THE ROLE OF PUBLIC FINANCE AND ENTERPRISE ANNUITIES FUNDS IN THE CHINESE SOCIAL SECURITY SYSTEM

VOLUME ON 2018 RESEARCH

TOPIC 2.3.2

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Contents

The Role of Enterprise Annuity Funds in Chinese Social Security

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Contents

Abstract: China's social security follows "multi-level" principle. Multi-level social security system can increase income and well-beings of the retirees. Besides, it also reduces the governments' burden and improves the market competitiveness of enterprises. Currently, pension system in China consists of three pillars: the first pillar is the state-sponsored basic pension system, established in early 1990s. It includes two parts: Urban employees' basic old age insurance system and social old age insurance for urban and rural residents. By the end of 2017, the total fund income of urban employees' basic old age insurance system was 4331 billion yuan. The fund expenditure was 3805.2 billion yuan and the accumulated fund balance was 4388.5 billion yuan. The number of people participating in the system was 402.93 million, of whom 292.68 million contributors and 110.26 million benefit recipients. The contributors in the social old age insurance for urban and rural residents were 512.55 million, of whom 155.98 million benefit recipients. The fund income of social old age insurance for urban and rural residents was 330.4 billion yuan. The fund expenditure is 237.2 billion yuan and the accumulated fund balance was 631.8 billion yuan in 2017. Chinese basic old age insurance system is the world's most extensive insurance system and expensive government program. The second pillar in China should be divided into two parts according to the nature of the enterprises: one is enterprise annuity. By the end of 2017, the number of enterprises establishing enterprise annuity was 80,429, and the number of employees participating in the system was 23.32 million. The accumulated pension fund was 1297.9 billion yuan. The other one is occupational pension system. It covers about 40 million public sector employees. The second pillar pension system is gradually improved, and the fund scale is taking shape. The third pillar is commercial old age insurance products invested by individuals. There is a big structure imbalance among three pillar pension system in China. The first pillar develops rapidly and bears almost all the security responsibilities, while the second and the third pillar are relatively backward.

Enterprise annuity funds as independent assets are entrusted to the trustees, who will manage the assets on behalf of the interests of the participants. The trustee may manage the assets or entrust them to other professional institutions. The management of enterprise annuity includes trustees, account managers, investment managers and custodians: **(1) Trustees.** There are 11 legal trustee institutions entrusted with the enterprise annuity funds. The number of companies which accept trustee management was 59,997 by the end of 2017. The assets were managed by the trustees were 822.35 billion yuan. **(2) Account Managers.** There are 18 account managers in China to manage the enterprise annuity fund accounts in 2017. Total account management business involves 80.43 thousand enterprise accounts and 23.31 million individual accounts. **(3) Investment Managers.** There are 21 financial institutions participating in the investment management of enterprise annuity fund in China, and the total number of portfolios was 3,451. The fund assets were 1.24 trillion yuan in 2017. **(4) Custodians.** At present, there are 10 financial institutions in China providing custodian services for the enterprise annuity fund, and the total amount of custodian fund asset was 1.29 trillion yuan at the end of 2017.

Over the past 20 years, Chinese enterprise annuity system has made certain achievements, but it has also encountered some obstacles. Its main problem is the low participation rate. The problems of enterprise annuity in China are mainly reflected in three aspects.

Firstly, low participation rate. It embodies in the following aspects: Small and micro enterprises are largely excluded from participating in enterprise annuity system; The development of enterprise annuity in different regions is imbalanced.

Second, the replacement rate is low, and the development level is lagging behind. It includes: (1) Employees' retirement income is insufficient. The replacement rate (that is, the proportion of pension to the average wage of the society) of basic old age insurance system is about 42%-44%. Due to the low participation rate, the number of recipients is only 1.28 million. Total fund amount received is 34.54 billion yuan. If pension funds are taken away for one time, it is only 27.1 thousand yuan per person. (2) New injustices are formed within the system. As we all know, there are huge difference in participation rate between the enterprises' employees and public sector's employees. The participation rate of enterprise annuity is very low.

Third, the tax incentive in China is very limited.

At present, there are four important opportunity windows for the reform of Chinese enterprise annuity. Firstly, the structural reform of reducing social insurance contributions rate provides a space for expanding participation rate. Second, the law of "enterprise annuity trial method" has been implemented for 13 years. It is imperative to revise and upgrade the enterprise annuity policy. Third, the commercial insurance is being improved. It is the right time to open the channel between the enterprise annuity and commercial individual account. Forth, the GOPI pension system has just started to reform. Many details need to be complemented. It is urgent to set up many regulations ensuring labor mobility between public sector and private sector. China should seize these four opportunities to promote the reform of the enterprise annuity system.

Finally, the report proposes ten core measures to promote reform: (1) Introducing automatic enrollment mechanism is the breakthrough; (2) Appropriate release of individual investment options. Appropriate release of individual investment options helps to form long-term investment funds. The long-term investment funds will be flown into the capital market, conducive to construct the capital market, reducing the market volatility and curbing the market speculation; (3) Establish qualified default investment alternatives. The introduction of TDFs can solve some existing problems of Chinese enterprise annuity funds. The introduction of TDFs can meet the individual needs of employees.(4) improve the tax incentive policy. The report recommends to raise the preferential tax rate from 5% to 8%; (5) Cancel or Shorten the vesting period of enterprise contributions. (6) Enlarge the investment choices of enterprise annuity funds. It recommends that Enterprise annuity fund investment choices should be expanded. Enterprise funds are allowed to be invested in financial derivatives. It is helpful to follow the diversified investment strategy. Besides, more funds can be invested in equity and into overseas market. (7) Establish a free conversion mechanism between the second and the third pillar. Building the transfer mechanism between the second and the third pillar is good to personnel flows. (8) The regulatory system of pension management companies needs to be optimized. The pension management companies should be listed as an independent financial industry. It is necessary to establish more professional pension management companies, which help to compete with each other. (9) Establish an enterprise annuity IT system platform with Chinese characteristics. There are three ways to establish a nationwide IT account system platform. (10) Establish TEE tax exemption account. The TEE tax-free account should be based on the tax system reform.

Key Words: Enterprise Annuity; Pension Insurance System; Participation Rate; Tax Incentive.

The Role of Enterprise Annuities Funds in the Chinese Social Security System

Zheng Bingwen, Liu Guilian

The "multi-level" principle is very important for China to establish a social security system. Establishing multi-level social security system can increase income and well-being of the retirees. It also reduces the governments' burden and improves the market competitiveness of enterprises. The report mainly deals with three problems: firstly, the inevitability of constructing a multi-level pension system in China; second, the overall development of China's enterprise annuity system; third, it discusses some problems of enterprise annuity, and provides some measures for reforming enterprise annuity system.

1. Overview of Chinese "three-pillar" Old Age Insurance System

Currently, the pension system in China consists of three pillars: the first pillar is the state-sponsored basic pension system. The second pillar is the enterprise annuity, sponsored by employers. The third pillar is commercial old age insurance.

The World Bank has proposed to add other two pillars, known as social assistance and family support program. The zero-pillar, also called universal flat-rate pension, is a non-contributory pension security system, subsidized by the government. China has not yet established a national pension system, but several counties have already set up old age allowances, the standards varying from place to place. The qualification applying for social assistance benefit is based on means test. The fifth pillar is personal savings and other pension security products, belonging to the financial plan.

In the paper, we will consider the current three-pillar pension system.

1.1 The First Pillar: Basic Old Age Insurance System

The first pillar established in the early 1990s is a basic old age insurance system. It consists of two parts: the urban employees' old age insurance system and the social old age insurance for urban and rural residents. The urban residents who have employers and the self-employed should be incorporated in the urban employees' old age insurance system, but the contribution level is different: the employers' contribution rate is equal to 20% of the workers' salary, entering into social pooling; the employees' contribution rate is 8% of the workers' salary, entering into individual accounts. As for the self-employed, they should pay 20% by themselves. Besides, financial subsidies are also an important source of revenue. The financial subsidy of urban employees' old age insurance system has increased from 2.4 billion yuan in 1998 to 800.4 billion yuan in 2017(see Table 1). The financial subsidies grew fast over the past 20 years. By the end of 2017, the total pension fund revenues were 4,331 billion yuan. The total fund expenditure was 3,805.2 billion yuan. The total fund balance was 4,388.5 billion yuan. The number of participants was 402.93 million, of which the contributors were 292.68 million and the recipients were 110.26 million.

Table 1 Financial Subsidy in China from 1998 to 2017 (Billion)

Year	Central Government Subsidy	Local Government Subsidy	Total	Central Government Subsidy %
1998	2.4	——	2.4	100
1999	17.44	1.85	19.29	90.4
2000	33.8	2.77	36.57	92.4
2001	34.9	5.35	40.25	86.7
2002	40.82	4.66	45.48	89.8
2003	47.43	5.57	53.0	89.5
2004	52.2	9.2	61.4	85
2005	54.4	10.7	65.1	83.6
2006	77.4	19.7	97.1	79.7
2007	91.8	23.9	115.7	79.3
2008	112.74	30.96	143.7	78.5
2009	132.62	31.98	164.6	80.6
2010	156.1	39.3	195.4	79.9
2011	184.69	42.51	227.2	81.3
2012	——	——	264.8	——
2013	——	——	301.9	——
2014	——	——	354.8	——
2015	——	——	471.6	——
2016	——	——	651.1	——
2017	——	——	800.4	——
Total Subsidy			4111.79	

Source: Ministry of Human Resources and Social Security.

The second component is the social old age insurance for the urban and rural residents. Both urban and rural residents without fixed income are included in the system. At present, there are more than 30 million urban residents joining the system. The main participants are farmers. The social pooling system is subsidized by the central government and local governments. The individuals just need to pay individual's contributions, entering into individual accounts. The pension benefit has increased from 55 yuan per month in 2009 to 70 yuan per month. The rural old age insurance system is similar to social assistance. In 2017, 156 million people receive pensions and about 513 million people participate in the system.

The number of people participating in the basic pension system in China is the most all over the world. In 2017, 915.45 million people both in the urban and rural areas were covered. The average monthly pension benefit was 2,875 yuan.

1.2 The Second Pillar: Enterprise Annuity

In China, the second pillar is the enterprise annuity, originating from the supplementary pension system established in 1991. As for employees of Government institutions, the second pillar is called occupational pension system, which was established in 2015. Enterprise annuity is a completely market-oriented investment system, which consists of consignor, custodian, investment manager and account manager. They operate independently of each other. Every individual has a separate account. The funds in the account belong to the individual. The pension benefits are determined by the accumulated funds in the accounts.

One of the biggest problems facing by the enterprise annuity in China is the low participation rate of enterprises and employees. By the end of 2017, the number of enterprises setting up enterprise annuity was around 80,000. The accumulated pension funds were 1.29 trillion yuan. The number of people covered by the system was 23.31 million, accounting for only one over eighty of the urban employees' participating in the old age insurance system.

The preferential tax policy model of enterprise annuity is EET. In the contribution phrase, the individuals' contribution rate is 4% and the enterprises' contribution rate is 5%, which enjoys the preferential treatment before tax.

1.3 The Third Pillar: Personal Savings and Commercial Old Age Insurance

The third pillar is the supplement old age insurance system. Its development depends on the tax preference policy. The third pillar in China develops relatively slowly. In June 2017, the state council general office issued "Several Opinions on Speeding up the Development of Commercial Old Age Insurance, marking the birth of the personal tax-deferred commercial old age insurance. In

April 2018, China decided to promote personal tax deferred commercial old age insurance pilots in Shang Hai, Su Zhou and Fu Jian for a year.

1.4 Structural imbalance among the three-pillar pension insurance

The development of three-pillar pension systems in China is imbalance. The first pillar developed rapidly and bears almost all the pension responsibility, while the second and third pillars develop slowly. By the end of 2017, the proportion of enterprises which has established enterprise annuity was less than 10% of the national legal enterprise's entities. The number of employees involved was only 5.72% of the contributors participating in the urban employees' basic old age insurance system.

The accumulated enterprise annuity fund accounts for only 28.26% of the accumulated balance of urban basic old age insurance fund. The accumulated pension funds of urban employees' old age insurance account for 5.31% of GDP in 2017, while the enterprise annuity fund accounts for only 1.56% of GDP.

By the end of 2017, both the participation rate of enterprises and employees in USA was more than 50%. The fund accumulated was equal to 19 trillion, accounting for 97% of the GDP. The total amount of the second and third pillar pension funds in USA were up to 28.2 trillion.

In conclusion, compared with the basic old-age insurance system, enterprise annuity develops slowly. Moreover, it does not play its due role in the three-pillar old age insurance system in China.

2. Overall situation of Chinese Enterprise Annuity Funds

The second pillar pension system includes enterprise annuity and occupational pension system. In 2017, the number of enterprise setting up enterprise annuity system was 80,429. 23.32 million employees participated in the system and the accumulated funds were 1298 billion yuan. Besides, the occupational pension system includes about 39 million public sector employees.

2.1 The Overview of Enterprise Annuity

2.1.1 Change of enterprise annuity participation rate

Generally, the growth of enterprise annuity fund is determined by three factors: firstly, the number of employees who participate in the system increases; second, the investment income of enterprise annuity fund increases; third, employees' salary increases. By the end of 2017, the accumulated fund balance amounted to 1.29 trillion yuan, growing from 1.11 trillion yuan in 2016.

Table 2 Change of enterprise annuity fund assets from 2008 to 2017 (Billion)

Year	Fund Asset	Growth Rate
2008	191.1	25.81%
2009	253.3	32.55%
2010	280.9	10.90%
2011	357.0	27.09%
2012	482.1	35.04%
2013	603.5	25.18%
2014	768.9	27.41%
2015	952.6	23.89%
2016	1107.5	16.26%
2017	1287.97	16.30%

Source: Ministry of Human Resources and Social Security.

Enterprises which have established enterprise annuity have continued to increase from 33 thousand in 2008 to 80.4 thousand in 2017 (Figure 1).

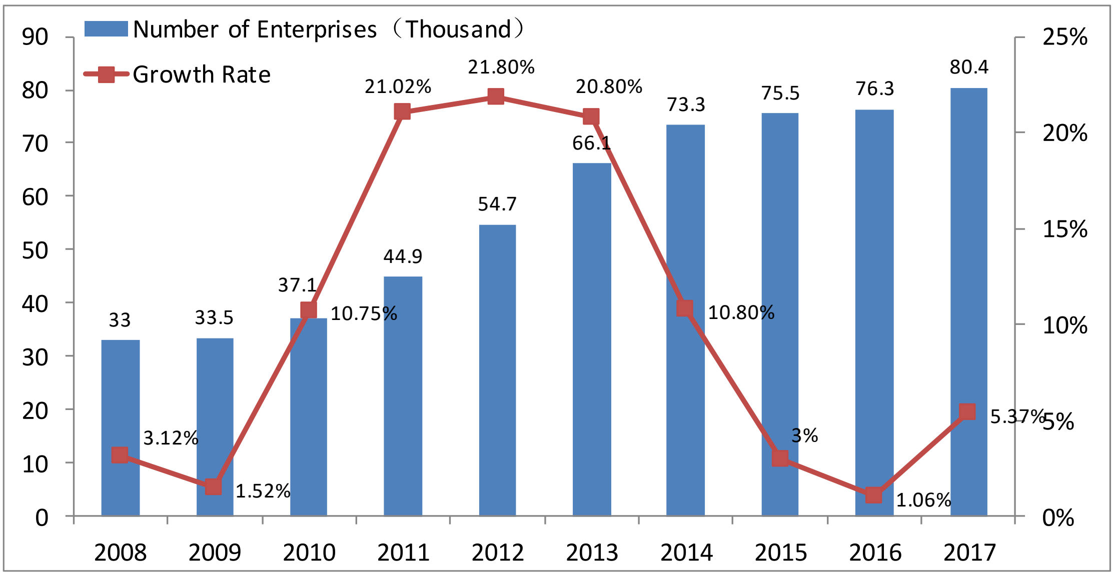

Figure 1 Change of Enterprises which established enterprise annuity (million)

Source: Ministry of Human Resources and Social Security.

The number of employees who participated in the system grew slowly, from 10.38 million in 2008 to 23.31 million in 2017.The growth rate rose from 11.73% in 2008 to 18.13% in 2011. After that the growth rate decreased quickly and it was down to 11.5% in 2014, and in 2015 the growth rate was only 1%, which was an historical turning point. The growth rate of the employees was only 0.39% in 2016 and 0.27% in 2017, indicating that the growth rate of employees was almost stagnant (Figure 2).

The reasons of this phenomenon are various. First, the global economy is in downturn, and the operation of enterprise annuity has some difficulty. Second, Chinese economic development is in the midst of the old and new momentum in the transformation and in its critical economic upgrading period. There are some economic fluctuations in the short term. Some enterprises withdraw from the enterprise annuity system. Third, the young and middle-aged employees are generally under great pressure for housing, children education and medical treatment. The cost of living keeps increasing, which leads to decreased participation rate. Forth, insufficient publicity leads to the low visibility of enterprise annuity, and most employees know little about it.

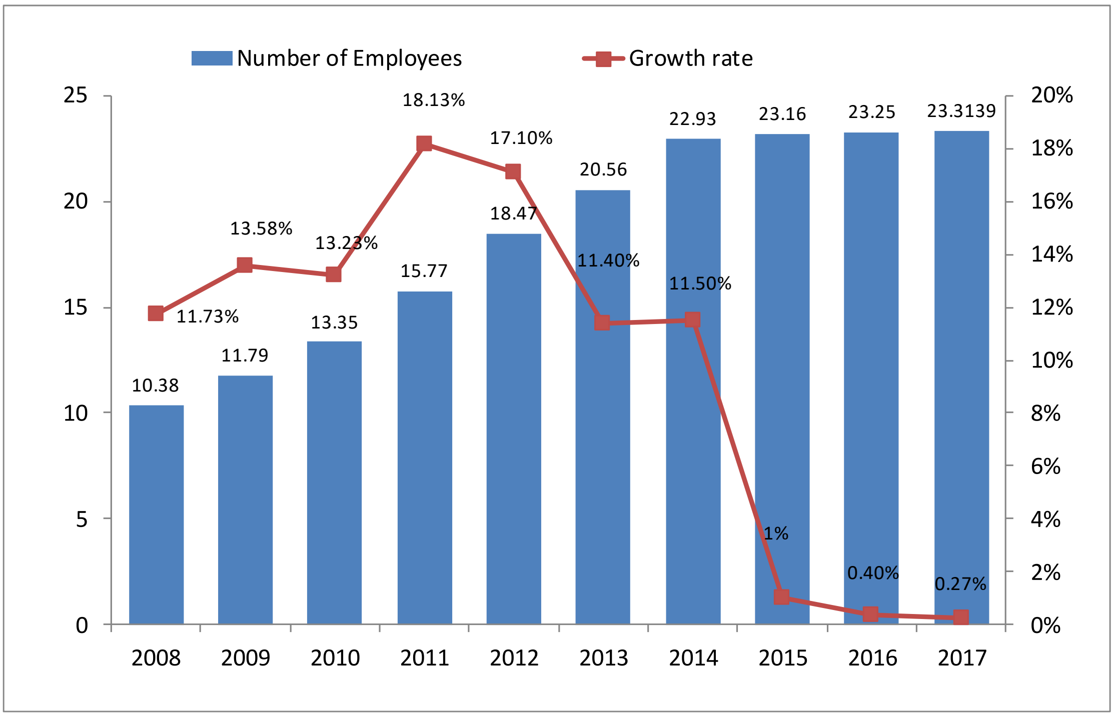

Figure2 Change of employees from 2008 to 2017 (million)

Source: Ministry of Human Resources and Social Security.

2.1.2 The development of enterprise annuity in different industries and regions

The development of Chinese enterprise annuity is divided among industries and regions. Enterprise annuity system in the monopolized industries enjoyed rapid development, such as the oil industry, electric power industry, telecommunication, the petrochemical industry and the railroad industry. At the same time, many small and medium-sized enterprises cannot satisfy the basic requirement of establishing enterprise annuity due to their short life cycle and weak profit. Therefore the development of enterprise annuity in small and medium-sized company is relatively slow.

Coming to the regional distribution, coastal areas and the developed provinces are in the top ranking. The first seven provinces in terms of the number of enterprise setting up the annuity accounts are: Xia men (11,882), Shang Hai (8,931), Beijing (3,306), Guangxi (2,810), Zhejiang (2,761), Jiangsu (2,516) and Guangdong (2,510), while the top eight in terms of total fund assets are: Shang Hai (65.34 billion yuan), Beijing (46.51 billion yuan), Jiangsu (35.41 billion yuan), Guangdong (32.42 billion yuan), Shandong (29.69 billion yuan), Zhejiang (27.77 billion yuan), Shanxi (26.39 billion yuan) and Anhui(26.17 billion yuan).

The coverage rate is high in the developed provinces and cities. Small enterprises, especially those with less than 500 employees, generally are able to establish enterprise annuity.

Table 3 the region distribution of enterprise annuity in 2017

Province	The number of enterprise account	The number of employee account (Thousand)	Total Asssts (Billion)
Bei Jing	3306	670.3	46.51
Tian Jin	1372	210.5	9.073
He Bei	814	392.3	13.243
Shan Xi	867	554.7	26.387
Nei Menggu	507	228.7	10.060
Liao Ning	917	322.9	14.340
Ji Lin	462	135.0	7.074
Hei Longjiang	1011	184.5	7.819
Shang Hai	8931	1322.5	65.341
Jiang Su	2516	497.5	35.412
Zhe Jiang	2761	433.0	27.770
An Hui	1118	493.6	26.170
Fu Jian	1343	294.2	21.873
Jiang Xi	895	205.8	9.501
Shan Dong	1440	476.3	29.692
He Nan	1247	658.0	18.037
Hu Bei	844	314.5	19.964

Hu Nan	591	239.0	11.862
Guang Dong	2510	561.1	32.416
Guang Xi	2810	177.6	7.102
Hai Nan	195	35.1	0.722
Si Chuan	1097	391.6	17.168
Chong Qing	504	105.5	5.931
Gui Zhou	359	183.8	9.009
Yun Nan	1209	332.4	17.227
Tibet	29	9.2	0.371
Shaanxi	902	409.9	20.515
Gan Su	451	205.2	9.446
Qing Hai	137	63.0	2.747
Ning Xia	300	49.6	2.786
Xin Jiang	649	113.0	6.719
Xin Jiang Production and Construction Corps	63	11.4	1.138
Da Lian	1335	89.4	2.899
Qing Dao	1739	81.2	2.736
Ning Bo	361	37.5	1.594
Xia Men	11882	180.1	4.407
Shen Zhen	1789	558.5	21.134
Ministry of Human Resources and Social	21166	12085.5	721.878

Security			
Total	80429	23313.9	1287.967

Source: Ministry of Human Resources and Social Security.

2.1.3 The Change of investment rate of Chinese Enterprise Annuity

In 2017, the weighted average yield of enterprise annuity fund investment was 5%, higher than in 2016.According to the current investment regulations of Chinese enterprise annuity, the funds are permitted to invest only in the domestic market. Therefore, its investment return is basically determined by the development of domestic capital market.

In this period, the domestic bond market faced financial difficulties. The interest rate fell sharply in the first three quarters in 2016. The volatility of bond market increased. The interbank market bond index rose from 171.37 in 2015 to 174.44 in 2016. The bond index in the exchange market rose from 154.54 in 2015 to 159.79 in 2016. Moreover, the stock index fell sharply in 2016. Due to the weak performance of debt and stock market, the overall investment rate of return was low.

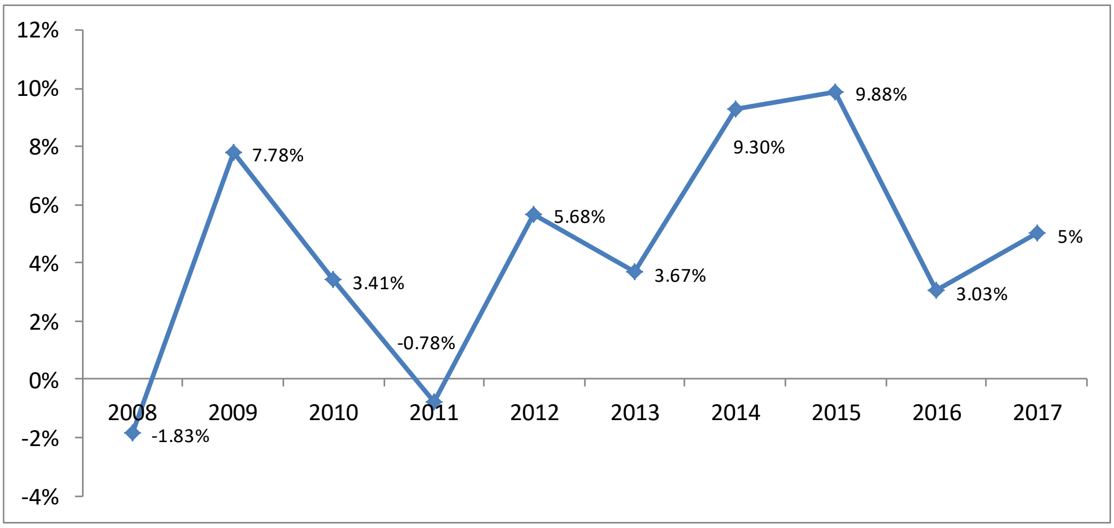

Figure 3 Change of investment rate of return from 2008 to 2017

Source: Ministry of Human Resources and Social Security.

2.2 The development of Occupational Pension in China

On January 2015, China has decided to establish occupational pension fund system for the civil servants and the employees of public institutions. The occupational pension frame is similar to the enterprise annuity, with the characteristics of the DC trust system. Due to the different nature of the institutions, enterprise annuity and occupational pension differ for what relates to coverage, contribution rate, management method and benefit payment.

(1) Coverage. The occupational pension covers the units under the administration of the civil service law and the public sectors' staff. At present, the occupational pension system covers 40 million people, accounting for less than 5.2 percent of the employed workers.

(2) Contribution Rate. Unlike enterprise annuity based on voluntary principle, the occupational pension system is mandatory. The contributions are shared by the employer and the employee. The employers' contribution rate is 8%, while the employees' contribution rate is 4%, withheld by the enterprise.

(3) Management Mode. The pension funds of public sectors' employers in individual account are real accumulation. As for the units with full financial allocation, employers' contributions are not real accumulation. The contributions are recorded in their accounts. China calculates the interest rate according to the account interest rate uniformly published by the state every year. The financial department allocates the actual amount according to the total amount of the account. As for the non-financial units, the employers' contributions will be real account accumulation.

(4) Receiving Benefits. When public sector employees reach the retirement qualification prescribed by the provision, they can select several ways to receive the benefits. In the first place they can purchase commercial old age insurance products for lump-sum payment. They will then receive the benefits according to the insurance contract and enjoy the corresponding inheritance. Second, they can choose to receive the pension benefits every month. The pension benefit is calculated according to the benefit formula. The individual account fund balance will be inherited after the individual dies. Meanwhile, the individual account funds can be transferred along with the staff of government organs and institutions when they change their work.

(5) Operation and management of occupational pension funds. There are five major market entities in the occupational pension fund market, including consignors, trustees, custodians, agents and investment managers. The agent is the pension insurance management center and the provincial social insurance agency, responsible for managing the fund account. The responsibilities of the other four market entities are similar to those of enterprise annuity. The trustee, custodian and investment management institutions of the occupational pension funds should be selected from the institutions that have the corresponding qualifications for the management of the enterprise annuity fund. The occupational pension funds are managed in centralized management way. The agent represents the consignors to sign the management contract with the trustee. The trustee will sign the entrustment contract with the custodian and the investment manager respectively.

3. Analysis on the Operation and Management of Chinese Enterprise Annuity

Chinese enterprise annuity operates in the mode of trust fund. Enterprise annuity funds as independent assets are entrusted to the trustee, who will manage the assets on behalf of the interests of the participants. The trustee may manage the assets or entrust them to other professional institutions. Since its establishment, the law clarifies that the operation of Chinese enterprise annuity is in the market way. The newly revised “enterprise annuity fund management method” in 2011 has clearly stipulated that fund investments should follow the principle of prudence and risk spread. The assets are limited to investing the domestic market. The investment tools include bank deposits, government bonds, central bank bills, bond repurchase, universal insurance products, mutual funds and stocks. China has strict limits on the proportion of investment in equities and other equity products, which is no more than 30% of the net worth of fund portfolios.

3.1 Basic Responsibilities of operating entities in the enterprise annuity

The management and operation of enterprise annuity funds involve four parties: the trustee, the account manager, the investment manager and the custodian. They have their respective responsibilities and ensure the operation of enterprise annuity. The specific responsibilities of four operating entities are as follows:

(1) Trustee. The trustee accepts the commission of the consignor. He selects, supervises and replaces the account manager, custodian, investment manager and intermediary service agencies. The trustee is responsible for formulating enterprise annuity fund investment strategy and supervising the management of enterprise annuity.

(2) Account Managers. The account manager is the professional institutions entrusted by the trustee to manage the enterprise annuity fund account. They set up independent company account and individual account, and timely records enterprise annuity plan information, account information and personal account information.

(3) Custodian. The custodian is a commercial bank or professional institution entrusted by the trustee to keep the assets of the enterprise annuity fund. The custodians are responsible for the safe custody of the assets of the enterprise annuity fund, and set up different accounts for the trust fund assets to ensure the independence and integrity of the fund asset.

(4) Investment manager. The investment manager is a professional institution entrusted by the trustee to manage the assets of enterprise annuity funds. The investment manager is responsible for investing the assets of the enterprise annuity fund and establishing the risk reserve for the investment management of the enterprise annuity fund.

3.2 Market Investment Management Analysis of Enterprise Annuity Fund

Trustee, investment management, account management and custodian are represented by different institutions with corresponding qualifications. Therefore, the whole enterprise annuity can be subdivided into the trustee market, account manager market, custodian market and the investment manager.

Analysis of fund trustee management market

There are 11 legal trustee institutions entrusted with the enterprise annuity. The companies which accepted trustee management were 59,997 by the end of 2017. The employees who are managed by the trustee institutions were 14.09 million. The fund assets were 822.35 billion yuan in 2017.

(1) The market share of fund trustee management

In terms of companies managed by trustees, a handful of companies still dominate the majority of the market. The enterprises entrusted by the Ping an life insurance co. Ltd are up to 24,518, accounting for 40.87% of all entrusted corporates. The market share is as high as 40%, maintaining a leading role. China life pension insurance company limited, China Taiping pension insurance company limited and China Chang Jiang pension insurance company limited rank from 2^{nd} to 4^{th}. The number of companies entrusted by them is 11,383, 7,432 and 7,258, accounting for 18.97%, 12.39% and 12.10% respectively. The number of enterprises entrusted by the top five companies trustees was 55,358, accounting for 92% of the total market share. The remaining six corporate trustees account for only 8% of the market share.

Table4 the number of enterprises and assets managed by a trustee in 2017

Management Institutions	Number of Enterprises	Number of Employees	Assets managed by the trustees（Million）

Hua Bao Trust Co. LTD	240	121,882	8575.52
CITIC Trust Co. LTD	20	4,394	366.89
Ping An Life Insurance Co. Ltd	24,518	3,343,488	198797.05
Taiping Pension Insurance Company Limited	7,432	1,194,438	61659.55
China Construction Bank CO.LTD	1,569	518,840	22606.97
Industrial and Commercial Bank of China	995	1,455,556	105940.54
China Merchant Bank	476	177,564	7740.15
China Chang Jiang Pension Insurance Company Limited	7,258	1,231,816	65628.37
China Life Pension Insurance Company Limited	11,383	4,541,622	267477.06
China Taikang Pension Insurance Company Limited	4,767	822,638	32201.70
CCB Pension Management CO.LTD	1,339	680,267	51356.93
Total	59,997	14,092,505	822350.74

Source: Ministry of Human Resources and Social Security.

As for the number of employees entrusted by the trustee organizations, China life pension insurance company limited and China Ping An pension insurance were ranked in the first and second place respectively. The number of employees entrusted by these two companies was 4.54 million and 3.34 million respectively. The Industrial and Commercial Bank of China, the Taiping pension insurance company limited and the Chang Jiang pension insurance company limited have also taken up a large market share. The number of employees entrusted by these companies was 1.46 million, 1.23 million and 1.19 million. The corresponding market share was 10.32%, 8.74% and 8.48%. The total employees in the former five trustee fiduciaries were up to 11.76 million, accounting for 84% of the total market share, while the other six trustees share the remaining 7% (Table 4).

As for the amount of funds managed by the trustee organizations, the first five trustees have alarge market share. Among them, China life pension insurance company limited and Ping An pension insurance company limited have remarkable advantages, managing 267.5 billion yuan and 198.80 billion yuan respectively. They account for 33% and 24% of all entrusted fund assets. The fund assets managed by industrial and Commercial Bank of China, Chang Jiang pension insurance company limited and Tai Ping pension insurance company limited were 105.94 billion yuan, 65.63 billion and 61.66 billion yuan, which account for 13%,8% and 8% of the total market. The top five trustees managed 699.50 billion yuan, accounting for 85 percent of the total market share, while the remaining 15 percent of the market share were shared by the other six trustees.

(2) Analysis of fund trustee management market

Since 2015, the number of enterprises, employees and fund assets entrusted by enterprise annuity has continued to grow. However the amount of funds managed by all trustees increased from 573.49 billion yuan in 2015 to 822.35 billion yuan in 2017, while the number of enterprises and employees has increased by 3,981 and 0.76 million respectively.

For the enterprises, the number of enterprises entrusted by trustees continues to grow except for CITIC Trust company limited. China life pension insurance company limited has the highest growth rate. The number of enterprises under management has increased by 1,976. The growth rate was 21.01%. However, the market share ranking in 2017 did not change. In addition, Tai Kang Pension Insurance CO. LTD and Industrial and Commercial Bank of China have achieved rapid growth. By comparison, the number of enterprises entrusted by Hua Bao Trust Co. LTD has decreased from 352 in 2016 to 240 in 2017. (Table 5)

Table 5 Chang of enterprises entrusted by trustee market

Manager	2017	2016	2015	The change of enterprises （compared with 2015）	
					%
China Life Pension Insurance CO.LTD	11,383	9,407	7,956	1976	21.01
Chang Jiang Pension Insurance CO.LTD	7,258	7,040	6,149	218	3.10
Industrial and Commercial Bank of China	995	916	829	79	8.62

Tai Kang Pension Insurance CO.LTD	4,767	4,379	4,001	388	8.86
Total	59,997	56,016	51,187	3,981	7.11
Tai Ping Pension Insurance CO.LTD	7,432	7,325	6,816	107	1.46
Huabao Trust CO.LTD	240	352	328	-112	-31.82
Ping'an Pension Insurance CO.LTD	24,518	23,426	22,130	1092	4.66
China Merchant Bank	476	466	462	10	2.15
CITIC Trust CO.LTD	20	20	20	0	0
CCB Pension Management CO.LTD	1,339	930	-	-	-
China Construction Bank CO.LTD	1,569	1,755	2,496	-	-

Source: Ministry of Human Resources and Social Security.

In 2017, the number of employees continued to grow in five entrusted institutions, while in four declined to some degree, but the market ranking did not change. The number of employees entrusted by China Life Pension Insurance CO.LTD and Tai Kang Pension Insurance CO.LTD increased by 358.7 thousand and 151.5 thousand respectively. The growth rate was 8.58% and 22.57%, far more than the national average. In comparison, the number of employees entrusted by Hua Bao Trust Co. Ltd, CITIC Trust CO.LTD and China Merchant Bank declined by -19.54%,-4.35% and -3.43% (Table 6).

Table 6 Change of the number of employees (thousand)

Managers	2017	2016	2015
Tai Kang Pension Insurance CO.LTD	822.6	671.1	502.6
China Life Pension Insurance CO.LTD	4541.6	4182.9	3473.2
Total	14092.5	13330.1	12209.5
Chang Jiang Pension Insurance CO.LTD	1231.8	1150.9	1061.5

Tai Ping Pension Insurance CO.LTD	1194.4	1210.0	1139.1
Ping' an Pension Insurance CO.LTD	3343.5	3189.9	3107.4
Huabao Trust CO.LTD	121.9	151.5	152.4
CITIC Trust CO.LTD	4.4	4.6	4.8
Industrial and Commercial Bank of China	1455.6	1429.5	1507.5
China Merchant Bank	177.6	183.9	207.4
CCB Pension Management CO.LTD	680.3	470.9	-
China Construction Bank CO.LTD	518.8	518.8	1053.5

Source: Ministry of Human Resources and Social Security.

As for the fund asset, Ping An Pension Insurance CO.LTD, Tai Kang Pension Insurance and China Life Pension Insurance have ranked three as market managers. Their growth rate has surpassed the national average, while the growth rate of China Merchant Bank and Huabao Trust CO.LTD was negative (Table 7).

Table7 Change of Fund Assets (Billion)

Managers	2017	2016	2015	Change between 2016 and 2017	
				billion	%
Ping An Pension Insurance CO.LTD	198.797	165.61	127.23	33.19	20.04
Tai Kang Pension Insurance CO.LTD	32.202	25.33	20.30	6.868	27.11
China Life Pension Insurance CO.LTD	267.477	213.82	171.56	53.657	25.09
Total	822.351	692.77	573.49	129.58	18.70
Tai Ping Pension Insurance CO.LTD	61.660	53.73	45.54	7.932	14.76
Industrial and Commercial Bank of China	105.941	92.34	80.73	13.61	14.74

Chang Jiang Pension Insurance CO.LTD	65.628	57.92	52.36	7.713	13.32
CITIC Trust CO.LTD	0.367	0.32	0.30	0.045	13.98
Huabao Trust CO.LTD	8.576	8.74	8.26	-0.167	-1.91
China Merchant Bank	7.740	11.12	11.10	-3.38	-30.40
CCB Pension Management CO.LTD	51.357	38.42	——	-	-
China Construction Bank CO.LTD	22.607	25.42	56.13	-	-

Source: Ministry of Human Resources and Social Security.

Analysis of fund account management market

In 2017 there were 18 account managers in China to manage the enterprise annuity fund account, and they managed 80.43 thousand enterprise accounts and 23.31 million individual accounts.

(1) Analysis of Account management market share

In 2017, the number of enterprise accounts managed by the Industrial and Commercial Bank of China rank No.1, including 31,625 corporate accounts. It accounted for 39.32% of the total number of enterprise accounts. China Life Pension Insurance ranked No.2 and also had a large share of the market, with 8,986 corporate accounts. The Bank of China CO.LTD and the Chang Jiang Pension Insurance CO.LTD rank No.3 and No.4. The number of corporate accounts managed by them was 7,224 and 6,590 respectively. The number of corporate accounts managed by China Merchant Bank was 5,669 and the market share was 7.18%. The total number of enterprise accounts managed by the top five accounted for 75% of the total market, while the remaining 25% was shared by the other 13 account managers.

The number of individual accounts managed by each account manager is relatively centralized. In 2017, the Industrial and Commercial Bank of China ranked No.1, with a total of 9.75 million individual accounts representing 41.18% of the market share. The Bank of China LTD which ranked No.2 also had a large share of the market, with 2.77 million individual accounts and accounting for 11.9% of the market. The third one was China Construction Bank CO.LTD, which managed 1.17 million individual accounts. The individual accounts managed by China Merchant Bank and China Life Pension Insurance CO.LTD were 1.76 million and 1.72 million, accounting for 7.55% and 7.38% respectively. The total number of individual accounts managed by the top five institutions made up 76% of the market, the remaining 24% was shared by the other 13 account managers (Table 8).

Table 8 Number of enterprises accounts and individual accounts by the end of 2017

Name	Enterprise Account	%	Individual Account	%
Industrial and Commercial Bank of China CO.LTD	31,625	39.32%	9,747,411	41.81%
Bank of Communications CO.LTD	5,370	6.68%	934,756	4.01%
Shanghai Pudong Development Bank	668	0.83%	327,489	1.40%
China Merchant Bank CO.LTD	5,734	7.13%	1,759,743	7.55%
China Everbright Bank CO.LTD	3,191	3.97%	721,283	3.09%
CITIC Bank CO.LTD	603	0.75%	215,875	0.93%
Huabao Trust CO.LTD	283	0.35%	184,942	0.79%
New China Life Insurance CO.LTD	20	0.02%	1,529	0.01%
China Construction Bank CO.LTD	5,386	6.70%	1,770,751	7.60%
China Minsheng Bank CO.LTD	320	0.40%	173,406	0.74%
Bank of China CO.LTD	7,224	8.98%	2,767,063	11.87%
China Life Pension Insurance CO.LTD	8,986	11.17%	1,721,330	7.38%
Tai Kang Pension Insurance CO.LTD	557	0.69%	177,330	0.76%
Ping An Pension Insurance CO.LTD	763	0.95%	304,525	1.31%
Chang Jiang Pension Insurance	6,590	8.19%	928,181	3.98%

CO.LTD				
Tai Ping Pension Insurance CO.LTD	8	0.01%	2,880	0.01%
Agricultural Bank of China CO.LTD	173	0.22%	51,243	0.22%
CCB Pension Management CO.LTD	2,928	3.64%	1,524,210	6.54%
Total	80,429	100.00%	23,313,947	100.00%

Source: Ministry of Human Resources and Social Security.

(2)Analysis of the account management market

The growth of China's enterprise annuity fund account management market has been slowing down. The corporate accounts managed by the China Life Pension Insurance Co. Ltd grew the fastest, from 8,116 in 2016 to 8,986 in 2017.Accordingly, the corporate accounts managed by the CITIC Bank CO.LTD grew from 532 in 2016 to 603 in 2017.In comparison, the growth rate of Huabao Trust CO.LTD and Shanghai Pudong Development Bank were negative (Table 9).

Table9 Change of corporate accounts in the account management market from 2015 to 2017

Managers	2017	2016	2015
CITIC Bank CO.LTD	603	532	321
Agricultural Bank of China CO.LTD	173	122	85
Chang Jiang Pension Insurance CO.LTD	6,590	6468	5644
Tai Kang Pension Insurance CO.LTD	557	407	359
China Life Pension Insurance CO.LTD	8,986	8116	7377
Bank of China CO.LTD	7,224	6567	6008
Huabao Trust CO.LTD	283	394	368

China Merchant Bank CO.LTD	5,734	5546	5338
Bank of Communications CO.LTD	5,370	5228	5107
China Everbright Bank CO.LTD	3,191	3089	3027
Total	80429	76298	75454
Shanghai Pudong Development Bank	668	675	689
Industrial and Commercial Bank of China CO.LTD	31,625	30467	33132
China Minsheng Bank CO.LTD	320	219	254
Ping An Pension Insurance CO.LTD	763	671	781
New China Life Insurance CO.LTD	20	20	26
Tai Ping Pension Insurance CO.LTD	8	6	0
CCB Pension Management CO.LTD	2,928	1061	-
China Construction Bank CO.LTD	5,386	6710	6938

Source: Ministry of Human Resources and Social Security.

In 2017, the number of employee accounts in fourteen corporates exceeded the national average level. The number of employee accounts managed by Tai Ping Pension Insurance Co. Ltd has grown from 300 in 2016 to 2,880 in 2017. The number of employee accounts managed by CCB Pension Management CO.LTD has also grown from 595,500 in 2016 to 1.53 million in 2017. Similarly, China Minsheng Bank CO.LTD and Tai Kang Pension Insurance CO.LTD also increased rapidly, 36.11% and 28.31% respectively. China life Pension Insurance CO.LTD, Ping An Pension Insurance Co. Ltd and Bank of China Co. Ltd achieved steady growth, increasing by more than 5%. By contrast, the growth rate of Hua Bao Trust Co.Ltd, Shang Hai Pudong Development Bank and China Construction Bank CO.LTD were negative (Table 10).

Table10 Change of individual accounts from 2015 to 2017 (million)

Managers	2017	2016	2015	Change (%)
Agricultural Bank of China CO.LTD	0.0512	0.033	0.02	57.19%

China CITIC Bank CO.LTD	0.2159	0.20	0.13	5.56%
Tai Kang Pension Insurance CO.LTD	0.1773	0.14	0.12	28.31%
Chang Jiang Pension Insurance CO.LTD	0.9282	0.89	0.82	4.56%
China life Pension Insurance CO.LTD	1.7213	1.50	1.40	14.74%
China Merchant Bank CO.LTD	1.7597	1.69	1.58	4.23%
Huabao Trust CO.LTD	0.1849	0.21	0.20	-11.89%
Bank of Communications CO.LTD	0.9348	0.93	0.91	0.84%
Industrial and Commercial Bank of China CO.LTD	9.7474	9.74	9.58	0.07%
Ping An Life Insurance CO.LTD	0.3045	0.28	0.28	8.76%
China Everbright Bank CO.LTD	0.7213	0.71	0.71	1.92%
Shanghai Pudong Development Bank	0.3275	0.34	0.34	-3.20%
New China Life Insurance CO.LTD	0.0015	0.002	0.002	1.93%
China Minsheng Bank CO.LTD	0.1734	0.13	0.14	36.11%
Bank of China CO.LTD	2.7671	2.60	3.00	6.42%
Tai Ping Pension Insurance CO.LTD	0.0029	0.0003	0	860.00%
CCB Pension Management CO.LTD	1.5342	0.60	-	157.46%
China Construction Bank CO.LTD	1.7708	3.27	3.93	-45.80%
Total	23.3139	23.25	23.16	0.29%

Source: Ministry of Human Resources and Social Security.

Analysis of fund collocation management market

At present, there are 10 financial institutions in China providing custodian services for enterprise annuity fund, and at the end of 2017 the total amount of custodian fund asset was 1.29 trillion yuan. The Industrial and Commercial Bank of China CO. LTD has the largest share of enterprise annuity fund custodian services. The funds asset hold by the ICBC are 477.03 billion yuan assets, accounting for 37.04% of the total hosting funds. The funds asset held by the remaining nine financial institutions are more balanced. China Construction Bank CO.LTD also has a large market share. In 2017 the amount of fund assets held by it was 203.95 billion yuan, accounting for 15.83% of the total market share. The third one was the Bank of China that managed 173.98 billion yuan (13.51%). The total amount of fund assets managed by the top five financial institutions were up to 1.03 trillion yuan, accounting for 80.12% of the whole market share, while the remaining was shared by the other five custodian institutions (Table 11).

Table 11 Fund assets managed by the custodians in 2017 (Billion)

Name	**Assets**	**%**
Industrial and Commercial Bank of China CO.LTD	477.03	37.04%
China Construction Bank CO.LTD	203.95	15.83%
Bank of China CO.LTD	173.98	13.51%
Bank of Communications CO.LTD	71.82	5.58%
China Merchant Bank CO.LTD	95.37	7.40%
China Everbright Bank CO.LTD	48.91	3.80%
China CITIC Bank CO.LTD	61.94	4.81%
Shanghai Pudong Development Bank	50.49	3.92%
Agricultural Bank of China CO.LTD	81.65	6.34%
China Minsheng Bank CO.LTD	22.84	1.77%
Total	1287.97	100.00%

Source: Ministry of Human Resources and Social Security.

In 2016, the total amount of custodian assets in enterprise annuity fund increased by 182.31 billion yuan. Also the number of custodians increased rapidly. Six financial institutions have grown faster than the national average. Among them, China Agricultural Bank CO.LTD grew fastest. The fund assets increased from 63.40 billion yuan in 2016 to 81.65 billion yuan in 2017. CITIC Bank

CO.LTD and China Construction Bank CO.LTD have also achieved a rapid growth. Their assets increased by 39.16 billion yuan and 10.62 billion yuan respectively. The assets managed by the Bank of China CO.LTD, China Everbright Bank CO.LTD and China Minsheng Bank CO.LTD continued to maintain certain level of growth (Table 12).

Table 12 Change of custodian assets in enterprise annuity from 2015 to 2017 (Billion)

Managers	2017	2016	2015
China CITIC Bank CO.LTD	61.94	51.321	39.304
Agricultural Bank of China CO.LTD	81.65	63.604	49.057
Bank of China CO.LTD	173.98	147.585	122.672
China Minsheng Bank CO.LTD	22.84	19.562	16.614
China Merchant Bank CO.LTD	95.37	87.648	74.531
China Construction Bank CO.LTD	203.95	164.789	141.158
Total	1287.97	1107.462	952.551
Bank of Communications CO.LTD	71.82	64.203	56.573
Industrial and Commercial Bank of China CO.LTD	477.03	422.699	374.989
Shanghai Pudong Development Bank	50.49	44.316	39.580
China Everbright Bank CO.LTD	48.91	41.735	38.073

Source: Ministry of Human Resources and Social Security.

Analysis of fund investment management market

There are 21 financial institutions in China participating in the investment management of enterprise annuity fund, and the total number of portfolios and assets amounted to 3,451 and 1.24 trillion yuan respectively in 2017. The investment management market is evenly distributed.

(1)The investment portfolio of the enterprise annuity fund

The Ping' An Pension Insurance CO.LTD managed 630 fund portfolios, accounting for 18% of the total number of portfolios. The number of fund portfolios managed by China Life Pension Insurance CO.LTD and Tai Kang Pension Insurance were 558 and 530 respectively. The total number of portfolios managed by the first five companies was 2,235, accounting for 65% percent of the total market share. The remaining was shared by the other 16 investment managers (Table 13).

Table 13 the investment portfolios managed by investment managers in 2017

Name	Number	%
Hai Futong Fund Management CO.LTD	78	2.26%
China Asset Management CO.LTD	192	5.56%
Southern Fund Management CO.LTD	109	3.16%
E Fund Management CO.LTD	108	3.13%
Harvest Fund Management CO.LTD	109	3.16%
China Merchants Fund CO.LTD	32	0.93%
Fullgoal Fund Management CO.LTD	65	1.88%
Bosera Funds CO.LTD	103	2.98%
Yinhua Fund Management CO.LTD	44	1.27%
China International Capital CO.LTD	56	1.62%
CITIC Securities Company Limited	133	3.85%
Hua Tai Asset Management CO.LTD	29	0.84%
Ping ' An Pension Insurance CO.LTD	630	18.26%
Tai Ping Pension Insurance CO.LTD	325	9.42%
Guo Tai Asset Management CO.LTD	41	1.19%
ICBC Credit Suisse Fund Management CO.LTD	123	3.56%

Tai Kang Asset Management CO.LTD	530	15.36%
PICC Asset Management CO.LTD	46	1.33%
Chang Jiang Pension Insurance CO.LTD	121	3.51%
China Life Pension Insurance CO.LTD	558	16.17%
CCB Pension Management CO.LTD	19	0.55%
Total	3451	100.00%

Source: Ministry of Human Resources and Social Security.

AS for the assets, Ping An Pension insurance ranked No.1. The total amount of assets managed were 18.39 trillion yuan, accounting for 14.84% of the total amount. Tai Kang Pension Insurance ranked No.2 has managed 179.61 billion yuan, accounting for 14.50%. China Life Pension Insurance CO.LTD and China Asset Management CO.LTD ranked No.3 and No.4 respectively. The assets they managed were 141.58 billion yuan and 90.18 billion yuan respectively. The Tai Ping Pension Insurance CO.LTD ranked No.5 and managed 77.05 billion yuan, accounting for 6.22% of the market share. The total assets managed by the top five investment managers were 672.36 billion yuan, accounting for 54% of the total market share, while the remaining was shared by the other 15 investment managers (Table 14).

Table 14 Assets managed by investment managers in 2017 (Billion)

Name	**Funds**	**%**
Hai Futong Fund Management CO.LTD	37.604	3.03%
China Asset Management CO.LTD	90.176	7.28%
Southern Fund Management CO.LTD	47.686	3.85%
E Fund Management CO.LTD	56.098	4.53%
Harvest Fund Management CO.LTD	54.221	4.38%
China Merchants Fund CO.LTD	15.082	1.22%
Fullgoal Fund Management CO.LTD	30.771	2.48%

Bosera Funds CO.LTD	38.96	3.14%
Yinhua Fund Management CO.LTD	8.549	0.69%
China International Capital CO.LTD	47.938	3.87%
CITIC Securities Company Limited	47.846	3.86%
Hua Tai Asset Management CO.LTD	12.406	1.00%
Ping ‘ An Pension Insurance CO.LTD	183.945	14.84%
Tai Ping Pension Insurance CO.LTD	77.052	6.22%
Guo Tai Asset Management CO.LTD	9.821	0.79%
ICBC Credit Suisse Fund Management CO.LTD	68.123	5.50%
Tai Kang Asset Management CO.LTD	179.614	14.50%
PICC Asset Management CO.LTD	18.517	1.49%
Chang Jiang Pension Insurance CO.LTD	66.82	5.39%
China Life Pension Insurance CO.LTD	141.575	11.43%
CCB Pension Management CO.LTD	6.326	0.51%
Total	1239.131	100.00%

Source: Ministry of Human Resources and Social Security.

Overall, the number of investment portfolios of enterprise annuity funds increased steadily in 2017. Although the assets continued to rise rapidly, their growth rate was lower. The number of investment portfolios of the enterprise annuity fund increased from 3,207 in 2016 to 3,451 in 2017, (+ 7.61%). The assets of the enterprise annuity fund increased from 1067.3 billion yuan to 1239.13 billion yuan.

There are seven companies that held a number of portfolios above the national average. The growth rate of portfolios held by CCB Pension Management CO.LTD and China Merchants Fund CO.LTD were 217% and 39.13% respectively. The growth rate of Southern Fund Management CO.LTD, Tai Kang Asset Management CO.LTD, E Fund Management CO.LTD, Tai Kang Asset

Management CO.LTD, Ping ‘ An Pension Insurance CO.LTD and Tai Ping Pension Insurance CO.LTD were higher than 10%. The number of portfolios managed by Yinhua Fund Management CO.LTD, CITIC Securities Company Limited, China Life Pension Insurance CO.LTD and Harvest Fund Management CO.LTD declined albeit at different rates (Table 15).

Table 15 Number of portfolios managed by the fund investment market from 2015 to 2017

Managers	2017	2016	2015	Change (%)
China Merchants Fund CO.LTD	32	23	17	39.13%
Southern Fund Management CO.LTD	109	87	74	25.29%
Tai Kang Asset Management CO.LTD	530	457	389	15.97%
Fullgoal Fund Management CO.LTD	65	62	53	4.84%
Tai Ping Pension Insurance CO.LTD	325	289	255	12.46%
Ping ‘ An Pension Insurance CO.LTD	630	550	492	14.55%
E Fund Management CO.LTD	108	92	83	17.39%
China International Capital CO.LTD	56	56	51	0.00%
Guo Tai Asset Management CO.LTD	41	40	37	2.50%
Total	3451	3207	2993	7.61%
PICC Asset Management CO.LTD	46	45	42	2.22%
Yinhua Fund Management CO.LTD	44	50	47	-12.00%
Hua Tai Asset Management CO.LTD	29	28	27	3.57%
China Asset Management CO.LTD	192	188	182	2.13%
Chang Jiang Pension Insurance CO.LTD	121	114	111	6.14%
Hai Futong Fund Management CO.LTD	78	77	75	1.30%

Harvest Fund Management CO.LTD	109	111	109	-1.80%
ICBC Credit Suisse Fund Management CO.LTD	123	117	115	5.13%
China Life Pension Insurance CO.LTD	558	567	565	-1.59%
Bosera Funds CO.LTD	103	103	110	0.00%
CITIC Securities Company Limited	133	145	159	-8.28%
CCB Pension Management CO.LTD	19	6	-	216.67%

Source: Ministry of Human Resources and Social Security.

Coming to fund assets, there are seven companies whose fund assets exceed the national average. The amount of fund assets in the PICC Asset Management CO.LTD increased from 13.23 billion yuan in 2016 to 18.52 billion yuan in 2017. Compared with the year 2016, the fund assets managed by ICBC Credit Suisse Fund Management CO.LTD, Southern Fund Management CO.LTD, Ping ‘ An Pension Insurance CO.LTD, Tai Kang Asset Management CO.LTD and Tai Ping Pension have increased rapidly, with growth rates over 20%. The growth rate of the fund assets managed by Hai Futong Fund Management CO.LTD and Harvest Fund Management CO.LTD were less than 5% (Table 16).

Table 16 Change of Fund Assets in the fund investment market from 2015 to 2017 (Billion)

Management	**2017**	**2016**	**2015**
Tai Kang Asset Management CO.LTD	1796.14	148.971	112.79
Tai Ping Pension Insurance CO.LTD	770.52	63.95	51.79
Hua Tai Asset Management CO.LTD	124.06	10.90	8.93
E Fund Management CO.LTD	560.98	49.24	40.60
PICC Asset Management CO.LTD	185.17	13.23	11.04
Southern Fund Management CO.LTD	476.86	39.07	33.31
China Merchants Fund CO.LTD	150.82	12.57	10.86

TOTAL	12391.31	1067.30	926.03
Ping ‘ An Pension Insurance CO.LTD	1839.45	152.23	132.59
Yinhua Fund Management CO.LTD	85.49	8.07	7.06
China Life Asset Management CO.LTD	1415.75	126.30	110.53
China Asset Management CO.LTD	901.76	81.41	72.41
Chang Jiang Pension Insurance CO.LTD	668.2	57.62	51.41
Fullgoal Fund Management CO.LTD	307.71	28.04	25.07
ICBC Credit Suisse Fund Management CO.LTD	681.23	53.15	48.04
Guo Tai Asset Management CO.LTD	98.21	8.90	8.10
CITIC Securities Company Limited	478.46	44.62	40.66
Harvest Fund Management CO.LTD	542.21	53.09	49.79
Hai Futong Fund Management CO.LTD	376.04	37.00	34.99
China International Capital CO.LTD	479.38	43.68	42.10
Bosera Funds CO.LTD	389.6	34.96	33.98
CCB Pension Management CO.LTD	63.26	0.29	-

Source: Ministry of Human Resources and Social Security.

4. Main Problems of Chinese enterprise annuity

The main problem of the first pillar of the Chinese old age insurance system is sustainability, and for the second pillar is fairness due to the low participation rate, which is often called the “rich-club” phenomenon. There was a turning point of enterprises annuity in 2015, when the participation rate increased by only 1% over the previous year. That was an important signal. If strong series of reform measures are not implemented, the participation rate may remain stagnant.

4.1 The participation rate of enterprises annuity

(1) The coverage rate presents a serious imbalance. The amount of enterprises annuity fund asset is too small, which cannot play the supplementary security role. By the end of 2017, the number of enterprises which had established enterprise annuity was less than 10% of the national legal enterprises. The number of employees involved in the system was only 6.55% of the contributors in the urban employees' old age insurance system. The accumulated fund assets were only 26.85% of the total surplus of the urban employees' old age insurance system, accounting for less than 1.5% of GDP.

(2)The enterprise annuity is characterized by a regional unbalance. In fact The participation ratios and the fund assets of enterprise annuity are very different between the developed and less developed regions. Only Beijing and Shanghai have more than one million employees. Some developed provinces, such as Guangxi and Gui Zhou, have fewer employees,.

(3) It does also present a serious imbalance with respect to economic sectors and typologies of enterprises. Most enterprises who establish the enterprise annuity are monopoly and resource-based corporates, such as energy, electric power, railway transportation and tobacco. Other industries that have developed the enterprises annuity system are the banking industry, securities, insurance and other for-profit financial sectors. Overall, about three-quarters of the total accumulated fund assets are owned by state-owned enterprises.

(4)Small and micro enterprises are largely excluded. According to the statistics released by the National Bureau of Statistics, the number of small and micro enterprises in China is 7.85 million, accounting for more than 97% of the registered enterprises. A total of 147 million people are employed by small and micro businesses which absorb more than 50% of urban employees. The assets are as high as 138 trillion yuan. The main characteristics of small and medium enterprises are short life cycle and quick turnover of workers. According to the research report, the number of enterprises living within one year accounts for 14.8 percent of total number of enterprises. The number of enterprises living within three year accounts for 40.4 percent of total number of enterprises. The number of enterprises living within five year accounts for 32.9 percent of total number of enterprises. Therefore, Small and micro businesses are largely excluded from the pension system.

4.2 The replacement rate is low, and development is lagging

The old age insurance system in China is developing slowly. The enterprises annuity could be an important supplement of the basic old age insurance. The enterprise annuity is lagging behind in China, which will have a negative effect on workers' income security.

(1) Employees' retirement income is inadequate. The replacement rate (that is, the proportion of pension to the average wage of the society) of basic old age insurance system is still falling. The average replacement rate is about 42%-44%. Enterprise annuity benefit should become an important source of retirement income. Due to the low participation rate, the number of recipients is only 900 thousand. Total fund assets received in 2015 was 26 billion yuan. If the benefits are taken away for one time, it is only 29 thousand yuan per capital and only 209 yuan per month.

(2) There are benefit gaps within pension system. In China the reform of government organs and of the public institutions pension system (hereinafter, GOPI pension system) has already began. According to the new design, all the employees in the GOPI pension system will participate in occupational pension system. With the continuous advancement of the GOPI pension system reform, the difference about participation rate between the enterprises annuity system and the GOPI pension system will be enlarged. It is possible to trigger pension justice problem between two systems.

(3) The goal of establishing a "multi-level" pension system is not realized. China is committed to building a "multi-level" pension system. If the participation rate of enterprise annuity will remain low, the process of establishing a multi-level pension system will be in a pilot situation for a long time. Although China has set up three-pillar old age insurance system, the basic old age insurance system plays the dominant role. Workers are very dependent on the basic old age insurance. The enterprise annuity does not play its due role.

4.3 The tax incentives are limited

In theory, it is an inevitable choice to provide clear and generous tax treatment policy to develop enterprises annuity. The tax preference helps to perfect the multi-pillar social security system, accelerate the pension fund accumulation and to improve the governance of the capital market. At present, enterprise annuity in China adopts EET model. The tax incentive is very limited. The number of employees who can enjoy tax preference is very small due to the low participation in the enterprise annuity system.

5. Ten core measures to promote the reform of Chinese enterprise annuity

At present, there are four important opportunity windows for the reform of enterprise annuity. Firstly, the reduction of social insurance contributions could promote an expansion of the participation rate. Second, the law of "enterprise annuity trial method" has been implemented for 13 years. It is imperative to revise and upgrade the enterprise annuity policy. Third, China now begins to develop the commercial insurance. It is the right time to open a channel between the enterprise annuity system and commercial insurance system. Forth, the GOPI pension system has just started. Many details need to be specified and it is necessary to set up many regulations to ensure labor mobility between the public and the private sector. China should seize these four opportunities to promote the reform of the enterprise annuity system.

5.1 Introducing automatic enrollment mechanism is the breakthrough

The requirements of participating in enterprise annuity are too high. The "enterprise annuity trial method" was issued in 2004 and needs to be revised. Firstly, enterprises should participate in the basic old age insurance by law and must pay contributions on time and in full. Second, a collective bargaining mechanism must be established. Third, enterprise should strive to make profits.

Now in China, more and more state-owned enterprises have established enterprise annuity. Many small and medium-size enterprises are unable to participate in the enterprise annuity due to their weak economic ability. Besides, small and medium-sized enterprises have high labor mobility. It is difficult for the small and medium-size enterprises to meet the requirements. Thus, in order to increase the participation rate, it is necessary to establish automatic enrollment mechanism.

5.2 Appropriate release of individual investment options

Since the system was established in 2004, only in few enterprises employees own personal investment options, such as in the financial industry, foreign banks and IT industry. Many enterprises have established a single plan, that is, all the employees in the same plan enjoy the average rate of return. The enterprises and trustee are responsible for formulating the investment strategy and asset allocation at the enterprise level. The establishment of the "enterprise selection instead of individual choice model" has historical reason. The main consideration of designing a pension system is security and easy operation. The enterprise (as trustor) and the trustee organization (as trustee) make decisions together. They provide a single plan and the rate of return for employees. The single plan is easy and there is no competition among workers. In addition, when the enterprise annuity plan is introduced, the employee's understanding is insufficient and individual do not have a strong motivation to investing their pension funds.

State-owned enterprises are the first founders and beneficiaries of enterprise annuity system. In order to solve the benefit gap between different groups and convenient management, China chooses to adopt the unified enterprise annuity system. The unified plan will limit the personal choice. Under the conditions of enterprise unified investment policy and the absence of workers' individual investment options, the only investment target is to maintain the value of the pension fund assets. The investment goal of enterprise annuity fund is to pursue preservation rather than appreciation.

Enterprise annuity system in China is Defined Contribution. As we all know, China adopts the unified investment mode for the enterprise pension fund. That is, the different risk preference and employees with different age groups are covered by a unified plan. The asset allocation is the same whether employees are young or old. Thus, the whole employees in the plan enjoy a relatively low rate of return. This is not good for the young employees.

It is advised that appropriate release of individual investment option is a good solution. It helps to allocate assets accordding to employees' risk preference. Besides, it is also helpful to receive a relatively high investment return by investing into the capital market.

5.3 Establish qualified default investment alternatives

It is necessary to introduce the qualified default investment alternatives (QDIAs). The introduction of this mechanism will simplify individual decision making, helping to solve the problems caused by unreasonable asset allocation.

Broadly, QDIAs include target-date funds (life cycle fund) and target-risk funds. The target-risk funds have played an important role in enlarging the investment choice. The life-cycle fund helps to solve some existing problems of Chinese enterprise annuity. Firstly, it helps to make the long-term investment for enterprise annuity funds. Secondly, it helps to solve the problem that the single fund asset allocation is unable to meet employee' needs. Finally, the problem that fund investment is inefficient can be solved. The employees may enjoy a higher rate of return by investing the QDIAs. If the life cycle funds are introduced in China, the enterprise annuity funds will become an important long-term investment fund. The long-term investment fund is helpful for Chinese capital market. In all, the introduction of life cycle fund helps to reduce the investment loss caused by personal investment decisions.

5.4 Improve the tax incentive policy

Enterprises annuity system was established in 2004. Only the employer's contributions enjoy the tax treatment. The Notice on the individual income tax related problems in the enterprise annuity and occupational pension promulgated in 2013 states that employees' contribution rate can enjoy 4% tax preferential policies. The tax treatment has a demonstrative effect on promoting the development of enterprise annuity. In order to ensure the EET model systematic, supplementary policies should be formulated as soon as possible.

Firstly, design tax threshold when retirees begin to receive pension benefits. After workers retire, personal tax exemption should be deducted when they receive the pension benefits.

Second, it is prudent to tax the investment income in the contribution stage. Now China does not levy a tax on capital gains in tax system. If China begins to tax on investment income of enterprise annuity, it is obviously not conducive to expand the participation rate. Therefore, it is not wise to tax on the investment income in China.

Third, if retirees use their enterprise annuity to purchase commercial annuity products, the preferential tax policy should be considered. Because many commercial insurance products provide lifetime pension benefits, it is necessary to offer certain tax support.

Forth, raise the proportion of tax preference. In order to expand the participation rate, it is necessary to increase the proportion of tax preference. It is proposed to increase the proportion of tax preference from 5% to 8%.

5.5 Cancel or Shorten the vesting period of enterprises' contributions

The previous related documents on enterprise annuity do not specify the vesting period of employers' contributions. Some companies provide that the employers' contributions will belong to employees themselves when they retire. It is not good to the flow of employees. It may become an obstacle to reduce the flexibility of the labor market. In 2017, China has provided that employers' contributions and its investment income in the individual account can belong to employees when they participate in the enterprise annuity system. Otherwise, employers' contributions can also belong to individuals gradually with the increase of working period. They completely belong to the individual not exceeding the time limit for 8 years.

It is helpful to cancel or shorten the vesting period of employers' contributions. If the employers' contributions belong to employees immediately, it is helpful for employees to participate in the enterprise annuity system.

5.6 Enlarge the investment choice of enterprise annuity funds

Ministry of Human Resources and Social Security has adopted several laws to expand the investment choices of enterprise annuity funds from the year 2011 to 2013. This is an important reform since the establishment of enterprise annuity system in 2004. Overall, the investment choices of Chinese enterprise annuity are still very low.

At present, China's enterprise annuity fund investment is still in its initial stage. Higher proportion of enterprise annuity funds are invested in the fixed income products. Recently, more and more enterprise annuity funds are accumulated, it is necessary to expand the investment choice.

Firstly, the fund investment choices of enterprise annuity should be expanded. The funds should be invested on equity and real estate.

Secondly, enterprises annuity funds should be allowed to invest in financial derivatives, such as the stock index. As we know, the stock index is useful to avoid the investment of stock market. It is necessary to implement the diversified investment strategy for the enterprise annuity.

Third, increase the proportion of enterprise annuity fund investment on equity assets. In China, it is provided that the proportion of enterprise annuity funds invested in equity will not exceed 30 percent of total investment assets. We suggest that it is necessary to raise the proportion of enterprise annuity fund investment on equity assets.

Forth, expand the fund investment regions and conduct overseas investment. In the initial stage, we can invest in Hong Kong equity market.

5.7 Establish a free conversion mechanism between the second and the third pillars

It is necessary to establish a free conversion mechanism between the second and the third pillar, allowing the accounts assets to be transferred between them. A large number of employees change their employment among different jobs. Building the free conversion mechanism between the second and the third pillar contributes to meet the needs of personnel flows. If employees in the small and medium-size enterprises leave the company, their annuity funds in their account can be changed into their commercial insurance accounts. The translation channel mechanism can enhance the attractiveness of enterprise annuity system and expand the participation rate.

5.8 The regulatory system of pension management companies needs to be optimized

China has established the first professional pension management company in 2015. The name is CCB Pension Management Co LTD. One of the goals of establishing the pension management companies is to provide retail annuity products for the small and medium-sized enterprises. It is helpful to expand the participation rate. The professional pension management company needs to be improved.

Firstly, the task of pension Management Company is to manage the fund asset. It needs to be regulated by different parties.

Second, more professional pension management companies should be established, which help to compete in the market. Therefore, it is helpful to establish an unified and independent regulatory system in China.

Third, the professional pension management company should be a chartered asset management company. Its special regulatory framework and regulations should be defined by the law.

5.9 Establish an enterprise annuity IT system platform with Chinese characteristics

It is necessary to establish a nationwide IT system to develop the enterprise annuity system. There are three options for establishing a nationwide IT account system platform in China. Firstly, establish a new IT system. The funds are provided entirely by the government Secondly, China can use the existing IT platform and make some relevant modifications to the platform. Thirdly, we can select one effective account management systems from the market by government purchase.

In all, it is important to set up a nationwide IT platform for managing enterprise annuity system. In the future, the cloud service should be used, which is help to provide cost- effective service.

5.10 Establish TEE tax exemption account

At present, many account holders choose to receive their enterprise annuity benefit in installments, which is not good for the employers to establish the enterprise annuity system.

In order to expand the participation rate, it is useful to establish the tax-free account. It is important to establish TEE tax exemption account in the future. The main reforms are as follows.

Firstly, China needs to tax on the capital gains. If capital gains tax is absent, TEE account will lose its attraction.

Secondly, the indirect tax in China should change into the direct tax. China adopts the indirect tax system at present. Personal income tax revenue accounts for a very low proportion of fiscal revenue. The number of taxpayers is small. Therefore, if China implements the direct tax, there may be more taxpayers. More people will enjoy the tax preference policy. Under the current tax system in China, it is difficult to establish TEE tax exemption account. In all, the reform of tax system in China is very important.

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The role of public finance in the Chinese social security system: EU Experiences

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Contents

Abbreviations

CADES	Caisse d’amortissement de la dette sociale [French Social Security Debt Fund]
ESSPROS	**European System of Integrated Social Protection Statistics**
EU	**European Union**
MISSOC	Mutual Information System on Social Protection
NPRF	National Pension Reserve Fund
OECD	Organisation for Economic Co-operation and Development
SOCX	**Social expenditure database**
SPC	Social Protection Committee (EU)

Introduction

This report forms part of Topic 2.3.2 - *The role of public finance and enterprise annuities funds in the Chinese social security system*. It focuses on the issue of the role of public finance.

As set out in the terms of reference, the report is addressed to the issue of how to define the responsibility of public finance in relation to a subsidy for social security funds: that is whether the subsidies should be used ex-ante as a contribution to the social insurance fund or should be used ex-post to cover any expenditure deficit. This report provides examples of EU practice to help inform the future development of policy recommendations for the Chinese situation. It also looks at the limited studies available on this issue including studies from other relevant countries.

In general, as identified in the terms of reference, EU practice varies very widely on this issue and the approach which has been adopted in EU member states is not simply an outcome of technical analysis but is also a result of political considerations and compromises.

The paper maps the different methods used by EU member countries to subsidize social insurance and pension funds with tax revenues; collects time series data on such subsidies and their relevance, insofar as possible, analyses their historical origin and rational, while providing an evaluation of their impacts, relative advantages and disadvantages.

In order to put the role of public finance in context, we first (section 1) outline the overall approach of EU member states to funding social protection including both social insurance and contributory benefits.

In section 2, we look more specifically at the role of public finance in supporting social insurance funds in EU countries.

Finally, section 3 discusses the issues raised and the advantages and disadvantages if different approaches.

Annex 1 sets out further details (based on MISSOC) as to the role of public authorities in funding social protection schemes in selected EU countries. However, readers should be aware that the data provided by MISSOC focusses mainly on those circumstances where the member state provides an explicit subsidy to the social insurance system and may not include all examples of where the state provides support (implicit or explicit) to social security costs.[1]

[1] For example, the data for Ireland indicates that Ireland provides a subsidy to meet any social insurance deficits not covered by contributions from employers and employees. However, it does not indicate that Ireland also generally excludes low paid workers from social insurance costs and that it provides 'credited' contributions to formerly insured persons during periods of, for example, unemployment or illness. Ireland also provides assistance to parents (de facto mothers) to qualify for old age pensions. These measures are not explicitly funded by the state (or indeed by anyone) but given that the social insurance fund is normally in deficit and that the state covers the costs of this deficit, they are de facto funded by the Irish public finances. No estimate of the costs involved appears to be available.

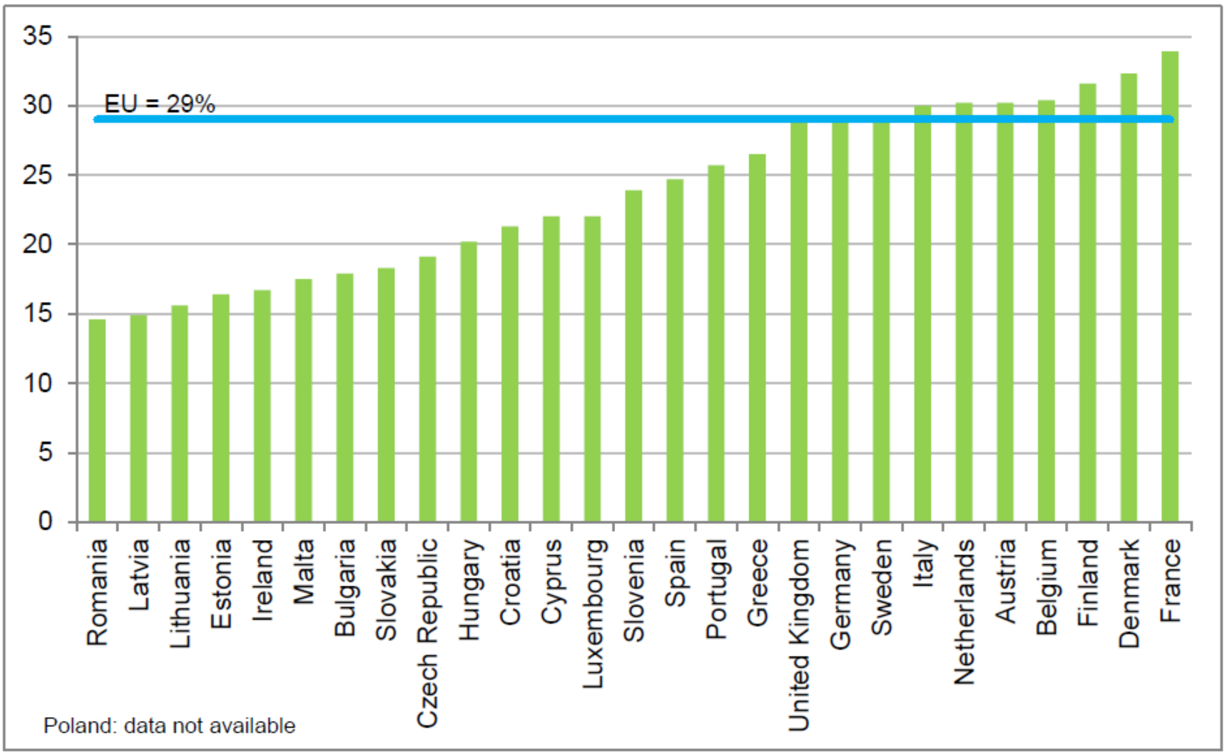
Funding of social protection in the EU

In this section we outline details about the level of social protection spending in EU countries, the sources of funding (social contributions versus general government contributions) and the level of social security fund debt.

Current levels and sources of social protection funding

In 2015 (most recent data), EU countries spent on average 29% of GDP on social protection (all data comes from Eurostat ESSPROS unless otherwise indicated).[2] The EU average hides major disparities between Member States. In 2015, social protection expenditure represented at least 30% of GDP in France (34%), Denmark and Finland (both 32%), Belgium, the Netherlands, Austria and Italy (all 30%). In contrast, social protection expenditure stood below 20% of GDP in Romania and Latvia (both 15%), Lithuania and Estonia (both 16%), Ireland (17%), Malta, Bulgaria and Slovakia (all 18%) as well as in the Czech Republic (19%). Further details are set out in the table below:

Social protection expenditure in the EU Member States, 2015
(% GDP)



[2] Expenditure on social protection contains: Social benefits, which consist of transfers, in cash or in kind, to households and individuals to relieve them of the burden of a defined set of risks or needs; Administration costs, which represent the costs charged to the scheme for its management and administration; Other expenditure, which consist of miscellaneous expenditure by social protection schemes (payment of property income and other).

In 2015, the two main sources of funding of social protection at EU level were social contributions, making up 54% of total receipts, and general government contributions from taxes at 43%. Again, however, the EU average hides a wide variation in approach between different countries. One group of countries (mainly central or eastern European) derive 60% or more of their social protection receipts from social contributions. These range from Estonia (79%) to Belgium (60%) and include France and the Netherlands. In contrast, a number of countries including Nordic countries (Denmark, Finland, Sweden),[3] Ireland, Romania and the UK receive less than 50% of their receipts from social contributions. Denmark which relies heavily on public finance is an outlier with only 18% of social protection receipts coming from social contributions. Finally, a number of countries (mainly southern European) are around the average including Greece (55%), Italy (50%) and Spain (54%).

This data refers to funding for the total social protection system including non-contributory benefits and, therefore, it does not indicate the extent to which states fund social insurance schemes. Indeed there are significant variations in the extent to which states rely on means-tested as opposed to contributory or other non-contributory but non-means-tested benefits. While ESSPROS does not readily provide comparisons of the extent to which countries rely on means-tested benefits in terms of % of total social protection expenditure, the EU Social Protection Committee (2015) carried out a special analysis of this data to look at the extent to which countries relied on non-means-tested (including contributory) as opposed to means-tested benefits. Overall, the EU28 relied heavily on non-means-tested benefits (89.2%) with only (10.8%) being spent on means-tested benefits. The countries which relied most heavily on non-means-tested benefits (c.95% or more) included Belgium, Bulgaria, Czech Republic, Denmark, the Baltic countries, Hungary, Poland, Romania, Slovakia, Finland and Sweden. Conversely, those which relied most heavily on means-tested benefits were Ireland (27.6%), Spain (16.4%), Netherlands (15.4%), and the UK (14.4%). Comparative data on ‘income-tested benefits” are also available from the OECD SOCX (2014) which covers many EU countries.[4] This also shows that countries such as Ireland (36.5% of total expenditure) and the UK (26%) rely heavily on means-tested benefits.[5]

Thus, some of the countries which rely heavily (in comparative terms) on pubic finance to fund their social protection systems do so because their system involves a greater reliance on means-tested benefits (e.g. Ireland and the UK).

Looking at countries in terms of how much they spend on social protection (compared to the EU average) and how much they rely on social contributions we find that

1) some countries spend above average and rely more on social contributions (e.g. France)
2) some spend above average but rely heavily on public finance (e.g. Denmark)
3) some spend about average and rely at about average on social contributions (Italy)
4) some spend below average but rely heavily on social contributions (Czech Republic); and
5) some spend below average and rely on public finance (Ireland).

[3] Norway (not an EU member state) would also fall into this group.

[4] “Income-tested benefits” are defined as those benefits that aimed to prevent household income to fall below a certain level and for which eligibility and entitlements are conditional on the recipient's current income, and assets in the case of means-testing

[5] Netherlands spends 12% on means-tested benefits but OECD data shows Denmark as spending less than 1% which suggests that OECD and EUROSTAT are using different classifications of Danish benefits. The OECD approach would appear to be correct as most studies would not categorise the Danish social protection system as relying on means-tested benefits.

Social protection spending and financing in EU countries, 2015[6]

Spending/ Funding	**Above average spending**	**Average**	**Below average spending**
Above average social contributions	France	Austria, Belgium	Czech Republic, Estonia
Mixed	-	Italy	Spain
Above average public finance	Denmark, Finland	Sweden, UK	Ireland, Romania

As can be seen, EU member states adopt a very wide range combination of different approaches. Of course, EU and OECD states also use the tax system in various ways to subsidise social protection by, for aplenty, giving tax incentives for people to contribute to pensions or more favourably tax treatment to pension income (see OECD, 2014). However, these type of tax subsidies fall outside the current study which focusses on direct expenditure subsidies to the pension system.

In the next section we look in more detail at the approaches adopted by different countries to support social insurance expenditure.

Social security fund debt

The impact of social security funds on the general government debt in most EU countries is relatively small: contributions of less than 5% of total general government debt were recorded in most countries (see Table A1). However, three countries had higher ratios of debt for social security funds: Lithuania (20.3%), France (10.3%) and the Netherlands (6.6%).

[6] We provide some examples rather than trying to include all 28 countries.

The role of public finance

Historical background

The UK Beveridge Report (1942) was very influential in a range of countries in its approach to social security. Beveridge strongly supported the social insurance (contributory) approach and recommended that this should form the basis of a reformed UK social security system. He recommended that all citizens of working age would pay contributions and that benefits (without a means test) would 'be paid from a Social Insurance Fund built up by contributions from the insured persons, from their employers, if any, and from the State'.[7] This, as Beveridge acknowledged, was a continuance of the tripartite scheme of contributions established in the UK in 1911 which included a contribution from the National Exchequer out of general taxation. The employer and employee contributions proposed in the report were intended initially to cover two-thirds of the cost of unemployment and five-sixths of the cost of retirement pensions and other benefits with the remainder to be provided by government. Beveridge envisaged that the government share would rise as the scheme matured. However, no specific justification of these proportions is advanced and the approach arrived at appears more pragmatic than principled. In any case, significant changes were made in the details of the proposals when a unified social security scheme was introduced in Britain after World War II.

Thus, even in the case of this classic report, the precise justification of the objective and level of public subsidy remains somewhat unclear and the final outcome appears to be largely based on policy legacies and political compromises (see Baldwin, 1992). However, the logic of Beveridge's approach (again probably based on the existing practice) was that the government's role was to subsidise the deficit in contributions and this remains the approach of the UK scheme today.

Many continental European countries (such as France and Germany) adopted a Bismarckian approach to social protection, again relying heavily on social insurance but with benefit levels more closely related to social insurance contributions. It is not possible in this report to examine the origins of subsidies in other EU countries but all the evidence would suggest that these have developed over time based on compromise and policy legacies. In its study of matching contributions (one method of subsiding social insurance costs the World Bank (2013) noted that countries were 'rarely explicit about the objectives of a policy intervention and even less specific regarding how to measure outcomes'. The same point could be made in relation to most aspects of EU countries' approaches to subsiding pensions and social insurance funds. Decision makers are rarely explicit about what they are trying to achieve and, in many cases, the ultimate approach arrived at is a political compromise between different views.

Overview

As we have seen in the previous section, EU countries adopt very different approaches in terms of the amount they spend on social protection and how they fund this. In this chapter, we look in more detail at the technical means by which member states support social insurance expenditure. Again we will see that countries adopt a range of different approaches.

As set out in the terms of reference, these can basically be summarised into four approaches:

[7] Beveridge Report, para. 20.

1) Pre-subsidising social funds
2) Post-subsidising the deficit (if any) arising
3) Subsiding a minimum benefit/pension[8]
4) Funding transitional costs, e.g. where there is a reform of the pensions system.

We look in more detail below at these different measures but we should first point out that countries use a mix of these different policies measures. In addition, while we have categorised thee different approaches under these four headings, in practice there may not be much difference between, for examples, countries which pre-subsidise a certain proportion of a social insurance fund's annual expenditure (e.g. Japan) and a country which post-subsidises any annual deficit arising (e.g. UK). Countries often combine a variety of approaches. For example, in relation to pensions, Germany provides a general Federal State subsidy for statutory pensions which varies according to the development of the gross salary and wages per employee and the contribution rate. Germany also provides targeted pre-subsidies, for example, by paying contributions during child-raising periods. It also provides some transitional funding in relation to pensions costs arising from the unification of Germany. All the federal expenses mentioned (almost one third of the total expenses in statutory pension insurance) are tax financed.

Pre-subsidising social funds

A wide range of different approaches are adopted in *ex-ante* subsidisation of social insurance funds. In general, countries provide subsidies for specific groups, e.g. low paid workers or people taking up employment (to encourage the creation of employment); and to parents to assist such persons (especially mothers) to qualify for benefits given that statistically women generally have lower contribution records than men (largely due to parental responsibilities).

In theory, countries might pay a more general subsidy to pay a proportion of social contributions which would otherwise have to be paid to the employers and/or employees. However, this is more often done by way of post-deficit subsidy (see below). Alternatively, a number of countries reduce contributions below a level which would be actuarially necessary to meet projected costs. The rationale for this may be to avoid high contribution levels so as to encourage employment or for more pragmatic political reasons that, in many countries, there is resistance to high levels of social contributions.

Subsidies to specific groups

One example of this approach (albeit not one to be recommended) is in Bulgaria where the state budget pays contributions on behalf of state employees including civil servants and soldiers.

Examples of subsidies focussed on *people who need support to take up employment* include:

> Bulgaria where the State Budget covers 50% of the contributions paid for people with disabilities working for certain employers, i.e. specialised enterprises, associations of

[8] In some cases, as in Sweden, these pensions are residence based non-contributory pensions rather than social insurance pensions. Nonetheless, they also closely linked to the social insurance system and it seems appropriate to take them into account.

people with disabilities and. units for occupational therapy of disabled persons set up in specialised social care institutions.

Romania: Contributions for unemployed persons participating in training are paid from the unemployment insurance budget.

Examples of support to *parents* include

Germany: the State pays contributions for pension insurance during child-raising periods.

Slovakia: the state contributions on behalf of persons taking care of children up to the age of 6 (up to the age of 18 whose health status is considered negative in the long-term)

An alternative to this pre-subsidisation approach is that some countries chose to post-fund specific schemes such as maternity (see below).

It should be noted that, rather than providing direct subsidies, many EU countries have chosen to reduce contributions for specific groups (e.g. low paid workers or unemployed people). Insofar as this does not affect entitlement to benefits, this involves an indirect subsidy, either from other contributors or, where a scheme deficit is funded by the state, from the public purse.

General subsidies

A limited number of countries provide general subsidies of social contributions. For example, Luxembourg pays 40% of the contributions to sickness and maternity; and one-third of contributions to old age and other long-term pensions.

Post-subsidising

Deficit

A number of countries subsidise any deficit arising in the social insurance fund. In the context of PAYG schemes, this means that the public finances are obliged to meet an annual deficit where the outgoings (benefit payments and administrative expenses, etc.) are less than the income to the fund (mainly social contributions) and any balance in the fund. Again there is variation in this approaches. In some countries, e.g. Ireland and the UK, there is a general responsibility to subsidise deficits across all (or almost all) social protection schemes. In other countries, the public finances fund only deficits in specific schemes. These differences are largely for historical reasons rather than having a clear policy rationale.

On the basis of the information provided in MISSOC and elsewhere, these type of provisions can be found in Austria (invalidity and old age/survivors pensions; unemployment benefits); Belgium (sickness benefits); Bulgaria (pensions); Germany (state loan covers possible deficits of the federal unemployment scheme; pensions); Hungary (except unemployment); Ireland; Poland; Romania (only in the case of unemployment benefits); Slovakia (occupational accidents, invalidity and old age pensions, unemployment) and the UK.[9]

Targeted

Some countries chose to fund a proportion of the expenses of specific schemes such as maternity. An example is in Austria where 70% of the expenses of maternity benefit are reimbursed by the families compensation fund. Similarly in Slovenia, the state finances the bulk of the maternity benefit costs (92%) with only 8% being funded from contributions.

Subsiding a minimum benefit/pension

In these cases, the State pays the cost of a minimum benefit or pension level. This type of approach is found, in particular, in the Nordic countries and ensures that the costs of a minimum payment fall on taxpayers generally rather than on individual insured persons and their employers. Examples include:

Finland: the state pays the costs of minimum sickness allowances and of the guaranteed old age pension

Spain: the state finances the guaranteed minimum pension amount of the contributory pension system

Sweden: The state funds the guarantee pension. Those who have not earned any national income-based pension at all receive a full guarantee pension. To those who receive a low income-based pension, the guarantee pension is a top-up.[10]

The intention of the guaranteed or minimum pension is generally to provide a basic level of income. This approach can be seen as involving an *ex post* individual transfer in contrast to the *ex ante* transfer involved in subsiding contributions.

Funding transitional costs

The issue of funding transitional costs should perhaps be seen separately to the above examples of pre and post-subsidisation. In theory the above examples are on an ongoing basis while funding of transition costs is to address a once-off issue (even though in practice the transition period may run over many years). Countries which use pre or post subsidisation (or which chose not to subsidise social insurance generally) may or may not decide to fund transition costs. Examples of the state

[9] In the case of the UK, there are very limited exceptions in relation to sickness benefits, Statutory Maternity Pay, Statutory Paternity Pay, and Statutory Adoption Pay where the state meets some or most of the costs.

[10] The Swedish guarantee pension is a non-contributory pension but forms part of a social insurance-based pensions system. Almost half (42%) of all pensioners currently receive a guarantee pension and, therefore, it seems appropriate to take it into account here.

funding transition costs include in Germany where the state funded costs arising from pensions reforms associated with the unification of the country and in a number of eastern European countries where the costs of pensions reform after the fall of the Soviet Union were also funded from general taxation (PRAXIS, 2008).

Reserve Funds

It should be noted here that a number of EU countries have created reserve funds with a view to putting aside resources in order to fund future projected pension deficits. In some cases, such as the Spanish Social Security Reserve Fund, these were made up of surpluses from social security contributions. However, in others such as the Irish National Pension Reserve Fund, the state agreed to put aside a proportion of national income. The Exchequer contributed an amount equal to 1% of GNP annually into the NPRF. The investment mandate required the Fund to secure the optimal total financial return provided the level of risk was acceptable to the Commission. The Commission implemented its investment strategy through a globally diversified portfolio that included quoted equities, bonds, property, private equity, commodities and absolute return funds. The objective of the fund was to meet as much as possible of the costs of social welfare and public service pensions from 2025 until at least 2055. Sweden also established a series of national pension funds (Severinson and Stewart, 2012). Japan and Korea and a number of other OECD countries have also established similar funds.

The 2008 recession had a negative impact on the reserves of some such funds and much of the Spanish fund (which at one time contained EURO66 billion) has now been drawn down while the Irish fund has been transformed into a broader Strategic Investment Fund. However, the Swedish funds play a continuing role in the Swedish pensions system.

France (which has the largest social security debt of any EU country) has established a specific fund (the Social Security Debt Fund - CADES) to repay the social debt, i.e. the accumulated deficits of the social security organizations. This is funded by a specific tax (the Social Debt Repayment Contribution) and other sources of income including other transfers from the public finances. The task of CADES is to pay down the accumulated debt by 2025 (extended from 2009). The approach adopted includes transforming ongoing short-term debt into longer-term debt and adopting a phased plan for amortizing this debt by 2025.[11]

Discussion

The issue raised by MoF is a very interesting one and it is perhaps surprising that there is very limited international literature on the topic. Insofar as issues concerning public subsidies for social insurance have been considered, they have tended to be considered separately. In relation to pre-subsidies, for example, the World Bank (2013) recently published a report on the effectiveness of matching contributions (although this looks mainly at defined contribution pensions schemes). This covers a wide range of countries including Germany, UK (and also China). Similarly, there have been some evaluations (e.g. Turkey, Korea) of the effectiveness of subsiding social insurance contributions to support employment. The conclusions of these studies are discussed below. However, there do not seem to be international studies of the effectiveness of pre-subsiding social insurance schemes more generally. Not do there appear to be such studies of post-subsidisation.

[11] Available data on EU states social security debt is outlined in Table A1.

Data is also lacking at EU level as to the extent to which individual countries fund social insurance from contributions as opposed to subsidies. While ESSPROS makes available extensive data (discussed above) as to the overall funding of social protection schemes, this includes non-insurance benefits and data is not readily available as to social insurance schemes separately. While MISSOC provides information on the approaches adopted by member states this is descriptive only and does not provide any quantitative data. To establish the extent to which specific member states subsidise their social insurance schemes from contribution as opposed to taxes would require an original analysis of the data provided to ESSPROS by member states and/or an examination of national data.

However, some general impression can be obtained from the data provided by ESSPROS if we look only at those countries which (like China) rely mainly on social insurance. Table 1 below sets out the seven larger member states (Belgium, Bulgaria, Czech Republic, Finland, Hungary, Romania and Sweden)[12] which rely mainly (95% or more of total spending) on non-means-tested benefit (mainly social insurance) and also provides data on the extent to which these member states fund their systems from different sources.[13]

[12] Four of these countries are also shown in the OECD SOCX data as spending 6% or less of total cash expenditure on means-tested benefits (OECD, 2014). Bulgaria and Romania are not members of OECD and so no data is available from this source.

[13] We do not include Denmark where the non-means tested benefits are not social insurance based.

Table 1: Sources of funding in social insurance countries

Country	% non-means tested	% funded by contributions	% funded by general government contribution
Belgium	95.2	60.3	37.5
Bulgaria	95.3	50.8	47.4
Czech Republic	98.0	71.6	27.0
Finland	95.2	47.7	47.3
Hungary	95.6	63.6	36.4
Romania	95.0	45.1	53.5
Sweden	97.2	47.2	50.7

Source: Data for % non-means tested is from SPC (2015) while data for the breakdown between different sources is from ESSPROS (2015).[14]

As can be seen, countries again take different approaches. The Czech Republic relies most heavily on social insurance contributions (over 70%) with general government contributions providing the lowest level of support - although still significant at over one-quarter of total social protection expenditure. In contrast, Bulgaria, Finland, Romania and Sweden (countries with very different welfare state models) adopt similar approaches to funding social protection. All fund about 50% from general government contributions. Belgium and Hungary are median cases with over one third of receipts coming from general government.

Data are available for six of these countries over time (excluding Bulgaria). Further details on the systems in these countries are set out in Annex 1 (based on MISSOC).

[14] The combination of social insurance contributions and general government contributions does not add up precisely to 100% and in most countries some small proportion of receipts come from 'other' sources such as income from investments.

Table 2: Trends over time in funding

Country	% non-means tested		% funded by general government contribution	
	2000	**2011**	**2000**	**2015**
Belgium	96.3	95.2	29.4	37.5
Czech Republic	92.3	98.0	25.0	27.0
Finland	93.8	95.2	42.9	47.3
Hungary	93.3	95.6	31.2	36.4
Romania	90.6	95.0	15.8	53.5
Sweden	95.2	97.2	44.3	50.7

Source: as table 1.

As can be seen, over the period from 2000 to 2011, there has been a general increase in reliance on non-mean tested benefits (or, conversely, a decline in reliance on means tested payments).[15] The trend for these countries is different to that of the average for EU members overall where there was no real change in the period.

Similarly there has been a general increase in the proportion of expenditure coming from general government contributions and conversely a fall in the proportion coming from social insurance. This was particularly marked in Romania. Most of this increase occurred in the period before 2008 (see Table A2 which also shows trends over a longer period for the countries for which this is available). This is line with trends for the average for EU countries overall where there has been increased reliance on general government contributions in the period from 2000 to 2014.[16]

Studies and evaluations

Subsidising contributions

The World Bank (2013) study on matching contributions (though mainly looking at defined contribution schemes) found that there is evidence that directly subsidising contributions does lead to an increase in participation in pension schemes. A study of subsided contributions for farmers and fishermen in the Korean defined benefit system (one of the few available) comes to the same conclusion (Moon, 2013). In order to encourage compliance with its national pension program, the government of the Republic of Korea has been providing matching subsidies to farmers and fishers of up to half of their contribution since 1995. Statistical analysis found that subsidised groups were

[15] Belgium is the only exception.

[16] Receipts from general government contributions increased for EU15 from 35.8% in 2000 to 40.9% in 2014 (latest data).

more than 10 percentage points more likely to contribute than other self-employed workers, after controlling for other variables, and that differences in contribution rates were larger among low-income workers. In Korea, the effect of subsidisation on reducing informality was found to be modestly positive. Of course, these conclusions depend on the design of the scheme and of the subsidy.

There have been a number of evaluations of subsidisation of social insurance contributions from a labour market perspective. However, given the number of reforms in EU countries, there have been surprisingly few evaluations looking specifically at subsidisation or reductions in social contributions *per se*. The studies which have been carried out in EU countries have generally found limited impacts.[17] For example, reductions of payroll taxes in regional 'support areas' in the Nordic countries have been examined in a number of studies. However, none of the studies finds any evidence that employment increased in the target regions as a consequence of the payroll tax cuts (Skedinger, 2014). Egebark and Kaunitz (2013) examined the impact of reforms to Swedish employers contributions for young people in 2007 and 2009, which reduced contribution rates by around 16% and found a small positive effect on employment. Skedinger (2014) looking at the same reforms only in the retail industry also found (at best) a modest increase in employment and concluded that reducing payroll taxes is a costly means of improving employment prospects for the young.

Outside the EU, Betcherman et al. (2010) examined employment subsidy schemes in Turkey which, inter alia, subsidized employers' social security contributions. The study found that the schemes led to significant net increases in registered jobs (5%–15%). However, the cost of the actual job creation was high because of substantial deadweight losses, i.e. the number of jobs that would have been created independently of the subsidy programs.. The study suggested that the main effect of subsidies was to increase social security registration of firms and workers rather than increasing employment and economic activity. The authors concluded that the study supports the theory that in countries with weak enforcement institutions, high labor taxes on low-wage workers may lead to substantial incentives for firms and workers to operate informally. Balkan et al. (2016) looking at a similar scheme found that the subsidy program seems to be ineffective in increasing the employment probabilities of the target group but that the program has been notably effective on some sub-groups, in particular, older women.

Similarly, looking at a study of social security contribution subsidies in Korea, Kim (2016; 2017) found that the subsidies increased employment by about 1% and that there were again significant deadweight losses. The author attributed this poor outcome to poor design features of the subsidy program. Kim concluded that subsidizing social security contributions may not be an effective policy tool for closing coverage gaps in countries with weak enforcement institutions.

Minimum pensions

The World Bank (2013) study also compared matching contributions (i.e. an *ex ante* subsidy) with the *ex post* subsidy invoked in a minimum pension guarantee (as in Sweden). This should be read with some caution as it is based on assumption rather than actual evaluation of either system. The

[17] See Marx (2001) for a review of earlier studies which found that employment effects of such measures were limited mainly due to larger than expected deadweight losses and, to a lesser extent, substitution effects.

study suggest that subsiding a minimum pension is very effective in terms of redistribution of income but not fiscally efficient as it may go to persons who do not need it.[18] In Sweden, however, the guarantee pension is reduced based on other pension income so this may not be such an issue. In any case, since these minimum pensions generally form an integral part of an overall pension system, it would be difficult to evaluate one aspect in isolation from the overall performance of the national pensions system.

Subsidising deficits

There do not appear to be any comparative studies of the impact (positive or negative) of subsidising fund deficits. In general, the objectives behind such an approach are obscure and, in many cases, lost in the mists of time. It is, therefore, difficult to assess how effective or efficient this approach is. If we look at the available information from MISSOC and ESSPROS as to countries which do deficit subsidise (although these sources do not provide data on the extent of such a subsidy) and data on expenditure level we do not find any clear pattern.

Based on MISSOC, a range of countries provide deficit funding for more than one branch of social security including Austria (invalidity and old age pensions; unemployment benefits); Hungary (except unemployment); Ireland; Germany (pensions, unemployment); Poland; Slovakia (occupational accidents, invalidity and old age pensions, unemployment) and the UK.

In table 3, we look at expenditure trends in these countries in comparison with the overall average for the EU.

[18] This reflects the Bank's usual preference for means-tested minimum pensions.

Table 3: Expenditure trends in deficit funding countries, 2000-2014 (% of GDP)

Country	2000	2014
European Union (25 countries)	25.3	28.8
European Union (15 countries)	25.5	29.5
Ireland	12.9	21.6
Germany	28.7	29.0
Hungary	19.6	19.8
Austria	27.9	29.8
Poland	19.6	19.1
Slovakia	19.1	18.5
United Kingdom	23.7	27.3

Average expenditure in the EU increased by about 14-15%. In Germany, Hungary, Poland and Slovakia expenditure remained broadly static (-3% to +1%); in Austria it increased more slowly than the average; Irish expenditure increased significantly as a percentage of GDP; while in the UK expenditure was in line with the average. Hungary and Slovakia (and Austria and Poland to a slightly lesser extent) rely heavily on non-means tested benefits while Ireland and the UK are at the opposite end of the social insurance↔means-tested spectrum. Again no clear pattern can be seen and there is nothing to suggest that deficit funding in principle has any specific impact on expenditure. However, one would need to look at detailed levels of expenditure funding and at broader socio-economic and demographic variables to explore this further.

The legal responsibility to cover deficits does not necessarily correspond with actual practice. The EU Commission (2015) services have calculated that, in 2013, countries where the state was contributing directly to the costs of pensions included Bulgaria, Germany, Ireland, Greece, Spain, France, Netherlands, Finland and Sweden.[19] The level of contribution ranged from less than 1% of GDP in Sweden to over 6% in Finland (over 50% of total pensions receipts).[20] However, this does not include countries which contribute to other social insurance benefits while it would appear to cover all forms of pension including means-tested pensions. Therefore it is not a direct indicator of the level of state support to pension and social insurance funds but given that these funds make up a major component of social protection spending in many countries, it gives some indication of current practice.

[19] No data was available for Belgium and the UK. The Irish support also covered other social insurance benefits.

[20] See the national reports at https://europa.eu/epc/2015-pension-fiches-2015-ageing-report_en

Table 4: Expenditure trends in pension funding countries, 2000-2014 (% of GDP)

Country	2000	2014
European Union (25 countries)	25.3	28.8
European Union (15 countries)	25.5	29.5
Bulgaria	n/a	18.5
Germany	28.7	29.0
Ireland	12.9	21.6
Greece	18.1	26.0
Spain	19.5	25.4
France	28.8	34.2
Netherlands	24.4	30.9
Finland	24.3	31.9
Sweden	28.3	29.5

We can see that, for these countries (with the exception of Germany and Sweden),[21] the level of expenditure has increased more rapidly than the average for the EU (much more so in many cases). This would suggest that, rather than a high level of public subsidies leading to retrenchment of social protection spending, increases in social spending have driven the level of public subsidy. However, once again no consistent trend can be seen as Germany and Sweden have only modest increases (albeit that these countries started at the higher end of the expenditure spectrum).

[21] Data is not available for Bulgaria in 2000.

Table A1: Social security funds debt in EU states (Euro M)

Country	2015	2016
Belgium	8,161.0	2,239.6
Bulgaria	1.1	0.0
Czech Republic	23.3	3.5
Denmark	71.2	79.5
Germany	1,411.1	1,143.2
Greece	149.0	142.0
Spain	17,188.4	17,173.0
France	228,899.9	229,066.1
Italy	113.6	145.8
Latvia	0.0	0.0
Lithuania	3,762.3	3,894.1
Hungary	139.5	329.2
Netherlands	36,174.0	32,774.0
Austria	1,299.0	1,388.5
Poland	10,630.2	10,504.0
Portugal	1.8	1.1
Romania	794.4	1,038.9
Slovenia	1.3	1.1
Slovakia	0.8	0.4
Finland	3,149.0	2,315.0
Sweden	4,029.9	3,025.8

Table A2: General government contributions as % of total social protection receipts in high social insurance countries, 1990-2015

Country	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Belgium	23.75	26.02	29.38	32.52	33.20	32.91	33.48	33.69	35.78	35.77	37.00	37.79	38.38	37.52
Czech Republic	:	20.75	25.04	20.17	20.64	22.22	22.01	26.85	28.06	27.56	27.81	28.30	28.50	26.99
Finland	40.59	45.78	42.86	43.36	42.78	42.86	42.90	45.28	46.17	46.20	46.92	47.45	47.23	47.31
Hungary	:	:	31.21	34.72	41.17	38.88	36.42	33.85	36.30	40.08	36.90	38.24	36.10	36.36
Romania	:	:	15.78	41.48	40.70	43.97	44.08	48.49	53.62	53.41	50.60	49.06	49.67	53.45
Sweden	:	49.57	44.33	47.43	48.17	46.16	48.09	50.54	49.35	50.64	50.00	50.53	50.84	50.71

Source: MISSOC

Summary and Discussion

Summary of approaches

In this section we summarise the findings of the report and discuss the advantages and disadvantages of different approaches.

In relation to the findings, the main conclusion has to be that there is a great variation in EU countries in how they finance social protection benefits. While EU countries (on average) fund a majority of social protection costs from social contributions, there is an enormous variation amongst countries with many relying heavily on general taxation. Similarly, general (average) trends in relation to the balance between social contributions and taxation hide a wide variation among EU member states. Countries which are often categorised as having into the same welfare state group (such as Denmark and Sweden) adopt quite different approaches to funding social protection.

The mechanisms adopted by member states to fund social insurance benefits and pensions include:

1) Pre-subsidising social funds
2) Post-subsidising the deficit (if any) arising
3) Subsiding a minimum benefit/pension
4) Funding transitional costs, e.g. where there is a reform of the pensions system.

However, once again there is little clear pattern. Many countries use a number of these methods but comparable quantitative data as to the extent to which different countries rely on different approaches is lacking. Unfortunately there is very little quantitative information as to the extent to which member states fund their social insurance schemes either on an ongoing basis or as to the debts (explicit and implicit) involved.

In the previous section we looked data for the the seven larger member states (Belgium, Bulgaria, Czech Republic, Finland, Hungary, Romania and Sweden)[22] which rely mainly (95% or more of total spending) on non-means-tested benefits (mainly social insurance). We saw that these countries did not adopt one approach. The Czech Republic relied most heavily on social insurance contributions. In contrast, Bulgaria, Finland, Romania and Sweden fund about 50% of spending from general government contributions. Belgium and Hungary are median cases with over one third of receipts coming from general government. In these countries, there has been a general increase in reliance on non-mean tested benefits (or, conversely, a decline in reliance on means tested payments) over the period from 2000. This trend is different to that of the average for EU members overall where there was no real change in the period. Similarly, in these countries, there has been a general increase in the proportion of expenditure coming from general government contributions.

The different approaches appear to have arisen largely for historical reasons and represent political and policy compromises. Perhaps surprisingly there has been little academic discussion about the pros and cons of different options.

[22] Four of these countries are also shown in the OECD SOCX data as spending 6% or less of total cash expenditure on means-tested benefits (OECD, 2014). Bulgaria and Romania are not members of OECD and so no data is available from this source.

Pros and cons of different approaches

Here we look first at the pros and cons of the four different options adopted to subsidise social insurance. Second, we look at the pros and cons of different sources of funding, i.e. social contributions versus different forms of taxation including income taxes, consumption taxes and capital taxes.

Pros and cons of funding sources

In terms of the pros and cons of different funding sources, we can look at the impact on work incentives, labour costs, risks of evasion, administrative costs, adaptability to demographic and economic changes, and distributive effects (drawing on Social Protection Committee (SPC), 2015). The SPC looked at social insurance contributions, income tax, consumption taxes (such as VAT), and capital taxes (including inheritance tax). The SPC (2013) points out that the options have different outcomes with respect to their revenue generating ability, their impact of the labour market, their sensitivity to evasion, their adaptability to demographic and socio-economic change, and their distributional implications (see Table). An assessment of the pros and cons of these options needs to look at all these factors.

Previous studies by the EU (2012) have looked at the extent to which the design of the tax and benefit system can create (dis-)incentives to participate in the labour market. The research shows that the effects depend on the characteristics of the workforce and the institutional framework. Although the findings do not point to a generally positive employment effect of a shift from social contributions to consumption taxes, such reforms can have a significant positive impact on specific groups, such as low-skilled workers, single parents and second earners. Therefore, targeted measures may prove more effective to boost employment. However, the 2012 report also shows that a shift from social security contributions to consumption taxes can have unfavourable distributional effects, as consumption expenditures represent a larger share of poorer households' income.

Social insurance contributions can, at least in principle, raise labour costs and create disencentives to employment. However, on the other hand, the link between contribution and benefits can create an incentive for people to work and pay contributions. Social contributions seem less suited to a universal benefit system because there are tied to labour contracts and therefore exclude people with no labour market attachment.The risk of evasion is related to the mechanisms for collecting social contributions (a topic being discussed in more detail in a separate report). However, one disadvantage of social contributions are that tend to contract in a recession as people lose jobs which creates a cyclical mismatch between the demand for social security and available revenues. They also do not respond easily to demographic change. As social protection expenditure are closely connected with population structures and economic conjunctures, demographic change and economic volatility can considerably affect the ability to raise revenues. In terms of distribution, this very much depends on the design of contribution system and whether there are upper and/or lower income limits beyond which no (additional) contribution are payable.

In a number of EU Member States, taxes are used as a main source of social protection funding. They appear particularly appropriate for social protection schemes with universal coverage and correspond to political choices to fund certain benefits regardless of attachment to the labour market. The level of funding based on taxes is subject to annual budget decisions and arguably provides greater flexibility and overall government control over public sector financing. These sources include income, consumption and capital taxes.

Like social contributions, income tax also increases labour costs and can have a disincentive effect. The risk of evasion depends on the overall effectiveness of tax collection in the country concerned. As with social contributions, income tax receipts will tend to contract in a recession and are also somewhat inflexible to demographic change. However, income tax is normally progressive in terms of income distribution.

The advantages and disadvantages of consumption taxes obviously depend on the specific design and whether they are general or targeted. In general these taxes do not have a direct effect on the labour market and are neutral as to work incentives. They are also less subject to evasion. Like most taxes they will tend to contract in a recession but are less responsive than taxes more closely linked to the labour market and also can be more readily adapted to demographic change. However, the distributional impact tends to be regressive.

Finally, capital taxes also do not have a direct effect on the labour market and are neutral as to work incentives. The likelihood of evasion of capital taxes will depend on the structure of tax and the effectiveness of collection. They are again likely to contract is a recession depending on the precise structure and source of taxation but are less closely linked to demographic issues. The distributional impact is likely to be positive.

The SPC (2015) does not come to any conclusions as to the appropriate approach and simply notes that the range of approaches in EU countries 'provide a repository of experiences that can feed into a better understanding of how various, and potentially new, financing vehicles can be used to achieve different policy goals and optimise financing methods for more sustainable social protection.'

	Work incentives	Labour costs	Risk of evasion	Administration costs	Adaptability to demographic & economic change	Distributive effects
Social contributions	May reduce work incentives but given link to benefits may also increase incentive to work	Increases labour costs	Depends on capacity of collection system	Can be higher if collection is separate to tax	Tends to contract in recession Does not respond easily to demographic change	Depends on structure of social contributions
Income tax	May reduce work incentives	Increases labour costs	Equivalent to general tax evasion risk	Normally low	Tends to contract in recession but not so closely linked to employment	Generally progressive but depends on structure of IT
Consumption tax	Neutral	Neutral	Low	Low	Dependent on the economic cycle	Regressive
Capital tax	Neutral	Neutral	Low	Variable	Partially dependent on economic cycle (depending on capital type)	Progressive

Source: Adapted from SPC (2015).

Pros and cons of subsidy approaches

In terms of the pros and cons of different subsidy approaches we can look at the possible objectives for these approaches including work incentives, labour costs, affordability (of contributions), assisting target groups to qualify for benefits, increasing participation in insurance, reduction in informality, and fiscal efficiency (see Table). We do not include transitional funding here as the impact would depend on how the transitional costs are funded.

As discussed in previous sections, there is limited empirical evidence on the impact of subsidies. In principle (and supported by the limited evidence which is available) targeted pre-subsidies seem most likely to have a positive impact assuming they are well designed and operate in a context where contribution collection is reasonably effective. Such approaches can create positive work incentives for specific groups (see EU, 2012) and reduce labour costs. They are also likely to have a positive impact on participation in social insurance and to assist targetted groups in qualifying for benefits. In principle they should help in reducing informality but studies of actually existing subsidies do not find such an impact in practice perhaps due to poor design or ineffective enforcement. In principle, such targeted approaches are likely to be most fiscally efficient. Of course, poorly targeted subsidies (e.g. to public servants as in some EU countries) will have none of these positive outcomes.

The World Bank (2013) suggests that post-subsidisation by way of minimum pensions is likely to be less fiscally efficient than targeted pre-subsidisation. However, minimum (or guarantee) pensions form part of the overall design of the pensions system in countries such as Sweden and need to be evaluated in that context. It seems very unlikely that targeted pre-subsidisation of contributions could achieve the same effect as a minimum guarantee (i.e. assuring a minimum pension for all residents).

Targeted post-subsidisation (such as paying a proportion of the costs of a maternity scheme) is more closely linked to specific objectives and the design of such an approach can be more narrowly focussed so as to encourage participation and make it more affordable, thereby assisting persons to qualify for benefits without adding to work disencentives. However, this all depends of the specific design.

Finally, in principle, post-subsidisation of deficits would appear to have limited advantages from an economic perspective. In principle, such post-subsidisation may lower contributions and might, therefore, have some positive impact on work incentives and affordability of contributions, etc. However, any such impact is indirect and likely to be difficult to measure. In general, because this approach does not have clearly defined objectives, it seems likely that governments will have difficulty in achieving positive outcomes from deficit funding. Such an approach also seems to be likely to be of limited fiscal efficiency but it must be emphasised that there do not appear to be any evaluation of deficit subsidisation in EU countries and the outcome of any evaluation would, of course, depend on the specific design. However, given the extent to which such an approach is operated in practice, there are clearly political and administrative advantages to post-deficit subsidisation.

	Work incentives	Labour costs	Affordability of contributions	Participation in social insurance	Assisting to qualify for benefits	Reduction in informality	Fiscal efficiency
Pre-subsidisation (targeted)	Can reduce disincentives for specific groups	Reduces labour costs for specific groups	Positive	Positive	Positive	Limited	Positive depending on scheme design
Pre-subsidisation (general)	Limited impact	Reduces labour costs more generally	Positive but high deadweight	Limited and high deadweight	Limited and high deadweight	No impact	Not likely to be efficient
Post-subsidisation (deficit)	May reduce disencentives but only indirectly	May reduce labour costs but only indirectly	Indirect	No direct impact	No impact	No direct impact	Not likely to be efficient
Post-subsidisation (targeted)	May reduce disencentives but only indirectly	May reduce labour costs but only indirectly	Direct	Positive	Positive	No direct impact	Potentially positive depending on scheme design
Post-subsidisation - Minimum benefit/pension	No direct impact	No direct impact	Indirect	No direct impact	Positive	No direct impact	Depends on scheme design

Source: Author.

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Annex 1: Public authorities participation in financing social protection schemes (MISSOC)

Missoc comparative tables: 1 July 2017.	Belgium	Czech Republic	Finland	Hungary	Romania	Sweden
I. Financing **2. Sickness and maternity: Cash benefits**	Part of global subsidies provided to the global management, depending on needs.	No participation of public authorities.	State pays the cost of minimum daily allowances plus an annual subsidy to cover any deficit.	State guarantee to cover deficit.	Participation of the State for beneficiaries of unemployment allowance.	Partly financed by the State.

I. Financing **4. Invalidity**	Part of global subsidies provided to the global management, depending on needs.	No participation of public authorities.	Included in the financing shown under "Old-age".	State guarantee to cover deficit.	Contributions included under Table I, "Public authorities' participation, 5.Old-age".	Sickness compensation and activity compensation (sjukersättning och aktivitetsersättning) in the form of guaranteed compensation, disability allowance (handikappersättning) and care allowance for disabled child (vårdbidrag) are financed by the State.

I. Financing **5. Old-age**	Part of global subsidies provided to the global management, depending on needs.	No participation of public authorities.	National pension (Kansaneläke): State pays 100% of expenditure on pension-tested national pension, some specific allowances plus an annual State subsidy to cover any deficit. Guarantee pension (Takuueläke): State pays 100% of expenditure. Statutory earnings-related pension: Employees' schemes: no participation of public authorities; Self-employed persons' scheme: State covers any deficit; Farmers' and scholarship recipients' schemes: State covers any deficit; Seamen's pension scheme: State covers 31%. Pension Assistance: Financed by the State.	State guarantee to cover deficit.	State Budget, Unemployment Social Insurance Budget, Unique National Health Care Insurance Fund. From the State Budget are paid: amounts allocated for balancing the State Social Insurance Budget. From the Unemployment Social Insurance Budget are paid: social insurance contributions (employer's contribution) owed by the unemployed; individual contributions owed by the persons receiving severance payments. From the National Health Insurance Fund are paid individual contributions for the self-employed while they are receiving health care benefits.	Partly financed by the State.

I. Financing **6. Survivors**	Part of global subsidies provided to the global management, depending on needs.	No participation of public authorities.	National pension (Kansaneläke): State finances national survivors' pension. Statutory earnings-related pension (Työeläke): See "Old-age".	State guarantee to cover deficit.	Contributions included under Table I, "Public authorities' participation, 5.Old-age".	Partly financed by the State.

I. Financing **7. Accidents at work and occupational diseases**	Part of global subsidies provided to the global management, depending on needs.	No participation of public authorities.	Employees' accident insurance: No participation of public authorities. For farmers: State share 29.50%.	State guarantee to cover deficit.	State Budget, Unemployment Social Insurance Budget. Contributions for unemployed participating in practical training are paid from the Unemployment Social Insurance Budget.	Partly financed by the State.

I. Financing **8. Unemployment**	Federal grant paid to federated entities.	No participation of public authorities.	Basic security: The State is responsible for financing. However, of the employees' contributions the part that corresponds to contributions from employees not members of unemployment funds, is also used to finance basic unemployment allowance, which reduces the State's actual part to 65% in 2015. The financing of the labour market subsidy is graded. The State finances the first 300 days, for the following 700 days the costs are equally shared between the State and the municipality of the person and after 1,000 days costs are borne for 70% by the municipality and 30% by the State (30%). Earnings-related security: The State pays the cost of basic unemployment allowances for the maximum period of 500 days (except for redemption) plus a subsidy for administration expenses.	No participation of public authorities.	The State covers the deficit of the Unemployment Social Insurance Budget.	Partly financed by the State.

POLICY SUGGESTIONS - PART ONE

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Content

At present, there are four important opportunity windows for Chinese enterprise annuity reform. Firstly, decreasing social insurance contribution rate helps to expand the participation rate of enterprise annuity system. Second, the law of “enterprise annuity trial method” has been implemented for 13 years. It is imperative to revise and upgrade the enterprise annuity policy in the new period. Third, China now begins to improve the commercial insurance system. It is the right time to open a channel between the enterprise annuity system and commercial insurance system. Forth, the GOPI pension system reform has just started. It is necessary to set up many regulations to ensure labor mobility between the public and private sector. China should seize these four opportunities to promote the reform of enterprise annuity system.

1. Introduce automatic enrollment mechanism

Now the low participation rate of enterprise annuity system in China is a major problem. It is partly due to the strict requirements of establishing the enterprise annuity. The “enterprise annuity trial method” was issued in 2004, which has made some specific provisions for employers to establish the enterprise annuity system. Firstly, enterprises must participate in the basic old age insurance by law and must pay contributions on time and in full. Second, a collective bargaining mechanism must be established. Third, enterprise should strive to make profits. Now in China, more and more state-owned enterprises have established enterprise annuity. Many small and medium-size enterprises are unable to participate in the enterprise annuity due to their weak economic ability. Besides, small and medium-sized enterprises have high labor mobility. Most small and medium-sized enterprises cannot meet these requirements. Thus, in order to increase the participation rate, it is necessary to establish automatic enrollment mechanism.

2. Appropriate release of individual investment options

Since Chinese enterprise annuity system was established in 2004, only several enterprises’ employees have personal investment options, such as in the financial industry, foreign banks industry and IT industry. Many enterprises have established the single plan, that is, all the employees in the same plan enjoy the average rate of return. The enterprises and trustee are responsible for formulating the investment strategy and asset allocation. In China, the individuals have no investment options. All the investment option decisions are made by the enterprise. There are historical reasons for China to establish the single plan. Firstly, the single plan is easy and there is no competition among workers. Every employee enjoys the same rate of return. Secondly, employees have insufficient understanding in enterprise annuity. They have no strong motivation and ability to invest their pension funds. Until now, the investment goal of enterprise annuity system is to ensure safety.

State-owned enterprises are the first founders and beneficiaries of enterprise annuity system. In order to solve the benefit gap between different groups and to make sure convenient management, China chooses to adopt the unified investment of enterprise annuity system. The unified plan will limit the personal choices. Under the conditions of enterprise unified investment policy and the absence of workers' individual investment options, the only investment target is to maintain the value of pension fund assets. The investment goal of enterprise annuity fund is to pursue preservation rather than appreciation.

Now Enterprise annuity system in China is Defined Contribution. As we all know, China adopts the unified investment mode for the enterprise pension fund. That is, the different risk preference and employees with different age groups are covered by a unified plan. The asset allocation is the same whether employees are young or old. Thus, all employees in the plan enjoy a relatively low rate of return. This is not good for the young employees.

It is advised that appropriate release of individual investment option is a good solution. It helps to allocate assets accordding to employees' risk preference. Besides, it is also helpful to receive a relatively high rate of return by investing into the capital market.

3. Establish qualified default investment alternatives

It is necessary to introduce the qualified default investment alternatives (QDIAs). The introduction of QDIAs will simplify individual decision making, helping to solve the problems caused by unreasonable asset allocation.

Broadly, QDIAs include target-date funds (life cycle fund) and target-risk funds. The target-risk funds have played an important role in enlarging the investment choice. The life-cycle fund helps to solve some existing problems of Chinese enterprise annuity funds. Firstly, it helps to make the long-term investment for enterprise annuity funds. Secondly, it helps to solve the problem that the single fund asset allocation is unable to meet the entire employee' needs. Finally, the problem of inefficient fund investment can be solved. Employees may enjoy a higher rate of return by investing the QDIAs. If the life cycle funds are introduced in China, the enterprise annuity funds will become an important long-term investment fund. The long-term investment fund is helpful for improving the Chinese capital market. In all, the introduction of life cycle fund helps to reduce the investment loss caused by personal investment decisions.

4. Improve the tax incentive policy

Enterprises annuity system in China was established in 2004. Only the employer's contributions enjoy the tax treatment. The Notice on the individual income tax related problems in the enterprise annuity and occupational pension promulgated in 2013 states that employees' contribution rate can enjoy 4% tax preferential policies. Until now, the full EET model was formally established. The tax treatment has a demonstrative effect on promoting the development of enterprise annuity system. In order to ensure the EET model systematic, supplementary policies should be formulated as soon as possible.

Firstly, design tax threshold when retirees begin to receive pension benefits. After workers retire, personal tax exemption should be deducted when they receive the pension benefits.

Second, it is prudent to tax the investment income in the stage of receiving benefit. Now China does not levy a tax on capital gains. If China begins to tax on investment income of enterprise annuity, it is obviously not conducive to expand the participation rate. Therefore, it is not wise to tax on the investment income in China.

Third, if retirees use their enterprise annuity to purchase commercial annuity products, the preferential tax policy should be considered. Because many commercial insurance products provide lifetime pension benefits, it is necessary to offer certain tax support.

Forth, raise the contribution rate which enjoys the tax preference. In order to expand the participation rate, it is necessary to increase tax preference. It is proposed to increase the preferential tax rate from 5% to 8%.

5. Cancel or Shorten the vesting period of enterprises' contributions

The previous related documents on enterprise annuity do not specify the vesting period of employers' contributions. Some companies provide that the employers' contributions will belong to employees when they retire. It is not helpful for the labor flow. It may become an obstacle to reduce the flexibility of the labor market. In 2017, China has provided that employers' contributions and its investment income in the individual account can belong to employees when they participate in the enterprise annuity system. Otherwise, employers' contributions can also belong to individuals gradually with the increase of their working period. They completely belong to the individual not exceeding the time limit for 8 years.

It is helpful to cancel or shorten the vesting period of employers' contributions. If the employers' contributions belong to employees immediately, it is helpful for employees to participate in the enterprise annuity system.

6. Enlarge the investment choice of enterprise annuity funds

Ministry of Human Resources and Social Security has adopted several laws to expand the investment choices of enterprise annuity funds from the year 2011 to 2013. It is an important reform since the establishment of enterprise annuity system in 2004. Overall, there are still few investment choices for Chinese enterprise annuity in China.

At present, China's enterprise annuity fund investment is still in its initial stage. Higher proportion of enterprise annuity funds are invested in the fixed income products. Recently, more and more enterprise annuity funds are accumulated, it is necessary to expand the investment choices.

Firstly, the fund investment choices of enterprise annuity should be expanded. More enterprise annuity fund investment choices, such as equity investment and real estate investment, should be expanded.

Second, enterprises annuity funds should be allowed to invest in financial derivatives, such as the stock index. As we know, the stock index is useful to avoid the investment risk of stock market. It is necessary to implement the diversified investment strategy for the enterprise annuity.

Third, increase the proportion of enterprise annuity fund investment on equity assets. In China, it is provided that the proportion of enterprise annuity funds invested in equity will not exceed 30 percent of total investment assets. We suggest that it is necessary to raise the proportion of enterprise annuity fund investment on equity assets.

Forth, expand the fund investment regions and conduct overseas investment. In the near future, it is possible to invest overseas. In the initial stage, we can invest in Hong Kong equity market.

7. Establish a free conversion mechanism between the second and the third pillar

It is necessary to establish a free conversion mechanism between the second and the third pillar, allowing the fund assets in the accounts to be transferred between them. A large number of employees change many jobs in their life. Building the free conversion mechanism between the second and the third pillar contributes to meet the needs of personnel flows. If employees in the small and medium-size enterprises leave the company, their annuity funds in their account can be changed into their commercial insurance accounts. The translation channel mechanism can enhance the attractiveness of enterprise annuity system and will help to expand the participation rate.

8. The regulatory system of pension management companies needs to be optimized

China has established the first professional pension management company in 2015. The name is CCB Pension Management Co LTD. One of the goals of establishing the pension management companies is to provide retail annuity products for the small and medium-sized enterprises. It is helpful to expand the participation rate. There are some systemic obstacles to be solved in the operation of pension management companies.

Firstly, the pension management companies should be listed as an independent financial industry. The nature of pension Management Company is to manage the fund asset. It needs to be regulated by different parties.

Second, more professional pension management companies should be established, which help to compete in the market. Therefore, it is helpful to establish unified and independent regulatory systems in China.

Third, the professional pension management company should be a chartered asset management company. Its special regulatory framework and regulations should be defined by the law.

9. Establish an enterprise annuity IT system platform with Chinese characteristics

It is necessary to establish a nationwide IT system to support the development of enterprise annuity system. There are three options for establishing a nationwide IT account system platform in China. Firstly, establish a new IT system. The funds are provided entirely by the government. Second, China can use the existing IT platform and make some relevant modifications to the platform. We can make use of the securities registration and settlement system and insurance information technology management system, which have the ready-made platform. Third, we can select one effective account management systems from the market by government purchase.

In all, it is important to set up a nationwide IT platform for managing enterprise annuity system. In the future, the“cloud service” should be used, which is help to provide cost- effective service.

10. Establish TEE tax exemption account

At present, many account holders choose to receive their enterprise annuity benefit in installments, which helps to avoid tax. Therefore, it is not good for employers to establish the enterprise annuity system.

In order to expand the participation rate, it is useful to establish the tax-free account. It is important to establish TEE tax exemption account in the future. The main reforms are as follows.

Firstly, China needs to tax on the capital gains. If the capital gains tax of security investment is absent, the TEE tax account of enterprise annuity and individual commercial old age insurance will be difficult to play the due role.

Second, the indirect tax in China should change into the direct tax. China adopts the indirect tax system at present. Personal income tax revenue accounts for a very low proportion of fiscal revenue. The number of taxpayers is small. Therefore, if China implements the direct tax, there may be more taxpayers. More people will enjoy the tax preference policy. Under the current tax system in China, it is difficult to establish TEE tax exemption account. In all, the reform of tax system in China is very important.

POLICY SUGGESTIONS - PART TWO

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Contents

Abbreviations

CADES	Caisse d’amortissement de la dette sociale [French Social Security Debt Fund]
ESSPROS	**European System of Integrated Social Protection Statistics**
EU	**European Union**
MISSOC	Mutual Information System on Social Protection
MoF	Ministry of Finance (PRC)
MoHRSS	Ministry of Human Resources and Social Security (PRC)
NPRF	National Pension Reserve Fund
OECD	Organisation for Economic Co-operation and Development
SOCX	**Social expenditure database**
SPC	Social Protection Committee (EU)

Introduction

This report forms part of Topic 2.3.2 - *The role of public finance and enterprise annuities funds in the Chinese social security system*. It focuses on the issue of the role of public finance.

As set out in the terms of reference, the report to provide policy recommendation reports on the topic 2.3.2 based on the best practices from the EU and the Chinese background situation. This report draws on the background report prepared for the June workshop which sets out examples of EU practice to help inform the future development of policy recommendations for the Chinese situation. It also looks at the limited studies available on this issue including studies from other relevant countries.

In general, as identified in the terms of reference, EU practice varies very widely on this issue and the approach which has been adopted in EU member states is not simply an outcome of technical analysis but is also a result of political considerations and compromises.

In section 1, we outline the Chinese context looking at the current levels of public subsidy and likely future trends.

Section 2 looks more specifically at the role of public finance in supporting social insurance funds in EU countries.

Finally, section 3 sets out policy recommendations.

1. Chinese context

National studies indicate that there is currently a high level of subsidy to the social insurance system. For example, Professor Dong (2018) in his presentation to the June workshop reported the following levels of subsidy under the urban and urban and rural residents pensions schemes.

Year	Basic Pension Insurance for the Urban Employees (billion)				Basic Pension Insurance for Urban and Rural Residents (billion)			
	Revenue	Expenditure	Balance	Subsidies	Revenue	Expenditure	Balance	Subsidies
2002	317	284	161	41				
2003	368	312	221	53				
2004	426	350	298	61				
2005	509	404	404	65				
2006	631	490	549	97				
2007	783	596	739	116				
2008	974	739	993	144				
2009	1149	889	1253	165				
2010	1342	1055	1537	195	45	20	42	22
2011	1689	1276	1950	227	111	60	123	69
2012	2000	1556	2394	265	183	115	230	124
2013	2268	1847	2827	302	205	135	301	142
2014	2531	2175	3180	355	231	157	384	164
2015	2934	2581	3534	472	285	212	459	216
2016	3506	3185	3858	651	293	215	539	220

Professor Dong concluded that the urban pension fund balance mainly came from the sum of fiscal subsidies over the years and that financial subsidies have accounted for more than 70% of urban & rural residents pension income in the long term.

The Chinese Statistical Yearbook 2017 indicates that, currently, a number of provinces are spending more on urban pensions than they receive or are close to a negative balance. It is understood that, at least in part, this is because some provincial administrations take a short-term approach to pension funding, focusing on ensuring that revenues are sufficient to cover current expenditure and not giving full attention to the long-term implications of pension funding. This suggest a need for awareness raising by MoF and MoHRSS.

Provinces with expenses higher than revenue	Provinces close to negative balance
Hebei	Tianjin
Neimenngu	Henan
Liaoning	Hunan
Jilin	Guangxi
Heilongjiang	Sichuan
Hubei	Shanxi
Qinghai	Gansu

Source: Chinese Statistical Yearbook, 2017, table 24:30[23]

As has been discussed in a number of papers prepared for the EU-China SPRP, including Bruni (2017), the cost of pensions and other social security beenfits is likely to rise significantly in comeing years due to the ageing of the population (higher proportion of older people and increased longevity) and conversely a fall in the working population paying contributions to fund pension costs. This means that, in the absemce of alternative policy measures, the demand for public subsidies is likely to rise further in the coming decades.

[23] Available at http://www.stats.gov.cn/tjsj/ndsj/2017/indexeh.htm

2. The role of public finance

Overview

EU countries adopt very different approaches in terms of the amount they spend on social protection and how they fund this. As set out in the terms of reference, these can basically be summarised into four approaches:

5) Pre-subsidising social funds
6) Post-subsidising the deficit (if any) arising
7) Subsiding a minimum benefit/pension[24]
8) Funding transitional costs, e.g. where there is a reform of the pensions system.

We look in more detail below at these different measures but we should first point out that countries use a mix of these different policies measures. In addition, while we have categorised thee different approaches under these four headings, in practice there may not be much difference between, for examples, countries which pre-subsidise a certain proportion of a social insurance fund's annual expenditure (e.g. Japan) and a country which post-subsidises any annual deficit arising (e.g. UK). Countries often combine a variety of approaches. For example, in relation to pensions, Germany provides a general Federal State subsidy for statutory pensions which varies according to the development of the gross salary and wages per employee and the contribution rate. Germany also provides targeted pre-subsidies, for example, by paying contributions during child-raising periods. It also provides some transitional funding in relation to pensions costs arising from the unification of Germany. All the federal expenses mentioned (almost one third of the total expenses in statutory pension insurance) are tax financed.

The available evaluations of different approaches were discussed in the background report (Cousins, 2018) and are summarised in section 3 (below).

Pre-subsidising social funds

A wide range of different approaches are adopted in *ex-ante* subsidisation of social insurance funds. In general, countries provide subsidies for specific groups, e.g. low paid workers or people taking up employment (to encourage the creation of employment); and to parents to assist such persons (especially mothers) to qualify for benefits given that statistically women generally have lower contribution records than men (largely due to parental responsibilities).

In theory, countries might pay a more general subsidy to pay a proportion of social contributions which would otherwise have to be paid to the employers and/or employees. However, this is more often done by way of post-deficit subsidy (see below). Alternatively, a number of countries reduce contributions below a level which would be actuarially necessary to meet projected costs. The rationale for this may be to avoid high contribution levels so as to encourage employment or for more pragmatic political reasons that, in many countries, there is resistance to high levels of social contributions.

[24] In some cases, as in Sweden, these pensions are residence based non-contributory pensions rather than social insurance pensions. Nonetheless, they also closely linked to the social insurance system and it seems appropriate to take them into account.

Subsidies to specific groups

One example of this approach (albeit not one to be recommended) is in Bulgaria where the state budget pays contributions on behalf of state employees including civil servants and soldiers.

Examples of subsidies focussed on *people who need support to take up employment* include:

> Bulgaria where the State Budget covers 50% of the contributions paid for people with disabilities working for certain employers, i.e. specialised enterprises, associations of people with disabilities and. units for occupational therapy of disabled persons set up in specialised social care institutions.
>
> Romania: Contributions for unemployed persons participating in training are paid from the unemployment insurance budget.

Examples of support to *parents* include

> Germany: the State pays contributions for pension insurance during child-raising periods.
>
> Slovakia: the state contributions on behalf of persons taking care of children up to the age of 6 (up to the age of 18 whose health status is considered negative in the long-term)

An alternative to this pre-subsidisation approach is that some countries chose to post-fund specific schemes such as maternity (see below).

It should be noted that, rather than providing direct subsidies, many EU countries have chosen to reduce contributions for specific groups (e.g. low paid workers or unemployed people). Insofar as this does not affect entitlement to benefits, this involves an indirect subsidy, either from other contributors or, where a scheme deficit is funded by the state, from the public purse.

General subsidies

A limited number of countries provide general subsidies of social contributions. For example, Luxembourg pays 40% of the contributions to sickness and maternity; and one-third of contributions to old age and other long-term pensions.

Post-subsidising

Deficit

A number of countries subsidise any deficit arising in the social insurance fund. In the context of PAYG schemes, this means that the public finances are obliged to meet an annual deficit where the outgoings (benefit payments and administrative expenses, etc.) are less than the income to the fund (mainly social contributions) and any balance in the fund. Again there is variation in this approaches. In some countries, e.g. Ireland and the UK, there is a general responsibility to subsidise deficits across all (or almost all) social protection schemes. In other countries, the public finances fund only deficits in specific schemes. These differences are largely for historical reasons rather than having a clear policy rationale.

On the basis of the information provided in MISSOC and elsewhere, these type of provisions can be found in Austria (invalidity and old age/survivors pensions; unemployment benefits); Belgium (sickness benefits); Bulgaria (pensions); Germany (state loan covers possible deficits of the federal unemployment scheme; pensions); Hungary (except unemployment); Ireland; Poland; Romania (only in the case of unemployment benefits); Slovakia (occupational accidents, invalidity and old age pensions, unemployment) and the UK.[25]

Targeted

Some countries chose to fund a proportion of the expenses of specific schemes such as maternity. An example is in Austria where 70% of the expenses of maternity benefit are reimbursed by the families compensation fund. Similarly in Slovenia, the state finances the bulk of the maternity benefit costs (92%) with only 8% being funded from contributions.

Subsiding a minimum benefit/pension

In these cases, the State pays the cost of a minimum benefit or pension level. This type of approach is found, in particular, in the Nordic countries and ensures that the costs of a minimum payment fall on taxpayers generally rather than on individual insured persons and their employers. Examples include:

Finland: the state pays the costs of minimum sickness allowances and of the guaranteed old age pension

Spain: the state finances the guaranteed minimum pension amount of the contributory pension system

Sweden: The state funds the guarantee pension. Those who have not earned any national income-based pension at all receive a full guarantee pension. To those who receive a low income-based pension, the guarantee pension is a top-up.[26]

The intention of the guaranteed or minimum pension is generally to provide a basic level of income. This approach can be seen as involving an *ex post* individual transfer in contrast to the *ex ante* transfer involved in subsiding contributions.

[25] In the case of the UK, there are very limited exceptions in relation to sickness benefits, Statutory Maternity Pay, Statutory Paternity Pay, and Statutory Adoption Pay where the state meets some or most of the costs.

[26] The Swedish guarantee pension is a non-contributory pension but forms part of a social insurance-based pensions system. Almost half (42%) of all pensioners currently receive a guarantee pension and, therefore, it seems appropriate to take it into account here.

Funding transitional costs

The issue of funding transitional costs should perhaps be seen separately to the above examples of pre and post-subsidisation. In theory the above examples are on an ongoing basis while funding of transition costs is to address a once-off issue (even though in practice the transition period may run over many years). Countries which use pre or post subsidisation (or which chose not to subsidise social insurance generally) may or may not decide to fund transition costs. Examples of the state funding transition costs include in Germany where the state funded costs arising from pensions reforms associated with the unification of the country and in a number of eastern European countries where the costs of pensions reform after the fall of the Soviet Union were also funded from general taxation (PRAXIS, 2008).

Reserve Funds

It should be noted here that a number of EU countries have created reserve funds with a view to putting aside resources in order to fund future projected pension deficits. In some cases, such as the Spanish Social Security Reserve Fund, these were made up of surpluses from social security contributions. However, in others such as the Irish National Pension Reserve Fund, the state agreed to put aside a proportion of national income. The Exchequer contributed an amount equal to 1% of GNP annually into the NPRF. The investment mandate required the Fund to secure the optimal total financial return provided the level of risk was acceptable to the Commission. The Commission implemented its investment strategy through a globally diversified portfolio that included quoted equities, bonds, property, private equity, commodities and absolute return funds. The objective of the fund was to meet as much as possible of the costs of social welfare and public service pensions from 2025 until at least 2055. Sweden also established a series of national pension funds (Severinson and Stewart, 2012). Japan and Korea and a number of other OECD countries have also established similar funds.

The 2008 recession had a negative impact on the reserves of some such funds and much of the Spanish fund (which at one time contained EURO66 billion) has now been drawn down while the Irish fund has been transformed into a broader Strategic Investment Fund. However, the Swedish funds play a continuing role in the Swedish pensions system.

Debt funds

The impact of social security funds on the general government debt in most EU countries is relatively small: contributions of less than 5% of total general government debt were recorded in most countries (see Table A1). However, three countries had higher ratios of debt for social security funds: Lithuania (20.3%), France (10.3%) and the Netherlands (6.6%). France has established a specific fund (the Social Security Debt Fund - CADES) to repay the social debt, i.e. the accumulated deficits of the social security organizations. This is funded by a specific tax (the Social Debt Repayment Contribution) and other sources of income including other transfers from the public finances. The task of CADES is to pay down the accumulated debt by 2025 (extended from 2009). The approach adopted includes transforming ongoing short-term debt into longer-term debt and adopting a phased plan for amortizing this debt by 2025.

Discussion

The issue raised by MoF is a very interesting one and it is perhaps surprising that there is very limited international literature on the topic. Insofar as issues concerning public subsidies for social insurance have been considered, they have tended to be considered separately. In relation to pre-subsidies, for example, the World Bank (2013) recently published a report on the effectiveness of matching contributions (although this looks mainly at defined contribution pensions schemes). This covers a wide range of countries including Germany, UK (and also China). Similarly, there have been some evaluations (e.g. Turkey, Korea) of the effectiveness of subsiding social insurance contributions to support employment. The conclusions of these studies are discussed below. However, there do not seem to be international studies of the effectiveness of pre-subsiding social insurance schemes more generally. Not do there appear to be such studies of post-subsidisation.

Data is also lacking at EU level as to the extent to which individual countries fund social insurance from contributions as opposed to subsidies. While ESSPROS makes available extensive data as to the overall funding of social protection schemes, this includes non-insurance benefits and data is not readily available as to social insurance schemes separately. While MISSOC provides information on the approaches adopted by member states this is descriptive only and does not provide any quantitative data.

3. Discussion and Recommendations

Summary of approaches

In this section we summarise the findings of the report and discuss the advantages and disadvantages of different approaches and set out four key recommendations for the Chinese authorities.

In relation to the findings, the main conclusion from the international experience has to be that there is a great variation in EU countries in how they finance social protection benefits. While EU countries (on average) fund a majority of social protection costs from social contributions, there is an enormous variation amongst countries with many relying heavily on general taxation. Similarly, general (average) trends in relation to the balance between social contributions and taxation hide a wide variation among EU member states. Countries which are often categorised as having into the same welfare state group (such as Denmark and Sweden) adopt quite different approaches to funding social protection.

The mechanisms adopted by member states to fund social insurance benefits and pensions include:

5) Pre-subsidising social funds
6) Post-subsidising the deficit (if any) arising
7) Subsiding a minimum benefit/pension
8) Funding transitional costs, e.g. where there is a reform of the pensions system.

However, once again there is little clear pattern. Many countries use a number of these methods but comparable quantitative data as to the extent to which different countries rely on different approaches is lacking. Unfortunately there is very little quantitative information as to the extent to which member states fund their social insurance schemes either on an ongoing basis or as to the debts (explicit and implicit) involved.

The different approaches appear to have arisen largely for historical reasons and represent political and policy compromises. Perhaps surprisingly there has been little academic discussion about the pros and cons of different options.

Pros and cons of different subsidy approaches

In terms of the pros and cons of different subsidy approaches we can look at the possible objectives for these approaches including work incentives, labour costs, affordability (of contributions), assisting target groups to qualify for benefits, increasing participation in insurance, reduction in informality, and fiscal efficiency (see Annex). We do not include transitional funding here as the impact would depend on how the transitional costs are funded.

As discussed in previous sections, there is limited empirical evidence on the impact of subsidies. In principle (and supported by the limited evidence which is available) targeted pre-subsidies seem most likely to have a positive impact assuming they are well designed and operate in a context where contribution collection is reasonably effective. Such approaches can create positive work incentives for specific groups (see EU, 2012) and reduce labour costs. They are also likely to have a positive impact on participation in social insurance and to assist targeted groups in qualifying for benefits. In principle they should help in reducing informality but studies of actually existing subsidies do not find such an impact in practice perhaps due to poor design or ineffective enforcement. In principle, such targeted approaches are likely to be most fiscally efficient. Of course, poorly targeted subsidies (e.g. to public servants as in some EU countries) will have none of these positive outcomes.

The World Bank (2013) suggests that post-subsidisation by way of minimum pensions is likely to be less fiscally efficient than targeted pre-subsidisation. However, minimum (or guarantee) pensions form part of the overall design of the pensions system in countries such as Sweden and need to be evaluated in that context. It seems very unlikely that targeted pre-subsidisation of contributions could achieve the same effect as a minimum guarantee (i.e. assuring a minimum pension for all residents).

Targeted post-subsidisation (such as paying a proportion of the costs of a maternity scheme) is more closely linked to specific objectives and the design of such an approach can be more narrowly focussed so as to encourage participation and make it more affordable, thereby assisting persons to qualify for benefits without adding to work disencentives. However, this all depends of the specific design.

Finally, in principle, post-subsidisation of deficits would appear to have limited advantages from an economic perspective. In principle, such post-subsidisation may lower contributions and might, therefore, have some positive impact on work incentives and affordability of contributions, etc. However, any such impact is indirect and likely to be difficult to measure. In general, because this approach does not have clearly defined objectives, it seems likely that governments will have difficulty in achieving positive outcomes from deficit funding. Such an approach also seems to be likely to be of limited fiscal efficiency but it must be emphasised that there do not appear to be any evaluation of deficit subsidisation in EU countries and the outcome of any evaluation would, of course, depend on the specific design. However, given the extent to which such an approach is operated in practice, there are clearly political and administrative advantages to post-deficit subsidisation.

Recommendations

Policy recommendation 1

The first recommendation is that the Chinese authorities should develop explicit estimates of the cost of pension and social insurance schemes at both the national and provincial levels. This involves both estimating the likely actuarial cost of pensions schemes in total but also isolating the likely cost in public subsidies based on best estimates as to likely economic and demographic trends. This exercise would also help to increase awareness of the policy challenge at provincial and municipal levels of government.

In doing so, the Chinese authorities could draw on the work carried out by the EU Commission in its ‘Ageing Report’ (2018) which looks at the long-run economic and fiscal implications of

Europe's ageing population.[27] This report estimates the costs of pensions and other benefits at a national level.

Policy recommendation 2

A second recommendation is that the Chinese authorities should analyse the full extent of existing subsidies. These includes not only direct payments from central and/or local government funds but also implicit subsidies such as those arising from the fact that pension payments are normally calculated by dividing the pension account by a set number of months whereas the actual pension payment period is likely to be significantly longer than this.

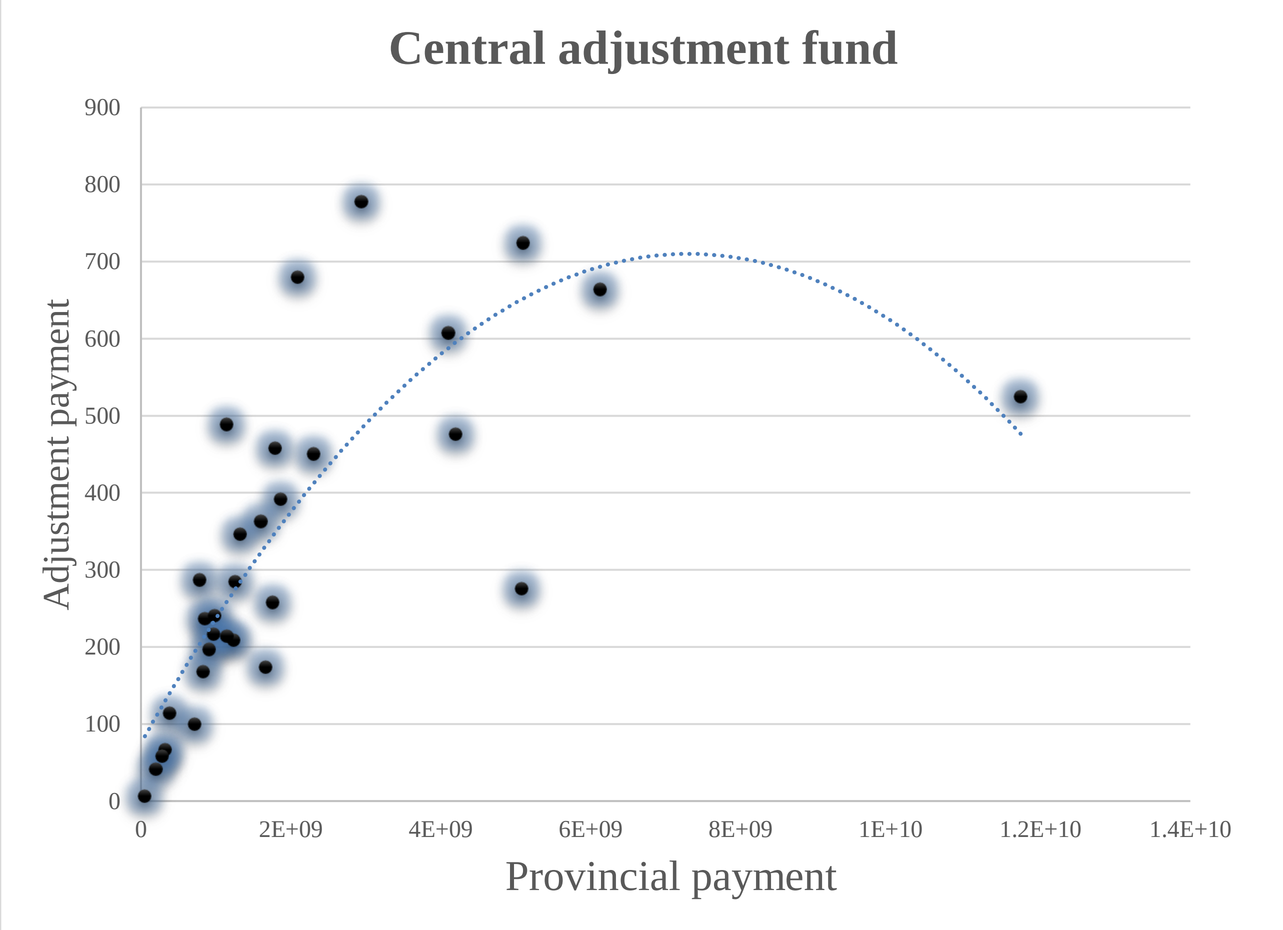
As part of this analysis, the study should identify the rationale for the existing subsidies. It may be that, as in many EU countries, subsidies have been introduced on an ad hoc basis and without a very clear policy analysis. Therefore, it would be important to consider whether these objectives are still relevant and whether the subsidies are achieving their objectives in the most cost-effective manner. Alternatively, the study should look at whether there are there more cost-effective approaches for the future such as more targeted subsidies and/or pre-subsidisation rather than deficit funding. For example, the implications of moving to a more geographically targeted approach to funding (providing high levels of subsidy to poor areas) might be examined.

Policy recommendation 3

It is clear that the challenges caused by an ageing population will affect different Chinese provinces to a different extent. It is recommended that the Chinese authorities should use funds and experiences (both good and bad) from Chinese provinces to inform policy and support financial resources. It is noted that there have been a number of previous attempts to restore financial sustainability in North-eastern provinces. These received rather positive evaluations at the time (World Bank, 2006; Zheng, 2006). However, it is noteworthy that all 3 provinces are currently in negative balance in terms of urban pensions funding.

One interesting innovation is the central adjustment fund recently established by the government (Guó fā (2018) 18). This is to be funded by provinces with payments *in* based on provincial average wage and number of covered employees and payments *out* based on number of pensioners in the province.

[27] See https://ec.europa.eu/info/publications/economy-finance/2018-ageing-report-economic-and-budgetary-projections-eu-member-states-2016-2070_en



It is too early to know how this will work in practice. However, an estimate of the impact of the fund based on data published in the Chinese statistical yearbook would suggest that most provinces (with the exception of Guangzhou – the outlier in the figure above - which will pay much more than it will receive based on these estimates) will pay in broadly what they will receive which would suggest that the fund would have a limited impact. Of course this is just an estimate and it may be that the operation in practice will be different. However, this highlights the need to monitor the impact of the fund and to revise the formulae for payments in and out where necessary. It will also be important to provide positive incentives to provinces. For example, payments in to the fund should be based on what provinces should collect rather than any lower actual figure to avoid giving provinces incentives for ineffective collection.

Policy recommendation 4

Finally, although it is not directly related to public subsidies, it will be important to improve the financial management skills of social security authorities at both national and local levels. The level of finances involved in pension funds is enormous and expertise is required to manage both funds and deficits. We have described in section 2 of this report the examples of different pensions and debt funds which have been established in EU countries with specific financial management expertise (investment, debt management, etc.).

More effective and efficient use of funds (and management of debts where this is relevant) will increase the resources available to social security funds and conversely reduce the level of public subsidy which is required. A greater focus on good financial management should also help to ensure that public subsidies are used most efficiently and are not treated as 'free money'.

	Work incentives	Labour costs	Affordability of contributions	Participation in social insurance	Assisting to qualify for benefits	Reduction in informality	Fiscal efficiency
Pre-subsidisation (targeted)	Can reduce disincentives for specific groups	Reduces labour costs for specific groups	Positive	Positive	Positive	Limited	Positive depending on scheme design
Pre-subsidisation (general)	Limited impact	Reduces labour costs more generally	Positive but high deadweight	Limited and high deadweight	Limited and high deadweight	No impact	Not likely to be efficient
Post-subsidisation (deficit)	May reduce disencentives but only indirectly	May reduce labour costs but only indirectly	Indirect	No direct impact	No impact	No direct impact	Not likely to be efficient
Post-subsidisation (targeted)	May reduce disencentives but only indirectly	May reduce labour costs but only indirectly	Direct	Positive	Positive	No direct impact	Potentially positive depending on scheme design
Post-subsidisation - Minimum benefit/pension	No direct impact	No direct impact	Indirect	No direct impact	Positive	No direct impact	Depends on scheme design

Source: Author.

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