

The Role of Korean Institutional Investors in ESG Investing

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Environmental, Social and Governance (ESG) investing is increasingly gaining attention in Korea as such investments are expanding internationally.

- ESG investing is an investment method that not only considers financial data - the data displayed in financial statements - but also uses non-financial data such as environmental, social and governance criteria.
 - If ESG investing becomes mainstream, individual investors will gain a new means to manage non-financial risks and have a broader choice in terms of improving performance.
- As of 2017, 1,961 institutions throughout the world (representing approximately \$81.7 trillion AUM) have joined the Principles for Responsible Investment (PRI: six principles regarding ESG investing), with approximately 5.4 times more signatories than in 2007.
 - The global volume of ESG investing increased from \$13.3 trillion in 2012 to \$22.9 trillion in 2016, to 26.3% of total AUM as of 2016.
- Although ESG investing is not yet widespread in Korea, there is growing interest.
 - Recent developments, such as the National Pension Service's public disclosure on ESG investing, the introduction of the Stewardship Code and the sudden growth in ESG investing in Japan, have spurred the creation of a social consensus regarding the use of non-financial data.

Korean institutional investors are less active in terms of utilizing ESG investing principles than foreign institutional investors.

- Active management of non-financial risks by embracing ESG investing would enable Korean institutional investors to improve mid-to-long term performance and lower the level of overall non-financial country-related risk.
 - In 2017, Korea received an ESG country rating of 58.3%, lower than the OECD average of 73.7, which implies that the country has a higher than average level of non-financial risks.
- Even though non-financial risk management may be in line with the beneficiary's interests, there may be a lack of motivation for the institutional investor who is the agent (fiduciary) to actively accept such practices.
 - According to an analysis conducted on data from 2010 to 2017 on 35 OECD member states, it is difficult to assume that the increased proportion of institutional investors in a financial system contributes to the reduction of non-financial risks nationwide.

Stronger means are needed to induce Korean institutional investors to move beyond short term-oriented perspectives and embrace ESG investing.

- Efforts to quickly realize relevant operational standards are urgently required to ensure Korea's success in widening the scope of fiduciary responsibilities and introducing the Stewardship Code.
 - It is necessary to provide credible, complete and comparable information for the beneficiary to have an accurate understanding of the institutional investor's ESG investing status as well as the status of non-financial risks inherent within the target investees.
 - The public disclosure standard should be improved to enhance the content, rationale and methods by which institutional investors exercise their voting rights, while the content and style of non-financial data disclosed by companies should be standardized.

01. ESG Investing Status in Korea and Abroad

A. Introduction to ESG Investing

ESG investing is an investment method that considers non-financial data as well as financial data in the process of asset management.

- **Non-financial data refers to all content that is excluded from financial data—the data displayed in financial statements.**
 - Non-financial data is generally within the scope of environmental, social and governance spheres, thus it is referred to as “ESG investing”.
- **The stages of asset management can be broken down into investment policy development, setting of risk level, investment strategy implementation and performance evaluation; ESG investing uses non-financial data in every stage of the process.**
 - It is customary to include, in the Investment Policy Statement (IPS), details on whether non-financial data was used and the scope of such usage.
 - The objective is to manage the risk of a massive loss by utilizing non-financial data.
 - An investment strategy for improving mid-to-long term performance is pursued by examining under-rated target investment opportunities through asset valuation based on non-financial data.
 - Having determined that financial data fails to fully expose potential risks related to future management performance, the investor can also use non-financial data as an indicator for performance evaluation from a mid-to-long term perspective.

Individual investors view ESG investing as a means to improve mid-to-long term management performance.

- **The investment philosophy of improving mid-to-long term management performance by utilizing non-financial data can easily be associated with various investment strategies that have been widely pursued. (See [Table 1])**
 - Investment strategies based on non-financial information can be categorized into best-in-class selection, exclusionary screening, active ownership, thematic investment, impact investment and ESG integration.
- **Negative screening is an investment strategy that excludes assets that do not meet the ethical standards set by the investor from the portfolio and was mainly used in earlier ESG investments.**
 - From a risk-earning viewpoint, this approach is criticized for potentially damaging short-term performance by restricting the effects of portfolio diversification through the imposition of additional constraints.

■ Recent global market trends show that ESG integration is the most often used strategy.

- According to a survey conducted by CFA Institute on 1,325 portfolio managers and financial analysts in 2015, 57% of respondents used the ESG integration strategy.

[Table 1] ESG Investing Strategy Overview & Strategy-Specific Usage

Strategy	Overview	Rate of Response (%)
ESG Integration	Integrating non-financial data into the company's value and risk analyses.(i.e., adjusting discount rate by referring to non-financial data)	57
Best-in-Class Selection	Investing in companies with high ESG ratings among group of competing targets. (i.e., selecting companies in the top 50% ESG rating within the same sector)	38
Exclusionary Screening	Excluding companies that fail to meet certain standards from the portfolio. (i.e., excluding arms suppliers)	36
Active Ownership	Prompting non-financial risk management by intervening in a company's ESG issues. (i.e., exercising voting rights, meeting with corporate executives)	26
Thematic Investment	Concentrating investments in companies with certain themes. (i.e., investing in companies specializing in renewable energy, water-management, etc.)	23
Impact Investment	Investment method upholding social values. (i.e., investing in companies in which at least 70% of employees live in vulnerable regions)	21

Note: The response figures represent the proportion of a total of 1,325 respondents who have indicated their use of such investment strategies while answering a multiple-choice question allowing more than one answer.

Source: Created by NABO based on data provided by CFA Institute

At the national level, there is much attention on whether ESG investing can boost economic sustainability.

■ Widespread ESG investing can improve major financial functions - valuation, post-inspection and risk management - and lead to the positive external effect of enhanced sustainability for the overall economy.

- ESG investing can contribute to a shift toward a sustainable economy by giving more weight to sustainable investment opportunities in terms of valuation, allocating more funds to such companies.
- ESG investing can also contribute to boosting corporate sustainability by reinforcing the post-inspection of target investment opportunities through the active exercising of voting rights.
- If ESG investing becomes widespread and the systematic management of non-financial risks becomes the norm, it could result in a reduction of potential non-financial risks embedded throughout the economy.

B. Performance of ESG Investing

Contrary to early-stage concerns, there are mounting research outcomes that testify to the positive performance of ESG investing.

- Friede et. al. (2016) conducted a comparative analysis of previous studies analyzing the relation between corporate ESG scores and corporate financial performance (CFP)¹⁾.
- Based on the results of the impact of corporate ESG scores on financial performance, distributions of outcomes were calculated to be divided into four categories—positive, neutral, negative and mixed.
 - Among 1,816 studies, the weighted share of positive findings was 48.2%, the share of neutral findings was 23.0% with 10.7% composed of negative findings. The remaining 18.1% had mixed results, making it difficult to make a clear distinction.

ESG investing provides a safety-net against massive losses incurred by non-financial risks.

- Given that the capital market operates efficiently, the expected returns from ESG investing can drop by as much as the risk premium set for the safety-net.
 - A sensible investor should be inclined to pay a risk premium against the safety-net provided via ESG investing, accepting a relatively lower level of expected returns.
- Since the ex-post returns of ESG investing vary depending on whether a loss has occurred, determining the usefulness of ESG investing solely from the realized returns may result in distortion.
 - ESG investing is protected from any loss incurred by non-financial risks, resulting in returns higher than investments dependent on financial data alone.
 - If there is no loss incurred by non-financial risks, the ex-post returns of ESG investing are as low as the risk premium compared to investments solely dependent on financial data.
 - Incidents associated with non-financial risks include the bankruptcy of the Enron Corporation in 2002, the Deepwater Horizon oil spill by UK-based oil company BP in 2010 and the collapse of Rana Plaza, a garment factory, in Bangladesh in 2013.

1) Friede, G., Busch, T., and Bassen A., "ESG and financial performance: aggregated evidence from more than 2000 empirical studies"(Journal of Sustainable Finance & Investment, 2016).

As consensus builds regarding the utility of non-financial data gains, usage is becoming diversified.

- With regard to corporate credit ratings, 12 credit rating agencies and approximately 120 institutional investors signed the Statement on ESG in Credit Ratings.
 - This indicates that non-financial data from a bond issuing company, such as on climate change response, corruption-related litigations and poor labor relations, can affect the company's credit ratings.
- ESG Country Ratings, which serve as an overall non-financial risk indicator of a country, are used to analyze a country's credit risk.
 - According to an analysis conducted by Sustainalytics, countries with high ESG scores, which represent overall sustainability, have high sovereign credit ratings.²⁾
- Governments around the world are increasing their use of non-financial data in developing policies to implement international agreements such as the Paris Climate Agreement and the UN Sustainable Development Goals (UN SDGs).
 - Through non-financial data, corporate behavior related to natural resource management, public health and education, as well as fraud and corruption, are identified to be incorporated in policies for sustainable development.

C. Growth of ESG Investing

As the volume of global investments based on ESG criteria increases, such practices are being expanded throughout regions with no previous involvement.

- The volume of ESG investing, as identified by the Global Sustainable Investment Review (GSIR), increased from \$13.3 trillion in 2012 to \$22.9 trillion in 2016. (See [Table 2])
 - As of 2016, the proportion of ESG investing relative to total managed assets is 26.3%.³⁾
- Such practice has moved beyond growth mainly in Europe to regions such as the US, Australia/New Zealand and Japan.
 - The volume of responsible investments in Europe amounted to approximately \$12.0 trillion in 2016, higher than in other regions.
 - The ratio of such investments in 2016 compared to 2012 was 47.4 times in Japan, 3.85 times in Australia/New Zealand and 2.33 times in the US. All of these regions exhibited growth stronger than Europe during this period.
- The pace of ESG investing growth is slow in Asia ex-Japan, with the proportion of ESG investing relative to total managed assets as low as 0.8% as of 2016.

2) Sustainalytics Thematic Research ESG Spotlight, Game of Bonds : Reassessing Sovereign Credit Ratings (2017).

3) GSIR refers to ESG investing as "responsible investment".

[Table 2] ESG Investing Volume by Region

(Unit: \$billion, times (x), %)

Region	2012 (A)	2014	2016 (B)	(B)/(A)	Proportion of Sustainable Investing Relative to Total Managed Assets (%)
Europe	8,758	10,775	12,040	1.37	52.6
US	3,740	6,572	8,723	2.33	21.6
Canada	589	729	1,086	1.84	37.8
Australia/New Zealand	134	148	516	3.85	50.6
Asia ex Japan	40	45	52	1.30	0.8
Japan	10	7	474	47.40	3.4
Global	13,261	18,276	22,890	1.73	26.3

Source: Created by NABO based on data provided by Global Sustainable Investment Review

The number of institutional investors using the ESG criteria is increasing in major overseas markets.

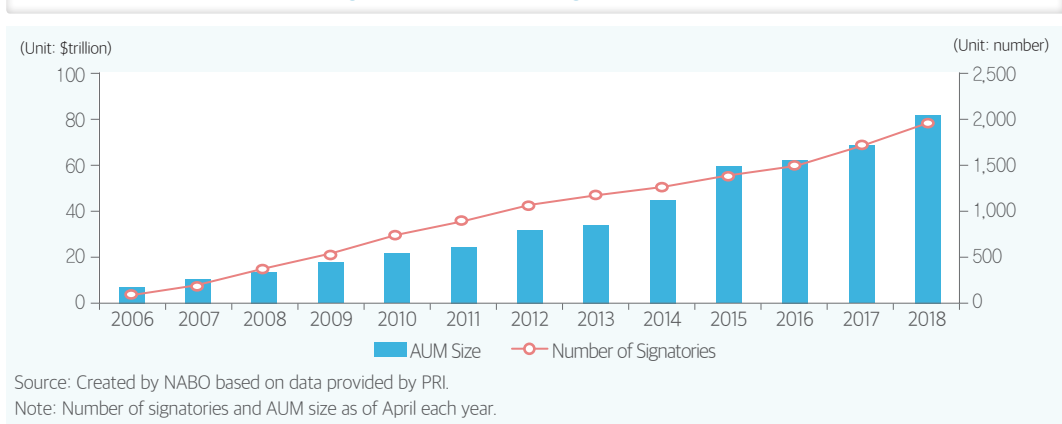
- The number of signatories to the PRI has increased.

- The PRI is an international network of institutional investors committed to observing the six principles for investments under the ESG criteria.
- As of April 2018, the number of parties that have signed the PRI reached 1,961 (representing approximately \$81.7 trillion AUM), an increase of about 5.4 times over the past 10 years.⁴⁾

- Experts working in major investment firms are increasingly showing interest in ESG investing.

- According to a 2017 survey conducted by the CFA Institute, 73% of 1,588 respondents considered non-financial data when making investment decisions.⁵⁾

[Figure 1] Number of PRI Signatories and AUM



4) <https://www.unpri.org/about>

5) CFA Institute, Environmental, Social and Governance (ESG) Survey (2017).

Unlike major markets overseas, Korean institutional investment firms are less active in embracing ESG investing.

- A stocktaking of ESG investing was taken of major Korean institutional investors, such as the three major pension funds (National Pension Service, Government Employees Pension, Teachers' Pension), Korea Post and credit unions.
 - The volume of ESG investing as of end-2017 totaled 7 trillion 246.6 billion won, 1.09% of the total AUM of 785 trillion 717.8 billion won.

[Table 3] ESG Investing Status of Major Korean Institutional Investment Firms

(Unit: KRW billion)

Category		2015	2016	2017
National Pension Service	ESG Investment Volume	6,852	6,370	6,880
	Total AUM	512,324	558,299	621,642
Teachers' Pension	ESG Investment Volume	119	212	102
	Total AUM	12,756	13,923	15,840
Government Employees Pension	ESG Investment Volume	109	40	74
	Total AUM	5,265	6,519	7,256
Korea Post	ESG Investment Volume	124	132	151
	Total AUM	107,934	110,755	115,464
Korean Teachers' Credit Union	ESG Investment Volume	0	0	40
	Total AUM	20,558	22,886	25,516
Total	ESG Investment Volume	7,204	6,754	7,247
	Total AUM	658,836	712,381	785,718

Note: The source of reference data was data disclosed online by the National Pension Service and documentation submitted by responsible staff for other institutions. This is a survey of the status of responsible investment conducted by each institute, using the term "ESG investing" for consistency.

Source: Created by NABO based on data provided by Korea Sustainable Investing Forum (KOSIF).

- A stocktaking was conducted on the AUM status of Korean public funds subject to the Morningstar Sustainability Rating, a rating given by Morningstar, a global fund evaluation firm.
 - ESG investing volume based on portfolio holdings as of end-2017 is 37 billion won in total, 15.3% of the total AUM of 241 trillion won.
 - When breaking down figures into the five levels of ESG integration, 3.8 trillion won is reported as "high", 3.3 trillion won is reported as "above average", 21.8 trillion won is reported as "average", 6.7 trillion won is reported as "below average" and 1.5 trillion won is reported as "low".

[Table 4] ESG Investing Status of Korean Public Funds

(Unit: billion won)

Category	2015	2016	2017
ESG Fund (stated in Investment Prospectus) ¹⁾	415	261	397
ESG Fund (based on portfolio holdings) ²⁾	33,677	29,467	37,091
All Public Funds ³⁾	205,510	205,088	241,732

Note: Based on the end-2017 closing price of managed funds, the total figure of net assets of the funds is calculated by extracting from 1) funds that stated their strategy as sustainable investment or responsible investment in the Investment Prospectus; 2) funds recognized as ESG investing funds according to the criteria for the Morningstar Sustainability Rating; and 3) domestically registered public funds under Morningstar's financial information system (Morningstar Direct).

Source: Created by NABO based on data provided by Morningstar Korea

02. Institutional Investors' Initiation of Transforming the Environment to Embrace ESG Investing

The recent growth in ESG investing noted in major foreign countries is driven by institutional investors.

- Conditions are being created for institutional investors to systematically utilize non-financial data in the process of key functions such as valuation, post-inspection and risk management.⁶⁾
- A social consensus is being created around the idea that institutional investors' systematic management of non-financial risks that may affect mid-to-long term performance is in line with the beneficiary's interest.
 - There is growing acknowledgement that it is within the scope of the fiduciary duty of institutional investors such as endowments, pension funds and financial institutions to manage non-financial risks to improve mid-to-long term management performance.
- The institutional foundation has been set for institutional investors to reinforce post-inspections of target investment opportunities.
 - The introduction of the Stewardship Code has enhanced the case for institutional investors to push investment targets to pursue sustainable management by actively exercising their voting rights.
- There has been an increase in the production and distribution of non-financial information that can be used by institutional investors when managing portfolios.
 - The scope of corporate disclosure of non-financial data has been expanded due to the prerequisites set by data servicing companies, investment advisory firms and financial institutions to collect, process and analyze non-financial data.

A. Enhanced Scope of Fiduciary Duties

The fiduciary duty of an institutional investor consists of the “duty of loyalty” and the “duty of care.”⁷⁾

- This indicates that the fiduciary works for the interest of the beneficiaries and not for its own interest, and the interpretation of the scope of work varies among countries and evolves over time.
 - The duty of loyalty is the responsibility of the fiduciary to work in good faith by pursuing the interests of the beneficiary rather than its own, and to guarantee fairness in moderating the conflicting interests among numerous beneficiaries.
 - The duty of care requires the fiduciary to act in good faith and in a prudent manner by ensuring a reasonable level of attention and expertise when managing the beneficiary's assets.

6) PRI & MSCI, Global Guide to Responsible Investment Regulation (2016).

7) PRI, UNEP/FI, UNGC and Inquiry, Fiduciary Duty in the 21st Century(2015).

In the past, it was widely believed that ESG investing went against the fiduciary duty of institutional investors.

- Fiduciary duty was considered a practice utilized to maximize the short-term risk-adjusted returns for the beneficiary and assumed that the market price fully reflected non-financial risks.
- It was believed that, according to fiduciary ethical standards, ESG investing contradicts the duty of loyalty.
 - Excluding target investment opportunities with low ESG scores from the portfolio was viewed as acting against the concept of diversification in investing under Modern Portfolio Theory.
- If short-term performance were weakened as a result of a restriction of investment targets, this was deemed a violation of the duty of care.
 - Since the traditional risk-return paradigm aimed at maximizing short-term risk-adjusted returns, there was little room to utilize non-financial data regarding mid-to-long term performance.

Recently, awareness has shifted toward acknowledging that ESG investing is part of the fiduciary responsibility of institutional investors.

- Since non-financial risks that are difficult to identify through financial data are not fully incorporated in market prices, ESG investing is seen as a method to improve mid-to-long term performance.
- The duty of loyalty is now assumed to encompass mid-to-long term performance as well as the future interests of the beneficiary.
 - Freshfields Bruckhaus Deringer, in its report to the United Nations Environment Programme Finance Initiative (UNEP FI) in 2005, claimed that improving mid-to-long term portfolio performance by integrating sustainable growth factors does not conflict with fiduciary duties.⁸⁾
- There is also an understanding that ESG investing is in line with the duty of care as it contributes to the improvement of mid-to-long term portfolio performance.
 - In 2014, the Law Commission in the UK put forward the view that non-financial data is one of the factors that have a significant impact on risk-adjusted returns.⁹⁾

More institutional investors are integrating non-financial data in their portfolio management process.

- The OECD distinguishes institutional investors into four categories according to their use of non-financial data: “traditional investors”, “modern investors”, “broader goal investors” and “universal investors”.¹⁰⁾
 - Universal investors fully integrate non-financial factors into their portfolios because they believe there are limitations to managing non-financial risks solely through diversified investments.

8) Freshfields Bruckhaus Deringer, A legal framework for the integration of environmental, social and governance issues into institutional investment (UNEP FI, 2005).

9) Law Com No. 350, Fiduciary Duties of Investment Intermediaries (2014).

10) OECD, Investment Governance and the Integration of Environmental, Social and Governance Factors (2017).

- According to the Asset Owners Disclosure Project (AODP), endowments, pension funds and mega-sized funds have been transformed into universal investors as financial assets continue to accumulate.
 - As of 2017, around 23% out of 500 of the world's largest asset owners are taking visible actions to manage the risks and opportunities stemming from climate change.¹¹⁾

B. Introduction of the Stewardship Code

The Stewardship Code is a set of model rules prompting institutional investors to exercise their voting rights in good faith.

- The rationale is to encourage institutional investors such as endowments and pension funds to take responsibility as stewards managing the beneficiaries' assets, placing their interests at the forefront, and transparently disclose the results.
- The objective is to push for sustainable management of target investees to maximize the beneficiary's interests, by exercising voting rights on shares held and building consensus with such companies.
 - The aim is to increase the target investee's value through faithful engagement as a shareholder.
 - The main details include the development and disclosure of the procedure and criteria for exercising voting rights and notifying the beneficiary about the details and reasons for exercising such rights in an appropriate manner.

In major foreign countries, the introduction of the Stewardship Code - which pushes for an enhanced role to be played by institutional investors - is becoming widespread.

- This is due to the reflection that the 2008 global financial crisis was caused by institutional investors' lack of involvement in valuation, post-inspection and risk management of target investees.
- As of 2017, approximately 20 countries have implemented the Stewardship Code.
 - After first being introduced in the UK in 2010, countries including the Netherlands, Canada and Switzerland followed suit, after which countries including the US, Australia and India newly implemented the Code in 2017.
 - In Asia, after Japan introduced the Code in 2014 to improve the business performance of target investees, markets such as Korea, Malaysia, Thailand, Taiwan, Hong Kong and Singapore also introduced the Code.
 - Japan, where 214 institutional investors have subscribed to the Code, is regarded as having spearheaded the increase of stock buybacks and dividend payouts through the exercise of voting rights in good faith.

11) Asset Owners Disclosure Project, AODP Global Climate 500 Index 2017

- Korea also published “Principles on the Stewardship Responsibilities of Institutional Investors” in December 2016.
 - The content encourages institutional investors to actively execute their voting rights; disclose their policies regarding the execution of voting rights as well as resolution measures for conflicting interests; and to build relevant competency.(See [Box 1])

Each country has implemented the Stewardship Code in diverse ways according to their respective economic and social circumstances.

- Each country has adopted the Code either on a mandatory, voluntary or “comply or explain” basis.
 - The “comply or explain” approach observes the Code in principle or otherwise offers an explanation of exceptional situations and has been adopted by many countries.
 - The International Corporate Governance Network (ICGN) also adopted the “comply or explain” system, promoting the enhancement of mid-to-long-term corporate value and ESG integration.

[Table 5] Method of Adopting the Stewardship Code

Method	Country/Region
Mandatory	Australia, India, Kenya
Voluntary	Switzerland, US, Canada, Brazil, Hong Kong, Malaysia, Singapore
Comply or Explain	EU, UK, the Netherlands, Denmark, Italy, Japan, Korea, Thailand, Taiwan, Kazakhstan, South Africa

Source: Created by NABO based on data provided by KOSIF

[BOX 1] Outline of the Korean Stewardship Code

The Korean Stewardship Code, “Principles on the Stewardship Responsibilities of Institutional Investors,” was introduced in 2016.

- In March 2015, the Stewardship Code Council, led by the Financial Services Commission (FSC), the Korea Corporate Governance Service (KCGS) and Korea Financial Investment Association (KOFIA), adopted a set of principles in December 2016.
 - In June 2017, the FSC published the Legal Guidance on the Stewardship Code and the KCGS published the First Manual on the Korean Stewardship Code.
- The seven principles of the “Principles on the Stewardship Responsibilities of Institutional Investors” are as follows:
 1. Institutional investors, as stewards of assets entrusted by their clients, beneficiaries etc., for safekeeping and management, should formulate and publicly disclose a clear policy to faithfully implement their responsibilities.
 2. Institutional investors should formulate and publicly disclose an effective and clear policy as to how to resolve actual or potential problems arising from conflicts of interest in the course of their stewardship activities.

3. Institutional investors should regularly monitor investee companies in order to enhance investee companies' mid-to-long term value and thereby protect and raise their investment value.
4. While institutional investors should aim to form a consensus with investee companies, where necessary, they should formulate internal guidelines on the timeline, procedures and methods for stewardship activities.
5. Institutional investors should formulate and publicly disclose a voting policy that includes guidelines, procedures and detailed standards for exercising voting rights in a faithful manner, and publicly disclose voting records and the reasons for each vote so as to allow the verification of the appropriateness of their voting activities.
6. Institutional investors should regularly report their voting and stewardship activities to their clients or beneficiaries.
7. Institutional investors should have the capabilities and expertise required to implement stewardship responsibilities in an active and effective manner.

C. Expanding the Scope of Public Disclosure of Companies' Non-Financial Data¹²⁾

Target investees' disclosure of non-financial data is regarded as the prerequisite for promoting ESG investing.

- During the early stages of ESG investing, sources of non-financial data were limited to the Sustainability Report provided by the target investee on a voluntary basis, information on the company website and from the press.
 - Examples of non-financial data include environmental policies, reduction of greenhouse gas emissions, energy usage, wages and welfare benefits, gender diversity, human rights policies, executives' observance of a code of ethics and transparency of the board of directors.
 - Obstacles to utilizing non-financial data were factors such as the restriction on which target investees may be included in the portfolio, a lack of confidence in the comparability of data and disclosure of companies overdependent on large conglomerates.
- In this respect, the key mandate is to improve the standard for data disclosure in a way to enhance the accountability, completeness and comparability of the non-financial data disclosed by target investees.

An increasing number of major foreign countries are introducing systems expanding the scope of disclosure of companies' non-financial data.

- Companies use various data disclosure methods such as policies, regulations, guidelines, frameworks and standards.
 - Such methods can be categorized into the Disclosure Initiative, stock exchange standards, financial supervisory standards as well as legal rules and regulations initiated by international organizations, institutional investors' networks and international non-governmental organizations (NGOs).
 - There is an increasing number of countries that incorporate their respective legal rules and regulations in the expansion of the scope of non-financial data disclosure, which was spearheaded by the Global Disclosure Initiative.

12) A summary of "The status, best practices and implications of the ESG disclosure system for promoting sustainable finance in Korea and abroad(2017)," published by KOSIF, commissioned by NABO in 2017.

[Table 6] Main Initiatives on Companies' Disclosure of Non-Financial Data

Year of Introduction	Title
1997	GRI Sustainability Reporting Standards
2000	UN Global Compact Principles
2003	CDP Climate Change
2013	International Integrated Reporting Council Framework
2015	Climate Disclosure Standards Board Framework
2017	Financial Stability Board Task Force on Climate-related Financial Disclosures Recommendation
2018	Sustainability Accounting Standards Board Standards

Source: Created by NABO based on data provided by KOSIF

- According to global projects that conduct an annual survey on disclosure trends of non-financial data, 383 disclosure systems have been adopted in 71 countries as of 2016.¹³⁾
 - This is an increase of approximately 3.7 times in terms of the number of countries and approximately 6.4 times in terms of the number of systems compared to 2006.
 - About 2/3 of all systems are mandatory, with the remaining operating on a voluntary basis. About 1/3 of all systems have been introduced via institutions such as the stock exchange or financial supervisory agency.

[Table 7] Trends related to the Adoption of Non-Financial Data Disclosure Systems

		2006		2010		2013		2016	
Type	Mandatory	35	58%	94	62%	130	72%	248	65%
	Voluntary	25	42%	57	38%	50	28%	135	35%
	Total	60		151		180		383	
Number of Countries or Regions		19		32		44		71	

Source: KOSIF

Major foreign countries are striving to enhance the accountability, completeness and comparability of non-financial data.

- According to PRI/MSCI(2016), the ESG Country Rating of countries that have implemented a government-led mandatory disclosure system is relatively higher than that of countries lacking such a system.¹⁴⁾
 - The group of countries in which a mandatory disclosure system is implemented had an ESG score of about 33% higher than that of the comparison group, implying that non-financial risks are more actively managed.
 - The group of countries in which a voluntary disclosure system is implemented had an ESG score of about 11% higher than the group of countries that does not have a disclosure system.
- In Korea, discussions on improvement measures are underway such as those on corporate information disclosure standards and corporate governance codes.

13) Carrots & Sticks, Global trends in sustainability reporting regulation and policy(2016). (Carrots & Sticks is a project survey on the sustainability reporting system jointly conducted by four institutes—KPMG, GRI, UNEP and Centre for Corporate Governance in Africa.)

14) PRI & MSCI, Global Guide to Responsible Investment Regulation(2016).

03. Country-Specific Non-Financial Risks and the Role of Institutional Investors

A. Status of Country-Specific Non-Financial Risk Levels

Korea's non-financial risks are regarded as relatively higher than these in other OECD member states.

- Sustainability - one of the most prominent companies providing ESG investing data - reviewed the trend of ESG Country Ratings calculated based on the non-financial data of each country.

[BOX 2] Sustainability's ESG Country Ratings

Sustainability publishes ESG country ratings that are related to a country's credit risks.

- Since 2010, the institute has evaluated and published the ESG country ratings of 172 countries, as an indicator of each country's level of competency in terms of achieving sustainable economic development.
- The ESG country ratings are drawn via the following procedure:
 - The scope of non-financial risks is categorized into environmental (E), social (S) and governance (G), each of which is given relevant indicators that add up to a total of 36 indicators.
 - The observed value of each indicator is normalized to compare the relative levels of each country. (Subtract 'average value' from the 'observed value' divided by 'standard deviation'.)
 - The ESG country ratings are drawn by calculating a singular indicator for each country by drawing the weighted average of the standardized value of individual indicators, and then converting this into a rating scale of 0-100.
- Korea's 2017 ESG Country rating was 58.3, lower than the OECD average of 73.7. (See [Table 7])
 - Over this period, the drop in Korea's ESG score (1.3) was greater than the average drop (0.2) in OECD members' scores.
 - This indicates that while the improvement in non-financial risks among OECD member states does not meet the level of the rest of the 172 subject countries, the improvement witnessed in Korea is even weaker.

[Table 8] ESG Country Ratings of OECD Member States

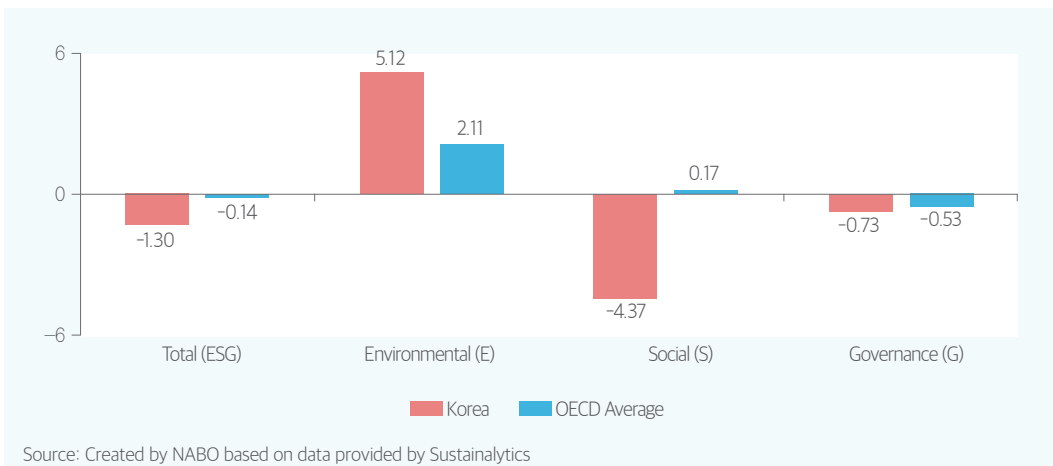
2010 Level			2017 Level		
Country	Score	Ranking	Country	Score	Ranking
Sweden	88.1	1	Sweden	87.7	1
Denmark	87.5	2	Denmark	86.5	2
Germany	85.6	3	Germany	86.2	3
Austria	85.4	4	Austria	84.8	4
Norway	84.9	5	Norway	84.4	5
Finland	84.8	6	Finland	84.2	6
New Zealand	84.2	7	New Zealand	83.3	7
Netherlands	83.7	8	Netherlands	83.0	8
Switzerland	82.8	9	Switzerland	82.1	9
Iceland	80.5	10	Iceland	80.8	10
Belgium	79.9	11	Belgium	79.8	11
Luxembourg	79.7	12	Luxembourg	79.6	12
United Kingdom	78.7	13	United Kingdom	78.8	13
Australia	78.4	14	Australia	78.0	14
France	77.3	15	France	77.8	15
Canada	77.2	16	Canada	77.3	16
Ireland	76.6	17	Ireland	76.7	17
Slovenia	73.3	18	Slovenia	75.3	18
Japan	72.7	19	Japan	73.4	19
Portugal	72.7	20	Portugal	72.5	20
Spain	72.1	21	Spain	72.3	21
Estonia	71.7	22	Estonia	71.6	22
Czech Republic	70.8	23	Czech Republic	71.5	23
Slovakia	70.3	24	Slovakia	71.5	24
Italy	69.0	25	Italy	71.1	25
Hungary	68.9	26	Hungary	69.8	26
USA	67.9	27	USA	68.1	27
Poland	66.5	28	Poland	68.0	28
Latvia	65.5	29	Latvia	66.1	29
Chile	64.1	30	Chile	62.3	30
Greece	61.2	31	Greece	61.7	31
Korea	59.6	32	Korea	58.3	32
Israel	59.0	33	Israel	55.9	33
Mexico	56.0	34	Mexico	54.4	34
Turkey	49.4	35	Turkey	45.1	35
Average	73.9		Average	73.7	

Source: Created by NABO based on data provided by Sustainalytics

The environmental (E) risks appear to have decreased in Korea, whereas social (S) risks have increased.

- Korea’s social (S) score dropped by 4.37 points from 2010 to 2017, while the rest of OECD member states did not show any significant changes in their average social (S) score.
 - During this period, concerns were raised about a potential government shutdown due to the impeachment of the Korean president during this period, leading to an increase in social (S) risks.
- As for the environmental (E) score during the same period, Korea’s score was 5.12, exhibiting a relatively significant increase compared to the average 2.11 seen in the rest of the OECD member states.
 - During this period, Korea’s environmental (E) risks were reduced due to the relatively low pace of increase in CO2 emissions and minimized coal dependency for power generation.

[Figure 2] Changes in ESG Country Ratings (Korea vs. OECD Average)



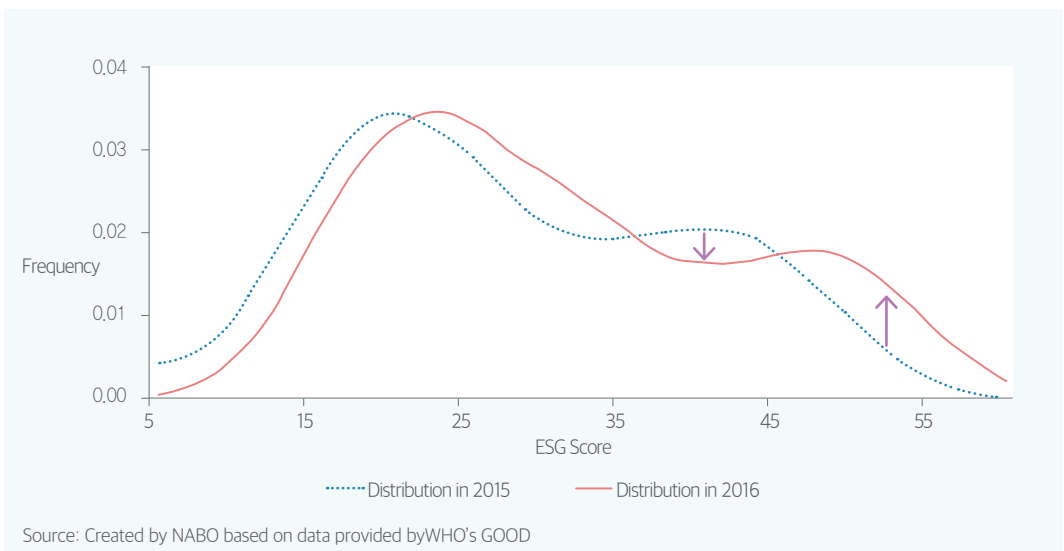
The indicators of the management level of non-financial risks by listed Korean companies appear to have improved recently.

- Based on public documentation published by WHO’s GOOD¹⁵⁾, a Korean company that provides ESG investing-related data, the ESG score of each company - calculated on a quantitative basis according to global standards - was reviewed.
 - Among the top 200 listed companies based on revenue, the ESG scores of 195 companies as of 2015 were subject to the review, excluding five companies that were unsuitable for comparison due to reasons such as mergers.
 - A comparison was made by drawing an estimation of the nonparametric probability distribution of ESG scores in 2015 and 2016.

15) WHO’s GOOD utilizes corporate and media data provided by the government instead of data provided by companies. In order to make the evaluation methodology more systematic, global standards such as the ISO 26000 and ICGN are taken into account in an automated evaluation utilizing IT-based technology such as AI to enhance the objectivity of the analysis outcomes.

- As ESG scores that reflect companies' non-financial risk management performance witness an overall improvement, the number of mid-tier companies decreased whereas the number of top-tier companies increased.
 - While the number of companies within the range of at least 45 points has increased from 2015 to 2016, the number of companies within the 35-45 score range decreased somewhat.
 - This could be because the number of listed companies that have stepped up to actively manage non-financial risks with greater attention is increasing in Korea.
- Moving forward, if Korean institutional investors actively embrace ESG investing, the level of non-financial risk management of listed companies is expected to be improve futher.

[Figure 3] Corporate ESG Score Distribution Trend(2015 vs. 2016)



B. Drivers of Institutional Investors' ESG Investing

The level of countrywide non-financial risks may vary depending on the level of acceptance by institutional investors.

- Institutional investors are corporate investors that invest in securities by gathering large amounts of funds from clients.
 - Types of institutional investors include banks, insurance companies, securities firms, investment trust companies, corporates that safeguard and manage funds and companies that conduct credit-related business.

- Since ESG investing promotes the enhancement of corporate sustainability via improving non-financial risk management, the acceptance of ESG investing by institutional investors is a crucial facilitator to ensure the practice becomes widespread in society.
 - Institutional investors have the expert knowledge and influence to explore investment opportunities to improve mid to long-term portfolio performance, based on analyses of non-financial risks.
- If institutional investors' use of ESG investing becomes widespread, related risks will be more systematically managed, potentially leading to reduced levels of non-financial risks country-wide.
 - Major foreign countries are making efforts to enhance the role of institutional investors regarding ESG investing in terms of protecting investors through increased transparency of corporate management.

Institutional investors may not have enough incentives to actively adopt ESG investing.

- According to the theory of the principal-agent problem¹⁶⁾, there is the potential for institutional investors as agents to act in a way that is not aligned with the interests of the beneficiary.
 - Even if the management of non-financial risks lines up with the beneficiaries' interests, the institutional investor who is the agent (fiduciary) may not actively adopt such practices.
 - In particular, if institutional investors are evaluated based on their short-term portfolio performance, there is little incentive for them to adopt ESG investing practices which pursue an improvement in long-term performance.
- This report aims to confirm whether institutional investors can be deemed active towards non-financial risk management.
 - If the incentive for institutional investors to utilize ESG investing is not significant, a reduction of countrywide non-financial risks may not be realized even if the retained assets of the institutional investors grow.

C. The Relation between Institutional Investors' Influence and Non-Financial Country Risks

An analysis was conducted on the relation between the degree of influence of institutional investors and the level of non-financial country risks.

- The ESG country score was set as the dependent variable, serving as a proxy variable indicating the non-financial risk level.
 - A high ESG country score is interpreted as indicating a low level of non-financial risk due to systematic management of related risks country-wide.

16) A situation in which the agent pursues his own interests arises when the preference of the agent is not aligned with that of the principal, or if the principal has less expert knowledge and information than the agent. First raised by M. Jensen and W. Meckling in 1976, this theory is used to analyze the moral hazard, free-riding and adverse selection incurred by the imbalance of information and incomplete surveillance.

- **The log real GDP per-capita was included as an independent variable.**
 - If the income level is high, there is likely to be higher social interest in non-financial risk management, which is expected to result in low non-financial country risks.
- **The aging ratio was included as a proxy variable for the risk aversion tendency of the overall society.**
 - This variable is calculated as the ratio of population aged 65 and above to the total population. If this ratio is high, it is assumed that the social incentives for managing non-financial risks are high.
- **The weight of long-term assets was included as a proxy variable for the average period of investment.**
 - Calculation is based on the ratio of the financial assets held by pension and insurance firms among total financial assets. If this ratio is high, it is assumed that social interest in mid-to-long term portfolio performance is high.
- **The log ratio of financial assets-to-GDP was included as a proxy variable for the degree of financial development.**
 - If the degree of financial development is high, it is assumed that use of non-financial data is frequent during the process of valuation, post-inspection and risk management, and that the overall non-financial country risk is low.
- **The log weight of financial assets held by financial institutions among total financial assets was used as a proxy variable for the weight of institutional investors.**
 - If the financial assets held by financial institutions grow at a higher rate than total financial assets, it is assumed that the influence of institutional investors increases within the financial system.
 - Reviews were conducted on whether there is a difference in the size of influence on the changes in ESG country scores depending on the weight of institutional investors, inclusive of the interaction between financial development level and the weight of institutional investors.

[BOX 3] Analysis Model and Variables

■ Regression Equation

$$y_{it} = \alpha + \beta_1 \text{GDP}_{i,t} + \beta_2 \text{OLD}_{i,t} + \beta_3 \text{LON}_{i,t} + \beta_4 \text{FIN}_{i,t} + \beta_5 \text{INS}_{i,t} \\ + \beta_6 \text{FIN}_{i,t} \times \text{INS}_{i,t} + \sum_{t=2012}^{2017} \gamma_t D_t + u_i + \epsilon_{i,t}$$

y: ESG country score

GDP: Log real GDP per-capita

OLD: Percentage of 65+ population among the total population

LON: Percentage of financial assets held by pension and insurance firms among total financial assets

FIN: Log ratio of financial assets-to-GDP

INS: Log weight of financial assets held by financial institutions among total financial assets

D: Dummy variable for years 2012, ..., 2017

u: Error term of fixed effects model, taking into consideration unique country-specific circumstances

For the analysis, a fixed effects(panel) model is used, taking into consideration the unique country-specific circumstances.

- A fixed effects term was included, considering that a gap in social demands of non-financial risk management may exist according to the unique country-specific conditions in addition to other than the control variables included in the analysis model.
 - Investors who had experienced a significant loss have a tendency to actively embrace ESG investing. A case in point is the spread of ESG investing in the US after the global financial crisis.
- A dummy variable for each year was included, considering that economic and social conditions may change each year.
- The analysis was conducted based on annual data over 8 years (2010-2017) in 35 OECD member states.
 - The data regarding the variables for economic and social conditions were drawn from sources including OECD’s national account database and financial statements .
 - The panel was created with data collected over 8 years from 35 countries, with a total of 249 observed values since some years lacked an observed value.

[Table 9] Elementary Statistics on Variables

Variable	Average	Standard Deviation	Minimum Value	Maximum Value
ESG Country Score	73.514	9.747	45.100	88.400
Income Level (\$)	10.465	0.332	9.758	11.390
Aging Ratio (%)	16.447	3.537	7.120	27.450
Weight of Long-Term Investment (%)	7.033	3.890	0.794	14.881
Degree of Financial Development	2.191	0.776	0.484	5.655
Weight of Institutional Investors	-0.684	0.219	-1.249	-0.041

Source: Estimated by NABO based on data provided by OECD and Sustainalytics

It is difficult to conclude that institutional investors contribute to non-financial country risk management overall.

- An enhanced level of income, aging ratio, weight of long-term investment and degree of financial development may be assumed to lead to higher ESG country ratings and lower overall non-financial country risks.
 - The coefficients of the income level, weight of long-term investment and degree of financial development have positive statistical significance at the 1% level, while the coefficient of the aging ratio has a positive statistical significance at the 5% level.
- Since the weight coefficient of institutional investors and the coefficient of interaction (financial development degree multiplied by the weight of corporate investors) appeared to have no statistical significance, it is difficult to deny the existence of the principal-agent problem.

- The coefficient of the weight of institutional investors and the coefficient of the interaction between the degree of financial development and weight of institutional investors both appeared to have a negative value with no statistical significance.
- This can be viewed as a side effect of “short-termism,” a tendency of institutional investors to maximize short-term portfolio performance at the cost of mid to long-term performance.
- **In order to drive institutional investors to actively embrace ESG investing, an environment should be created to influence the incentives for these investors.**
 - If institutional investors determine that pursuing enhanced mid to long-term portfolio performance is in accordance with the interests of not only the beneficiary but also their own, they are likely to actively adopt ESG investing.

[Table 10] Influence of Institutional Investors and Their Relation with ESG Country Ratings

Variable	Coefficient	p-Value
Income Level (log)	6.504	0.000
Aging Ratio (%)	0.449	0.019
Weight of Long-Term Investment (log)	0.582	0.000
Degree of Financial Development (log)	3.276	0.017
Weight of Institutional Investors (log value)	-2.155	0.587
Degree of Financial Development (log value) x Weight of Institutional Investors (log value)	-0.463	0.798
Number of Observed Values	249	
R-square	0.155	

Note: The estimated values of the constant term and coefficients for the dummy variable for years are omitted.
 Source: Estimated by NABO based on data provided by OECD and Sustainalytics

04. Implications

The level of non-financial risks may vary depending on institutional investors’ acceptance level of ESG investing.

- **The level of non-financial risks may vary depending on institutional investors’ acceptance level of ESG investing.**
 - Individual investors are given the opportunity to improve mid to long-term portfolio performance with a means to manage non-financial risks, as the level of overall non-financial country risks can be reduced.

- **However, the incentive for Korean institutional investors to actively adopt ESG investing may not be significant.**
 - Even though improving mid to long-term portfolio performance is in line with beneficiaries' interests, the evaluation system based only on short-term performance provides little incentive to accept ESG investing principles.

There is a need to raise the incentives for Korean institutional investors to embrace ESG investing.

- **Widespread awareness that mid to long-term portfolio performance can be enhanced based on the management of non-financial risks is the prerequisite for institutional investors to move away from "short-termism" toward embracing ESG investing.**
 - Incentives for institutional investors can be enhanced if ongoing efforts in Korea take root, such as the expansion of fiduciary duty, adoption of the Stewardship Code and increase in corporate non-financial data disclosure.
- **If an environment is established for beneficiaries to accurately identify the ESG investing circumstances of institutional investors and the status of non-financial risks of their investment targets, ESG investing can be facilitated.**
 - The enhancement of the accountability, completeness and comparability of non-financial data is the prerequisite for ESG investing to become widespread, followed by the realization of positive external effects.
 - To this end, the development of concrete criteria regarding the content, rationale and method of institutional investors' exercising of voting rights is required, while considering the standardization of the content and method of the disclosure of corporate non-financial data.