aging problems will appear more and more prominent. The aging of the population has brought a serious challenge to the sustainable development of China's pension insurance fund, the cash gap caused by the aging population will cause a huge burden to our country's pension fund.

1. THE STATUS QUO OF CHINA'S POPULATION AGING

1.1 The Status of the Aging Population

In accordance with the international standard measure, when a country or an area of 60 years of age and older elderly population reached 10% of the population of the society, or the elderly population aged 65 and above accounted for 7% of the proportion of the total population, it indicates that the aging in the country or area. According to the 2010 China's sixth census data show, the elderly population aged 60 and above in China has reached 177,650,000, 13.26% of the total population; 65 years old and on old people mouth 118,830,000 accounted for the proportion of the total population reached 8.87%, which indicates that China has entered the aging society. The population development forecast report of OECD (Organization for economic cooperation and development) shows that by 2030, the elderly population aged 65 and above in China accounted for more than Japan and become the country with the highest degree of the global population aging. Some developed countries have joined the list of aging society after they had become rich. However, the situation of our country is just the other way around. Due to the relatively weak economic foundation, a series of problems caused by the aging of the population has brought a lot of pressure on China's comprehensive deepening reform, and comprehensively building a welloff society.

[[]a] School of Management, Shanghai University of Engineering Science, China.

^{*}Corresponding author.

1.2 The Elderly Population Dependency Ratio

Dependency ratio refers to the ratio between the number of non labor population and the labor force, which measures the number of maintenance labor force per capita of the labor force. With the rapid increase of the elderly population, the elderly population of our country is increasing. The Figure 1 reflects the changing trend of the elderly population dependency ratio in our country from 1982 to 2012.

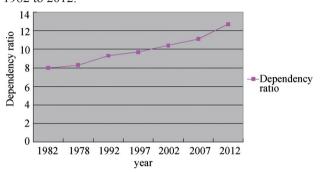


Figure 1
Trend Chart of Old Age Dependency Ratio from 1982 to 2012
Source: National Bureau of Statistics Yearbook of China population 2-4.

From the figure visible, China's elderly population dependency ratio raising, from 1982 to 8.0% rose to 12.7% in 2012, which payments to the pension insurance fund of our country brought certain risks. Therefore, improving the pension insurance system in our country has an important influence on reducing the risk of pension funds.

2. CHINA'S EXISTING PENSION INSURANCE SYSTEM

The problem of population aging is a challenge to our country's pension system. Aging population bringup ratio rising year by year makes pension number increases gradually. However, the number of paid pension premiums unchanged or even decreased. The influence of the phenomenon of PAYG pattern is the most outstanding. The increased number of receive, funds tend to form the deficit. At present, our country executes the partial accumulation model of social pooling and individual account. This model is smaller than the PAYG model burden, but there is also some payments risk. China has been practiced the PAYG system, change the mode of need is a huge restructuring costs, realize the pension system transition from PAYG system to partial accumulation system, which is bound to create a personal account of the problem of the implicit pension debt. With the gradual increase of the elderly, elderly population to the working age population ratio will continue to increase, the pension fund gap will become an important factor restricting the healthy development of China's pension system.

Reducing the risk of payment of pension fund requires us to grasp pension fund financing mode. To raise the pension insurance fund has three modes: PAYG mode, accumulation mode and accumulation mode. According to the choice mode of the age structure of the population, when a national population age structure is younger or system initial implementation, generally take PAYG model, because the rate is stable and low. Along with the population structure aging and the rate of the service worker's contribution rate is increasing year by year, the pattern is often transformed into partial accumulation mode or complete accumulation mode. Due to the characteristics of population aging in China, after 2003 the urban retired has a rapid increase, PAYGO will give enterprises and workers, and even countries bring huge burden. Therefore, in 1997, China began to implement a combination of social pooling and individual accounts accumulation model.

This paper takes Quzhou city of Zhejiang Province as an example to explain the pressure of the foundation fund in our country. By the December of 2013, the number of workers to participate in the basic old-age insurance to 586,600 people. Among them, the urban area to participate in the basic old-age insurance for 308,700 people, the number of 73,200 people, the cumulative balance of funds 1,313,000,000 yuan, the fund's ability to pay for 11.22 months. See Table 1 for details:

Table 1
Quzhou City, Zhejiang Province, the Basic OldAge Insurance for Workers and the Fund Balance of
Payments Situation

Year	The number of insurance (10 thousand)	Number of retirees (10 thousand)	Year-end accumulated surplus amount (10 million)	Fund payment capability (month)
2009	18.20	3.09	4.39	10.12
2010	20.51	3.24	4.60	9.10
2011	23.40	3.71	7.53	11.91
2012	27.43	5.60	10.98	12.61
2013	30.87	7.32	13.13	11.22

From the table a data analysis can be seen, in the past five years, the situation of Quzhou City balance fund slightly better, but the number of funds is still low. For the five years, the fund's ability to pay the longest for 12.61 months. This is not enough to guarantee the sustainable development of the pension fund. By the end of 2013, the province's basic pension insurance funds for the average payment capacity of 32.02 months. The existing fund of Quzhou City to pay far below the average level of the province. With the accelerated pace of aging and the number of people in the relative reduction of the number of insured, the future of Quzhou may be faced with the risk of receiving a non credit.

3. THE RISK OF THE EXISTENCE OF PENSION INSURANCE FUNDS IN CHINA

China's endowment insurance system by the PAYG system into the partial accumulation system, also a serious problems—endowment insurance fund appear gap. Statistics show that the future of China's pension gap will reach 6 yuan, China's pension system to maintain sustainable development can not be separated from the balance of pension funds. See Table 2 for details:

Table 2
China's Pension System After Eliminating Financial Subsidies

year	Pension premium income (10 million)	Expenses of pension insurance (10 million)	Balance (10 million)
2015	33,346.32	36,461.97	-3,024.87
2014	29,104.1	30,666.1	-1,563
2013	15,501	16,460	-959
2012	15,027	13,948	1,079

Note. Data from Ministry of Human Resources and Social Security of the People's Republic of China.

3.1 Debt Risk

China's pension system in from PAYG to fund accumulative total or semi fund cumulative system transformation process, because has not working and retired personnel of the cumulative past. And they have pension, according to the existing system, then the formation of the implicit pension debt. «Under the current combination of pooling debt forecasts and estimates stealth mode said, with 2012 as the base, the social pooling accounts of hidden debt was 83.6 trillion yuan, personal accounts of hidden debt was 2.6 trillion yuan, the total urban basic old-age stealth debt pooling of insurance under the system of combined 86.2 trillion yuan, accounting for 2012 GDP ratio of 166%. Because of the huge amount of implicit debt, social pooling account funds far enough to make up for the this difference, this situation will affect the sustainable development of the pension fund, and will lead to a series of economic and social problems.

3.2 Enterprises in Arrears of Endowment Insurance Risk

Due to the huge amount of arrears, therefore, the phenomenon of unpaid pension insurance companies exist in the national scope. According to data released by the Ministry of Labor and Social Security, and by the end of 1999 the national enterprises arrears accumulated 383 billion of which 10,000,000 yuan more than the large arrears of more than 200.By the end of 2002, the total number of workers pension insurance companies owed more than 30 million, owed a total of 44 billion employee pension insurance. Among them, the arrears million yuan enterprises have 211.By the end of 2006,

non-payment of basic pension insurance enterprises amounted to 43.6 billion yuan, more than ten million yuan in arrears nationwide 177 enterprises, total arrears of 4.5 billion yuan. Calculate the corporate pension fund general according to the balance, a slight accumulation principle, arrears of enterprises will have a direct impact on the pension insurance fund balance and sustainable development.

3.3 Regulatory Risk

At present, China's endowment insurance fund supervision of the main composition is complicated, including many aspects: labor and social security department, financial department, auditing department, tax department, banks and the public. Among them, the relevant government departments of administrative supervision have played a leading role. At present, China's regulatory system based on administrative supervision, public supervision is weak; Administrative regulatory agencies more, the scope of the regulatory system is more widely; In addition to the enterprises annuity fund, the basic pension insurance fund and the National Pension Reserve Fund are not introduced market mechanism to determine the pension fund managers; There is a lack of clear communication mechanism between the pension fund regulators and the public. Under this supervision strategy, the legal system of pension insurance fund is the slow development of the industry, and ultimately will hurt the interests of fund members.

3.4 Investment Risk

Pension insurance fund investment channel is single, the efficiency is low, the investment instruments are two kinds of national debt and bank deposit, and the investment rate is at a relatively low level. The safety principle of this investment is based on the sacrifice of market efficiency; Improper investment management mode, illegal investment seriously, China's basic pension insurance investment activities by the social insurance agency directly. This kind of investment management pattern has some defects which are difficult to overcome, which can not meet the need of the fund's investment operation and maintenance of value. Pension was diverted, diverted serious. There are no unified social supervision channels; each department is responsible for policy formulation, but also responsible for the supervision and implementation, and thus resulting in a large number of insurance premiums misappropriation and waste.

4. THE GAME RELATIONSHIP BETWEEN GOVERNMENT AND ENTERPRISES IN THE RISK OF PENSION FUNDS

Game theory is a tool to study the interaction process and the result of the decision-making body. In the game theory, the decision-making body is called the participants; each participant has a clear goal, each agent's decision based on the knowledge of the decision maker and the expectations of other decision makers. The theory of game theory is more focused on the behavior decision making, which is more close to the reality, thus widening the analysis of the traditional economics.

Workers and employers to participate in social insurance are the legal mandatory obligations and responsibilities. Social insurance is compulsory, and the social insurance premium is the legal obligation of the employer and the labor parties. Western political scientist Williamson and Panpeier by Germany, Britain, Sweden and the United States endowment insurance system development history inspection, found a variety of specific institutional arrangement is actually the result of the game between different interest groups; the redistribution function of endowment insurance will establish game and game.

The impact of the aging population on the risk of pension, resulting in the government's financial subsidies. From the perspective of government, as the main body of the social pension insurance, we must protect the rights and interests of retired workers, maintain social justice and maintain social stability. To defuse the risk of population aging on the overall pension, the government has two options: to reduce the cost and improve the overall rate of pension. To reduce the overall pension cost rate is undoubtedly reduce target substitution rate or the burden of the system than, target substitution rate reflects the living standards of retired workers; reduce the target replacement rate has a direct impact on retirement. So the government can reduce the burden of the system by adjusting the age of retirement. Relative to the enterprises, the biggest advantage is that the government has the right to make a pension insurance system, which determines the enterprises' pension behavior pattern. Therefore, the government raised the rate of payment of pension insurance provides a certain financial guarantee, reducing the pressure on their financial subsidies.

From the view of enterprises, they are the main body of the pension insurance, but as the legal entity of the market, it is the principle of profit maximization. In the course of the implementation of the system, enterprises take various measures to avoid payment obligations. Statistics show that the enterprises in the payment of social insurance premiums in the presence of serious violations of law. At the same time, the government is in the disadvantageous position of serious information asymmetry. it is difficult to understand the situation of the enterprises in a timely and comprehensive way. Therefore, it is difficult for the government to conduct a comprehensive and effective monitoring of the enterprises' pension.

The impact of the aging population on the government to ensure that the retirement of workers on the basis of retirement, by postponing the retirement age and raising the rate of payment will be the financial subsidies to the enterprises; While the enterprises in the profit maximization, the employer pays more attention to the current interests, while the government is concerned about the continuous and stable development of the society, this is the use of units and the government's game.

5. THE NEW COOPERATIVE RELATIONSHIP BETWEEN GOVERNMENT AND ENTERPRISES IN THE RISK OF PENSION FUNDS

Government and enterprises in the risk of pension funds, there is not only a game relationship, but also the cooperation relationship. The establishment of a new type of cooperative relationship is the guarantee for the normal operation of the pension funds in China.

From the perspective of enterprises, enterprises need to pay social insurance premiums in full, to reduce the financial burden of the government. Corporate social responsibility should become a bottom line, and the enterprises' economic and business prosperity is equally important, but also an urgent needs to do business. China Europe International Business School and Daimler-Chrysler Corporation believes that the successful business and corporate social responsibility in the hands of enterprises must grasp and enterprises when engaged in commercial activities should also taking into account the social background. Therefore, corporate social responsibility is undoubtedly one of the most senior corporate strategies.

From the government point of view, the government should give enterprises with strong financial subsidies. Enterprises is the creator of social wealth, is the driving force of economic development, therefore, the health of the enterprises is very important for the national economy. Government should not be too much interference in business operation, should not be too much to replace market resource allocation function, but should better committed to create a good social environment, legal environment, the competitive environment for the enterprises service.

Therefore, the government and enterprises must work together to deal with the problem of population aging, improve and stabilize the pension insurance system is an important pillar of the aging society.

CONCLUSION AND RECOMMENDATION

The old-age insurance fund shrinking increases the operational risks of the social security system of our country, how to effectively transport the fund in order to achieve the goal of preserving and increasing the value has become a difficult problem to be solved. Taking into account the current problems of China's pension insurance funds, based on the experience of foreign countries for

reference, put forward to further improve the management of pension funds in china.

(a) The Flexibility to Postpone Retirement Age, and Reduce the Overall Pension Payment Pressure

With the development of society, the life expectancy of the population is increasing. For the pension insurance system, is in the case of the individual account payment period, extended the payment period of the overall account. According to China's present income pooling account system of pay as you go system, under the background of deepening of the aging of the population, and gradually to postpone the retirement age is the overall response to the pension payment pressure increases the effective measures. Flexible retirement age is a reasonable choice to reduce the burden of the system. At the same time, to postpone the retirement age can increase the accumulation of individual account pension, for the vast majority of official staff, rising the retirement age can extend their payment period and improve retirement income.

(b) Improve the Social Security Fund to Coordinate Level

The current management of the pension insurance fund in China is the lack of efficiency of the operation of the pension fund. From the point of view of fund investment management and supervision, the pension fund is in urgent need of upgrading the overall level. On the one hand, because of the market economic system of our country is still not perfect, almost all existing social security fund investment to county and municipal management based, which not only lack of perfect investment governance structure, investment institutions and professionals, it is difficult to play the effect of the size of the investment. On the other hand, the social security fund centralized management has also reduced the management level, which is helpful for the supervision mechanism to better supervise the fund running of the various links, improve the efficiency of supervision. Therefore, to achieve the overall management of all kinds of social security funds as soon as possible, which are a key link to eliminate the social security fund market investment barriers.

(c) Open Up Multi-channel Investment to Achieve the Value of the Pension Value

In the face of the aging of the population, the overall pension payment pressure, on the one hand, it should open up more channels of pension financing model. China's pension insurance payment from enterprises and workers, social pooling account funds mainly from the enterprises, and the enterprises payment rate shall not exceed 20% of the local average wage. As far as China's current situation is concerned, it is impossible to raise the rate of payment. So, open up the way of financing is an important guarantee for the sustainable development of

the pension. On the other hand, improve the accumulation of pension funds. The endowment insurance system in China personal account with fund accumulation function. On the basis of individual accounts, the individual account fund not only to avoid inflation caused by the devaluation of the, but also to meet the living needs of the employee retirement.

(d) The Establishment of a Multi-pillar Pension Insurance System

The World Bank vigorously advocated three pillar pension models: first pillar is mandatory collection of pay as you go social basic endowment insurance; the second pillar is funded mandatory pension; the third pillar is voluntary supplementary pension. The three pillar models not only meet the needs of different people, but also to ensure the realization of the goal of old-age security. To encourage enterprises to develop the enterprises annuity system as a supplementary pension insurance, increase the preferential support for commercial insurance, improve the living standards of retired workers. At the same time, to actively develop family support, community care, pension and other non economic pillars of the housing, and strengthen the construction of pension insurance multi pillar system. This can effectively disperse the pension risk, but also to reduce the financial burden of the country, to ensure the sustainable development of the pension.

REFERENCES

- Bian, S. B., & Liu, H. L. (2013) Optimal investment strategy of DC pension fund under background risk—Based on Legendre Transform-Dual Solution. *Journal of Industrial Engineering and Engineering Management*, (03), 145-149. (In Chinese).
- Chen, H. Y. (2011). Study of payment risk and prevention mechanism of pension fund. *Economic Review*, (10), 80-83, 90. (In Chinese).
- Li, M., & Zeng, Y. Q. (2004). Game between government and enterprises on social pension insurance. *Journal of Central China Normal University (Social Science Edition)*, (04), 56-60. (In Chinese).
- Lu, J. (2006). Fund risk management: The lifeblood of sustainable development of Chinese social welfare system, Social Security Studies. (In Chinese). Retrieved from http:// www.docin.com/p-487076253.html
- Lu, X., Fan, J., & Wu, Z. H. (2014). Game between government and enterprises for pension fund risks. *Journal of Chongqing University* (*Social Science Edition*), (06), 184-188. (In Chinese).
- Peng, H. R., & Yue, J. G. (2013). Debt risk and operation management of China's public pension fund. *Journal of Sun Yat-sen University (Social Sciences Edition)*, (02), 153-162. (In Chinese).
- Sun, G. B., & Zheng, J. (2014). Investment decision and analysis of pension fund under risk management. *Friends of Accounting*, (10), 46-48. (In Chinese).

- Wang, H. P., & Zhang, L. (2005). Discussion on investment and supervision of pension insurance fund in China. *Financial Theory and Practice*, (03), 44-47. (In Chinese).
- Wang, Y. K. (2012). China's pension fund management: System risk and management risk based on suggestions from the OASDI management experience. *Journal of Central China Normal University (Humanities and Social Sciences Edition)*, (03), 8-13. (In Chinese).
- Wu, P. (2012). The problems and countermeasures of operation risk management of China's social endowment insurance fund. *Chinese Public Administration*, (03), 57-60. (In Chinese).
- Zhang, Y. (2011). The design concept of risk early warning organization of pension insurance fund. *Hubei Social Sciences*, (04), 58-60. (In Chinese).
- Zhang, Y. H. (2013). Risk and risk aversion of basic pension fund. *Journal of Shanghai Univer* (*Social Science Edition*), (06), 129-138. (In Chinese).