Enhancing Chinese Pension Funds Development through ESG Investment Perspectives

Jiapeng Liu*

School of Economics, Hebei University, Baoding, China

* Corresponding Author Email: fxgwanmin@tzc.edu.cn

Abstract. In current China, where the pension funds system is facing enormous pressure, this article will explore the positive impact of incorporating ESG investments into the Chinese pension funds system on its future development. Through research on the current situation of China's pension system, it is found that there are problems such as uneven regional distribution, unbalanced development of the three pillars, high population pressure and funding gap, high investment return requirements, and limited investment channels. By studying the feasible experiences of top ESG investment companies and leading countries in development, it is concluded that ESG investment contributes to improving the return on investment and stability of pension funds, and can alleviate the existing problems in China's pension funds. Finally, it is summarized that the feasible experience of combining ESG investment with China's pension funds is to take the lead in policies first, combined with strict supervision, and pay attention to talent cultivation.

Keywords: Pension Funds, Insurance, China, ESG Investment.

1. Introduction

Nowadays, effected by the combination of various factors such as society and economy, the wave of fewer fertility was further intensifying, and the birth rate continued to decline. At the same time, the persistent improvements that took place in healthcare field leaded to continuous increase in life expectancy of the population, result in a great augment in demand of pension funds, and the fund gap of pension funds is expanding.

In response to this situation, ESG investment which with long-term and sustainable advantages has been introduced into the investment area of pension funds, aims to pursue higher positive externality of investment results. Combining pension funds investment with ESG investment has become one of the most important development trends of global sustainable investment.

Although pension funds in China are actively participating in the ESG investment direction nowadays, but compared with other developed countries it is still in its Initial stage. Thus, many problems in the investment need to be further explored. Firstly, the development of the pension funds system in China is imbalance, the first pillar is over proportionate, and the source of funding is relatively sole. Secondly, the development of ESG investment in China is still in its early stage of exploration, the scope of investable projects is small, and the profitability is uncertain. Thirdly, there is a lack of standardized system in the investment process. The problems above are hindering the development of China’s pension funds in ESG investment direction.

This article starts with China's current pension funds system and points out its existing problems such as uneven development of the three pillars, high population pressure and yield pressure, and limited investment channels. It also introduces the advantages and characteristics of ESG investment, and explores the feasibility of using ESG investment to solve the aforementioned problems. By combining cases of companies with high ESG ratings and pioneer countries in ESG pension funds investment development, the author summarizes their experiences, ultimately concluding that the development of ESG investment in Chinese pension funds should be policy-driven at first stage, and strengthen the training of relevant talents, eventually form a comprehensive ESG investment system for pension funds.

2. Current Situation of China's Pension Funds

2.1. Concept of Pension Funds

A pension funds, also known as a superannuation funds in some countries, is any plan, fund, or scheme that provides retirement income. Pension funds are pooled monetary contributions from pension plans set up by employers, unions, or other organizations to provide for their employees' or members' retirement benefits. Pension funds are the largest investment blocks in most countries and dominate the stock markets where they invest. When managed by professional fund managers, they constitute the institutional investor sector along with insurance companies and investment trusts. Typically, pension funds are exempt from capital gains tax and the earnings on their investment portfolios are either tax-deferred or tax exempt [1].

2.2. Current Situation of Pension Funds in China

The World Bank released *Averting the Old Age Crisis: policies to protect the old and promote growth* in 1994, which summarized and analyzed on the pension systems of various countries. The paper introduced the concept of the three-pillar pension system for the first time, which included mandatory public pensions managed by the government, mandatory occupational pensions managed by private entities, and voluntary occupational pensions or individual savings plans [2]. The first pillar is the public pension with the government as the main responsibility, the second pillar is the occupational pension with the employers or enterprises, as the main responsibility, and the third pillar is the personal pension with the individual as the main responsibility. In the process of exploring the development of pension funds, China has always actively explored the establishment of a three-pillar pension funds system with a reasonable structure. In the current pension funds system of China, the basic pension insurance for urban employees and the basic pension insurance for urban and rural residents constitute the first pillar. The second pillar mainly includes enterprise annuity applicable to enterprise units and occupational annuity applicable to public institutions. The third pillar is the individual-led personal pension system.

Among the system, the first pillar is the predominant, The Chinese government is committed to promote the basic pension insurance for urban worker and the basic endowment insurance for urban and rural residents cover comprehensively. According to the statistics of the National Bureau of Statistics of China, in 2019-2023, the coverage rate of the first pillar of China's pension system has been increasing year by year. The coverage situation of China's first pillar pension system from 2019 to 2023 and the growth trend is shown in Fig. 1. By the end of 2023, the basic pension insurance system for urban employees had covered 520 million people, while the basic pension insurance system for urban and rural residents had covered over 540 million people, establishing the largest social security system all over the world.

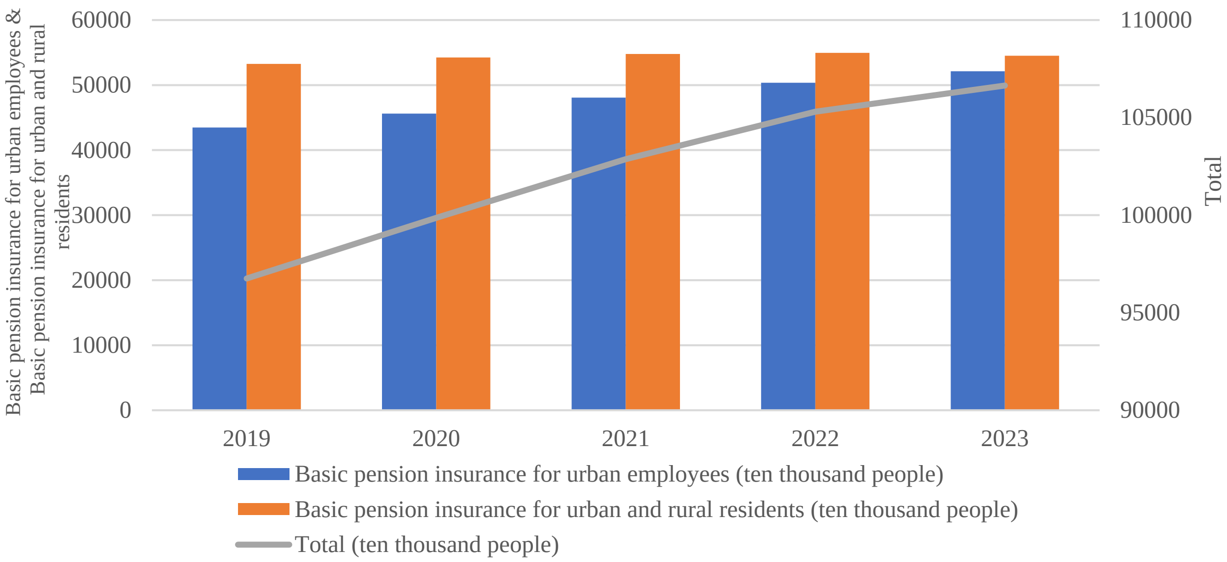

Fig. 1 Growth Trend of China's first pillar pension system

2.3. Significant Provincial Differences Exists in China's Pension Funds

According to the basic pension calculation of payment base and per capita treatment in each region of 2021 published by *China National Statistical Yearbook of 2022* summarized in Table 1, there is an obvious regional imbalance in the fund expenditure of basic pensions in different provinces, and there are also significant differences in per capita treatment. Among the 31 statistical regions, the province with the largest total expenditure on basic pension insurance for urban and rural residents in 2021 is Jiangsu Province, with a scale of 39.84 billion yuan, and the region with the smallest total expenditure is Tibet Province, with a scale of 750 million yuan. The difference between the two is approximately 53 times. It is not difficult to see from the comparative analysis of the total GDP of each province in Fig. 2 that the difference in pension funds among regions is closely related to their financial situation. Jiangsu, Shandong, and Guangdong, which rank in the top three in total basic pension insurance expenditures for urban and rural residents, also rank in the top three in GDP rankings. Conversely, Qinghai, Ningxia, and Tibet, which have the lowest expenditures, also rank in the bottom three in GDP rankings. However, due to regional population differences, there is a significant disparity in the per capita treatment among provinces. Guangdong, a province with a high GDP, is only ranked sixth in terms of per capita income due to the influence of its population size.

Table 1. Treatment of basic pension insurance for urban and rural residents and GDP in each province

Province	Expenditure of basic pension insurance for urban and rural residents in 2021 (100 million yuan)	Per capita treatment (yuan)	GDP of 2021 (10 thousands yuan)
Beijing	103.7	951.7	40269.60
Tianjin	50.0	503.7	15695.05
Hebei	172.7	132.4	40391.30
Shanxi	72.7	143.9	22590.16
Neimenggu	64.1	214.3	20514.20
Liaoning	78.2	152.8	27584.10
Jilin	43.8	129.5	13235.52
Heilongjiang	48.2	164.6	14879.20
Shanghai	90.2	1446.0	43214.85
Jiangsu	398.4	303.7	116364.20
Zhejiang	242.7	377.6	73516.00
Anhui	157.2	143.4	42959.20
Fujian	102.3	175.3	48810.36
Jiangxi	100.7	165.0	29619.70
Shandong	383.0	203.7	83095.90
Henan	222.0	129.2	58887.41
Hubei	149.3	154.9	50012.94
Hunan	152.8	149.7	46063.09
Guangdong	273.6	254.8	124369.67
Guangxi	103.7	146.8	24740.86
Hainan	21.9	234.8	6475.20
Chongqing	69.5	173.0	27894.02
Sichuan	231.0	175.1	53850.79
Guizhou	64.4	116.1	19586.42
Yunnan	99.7	153.1	27100.00
Xizang	7.5	238.4	2000.00
Shaanxi	102.8	158.5	29800.98
Gansu	55.2	145.8	10243.30
Qinghai	12.7	252.9	3346.63
Ningxia	12.1	237.8	4522.30
Xinjiang	28.7	198.5	16000.00

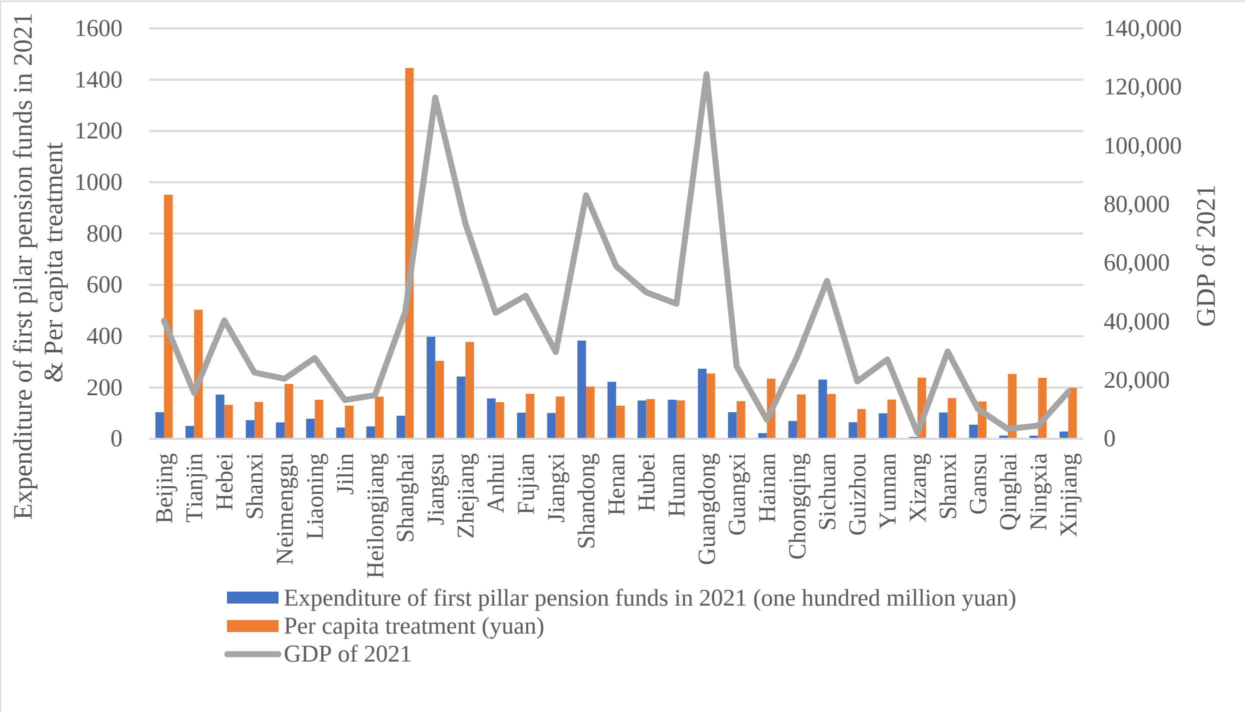

Fig. 2 Expenditure of basic pension insurance for urban and rural residents in 2021

3. Issues Faced by the Development of Chinese Pension Funds

3.1. Uneven Development of Three Pillars

By the end of 2021, looking at the composition of China's pension system, the accumulated balance of the first pillar is 6.4 trillion yuan, supplemented by the National Social Security Fund as a complement to the first pillar. The first pillar accounts for approximately 67.2% of China's current pension system. The second pillar, mainly composed of enterprise annuities and occupational annuities, has an accumulated balance of 4.4 trillion yuan, accounting for about 31.5%. However, due to the particularity of its main body, the coverage rate of the second pillar pension funds is limited. The third pillar, which consists of individual-driven savings-oriented pension insurance and commercial pension insurance, only totals approximately 160 billion yuan, accounting for only 1.2% [3].

In China's current pension funds system, the first pillar accounts for more than two-thirds. In the first pillar, the pension insurance of urban and rural residents is extremely dependent on government finance, with 61.7% of its total revenue coming from government financial subsidies. The serious imbalance in the development of the three pillars will lead to the pressure of pension funds expenditures shifting towards government finances, easily resulting in an excessive financial burden, insufficient development momentum of the pension funds system, and other problems.

3.2. Evident Population Pressures and Large Funding Gaps

According to the classification criteria that the United Nations released in *The Ageing of Populations and its Economic and Social Implications*, when the proportion of the elderly population aged 65 and above in a country or region exceeds 7% of the total population, it means that this country or region has entered a period of aging. China had already surpassed the 7% red line as early as 2002. At the same time, the natural population growth rate in China has been decreasing year after year, dropping from 5.58‰ in 2017 to 0.34‰ in 2021, and experiencing negative growth for the first time at -0.6‰ in 2022.

In the context of the accelerating process of population aging, according to the *China Pension Actuarial Report 2019-2050* released by the Chinese Academy of Social Sciences, only in 2019, 102 million people participated in the basic pension insurance for urban enterprise employees retired. This number has been steadily increasing from 2019 to 2021, and is expected to reach 278 million by 2050 [4]. According to the forecast of the Chinese Academy of Social Sciences, the basic pension funds for urban employees will peak in 2027 and decline rapidly until it is completely exhausted by 2035 [4]. If excluding financial subsidies of the government, the fund gaps for the three categories of urban and rural resident pension insurance, enterprise employee pension insurance, and institution employee pension insurance are 292.5 billion yuan, 595.5 billion yuan, and 165.9 billion yuan respectively, all facing a situation of insufficient revenue to cover expenses [3].

3.3. High Investment Requirements and Limited Investment Channels

The purpose of pension funds is to provide income sources for residents after retirement, which also means that the investment of pension funds needs to have long-term and stable investment returns. Compared with other funds, pension funds pay more attention to the security of the investment field and the stability of investment returns. This has also led to strict regulation of investment in Chinese pension funds at both the market and government levels, emphasizing long-term stable investment returns while also focusing on risk avoidance.

China's pension funds' investments are mainly concentrated in areas with lower risk levels such as government bonds and bank deposits. The *Measure for Investment Management of Basic Pension Insurance Fund* even stipulate that the basic pension funds can only be invested domestically, and the investment proportion of equity assets cannot exceed 30% [5]. This severely restricts the investment scope of pension funds, with even fewer ESG investments scale in endowment funds.

4. Solutions to Promote the Development of China's Pension Funds from the ESG Perspective

4.1. Feasibility of ESG Investment in Alleviating Current Issues of China's Pension Funds

4.1.1. Concept of ESG investment

ESG is the concept and practice of integrating environmental, social, and governance factors into corporate investment decisions and operations. ESG emphasizes that companies should not only focus on financial performance, but also measure the value of a company from the perspectives of environment, social, and governance. This allows companies to quantify, compare, and sustainably improve their practices and performance in fulfilling their social responsibilities [6].

4.1.2. Characteristics and advantages of ESG investments

ESG investing aims to motivate investors to actively respond to environmental issues such as climate change and pollution, promote social issues such as gender equality and privacy protection, and take on more social responsibility through sound and effective corporate governance practices while pursuing maximum profits.

ESG investment aims to address the significant external challenges affecting a company's sustainable development through market-based investment strategies, guiding companies to adopt corresponding sustainable strategies and planning to maximize benefits at the micro level while achieving continuous expansion of positive externalities at the macro level. The incorporation of companies into ESG evaluation systems helps to further enrich the corporate investment system and achieve long-term stable and sustainable development.

At the same time, once was studies have utilized funds holding stocks, bonds, and micro data on companies' ESG performance to measure fund vulnerability, with the results showing that higher ESG ratings significantly reduce fund investment vulnerability [7].

4.1.3. Coordination between ESG Investment and Current China's Pension Funds

Combining the advantages and characteristics of ESG investment, it can be seen that ESG investment has long-term and risk-averse characteristics, which greatly overlap with the requirement of long-term stable returns for pension funds’ investments. The reason why the second and third pillars of the Chinese pension funds system cannot be developed is largely due to the influence of investors' risk preferences. Investors dislike risks and are reluctant to participate in investments in their individual capacity, preferring to rely on the first pillar pension funds which backed by national credit. And including ESG investments that have long-term and risk-averse characteristics in the pension funds investment system can further stabilize investment returns, greatly improve the sustainability of pension funds returns, gradually change investors' risk attitudes towards second and third pillar pension funds, and further be willing to invest actively. Changjiang Pension Insurance Co., Ltd. once stated: "Pension funds have a natural adaptability to the defensive nature, long-term nature, and public nature of ESG investments [8]." The positive externalities of ESG investment to the natural and social environment will also have a positive impact on population and environmental pressures, and further expand the investment channels of pension funds. At this point, the three main problems existing in China's pension funds system can be alleviated.

4.2. Research on the Performance of Companies with High ESG Ratings

According to SynTao Green Finance data, companies listed with high ESG ratings have green revenue that is 12% higher than companies with low ESG ratings, carbon intensity decreases at a rate that is 10% higher, and research and development investment is 15% higher on average. This reflects that ESG investments help listed companies achieve high-quality development [9]. According to SynTao Green Finance's ESG rating for the fourth quarter of 2023, SF Holdings, China National Offshore Oil Corporation (CNOOC), and Bank of China Hong Kong (BOCHK) ranked first in the transportation, energy, and banking sectors ‘respectively, and received an A rating.

In its 2023 semi-annual report, SF included environmental and social responsibility in the report, emphasizing that SF has always been committed to the unity of corporate value and social value, and adheres to environmental friendliness and sustainable development. At the environmental level, SF promotes low-carbon transportation, builds green industrial parks, practices sustainable packaging, and actively develops green technologies. On the social front, SF Express, with its own logistics advantages, deeply promotes the work of "agriculture, rural areas, and farmers", and helps to revitalize rural agriculture, assisting farmers in connecting the "last mile" of agricultural product transportation, forming industrial scale. By the first half of 2023, SF has helped build 26 regional brands of agricultural products, transported 230,000 tons of special agricultural products, and helped farmers generate income. In terms of governance, SF Express actively improves its work environment and staff welfare, also SF is enthusiastic about public welfare and charity. For two consecutive years, SF Holdings has been included in the Fortune China ESG Influence List. With the support of the above factors, SF Holdings' net profit attributable to the parent company in the first half of 2023 reached 4.18 billion yuan, an increase of 66.2%, the basic earnings per share was 0.86 yuan per share, an increase of 68.6%, and the return on equity reached 4.72%, an increase of 1.72% [10].

CNOOC pointed out in its 2022 annual report that the company is actively promoting green development projects, making smooth progress in new energy business, solidly advancing green production of oil and gas, and acquiring large-scale projects such as the Hainan Dongfang offshore wind power project. The first deep-sea floating wind power platform "CNOOC Guanlan" completed the final assembly of the float body, and China's first offshore carbon sequestration demonstration project was completed in the Enping oil field group. Summarizing the above factors, CNOOC's net profit attributable to the parent company reached 141.7 billion yuan in 2022, representing a year-on-year increase of 101.5%. Operating cash flow amounted to 205.6 billion yuan, a 39% increase from the same period last year [11].

BOCHK pointed out in its mid-term performance report for 2023 that the company has always actively implemented sustainable development strategies, enriching green financial products based on market and customer trends towards low-carbon transformation. At the same time, in response to the increasing market focus on ESG, the company introduced a sustainable income strategy fund and the first sustainable equity fund in Hong Kong that only refers to the S&P BOCHK China Hong Kong Greater Bay Area Net Zero 2050 Climate Transition Index for active investment, helping investors capture new opportunities in green investment, and at the same time continuing to promote and publicize the "Green Mortgage Plan" to encourage home buyers to choose green buildings. As of the end of June 2023, the number of ESG funds sold by BOCHK has increased by approximately 20% compared to the end of the previous year, and the balance of green mortgage loans has increased by nearly 2.2 times from the end of 2022 [12].

4.3. Advices Based on ESG Investment

Firstly, it is necessary to improve the disclosure and rating standards of ESG indicators. In recent years, ESG investment has been increasingly valued in the Chinese market, but there is no unified disclosure standard. Different listed companies refer to different disclosure standards, leading to differences in the indicators, degrees, and other aspects of disclosure. Therefore, the phenomenon of hiding unfavorable information about companies in ESG disclosure reports is widely prevalent, greatly reducing the authenticity and credibility of the reports. At the same time, there are many rating agencies, such as MSCI, SynTao Green Finance, Sino-Securities Index, Refinitiv and so on, and the grading and rating standards used by the institutions are also different, making it difficult to compare the ESG reports of different institutions horizontally. Only by establishing and improving fair and efficient ESG disclosure and rating standards can we improve data reliability and transparency, and build investors' confidence in pension ESG investment.

Secondly, expanding investment channels appropriately. ESG investments in China are still in the early stages of development, with primary financial products being stocks, mutual funds, and others, none of which fall within the scope of the investment management regulations for pension funds. The options for ESG investments in pension funds are limited, and investment channels are restricted. It is necessary to relax the requirements of investment management policies for pension funds, expand the scope of areas where pension funds can invest, and pursue stable returns while ensuring long-term security.

4.4. ESG Investment Promotes the Development of Pension Funds

4.4.1. Overview of the Pension Funds combined ESG investment in the US and Japan

As the country with the largest pension funds scale in the world, the United States' pension funds are mainly based on the second pillar. In terms of the mandatory ESG investment of pension funds, the United States' ESG investment is relatively mature, so the United States clearly states in its Senate bills and regulations that pension funds must consider ESG factors when investing. For example, in the US “Senate Bill No. 185”, it is explicitly stated to stop investing California civil servants' and teachers' retirement funds in the coal sector and to shift towards other clean energy sources [5]. In terms of listed companies, the US provides detailed guidelines on how to prepare ESG reports for all companies in the NASDAQ market in the "ESG Reporting Guidelines 2.0" [5]. At the same time, the US actively promotes the growth of talents and positions in the ESG investment field, with many US companies creating the position of Chief Sustainability Officer, creating a positive social atmosphere for ESG investments [13].

Japan, as one of the countries with the highest aging rate in the world, had a population of elderly people aged 65 and over accounting for 29.1% of the total population as of September 2023. Similar to China, Japan's pension system is primarily based on the first pillar. There is no mandatory requirement for ESG investment in pension funds in Japan, but there is emphasis on the positive impact of ESG investment and encouragement for pension funds to engage in such investments. In 2017, Japan revised its "Japan Stewardship Code," which provides clear guidance on ESG investment in pensions and emphasizes the importance of considering the interests of the ultimate beneficiaries [5].

4.4.2. Useful experience summary

Firstly, it is important to prioritize policies, establish a sound regulatory system and relevant laws for ESG investment. In the regulatory system, both environmental and social aspects should be taken into account, and comprehensive governance should be strengthened. Considering the characteristics of the Chinese market, a suitable policy system should be established. Mandatory disclosure of information can be enforced, and third-party audit institutions can be introduced to ensure the authenticity of data, thereby maintaining the stable operation of pension funds ESG investments with a high level of transparency in information. This optimizes the investment environment in the market, making more investors willing to participate in pension funds ESG investments.

Secondly, it is necessary to strengthen the reserve of relevant talents. In the initial stage of promoting ESG investment in pension funds, there is an urgent need for a large number of professionals with knowledge and skills in insurance and investment studies. However, China currently has a shortage of person with ability in these fields, and there is also a lack of institutions providing systematic training and professional qualification certifications. China should accelerate the construction of talents in ESG investment in pension funds, enhance the ESG investment abilities of relevant personnel in pension funds management institutions, and promote the sustainable development of pension funds investment.

5. Conclusion

This article mainly discusses the feasibility of integrating ESG investments into the China's pension funds investment system to address its existing problems and further promote the positive development of the Chinese pension funds in the future. Through the analysis of the current situation of the Chinese pension system based on official public data, this study points out the urgent existing problems. By analyzing cases of ESG investments in companies and countries, the article further explores how ESG investments can help alleviate the current problems in the Chinese pension funds system and summarizes transferable experiences.

Finally, it points out that the development of ESG investment in China's pension funds should first establish a comprehensive legal system, improve the ESG rating standard system and supervisory methods, and cultivate relevant professional talents. Providing feasible methods for ESG investment, which will be the main development trend of pension funds in the future. These advices also have important reference for improving the sustainability and development resilience of China's pension system.

However, this paper still has a relatively brief division of the three-pillar pension system. Simply using the sum of the basic pension insurance for urban and rural residents and basic pension insurance for urban employees as the first pillar. This approach may lead to slight discrepancies in the data. Subsequent researchers could further refine the specific coverage content of each pillar in order to obtain more detailed background data.

References

[1] CFA Institute, Pension Funds. Retrieved from: https://rpc.cfainstitute.org/en/policy/positions/pension-funds, 27th February 2020, Accessed 9th March 2024.

[2] Shi, W.K., Dong, K.Y. Research on the structural reform of China's multi-pillar pension system. Macroeconomics, 2022 (11): 93-103.

[3] Lin, C.Y. How big is the pension gap in our country? Sina Finance. Retrieved from: https://finance.sina.com.cn/zl/china/2023-04-12/zl-imyqasmn9103402.shtml, 12th April 2023, Accessed 20th March 2024.

[4] Zheng, B.W. China pension actuarial report 2019-2050. Beijing: China Labor and Social Security Press, 2019.

[5] Wang, Y.T., Li, J.R., Li, H. Research on ESG investment issues of China's pension funds: Based on a comparative analysis of multi-country markets. China Insurance, 2023 (12): 18-24.

[6] Li, X. Current status and development suggestions of ESG concept, Institute for Internet Industry of Tsinghua University. Retrieved from: https://www.iii.tsinghua.edu.cn/info/1131/3609.htm, 19th October 2023, Accessed 3rd April 2024

[7] Wang, H. ESG investment preference and fund vulnerability. International Review of Financial Analysis, 2024, 91: 103002.

[8] Li, J., Yin, Q.F. Research on the application of ESG investments in China's three-pillar pension system. Shanghai Insurance, 2022 (11): 39-44.

[9] Kuang, J.X. ESG investment survey: Four major characteristics highlighted, five major trends will emerge. Securities Times, 12th January 2024.

[10] SF Holding, 2023 semi-annual report. Retrieved from: https://www.sf-express.com/mobile/cn/sc/prd/investor/report, 28th August 2023, Accessed 20th March 2024

[11] CNOOC Limited, 2022 annual report. Retrieved from: https://www.cnoocltd.com/col/col3881/index.html, 11th April 2023, Accessed 20th March 2024

[12] BOC Hong Kong (Holdings) Limited, Mid-term performance report. Retrieved from: https://www.bochk.com/sc/aboutus/ir/finreport.2023.1.html, September 2023, Accessed 20th March 2024

[13] Shao, C.D., Qiu, F., Xiao, Y., et al. Domestic and international exploration and practice of pension funds in ESG investments. Shanghai Insurance, 2023 (11): 46-49.