

Necessity, Feasibility and Limitation of ESG Investment of Pension Funds in China

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Abstract

In recent years, green and low-carbon economy has become the main melody of contemporary economic and social development. The proposal of “double carbon” goal promotes the further development of ESG investment concept in China. At the same time, under the influence of COVID-19, people are aware of the importance of sustainable development. ESG investment has become a new hot topic. Pension fund and ESG investment have natural adaptability, and their investment ideas are highly consistent. However, the ESG investment of pension fund in China is still limited by the lack of unified ESG rating system and information disclosure system, the potential profit-seeking tendency of pension fund investment and the lack of professional ESG investment talents. China should actively learn relevant experience from abroad and form an ESG investment model of pension fund in line with its national conditions.

Keywords: pension fund, ESG, investment

1. Introduction

In 2016, China issued the guidance on green financial system to encourage long-term funds such as pension funds and insurance funds to carry out green investment. Funds with government nature such as pension funds can drive the promotion of ESG investment concept. At the same time, as long-term funds, pension funds have the natural advantage of ESG investment. At the same time, the problem of population aging in China is becoming more and more serious, there is the challenge of getting old before getting rich, the demand for maintaining and increasing the value of pension funds is increasing, and the ESG investment of pension funds can bring long-term and stable investment returns. However, the research on ESG investment of pension funds in China is still in its infancy, and there are few relevant studies. This paper will discuss the ESG investment of pension funds in China from the necessity, feasibility and limitations of ESG investment, and put forward corresponding suggestions.

2. Body

2.1 Overview of ESG Investments

2.1.1 What is ESG Investment

ESG is the abbreviation of environmental, social and governance. ESG focuses on the concept of corporate investment and social governance, which is different from the traditional concept of corporate investment and social governance. Under the guidance of ESG investment philosophy, investors pay more attention to corporate social responsibility and internal governance. Enterprises actively perform their duties in consideration of their own interests, find a balance between business value and social responsibility, and promote the long-term sustainable development of the financial market.

2.1.1.1 Environmental

Environmental indicators judge the performance of an enterprise as a natural environment manager. The evaluation criteria may include the company's resource use structure, waste discharge and treatment, pollution to the environment, damage to nature, etc. With the emergence of environmental problems such as global warming and haze, the relationship between man and nature has attracted public attention, and green and low-carbon economy has also become the main theme of economic development. Whether the enterprise can protect the environment is also included in the evaluation system of investors. In addition, environmental penalties will affect the financial status of enterprises and even cause bankruptcy. For example, Changdeyuwen environmental protection building materials Co., Ltd. was fined 500,000 yuan for exceeding the standard emission of air pollutants. Therefore, it is a general trend to take environmental factors as a part of the investment evaluation system, which is helpful for investors to evaluate the environmental risks that the company may face and the methods of managing these risks.

2.1.1.2 Social

The proposal of the principle of responsible investment issued by UNPRI in 2021 mentioned that social factors include human rights, child labor, working conditions and employee relations. Scholars have different opinions on the understanding of social factors. Some scholars believe that society (s) refers to the contribution and responsibility of enterprises to society, while others believe that its scope refers to social factors, including social ethics. The author believes that social factors should not only be limited to the impact of enterprises on society, but also include social ethics and business ethics, such as whether to employ child labor, protect individual rights, abide by business ethics, etc. Social factors will also affect the financial situation of an enterprise, and even affect other enterprises. In 2018, the data theft of Facebook by Cambridge analysis company made Facebook lose hundreds of millions of market value. In addition, with the development of big data, attention has been paid to the protection of personal privacy. Amazon was fined 746 million euros for personal data disclosure.

2.1.1.3 Corporate Governance

The evaluation factors of corporate governance may include the structure of the company's board of directors, executive compensation, ownership structure and tax strategy. The problem of corporate governance should not be underestimated. Whether the company can manage efficiently and reasonably will obviously have a chain reaction to the market value of the enterprise. The stock price of Lending Club plummeted by 35% due to the violation of CEO Renaud Laplanche. Therefore, incorporating corporate governance into the investment evaluation system can not only supervise the healthy development of enterprises, but also protect the rights and interests of investors and reduce the risks of investors.

ESG factors vary in reality, including :		
Environment	Social	Corporate governance
·climate change	·human rights	·Bribery and corruption
·resource consumption	·Modern slavery	·Executive compensation
·waste	·Child labour	·Diversity and structure of the board of directors
·pollution	·Working conditions	·Political lobbying and contributions
·Deforestation	·Employee relations	·Tax strategy

Figure 1.

Source: UNPRI

2.1.2 Development History of ESG Investment

Back in the 1920s, ethical investment required investors to avoid investments in negative industries, such as gambling, guns and other "guilty" areas. Subsequently, in the 1960s, the public movement with the theme of environmental protection and anti racial discrimination was launched in western countries, which opened up the emerging investment concept of social responsibility investment and laid the foundation for the emergence of the concept of ESG (Ammann,2019). In 1971, the world's first liability fund, the pass Global Fund, indicated that it would not invest in enterprises associated with the Vietnam War. In 2004, under the background of global climate crisis and resource shortage, the concept of ESG was first proposed by the United Nations Environment Programme(UN Global Compact). Two years later, the principle of responsible investment organization (UNPRI) was established and put forward the "principle of responsible investment" (PRI), which activated the great power of the times of ESG investment concept. ESG investment gradually entered the public's vision and became a new development trend (Darlene Himick,2020).

According to the official data of UNPRI since its establishment in 2006, the number of institutions joining

UN-PRI has increased year by year, and the growth rate has gradually increased in recent years. By 2021, 3826 institutions have joined UN-PRI. It can be seen that ESG's investment philosophy has attracted public attention and been widely recognized.

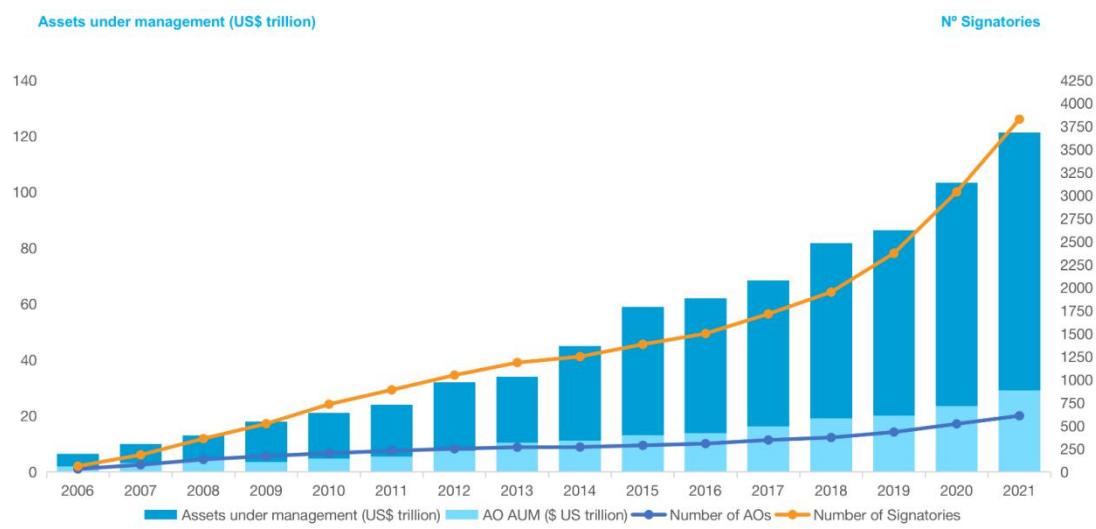


Figure 2.

Source: UN-PRI

2.2 Necessity and Feasibility of Pension Fund ESG Investment in China

With the aggravation of China's aging population, the expenditure pressure of pension funds is gradually increasing, and the demand for using pension funds to obtain stable investment income is also gradually increasing. Tang wensong(2021), vice president of China social insurance society, said that the participation of pension insurance in ESG investment can improve economic and social benefits and contribute to the high-quality and sustainable development of pension funds.

2.2.1 ESG Investment Philosophy Is Consistent with the Characteristics of China's Pension Funds

China's pension insurance is a policy tool to stabilize social and economic development. Therefore, the investment of pension fund is social and pays attention to social impact and social responsibility. ESG investment belongs to responsibility investment, which focuses on the evaluation of corporate social responsibility such as environmental society and corporate governance. ESG investment using pension funds can take into account the interests of all parties and reduce the probability of negative externalities through negative screening, which is in line with the public attribute of pension funds.

Secondly, because China's social insurance law stipulates that pension insurance can only obtain retirement income after at least 15 years of cumulative payment, and the time span is large, the investment of pension fund is long-term. ESG's investment philosophy also has the characteristics of sustainable investment. It will not ignore the factors affecting long-term sustainable income such as corporate social responsibility and corporate governance because of short-term interests. The two are mutually beneficial. Using pension funds with long-term characteristics for ESG investment is conducive to the comprehensive consideration of various indicators of ESG and the implementation of ESG investment philosophy. Using ESG investment philosophy can bring long-term and stable benefits to pension funds.

2.2.2 The Income Level of ESG Investment Is Consistent with the Demand of Pension Funds in China

For a long time, the investment of China's pension fund aims at steady development and pays attention to the safety and profitability of investment. In essence, ESG investment belongs to double bottom line investment. It pursues financial returns while pursuing ESG's long-term sustainable benefits, hoping to achieve low risk and obtain stable returns at the same time.

Research shows that ESG performance and financial performance are interrelated. Kawazoec(2020) said that companies with good ESG performance in the market usually also have excellent financial performance. According to the Research Report of China Securities Index, since June 2017, the medium group and high group of China Securities 500esg have achieved an excess return of 0.6% and 10.9% respectively, while the low group of ESG has a poor performance, and its excess return is 13.7% lower than the benchmark index. In terms of

annualized volatility, the middle ESG group and the high ESG group are the same (23.1%), both lower than the low ESG group (23.6%), which shows that the securities with high ESG rating have high yield and relatively low risk, meeting the investment needs of pension funds

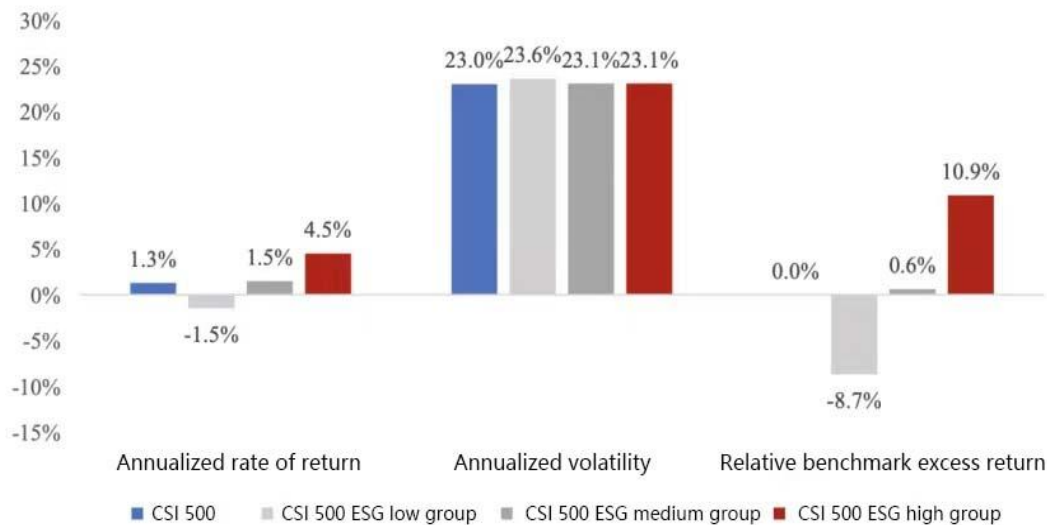


Figure 3.

Source: Official website of China Securities Index

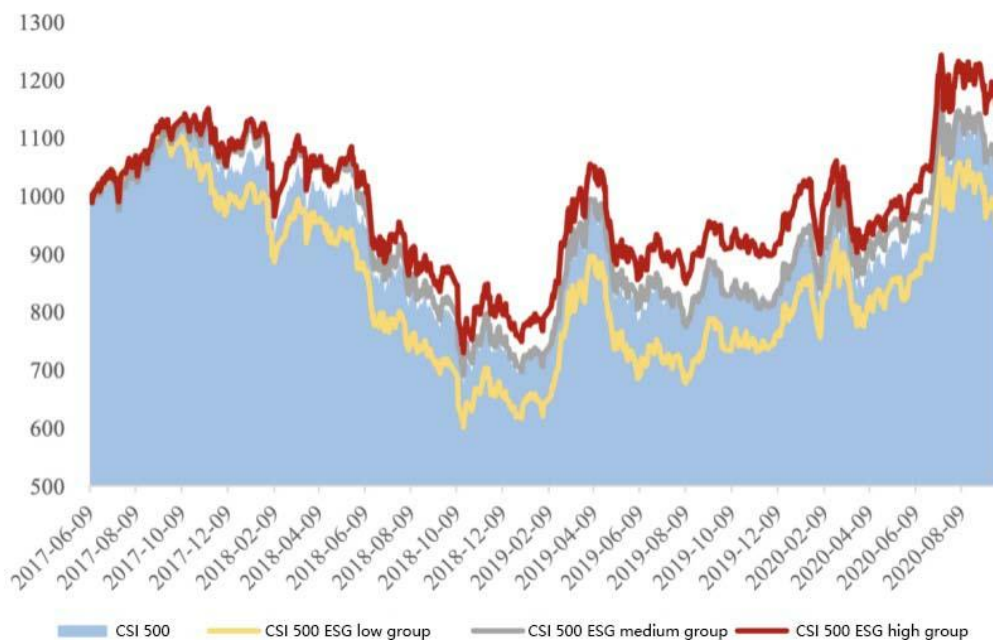


Figure 4.

Source: Official website of China Securities Index

2.2.3 Pension fund ESG investment contributes to the realization of China's dual carbon goal

In the context of the deterioration of environmental problems and the increasing attention of the world to environmental problems, China, as a responsible big country, has put forward the “double carbon” goal, striving to reach the peak of carbon dioxide emissions by 2030 and achieve carbon neutralization by 2060. However, reaching carbon peak and carbon neutralization requires a large amount of funds every year. The pension fund

has the characteristics of strong capital scale. According to the 2020 data of the National Bureau of statistics, the cumulative balance of pension insurance for urban and rural residents has reached 975.86 billion yuan. ESG investment of pension fund can solve the problem of capital demand of double carbon goal and accelerate the realization of double carbon goal. At the same time, pension fund ESG investment can promote enterprises to pay attention to carbon emissions and other issues, devote themselves to the development and innovative use of new energy and build a green and low-carbon industry. It has increased the amount of corporate social responsibility by billion yuan and promoted the realization of carbon neutralization and carbon peak.

index	year 2020
Number of urban and rural residents participating in social endowment insurance (ten thousand people)	54243.8
Actual number of urban and rural residents receiving social endowment insurance (ten thousand people)	16068.2
Income from social endowment insurance fund for urban and rural residents (million yuan)	4852.9
Expenditure of social endowment insurance fund for urban and rural residents (million yuan)	3355.1
Accumulated pension insurance balance of urban and rural residents (million yuan)	9758.6

Figure 5.

Source: National Bureau of Statistics

2.3 Limitations of Pension Fund ESG Investment in China

Since the guidance on green financial system issued by China in 2016 encouraged pension funds, insurance funds and other long-term funds to carry out green investment, China's pension fund management has actively incorporated ESG investment philosophy and investment strategy. However, due to the late start of ESG investment philosophy in China, there are still many problems in the implementation process.

2.3.1 China's ESG Investment Lacks a Unified Rating System and Information Disclosure System

2.3.1.1 Lack of a Unified ESG Rating System

The research on ESG rating system in China started late and is still in the exploratory stage. At present, some Chinese institutions such as Hua Zheng and Shang Dao ronglv have formulated their own ESG rating system, but there is still no unified standard in ESG elements and risk assessment. At the same time, due to different national conditions, China cannot completely copy the foreign ESG rating system. For example, due to China's wine culture, the wine industry is often a leading enterprise in China, while the attitude of the United States towards wine is relatively negative due to the impact of historical prohibition.

2.3.1.2 Lack of Unified ESG Information Disclosure System

There is no unified ESG information disclosure specification and requirements in China. The ESG information disclosed by various companies is mixed, and the ESG factor evaluation among various companies is not comparable. The disclosure of ESG information is not accurate, which leads to the uncertainty of ESG information in the process of enterprise investment. At the same time, it can not provide subjective information for investors, which leads to the inaccuracy of ESG information.

2.3.2 China's Pension Fund Investment Has a Potential Profit-Seeking Tendency

As a tool to maintain social order and solve population aging, the liquidity and saving capacity of pension will directly affect social retirement and intergenerational relations. The maintenance of retirees will directly cause social unrest. Therefore, the pressure of maintaining and increasing the value of pension funds will increase. At the same time, there is a principal-agent problem in pension fund investment. When financial institutions are entrusted to invest, ownership and management rights are separated, and agents are more inclined to pursue investment return. Therefore, it is possible to ignore the adaptability between pension fund investment cycle and debt duration, resulting in potential short-term profit seeking tendency.

2.3.3 Lack of Professionals

As an emerging investment concept, there are relatively few relevant researchers in China. At the same time, ESG investment concept requires investors to consider comprehensive factors such as environmental, social, corporate governance and financial status. It has high requirements for investors and managers, and needs comprehensive high-end talents who understand environmental issues, social responsibility, corporate

governance and financial engineering. However, the research on ESG investment and the training of ESG talents in Colleges and universities in China are still in the initial stage.

2.4 ESG Investment of Pension Funds in Foreign Countries

The Japanese government pension investment fund (GPIF) signed the UN-PRI principle in 2015 to vigorously promote ESG investment and become a leading promoter of sustainable development in Asia. The 2020 annual report released by GPIF mentioned that the purpose of GPIF's ESG investment is to ensure the economic benefits of pension beneficiaries in the long term by reducing the negative impact of environmental and social problems on the capital market. Under the existing legal and investment objectives, GPIF will not only invest in companies with the sole goal of solving social problems.

Japan's pension fund ESG investment has formed a relatively mature and perfect organizational structure. The Council discusses and supervises the promotion of ESG and the way GPIF invests in ESG; The executive office is divided into public market investment department, investment strategy department, private market investment department and other departments related to asset management. Each department performs its own duties and is interconnected; The investment committee is responsible for discussing and making decisions related to ESG and asset management, reporting important issues to the board of directors and preparing ESG report before reporting.

Key departments responsible for ESG




Figure 6.

Source: Official website of GPIF

In recent years, GPIF has continuously expanded its ESG index investment, hoping to improve the long-term return on investment through the sustainable growth of investment and market. According to the practical guide for ESG index selection, GPIF made passive investment based on MACI ACWI ESG general index and Morningstar gender diversity index in 2020. In March 2021, the passive investment scale of GPIF reached about 10.6 trillion. In addition, GPIF is still trying to expand investment opportunities in green, social and sustainable bonds. Together with the World Bank Group, GPIF is committed to bringing ESG into the field of fixed income investment. On March 31, 2021, GPIF established an investment platform with more than 10 development banks and 6 government financial institutions as issuers.

Main characteristics of ESG indexes adopted by GPIF

ESG Indexes for Domestic Equities

	 FTSE Blossom Japan Index	 MSCI Japan ESG Select Leaders Index	 MSCI Japan Empowering Women Index ("WIN")	 S&P/JPX Carbon Efficient Index
Concept and characteristics of index	<ul style="list-style-type: none"> The index uses the ESG assessment scheme used in the FTSE4Good Japan Index Series, which has one of the longest track records globally for ESG indexes. It is a broad ESG index that selects stocks with high absolute ESG scores and adjusts industry weights to neutral. 	<ul style="list-style-type: none"> The MSCI Japan ESG Select Leaders Index is a broad ESG index that integrates various ESG risks into today's portfolio. The index is based on MSCI ESG Research used globally by more than 1,000 clients. The index is comprised of stocks with relatively high ESG scores in each industry. 	<ul style="list-style-type: none"> MSCI calculates the gender-diversity scores based on information disclosed under "the Act on Promotion of Women's Participation and Advancement in the Workplace" and selects companies with higher gender diversity scores from each sector. The first index designed to cover a broad range of factors related to gender diversity. 	<ul style="list-style-type: none"> Constructed by S&P Dow Jones Indices based on carbon data provided by Trucost, a pioneer in environmental assessment. This index is designed to overweight companies that have lower carbon footprints (annual greenhouse gas emissions divided by annual revenues) and that actively disclose their carbon emission information.
Index construction	Best-in-Class	Best-in-Class	Best-in-Class	Tilted
Constituent universe (Parent index)	FTSE Japan All Cap Index (1,391 stocks)	MSCI Japan IMI Top 700 (694 stocks)	MSCI Japan IMI Top 700 (694 stocks)	TOPIX (2,187 stocks)
Number of index constituents	200	231	298	1,844
Assets under management (¥billion)	1,490.6	2,026.8	1,236.2	1,536.5

(Source) Prepared by GPIF based on data from FactSet and individual index providers.

Figure 7.

Source: Official website of GPIF

2.5 Suggestions on ESG Investment of Pension Funds in China

2.5.1 Formulate Unified ESG Rating System and Standardized ESG Information Disclosure System

In order to promote the ESG investment of pension funds, we must first improve China's ESG investment system. ESG rating system and information disclosure lack unified and standardized requirements and standards, which will lead to information asymmetry between investors and enterprises and affect investors' investment decisions. The necessity of ESG information disclosure has been recognized by many institutions around the world in recent years, and the disclosure attitude has gradually changed from encouragement to semi compulsion and compulsion. In 2020, Hong Kong IPO companies have been forced to disclose ESG information, and the A-share market is still dominated by "voluntary + semi mandatory". In the same year, the Tokyo Stock Exchange issued the "practical manual of ESG disclosure" for enterprises to disclose ESG information for reference. China should learn from foreign mature experience and combine its own actual situation to formulate ESG evaluation system and detailed requirements of information disclosure in line with its own capital market.

2.5.2 Matching the Investment Cycle of Pension Funds with the Duration of Liabilities

In order to realize the ESG investment of pension funds, we need to solve the problem of potential pursuit of short-term returns in China's pension fund investment. Pension fund investment should consider intergenerational interests and make long-term and stable investment, rather than chasing short-term petty profits. As China's government has not yet had a clear actuarial report on pension insurance, investors do not have accurate information on the duration of liabilities, resulting in the mismatch of investment cycle. Therefore, China needs to carry out actuarial work of endowment insurance to help investors make reasonable long-term and stable investment. At the same time, financial institutions should abandon short-term assessment in the investment of pension funds and focus on long-term sustainable returns.

2.5.3 Cultivate Professional ESG Investment Team

The ESG investment field of China's pension funds needs investment talents and investment teams with comprehensive ability. The establishment of ESG evaluation system needs to obtain data, select ESG evaluation indicators, set weights and establish models. It only needs complex steps such as analysis, which need to be completed by professional teams. In addition, due to the great social responsibility of pension funds, which is related to the interests of almost all social members, the requirements for investors are also more stringent. There will be subjective errors and thinking limitations in individual investment. Team members can learn from each other's strengths to make up for their weaknesses and pool their wisdom to choose the best ESG investment strategy.

3. Conclusion

In the context of increasing global attention to sustainable development, ESG investment will become the main theme of development. It is necessary and feasible for China's large-scale pension fund to invest considering ESG factors, which can promote the realization of ESG investment of pension fund. Moreover, in order to promote the ESG investment of China's pension funds, China should establish a perfect ESG rating system and information disclosure system, adapt the investment cycle to the duration of liabilities, actively carry out pension actuarial work, abandon short-term interests, cultivate ESG investment professionals of pension funds and form a professional team. At the same time, China's ESG investment started later compared with other countries abroad, we should learn from relevant experience abroad to form a pension fund ESG investment model in line with our national conditions.

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