INTEGRATION OF ESG ISSUES IN INVESTMENTS PRACTICES OF PENSION FUNDS

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ABSTRACT
Pension funds are major asset owners in financial markets and global investors with long-term investment horizons and the need for stable and predictable cash flows. On the other hand, these institutional investors are crucial for maintaining social security, so their performance and investment structure should take into account their responsibility for the environment and society in general. Therefore, they have an extraordinary potential and special responsibility to take measures against sustainability risks and to green the economy, but also to improve social and managerial aspects when adjusting their investment portfolios. Pension funds among institutional investors are expected to make an important contribution to the transition to a sustainable economy. The objective of this paper is to highlight the importance of integrating environmental, social and governance (ESG) aspects into the structure of pension funds' investment portfolios, taking into account related regulatory measures and anticipating transition risks. Investment strategies refer to exclusion procedures for ineligible investments, but also to sophisticated screening techniques and verification of compliance with specific sustainability criteria to contribute to the transition to a greener and more sustainable economy.

Keywords: *ESG, Pension funds, Investments*

JEL classification: *G11, G23, Q5*

1. INTRODUCTION

In recent decades, economic development has been largely determined by environmental and social responsibility. The process of sustainable development, in the sense of economic growth that does not endanger future generations, has significantly changed the main reasons for investment (Brundtland, 1987). The need for more responsible investments led to the creation of standards in the form of ESG criteria that promote sustainable businesses and investments. The concept of ESG stands for a set of criteria that include measures of environmental impact (eng. environment), social impact (eng. social), and structure and management methods (eng. governance) (Li and others 2021). ESG criteria as a continuation of socially responsible investment, with international and national policies, have made additional efforts to achieve sustainable development. The integration of green policies in business and investment has changed business strategies and consumer preferences. The integration of green policies has fostered additional growth of green investments, affecting

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investor behavior in financial markets (Bialkowski and Starks, 2016). Measuring environmental awareness, social responsibility, and fairness in corporate governance and corporate rankings directs capital flows toward companies that prioritize morally responsible business (Taliento, Favino, and Netti, 2019). Although there are significant results demonstrating positive effects, investors have different viewpoints on corporate sustainability investments. The first group believes that sustainability investments do not have a significant impact on business operations and reduce profits, while the second group views investments in sustainable companies positively and considers such investments as a long-term investment. The third group is indifferent to investing in sustainability (Hartzmark and Sussman, 2019). However, according to Whelan et al. (2021), the majority of investors have a positive opinion about investing in sustainability, while very few investors have a negative view of investing in sustainable development.

Recent studies also show that institutional investors are increasingly considering ESG criteria for several reasons. First, the integration of ESG principles as part of fiduciary duty has gained international acceptance (UNEP FI, 2009). Second, stakeholder demand for their environmental and social impacts is increasing (Goy and Schwarzer, 2013). Third, conventional funds seek to restore trust in their damaged legitimacy and mitigate the impact of crises (Gangi and Trotta, 2015; Joliet and Titova, 2018). Moreover, ESG integration is a way to generate profits (Revelli, 2017). Consequently, the ESG niche may cross the boundary with conventional funds and expand into the mainstream of conventional management.

Institutional investors, including pension funds, typically invest their assets with the primary objective of maximising returns at an acceptable level of risk. Recently, sustainable criteria and the inclusion of sustainable investments in the portfolios of pension funds have become an inevitable part of their investment policy. They are at the top of the investment value chain, which puts them in a strong position to advance the integration of sustainability and achieve the Sustainable Development Goals set by the United Nations (García, Sánchez, 2022; Martí-Ballester, 2020). Sustainable investment helps combat climate change and promote sustainable development, but it also has the potential to create new jobs, drive innovation, and promote long-term economic growth.

The potential impact and accompanying responsibility of pension funds on the global economy is also clear from data on their size and accelerating growth. Pension funds are the largest institutional investors in the financial market, representing 37% of total assets or US$57 trillion in 2020 (Thinking Ahead Institute's, 2021). Global pension assets are growing faster than the global economy, up 15% in 2019 and 11% in 2020 (Nikulina 2023). Nonetheless, global assets under management (AuM) in sustainable investments grew at a rate of 19% per year between 2016 and 2021, well above the average growth rate of the asset management industry as a whole. By the end of 2021, global AuM in dedicated ESG strategies reached a record high of US$2.1 trillion (EFAMA 2022, p. 7). In recent years, ESG factors have been one of the investment priorities of pension funds in order to protect savings from climate risks and capitalize on the financial advantages of early adoption. Nevertheless, available data of pension funds investing in sustainable securities is no relevant data to analyze because of the short time horizons, unclear assumptions and non transparent processes. According to the above, the paper was made as a review paper. The aim of this paper is therefore to find out what are the main reasons for pension funds to integrate ESG issues and sustainable and green investments into their portfolios, and what are the main advantages and disadvantages of integrating ESG into investment practices. The contribution of the paper is to review the importance and influence of ESG criteria on pension funds so that investors in pension funds and asset managers can make rational decisions according to their preferences.

The paper is organized in the following order: After the introduction, the history of the ESG framework and its evolution over the past decade are explained. The third part focuses on green investment instruments and analyzes the tools that can be used in green investments. The fourth part reviews the advantages of integrating ESG in pension funds and possible disadvantages that can complicate the management process or influence investors. The last part concludes the paper and includes the main parts of the paper with recommendations for future research.

2. HISTORICAL ORIGINS AND EVOLUTION OF ESG FRAMEWORK

The sustainability standardization model existed even before the emergence of ESG. Socially responsible investing (SRI) emerged in the 1920s, and ESG can be seen as a continuation of this model. The goal of both models is to invest in sustainable companies, with ESG broadening the understanding of sustainability and bridging the partial disinterest of investors, as in the case of SRI (Billio et al., 2021). For the first time, the term "ESG" was used in the report "Who Cares Wins" in 2004, and the idea was to develop guidelines for creating a more resilient market and sustainable society by implementing ESG in companies and by directing investors to more sustainable business ventures (The Global Combat, 2004).
The majority of institutional investors are actively participating in the adaptation of responsible investing principles and are adjusting their investment policies towards a sustainable and greener economy (Hammond and O'Brien, 2021). In 2006, under the leadership of the United Nations (UN) Principles for Responsible Investment (PRI) were developed. A significant portion of the world's professionally managed investment institution signed the document. Voluntarily enrolled institutional investors began to incorporate six principles into their investment practices by requesting disclosure of ESG factors from invested companies and reporting on their own activities.

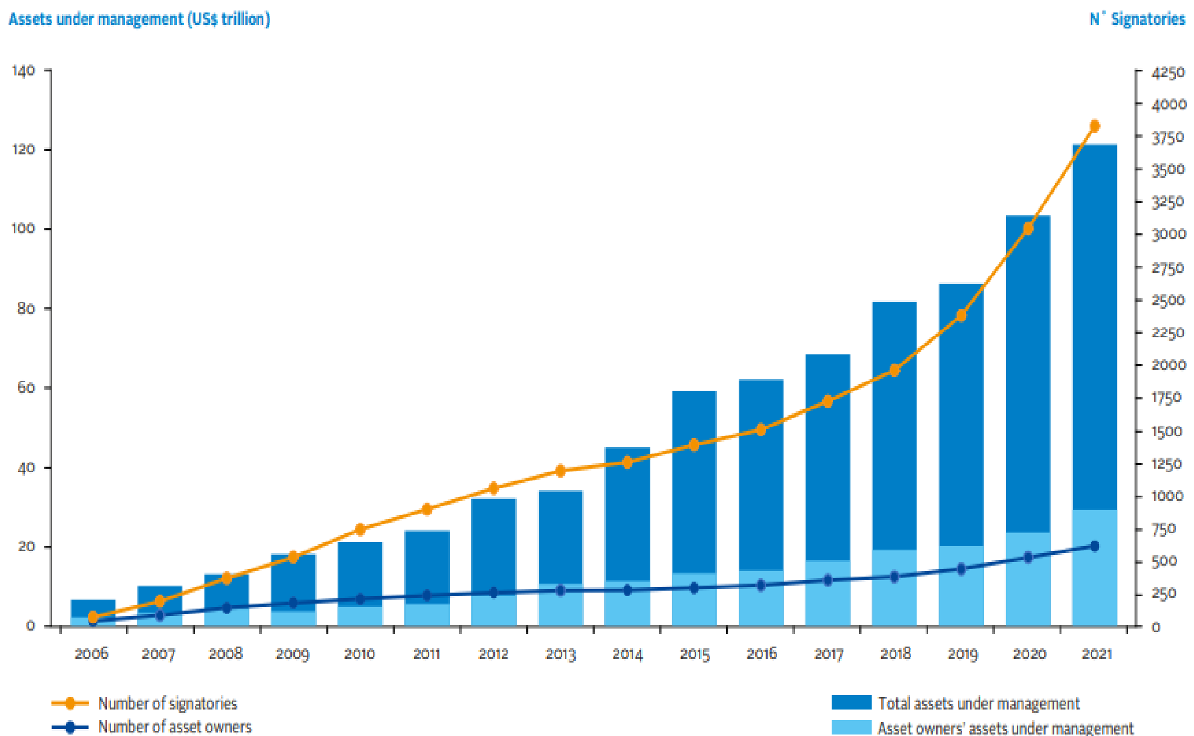
Table 1: Six key principles of responsible investment for institutional investors

Principle 1	We will incorporate ESG issues into investment analysis and decision-making processes.
Principle 2	We will be active owners and incorporate ESG issues into our ownership policies and practices.
Principle 3	We will seek appropriate disclosure on ESG issues by the entities in which we invest.
Principle 4	We will promote acceptance and implementation of the principles within the investment industry.
Principle 5	We will work together to enhance our effectiveness in implementing the principles.
Principle 6	We will each report on our activities and progress towards implementing the principles.

(Source: EFAMA 2022)

Figure 1 shows the assets managed according to the principles of responsible investment and the number of asset owners in the period from 2006 to 2021.

Figure 1: AUM and number of signatories of Principles for Responsible Investment



(Source: PRI, 2022)

At the end of 2022 the number of participating financial institutions was approximately 4900 with AUM over US$ 120 trillion (PRI, 2022). Since 2006 and the development of the PRI, there has been a steady growth of AUM and signatories, with a significant shift in 2015, 2020, and 2021. The reason for the first significant growth is the Paris Conference in 2015. The creation of the European Union Taxonomy in 2020, which governs the process of environmental change, facilitates green investment, and makes greenwashing more difficult, also had a major impact. The taxonomy is a comprehensive framework designed to encourage sustainable investment by both retail and institutional investors, including pension funds. The second timing is in 2021 after the outbreak of the Covid crisis.

With the creation of the EU taxonomy, a change in the price of capital or other expectations of other market participants was expected (Dumrose, Rink, and Eckert, 2022). To increase transparency for investors, non-financial sustainability monitoring reports are required. According to Regulation (EU) 2019/2088 (2019), the preparation of non-financial reports is mandatory for large companies, while medium and small companies can improve their reputation. In addition, ESG are central to the development of sustainable investment strategies, but regulation and reporting methods should reduce the possibility of greenwashing.

The growing interest of financial institutions in integrating ESG factors into their investment processes is further motivated by the greenwashing problem and other high-profile ESG failures, increasing public concern about ESG issues (International Actuarial Association 2020), and scientific evidence of positive effects on investment returns and/or volatility when ESG are integrated into investment processes with appropriate consideration of risk (Kim and Li, 2021; Minutolo, Kristjanpoller, and Stakeley, 2019).

3. VEHICLES OF GREEN INVESTING FOR PENSION FUNDS

Pension funds as conservative and long-term oriented investors are interested in different types of financing vehicle with lower risk and a steady, inflation adjusted income stream. These institutions are part of an upstream investment chain and represent the most influential player in financial markets. Moreover, pension funds are of particular importance in the social and political spheres of any country, and their establishment, operation, and investment structure are of special interest to the state, as they are linked to numerous stakeholders across different generations. The basic principles of pension fund operation relate to safety, risk diversification, liquidity, and long-term predictability of cash flows, and not primarily to maximizing the return on investments. Given these requirements, pension funds typically have a highly diversified investment structure and invest predominantly in long-term financial instruments, with an emphasis on top-rated securities, such as government bonds and "blue chip" equities. A smaller but growing portion of the portfolio is allocated to investments in private equity, real estate and infrastructure assets. The fiduciary duty of pension funds is to invest in the best long-term interest of their beneficiaries. Applying the principles of responsible investing to ESG issues could better align investors with the broader goals of society while having a positive impact on investment portfolio performance.

Pension funds' investment strategies must balance risk, return and costs. Recently, pension funds'investment policies increasingly incorporate sustainable finance and in general ESG investments.Green and sustainable investing is an emerging asset class of particular interest to pension funds, as it plays a special societal role in social cohesion and offers great potential to address global sustainability issues. Since the first issuance of green bonds in 2008[1], they have become an important asset class for pension funds. Issues such as climate risk have long-term implications for the long-term cash flows that affect these investors. Achieving sustainable, long-term returns while managing investment risk in a portfolio is therefore critical for pension investments (Owadally et. al., 2021). Some pension funds to incorporate non-financial objectives in their investment policy, such as specific carbon reduction targets, within the scope of the risk-return objectives set out by the prudent person principle (Pensions Europe, 2022, p. 23).

However, these investments do not only refer to allocating funds to projects or companies that focus on sustainable practices, green technologies, and natural resource conservation, but also to other investment products that apply ESG principles. Pension funds also invest in equities, real estate, sustainable bonds, social bonds, and other financial products with the goal of achieving measurable social and environmental impact in addition to financial return. The readiness to integrate ESG into different asset classes of pension funds was studied by Mercer UK (2020). It found that 88% of pension funds are considering these changes. Table 2 shows different forms of financing sustainable and green growth initiatives that pension funds might consider.

Table 2: An overview of vehicles for green investing of pension funds

Asset class	Type of vehicle	Description
Equity	Indices	Include only stocks of companies that have

[1] The beginnings of the green market began in 2007 with the European Investment Bank's issuance of the Climate Awareness Bond (CAB), an equity index-linked bond listed on 27 markets in the EU. A year later, the World Bank issued its first green bond, designed in collaboration with Skandinaviska Enskilda Banken. With this issue, the World Bank responded to specific demand from Scandinavian pension funds seeking a fixed-income investment opportunity to support the transition to a lower-carbon and more climate-friendly world, taking into account their long-term investment horizon as pension funds.

		„good environmental practices“
	Green Mutual Funds	They pool money from multiple investors to invest in a diversified portfolio of green assets, such as renewable energy companies and sustainable infrastructure projects.
	Green Exchange-Traded Funds (ETFs)	financial instruments that track the performance of a specific index, sector, or theme, including green investment-focused indices.
Fixed-income	Green bonds	Debt securities issued by governments, corporations, or financial institutions to raise capital to solve environmental problems
Alternatives	Real estate	Real estate investments that are environmently acceptable
	Green private equity and venture capital	Investment firms that provide capital to start-ups and established businesses engaged in environmentally sustainable projects or technologies.
	Carbon Credits and Offsets	Financial instruments that represent the reduction or removal of one metric ton of carbon dioxide equivalent emissions, which can be purchased by individuals or organizations to offset their carbon footprint

(Source: Authors)

The first pension fund to issue green bonds was the Canada Pension Plan Investment Board (CPPIB) in 2018, issuing EUR 1.2 billion worth of 10-year bonds with a 3% coupon. This allows CPPIB to further invest in energy efficiency, renewable energy and sustainable water management.

4. **PENSION FUNDS INVESTMENT STRATEGIES – ESG CRITERIA**

An increasing number of pension funds are adopting a holistic approach to sustainability at the institutional, operational and portfolio levels. UNCTAD (2023) reports that pension funds are increasingly committed to integrating ESG criteria into all investment decisions, with long-termism as a guiding principle, and to considering ESG performance to manage risks and seize opportunities related to the transition to a more sustainable economy.

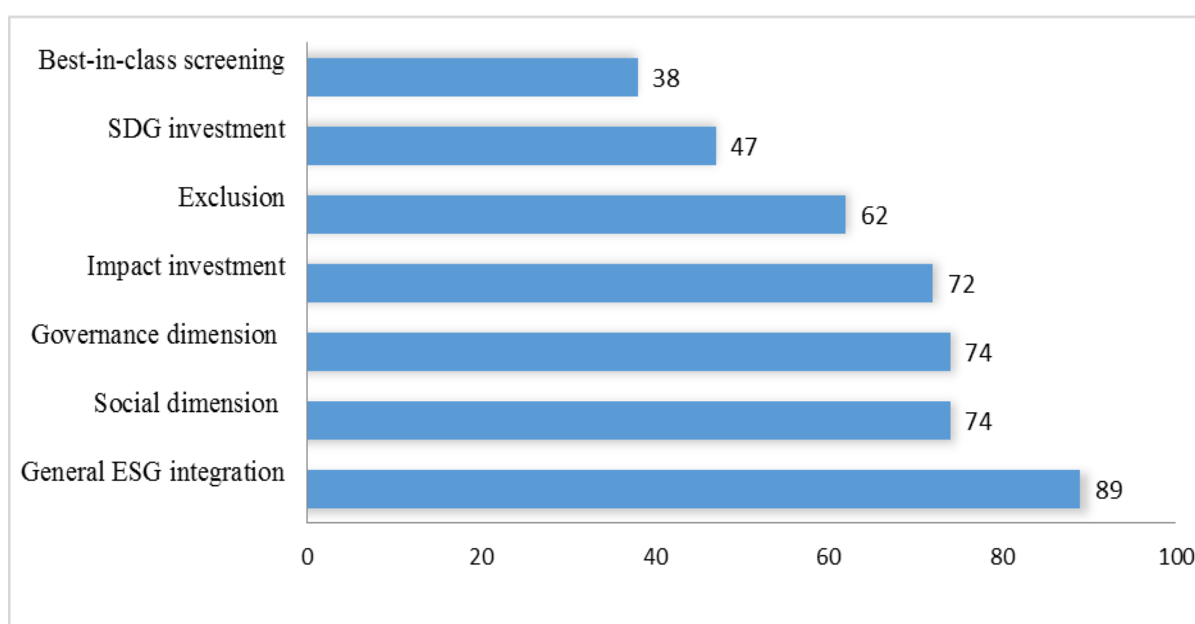
Pension funds' strategy for selecting ESG investments is based on discretion, using one or a combination of the following approaches (Mercer UK, 2022; Pension Europe, 2022; UNCTAD, 2023):

a. ESG integration: combining ESG factors in traditional investment analysis with the aim of determining the issuer's real value and identifying potential risks and opportunities.
b. Best-in-class or positive screening: strategically investing in sectors, companies, or projects that are leaders in the sustainability performance of their peer group (leaders in renewable energy, employee satisfaction, and product safety).
c. Exclusion or negative screening: exclusion from the portfolio of issuers whose activities are inconsistent with sustainable development (specific sectors, companies, and practices) or specific ESG criteria including moral values (e.g., tobacco or gambling),

standards and norms (e.g., human rights), ethical convictions (e.g., animal testing), or legal requirements (e.g., controversial armaments such as cluster bombs or land mines, excluded to comply with international conventions).

d. Norm based screening: involves screening potential investments against minimum standards of business practice based on international norms relating to climate protection, human rights, working conditions, and action plans against corruption.
e. Thematic investing: Selecting issuers based on specific themes that contribute to a positive environmental or social outcome (cleantech, infrastructure, energy-efficient real estate, or sustainable forestry).
f. Impact investing: targeting ESG-oriented sectors (sustainable energy, affordable healthcare, or inclusive connectivity) or capital market instruments (green bonds, social bonds, or ESG funds).
g. Governance or social dimension: working with companies to highlight the importance of ESG issues, improve ESG practices, transform sustainability outcomes, e.g. governance, human capital management, promoting diversity and inclusion in the company, and climate risks.
h. Active ownership: focusing on engagement and dialogue with portfolio companies to influence the strengthening of ESG strategy and action through ownership and activism for change.

Figure 2: Sustainability investment strategies of reposting funds, 2022 (%)



(Source: UNCTAD 2023)

Investment strategies range from relatively simple exclusionary strategies to more positive screening strategies to integrate an ESG and SDG perspective into their investment decisions. The vast majority (89%) of pension funds involved incorporate ESG factors into their strategies. The social and management dimension of investment is second in the choice of investment strategies. Typically, funds favour engagement with asset managers and investment recipients as a first means of improving ESG performance and divestment as a last resort if performance does not improve (UNCTAD, 2023). Nearly three-quarters of funds use an impact strategy, indicating a shift from responsible investing in earlier periods to

sustainability-focused investing that specifically targets sustainability-related issues or sectors.

5. LIMITATIONS AND PREREQUISITES FOR THE DEVELOPMENT OF SUSTAINABLE INVESTMENT STRATEGIES OF PENSION FUNDS

When creating a portfolio, pension fund managers should consider a number of risks related to issuers, but also those whose emergence depends on environmental conditions. The most important strategic risks for pension funds are generally market risk, inflation risk, and interest rate risk, to which climate risk has been added in recent years. Climate change is a systemic risk that poses a particular challenge for pension funds.

From an ESG perspective, different types and sources of ESG-related risks can be distinguished (Sautner and Starks, 2023; Della Croce, Kaminker, and Stewart, 2011, UNCTAD, 2023):

1. Reputational risks - refer to the threat or danger to a company's good name or reputation,
2. Human capital management risks - social risks related to working conditions, including slavery and child labour, health and safety issues, employee relations and diversity, employment and occupational discrimination, industrial action (strikes), etc.
3. Supply Chain Risk - risks associated with the securities of all issuers included in the portfolio,
4. Regulatory and political risk - potential interference of partisan politics in the management of pension investments, unstable regulatory environment or regulatory restrictions (asset class, due to liquidity and diversification requirements, solvency restrictions, etc.)
5. Governance risk - risks related to executive compensation, respect for the rule of law, bribery and corruption, political lobbying and donations, board diversity and structure, tax strategy, cybersecurity, accounting fraud, anti-money laundering (AML), and counter-terrorist financing (CFT).
6. Transition risks - relate to changes in climate change policy, regulations, technologies, investor sentiment, and prices due to the transition to a low-carbon economy. These are particularly relevant for investors in resource-intensive activities with high GHG emissions within their value chains,
7. Climate risks - environmental risks can be physical risks arising from the direct impact of natural disasters such as earthquakes or floods, climate change, greenhouse gas emissions, renewable energy, and resource depletion.

Pension funds should develop processes to identify, measure, and manage ESG-related downside risks, especially those related to climate change. When considering regulatory constraints or incentives for sustainable investments in pension fund portfolios, several studies (Sievänen et al., 2013; Zwan et. al., 2019) have identified regulation as an important influencing factor, with vast area of improvement in the disclosure and reporting of ESG practices. In addition, the use of performance indicators is lagging, which means that sustainability disclosure is not objective. In summary, greater harmonization of standards and regulations is needed to promote a broader approach to integrating sustainability and performance. The last decade has also seen an increase in the regulatory framework at the national and regional level, making it more difficult to monitor and compare pension fund

activities and risks. For example, sustainable finance regulations have increased by up to 40% in the last five years, with 300 national and regional regulations listed in the 35 most developed economies (UNCTAD, 2023). ESG risk disclosure is still limited and insufficient for most pension funds (except the largest) (International Actuarial Association 2020), but is increasing rapidly as legislation is implemented, particularly in Europe. The majority of pension funds now voluntarily produce detailed reports on the management of their investments and are continuously improving disclosure to make sustainability and risk management transparent to investors and regulators. In 2019, the International Organization of Pension Supervisors issued Supervisory guidelines on the integration of ESG into investment with aim to "disclose to members and stakeholders information about the pension fund's investment policies related to long-term sustainability, including ESG factors, stewardship, and non-financial factors" (IOPS, 2019).

6. CONCLUSION

Pension funds can be a powerful force in directing the global financial market towards sustainable and inclusive goals and development in the right direction. Recently they are becoming more active in redefining their portfolios with respect to environmental, social, and governance (ESG) factors and are engaging in more effective and assertive asset management. Their investment strategies are increasingly focused on sustainability-related risks, particularly with respect to climate-related, sustainable, and inclusive actions. Pension funds responsibility to achieve sustainability goals stems from their large assets, long-term investment horizon, and social role in the economy, especially from the perspective of the different types and sources of ESG-related risks (reputational, litigation, regulatory, climate, etc.). Therefore, they are one of the key players in climate change mitigation and adaptation. Pension funds are increasingly adopting internal strategies and policies to incorporate ESG considerations into their investment strategies and decisions, anticipating transition risks, and aiming for net-zero in their portfolios by 2050 at the latest. They have a great opportunity to incorporate ESG factors into their investment strategy to enhance or preserve the value of their investments or manage long-term risks by deploying capital in areas with a stronger ESG or sustainability focus and promoting good governance both within the pension system and in investments. In order to attract a larger number of investors and following the market trends, it is necessary to strengthen the process of collecting data and reporting related to ESG factors.

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