Annual ESG Investment Report of China's Asset Management Industry 2021

By Shenzhen Finance Institute, The Chinese University of Hong Kong, Shenzhen and Huaxia Wealth Management Co., Ltd.

EDITORIAL BOARD MEMBERS

EXECUTIVE SUMMARY

Evolution and Ethics, a book of English essays, came out in 1893 (Yan Fu, a modern enlightening thinker of China, translated the first two parts of the book and named it "Tianyan Lun"). The book's author, T. H. Huxley, provided further elucidation of Darwin's Theory of Evolution, explaining the relationship between evolutionary process and ethical process in the universe's development, advancing the achievement of human civilization and social progress by restraining excessive competition through ethics, calling human beings out of excessive competition, and affirming the essence of ethics. The views expressed in the book showed his worries about the intense struggle for existence in human society at that time and his yearning for a beautiful, kind and harmonious society. Things have changed with the passage of 128 years. Today, it is also necessary for us to consider the relationships among competition, society and environment. In the whole economic system, our financial sector has undertaken the important task of coordinating the integrated development of the three elements. Particularly after the world has entered the post-pandemic era, the ESG-oriented asset management concept which is concentrated on sustainable development, social responsibility and environmental protection is in line with the recovery concepts of countries after the pandemic, making ESG investment once again included in the important strategy of financial institutions. The CPC Central Committee and the State Council of China put a premium on, and have issued a number of important policies concerning green and low-carbon development, high-quality development and sustainable development. This year, Carbon Peak and Carbon Neutrality were firstly written into the "14th Five-Year" Plan and the Long-Range Objectives Through the Year 2035. The carbon neutrality goal focuses on climate risks and environmental risks, and will receive market attention for a long time in the future. The common prosperity policies focus on distribution and fairness, making the whole public pay more attention to social responsibility. Corporate governance delivers excess benefits by identifying investment opportunities and providing risk controls. Driven by "top-down" policies, regulatory supports, overseas fund providers' requirements and market demands, China's ESG investment will develop rapidly. With multiple approaches including data collection, data analysis and questionnaire survey, this report gives a summary of disclosure policies for sustainable investments and developments of sustainable investment at home and abroad, compares domestic and foreign ESG rating systems in China's market, and analyzes the latest developments of ESG in China's asset management sector. This report aims to encourage the asset management sector to practice the ESG investment and promote high-quality development of economy in China. I thank various institutions for their supports and cooperation in this survey, and my thanks also go to the experts and researchers of the editorial board for their contribution.

by Bohui Zhang in Shenzhen in November 2021

EXECUTIVE SUMMARY

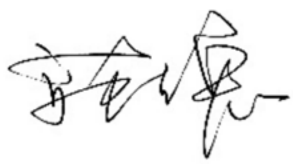
2021 is an extraordinary year. Along with the repeated resurgence of COVID-19, various kinds of disasters caused by extreme weather have impacted the global economic recovery sustainably and adversely. In this context, we do not see the growth rate of global ESG investment AUM has been affected. Both the AUM of ESG investment strategies adopted in the five markets over the globe and the AUM of ESG thematic funds and ESG wealth management products in China reflect that investors are increasingly mature in applying the concept of sustainable development in the process of asset allocation.

As a forerunner practicing ESG concept in the asset management sector of China, Huaxia Wealth Management completed ESG integration at the corporate level in this May; and in this November, Huaxia Wealth Management showed to the global market, the exploration and thinking of Chinese financial institutions in the process of responsible investment, through the special column of PRI official website's "Signatory's Story". Among ESG work throughout this year, we have carried out ESG ratings in different asset classes such as equity, fixed income and fund-of-funds (FOFs), continuously issued and managed more than RMB 20 billion ESG wealth management products, gradually covered the global carbon neutrality policy pathways, carbon trading markets and carbon measurement methods in the research on carbon neutrality and ESG topics, and constructed a Carbon Neutrality Investment Strategy.

As an asset management institution, Huaxia Wealth Management has brought sustainable perspectives to the traditional investment and research framework. Under the guidance of national policies of carbon peak and carbon neutrality, the investment logic of the industry has mainly focused on four carbon reduction directions: reducing energy consumption intensity, reshaping energy structure, optimizing industrial structure and developing low-carbon technologies. We have incorporated ESG factors into the analysis process of industry supply-demand and corporate fundamentals. We have also applied information technology as an enhancement to make the rating of sustainable development ability of investment targets more systematic and comparable.

Seen from global development of ESG investment, the rising of ESG investment are accompanied by specific processes of social development. China’s economy has been transitioning to a stage of high-quality economic and social development, which will drive growth of domestic ESG investment. Along with the accelerated release of industry policies, more benefits will be seen by applying ESG investment strategies to support low-carbon development in real economy.

To conclude, I hope that this report can truly reflect the development status and trend of ESG concept in the asset management sector, and thank all institutions for their support and cooperation, and experts and researchers of the editorial board for their hard work.



by Zhihong Yuan in Beijing in November 2021

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I.
Background

In the 1970s, green consumption, environmental protection and other initiatives emerged in developed countries in response to environmental issues caused by favoring economy growth over the environment. In the 1990s, social responsibility investment started to transform from morality consideration to investment strategies. As part of the transformation, the comprehensive performance of a company in Environment, Social and Governance (ESG) was considered during investment decision-making and potential effects of ESG investments on investment risks and return were evaluated.In September 2015, all 193 member countries endorsed the 2030 Agenda for Sustainable Development at the United Nations Sustainable Development Summit, consisting of 17 Sustainable Development Goals (SDGs) and 169 Targets. The SDGs aim to comprehensively solve developmental issues in the social, economic and environmental aspects that would emerge in 2015-2030, and lead the world towards a sustainable development path.

In respect of environmental issues in China, in September 2020 at the session of the United Nations General Assembly, General Secretary Xi Jinping announced that China would scale up its NDCs by adopting more vigorous policies and measures to have CO2 emissions peak before 2030 and achieve carbon neutrality before 2060. Since then, Xi Jinping has mentioned Carbon Peak and Carbon Neutrality on many international occasions. In October 2021, the Opinions of the Central Committee of the Communist Party of China and the State Council on Complete, Accurate and Comprehensive Work to Achieve Carbon Peak and Carbon Neutrality Goals Under the New Development Philosophy (hereinafter referred to as the Opinions) were unveiled as the "1" part of the "1+N" policy framework. This strategy played a commanding role and provided a roadmap and working scheme towards Carbon Peak and Carbon Neutrality goals. Following the unveiling of the Opinions, the State Council issued and printed the Action Plan for Carbon Dioxide Peaking Before 2030 as an N-focused policy document. This document set specific targets for various sub-areas including those in the 14th Five-Year and the 15th Five-Year Plans that are appropriate to the staged significant reduction in the emissions of the Carbon Dioxide Peaking Before 2030. In October 2021, the State Council released China's Policies Responding to Climate Change which stated significant changes in China's response to climate change. In November 2021, at the 26th session of the Conference of the Parties (COP26) to the United Nations Framework Convention on Climate Change held as the first session after the implementation of the Paris Agreement, China and the United States released the China-US Joint Glasgow Declaration on Enhancing Climate Action in the 2020s under which they reached a consensus on tackling climate change.

From the social perspective, attention relating to common prosperity, anti-monopoly, and privacy and data security increased across all sectors of society. In November 2020, the Fifth Plenary Session of the 19th Central Committee of the Communist Party of China called for more substantial progress in promoting common prosperity for everyone. In May 2021, the Central Committee of the Communist Party of China and the State Council issued the Opinions on Supporting Zhejiang's High-quality Development and Building a Demonstration Zone for Achieving Common Prosperity which stated the mission of building a demonstration zone for achieving common prosperity in Zhejiang. Concerning anti-monopoly, in December 2020, General Secretary Xi Jinping presided over the session of the Political Bureau of the CPC Central Committee. The session called for stepping up anti-monopoly supervision and preventing the disorderly expansion of capital. At the subsequent session of China's Central Economic Work Conference, stepping up anti-monopoly supervision and preventing the disorderly expansion of capital were identified as one of 2021’s eight priorities in economics. Also, concerning data security, the Date Security Law of the People's Republic of China came into effect on September 1st, 2021, whilst the Personal Information Protection Law of the People's Republic of China came into effect on November 1st, 2021.

Corporate governance is a basic system that is designed to ensure the efficient operation of a company and secure shareholders' benefits. In 2020, to push securities companies towards perfecting their corporate governance and promote standardized operations, China Securities Regulatory Commission amended the Rules for Governance of Securities Companies. To upgrade the governing level of listed companies, National Equities Exchange and Quotations Co., Ltd. developed the Rules for Governing Listed Companies of National Equities Exchange and Quotations. In 2021, the China Banking and Insurance Regulatory Commission issued and implemented the Measures for the Supervision of the Conduct of Principal Shareholders of Banking or Insurance Institutions (for Trial Implementation). These measures further enhanced the regulation of shareholder equity and perfected the corporate governance of banking and insurance institutions.

The concern and value of domestic authorities on ESG further promoted the development of green and responsible investment. The concept of sustainable development has been widely recognized by financial institutions, and China's asset management industry has stepped into the era of sustainable investment. In 2021, we focus on the disclosure policies for sustainable investments, the global and domestic state of sustainable investments and the ESG rating system, together with the analysis of the collected 2021 ESG questionnaire in China's asset management industry. Our research also identified the obstacles and challenges towards sustainable investments and aim to provide a reference and guidance for ESG policymakers and practitioners in China.

II. Disclosure Policies for Sustainable Investment

We, first of all, focus on the disclosure policies for sustainable investments in various regions. Considering the different stages in regions that practice responsible investment, we organized the policies of the EU, USA, Canada, Australia, Hong Kong China and the Mainland of China. The key findings and conclusions from this process are summarized below.

Hong Kong China has the strictest definition of the ESG fund. From a global perspective, the EU, USA, Canada and Australia are similar in the fact that they all define investments that focus on ESG elements as sustainable investments. The Hong Kong Securities and Futures Commission (SFC) has the strictest definition of ESG investment and considers that a fund may not be classified as an ESG fund unless any ESG elements have been stated as the core investment goal or investment strategy. However, regardless of the existing definition of green investments, the Asset Management Association of China has not yet given a definition on sustainable investments.

The EU SFDR has the most comprehensive requirements for disclosing sustainable investments. The disclosure policies for sustainable investments within various regions focus on investment goals, strategies and approaches for sustainable investment. The laws of the EU and Hong Kong China require the disclosure of the risks associated with sustainable investment. The Regulation on Sustainability-related Disclosures in the Financial Services Sector (SFDR) issued by the EU in December 2019 defined these risks as principal adverse impact. The laws of the EU, Hong Kong China and Mainland China require the disclosure of investment principles and criteria.

Table 1 Sustainable investment disclosure requirements in different regions

Region	EU	USA	Canada	Australia	Mainland China	Hong Kong China
Title of the document	Regulation on Sustainability-related Disclosures in the Financial Services Sector	Potential Recommendations of ESG Sub-committee	Responsible Investment Fund Identification Framework	Disclosure Guidelines of Part 1013DA Under Company Law	Green investment Guidelines	Notice to SFC Authorized Managers of Trust Funds and Mutual Funds - Concerning ESG Fund
Issuer	EU Parliament and Council	ESG Subcommittee, SEC Asset Management Advisory Committee	Canadian Investment Funds Standards Committee	Australian Securities & Investments Commission	Asset Management Association of China	Hong Kong Securities and Futures Commission
Issue date	November 2019	December 2020	October 2020	November 2011	November 2018	June 2021
Disclosure frequency	Annually	-	-	-	Annually	Annually
Legal effect	Mandatory (comply or explain)	Non-mandatory	Non-mandatory	Mandatory	Non-mandatory	Mandatory

Table 1 Sustainable investment disclosure requirements in different regions (continued)

Region	EU	USA	Canada	Australia	Mainland China	Hong Kong China
Definitions involved	Sustainable investment can be defined as an investment, in which the investee companies follow good governance practices and such investments do not significantly harm the environment or the society.	Sustainable investment can be defined as an investment including the following elements: environment, social and governance; sustainability; influence; and responsible investment.	Sustainable investment can be defined as an investment including any of the following investment strategies: ESG evaluation-based investment; thematic investment involving anyone of the ESG elements; negative screening; impact investment; and shareholder engagement.	Sustainable investment can be defined as an investment that claims to consider labor standards, environmental, social or ethical elements.	Green investment refers to the behavior of investing in enterprises or projects that can produce environmental benefits and reduce environmental costs and risks by adopting systematic green investment strategies with the aim to promote the environmental performance of enterprises, develop green industries and reduce environmental risks.	ESG is the core of key investments and the fund reflected in the investment goals and investment strategies.
Required disclosures	1. Policies on sustainability risks; 2. Entity level: material adverse impact physically caused by sustainable elements; 3. Considerations on remuneration policies related to inclusion into sustainability risks; and 4. Product level: How to include in investment decision-making and possible impact; and principal adverse impact	1.Recommended disclosures of investment goals, investment strategies and investment points; and 2. Recommended disclosures of ownership activity information.	1. Reasons for adopting the approach; 2. Processes and strategies for adopting the approach; and 3. Expected results and influence.	1. Investment considerations; 2. The approach to take these considerations into account as well as their weights or degrees; and 3. Ways to monitor and check.	1. Green benchmark; 2. Green investment concept; 3. Building of Green investment system; and 4. Achievement of Green investment goals (environmental performance).	1. nvestment points and standards; 2. nvestment strategies and approaches (standards or principles); 3. References; 4. Relevant risks and limits; and 4. Periodic monitoring and review.

Source: Public information

2.1 Foreign disclosure policies for sustainable investment products

2.1.1 Europe

Europe is the pioneer of global low-carbon transformation. In 2015, the execution of The Paris Climate Agreement and the UN 2030 Agenda and Sustainable Development Goals prompted the EU to focus on exploring the path of sustainable financial transformation. In 2018, the European Union issued the Commission's 2018 Action Plan for Financing Sustainable Growth, which formulated a detailed strategy and work roadmap for sustainable investment, which includes three types of action plans: 1. reorient capital flow towards sustainable investments; 2. mainstreaming sustainability into risk management; 3. foster transparency and long-termism in financial and economic activity. In 2020, as a part of the European Green Agreement, the European Union put forward the European Green Deal Investment Plan, which proposed to facilitate the inflow of at least EUR 1 trillion of funds into sustainable investment in the next decade. In 2020, the EU proposed to increase the greenhouse gas emission reduction rate to 55% in 2030 as compared with 1990 (2030 Climate Target Plan). In order to achieve this goal, the EU needs to increase investment by EUR 350 billion every year during the period of 2021 – 2030 as compared with the last decade. Although the European Union has set up the European Fund for Strategic Investments to promote investment, it is far from enough to achieve this goal, in which the financial sector is considered to have played a key role.

In December 2019, the European Union issued Regulation on Sustainability-Related Disclosure in the Financial Services Sector (hereinafter referred to as "SFDR"), which aims to reduce the information asymmetry on sustainability factors caused by principal-agent relationship by requiring financial institutions to disclose sustainability factors beforehand and continuously. SFDR requires disclosure from two levels, namely, entity and financial products, especially adding the obligation in disclosure of adverse effects of sustainable investment, that is, whether financial market players and financial consultants have considered the negative externalities of investment decisions on the environment and society. While implementing SFDR, the European financial supervision system (EBA, EIOPA and ESMA, collectively referred to as ESAs) also submitted the draft Regulatory Technical Standards (hereinafter referred to as RTS) to the European Union in February 2021 as a supplement. RTS, which is proposed to take effect on January 1, 2022, specifies the disclosure contents, methods and expressions for investment companies and their products and services at the entity and product levels under SFDR requirements.

Table 2 Disclosure requirements on sustainable products in the EU

Region	**Member State of the European Union**
Title of document	Regulation on Sustainability-related Disclosures in the Financial Services Sector, hereinafter referred to as "SFDR"
Issue date	November 27, 2019
Implementation date	March 10, 2021
Issuer	EU Parliament and Council
Legal effect	Mandatory
Target of application	Uniform transparency rules are stipulated for financial market players and financial consultants, and non-EU entities that have subsidiaries in the EU and/or provide related services in the EU are also bound by this regulation.
Definitions involved	Sustainable investment can be defined as an investment, in which the investee companies follow good governance practices and such investments do not significantly harm the environment or the society.
Classification	1.Sustainable fund (A financial product has sustainable investment as its objective and an index has been designed as a reference benchmark): products with sustainable investment objectives and performance benchmarks. (Article 9) 2.Pan ESG fund (promote environmental or social characteristics): products that promote environmental or social factors. (Article 8) 3.Other products that do not focus on ESG. (Article 7)
Main information to be disclosed	1.Disclosure of policies related to sustainability risks Policies for considering sustainability risks in making investment decisions/giving investment or insurance advice should be disclosed on the website. 2.Disclosure of adverse impacts on sustainability (entity level) The "principal adverse impact" (PAI) on sustainable factors in investment decisions/investment or insurance advice should be disclosed on the website. Reasons should be stated for situations where the adverse impacts are not considered, indicating whether or when they will be considered in the future. 3.Disclosure of compensation policies related to sustainability risks Information on whether the compensation policy is consistent with sustainability risk management should be included into the compensation policy and disclosed on the website. 4.Disclosure of inclusion into sustainability risks (product level) 1)Financial market players should state the method to incorporate sustainability risks into their investment decision-making process in its disclosure prior to execution of the contract, as well as the results of evaluating

Table 2 Disclosure requirements on sustainable products in the EU (continued)

Main information to be disclosed	the possible impact of sustainability risks on the income of the financial products they provide. If financial market players believe that sustainability risks are irrelevant, they should state the reasons and provide a brief explanation. 2)The financial consultant shall state in its disclosure prior to execution of the contract on the method to incorporate sustainability risks into its investment or insurance proposal, as well as the results of evaluating the possible impact of sustainability risks on the income of the financial products it provides advises on. If the financial adviser believes that the sustainability risks are irrelevant, it should state the reason and provide a brief explanation. 5.Disclosure of adverse impacts on sustainability at the financial level (at the product level) Whether it is necessary to consider and how to consider the principal adverse impacts on sustainable factors when disclosing financial products; Statement on information disclosure of principal adverse impacts of financial products on sustainable factors. Reasons should be stated if no consideration is given to adverse impacts with regard to financial products. 6.Product disclosure that promotes environmental or social characteristics (product level) In the disclosure prior to the execution of the contract, how can the disclosure meet the environmental or social characteristics; If an index is designated as the performance benchmark, then it should indicate whether and how the benchmark is consistent with the above characteristics. The environmental or social characteristics and sustainable investment objectives should be disclosed on the official website, as well as the methods used to evaluate, measure and monitor whether financial products meet the environmental or social characteristics as well as the sustainable impacts, including their data sources and screening standards of related assets. The degree of compliance with environmental or social characteristics should be disclosed in regular reports. 7.Product disclosure with sustainable objectives (product level) In the disclosure prior to execution of the contract, how the disclosure performance benchmark is consistent with the objectives; The difference between performance benchmark and market index; If there is no performance benchmark, statement should be given on how to achieve the sustainable objectives; Financial products aiming at reducing carbon emissions should disclose the risk exposure of low-carbon emissions investment in order to achieve the long-term objectives under Paris Agreement. The environmental or social characteristics and sustainable investment objectives should be disclosed on the official website, as well as the methods used to evaluate, measure and monitor whether financial products meet the environmental or social characteristics as well as the sustainable impacts, including their data sources and screening standards of related assets. In the periodic report, disclosure should be made on the overall sustainability impact as measured by sustainability indicators, and on the comparison of the sustainability impacts of financial products as measured by sustainability indicators, designated indicators and comparison of sustainable impacts between designated indicators and broad-based market indicators.

Source: Public information

2.1.2 United States

In February 2021, Tony Blinken, US Secretary of State issued a statement claiming that Biden signed an executive order to return to the Paris Agreement on the first day of president's inauguration. Like the United States joining the Paris Agreement in 2016, the United States formally became a party to the Paris Agreement again. The execution of the Paris Agreement has also promoted the development of sustainable investment in the United States.

In September 2020, the Asset Management Advisory Committee (hereinafter referred to as "AMAC") of the United States Securities and Exchange Commission (hereinafter referred to as "SEC") indicated that the performance disclosure requirements of ESG funds are still based on the regulations related to mutual funds (FORM N1-A). AMAC set up the ESG Subcommittee in 2020. The purpose of ESG Subcommittee is to study the ESG practice of investment products, with special attention to the differences between ESG investment products and other investment products, and whether it is necessary to intervene with regard to the differences. In April, 2021, the Securities and Exchange Commission (SEC) of the United States released the report Review of ESG Investment by the Audit Department. According to the review results on existing entities, SEC indicated that the current ESG investment practice has the following defects: 1. the practice in the process of portfolio management is inconsistent with the disclosure; 2. the control measures are insufficient to maintain, monitor and update the ESG-related investment standards and mandatory requirements of customers; 3. proxy voting may be inconsistent with the method mentioned by the consultant; 4. there is unconfirmed or possibly misleading statement about ESG investment; 5. control measures are inadequate to ensure consistency between ESG disclosure and marketing and practice; 6. the compliance plan does not pay enough attention to ESG issues. In addition, SEC identified the effective practice of ESG. 1. the disclosure is clear and accurate, which is consistent with the actual practice of ESG investment. 2. policies and procedures related to ESG investment are formulated, covering the key processes of the company; 3. compliance personnel are familiar with ESG related practices of the company. Up to now, the United States has not issued information disclosure rules for ESG funds. On December 1st, 2020, ESG Subcommittee made the following suggestions to SEC on the disclosure of ESG investment products.

Table 3 Disclosure requirements on sustainable products in the United States

Region	**USA**
Title of document	Potential Recommendations from the ESG Subcommittee
Issue date	December 1, 2020
Implementation date	n/a
Issuer	ESG Subcommittee under SEC Asset Management Advisory Committee
Legal Effect	Non-mandatory
Target of application	n/a
Definitions involved	Sustainable investment can be defined as an investment including the following elements: environment, social and governance; sustainability; influence; responsible investment.
Classification	It is suggested to refer to the classification of ESG investment by Investment Company Institute (ICI), which classifies ESG investment products according to product strategy as follows: positive screening, screening investment and influence investment.
Main information to be disclosed	1.SEC should provide guidance for the disclosure of ESG investment products, including complying with the classification method formulated by the ESG work group of ICI, and clarifying the investment strategy and investment priorities of each product, including the non-financial objectives such as environmental impact and adherence to religious objectives; for example, whether the income risk objectives present higher or lower priority than the social objectives. 2.SEC should provide guidelines for the disclosure of information on shareholders' activities, including the description of each product in the supplementary information statement as shareholding activities of shareholders, and the disclosure of other recent shareholding activities worthy of attention in the shareholders' report besides proxy voting reported in the N-PX form. Disclosure information required for ownership activities: 1) How to vote by proxy; 2) Communication with management privately or through a third party; 3) Whether to organize/lead the shareholders' motion; 4) Supplementary information statement; 5) Regular disclosure of noteworthy shareholding activities in shareholders' reports. Among them, the first three terms are applicable to any product.

Source: Public information

2.1.3 Canada

In 2020, the Canadian Investment Funds Standards Committee (CIFSC) released the Identification Framework of Responsible Investment Funds. CIFSC believes that most investment institutions refer to CFA Institute's classification of responsible investment, so it will update the identification framework of responsible investment funds after CFA Institute revises CFA's ESG Disclosure Standards for Investment Products again.

Table 4 Disclosure requirements on sustainable products in Canada

Region	Canada
Title of document	The Identification Framework of Responsible Investment Funds (Potential Recommendations from the ESG Subcommittee)
Issue date	October 7, 2020
Implementation date	n/a
Issuer	Canadian Investment Funds Standards Committee
Legal Effect	Non-mandatory
Target of application	n/a
Definitions involved	Sustainable investment can be defined as an investment including any of the following investment strategies: ESG evaluation-based investment; themed investment involving anyone of the ESG elements; negative screening; impact investment; shareholders' participation.
Classification	1.Investment based on ESG evaluation; 2.Themed investment involving anyone of the ESG elements; 3.Negative screening; 4.Impact investment; 5.Shareholders' participation.
Main information to be disclosed	1.Reasons for adopting the approach; 2.Processes and strategies for adopting the approach; and 3.Expected results and influence.

Source: Public information

2.1.4 Australia

In 2011, Australian Securities & Investments Commission (hereinafter referred to as "ASIC") issued Section 1013DA disclosure guidance under the Companies Act, which stipulated the disclosure rules for sustainable investment products.

Table 5 Disclosure requirements on sustainable products in Australia

Region	Australia
Title of document	Section 1013 DA Disclosure Guidance under Company Act
Issue date	November 2011
Implementation date	November 2011
Issuer	Australian Securities & Investments Commission
Legal Effect	Mandatory
Target of application	n/a
Definitions involved	Sustainable investment can be defined as an investment that claims to consider labor standards, environmental, social or ethical elements.

Table 5 Disclosure requirements on sustainable products in Australia(continued)

Classification	1.Active participation, that is, exercising voting rights or other means to influence the behavior of the investee; 2.Risk management, such as considering environmental, social and corporate governance risks and opportunities faced by investment, and actively communicating with stakeholders; 3.Negative screening; 4.Positive screening; 5.Priority, that is, the investment manager lists a series of criteria that the investee needs to abide by; 6.Best-in-class method, that is, investing in the best performing companies in each sector based on specific benchmarks; 7.Passive index investment consisting of environmentally friendly or socially friendly responsible companies.
Main information to be disclosed	1.What factors are specifically considered in the disclosure? If only one of the labor standards, environmental, social or ethical factors is considered, the disclosure shall not be deemed as being based on full considerations. The criteria that consider labor standards, environmental, social or ethical factors in the investment process should be disclosed in advance in the absence of preset criteria. 2.Disclosure should be made on the degree to which labor standards, environmental, social or ethical factors are considered in the investment process, including methods and weights. For example, by lobbying the investees to meet specific labor standards, environmental, social or ethical objectives, or investing only in companies that meet certain labor standards. If the degree of consideration is not preset, it needs to be disclosed in advance. For example, disclosure may be made that no labor standards, environmental, social or ethical factors are not considered in advance, but the impacts of the above factors on investment income will be considered. 3.Disclosure may be made on the method of monitoring and inspection to ensure that the investment method takes into account labor standards, environment, society or ethical factors; if there is no relevant monitoring and inspection method in place, relevant explanation should be provided. If the product is subject to a monitoring and inspection schedule, disclosure is required, if not, relevant explanation should be provided. Explain what will happen if the investment principle or schedule is not met. If there is no predetermined opinion, explanation should be provided that the investment method is determined on a case-by-case basis, or the schedule is uncertain.

Source: Public information

2.2 Domestic disclosure policy for sustainable investment products

2.2.1 Mainland, China

In recent years, the requirements of domestic regulators for promoting ESG information disclosure have been gradually strengthened. In the background of facilitating carbon peak and neutrality, more detailed guidelines for environmental information disclosure have been formed.

In February 2021, China Securities Regulatory Commission issued Guidelines for Investor Relations Management of Listed Companies (Draft for Comment), which clearly stated that "information on environmental protection, social responsibility and corporate governance of companies" is part of the communication between listed companies and investors in investor relations management.

In May, 2021, the CSRC further publicly solicited opinions on the Contents and Formats of Information Disclosure of Companies Publicly Offering Securities No.2-Contents and Formats of Annual Reports (Draft for Comment) and the Contents and Formats of Information Disclosure of Companies Publicly Offering Securities No.3-Contents and Formats of Semi-annual Reports (Draft for Comment), and added a chapter on environmental and social responsibility on the basis of the chapter on "corporate governance". It clarifies the environmental information that should be disclosed by "companies classified as key pollutant emission units or their major subsidiaries announced by the environmental protection authorities", and states that "companies other than key pollutant emission units should disclose the situation where they were subject to administrative punishment due to environmental matters during the reporting period". It encourages "companies to voluntarily disclose relevant information conducive to protecting the ecology, preventing pollution and fulfilling environmental responsibilities" and "actively disclose the efforts in actively fulfilling social responsibilities".

In May 2021, the Ministry of Ecology and Environment issued the Reform Plan of Environmental Information Disclosure System according to Law, which proposed to establish and improve the normative requirements, collaborative management mechanism and supervision mechanism of environmental information disclosure according to law, and to strengthen efforts in the promoting environmental information disclosure by law. The main objective is to enable the mandatory disclosure system of environmental information to basically take shape by 2025.

In July, 2021, the People's Bank of China officially issued Guidelines for Environmental Information Disclosure of Financial Institutions, which put forward requirements for the forms, frequency, qualitative and quantitative information that should be disclosed in terms of environmental information disclosure by financial institutions, and provided guidance on the measurement and basis of quantitative information in financial sub-sectors such as commercial banks, asset management, insurance and trust according to the actual operation characteristics of financial institutions.

However, as for the information disclosure guidelines of funds or investment products, there is only the Green Investment Guidelines issued by Asset Management Association of China (AMAC) in November 2018. The Green Investment

Guidelines defines the connotation, clarifies the objectives, principles and basic methods of green investment, and aims to guide fund managers and fund products engaged in green investment activities to operate in a market-oriented, standardized and professional way, so as to cultivate long-term value investment orientation and establish behavior norms on green investment.

Table 6 Disclosure requirements on sustainable products in Chinese mainland

Region	Chinese Mainland
Title of document	Green investment Guidelines
Issue date	November 10, 2018
Implementation date	November 10, 2018
Issuer	Asset Management Association of China
Legal Effect	Non-mandatory
Target of application	Managers of public and private offerings of securities investment funds or asset management plans engaged in green investment and their products
Definitions involved	Green investment refers to the behavior of investing in enterprises or projects that can produce environmental benefits and reduce environmental costs and risks by adopting systematic green investment strategies with the aim to promote the environmental performance of enterprises, develop green industries and reduce environmental risks. For active management green investment products, the green factors should be incorporated into the fundamental analysis dimension, which may be used as risk-return adjustment items to help making investment decisions. For active management green investment products, the investment targets that do not conform to the green investment concept and investment strategy should be included in the negative list.
Classification	The scope of green investment should focus on environmental protection, low carbon and recycling, including but not limited to improving energy efficiency, reducing emissions, promoting clean and renewable energy, environmental protection & restoration and recycling economy.
Main information to be disclosed	1.When issuing and operating active management green investment products, information such as green benchmarks, green investment strategies and changes in green components should be disclosed. 2.In the process of portfolio management, efforts should be made to regularly track the environmental performance of investment targets, to update the evaluation results of environmental information, adjust the positions of the portfolio, and limit the positions of the lowest rated subject matters. 3.The fund manager shall conduct a self-assessment on green investment once a year, with the report including but not limited to the company's concept on green investment, the development of green investment system and the achievement of green investment objectives. The fund manager shall submit the self-assessment report of the previous year together with the Self-assessment Form of Green Investment of Fund Manager to Asset Management Association of China in writing before the end of March each year.

Source: Public information

2.2.2 Hong Kong, China

In November 2019, Hong Kong Securities and Futures Commission (Securities and Futures Commission, (hereinafter referred to as "SFC") issued the Circular to Management Companies of Trust Funds and Mutual Funds Approved by CSRC-About Green or ESG Funds (SFC). The guideline is an important regulatory measure under the framework of Hong Kong's green finance strategy.

In June, 2021, SFC issued Circular to Management Companies of Unit Trust Funds and Mutual Funds (ESG Funds) based on the 2019 Circular. The new regulations will come into effect on January 1, 2022. Compared with the old regulations, the new regulations define ESG fund as the priority in core investment, which is reflected in investment objectives and investment strategies. Funds that apply certain global ESG-related principles for negative screening, with regard to which investment managers incorporate ESG factors and financial factors into the investment decision-making process to obtain a more comprehensive risk-return investment decision, are not ESG funds. The new regulations require ESG funds to regularly evaluate how they consider ESG factors, and provide additional guidance for ESG funds giving priority to climate-related factors.

Table 7 Disclosure requirements on sustainable products in Hong Kong, China

Region	Hong Kong, China
Title of document	Circular to Management Companies of SFC-authorized Unit Trusts and Mutual Funds-Green or ESG Funds
Issue date	June 29, 2021
Implementation date	January 1, 2022
Issuer	Hong Kong Securities and Futures Commission
Legal Effect	Mandatory
Target of application	ESG funds
Definitions involved	ESG fund is defined as the priority in core investment and is reflected in investment objectives and investment strategies.
Classification	The SFC believes that the following fund cases belong to (but not limited to) ESG funds: 1.Where subject matters with good ESG performance are selected based on quantitative or qualitative methods; 2.Where at least 70% of investment are invested in subject matters related to climate change adaptation or mitigation or with long-term operation not affected by climate; 3.Where investments are made to funds with a positive impact on climate change. SFC believes that although the following (but not limited to) fund cases contain ESG factors, ESG factors are not their core investment objectives or investment strategies in funding, so they do not belong to ESG funds: 1.Where negative screening method is adopted to screen out funds that do not meet certain ESG principles (such as the United Nations Global Compact principles); 2.Where investment managers incorporate ESG factors and financial factors into the investment decision-making process to obtain a more comprehensive risk-return investment decision.
Main information to be disclosed	1.ESG funds shall disclose the following contents in its issuance documents: 1)ESG is the focus in core investment Describe the main investment priorities of ESG Funds (such as climate change, green, low-carbon footprint and sustainability); It is applied to achieve ESG standards (such as filtering standards, indicators, ratings, third-party certificates or labels) for which ESG is the priority in core investment. 2)Investment strategy adopted by ESG Funds Explain the investment strategy adopted by ESG funds, the binding factors and importance of the strategy in the investment process, as well as the way to continuously implement the strategy in the investment process; Describe the method for ESG standards consideration, such as the method for measuring ESG standards, the ranking of these standards and investment strategies, and the examples of the most important ESG standards considered (if any); Explain whether the exclusion strategy is adopted and the types excluded. 3)Asset allocation The minimum proportion of securities or other investments consistent with the ESG priorities of the fund (such as the net asset value of ESG fund). 4)Reference benchmark If a fund tracks ESG benchmarks (such as index funds), it is necessary to disclose the detailed information of tracking benchmarks, including their characteristics and overall composition: if a fund intends to measure its ESG priorities according to a specified reference benchmark, explaination should be given as to why the specified reference benchmark is related to the fund. 5)Additional information ESG fund shall disclose the following supplementary information of ESG fund, fund manager or index provider (where ESG fund tracks ESG benchmark) to investors as appropriate in the issuance documents: a)Explain how to measure and monitor the fund's focus on ESG through internal or external mechanisms throughout the fund cycle:

Table 7 Disclosure requirements of sustainable products in Hong Kong, China (continued)

Main information to be disclosed	b)The method of measuring ESG as the priority in core investment and in terms of the awareness of the fund on ESG concept; c)Description of due diligence on ESG attribute of underlying assets of the fund: d)Description of the participation (including proxy voting) policy (if any); e)The source and processing method of ESG data, or the description of any assumptions made when relevant data are unavailable. Additional information may be disclosed on the fund manager's website or in other ways. Additional information should be reviewed and updated from time to time to ensure accuracy. 6)Risks Describe the risks or restrictions related to the fund's ESG priorities and related investment strategies (such as limitations in methods and data, lack of standardized classification, subjective judgment of investment choices, dependence on third-party sources, concentration of investment in specific ESG priorities). 2.Regular assessment and reporting ESG fund should be evaluated periodically at least every year to assess how the fund can achieve its ESG priorities. The fund shall disclose the following information subject to regular assessment to investors in an appropriate way (such as by annual report): 1)Explain how the fund takes ESG as the core during the evaluation period: the actual proportion consistent with the ESG concept of the fund: the actual proportion of investment sectors that fail the screening because of the ESG concept of the fund; Compare the performance of ESG factors of the fund with the designated reference benchmark (if any); Actions taken to realize the fund's ESG concept (such as shareholders' participation in activities, ESG fund's proxy voting record with regard to its investee); Other information that the fund manager considers necessary. 2)A description of the basis of the above assessment, including any estimates and restrictions; 3)The information provided by the fund on regular evaluation before, at least including the comparison between the current and last evaluation period. 3.About the Climate Fund Examples of climate-related priorities of the Climate Fund include: investing mainly in companies engaged in economic activities that help to slow down or adapt to climate change, seeking a low-carbon footprint compared with reference benchmarks, promoting the reduction of greenhouse gas emissions, having a positive impact on slowing down or adapting to climate change, and promoting the transition to a low-carbon economy. Climate-related indicators ("climate indicators") subject to consideration by the Climate Fund include: carbon footprint, weighted average carbon intensity, greenhouse gas emissions, income or profit, capital or operating expenditure commitments, activities that are considered to be beneficial to the mitigation of or adaptation to climate change. If the climate fund has a designated climate benchmark, the disclosure should include: explaining how the reference benchmark is consistent with the climate-related priorities of the fund in a continuous manner; Explain the difference between the specified index and the market index. Methods for measuring climate indicators (including standards used, calculation basis or formula, relevant data sources, any assumptions or estimates made and limitations) should be clearly disclosed. Climate Fund may prove its concern about climate by comparing its climate indicators with that of the previous evaluation period, reference benchmark and general investment situation.

Source: Public information

III. Development of Sustainable Investment

We attempted to track the development paths and current situation of global sustainable investment from international and domestic perspectives. From the international perspective, we have performed multi-level analysis on the developments of international sustainable investments in the areas of the signatories to the Principles for Responsible Investment Association (PRI), global sustainable investment assets and global sustainable funds. From the domestic perspective, we have defined the sustainable investment and detailed its development path. We have aimed to demonstrate the development progress of ESG investment in the domestic asset management industry. We have focused on discussing the performance of core ESG funds, ESG indices and wealth management products. Concerning the development of international sustainable investment, we have made the following findings and conclusions:

The number of Chinese signatories to the PRI has increased sharply in recent years. As of the start of 2020, over 3,000 (exactly 3,038) institutions had signed the PRI and the scale of assets under management (AUM) of the PRI signatories was more than USD 103.4 trillion. The developments of sustainable investment within different regions showed that European and American signatories are dominant in the number of signatories and are leaders in practicing responsible investment. The number of Chinese mainland institutions becoming PRI signatories has increased sharply since 2018. As of June 2021, a total of 60 Chinese mainland institutions had joined the PRI.

For the first time, the US has surpassed Europe in the scale of sustainable investment and has become the region with the largest scale of sustainable investment. As indicated in the Global Sustainable Investment Review 2020 issued by Global Sustainable Investment Alliance (GSIA), the scale of global sustainable investment assets as of early 2020 reached USD 35.3 trillion indicating that over one-third of global funds are invested in sustainable assets. Although Europe has always led and promoted sustainable investment, as of 2020, the US's sustainable investment increased to 58% of the global total, whilst investment in Europe fell to 34%. The US surpassed Europe and became the region with the largest scale of sustainable investment. Also, it should be noted that the fall in the scale of sustainable investment in 2020 in Europe was associated with the adoption of a more restrictive definitions of sustainable investment in SFDR. Also, the data showed a trend of strong development in the sustainable investment markets in Canada, Japan and Oceania regions.

The ESG integration strategy may be ‘an up-and-coming youngster’. Along with enhanced awareness of the sustainability development and increased ESG investment practices, increasing institutions have adopted an ESG integration strategy. They have also systematically integrated environmental protection, social responsibility and corporate governance elements into the traditional financial analysis framework. In 2020, the ESG integration strategy replaced negative screening and became the sustainable investment strategy covering the largest scale. The investment strategies of shareholders and sustainability thematic investments have also maintained growing trends. Sustainability thematic investment was the fastest-growing strategy during 2016-2018. With a forward-looking view, we believe that the ESG integration strategy will develop steadily to replace norms-based screening and negative screening strategies, and become a more popular approach for established institutions to practice the ESG investment. The shareholder engagement strategy can be used in combination with other strategies to enable investees to improve their ESG performance under active ownership approach. The themed investment strategies can be an important starting points for investment institutions to differentiate their products and build their competitiveness.

Europe maintains its leading status in sustainable investment funds. Morningstar statistics indicate that the aggregate amount of sustainable investment funds in five major regions over the world as of Q2 2021 is up to USD 2.24

trillion and the number of funds is up to 4,929. Europe is still a key player in sustainable investment and maintains its leading role. The sustainable investment funds scale in Europe at the end of Q2 2021 was nearly 82% of the global total which gave it an absolute advantage over the US as the second-ranking region, the sustainable investment funds scale of which were 14% of the global total. The sustainable investment funds in Japan, Australia/New Zealand, Canada and Asia (except Japan) account for less than 5% of the global sustainable investment funds, however, these areas are still undergoing a period of rapid growth.

Given the development of sustainable investment in China, we set corresponding keywords according to the 17 sustainable development goals of the United Nations. We define funds that refer to the keywords related to sustainable development goals in their investment goals, investment strategies or investment principles as sustainable investments. Furthermore, we distinguish sustainable investment into core ESG and ESG thematic investments. Core ESG investments refer to investments that incorporate environmental, social and corporate governance factors into investment objectives, investment strategies or investment principles. ESG thematic investments refer to investments focus on thematic investments relating to the 17 sustainable development goals of the United Nations in its investment objectives, investment strategies or investment principles. Limited to data available, we only focus on funds in Mainland, China in this report. The major findings and conclusions of domestic sustainable investment is described below.

Actively managed funds contributed to the major increment of sustainable investment funds in China. Since 2009, the number, share and scale of sustainable investment funds have continuously increased and expanded. As of June 2021, there were 393 domestic sustainable investment funds with AUM of RMB 583.9 billion. In terms of the types of funds, from 2015 to June 2021, equity funds took the lead in growth from 47 to 140 with a proportion in sustainable investment funds that increased from 20% to 34%. In contrast, the proportion of hybrid funds decreased from 71% to 60%. From 2015 to June 2021, sustainable investment funds were dominated by actively managed funds which grew strongly and contributed to the major increment of sustainable investment funds.

There are further opportunities for the development of core ESG funds in China. If core ESG funds are defined based on the inclusion of ESG evaluation criteria in their investment strategies, as of September 30th, 2021, there were 11 actively managed ESG funds in the domestic public offering market including partial-equity hybrid funds and common stock funds. The total value of these funds was approximately RMB 23.3 billion. As of September 30th, 2021, there were 8 passively managed ESG funds in the domestic public offering market including enhanced and passive index funds with a total ESG fund scale of approximately RMB 1.5 billion.

Compared to core passive ESG funds, actively managed funds may deliver more value with a higher Sharpe Ratio. In terms of returns, not all core active ESG funds have performed well. Core passive ESG funds (we use the return of tracked indices by core passive ESG funds to calculate) have not generated significant excess returns compared to the benchmark the tracked indices based on. However, the Sharpe Ratio of core active ESG funds outperform their performance benchmark. These data indicate that considering ESG in the process of investment decision-making can enhance the returns of unit portfolio risk. The Sharpe Ratio of core passive ESG funds (we use the Sharp Ratio of tracked indices by core passive ESG funds to calculate) fails to exceed the benchmark the tracked indices based on. This may be because ESG indices supported by current ESG data cannot fully reflect non-financial risks which suggests that actively managed funds are more valuable for avoiding black swan events and preventing risks.

Thematic indices account for a higher percentage of ESG stock indices, whilst bond indices are dominated by green bonds. For both stock and bond indices, the percentage of thematic indices is higher than indices constructed based on ESG performance indicators. As of August 31st, 2021, there were 58 stock indices constructed based on environmental, social, and corporate ESG performance indicators and 118 thematic stock indices. Amongst the bond indices, there were 18 indices constructed based on ESG performance indicators and 67 thematic indices. From our observation, stock indices constructed based on each performance indicator apply the corporate governance element performance mostly, and thematic bond indices are dominated by green bonds.

Bank wealth management products focus on sustainable investment and bring huge potential. As of the end of June 2021, 74 bank wealth management products were issued in the domestic market. Based on publicly available data, the cumulative issuance of bank wealth management products reached RMB 46.7 billion. However, the HengFeng Bank Co., Ltd. and Suzhou Rural Commercial Bank Co., Ltd. did not disclose their product offering scale and thus were not counted. ESG bank wealth management products doubled in issuance size from 2019 to the first half of 2021 with a growth rate of nearly 160%. In terms of market share, due to its early practice of ESG investment, Huaxia Wealth Management Co., Ltd. issued a total of RMB 26.3 billion of ESG bank wealth management financial products as of the first half of 2021 that accounted for 56.5% of the bank wealth management products available in the market. In addition to bank wealth management, other domestic investors have set their eyes on ESG investment. The Professional Committee of Responsible Investment (ESG) of Insurance Asset Management Association of China and the Committee of Green and Sustainable Investment of Asset Management Association of China (hereinafter referred to as committee) were established on October 28th, 2021 and November 16th, 2021, respectively. With the application of ESG principles by domestic sovereign funds, social security funds, insurance funds and other asset owners and managers, it is foreseeable that the market penetration rate of ESG investment will be greatly enhanced.

3.1 Development of international sustainable investment

3.1.1 PRI signatory

In 2006, the United Nations Principles for Responsible Investment Association (PRI) was published in New York Stock Exchange. PRI is the most influential responsible investor organization in the world, which is committed to developing a more sustainable global financial system and implementing six responsible investment principles in the investment field. By becoming a PRI signatory, Asset Owner (AO), Asset Manager (AM) or Service Provider (SP) promise to incorporate ESG issues into the investment analysis and decision-making process, so as to encourage the investee to abide by and practice ESG requirements, and urge the investment sector to widely adopt and implement the principle of responsible investment. Therefore, the number of PRI signatories and the assets under management (AUM) reflect the global ESG awareness and future development trend. As of the start of 2020, there were over 3,000 (exactly 3,038) institutions which had signed the PRI, with the assets under management (AUM) of PRI signatories up to USD 103.4 trillion.

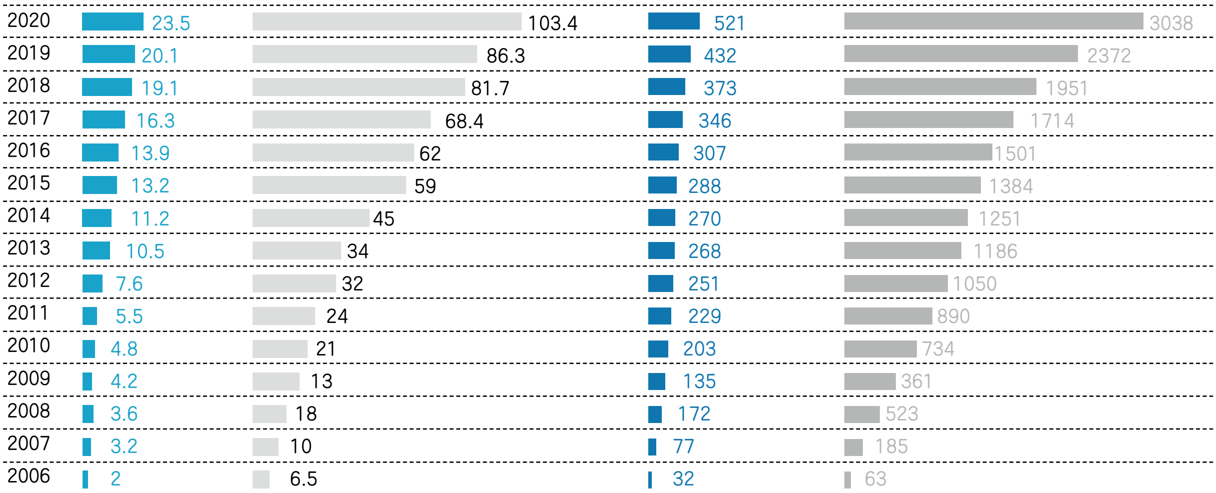

Fig.1 AUM and number of PRI signatories

AUM of AO signatories（USD trillions) AUM of all signatories (USD trillions) Number of AO signatories Number of all signatories

Source: Public information, PRI website

According to the type of PRI signatory organizations, 1. the number of asset owners steadily increased at a compound growth rate of about 22% per year. By 2020, the number of asset owners who have signed with PRI reached 521, and AUM reached USD 24 trillion. 2. the proportion of asset managers and service providers in the total number of signatories increased from 49% in 2006 to 83% in 2020. From 2006 to 2020, the average compound annual growth rate of the number of asset managers and service providers who have signed with PRI reached 37%. By 2020, the assets managed by the asset managers and service providers who signed PRI reached nearly USD 80 trillion.

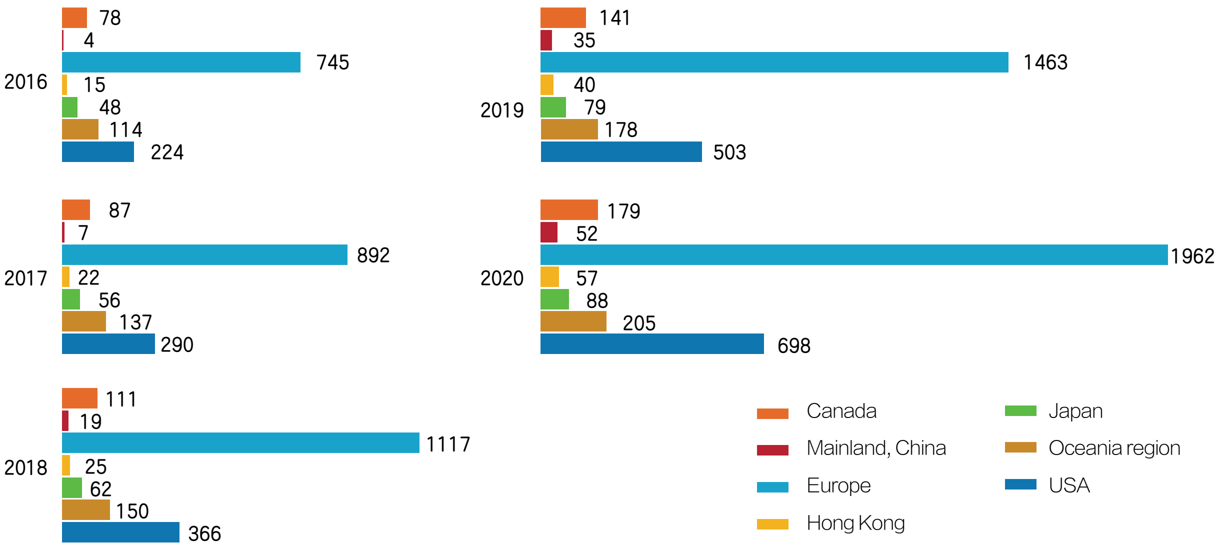

Fig.2 Number of PRI signatories by major economies

Source: Public information, PRI website

Specifically, with regard to the PRI signatures in major economies around the world, the number of signatories in Europe and the United States reaches a leading level, which are the main practitioners of responsible investment. By 2020, Europe has the largest number of responsible investment signatories (1,962), more than half of the total number. From 2018 to 2020, the number of signatories in Europe maintained a sustained and steady growth, while signatories in Europe increased by 225, 346 and 499 respectively in the past three years, taken together exceeding half of the overall increase. By 2020, the number of signatories in the United States reached 698, at an annual increase of more than 100 signatories in the past three years; the number of signatories in Canada reached 179, which maintained a sustained growth trend in recent years. Compared with Europe and North America, there is still room for growth in the total number and increment of signatories in the Asia-Pacific region (including Japan, Chinese Mainland and Hong Kong). By 2020, the total number remained at around 60, with an annual increment of more than 10 in the last three years. Responsible investment is gathering momentum in the Asia-Pacific region.

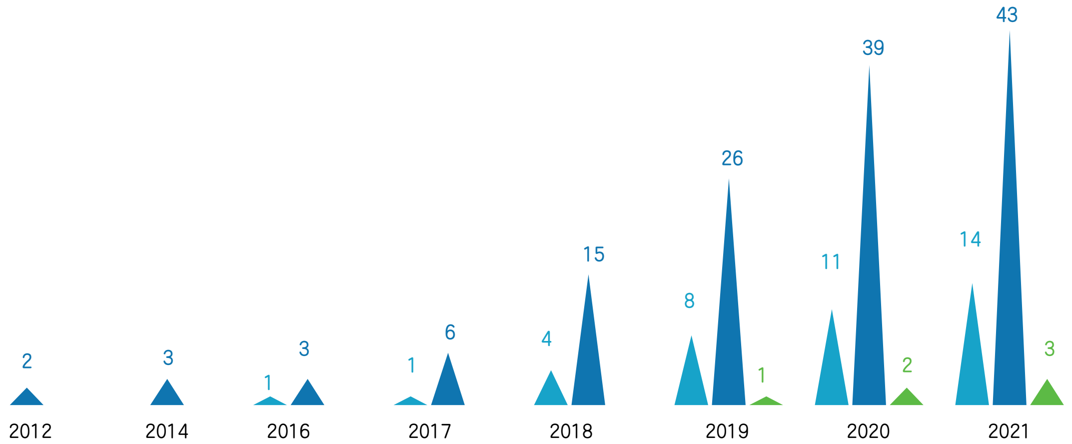

Fig. 3 Number of PRI signatories by type in Mainland, China

Source: Public information, PRI website

By June 2021, a total of 60 Chinese local institutions had joined PRI, including 14 service providers, 43 asset managers and 3 asset owners (Wu Capital, Ping An Insurance and Taikang Insurance). Since 2018, the number of Chinese institutions that have become PRI signatories has increased significantly, especially the number of asset managers, which increased from 15 to 43 in 2018, including 17 Public Offering of Fund companies. Large fund companies, such as China Southern Fund Management, E Fund Management, Harvest Fund, AEGON-INDUSTRIAL Fund Management, etc., have joined PRI and carried out ESG investment practice, and issued corresponding ESG thematic fund products. However, it is worth noting that at present, there are only three asset owners in China who have joined PRI. Compared with over 17% of asset owners who signed up with PRI around the world, there is still a big gap in terms of the practice of responsible investment between China's asset owners and that of the world. At present, some asset owners in China have gradually become aware of ESG's investment philosophy. China's long-term investors, represented by insurances, have begun to take action in ESG investment sector, and China's social security fund pays close attention to ESG investment. From the policy aspect, guiding the asset owners represented by sovereign funds, pensions, etc. to adopt ESG principles as soon as possible can effectively stimulate the investment community to become aware of ESG concepts and enhance the market participation of ESG investment.

3.1.2 AUM and strategy of global sustainable investment

In 2021, sustainable investment continued to prevail in the global investment sector. The Global Sustainable Investment Review 2020 released by the Global Sustainable Investment Alliance (hereinafter referred to as "GSIA") shows that the global sustainable investment assets reached USD 35.3 trillion at the beginning of 2020. In 2018-2020, the compound annual growth rate reached 16%, and the sustainable investment AUM as of 2020 was equivalent to 36% of all AUM in the regions covered by the report (America, Europe, Canada, Japan and Oceania). The report shows that in addition to the growth in sustainable investment AUM, the rapid development in various regions is reshaping sustainable investment, and increasing attention is paid to promoting the best ESG investment and practice.

3.1.2.1 AUM of global sustainable investment

Since 2014, the AUM of global sustainable investment has been developing rapidly, from USD 18.2 trillion in early 2014 to USD 35.3 trillion in 2020. The compound annual growth rate of sustainable investment AUM is as high as 12%, twice the overall growth rate in global AUM of 6%. From 2014 to 2020, the proportion of sustainable investment in all investment assets increased year by year, from 25.7% to 35.9%, which means that by 2020, more than one third of the global funds were invested in sustainable assets.

From 2018 to 2020, the first-mover advantage of Europe and America enables the AUM of sustainable investment in the two regions continue to account for more than 80% of global sustainable investment assets. Europe has always been the leader and promoter of sustainable investment, and its proportion of sustainable investment ranks first in the world for a long time. However, with the sustainable investment in the US market accounting for 58% of that around the world in 2020 and the proportion of sustainable investment in Europe dropping to 34%, the United States has replaced Europe as the region with the largest sustainable investment. It should be noted that,the fall of sustainable investment AUM in 2020 in Europe is associated to the adoption of a more restrictive definition of sustainable investment in SFDR. In addition, it also shows a strong development trend in the sustainable investment market in Canada, Japan and Oceania regions. From 2018 to 2020, the growth of sustainable investment in Canada is the strongest, with a growth rate of 48% over two years. The AUM of regional sustainable investment in Japan increased rapidly since 2014, at a compound annual average growth rate of 168% over the six years from 2014 to 2020, ranking first among major regions in the world. In 2020, the AUM of sustainable investment in Japan has also surpassed Canada and Oceania, ranking third in the world. Japan Government Pension Investment Fund (GPIF) is an important practitioner of ESG investment. As an asset owner, GPIF became a signatory of the PRI in 2015. Hiro Mizuno, executive managing director and chief investment officer of GPIF, said: "GPIF is a long-term inter-generational investor with a time span of 100 years, and it encourages long-termrism rather than short-term performance. It integrates ESG into each investment it has made, regardless of asset category or region”. The regulatory of Japan has issued and amended ESG and sustainablity related policies in recent years and attaches great importance to sustainability, which caused the bound of sustainable investment.

In terms of the proportion of sustainable investment assets in all investment assets in various regions, Canada is the market with the highest proportion of sustainable investment assets up to 62%, followed by Europe (42%), Oceania (38%), the United States (33%) and Japan (24%).

Table 8 Sustainable investment assets by region

USD billions								
	2014	2016	2018	2020	YoY growth rate			Compound annual growth rate
					2014–2016	2016–2018	2018–2020	2014–2020
Europe	10,775	12,040	14,075	12,017	12%	11%	−13%	1%
USA	6,572	8,723	11,995	17,081	33%	38%	42%	17%
Canada	729	1,086	1,699	2,423	49%	42%	48%	21%
Oceania	148	516	734	906	248%	46%	25%	36%
Japan	7	474	2,180	2,874	6692%	307%	34%	168%
Global sustainable Investment assets	18,231	22,839	30,683	35,301	25%	34%	15%	12%
Global investment assets	70,720	81,948	91,828	98,416	16%	12%	7%	6%
Global penetration rate of sustainable investment assets	25.70%	27.90%	33.40%	35.90%	8%	20%	7%	6%

Source：GSIA

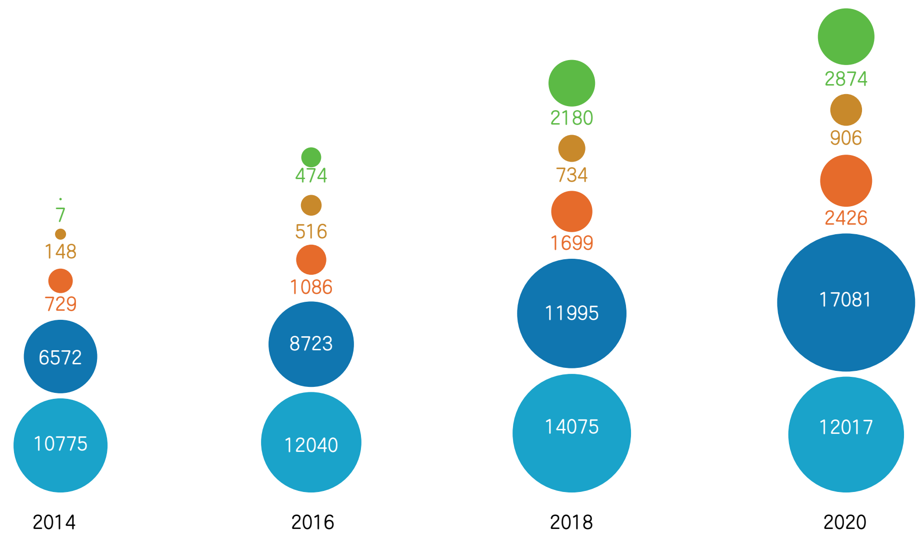

Fig. 4 Sustainable investment assets by region in 2014–2020

Canada Europe Japan Oceania USA AUM (USD billions)

Source：GSIA

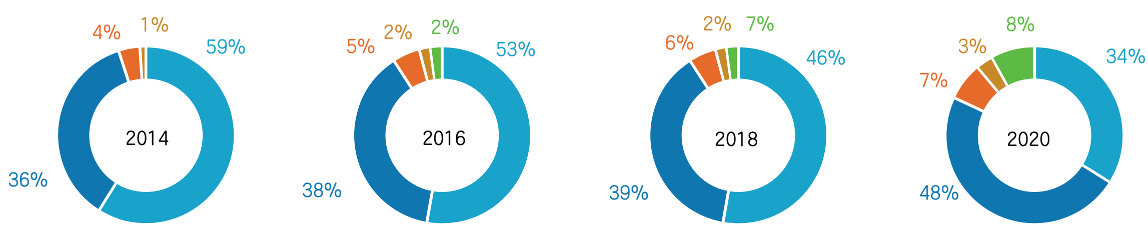

Fig. 5 Regional shares in global sustainable investment assets in 2014–2020

Canada Europe Japan Oceania USA

Source：GSIA

3.1.2.2 Global sustainable investment strategy

ESG investment strategy includes seven different strategies: negative screening, ESG integration, shareholder engagement strategy, norms-based screening, positive screening, sustainability thematic investment and impact investment. According to the GSIA report, in 2020, the size of ESG integration strategy investment exceeded negative screening for the first time. The overall size of the negative screening strategy continued to rise from 2012 to 2018, and it maintained its leading position among different strategies, but its size dropped back to the level of 2016 in 2020. However, the size of ESG integration strategy has always been in the forefront of all strategies and is growing rapidly, and it became the largest sustainable investment strategy in 2020. It demonstrates that along with enhanced awareness of the ESG sustainability concept and increased ESG investment practice, increasing institutions have adopted the ESG integration strategy, systematically integrating environmental protection, social responsibility and corporate governance elements into traditional financial analysis framework. In addition, the size of shareholders participation strategy is also on the rise with time. It can be inferred that more and more institutions will fully exercise shareholders' rights and facilitate the efforts of the investee to attach importance to ESG issues by attending shareholders' meetings and communicating with the board of directors or management. The AUM of sustainability thematic investment is small by comparison, but like ESG integration and shareholder engagement strategy, its AUM has been growing steadily since 2012, which is the fastest growing strategy in the two years over 2016 - 2018. The AUM of norms-based screening, positive screening and impact investment shows a trend of rising before declining, where the AUM of norms-based screening investment reached a high point in 2016, and then gradually declined. Positive screening and impact investment reached a high point and declined in 2018.

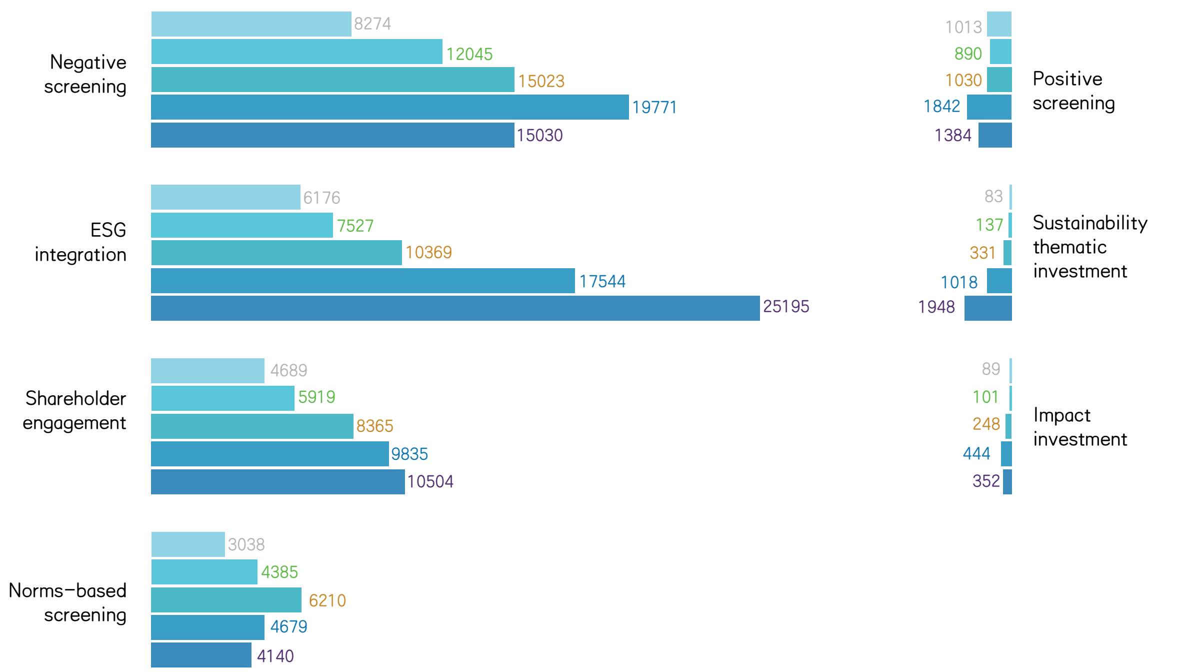

Fig. 6 Sustainable investment assets by strategy in 2012-2020

2012 2014 2016 2018 2020 (USD billions)

Source: GSIA

With a forward-looking view, we believe that the ESG integration strategy will develop steadily, replace negative screening strategies, and become a more popular strategy for established institutions to practice ESG investment. Secondly, the shareholder engagement strategy can be combined with other strategies to facilitate the investee's effort in improving ESG performance through active ownership. Finally we consider sustainability thematic investment strategies as important starting points for investment institutions to differentiate their products and build their competitiveness.

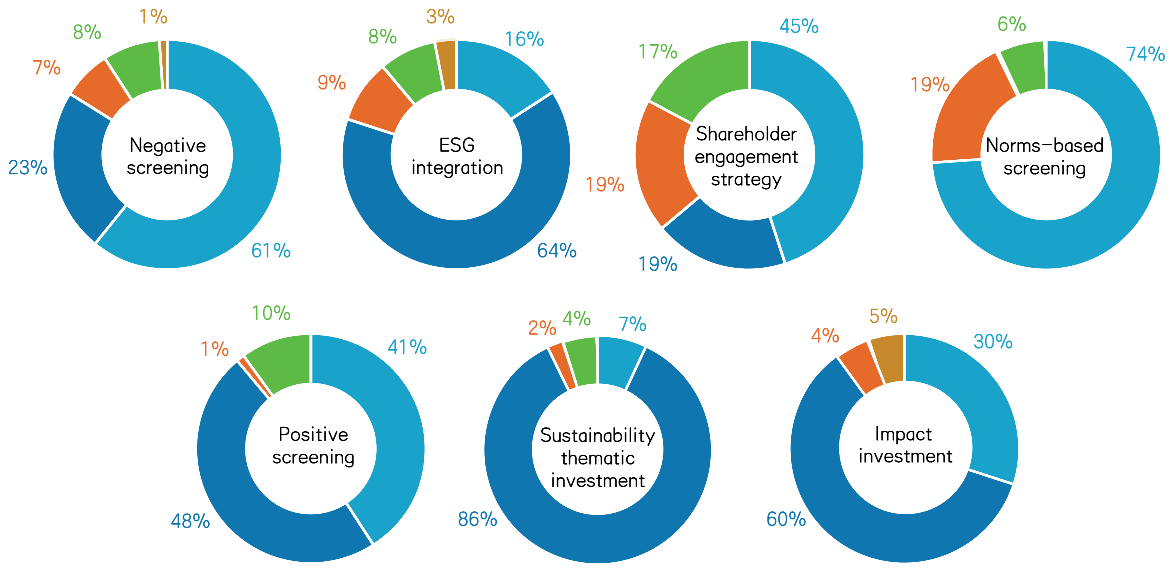

Fig. 7 Regional shares of global sustainable investments by strategy as of 2020

Source：GSIA

In terms of the implementation of strategies in various regions, the United States has an absolute advantage in impact investment and sustainability thematic investment, accounting for 60% and 86% of the size of corresponding global strategies respectively. Due to the rapid development of ESG integration strategy, the proportion of it in the United States ranks the highest in the world, reaching 64%. The size of negative screening strategy in Europe accounts for 61% of that around the world, ranking first. At the same time, European investors prefer shareholder engagement strategy by fully exercising shareholder power and practicing ESG concept through active ownership and proxy voting. There are diverse types of investment strategies in Canada and Japan, among which norms-based screening and shareholder engagement strategies account for a relatively high proportion. Oceania's sustainable investment strategy is less diverse, focusing on impact investment, ESG integration, negative screening, etc. The diversification in Oceania's investors’ strategy and the investment size of each strategy have room to progress.

3.1.3 Number and AUM of global sustainable investment funds

According to Morningstar, the aggregate amount of sustainable investment funds in five major regions over the world as of Q2 2021 is up to USD 2.24 trillion and the number of funds is up to 4,929. By region, Europe is still a key player in sustainable investment and maintains its leading role. Its sustainable investment funds size as of the end of Q2 2021 is nearly 82% of global total, and it has an absolute advantage over the second ranking US, the sustainable investment funds size of which is 14% of global total. As of today, the sustainable investment funds in Japan, Australia/New Zealand, Canada and Asia (except Japan) account for a relatively small size, less than 5% of the global sustainable investment size, and are still in a period of rapid growth.

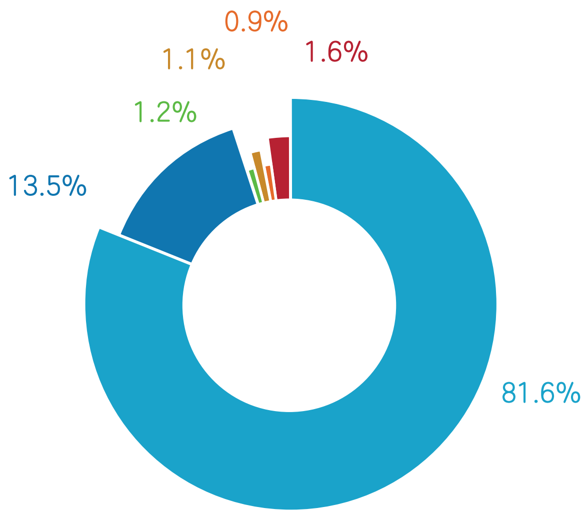

Fig.8 Sustainable investment funds by region as of 2020Q2

Source：Morningstar

The AUM of global sustainable investment funds as of the first quarter of 2020 was not affected by COVID-19 pandemic. Compared with the first quarter of 2020, the AUM of global sustainable investment funds doubled, with a growth rate of 168%. Regionally, the number of sustainable investment funds in Europe increased at an average rate of nearly 240.4 per quarter, and the size of sustainable investment funds management increased by 1.68 times. In the past year and a half, the number of sustainable investment funds in the United States showed a steady growth trend, with an average increase of 26 per quarter, and the size of sustainable investment funds increased by 1.55 times. In addition, Asia (excluding Japan) and Canada enjoyed the fastest growth rate in terms of sustainable investment size, reaching 387% and 301% respectively, with an average quarterly increase of 39 and 10.2 funds. The growth rate in sustainable investment size in Australia/New Zealand was in the second echelon, reaching 217%, with an average increase of 9.6 funds per quarter. The growth rate of sustainable investment in Japan was the lowest, at 98%, with the number of sustainable investment funds increased by 1.2 every quarter.

Source: Morningstar

Fig. 9 AUM of sustainable investment funds by region in 2020Q1–2021Q2

Canada Europe Japan Australia/New Zealand USA Asia (excluding Japan)

Size (USD 100 millions) Source: Morningstar

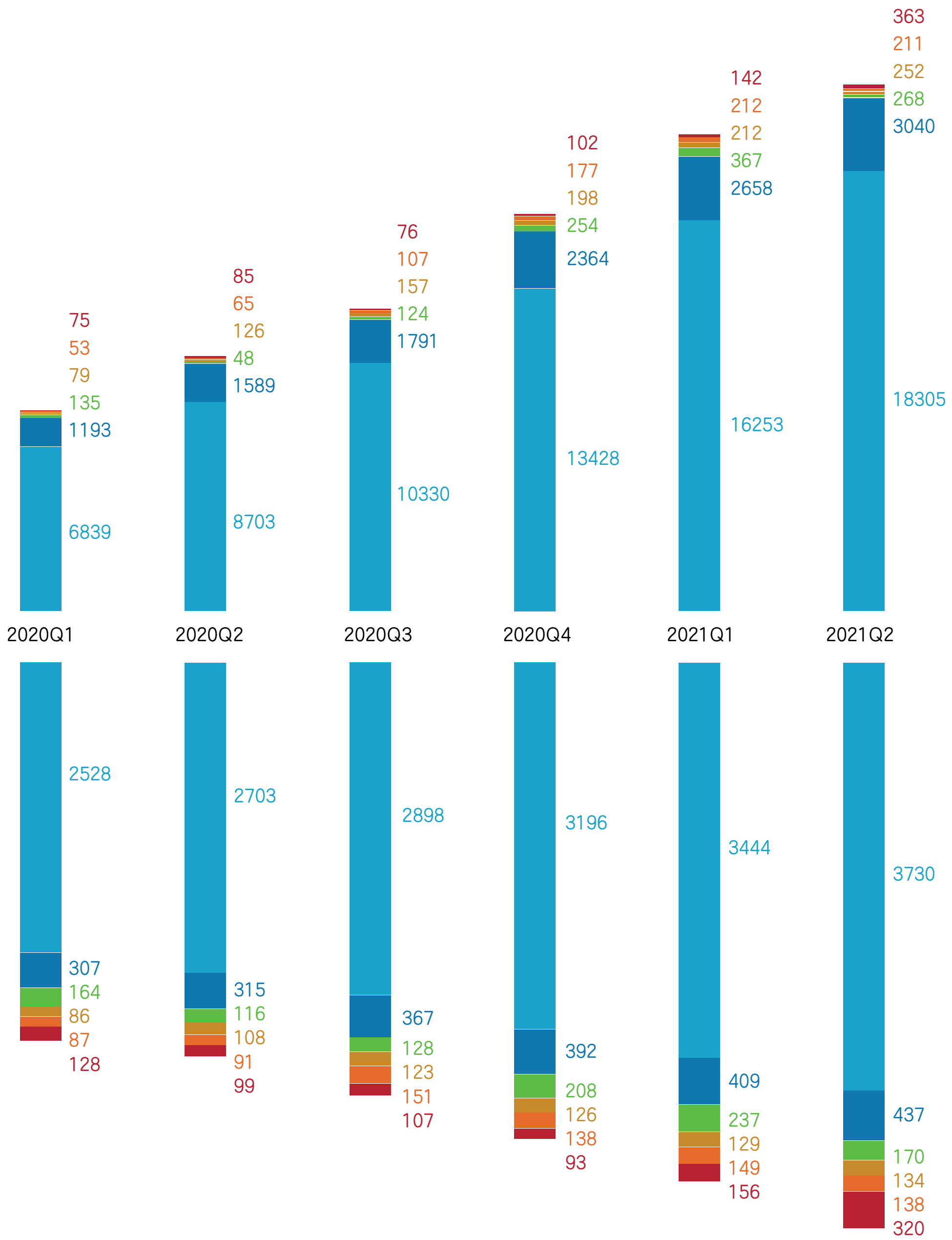

Fig. 10 Number of sustainable investment funds by region in 2020Q1–2021Q2

Canada Europe Japan Australia/New Zealand USA Asia (excluding Japan)

Source: Morningstar

3.2 Development of domestic sustainable investment

3.2.1 Domestic sustainable investment funds

When screening domestic sustainable investment funds, we define investment funds that incorporate UN's sustainable development goals into their investment goals, investment strategies or investment principles as sustainable investments. In addition, this Report divides sustainable investment into core ESG investment and ESG thematic investment. Among them, the core ESG investment refers to the incorporation of environmental, social and corporate governance factors into investment objectives, investment strategies or investment principles; while ESG thematic investment means any investment that focuses on thematic investments related to the 17 sustainable development goals of the United Nations in its investment objectives, investment strategies or investment principles. This Report screens domestic ESG thematic investment funds and manually reviews them according to the theme keywords corresponding to the following 17 sustainable development goals of the United Nations.

Table 9 Key words in sustainability thematic investments

Sustainable Development Goals	Definition	Key words
SDG1	End poverty in all its forms everywhere.	Poverty alleviation
SDG2	End hunger, achieve food security, improve nutrition and promote sustainable agriculture.	Agriculture
SDG3	Ensure a healthy lifestyle and promote the well-being of people of all ages	Medical treatment, quality life, healthy life, healthy and quality life.
SDG4	Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.	Education, study
SDG5	Achieve gender equality and empower all women and girls.	Women, female
SDG6	Ensure availability and sustainable management of water and sanitation for all.	Renewable dnergy, clean energy
SDG7	Ensure access to affordable, reliable and sustainable modern energy for all.	Low carbon, environmental protection, energy, new energy, green, environment, energy saving, clean, beautiful China, ecology, PV.
SDG8	Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.	Governance, new drivers, new thinking, excellent enterprises, high quality.
SDG9	Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.	Technology, infrastructure, innovation
SDG10	Reduce inequality within and among countries	Responsibility
SDG11	Make cities and human settlements inclusive, safe, resilient and sustainable	Cities
SDG12	Ensure sustainable consumption and production patterns	Consumption upgrading, quality upgrading and sustainability
SDG13	Take urgent action to combat climate change and its impact.	Climate change
SDG14	Conserve and sustainably use the oceans, seas and marine resources for sustainable development	Ocean
SDG15	Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.	–
SDG16	Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.	Society, social responsibility
SDG17	Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development.	–

Screening of the domestic Public Offering of Fund in Mainland, China according to the above criteria shows that, as of June 2021, there were 393 domestic sustainable investment funds, with a total fund share of over 362.1 billion and total assets amounting to RMB 583.9 billion. Since 2009, the quantity, share and size of sustainable investment funds have been increasing continuously through three stages of development.

In 2006, Shenzhen Stock Exchange issued Guidelines for Social Responsibility of Listed Companies, and in 2008, Shanghai Stock Exchange issued Notice on Proper Preparation of 2008 Annual Report of Listed Companies to encourage listed companies to disclose CSR, where the concept of responsible investment began to emerge in China. In April 2008, Xingquan Social Responsibility, China's first sustainable fund, was established. In the following four years, from 2009 to 2013, the growth of sustainable investment funds was relatively slow, the number of funds increased by only 40, and the size of sustainable investment funds increased by 87%. At this stage, the acceptance of responsible investments in China was relatively low, and ESG investment has not been widely spread in China.

With the revision of the Environmental Protection Law in 2014, in 2016, the People's Bank of China, together with six other ministries and commissions, jointly issued the Guiding Opinions on Building a Green Financial System, encouraging the use of capital guidance and financial instruments to build a green financial market, and improving the mandatory environmental disclosure system of green creditor's rights issuers and listed companies. All sectors of society gradually realized the importance of green investment and ESG sustainable investment. During the four years from 2014 to 2018, the growth rate of sustainable investment funds accelerated, the number of funds increased by 136 and the size of sustainable investment funds increased by 1.7 times.

In 2020, General Secretary Xi Jinping solemnly announced at the United Nations General Assembly that China will strive to achieve the peak of carbon emissions by 2030 and carbon neutrality by 2060. Under the background of the carbon peak and neutrality policy, combined with the rapid development of capital market brought by residents' asset allocation demand, the development of ESG investment in China enters into strong enhancement stage. From 2019 to the end of June 2021, the quantity of sustainable investment funds increased by 117, and the total AUM increased by 46%, of which the total size of funds increased by more than RMB 100 billion from 2019 to 2020. With the popularization and further development of ESG responsible investment, China's sustainable investment funds continued to flow in and showed great development momentum.

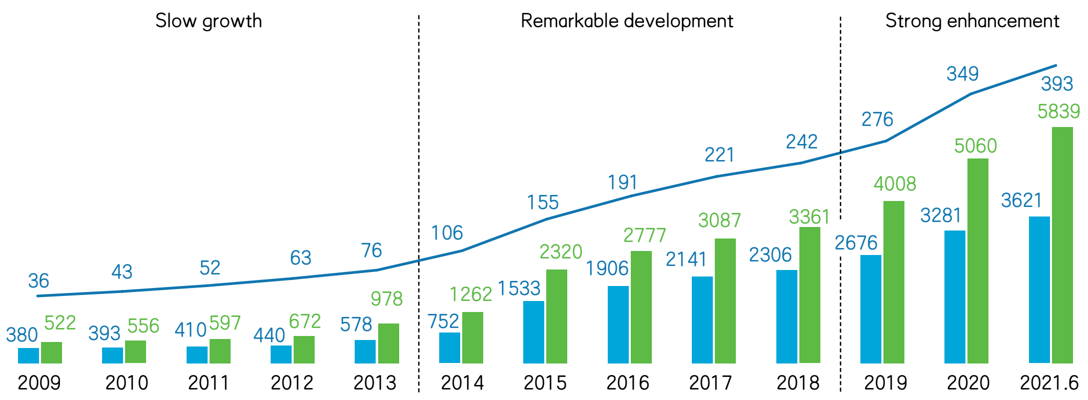

Fig.11 Sustainable funds in China in 2009–2021Q2

Share (100 millions) AUM (RMB 100 millions) No. of funds

In terms of investment types, as of June 2021, 393 sustainable investment funds were predominantly composed by hybrid (stock-based hybrid, debt-based hybrid, flexible allocation type) and stock type (common stock type, index type and index-enhanced type). The number of these two types of funds was 140 and 232 respectively, and the corresponding size was RMB 352.4 billion and RMB 198.7 billion respectively, accounting for 60% and 34% of all funds. There are only six bond-based sustainable investment funds (including pure bond based, hybrid bond based and bond index based types), with a size of RMB 27.4 billion, accounting for a relatively small proportion and presenting large growth potential.

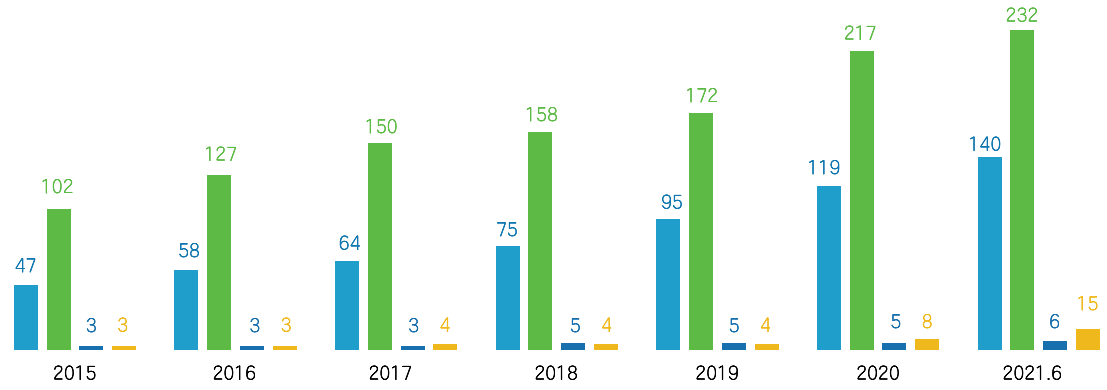

Fig. 12 Number of sustainable investment funds by type in 2015-2021Q2

Stock-based type Hybrid type Bond-based type Other types

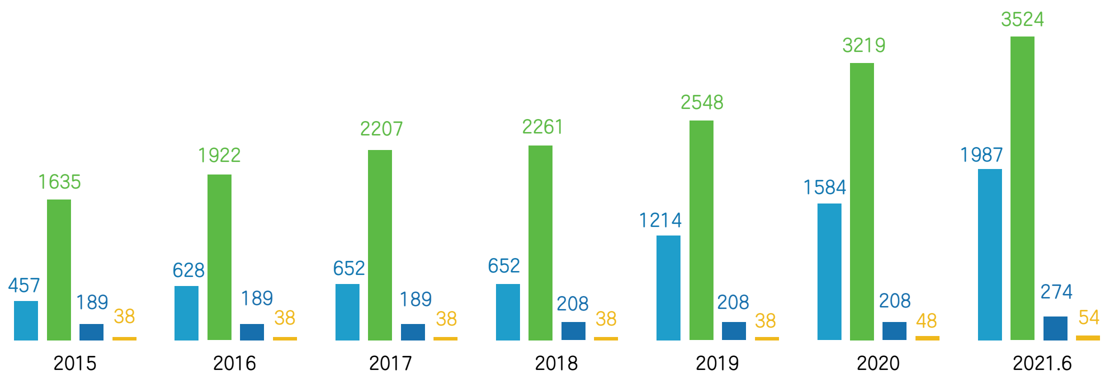

Fig. 13 AUM of sustainable investment funds in 2015-2021Q2

Stock-based type Hybrid type Bond-based type Other types (RMB 100 millions)

From 2015 to June 2021, equity funds took the lead in growth from 47 to 140, whose proportion in sustainable investment funds rose from 20% to 34%. In contrast, the proportion of hybrid funds decreased slightly from 71% to 60%.

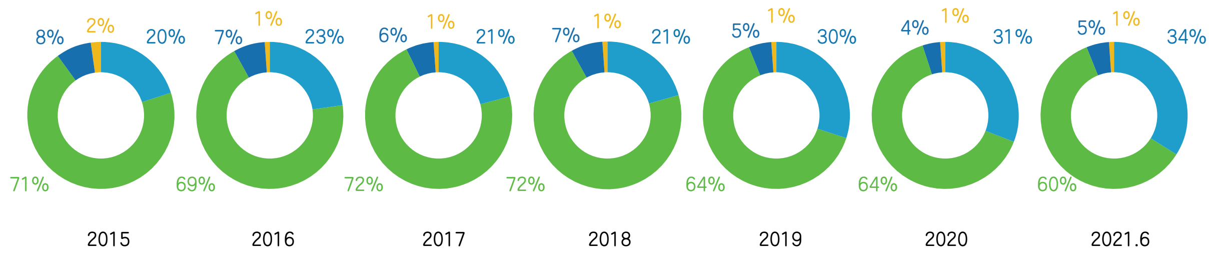

Fig. 14 Sustainable investment funds by type in 2015-2021Q2

Stock-based type   Hybrid type   Bond-based type   Other types

Based on a more detailed classification of funds, as of June 2021, the 393 sustainable investment funds are dominated by the stock-based hybrid funds, common stock funds and stock index funds, with the quantity being 146, 74 and 64 respectively, and the corresponding size being RMB 293.1 billion, RMB 120.9 billion and RMB 76.9 billion respectively. The number and AUM of other types of funds are small.

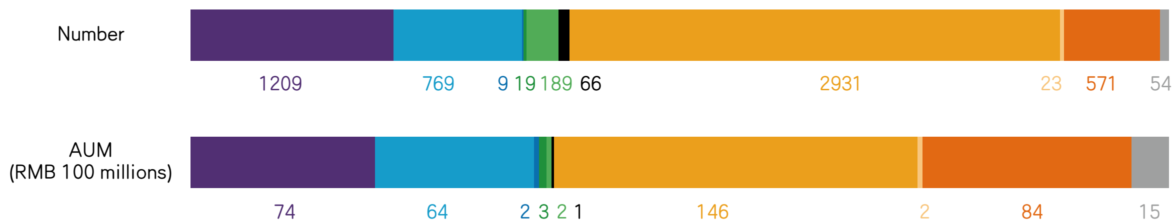

Fig.15 Sustainable investment funds as of 2021Q2
(based on secondary investment type)

Common stock type   Stock enhanced index type   Mixed bond type   Stock-based hybrid fund   Flexibly allocated fund
Stock index type   Pure bond type   Bond index type   Debt-based hybrid fund   Others

From the perspective of active funds and passive funds, from 2015 to June 2021, sustainable investment funds were mainly active management type, while active management maintaining a rapid growth trend. The number of active management funds increased from 130 to 326, at an increase rate of 1.5 times; At the same time, its size increased from RMB 201.6 billion to RMB 499.5 billion, with a compound annual growth rate of 16% at a strong development momentum. It contributed to the major increment in sustainable investment funds. In recent years, passive index funds are attracting more and more interest by the capital market, and are developing in quantity, share and size. From 2015 to June 2021, the annual compound growth rate of passive index funds reached 15%, which did not exceed that of active management funds. The proportion of passive index funds in all sustainable investment funds decreased slightly from 16% in 2015 to 15% at the end of June 2021, but the number of passive index funds increased by 1.7 times, showing great growth potential.

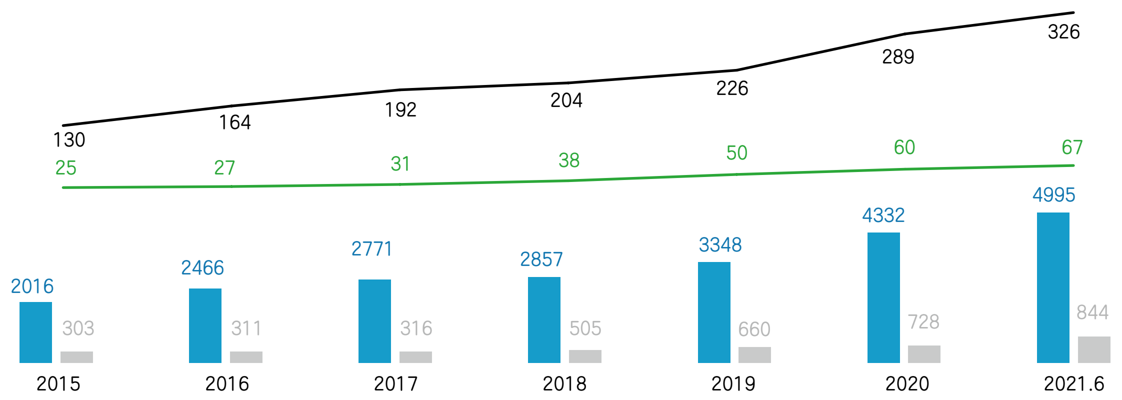

Fig. 16 Active and passive sustainable investment funds in 2015-2021Q2

3.2.2 Domestic ESG index

ESG index is an important measure for ESG investment development. We sort out the market ESG index issued in Mainland, China according to our definition of sustainable funds above. As of August 30, 2021, there were 263 ESG indices issued in the market, and tracked by 91 funds with a fund size of RMB 74.5 billion. Although the number of ESG indices was considerable, the tracker fund products were still small in size, so there is room for ESG investment to be recognized in the market. The institutions that issue most ESG indeices are China Securities Index and China Bond Index. Among them, the bond index is mainly published by China Securities Index and China Bond Index; The distribution of the issuers of the stock index are scattered, constituted by China Securities Index, Wind, China Securities Index, Changjiang Securities and Sino-Securities Index.

Table 10 ESG index and AUM of tracker fund

Index issuer	Multi-asset	Stock	Bond	Total	Number of tracker funds	AUM of tracker fund (RMB 100 millions)
National Inter-Bank Funding Center	-	-	2	2	0	0
Wind	-	48	-	48	0	0
Caitong Securities	-	1	-	1	0	0
Everbright Trust	-	1	-	1	0	0
Sinolink Securities	-	4	-	4	0	0
CNI Index	-	18	3	21	14	78
Hang Seng Index	-	2	-	2	0	0
Sino-Securities	-	10	-	10	0	0
China Minsheng Bank	1	-	-	1	0	0
Shanghai Clearing House	-	-	1	1	0	0
Shenwan Index	-	5	-	5	0	0
Xinhua Finance	-	1	-	1	0	0
Great Wall Securities	-	5	1	6	0	0
Changjiang Securities	-	18	-	18	0	0
China International Capital Corporation Limited	-	1	-	1	0	0
CITIC Securities	-	6	-	6	0	0
ChinaBond Indices	-	-	63	63	0	0
China Securities Index	1	56	15	72	77	667
Total	**2**	**176**	**85**	**263**	**91**	**745**

ESG index can be divided into two categories, one is derived from constituent stock screening based on one, two or three performance indicators in terms of environment, society and corporate governance. The other one is thematic index, which mainly includes sustainability, carbon neutrality, energy conservation and environmental protection, the belt and road initiative and poverty alleviation etc.

Among the stock indices, the thematic index accounts for a relatively high proportion. There are 58 indices established based on the corresponding performance indicators in terms of environment, society and governance, and 118 thematic indices. Among them, in the indices established based on various performance indicators, the corporate governance elements are used relatively more; while in thematic indices, energy conservation and environmental protection themes account for a relatively high proportion. Among the bonds, the thematic index accounts for a relatively high proportion. There are 18 indices based on ESG performance indicators and 67 thematic indices. Among them, the thematic index is dominated by green bonds.

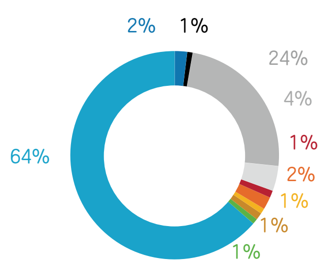

Fig. 17 ESG stock indices by type

E ES ESG G S SG
Theme: Sustainability
Theme: the belt and road initiative
Theme: Poverty alleviation and development
Theme: Energy conservation and environmental protection

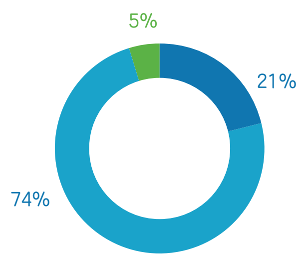

Fig.18 ESG bond indices by type

ESG
Theme: Green bond
Theme: Rural revitalization

3.2.3 Domestic ESG bank wealth management products

Bank wealth management is a new driving force for sustainable development in China. On the one hand, bank wealth management takes ESG and other factors into corporatre evaluation, which makes corporate evaluation more comprehensive and all-rounded, therefore is conducive to supporting the country to achieve its sustainable development goals; on the other hand, as the representative of asset managers, bank wealth management, by entrusting a special account to make ESG responsible investment, guides the recognition and interest toward ESG investment concept in the investment community.

According to banks' wealth management product manuals, ESG series wealth management products intend to implement the ESG investment through the following ways: innovative technology development, consumption upgrading, green technologies, health & medicine and other sectors, while taking into account the sectors of poverty alleviation, rural revitalization, supporting small and micro enterprises, the belt and road initiative, high-quality development and so on.

In April 2019, Huaxia Bank issued the first ESG thematic bank wealth management product in China, namely, the

Longying Fixed Income ESG Concept Wealth Management Product No.01. With the development of the concept of sustainable investment, ABC Wealth Management Co., Ltd., Jianxin Wealth Management Co., Ltd., Everbright Wealth Management Co., Ltd. and other companies joined efforts in ESG product issuance. As of the end of June 2021, 74 bank financial products were issued in the domestic market, and according to publicly available data, the cumulative issuance of financial products reached RMB 46.7 billion (HengFeng Bank Co., Ltd. and Suzhou Rural Commercial Bank Co., Ltd. did not disclose their product offering scale and thus were not counted, and only products issued in Mainland, China were considered). ESG bank wealth management products doubled in size from 2019 to the first half of 2021, with a growth rate of nearly 160%.

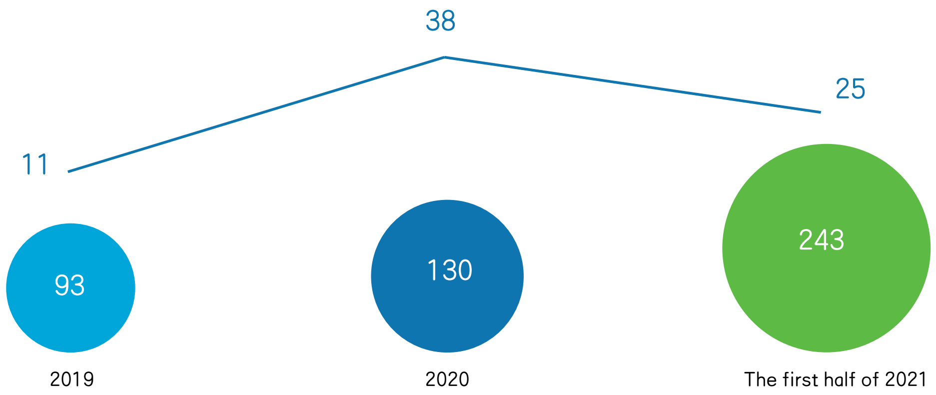

Fig. 19 ESG bank wealth management products in 2019-2021Q2

AUM of products issued (RMB 100 millions) Number of products issued

In terms of market share, Huaxia Wealth Management Co., Ltd. issued ESG bank wealth management products amounting to RMB 26.3 billion as of the first half of 2021, accounting for 56.5% of the market share, followed by Agricultural Bank of China Wealth Management Co., Ltd., which issued ESG bank wealth management products amounting to RMB 17.9 billion, accounting for 38.4% of the market share.

3.3 Domestic core ESG funds

This Report further highlights the analysis of the number, size and performance of core ESG funds (active management type and passive index type).

3.3.1 Domestic core active ESG funds

If ESG funds are defined based on whether their investment strategies include ESG rating criteria, as of September 30, 2021, there were 11 active management ESG funds in the domestic public offering market, including both partial-equity hybrid funds and common stock funds, with a total ESG fund scale of approximately RMB 23.3 billion. Among them, the earlier issued ESG fund is Xingquan Green Investment Fund, with a size of RMB 10.2 billion. With the development of ESG investment, another two, four and four core ESG thematic funds were established in 2019, 2020 and 2021 respectively.

From the perspective of ESG strategy, the most frequently used strategies are negative screening, positive screening, ESG integration or similar strategies. On this basis, China Southern Asset Management ESG Fund and China Universal Asset Management ESG implement ESG integration strategy; China Southern Asset Management ESG Fund practices shareholder engagement strategy; AXA SPDB Investment Managers ESG responsible investment and Sinolink ESG practice ESG momentum or improvement strategy for sustainable growth.

From the perspective of ESG rating system, E Fund ESG responsible investment, China Southern Asset Management ESG theme, Morgan Stanley ESG quantified antecedent, Founder Fubon ESG themed investment, TruValue ESG responsible investment, AXA ESG responsible investment, Golden Eagle responsible investment, China Universal Asset Management ESG sustainable growth and Sinolink ESG sustainable growth have elaborated on their key ESG indicators in detail. Among them, Xingquan Green Investment only considers environmental performance evaluation; The Sinolink ESG sustainable growth focuses on the responsibility evaluation system, which includes four aspects: profit responsibility, sustainable development responsibility, social responsibility and management responsibility.

Table 11 Core active ESG funds

Fund code	Short name of fund	Foundation dFoundation date	AUM (RMB 100 millions)	ESG strategy	Characteristics of evaluation system	Benchmark
163409.OF	Xingquan Green Investment	2011-5-6	102.2	Negative screening method, positive screening method	Quantitative environmental performance evaluation, banning investment in companies that cause serious pollution to the environment.	Industrial Securities ESG Profit 100 Index Yield *80%+ CSI government bond index Yield *20%

Table 11 Core active ESG funds (continued)

Fund code	Short name of fund	Foundation dFoundation date	AUM (RMB 100 millions)	ESG strategy	Characteristics of evaluation system	Benchmark
007548.OF	E Fund ESG responsible investment	2019-9-2	3.8	Negative screening, ESG evaluation system	Quantitative ESG evaluation, in which environmental and social (E&S) indicators account for about 40% of ESG evaluation weight, and corporate governance (G) indicators account for about 60% of ESG evaluation weight.	China MSCI A-share index yield *70%+ CSI Hong Kong Stock Connect Composite Index yield *15%+ China Bond Total Index yield *15%
008264.OF	China Southern Asset Management ESG Fund theme	2019-12-19	12.5	ESG screening strategy, shareholder activism strategy and integration strategy	Quantitative ESG evaluation, excluding stocks with ESG comprehensive score less than 0, to ensure that no ESG-related negative events have occurred in the stocks entering the pool recently.	CSI Zhongcai Shanghai and Shenzhen 100ESG Leading Index Yield *75%+ SSE government bond index Yield *15%+ CSI Hong Kong Stock Connect Composite Index (RMB) Yield *10%
009246.OF	Morgan Stanley ESG quantified antecedent	2020-7-16	4.4	"Blacklist System" and "Whitelist System"	ESG evaluation system, one-vote veto for key factors	CSI Zhongcai Shanghai and Shenzhen 100ESG Leading Index Yield *80%+ CSI Composite Bond Index Yield *20%
009872.OF	Sino-European responsible investment	2020-9-10	63.3	Negative screening and positive scoring	Meet the requirements of environmental protection, improve corporate governance and actively fulfill social responsibilities.	MSCI China A Inclusion Index yield *70%+ bank deposit interest rate (after tax) *20%+ CSI Hong Kong Stock Connect composite index yield *10%
010070.OF	Founder Fubon ESG themed investment	2020-12-28	1.7	Negative list, comprehensive evaluation	Quantitative ESG evaluation, in which environmental and social (E&S) indicators account for about 40% of ESG evaluation weight, and corporate governance (G) indicators account for about 60% of ESG evaluation weight.	CSI Zhongcai Shanghai and Shenzhen 100ESG Leading Index Yield *70%+ China Bond Composite Index Yield *20%+ Hang Seng Index Yield *10%
011149.OF	TruValue ESG responsible investment	2020-12-30	0.2	The combination of traditional investment and ESG related concepts	ESG evaluation system, forming a "AAA-CCC" nine-level rating system, with companies rated above B (including B) included into the candidate library for ESG responsible investment.	CSI 800 Index Yield *80%+ CSI Hong Kong Stock Connect Composite Index Yield *10%+ RMB deposit interest rate (after tax) *10%
009630.OF	AXA SPDB Investment Managers ESG responsible investment	2021-3-16	21.0	Exclusion strategy, negative screening, momentum strategy	Quantitative ESG evaluation	China MSCI A-share index yield *70%+ CSI total debt index yield *20%+ Hang Seng index yield (converted based on valuation exchange rate) *10%

Table 11 Core active ESG funds (continued)

Fund code	Short name of fund	Foundation dFoundation date	AUM (RMB 100 millions)	ESG strategy	Characteristics of evaluation system	Benchmark
011155.OF	Golden Eagle responsible investment	2021-3-16	0.6	Negative screening and positive rating	ESG evaluation system	Shanghai and Shenzhen 300 Index Yield *70%+ China Bond Total Wealth (Total Value) Index Yield *20%+ CSI Hong Kong Stock Connect Composite Index Yield *10%
011122.OF	China Universal Asset Management ESG sustainable growth	2021-6-10	19.2	Negative screening, positive screening, ESG integration strategy	ESG evaluation system	China MSCI A-share index yield *60%+ Hang Seng index yield (adjusted by exchange rate) *20%+ China Bond Composite Index yield *20%
012387.OF	Sinolink ESG sustainable growth	2021-7-20	3.8	Negative screening, ESG improvement, ESG integration	Responsibility evaluation system includes four aspects: profit responsibility, sustainable development responsibility, social responsibility and management responsibility.	CSI Zhongcai Shanghai and Shenzhen 100ESG Leading Index Yield *60%+ CSI Total Bond Index Yield *30%+ CSI Hong Kong Stock Connect Composite Index (RMB) Yield *10%

Note: The AUM is the sum of series A funds and series C funds.

According to the Wind's industry classification, we counted the numbers of various sectors appearing in the top ten positions of 11 core active ESG funds. Among them, according to the positions at the end of the third quarter of 2021, ESG fund sector allocation mainly includes industrial and materials, among which consumer staples, consumer discretionary, energy, public utilities and telecommunications services take up a relatively small share.

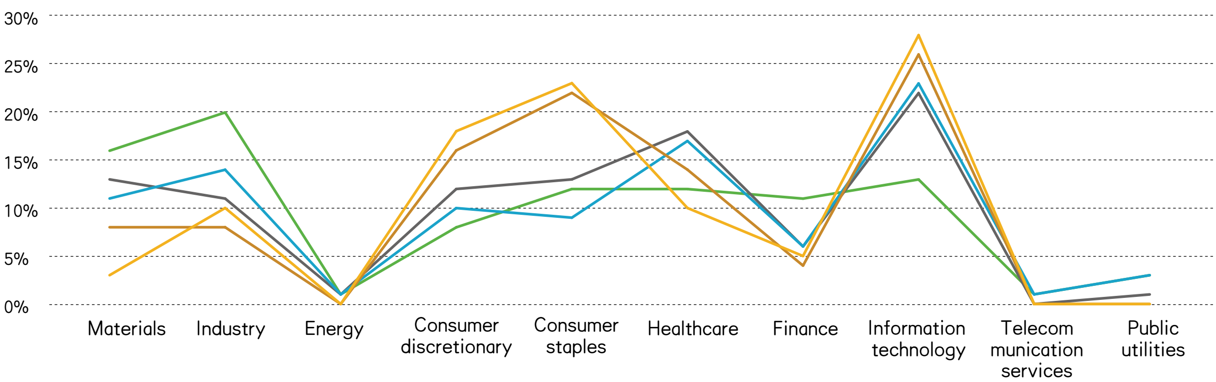

Fig. 20 Number of times when each sector appears in the top 10 positions of core active ESG funds and corresponding proportion

2020Q3 2020Q4 2021Q1 2021Q2 2021Q3

In order to study the performance of core active ESG funds, we first studied the percentage of ranking by ranges of its peers (here, peers refer to the funds classified into the same group under the secondary category in Wind, and the lower the percentage of ranking of peers the higher the ranking). Among the 11 funds, Xingquan Green Investment, Morgan Stanley ESG quantified antecedent, TruValue ESG responsible investment and Golden Eagle responsible investment belong to the middle and upper reaches, ranking among the top 35%. Among the 11 funds, only Industrial Securities Green Investment has been established for a long time, with the remaining 2 funds established in 2019, 4 funds established in 2020 and another 4 funds established this year. Due to the insufficient operation period, their rate of return may be temporarily unable to fully reflect the management ability of managers.

Table 12 Rank of core active ESG funds

Fund code	Fund name	Fund type	Percentage of ranking of peers			
			Recent six years	Last year	Recent two years	Recent three years
163409.OF	Xingquan Green Investment	Stock-based hybrid fund	31%	17%	26%	16%
007548.OF	E Fund ESG responsible investment	Common stock funds	85%	59%	61%	-
008264.OF	China Southern Asset Management ESG Fund theme	Common stock funds	56%	55%	-	-
009246.OF	Morgan Stanley ESG quantified antecedent	Stock-based hybrid fund	16%	17%	-	-
009872.OF	Sino-European responsible investment	Stock-based hybrid fund	49%	60%	-	-
010070.OF	Founder Fubon ESG themed investment	Stock-based hybrid fund	56%	-	-	-
011149.OF	TruValue ESG responsible investment	Common stock funds	33%	-	-	-
009630.OF	AXA SPDB Investment Managers ESG responsible investment	Stock-based hybrid fund	76%	-	-	-
011155.OF	Golden Eagle responsible investment	Stock-based hybrid fund	25%	-	-	-

Note: As calculated on the basis of series A funds

As we take the end of September 2021 as the node to calculate the annualized rate of return of fund (by ranges) (calculation formula: relative performance benchmark annualized rate of return by ranges = annualized rate of return of fund at corresponding ranges-performance benchmark annualized rate of return at corresponding ranges), from the perspective of rate of return, the core active ESG fundss have the rate of return lower than the performance benchmark for recent three months and six months while they provide better return than the benchmark for longer period. However, in terms of Sharp Ratio, the Sharp Ratio of core active ESG fundss are better than the performance of benchmark, which shows that taking ESG into account in investment decisions can reduce portfolio risks and help to obtain stable investment returns.

Table 13 Return and Sharp Ratio of core active ESG funds

Fund code	Fund name	Foundation date	Fund return VS. benchmark(return of fund-benchmark return)					Sharp ratio of fund VS. sharp ratio of benchmark(sharp ratio of fund-sharp ratio of benchmark)				
			Recent three months	Recent six years	Last year	Recent two years	Recent three years	Recent three months	Recent six years	Last year	Recent two years	Recent three years
163409.OF	Xingquan Green Investment	2011-5-6	37.43	41.18	33.63	33.32	29.96	2.41	2.52	1.57	1.26	1.13
007548.OF	E Fund ESG responsible investment	2019-9-2	-23.53	-9.36	6.63	17.05	-	-0.36	-0.17	0.04	0.34	-
008264.OF	China Southern Asset Management ESG Fund theme	2019-12-19	-12.69	18.89	12.47	-	-	0.13	1.11	0.37	-	-
009246.OF	Morgan Stanley ESG quantified antecedent	2020-7-16	42.13	55.23	29.61	-	-	1.95	2.07	0.84	-	-
009872.OF	Sino-European responsible investment	2020-9-10	-9.60	12.97	6.00	-	-	0.10	0.70	0.14	-	-
010070.OF	Founder Fubon ESG themed investment	2020-12-28	9.94	14.58	-	-	-	1.06	1.03	-	-	-
011149.OF	TruValue ESG responsible investment	2020-12-30	12.65	34.56	-	-	-	1.08	1.47	-	-	-
009630.OF	AXA SPDB Investment Managers ESG responsible investment	2021-3-16	10.68	-5.64	-	-	-	0.61	-1.03	-	-	-
011155.OF	Golden Eagle responsible investment	2021-3-16	46.73	40.22	-	-	-	2.42	2.11	-	-	-
011122.OF	China Universal Asset Management ESG sustainable growth	2021-6-10	11.32	-	-	-	-	0.75	-	-	-	-
012387.OF	Sinolink ESG sustainable growth	2021-7-20	-0.35	-	-	-	-	1.11	-	-	-	-

Note: As calculated on the basis of series A funds

3.3.2 Domestic core passive ESG funds

As of September 30, 2021, there were 8 core passive ESG fundss in the domestic public offering market, including 1 enhanced index fund and 7 passive index funds, with a total ESG fund size of about RMB 1.5 billion. From the perspective of the foundation date of fund, the first index enhanced ESG fund was released by Caitong Securities in 2012. Benefiting from the market's increased interest in ESG policy, the remaining seven passive ESG funds were intensively issued in 2021, but the size of passive ESG ETF based on ESG integration establishment strategy was still small and unpopular, which failed to attract a large amount of capital inflows. With the expansion and standardization of ESG underlying data disclosure, the development of ESG rating system and accumulated practical experience in ESG index establishment, passive ESG fund faces a bright prospect for development. Fullgoal CSI 300 ESG Benchmark ETF had the largest scale of assets, i.e. RMB 435 million.

Table 14 Core passive ESG funds

Fund code	Short name of fund	Foundation date	AUM (RMB 100 millions)	Tracked index	ESG rating approach
000042.OF	Caitong ECPI CSI ESG 100 Index Enhance	2013-03-22	2.13	The yield of CSI Caitong China Sustainable Development 100 (ECPI ESG) Index	ECPI ESG rating approach
516400.OF	Fullgoal CSI ESG 120 Strategy ETF	2021-06-16	0.13	The yield of CSI ESG 120 Strategy Index	CSI ESG rating
510990.OF	ICBCCS CSI 180 ESG ETF	2021-06-18	0.83	The yield of CSI 180 ESG Index	ICBC ESG green ratings system
516830.OF	Fullgoal CSI 300 ESG Benchmark ETF	2021-06-24	4.35	The yield of CSI 300 ESG Benchmark Index	–
561900.OF	CMF CSI 300 ESG Benchmark ETF	2021-07-06	1.08	The yield of CSI 300 ESG Benchmark Index	CSI ESG rating
012811.OF	Hwabao WP MSCI China A GJT ESGC	2021-07-09	0.50	MSCI China A GJT ESG Universal Index	MSCI ESG rating
516720.OF	AXA SPDB CSI ESG 120 Strategy ETF	2021-07-22	2.28	The yield of CSI ESG 120 Strategy Index	CSI ESG rating
159717.OF	Penghua CNI ESG 300 ETF	2021-09-15	3.62	The yield of CNI ESG 300 Index	CNI ESG rating

Looking at the performance of the indices tracked by core passive ESG funds and of the referenced indices for preparing these indices, at the end of September 2021, except that CSI Caitong China Sustainable Development 100 (ECPI ESG) Index, CSI 180 ESG Index and CNI ESG 300 Index underperformed in some ranges, the remaining ESG indices outperformed the referenced/benchmark indices. Looking at the Sharpe Ratio, only CSI Caitong China Sustainable Development 100 (ECPI ESG) Index and CSI 180 ESG Index outperformed over the referenced indices in all ranges. In respect of the yields, neither core ESG active funds or passive funds based on ESG indices generated excess yields obviously. Looking at the Sharpe Ratio, core active ESG funds till outperformed over core passive ESG funds. This may be because ESG indices supported by current ESG data cannot fully reflect ESG risks which suggests that actively managed funds are still valuable for avoiding black swan events and preventing risks.

Table 15 Return and Sharp Ratio of tracked indices by core passive ESG funds

Tracked index	Foundation date	Referenced index for preparing the index	Recent three months	Recent six years	Last year	Recent two years	Recent three years
CSI Caitong China Sustainable Development 100 (ECPI ESG) Index	2012-10-16	CSI 300 Index	Tracked index v. referenced index yield rates in time ranges (tracked index yield rate − referenced index yield rate, %)				
			−37.54	−14.58	−11.78	−2.03	0.21
			Tracked index v. referenced index Sharpe ratios in time ranges (tracked index Sharpe ratio − referenced index Sharpe ratio, %)				
			2.05	0.87	0.72	0.13	0.01
CSI ESG 120 Strategy Index	2020-4-30	CSI 300 Index	Tracked index v. referenced index yield rates in time ranges (tracked index yield rate − referenced index yield rate, %)				
			3.78	10.04	9.56	–	–
			Tracked index v. referenced index Sharpe ratios in time ranges (tracked index Sharpe ratio − referenced index Sharpe ratio, %)				
			−0.08	−0.55	−0.52	–	–
CSI 180 ESG Index	2018-12-10	SSE 180 Index	Tracked index v. referenced index yield rates in time ranges (tracked index yield rate − referenced index yield rate, %)				
			−4.82	−8.87	−6.93	−4.29	–
			Tracked index v. referenced index Sharpe ratios in time ranges (tracked index Sharpe ratio − referenced index Sharpe ratio, %)				
			0.28	0.54	0.38	0.21	–
CSI 300 ESG Benchmark Index	2020-4-30	CSI 300 Index	Tracked index v. referenced index yield rates in time ranges (tracked index yield rate − referenced index yield rate, %)				
			5.82	3.88	1.08	–	–
			Tracked index v. referenced index Sharpe ratios in time ranges (tracked index Sharpe ratio − referenced index Sharpe ratio, %)				
			−0.27	−0.20	−0.06	–	–
CSI 300 ESG Benchmark Index	2010-9-20	CSI 300 Index	Tracked index v. referenced index yield rates in time ranges (tracked index yield rate − referenced index yield rate, %)				
			12.52	12.22	−0.28	0.98	1.74
			Tracked index v. referenced index Sharpe ratios in time ranges (tracked index Sharpe ratio − referenced index Sharpe ratio, %)				
			−0.57	−0.70	−0.01	−0.07	−0.09

IV.
The ESG Rating System

ESG rating providers offer ESG rating services by analyzing information in terms of environment, social and corporate governance. The overseas ESG rating providers mainly include MSCI, Refinitiv and FTSE Russell, whilst the domestic ESG rating providers include Wind, Sino-Securities, SynTao Green Finance, the China Securities Index, Miotech and Rankins. By analyzing the rating framework, data sources, and relevance of the rating system, we have attempted to provide guidance for asset management institutions to establish their own ESG evaluation systems.

The ESG rating system focuses on risks and opportunities, and industry factors may be a necessary consideration. The rating system differs by company, but is based on three major pillars and support the evaluation of each pilllar through key issues or data points. Based on the substantive principle, industry issues or industry specific weights are considered in certain rating structures. At the company level, passive and active aspects, risk exposure and management capability are taken into consideration to avoid situations where ESG evaluation is not differentiated due to the same risks encountered by companies in the same industry.

The scope and importance of the key issues under ESG should evolve. When referring to or constructing an ESG rating system, it should be combined with an ESG strategy system to select key issues and corresponding weights that are in line with its responsible investment objectives. As China is now at the primary stage of ESG development, we cannot indiscriminately imitate and copy the ESG evaluation systems used overseas, but should cultivate and develop an authoritative domestic ESG rating framework. This should be based on the characteristics of China's local capital market and the organic combination of international standards and Chinese characteristics. Carbon Peak and Carbon Neutrality, common prosperity, anti-monopoly and data security are the key ESG indicators that have Chinese characteristics.

The correlation between any two of the above-mentioned ESG rating providers varies indicating that the providers do not agree on the ratings of the listed companies. The correlation between the ratings of the two providers was between 0.039 and 0.704. The lowest correlation was 0.039 between Sino-Securities and MSCI. Miotech and Wind have the highest rating correlation which is 0.704. Also, the correlation between any two of Refinitiv, FTSE Russell, SynTao Green Finance, Miotech and Wind was greater than or close to 0.5. The ratings of Sino-Securities, the China Securities Index and MSCI have a low correlation with other ratings. The correlation between any two of the above-mentioned providers varies indicating that the providers do not agree on the ESG ratings of the listed companies. In essence, the differences in the ESG rating come from differences in the underlying data, selection of key topics, and weights.

At the company level, the higher the ESG rating, the higher the stock return and the lower the stock volatility in the following year. According to the predictive ability of the ESG ratings on stock price returns in the following year, the regression results of the ESG ratings and the stock price returns of SynTao Green Finance were at the significance level of 10%. The regression results of the ESG ratings and share price returns of Sino-Securities, Miotech and Rankins were at the significance level of 5% and 1% respectively. According to the predictive ability of the ESG ratings on stock price volatility in the following year, the ESG ratings and stock price volatility of Sino-Securities and Miotech were negatively related at the significance level of 1%, whilst the ESG ratings and stock price returns of the remaining four institutions were not significant. The small sample size and the limited number of retrospective years may cause deviation in these data.

At the fund level, the further divergence in fund ESG ratings resulted in poor forecasting of fund returns and volatility in the following year. This report is based on the ESG scores of listed companies given by various rating providers. The fund ESG scores are weighted according to the annual data disclosed by the fund products. However, both the ESG rating correlations of all kinds of funds based on each ESG rating, and the empirical studies of the fund ESG ratings on the next year's fund return and volatility forecasts have not yielded good results due to further divergence in the fund ESG ratings.

4.1 Comparison of ESG rating systems

In nature, ESG investment is a central tenet of China’s sustainable development policy, and its core is to embed endogenous (corporate governance) and external (environmental and social) effects of business operation on the basis of traditional enterprise analysis to comprehensively measure the sustainability and competitiveness of a company's development.

As several internationally leading ESG rating systems are adopted to guide more than USD 1 trillion of investment, some scholars have studied the application of existing ESG rating systems into ESG measurement and their differences to guide investors in making use of these data. Chatterji et al. (2016) records the ratings from six famous rating providers (KLD, Asset4, Calvert, FTSE4Good, DJSI and Innovest) and identifies the lack of consistent understanding on social issues among these ratings and the difficulty to reliably measure social responsibility. Therefore, the rating providers are advised to periodically validate their data to improve the measurement of businesses' fulfillment of social responsibility, and the rating users are advised to keep cautious when drawing conclusions about the companies based on the above ratings. Berg, Koelbel and Rigobon (2019) explores the ESG rating differences among five famous rating providers (MSCI KLD, Sustainalytics, Vigeo-Eiris, Asset4 and RobecoSAM). The general differences are divided into three sources: range difference, measurement difference and weight difference. It is proven that the measurement difference explains more than 50% general differences. By using a sample of S&P 500 companies for the 2013-2017 period, Brandon et al. (2019) discusses the impact of ESG rating differences on stock yield. The average correlation of ESG ratings among six famous rating providers (Asset 4, Sustainalytics, Inrate, Bloomberg, MSCI KLD and MSCI IVA) is appr. 0.46. The lowest average correlation is seen in governance and the highest one is seen in environmental aspect.

Along with the increasing opening-up level of China's capital market, it is necessary to adapt ESG rating systems to the international standards while developing localised framework. In June 2018, MSCI incorporated A shares into MSCI index system and conducted ESG rating for over 400 listed companies. In addition to MSCI, foreign ESG rating providers which have rated domestically listed companies include Refinitiv and FTSE Russell, and the domestic ESG rating providers include SynTao Green Finance, Sino-Securities, MioTech, Wind, CSI and Rankins.

In developing a rating framework, Morningstar focuses on measuring a company’s ESG risks. MSCI suggests considering the exposure of ESG risks and opportunities and the company’s ability to manage ESG risks and opportunities, and comparing its general performance among global peers'. Generally, ESG is not only a risk factor but also has been recognized gradually in the investment field as a concept of investment opportunity. Thus, the inclusion of a positive indicator allows for the chance to measure company's ability of grasping future opportunities. All the rating systems are based on three pillars of ESG and have different sub-indicators or data points supporting each pillar. Some ESG frameworks consider the sector sector tilts, and adjust rating frameworks for different sectors based on the materiality principle. For specific companies, risk exposure and management ability, passiveness and activeness are introduced in the rating to avoid the situation that ESG rating is indistinguishable due to the same risks faced by industry companies.

Sino-Securities ESG rating and MioTech ESG ratings have the largest rating coverage, respectively of 4167 and 4054 companies, and the coverage of other ESG ratings are usually 500-800 companies, in most cases based on CSI 800 constituent stocks to establish initial ESG rating coverage.

Table 16 Comparison of ESG ratings

Rating provider	Data sources	Data processing method	Indicator Rating structure	Sector tilts	Rating schemes	Update frequency	Number of rated companies
MSCI	1.Listed companies' websites, announcements, sustainable development reports, etc. 2.Regulatory authorities 3.New press and public opinions 4.NGO and industry associations 5.Communication channels for companies	-	3 pillars, 10 issues, 37 sub-issues	Sector weight difference	7 levels varying from CCC, B, BB, BBB, A, AA, AAA	-	478
Refinitiv	1.Listed companies' websites, announcements, sustainable development reports, etc. 2.Regulatory authorities 3.New press and public opinions 4.NGO and industry associations	Data pre-processing Data pos-processing Independent review Management review	3 pillars, 10 issues, 186 sub-issues more than 500 data points	-	12 levels varying from D-, D, D+, C-, C, C+, B-, B, B+, A-, A, A+	-	618
FTSE Russell	1.Listed companies' websites, announcements, sustainable development reports, etc. 2.Regulatory authorities 3.New press and public opinions 4.NGO and industry associations	-	3 pillars, 14 issues, 300+ data points	-	1-100%	Monthly	730
SynTao Green Finance	1. Listed companies' websites, announcements, sustainable development reports, etc. 2. Regulatory authorities 3. New press and public opinions 4. Investigations by social organizations	-	3 pillars, 13 issues, 200+ data points	Set general indexes and sector indexes	10 levels varying from D, C-, C, C+, B-, B, B+, A-, A, A+	-	755

Table 16 Comparison of ESG Ratings(continued)

Rating agency	Data sources	Data processing method	Indicator Rating structure	Sector tilts	Rating schemes	Update frequency	Number of rated companies
Sino-Securities	1. Listed companies' websites, announcements, sustainable development reports, articles of association etc. 2. Regulatory authorities 3. New press and public opinions	Web crawler Semantic analysis Identification of real-name entities	3 pillars, 14 issues, 26 sub-issues 130+ data points	-	9 levels varying from C, CC, CCC, B, BB, BBB, A, AA, AAA	Quarterly in general, subject to temporary adjustments in case of a major event	4167
MioTech	1. Listed companies' websites, announcements, sustainable development reports, articles of association etc. 2. Regulatory authorities 3. New press and public opinions	Data collection Information extraction Knowledge integration Knowledge application	3 pillars, 19 issues, 700+ sub-issues, 1000+ data points	-	12 levels varying from D, DD, DDD, C, CC, CCC, B, BB, BBB, A, AA, AAA	Quarterly	4054
Wind	1.Listed companies' websites, announcements, sustainable development reports, etc. 2.Regulatory authorities 3.New press and public opinions 4.NGO and industry associations	Automated process Manual entry, coordinated push, logic verification, double-person entry, independent review	3 pillars, 27 issues, 300+ data points	-	7 levels varying from CCC, B, BB, BBB, A, AA, AAA	-	800
CSI	1. Listed companies' websites, announcements, sustainable development reports, articles of association etc. 2. Regulatory authorities 3. New press and public opinions 4. Listed companies' green income, implicit default and other feature information of China Securities Index Co., Ltd	-	3 pillars, 14 issues, 22 sub-issues, 100+ data points	-	10 levels varying from D, C, CC, CCC, B, BB, BBB, A, AA, AAA	Monthly in general subject to temporary adjustments in case of a major event	800
RKS	1. Listed companies' websites, announcements, sustainable development reports, articles of association etc. 2. Regulatory authorities 3. New press and public opinions	-	3 pillars, 26 issues, 100+ data points	-	7 levels varying from CCC, B, BB, BBB, A, AA, AAA	-	789

Note: The above information is available from public data and is likely to be different from the actual situation.

4.2 Key issues and data points of ESG ratings

An ESG rating system generally contains three pillars of environmental, social and corporate governance. Different rating systems will construct specific issues and data points under three pillars. To have a clear overview of the key issues and data points, we make the comparison of different ESG rating systems.

The environmental pillar focuses on environmental impact and opportunities associated to business operations. In the context of "Carbon Peak and Carbon Neutrality", the concerns on climate change, resource consumption, pollution and waste, and other issues become necessary in environmental assessment. In addition, MSCI, Refinitiv, Wind and Rankins respectively include environmental opportunity issues into the consideration of their respective environmental dimension. Specifically, green building, green finance, law-carbon products can be emerging issues in environmental opportunity assessment.

Table 17 Comparison of key issues of environmental pilllar under different ratings

	Climate changes	Resource consumption	Pollution and wastes	Environmental opportunities
MSCI	√	√	√	√
Refinitiv	√	√	√	√
FTSE Russell	√	√	√	
SynTao Green Finance	√	√	√	
Sino-Securities	√	√	√	
MioTech	√	√	√	
Wind	√	√	√	√
CSI	√	√	√	√
Rankins	√	√	√	√

Note: The above information is available from public data, is classified based on our understandings and is likely to be different from the actual situation.

The social pillar focuses on business operations and social impact, including protection of employee interests, supply chain system, customer and consumer, product responsibility, social/community contribution and other issues. As the same as the environmental pillar, the social pillar is an external effect consideration of business operation. In the context of common prosperity pointed out at the fifth plenary session of the 19th CPC Central Committee in 2020, the social element is expected to be enhanced in the ESG investment framework. Since this year, as there have been increasing concerns on "privacy and data security" and "anti-monopoly" among all sectors of society, all parties have been working together to promote the formation of a safe, orderly and competitive market system. "Privacy and data security" and "anti-monopoly" become necessary factors in considering a company's social influence.

Table 18 Comparison of key issues of social pilllar under different ratings

	Protection of employee interests	Supply chain system	Customer and consumer	Product responsibility	Social/community contribution	Privacy and data security	Anti-monopoly
MSCI	√	√	√	√	√	√	
Refinitiv	√		√	√	√	√	
FTSE Russell	√	√	√		√		√
SynTao Green Finance	√	√	√		√	√	
Sino-Securities	√	√		√	√		
MioTech	√	√		√	√		
Wind	√	√	√	√	√	√	√
CSI	√	√	√	√	√		
Rankins	√	√		√	√	√	

Note: The above information is available from public data, is classified based on our understandings and is likely to be different from the actual situation. Although some rating systems include anti-monopoly into their corporate governance dimension, considering the external nature of the social dimension and the internal nature of the corporate governance dimension, the report will consider anti-monopoly in the social dimension.

The corporate governance pillar focuses on the endogenous considerations of business operations to rate a company's governance in terms of management structure, shareholder's equity, financial rules, remuneration management, information disclosure, anti-corruption, ESG/social responsibility strategy, and other issues. ESG or social responsibility strategy and anti-corruption issues are valuable for a localised ESG rating system at the current development stage.

Table 19 Comparison of key issues of governance pillar under different ratings

	Management structure	Shareholder's equity	Financial rules	Remuneration management	Information disclosure	Anti-corruption	ESG/Social responsibility strategy
MSCI	√	√	√	√	√	√	
Refinitiv	√	√		√	√		√
FTSE Russell	√	√		√	√		
SynTao Green Finance	√			√	√	√	
Sino-Securities	√	√					
MioTech	√	√	√	√	√		√
Wind	√	√	√			√	
CSI	√	√	√		√		
Rankins	√			√			√

Note: The above information is available from public data, is classified based on our understandings and is likely to be different from the actual situation.

In general, along with improvement of information disclosure and development of economic activities, the range and importance of key ESG issues are evolving and changing. When constructing the ESG rating system, ESG strategy systems should be considered and key issues and their weights which are suitable to specific respective responsible investment goals should be selected.

Regarding the data sources, ESG related information of listed companies is difficult to acquire, incomplete or less reliable, the data of different asset categories is inconsistent, and ESG information disclosure guidelines are not standardized. This renders a poor data pool for ESG rating systems. On the other hand, some of ESG information is highly dynamic and not structured, so it is technically difficult to collect or apply such data. Thus, robust ESG data systems also require high maintenance costs. At present, ESG data includes four major categories: disclosures made by listed companies on their websites and in announcements, sustainable development reports and other forms; notice released by regulatory authorities and news press; company data acquired by NGO and sector associations. Some data vendors provide the service of data pre-processing, pos-processing, logical review. With similar data sources, data pos-processing capacity is an important factor to rate a data vendor's ability.

4.3 Company-level ESG rating correlation and empirical analysis

4.3.1 ESG ratings of domestically listed companies

Through various databases, we have collected ESG rating data of domestically listed companies as of 2020 from 8 domestic and overseas providers, including MSCI, Refinitiv and FTSE Russell as overseas ESG rating providers, and SynTao Green Finance, Sino-Securities, MioTech, Wind and CSI as domestic ESG rating providers. Some rating providers (SynTao, Wind and Sino-Securities) allocate different levels of rating, such as C-AAA instead of accurate scores to companies. To facilitate subsequent comparison and regression calculation, this report scores the ratings given by SynTao, Wind and Sino-Securities based on different levels, such as AAA corresponding to 9, and C corresponding to 1. The description of scored ESG ratings allocated by rating providers to domestically listed companies is shown in the following Table 20. Looking at the scores of domestically listed companies given by providers, the average is low and the standard deviation is large. There is space for domestically listed companies to improve their ESG performance.

Table 20 ESG ratings of listed companies by providers

Rating provider	Number of rated companies	Average score	Standard deviation of ESG score	Minimum score	Median score	Maximum score
MSCI	478	4.452	1.109	3.000	4.000	8.000
Refinitiv	618	34.664	15.879	1.187	32.839	82.140
FTSE Russell	730	1.309	0.573	0.300	1.200	3.900
SynTao Green Finance	755	4.425	0.964	2.000	4.000	7.000
Sino-Securities	4167	6.345	1.300	1.000	6.000	9.000
MioTech	4054	0.299	0.075	0.138	0.283	0.770
Wind	800	2.978	1.031	1.000	3.000	6.000
CSI	800	0.507	0.289	0.006	0.509	1.000

Note: The above information is available from public data and is likely to be different from the actual situation.
Source: CSMAR, Wind etc.

Based on 2020 ESG ratings issued by rating providers, this report provides correlation analysis in respect of ESG ratings issued by 8 domestic and overseas providers, as shown in Table 21. The correlation between the ratings of any two providers is between 0.039 and 0.704, with the lowest correlation of 0.039 between Sino-Securities and MSCI; and MioTech and Wind have the highest rating correlation which is 0.704. In addition, the correlation between any two of Refinitiv, FTSE Russell, SynTao Green Finance, MioTech and Wind is greater than or close to 0.5. The ratings of Sino-Securities, Sino-Securities and MSCI have low correlation with other ratings. The correlation between any two of the above-mentioned providers varies, indicating that the providers do not agree on the ratings of the listed companies.

The differences in ESG rating stem from differences in terms of underlying data, selection of key issues, and weights. Due to lack of uniform standards for underlying data of ESG and different data providers selected by the providers, it is difficult to reach consistency in respect of the underlying data. On the other hand, when the providers establish their ESG rating frameworks, their key issues and weights are different, rendering different rating results. As ESG involves judgement of values in nature, it is difficult to establish consistent and objective standards.

Table 21 Correlation between ESG ratings of different providers of listed companies in 2020

Rating provider	MSCI	Refinitiv	FTSE Russell	SynTao Green Finance	Sino-Securities	MioTech	Wind	CSI
MSCI	1.000							
Refinitiv	0.238	1.000						
FTSE Russell	0.301	0.628	1.000					
SynTao Green Finance	0.286	0.571	0.633	1.000				
Sino-Securities	0.039	0.144	0.137	0.210	1.000			
MioTech	0.264	0.585	0.583	0.675	0.315	1.000		
Wind	0.195	0.540	0.466	0.565	0.344	0.704	1.000	
CSI	0.179	0.139	0.133	0.243	0.238	0.263	0.185	1.000

Note: The above information is available from public data and is likely to be different from the actual situation.

4.3.2 Empirical analysis of ESG ratings of companies

This report attempts to study predicted impact of ESG ratings of different listed companies on stock return rates in the next year. As this study requires regression of ESG rating data for multiple years, this report respectively adopts ESG ratings of six providers as available, i.e. Refinitiv (sample years 2017-2020), SynTao Green Finance (sample years 2015-2020), Sino-Securities (sample years 2009-2020), MioTech (sample years 2017-2020), Wind (sample years 2017-2020) and Rankins (sample years 2010-2018), as explanatory variables and stock return rates of A shares listed companies in 2010-2020 as predicted variables, and processes the samples as follows: (1) excluding observations of net assets with negative value; (2) excluding observations of the financial sector; (3) excluding the missing observations of all variables involved in the regression. To control the influence of extreme value on empirical test results, in this report, all the continuous variables involved in the regression are shrunk at the upper and lower 1% quantiles. The financial data used in this report is from CSMAR and WIND databases.

To observe whether the current-year ESG rating of a listed company predicts the next-year stock return rate, this report adopts the following regression model for research:

$$Stock\_return_{i,t+1} = \alpha + \beta ESG_{i,t} + \gamma \sum Controls_{i,t} + Industry/Year\ FE + \varepsilon_{i,t+1}$$

In the above model, $\boldsymbol{Stock\_return}$ represents the stock return rate of a listed company, and $\boldsymbol{ESG}$ represents the ESG rating of the listed company. This report focuses on the β coefficient which represents the marginal influence of the current-year ESG rating of the company on its stock return rate in the next year. $\boldsymbol{Controls}$ is a control variable which is a series of business-level characteristics that may affect the stock return rate of the listed company, including Size, Leverage, Cash hold, ROA, Top1, Duality, BM, TobinQ and Ownership. In addition, this report also controls fixed effect of Ind FE and Year FE. Those variables are defined in Table 22.

Table 22 Definitions of variables of stock regression model

Variable	Name	Description
Stock return	Stock return rate	Annual stock return
MAR	Market-adjusted return	Annual stock return minus annual return of comprehensive market considering reinvestment of cash dividend in A-share market (calculated by equal weight average method)
Stock volatility	Stock price volatility	Standard deviation of daily stock return rates of a company in the past year divided by average stock price
ESG	The company's ESG rating	ESG scores given by Refinitiv, SynTao Green Finance, Sino-Securities, Rankins, MioTech and Wind
Size	Company size	lnTA at the end of the company's period
Leverage	Asset-liability ratio	The ratio of net profits to total assets
Cash hold	Cash hold	(Monetary fund+short-term investment) / total assets
ROA	Return on assets	The ratio of net profits to total assets
BM	BM	Shareholder interests/market value
Top1	Majority shareholders' shareholding ratio	Percentage of the number of shares held by the largest shareholder to the total number of shares
Duality	Duality	The result is 1 if CEO serves as the chairman at the same time, or the result is 0
Tobin'Q	EV	The sum of the market value of equity and the book value of total liabilities divided by the book value of total assets
Ownership	Business nature	The result is 1 if it is a state-owned company or 0 if it is a non-state-owned enterprise

In this report, the regression results are shown in Table 23. Generally, the ESG ratings of the most providers can predict the stock return rates in the next year. The higher the ESG rating is, the higher the stock return rate will be in the next year. Specifically, the regression results of SynTao's ESG ratings and stock return rates are significant at the 10% level; the regression results of ESG ratings of Sino-Securities, MioTech and Rankins and stock return rates are significant at the 5% and 1% levels respectively; and the results of ESG ratings of Refinitiv and Wind and stock return rates are not significant.

Table 23 Regression results of ESG rating and stock return

Predicted variable: stock return rate						
Explanatory variable	Refinitiv	SynTao Green Finance	Sino-Securities	MioTech	Wind	RKS
ESG	0.045	0.043*	0.007**	0.308***	0.014	0.075***
	(1.27)	(1.96)	(2.38)	(3.01)	(1.01)	(3.59)
Size	-0.162***	0.023	-0.042***	-0.001	-0.102***	-0.053***
	(-4.09)	(0.92)	(-11.25)	(-0.15)	(-3.53)	(-7.62)
Leverage	0.456***	0.023	0.105***	0.072**	0.355***	0.027
	(3.21)	(0.21)	(5.73)	(2.38)	(3.12)	(0.63)
ROA	-0.079	0.750*	0.468***	0.695***	0.224	0.465**
	(-0.14)	(1.80)	(6.31)	(6.13)	(0.51)	(2.45)
MB	-0.091	-0.304***	0.149***	-0.069*	-0.116	0.391***
	(-0.64)	(-2.84)	(6.49)	(-1.72)	(-1.03)	(9.19)
Tobin'Q	-0.018	-0.015	-0.009***	-0.012**	-0.007	-0.002
	(-0.98)	(-0.99)	(-3.11)	(-2.09)	(-0.42)	(-0.36)
Cash	1.030***	0.818***	0.392***	0.607***	0.888***	0.215**
	(3.03)	(2.87)	(8.69)	(7.49)	(3.44)	(2.26)
Duality	0.024	-0.120	0.003	0.051	0.057	-0.061*
	(0.15)	(-1.45)	(0.14)	(1.06)	(0.48)	(-1.92)
Ownership	0.019**	0.007	0.009***	0.004*	0.009	0.009***
	(1.98)	(0.76)	(6.00)	(1.71)	(1.15)	(2.82)
Top1	0.001	-0.001	0.000**	0.000	-0.000	0.000
	(0.57)	(-1.07)	(2.41)	(0.19)	(-0.36)	(0.98)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Ind FE	Yes	Yes	Yes	Yes	Yes	Yes
Adj.R2	0.285	0.236	0.331	0.266	0.263	0.385
Obs.	1475	1231	25601	9669	1901	4490

Note: The definitions of all variables are shown in Table 22. Ind FE and Year FE refer to industry fixed effect and year fixed effect respectively; Obs. refers to observed value; and Adj. R refers to Adj. R-Square. T- statistics adjusted according to aggregation effect at company and annual level are reported in brackets. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

We substitute stock return rate in the above model into the market-adjusted rate (MAR), and the regression result as shown in Table 24 that only Sino-Securities' ESG ratings and MARs are significant at the 5% level, and the other four providers' ESG ratings and MARs are not significant. The small sample size and the limited years of traceability may render any deviation to the results above.

Table 24 Regression results of ESG rating and MAR

Predicted variable: market-adjusted rate						
Explanatory variable	Refinitiv	SynTao Green Finance	Sino-Securities	MioTech	Wind	RKS
ESG	0.001	-0.000	0.001**	0.011	-0.000	0.005
	(0.38)	(-0.28)	(2.06)	(1.56)	(-0.13)	(1.39)
Size	0.003**	0.005***	0.001***	0.002***	0.004***	-0.000
	(2.48)	(3.24)	(3.03)	(4.96)	(3.25)	(-0.00)
Leverage	-0.012	0.001	-0.001	-0.005*	-0.008	-0.010
	(-1.60)	(0.09)	(-0.51)	(-1.95)	(-1.31)	(-1.60)
ROA	0.024	0.009	0.017*	0.039***	0.048**	-0.019
	(0.81)	(0.31)	(1.93)	(3.87)	(2.00)	(-0.69)
MB	-0.002	-0.018**	-0.007**	-0.003	-0.008	0.016**
	(-0.35)	(-2.29)	(-2.36)	(-0.85)	(-1.29)	(2.05)
Tobin'Q	0.002*	0.001	-0.001*	0.001*	0.002*	0.000
	(1.94)	(0.43)	(-1.96)	(1.76)	(1.83)	(0.11)
Cash	-0.007	-0.014	0.003	-0.002	-0.031*	0.015
	(-0.40)	(-0.65)	(0.59)	(-0.31)	(-1.85)	(0.97)
Duality	-0.002	-0.002	-0.004	-0.002	-0.005	-0.001
	(-0.31)	(-0.20)	(-1.53)	(-0.56)	(-0.65)	(-0.13)
Ownership	-0.000	-0.001*	-0.000	-0.000	-0.001	0.000
	(-0.93)	(-1.86)	(-1.62)	(-0.99)	(-1.29)	(0.35)
Top1	-0.000*	-0.000	-0.000	-0.000	-0.000	-0.000
	(-1.75)	(-0.78)	(-0.37)	(-0.53)	(-1.11)	(-0.04)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Ind FE	Yes	Yes	Yes	Yes	Yes	Yes
Adj.R2	0.086	0.088	0.049	0.051	0.096	0.065
Obs.	1417	1208	13203	9025	1834	1729

Note: The definitions of all variables are shown in Table 22. Ind FE and Year FE refer to industry fixed effect and year fixed effect respectively; Obs. refers to observed value; and Adj. R refers to Adj. R-Square. T- statistics adjusted according to aggregation effect at company and annual level are reported in brackets. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

In addition to the stock return rate, the stock price volatility is another important index in investment analysis to control the risks. Therefore, we further explore the correlation of ESG rating to the stock price volatility in the next year by changing the stock return rate in the above model to the stock price volatility in the following model, under which the ESG ratings of the six providers and the stock price volatilities are used similarly for analysis. The regression results are shown in Table 25. Generally speaking, to some extent, the higher the ESG rating of a listed company is, the smaller the stock price volatility will be. Specifically, the regression results of ESG ratings of Sino-Securities and MioTech and stock price volatilities are negatively significant at the 1% level, while the ESG ratings of the remaining four institutions and stock price volatilities are not significant. The small sample size and the limited years of traceability may render any deviation to the results above .

$$Stock\_volatility_{i,t+1} = \alpha + \beta ESG_{i,t} + \gamma \sum Controls_{i,t} + Industry/Year\ FE + \varepsilon_{i,t+1}$$

Table 25 Regression results of ESG rating and stock volatility

Predicted variable: stock price volatility						
Explanatory variable	Refinitiv	SynTao Green Finance	Sino-Securities	MioTech	Wind	RKS
ESG	0.000	0.000	-0.000***	-0.004***	-0.000	-0.000
	(0.33)	(1.31)	(-7.92)	(-3.75)	(-0.36)	(-0.04)
Size	-0.002***	-0.002***	-0.001***	-0.001***	-0.002***	-0.001***
	(-10.33)	(-7.08)	(-33.29)	(-17.44)	(-10.62)	(-13.98)
Leverage	0.007***	0.004***	0.002***	0.003***	0.006***	0.005***
	(6.10)	(3.36)	(10.13)	(6.68)	(5.47)	(8.30)
ROA	-0.022***	-0.027***	-0.012***	-0.019***	-0.023***	-0.016***
	(-4.49)	(-5.94)	(-12.07)	(-12.60)	(-5.59)	(-6.56)
MB	-0.005***	-0.003**	-0.003***	-0.004***	-0.004***	-0.005***
	(-4.77)	(-2.55)	(-10.30)	(-8.18)	(-4.31)	(-7.02)
Tobin'Q	-0.000*	-0.000	-0.000***	-0.000***	-0.000**	0.000
	(-1.88)	(-0.64)	(-5.67)	(-5.04)	(-2.16)	(0.46)
Cash	0.003	0.002	-0.004***	-0.001	0.005**	-0.005***
	(0.98)	(0.49)	(-6.60)	(-1.07)	(2.13)	(-4.25)
Duality	0.002	0.001	-0.000	0.001	0.001	-0.000
	(1.58)	(0.82)	(-0.14)	(1.06)	(1.50)	(-0.05)
Ownership	0.000***	0.000***	0.000***	0.000***	0.000***	0.000
	(5.10)	(2.75)	(12.11)	(12.19)	(3.71)	(0.42)
Top1	-0.000	-0.000**	0.000***	-0.000	-0.000	-0.000
	(-1.14)	(-2.38)	(3.88)	(-1.63)	(-1.39)	(-1.22)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Ind FE	Yes	Yes	Yes	Yes	Yes	Yes
Adj.R2	0.487	0.424	0.600	0.297	0.431	0.726
Obs.	1475	1231	25601	9669	1901	4490

Note: The definitions of all variables are shown in Table 6. Ind FE and Year FE refer to industry fixed effect and year fixed effect respectively; Obs. refers to observed value; and Adj. R refers to Adj. R-Square. T- statistics adjusted according to aggregation effect at company and annual level are reported in brackets. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

4.4 Fund-level ESG rating correlation and empirical analysis

4.4.1 ESG ratings of domestic funds

Based on the ESG ratings and scores of listed companies given by various rating providers, the weighted ESG scores (as defined below) are calculated according to the annual position data disclosed by the fund products.

$$\text{Fund ESG score} = \sum_{i=1}^{n} w_i * \text{ESG score of Company } i$$

w_i represents the weight of Company i in the fund portfolio, n represents the number of companies in the fund portfolio, and $\sum_{i=1}^{n} w_i$ =1. Due to the limited number of companies covered by the ratings, we use the average ESG rating of the industry for the listed companies without a rating as a substitute score.

According to the second-tier fund classification, we have selected 3441 funds as of 2020 (including bond-oriented hybrid, stock-oriented hybrid, enhance index fund, balanced hybrid, flexible allocation fund and ordinary stock fund). The descriptive statistics of fund ESG ratings results calculated through ESG rating of listed companies by eight ESG ranting providers (MSCI, Refinitiv, FTSE, SynTao Green Finance, Sino-Securities, MioTech, Wind and CSI) are shown in Table 26. It is not necessary to conduct substitute estimating for Sino-Securities as it has scored all A share listed companies, and the result of average fund ESG score is relatively higher.

Table 26 ESG ratings of public funds by provider in 2020

Rating provider	Number of rated funds	Average score	Standard deviation of score	Minimum score	Median score	Maximum score
MSCI	3441	4.585	0.262	3.522	4.582	6.116
Refinitiv	3441	36.278	4.764	17.289	36.191	77.235
FTSE Russell	3441	1.462	0.184	0.700	1.440	2.641
SynTao Green Finance	3441	4.487	0.257	1.951	4.486	6.000
Sino-Securities	3441	7.142	0.334	5.000	7.166	8.586
MioTech	3441	0.381	0.423	0.208	0.382	0.654
Wind	3441	3.594	0.284	2.000	3.604	4.780
CSI	3441	0.956	0.164	0.217	0.931	2.283

Note: Due to lack of Rankins' ratings in 2020, that part is excluded.

The correlation of fund ratings calculated on different rating systems is shown in Table 27. Generally, the correlation of fund rating scores given by different rating providers is not high. Based on multiple rating calculations, the fund ESG ratings are negatively correlated, and the fund ESG ratings are further divided.

Table 27 Correlations between ESG ratings of different providers of public funds in 2020

Rating provider	MSCI	Refinitiv	FTSE Russell	SynTao Green Finance	Sino-Securities	MioTech	Wind	CSI
MSCI	1.000							
Refinitiv	0.404	1.000						
FTSE Russell	0.529	0.696	1.000					
SynTao Green Finance	0.296	0.503	0.550	1.000				
Sino-Securities	0.338	0.415	0.341	-0.122	1.000			
MioTech	0.541	0.599	0.730	0.041	0.631	1.000		
Wind	0.121	0.394	0.263	0.270	-0.122	0.041	1.000	
CSI	-0.179	-0.226	-0.149	0.457	-0.531	-0.108	-0.322	1.000

Note: Due to lack of Rankins' ratings in 2020, that part is excluded.

After the ESG score is calculated by each of the eight ESG rating providers for each stock-oriented fund, we rank the funds based on their ESG scores (the higher the ESG score, the higher the ranking), and then use the average ESG ranking of the eight providers as the final ranking of the fund, i.e.:

$$ESG\ ranking\ of\ fund = \sum_{i=1}^{8} Fund\ ESG\ ranking_i / 8$$

After ranking the 264 funds of the 3441 funds which meet the definition of sustainable fund in this report, the top 50 sustainable funds by ESG ranking are as follows:

Table 28 Top 50 Sustainable funds by ESG ranking in 2020

Fund ranking	Short name of fund	Fund code
1	Dongfanghong Chuangxin Youxuan	169106.OF
2	Lion Strategic Selected	320020.OF
3	Lion Low Carbon Economy A	001208.OF
4	Sino-European Innovate Future 18-month	501208.OF
5	Xingyin Big Health	001730.OF
6	WL Multi-stray Sel Alloc A	671010.OF
7	Mshf Quality Life Selected	000309.OF
8	Fuanda Healthy Life	001861.OF
9	China Universal Future Innovation 18 Months	501206.OF
10	Hwabao WP Green Theme	005728.OF
11	China Nature Low Carbon Economy	350002.OF
12	Qhky Advantage Blue Chip A	001162.OF
13	Dacheng Blue Chip Sustaining	90003.OF

Table 28 Top 50 Sustainable funds by ESG rating in 2020

Fund ranking	Short name of fund	Fund code
14	China Southern Information Innovation A	007490.OF
15	Changsheng Core Growth A	010155.OF
16	Caitong Ecpi Esg 100 Index Enhance Fd A	000042.OF
17	China Life AMP Health Science A	005043.OF
18	BOC Outstanding Corporation	0000432.OF
19	Mshf Healthcare	002708.OF
20	China Universal Value Selected A	519069.OF
21	Huaan Upgrade Theme	040020.OF
22	BOC Great Health A	009414.OF
23	Bosera Medical & hlth Care Set Sectors	050026.OF
24	China AMC Yixiang Health	007481.OF
25	ICBCCS New Material New Energy Ids	001158.OF
26	GTS GBA Theme A	009055.OF
27	Bosera Healthy Growth Biweekly Redemption A	009468.OF
28	China Fund Medical Health A	010090.OF
29	Manulife Teda Quality Life	162211.OF
30	Tianhong Health Care A	001558.OF
31	Maxwealth HK Stk Connect Qlty Life Smart Sel	009983.OF
32	First-trust Goodquality Life	290004.OF
33	Changxin Chuangxin Driven	519935.OF
34	Ubs Sdic Beautiful China	000663.OF
35	Huashang Future Theme	000800.OF
36	Hony Horizon Consumption Upgrade	006644.OF
37	Igw Selected Equity	00688.OF
38	China Fund Health Care Reform Alloc A	002408.OF
39	ICBCCS Selected Bal	483003.OF
40	Dacheng Health Industry Fund	90020.OF
41	Minsheng Royal Prosperity Industry A	690007.OF
42	JYAH Health Care	007613.OF
43	E Fund Healthcare Sector	110023.OF
44	SWS MU New Power	310328.OF
45	FTS Health High Lvl Life	000761.OF
46	Huatai-PineBridge Medical Health	005805.OF
47	Penghua Medical and Hlth Care	000780.OF
48	ICBCCS Innovation Selection 1-Year Rgr Opn Mx Fd A	009867.OF
49	BOC Innovative Health Care A	007718.OF
50	China Universal Health Care A	470006.OF

4.4.2 Empirical analysis of ESG ratings of funds

To observe whether the ESG rating of a fund product predicts the next-year return rate, this report adopts the following regression model for research:

$$Fund\ return_{i,t+1} = \alpha + \beta ESG_{fund,i,t} + \sum \gamma Controls_{i,t} + Fund/Year\ FE + \varepsilon_{i,t+1}$$

$Fund\ return$ refers to the annual return rate of the fund, and ESG_{fund} refers to the ESG rating calculated based on the five ESG rating systems of Refinitiv, SynTao Green Finance, Sino-Securities, Rankins, MioTech and Wind. The control variables are Fund Size, Beta, Turnover Rate and Age, and control the Fd and Yr fixed effects of the fund. The definitions of specific variables are shown in Table 29.

Table 29 Definitions of variables of fund regression model

Variable	Name	Description
Fund return	Fund return rate	Year-end return rate
Fund volatility	Fund volatility	Annual standard deviation of daily rates of return
ESGfund	Fund ESG rating	Weighted based on ESG ratings of companies by providers and fund positions
Size	Fund size	Natural logarithm of total assets at the end of the fund period
Beta	Risk factor	The volatility of the investment portfolio compared with the whole market
Turnover rate	Turnover rate	Total quantity of stocks bought + total quantity of stocks sold/average daily size of the fund in the statistical period
Age	Age	The age of the fund + 1, then take the logarithm.

The regression results as shown in Table 30 indicate that if the Fd and Yr effects are controlled, different ESG ratings have caused further difference in fund ESG ratings, which leads to further divergence of regression results between fund ESG ratings and fund returns. The fund ESG ratings of SynTao Green Finance, Sino-Securities, Wind and Rankins have a significant positive correlation with the next year's returns of the funds, while the fund ESG ratings under the ESG rating systems of Refinitiv and MioTech have a significant negative correlation with the next year's returns of the funds.

Similarly, the regression analysis is conducted based on fund ESG ratings and fund volatilities, and the results are shown in the following Table 31. The divergence of company-level ESG rating has resulted in further divergence of fund-level ESG ratings. The fund ESG ratings of Refinitiv, Sino-Securities, MioTech and Rankins have a significant negative correlation with the next year's fund volatility, while the fund ESG ratings of SynTao Green Finance have a significant positive correlation with the next year's fund volatility at the 1% significant level, and it is difficult to predict next year's fund price volatility from the fund ESG ratings of Wind.

$$Fund\ volatility_{i,t+1} = \alpha + \beta ESG_{fund,i,t} + \sum \gamma Controls_{i,t} + Fund/Year\ FE + \varepsilon_{i,t+1}$$

Table 30 Regression results of ESG rating and fund return

Predicted variable: fund return rate						
Explanatory variable	Refinitiv	SynTao Green Finance	Sino-Securities	MioTech	Wind	RKS
ESGfund	−0.621***	5.603***	12.194**	−14.719***	3.874***	6.596***
	(−7.56)	(2.66)	(2.39)	(−3.77)	(3.46)	(2.74)
Size	−1.881***	−2.925***	−2.679***	−2.142***	−2.326***	−5.551***
	(−3.86)	(−7.80)	(−7.28)	(−4.44)	(−4.87)	(−11.32)
Beta	−15.162***	−12.625***	−12.942***	−15.043***	−14.851***	−12.992***
	(−14.27)	(−15.23)	(−15.33)	(−13.87)	(−13.56)	(−15.83)
Turnover rate	−0.918***	−0.492***	−0.475***	−0.893***	−0.879***	0.190
	(−5.13)	(−3.88)	(−3.86)	(−5.07)	(−5.06)	(1.53)
Age	−31.908***	−13.955***	−15.510***	−32.976***	−33.658***	4.329*
	(−9.06)	(−6.40)	(−7.11)	(−9.26)	(−9.48)	(1.78)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Ind FE	Yes	Yes	Yes	Yes	Yes	Yes
Adj.R2	0.813	0.794	0.784	0.810	0.810	0.785
Obs.	5948	7783	7946	5948	5948	3605

Note: The definitions of all variables are shown in Table 2.9 Year FE and Fund FE refer to year fixed effect and fund fixed effect respectively; Obs. refers to observed value; and Adj. R refers to Adj. R-Square. T- statistics adjusted according to aggregation effect at company and annual level are reported in brackets. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 31 Regression results of ESG rating and fund volatility

Predicted variable: fund volatility						
Explanatory variable	Refinitiv	SynTao Green Finance	Sino-Securities	MioTech	Wind	RKS
ESGfund	−0.066***	5.603***	−6.904***	−3.753***	0.212	−3.457***
	(−4.13)	(2.66)	(−5.45)	(−4.88)	(1.02)	(−3.89)
Size	−0.883***	−2.925***	−0.656***	−0.896***	−0.927***	−0.264
	(−8.22)	(−7.80)	(−7.40)	(−8.37)	(−8.77	(−1.50)
Beta	1.643***	−12.625***	2.535***	1.659***	1.665***	1.964***
	(8.09)	(−15.23)	(13.21)	(8.16)	(8.14)	(6.56)
Turnover rate	0.060*	−0.492***	−0.021	0.060*	0.065**	−0.161***
	(1.85)	(−3.88)	(−0.67)	(1.83)	(1.99)	(−2.67)
Age	2.221***	−13.955***	0.472	2.262***	2.016***	0.055
	(3.78)	(−6.40)	(1.10)	(3.84)	(3.43)	(0.06)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Ind FE	Yes	Yes	Yes	Yes	Yes	Yes
Adj.R2	0.476	0.794	0.630	0.477	0.472	0.757
Obs.	5948	7783	7946	5948	5948	3605

Note: The definitions of all variables are shown in Table 6. Year FE and Fund FE refer to year fixed effect and fund fixed effect respectively; Obs. refers to observed value; and Adj. R refers to Adj. R-Square. T- statistics adjusted according to aggregation effect at company and annual level are reported in brackets. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

V.
Survey on ESG Investment in the Asset Management Industry of China

To comprehensively track current status of ESG investment in China's asset management industry and to promote the further development of ESG investment, Huaxia Wealth Management Co., Ltd. and Shenzhen Finance Institute, The Chinese University of Hong Kong, Shenzhen jointly initiated this year's Investor Survey: ESG and Responsible Investment in China. We formed a joint research group and assigned several experts to conduct a special study on this survey. Two versions of questionnaires were used in this survey of which one was the institutional version mainly for publicly offered fund companies with 159 questionnaires collected, and the other was a product version for publicly offered funds that have issued sustainable fund products with 79 questionnaires collected. The major findings and conclusions from the questionnaires are summarized below.

The practice of ESG investment has been faster than expected. The vast majority of institutions have recognized that practicing ESG investment improve the long-term performance of listed companies and their investment performance. Investors have recognized ESG factors as an important method for long-term sustainability. With only 6% of respondents adopted ESG investment practices in 2020, the number of ESG investment practitioners increased to 23% in 2021. In absolute terms, the number of institutions adopting ESG investment practices increased from 14 to 37 and the number of institutions who are "very interested and be about to practice" ESG investment has increased from 20 to 34. Investment institutions gradually accepted ESG investment and started exploring negative screening, and integrating ESG factors into the investment research process. Overall, significantly more attention is being paid to ESG information and practices.

Product diversification outweighs returns as the primary motivation for practicing ESG. The top three motivations for ESG are "improve long-term returns", "reduce investment risks", and "diversification and differentiation of product offerings". Compared to last year, "diversification and differentiation of product offerings" replaced social responsibility as the third most important motivation. These data show that ESG products can attract capital inflows and ESG products have become a necessary consideration for publicly offered funds when designing product sequences. Currently, clients interested in ESG funds are mainly institutional investors including bank wealth management companies, social security funds and long-term investors. Retail investors are less aware of ESG concepts. The development and growth of ESG investment require increased education to retail investors.

The practice of ESG investment requires refinement of institutional structures and functions. ESG investment requires institutions to bear costs by outsourcing data or consulting services resulting in reduced short-term profits. The implementation of ESG strategy involves several departments such as investment, research, ESG and technology departments. Therefore, promoting the ESG investment through senior staff helps the organization to create synergy from the top down. Conversely, the majority of funds believe that ESG products need 3-5 years to achieve superior performance, whilst the performance assessment term of most fund companies is 1-3 years. The mismatch between ESG product performance manifestation and the performance assessment cycle may hinder the development of ESG products. To better motivate ESG product managers, institutions should fully consider the development stage of the ESG investment and set a reasonable performance evaluation system.

ESG integration overtakes negative screening as the fastest growing strategy. Negative screening and positive screening strategies are still the most popular choices. Nearly 80% of institutions chose to apply a negative screening strategy, and nearly 58% chose a positive screening strategy. Based on the percentage of votes received for each strategy (i.e. looking at the marginal change), ESG integration strategies received more recognition compared to last year rising to 14% from 8%. Only 10% of the respondents chose the shareholder engagement strategy. According to GSIA, the regions that practiced shareholder engagement strategies were mainly Europe and the United States. In China, there is still room for the development of shareholder engagement strategy.

Data is a major obstacle to implementing ESG investment. There are currently several ESG data providers in the market. According to the survey, institutions have a balanced preference for data sources with no data source dominating the advantage. At present, the ESG disclosure system in China is in the process of construction and access to ESG-related information is limited. The major ways of accessing ESG information include proactive information disclosure by listed companies through announcements and sustainability reports, penalties and news about companies disclosed by regulatory authorities and news media, and data compiled by NGOs and industry associations. Some companies make full use of AI and satellite technologies for mining, structuring and analyzing alternative data. However, the validity, consistency, objectivity and traceability of ESG data are not verified. As an important task in practicing the ESG concept, investment institutions need to track the underlying ESG data provided by the market and improve their data system.

Self-building an ESG rating system represents the future trend. We counted the views of fund managers and their opinions of third-party ESG rating providers. According to the statistics, 34% of the institutions were skeptical about the ESG ratings provided by domestic and foreign third-party institutions. Institutions believe that various ESG ratings have certain reference value but due to the lack of ESG-related information disclosure and the quality of corporate disclosure, the existing ESG ratings are difficult to guide investment. The research showed that 28% of the institutions have built their ESG indicator system. With the development of the ESG investment and the increasing number of institutions implementing ESG investment, it is foreseeable that a self-built ESG evaluation system may indicate future trends. Some institutions may combine the information derived from ESG ratings with their deep industry insights and integrate ESG factors in the investment analysis framework to influence investment decision-making. This strategy can also become an efficient way to use ESG information.

Climate risk goes beyond corporate governance as an important factor affecting corporate performance. As indicated through this year’s survey, corporate governance is considered as the factor having the most effect on a company’s performance and results of operation, while environmental protection becomes more and more important obviously. Climate change, as an urgent risk for all types of businesses, has become an important factor that impacts corporate performance. Global economic development is being constrained by natural disasters and extreme weather events are already increasing the operating costs of enterprises by disrupting their supply chains and affecting their capacity. In the global transition to a low-carbon economy, policy changes, social preferences and the emergence of green technologies may affect or change the development landscape of certain industries. Countries and regions have taken steps to integrate climate risk into risk management considerations.

5.1 Institutional-level questionnaire

5.1.1 Opinions and understandings of ESG

Last year's questionnaire covered 226 institutions, including 118 public funds and 86 other asset management institutions. Compared with last year's questionnaire, this year's pays more attention to public fund companies with 122 public funds in 159 participating institutions. In view of that, as of October 15, 2021,the number of fund management companies published on the CSRC website is 153, which means this questionnaire should highly reflect the opinions and views of China's public funds on ESG responsible investment.

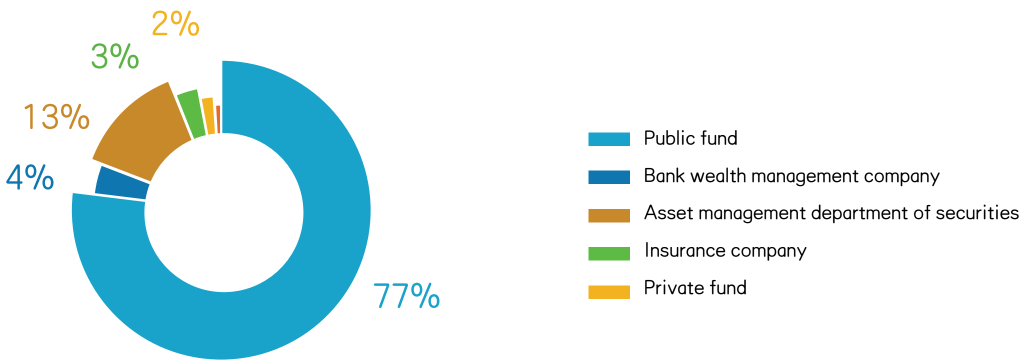

Fig.21 Questionnaire respondent portrait

Since this year, there has been an increasing number of institutions caring and practicing investment in ESG. On the level of caring ESG investment, the numbers of the institutions which are "unfamiliar with" and "heard of" it decline sharply. On the investment practice, 23% of the respondents have “practiced” the ESG investment this year, while the figure last year is 6% only. 21% of the respondent institutions are “very interested and be about to practice” the ESG investment. In absolute terms, the number of institutions practicing ESG investment has increased from 14 to 37, and the number of institutions who are “very interested and be about to practice” ESG investment has increased from 20 to 34. Only in a year, the investment by domestic asset management institutions in ESG practices has increased significantly, and domestic ESG sustainable investment shows strong development momentum and growth potential. It can be predicted that in the next few years, ESG investment will increase continuously, and the importance of non-financial indicators in investment decision-making will continue to improve.

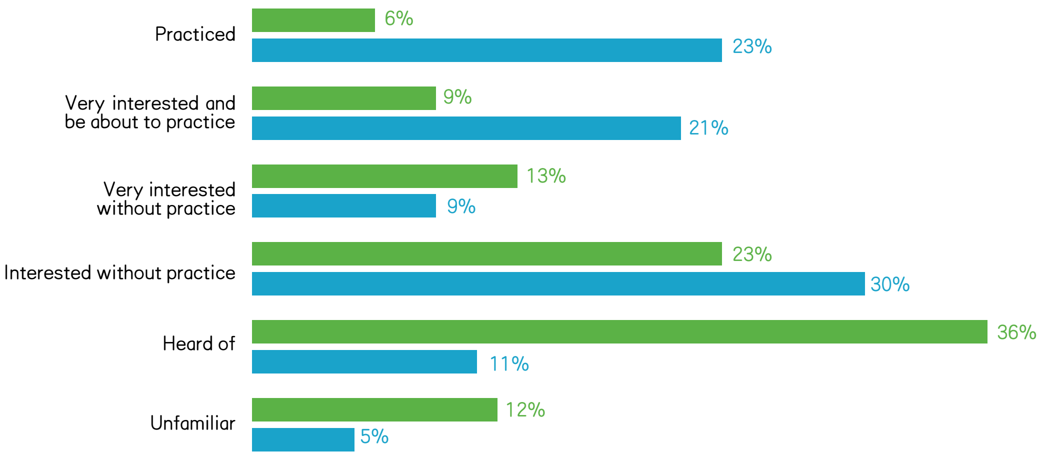

Fig.22 Respondents'knowledge of ESG investments

According to 2021 Global ESG Survey of BNP Paribas (BNP), 22% of global respondents have included ESG consideration into 75% of their portfolios at least, and this percentage will be increasing in the two years. In our survey, 98 domestic institutions have included ESG factors into investment decision-making. This number is 62% of this year's respondents, while last year's number is 91 (40%). In addition, we have noted that only 37 institutions chose "practiced" in the question above. Obviously, although some institutions have not considered doing responsible investment, ESG factors have been taken into account in specific investment decision-making unconsciously. Looking at the time when ESG factors are included into investment decision-making, the number of institutions under "two - five years" is up to 38, the number under "zero (included) - two years" is 48, and the number under "five years or more" is 16, in all cases saw an increase. On the contrary, the numbers under "not yet considered" and "will consider in five years" decline to some extent.

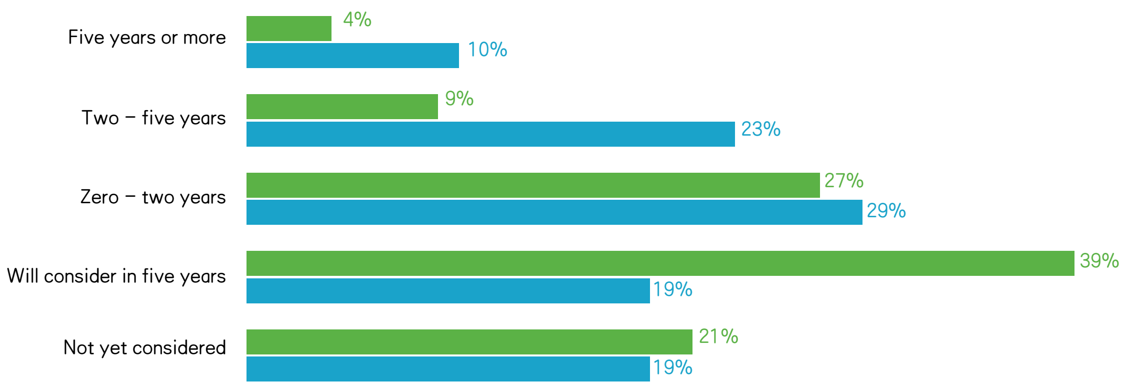

Fig. 23 Time when institutions include ESG factors into investment decision-making

ESG investment is playing its role at two dimensions of business and investment. Compared with last year, majority institutions have recognized that ESG investment improves the long-term performance of listed companies and own investments. Notwithstanding the "little significance" option provided this year, none of the institutions have chosen this option. Thus, ESG consideration is accepted more widely. The above conclusion is supported by research results of the academia. In 2015, Friede, Busch and Bassen summarized the results of 2200 personal studies. About 90% of the studies identified the non-negative relationship between ESG and corporate financial performance. The studies also indicated that North America and emerging market are the two markets with the most effective ESG information. Through the questionnaire follow-up, some fund managers have pointed out that the factor of corporate governance in emerging market needs to be improved, which may be the source of higher effectiveness of ESG factors. In 2016, Verheyden, Eccles and Feiner found that ESG screening strategy hardly reduced the rate of return, but reduced the risk relatively, and had little negative impact on the diversity of portfolio.

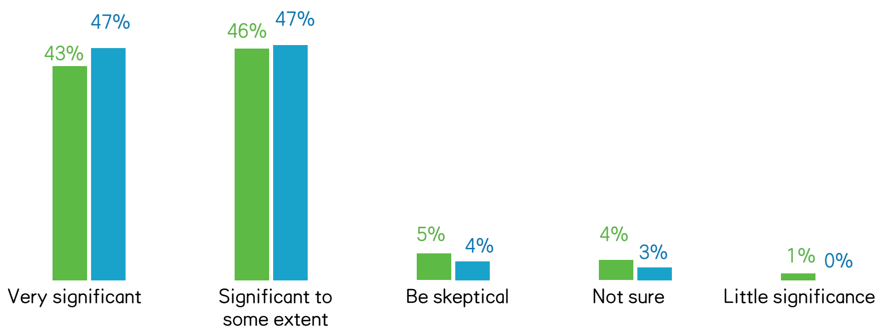

Fig.24 Opinions of institutions on ESG's effect on improving long-term performance of listed companies

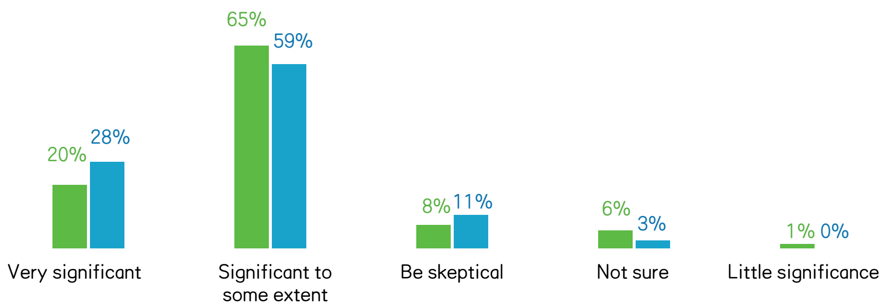

Fig.25 Opinions of institutions on ESG's effect on improving their own investment performance

Most institutions consider that ESG sustainable investment is conductive to fulfilling social responsibilities, improvement of brand image and reputation, attracting capital inflows, and better displaying corporate culture. BNP 2021 ESG Questionnaire Survey for Global Institutional Investors indicates that brand and reputation have exceeded the return and become the main driving force of ESG. However, according to our questionnaire, "improvement of brand image and reputation" ranks fifth in the driver for ESG. The top three motivations are "improve long-term returns," "reduce investment risk," and "diversification and differentiation of product offerings". Compared with global institutional investors, domestic public funds' motivations to practice ESG are concentrated on improving investment returns, reducing investment risks and market product demands, and are not very concentrated on brand image and reputation. This is because of competence of net value public funds in China. Investors pay more attention to whether public offerings can earn excess returns, and the brand effect of public offering of fund has limited influence on attracting capital inflows. In addition, we note that "diversification and differentiation of product offerings" has replaced "social responsibility" to become the third most chosen motivation. This shows that, along with the launch of ESG products, they have become a necessary consideration for publicly offered funds when product sequences are designed.

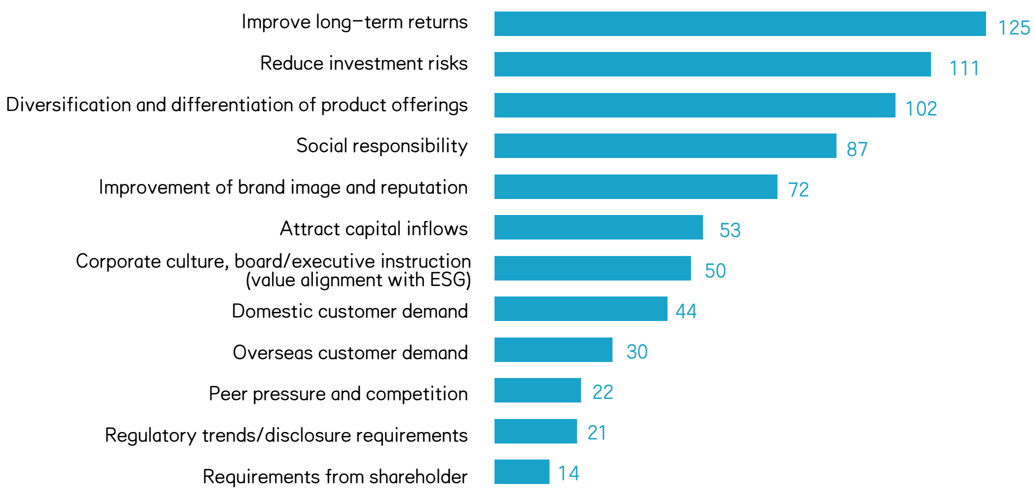

Fig.26 Main (or possible) motivations of ESG investment (multiple choice)

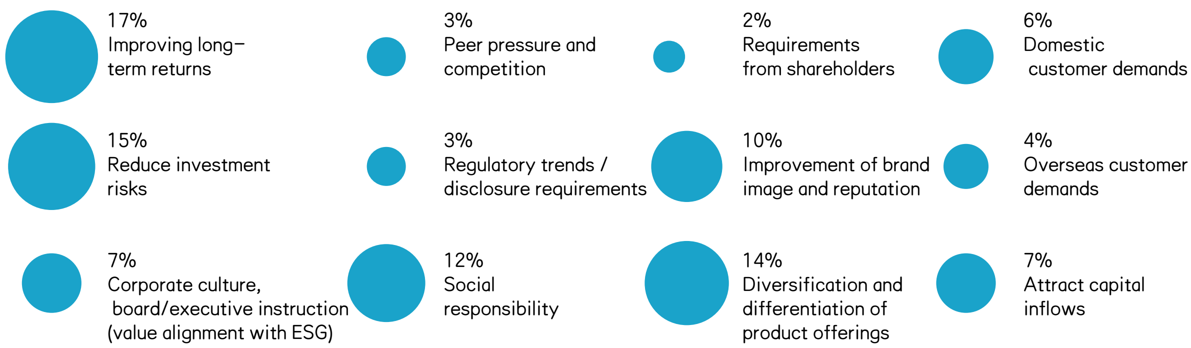

Fig.27 Main (or possible) motivations of ESG investment (multiple choice)

5.1.2 Organization structure and external resources

After checking institutions' specific methods to practice ESG responsible investment, we consider that the most popular approach is to "train employees on ESG risks and opportunities". Among other approaches, the percentages of "attend related meetings organized by a third party", "purchase ESG data or ESG ratings", "embed ESG factors into the investment decision-making" and "hire third party consultants to optimize internal ESG policy/strategy" are 17%, 15%, 13% and 11%. At present, less institutions are practicing the ESG concept by "establish ESG-related assessment, incentive and punishment schemes". Regarding the marginal change, compared with last year, more institutions are practicing the ESG concept by "hire third party consultants to optimize internal ESG policy/strategy" and "purchase ESG data or ESG ratings". Now the institutions are in their early stage to practice ESG investment and are understanding and researching the ESG concept by consulting or acquiring data services. We also see room for institutions to improve incentive mechanism and organization structure of ESG practice.

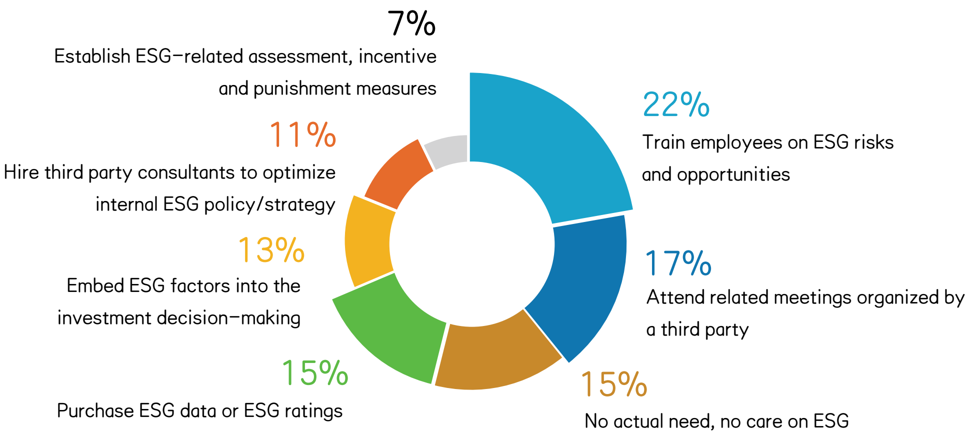

Fig.28 Measures institutions take in ESG investment

To further research institutions' organizational structure and functions to practice ESG, we have researched "arrangements of ESG investment in the organizational structure" and "departments or roles leading the development of departments or involving ESG investment strategies". Regarding the organizational structure, 11 (7%) of the respondents have established their own ESG teams or departments, indicating that the specific ESG practice has not been widely applied in various institutions. At present, ESG work is mainly carried out by full-time or part-time researchers. About 19% of the institutions are "equipped with full-time ESG research or investment personnel ", and about 28% of the institutions have "no full-time staff, but part-time". Regarding departments or roles leading the development of ESG investment strategies, 49 institutions are led by department heads, and 35 institutions are led by officers or CEOs to formulate and implement ESG investment strategies. This is consistent with the realization that the implementation of ESG needs to form internal consensus from top to bottom. At present, in the circumstance that ESG strategy has not been proved to have obvious excess returns, the development of ESG work requires institutions to invest costs in data purchase or consulting services, which leads to the reduction of short-term profits. Therefore, senior officers responsible of implementing ESG strategy could ensure collaboration between internal stakeholders and different departments.

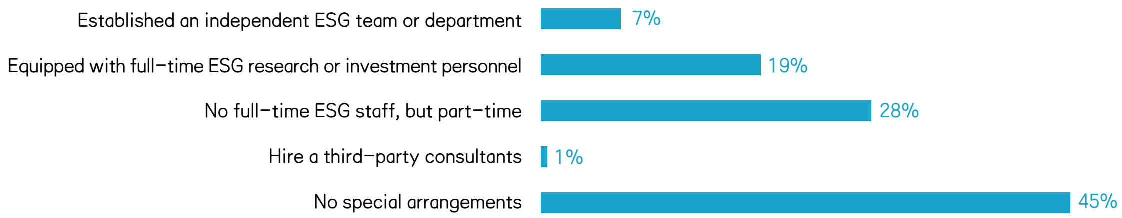

Fig. 29 Arrangements for ESG investments in the organizational structure

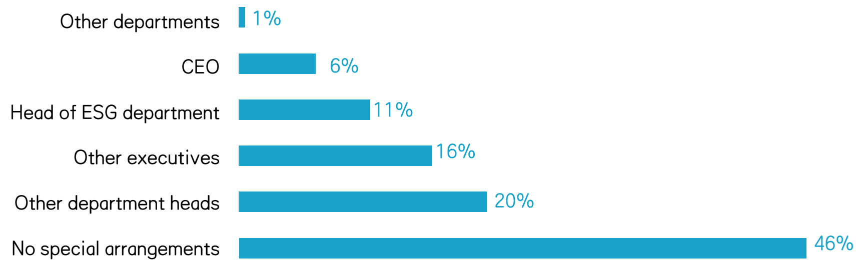

Fig. 30 Departments or roles leading the development of ESG investment strategies

The integration of ESG with the investment research process is fundamental to the practice of ESG concept. During the implementation of ESG strategies in the investment process, the most involved departments include investment department, research department and ESG department. Meanwhile, the technology department is playing a more and more important role, probably due to the fact that ESG-related information is difficult to obtain and relevant data needs to be mined, analyzed and back-tested by virtue of AI and other technologies, so the technology department is important for implementing ESG strategies.

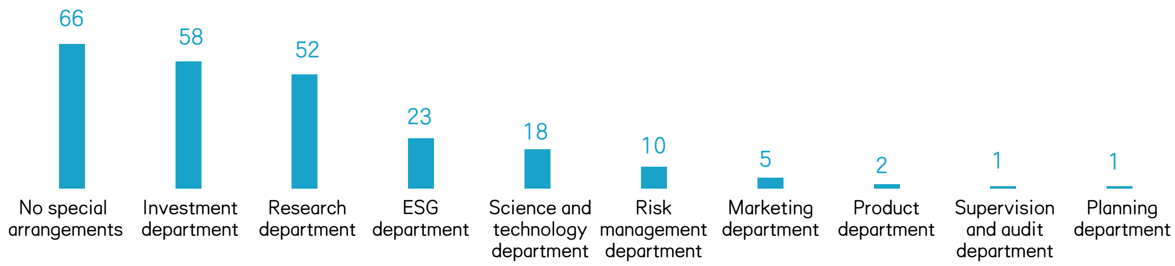

Fig. 31 Departments implementing ESG strategies in investment decision-making (multiple choice)

In terms of ESG research methodology, 44 of the respondents have established ESG rating systems, accounting for 28% of all respondents. The relative low number of institutions that have established their own ESG rating systems may be caused by the limitation of current low recognition of ESG investment or the considerations of institutions for the cost of data sources and human resources. However, in terms of the marginal change, this year's number of the institutions which have established their ESG rating systems is more than the number of last year’s 40 institutions. Considering that ESG investment ratings represent the investment preferences and styles of institutions to some extent, and independent ESG rating system helps the establishment of standards and criteria institutions set to rate a company's ESG performance, we believe that, with the development of ESG concept, more institutions will establish their ESG rating systems in the future.

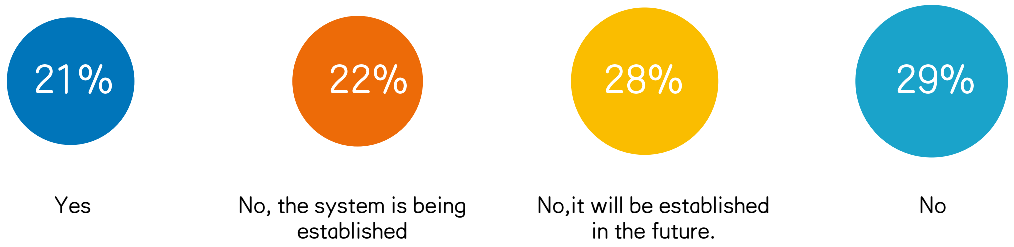

Fig. 32 Institutions that have established their own ESG rating system

ESG data are the basis for ESG ratings. In terms of ESG data support and sources, the respondents have a balanced preference for data sources, with no data source dominating the preference. The top three data sources were “government or service agency data”, “third-party data providers” and “third-party ratings, rankings or indices”, accounting for 17%, 15% and 14% respectively. The least preferred option - NGO reports, accounts for 9%. With the emergence of FinTech innovations so far this year, a certain percentage of institutions recognize alternative data as a component of ESG data sources. ESG data consistency is low because ESG disclosure guidelines have not yet been established. Meanwhile, considering that the ESG is in the stage of rapid development, the number of data service providers and rating providers engaged in ESG is increasing, while tracking the underlying ESG data available in the market and improving their own data systems is a long-term commitment for investment institutions practicing ESG investment. Due to the low-frequency nature of ESG data, the vast majority of institutions in the survey endorsed that ESG data should be updated on a monthly and quarterly basis.

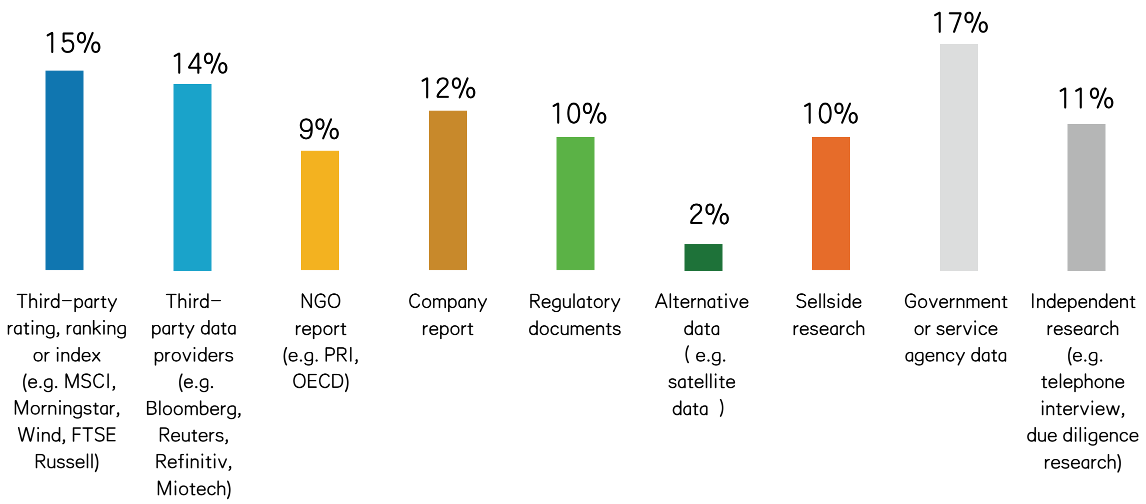

Fig. 33 Preferred data source for ESG strategy (multiple choice)

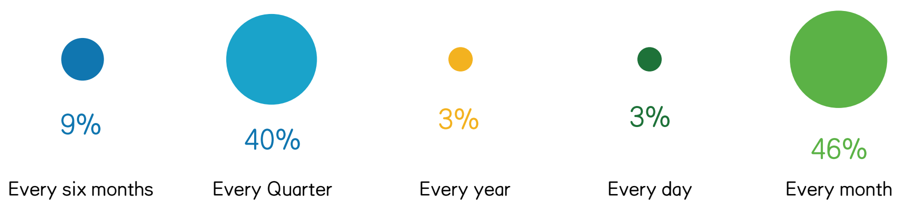

Fig. 34 Update frequency of ESG data

5.1.3 Strategy and analysis system

In terms of investment strategy, more than half of the respondents, 98 in total, identified that they were implementing ESG strategies. Among institutions that have implemented ESG investment strategies, negative screening and positive screening strategies were the most popular choices. Nearly 80% of institutions chose to apply negative screening strategies, nearly 58% chose positive screening strategies, 55% chose green or sustainable thematic investment strategies, while ESG integration strategies and shareholder engagement strategies were chosen by 44% and 31% of institutions, respectively, and norms-based screening and impact investment were chosen by 27% and 14% of institutions, respectively. In the primary stage of sustainable investment development in China, negative screening which is relative easy to implement is the priority choice for most institutions, while ESG integration strategy and shareholder engagement strategy obviously account for a relatively low percentage, indicating the lack of a mature model ESG investment framework and of a sound ESG rating system in China, as well as the gap with mature foreign markets.

Since the question was multiple choice, we notice ESG integration strategies received more recognition this year, up to 14% from 8% last year, as indicated from the number of votes each strategy received as a percentage of all votes. Market awareness of norms-based screening and shareholder engagement strategies had also increased, from 6% to 9% and from 9% to 10%, respectively. As for the ESG strategy system in the next five years, it seems positive screening, ESG integration, regulated screening and shareholder engagement strategies will be recognized by more institutions. In particular, fund managers predicted that the proportion of positive screening strategies will increase from 19% to 25% while that of ESG integration strategies will increase from 14% to 19%.

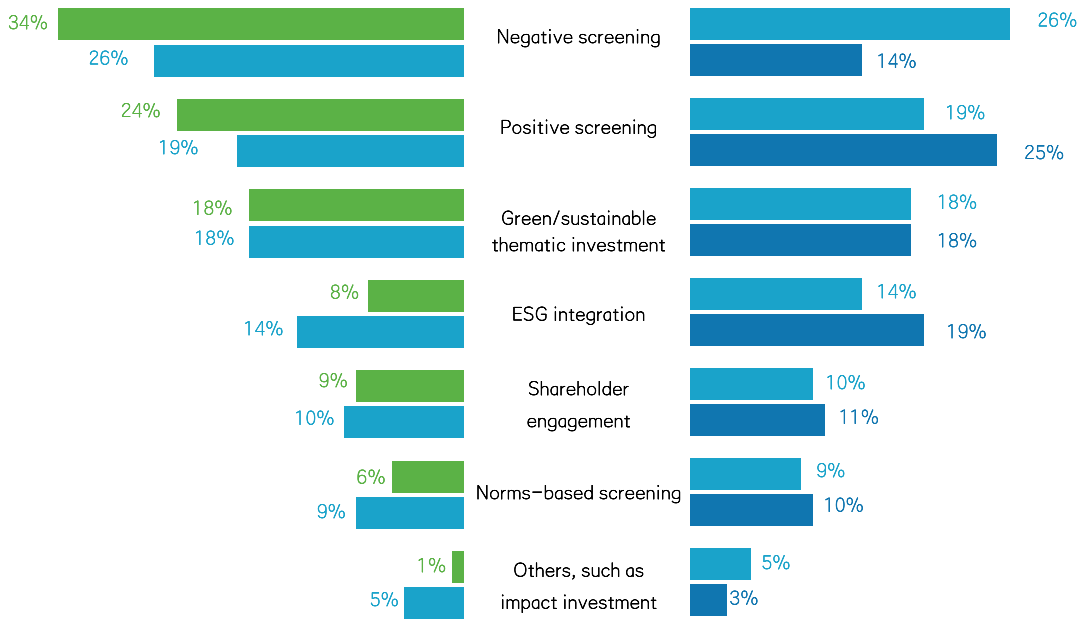

Fig. 35 ESG strategy implementation in 2020 and 2021 (multiple choice)

Fig. 36 ESG strategies to be implemented in the next five years (multiple choice)

2020 2021

2021 Next five years

According to the research, institutions believe that corporate governance remains the most influential of the three factors on company performance and operations. However, compared to last year, the percentage of institutions that recognized corporate governance as the most influential factor on the performance of investees decreased from 77% to 62%. Conversely, attention to environmental factors have increased, with 21% of institutions citing them as the most important factor affecting the performance of investees this year. Climate change has become an urgent and possible financial risk factor for companies. In the context of the Paris Agreement, it will become an inevitable trend for the world to systematically incorporate the challenges and opportunities presented by climate change into the risk management and strategic investments. In July 2021, the People's Bank of China officially released the Guidelines on Environmental Information Disclosure for Financial Institutions to guide financial institutions in identifying, quantifying and managing environment-related financial risks. This also helped to direct the green allocation of financial resources and promote the sound operation of the financial system. In November 2021, The Stock Exchange of Hong Kong Ltd., a wholly-owned subsidiary of Hong Kong Exchanges and Clearing Limited, published the Corporate Governance and Environment, Social and Governance (Climate Disclosure) Guidelines to assist listed companies in reporting following the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). Also, the Green and Sustainable Finance Cross-Agency Steering Group announced its intention to enforce climate-related disclosures in line with TCFD ‘s recommendations on or before 2025.

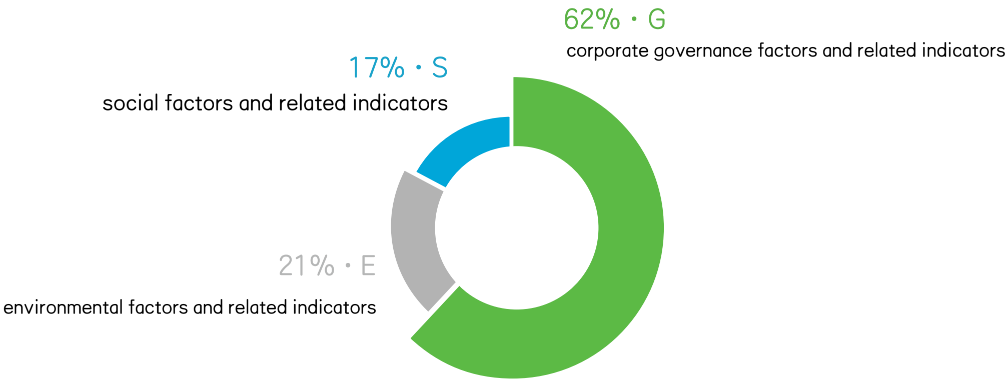

Fig. 37 Factors most influential on the performance of investees

During the research, we investigated institutions' perceptions of the effect of specific issues under the three ESG pillars on investees: short-term and long-term, direct and indirect, and significant and non-significant. According to the survey, except for whether "the level and quality of environmental information disclosure" had a direct or indirect impact on corporate value, the other issues of environment factors were considered to be long-term, direct factors that had a significant impact on the value of the investees. In terms of long-term impact, "green business ", "construction of environmental management system", and "carbon neutrality and climate change risk" were the top three long-term impact factors. In terms of direct impact, "carbon neutrality and climate change risk," "environmental risk events and response," and "green business" ranked in the top three. From the perspective of important impact, "emission management performance", "green business " and "construction of environmental management system" were the top three factors.

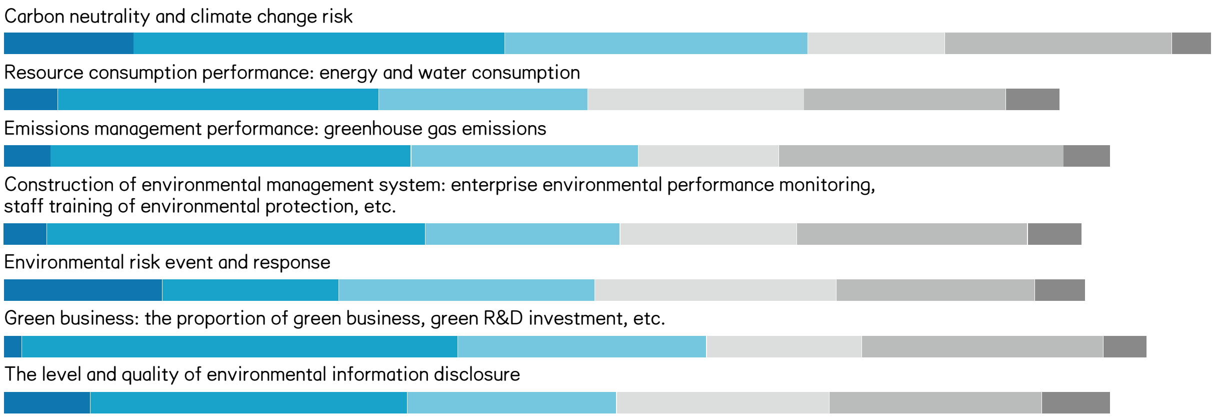

Fig. 38 Assessment of item E (multiple choice)

According to the survey, the issues of social pillar were considered to be long-term, direct factors that had a significant impact on the value of the investees. From the perspective of long-term impact, "regional relations", "talent policy", "product safety, production safety and public safety" were the top three factors. From the perspective of direct impact, "fair competition", "Corporate credit", "creditor’s debt", and "employee development, labor security, salary system, etc." ranked in the top three. From the perspective of significant impact, "corporate credit", "product safety, production safety and public safety" and "creditor’s debt" were the top three.

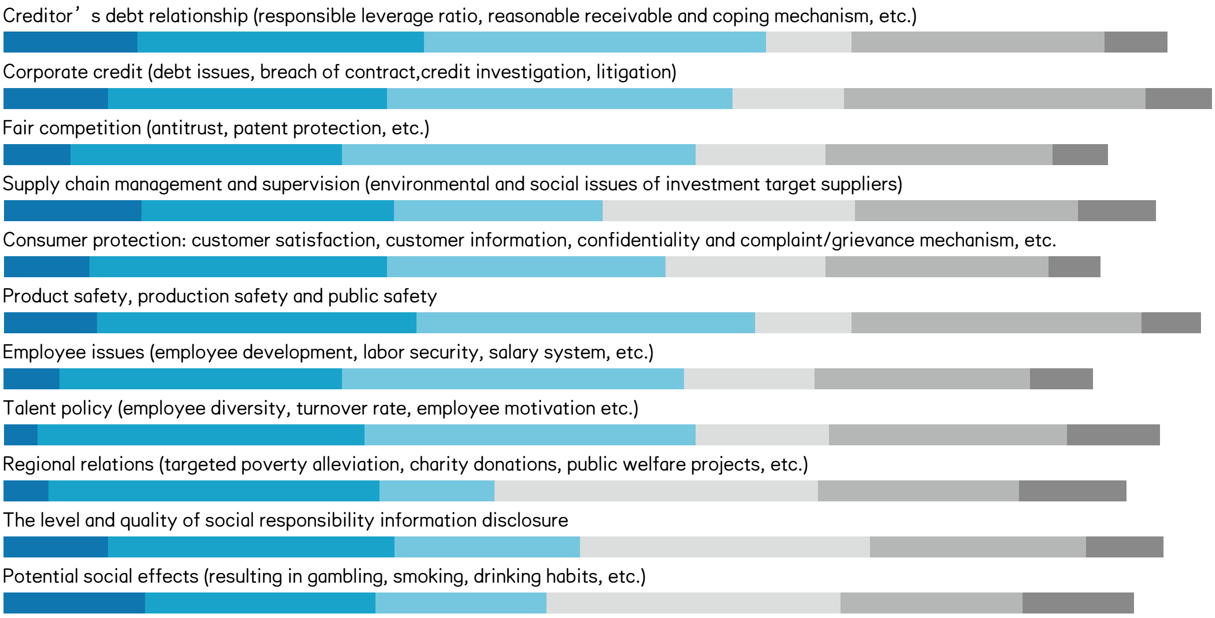

Fig. 39 Assessment of item S (multiple choice)

According to the survey, the issues of corporate governance pillar were also considered to be long-term, direct factors that had a significant impact on the value of the investees. "The relationship between strategy and performance", "whether sustainability/ESG concept is included in the company’s strategic planning and management", and "intensity of R&D investment" were the top three long-term impact factors. From the perspective of direct impact, "fraudulent (financial) reporting and performance manipulation", "other governance issues: ratio of non-recurring profits and losses, change of controlling right", and "the relationship between the board of directors and shareholders" ranked in the top three. From the perspective of significant impact, "fraudulent (financial) reporting and performance manipulation" and "intensity of R&D investment " ranked first and second respectively, while "the relationship between strategy and performance", "other governance issues: ratio of non-recurring profits and losses, change of controlling right" and "the level and quality of corporate governance information disclosure" ranked the third.

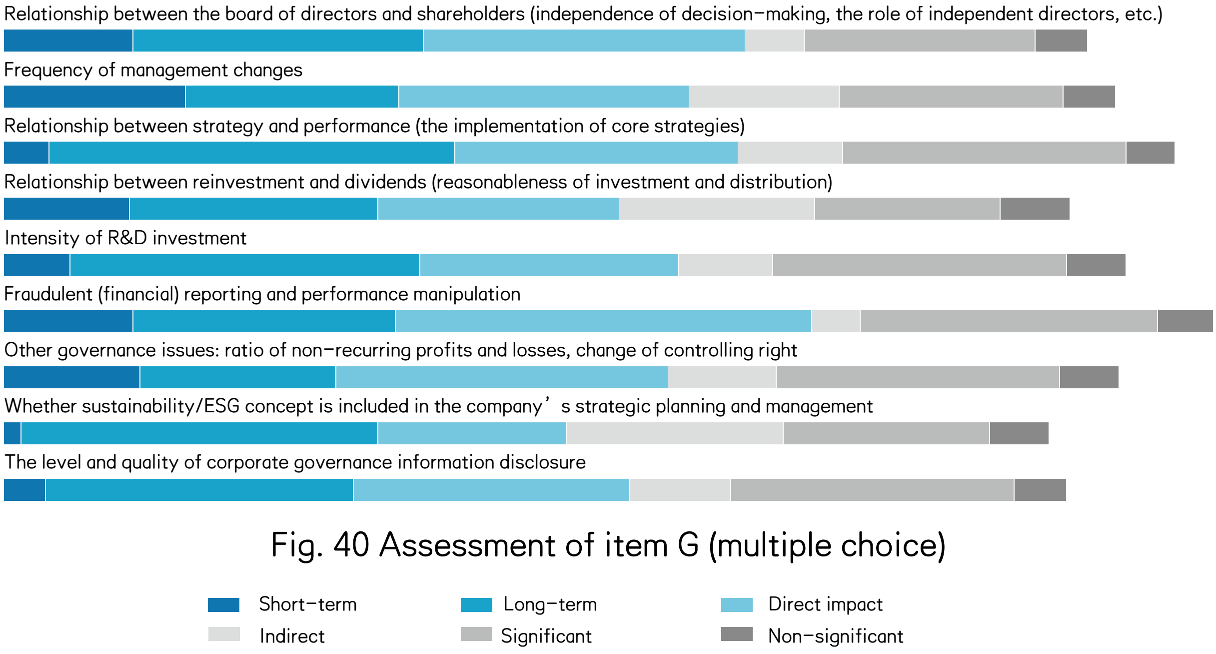

Fig. 40 Assessment of item G (multiple choice)

5.1.4 ESG product issuance and performance

Of the 159 respondents, a total of 66 have issued ESG or sustainability-related thematic products. In terms of the proportion of ESG or sustainability-related thematic products to the AUM of institutions, 71% of institutions had their sustainable investment product proportion in the "0-10%" or "10-20%" range. With an eye on the future, 80% (127) of institutions believed that investments in ESG or sustainability-related thematic products would grow in the next two years. Among those respondents, 130 institutions believed that the proportion of ESG or sustainability-related products in total investments would be in the range of "0-10%" or "10-20%", 13 institutions believed that the proportion would be in the range of "20-30%", and 3 institutions believed that the proportion would be in the range of "30-50%". ESG or sustainability-related thematic products currently account for a limited share of all assets under management in the domestic market, and there is significant room for growth compared to the global sustainable product penetration rate of 36% according to GSIA. With the introduction of the carbon neutrality target and the emphasis on sustainable development strategies in China, more ESG investment products will be available in the domestic market, providing diversified investment tools, and the proportion of ESG or sustainability-related thematic products to all assets under management will grow.

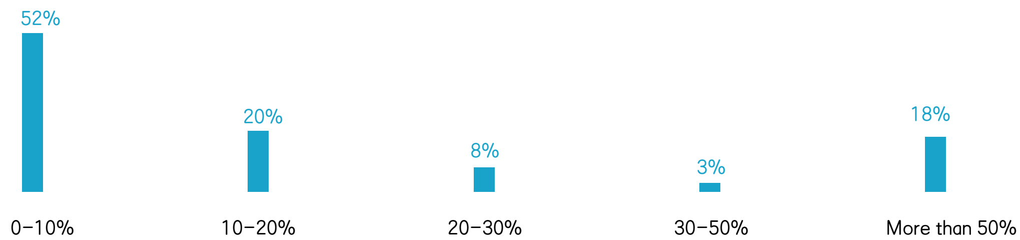

Fig. 41 Proportion of sustainability-related thematic products in investments and the corresponding number of institutions

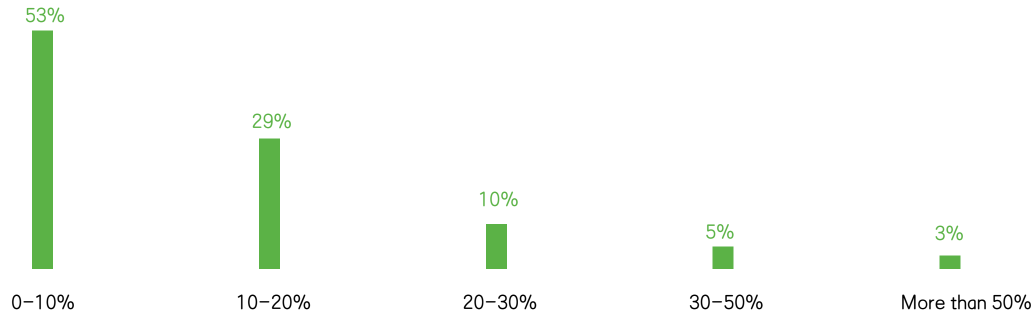

Fig. 42 Expected share of sustainability-related thematic products in investments and the corresponding number of institutions

Baillie Gifford, a leading long-term investment firm, believes that consideration of ESG in investment decisions align with the long-term investment philosophy. According to the questionnaire survey, the majority of funds believe that ESG products need 3-5 years to achieve superior performance, while the performance assessment term of most fund companies is 1-3 years. Therefore, the mismatch between the time required for better performance and performance assessment cycle may hinder investment researchers within the institution to practice ESG investment. The balance of appraisal mechanism between the time required for ESG product performance and the fund manager's investment performance evaluation cycle is necessary in the construction of the ESG ecosystem.

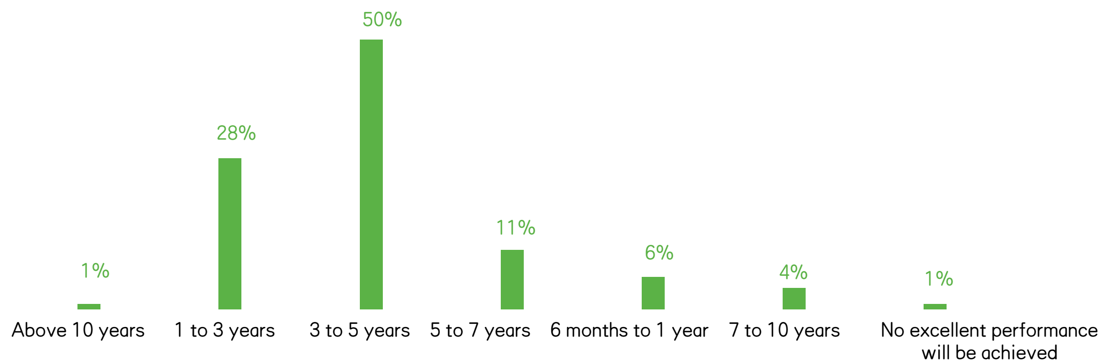

Fig. 43 Time required for ESG products to achieve outstanding investment performance

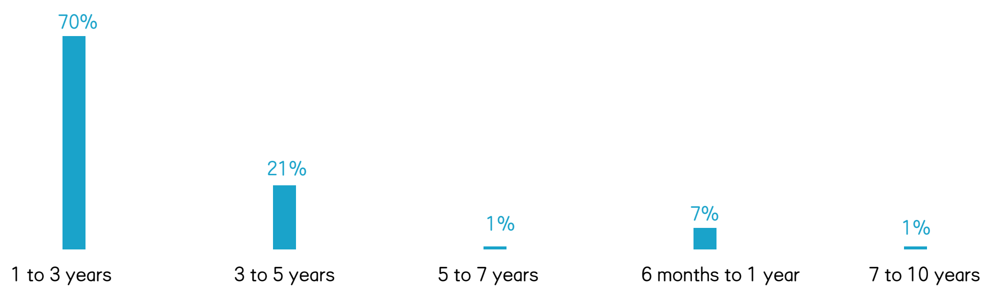

Fig. 44 Fund Manager's investment performance evaluation cycle

5.1.5 Challenges and motivations

We further explore what are the main obstacles and challenges in adopting ESG responsible investment. The biggest obstacle, according to 63% of the institutions, is that "ESG-related information of listed companies is difficult to obtain, and the information is incomplete and has low credibility". This matches the results of BNP's ESG survey of global investors, and the data is recognized as a barrier to global ESG investment. ESG investment in China also has these problems, and according to the survey, nearly 60% of the institutions believe that "lack of standardized ESG disclosure rules" and "third party ESG ratings/scores disagreement" make it more challenging to carry out ESG investment in this environment. Meanwhile, the "lack of standard industry indicators to measure ESG investment performance" and the "insufficient understanding of ESG and lack of corresponding investment " are also important reasons that prevent institutions from making responsible investment.

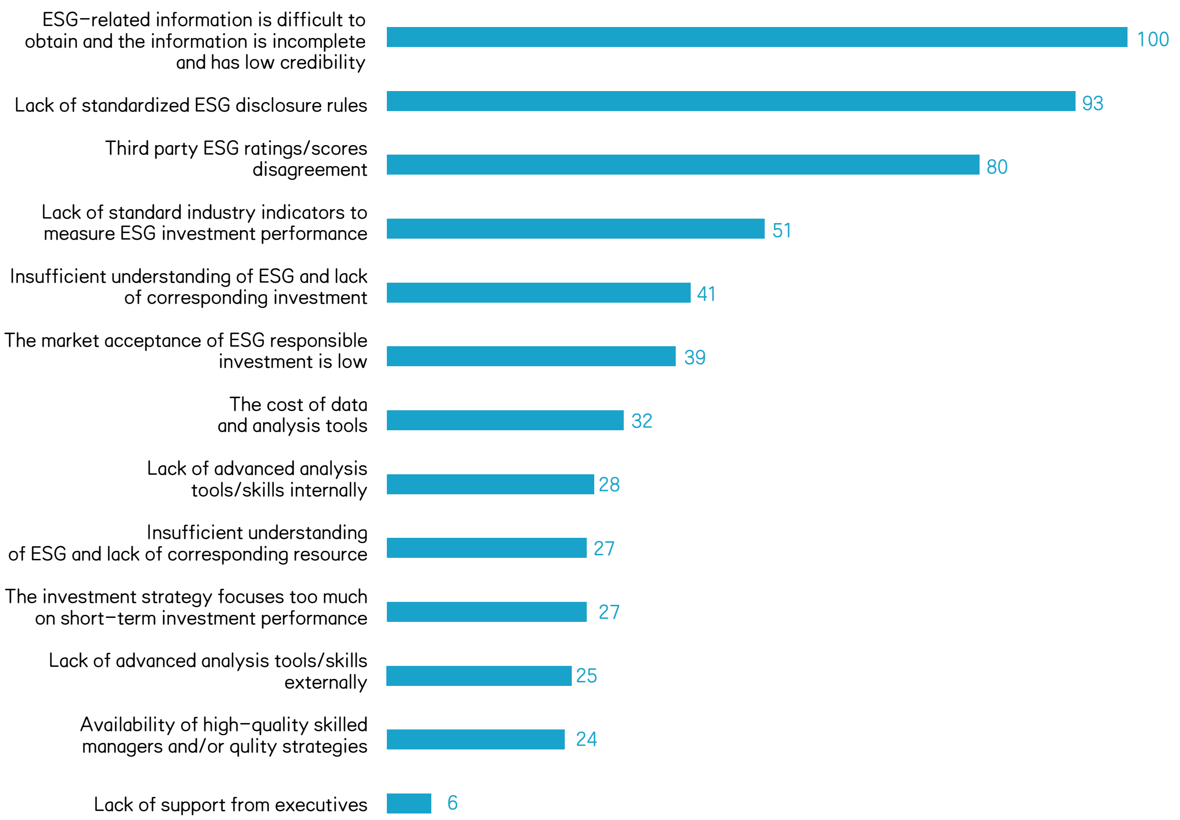

Fig. 45 Key challenges for institutions to adopt ESG investment (multiple choice)

In the face of the obstacles and challenges of ESG investment, the most effective way to motivate institutions to practice ESG investment this year is to "improve the quality of corporate information disclosure and increase the availability of data points". The "regulatory authorities promote and encourage ESG responsible investment from top to bottom and provide preferential policies" is equally important, but drops to the second place. In addition, enhancing "the supply of ESG talent", "strengthen investor education on ESG responsible investment", "improve the transparency of corporate ESG Report", and "greater consistency among ESG data providers" are also considered as important factors.

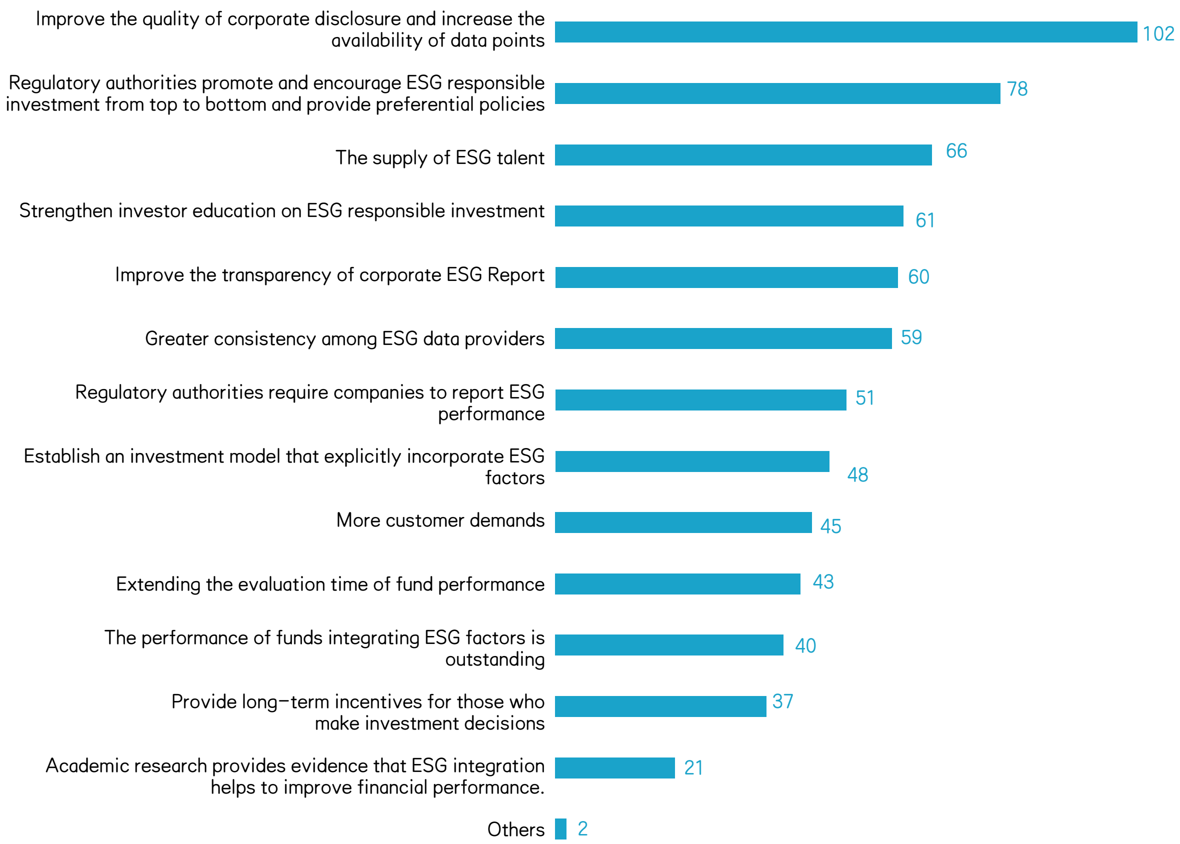

Fig. 46 Most effective way to motivate institutions to practice ESG investment (multiple choice)

5.2 Product-level questionnaire

This year's questionnaire involves product version questionnaire for the domestic sustainable investment fund managers identified in this report to discuss in depth key issues such as the definition of ESG funds, client portrait of ESG funds, the selection of ESG fund managers and ratings, the construction and implementation of ESG strategy. A total of 79 product version questionnaires were received this year. There are 144 public fund companies in the whole market which have issued sustainable investment products, and the questionnaires collected account for 55% of the public fund companies in the whole market.

5.2.1 Definition and client portrait

Up to now, there is no clear definition of ESG funds or products in China. According to the findings, the following two types of funds are considered as ESG funds: 1. Funds applying ESG strategies (e.g., positive screening, negative screening, ESG integration, shareholder engagement strategies, regulated screening, impact investment); 2. Funds that cover investments in ESG-related themes (e.g., low-carbon, environmental protection, energy, green, energy efficiency, clean, renewable, sustainable, social responsibility, governance, etc.). The percentages of institutions that recognize the above two types of funds as ESG funds is 54% and 41% respectively. It has been a concern in the industry that it attracts client capital inflows through the name of ESG, but does not actually practice ESG investment. For green investment, some institutions deem it necessary to identify the risk of "greenwashing". However, another view is that at the early stage of ESG development, emphasis should be laid on the exploration of ESG underlying data and research methods, strategy development and realization of excess returns, which will bring in the inflow of funds and further form a positive cycle to promote the development of ESG investment. The corresponding fund definition and disclosure requirements were established in Europe when its ESG or sustainable investment developed to certain stage. Therefore, we suggest not to focus excessively on the definition of ESG funds or products at present, but to work to improve ESG information disclosure at the company level to solidify the foundation for ESG ecosystem.

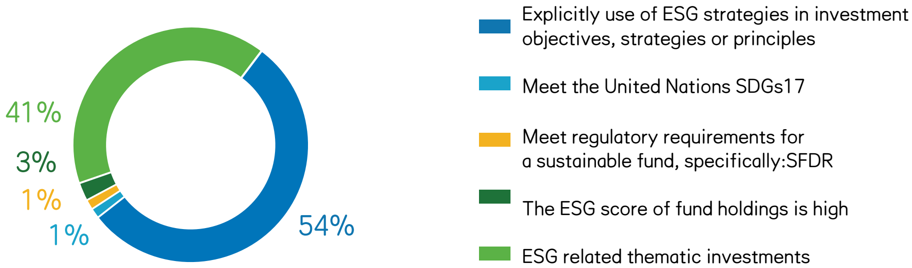

Fig. 47 Classification of ESG funds or sustainable funds

From the perspective of degree of attention paid to ESG and sustainable investment, 25 respondents indicated an increase at the company level. There are 3 major reasons. First, with the development and popularity of ESG concept, ESG investment is becoming more and more recognized in China and receives more attention in the market; second, policy objectives such as carbon neutrality goal and common prosperity promote the development of ESG thematic investment; third, customer needs drive the development of ESG products and strategies.

The power of customer demand to fuel ESG products cannot be underestimated. More than half (about 57%) of the respondents indicated that they have conducted ESG-related product development at the request of clients or have ESG products (including dedicated products) under management. Benefiting from the popularity and education of overseas markets for long term, overseas asset management institutions have developed a mature ESG concept and investment outlook. As a result, overseas asset management institutions are an important source of capital for ESG investment. Surprisingly, demands from domestic institutional investors or domestic asset owners accounted for 90%. Domestic institutional investors can quickly understand and learn ESG concept, focus on ESG risk management capabilities, are able to quickly seize thematic investment opportunities in the context of carbon neutrality and common prosperity, have the sense of social responsibility and serve as a major force in the development of ESG investment. We have reasons to believe that as domestic social security funds and more asset managers attach importance to, recognize and practice ESG concept, local ESG investment will develop by leaps and bounds.

Regarding the sales of ESG funds, nearly half (about 44%) of the institutions will educate clients of ESG investment ideas in their ESG fund product roadshows. Clients interested in ESG funds are also mainly institutional investors, including bank wealth management companies, social security funds and long-term steady investors. Retail investors are less aware of ESG investment. Enhancing retail investors' awareness and recognition of ESG investment through education is necessary for the growth and development of ESG investment.

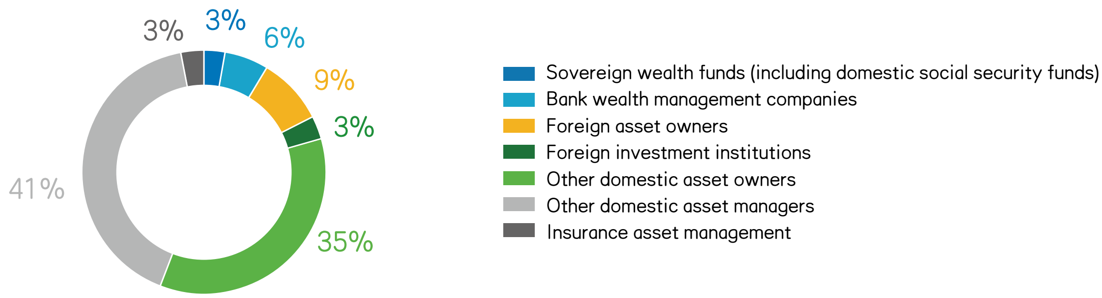

Fig. 48 ESG product client portrait

ESG investment is still in its early days, and attracting more capital inflows remains a core concern to promote ESG development. In order to explore the views of domestic institutions on the development path of ESG concept, we researched "the time when ESG investment concept will gain explosive recognition". According to the research, most respondents believed that the ESG investment would gain explosive recognition in the near future. 13 institutions believed that the ESG investment would gain explosive recognition within the next 2 years. 43 institutions believed that the ESG investment would gain explosive recognition within the next 2 to 5 years. 19 institutions believed that the ESG investment would gain explosive recognition after 5 years. Only 4 institutions believed that the ESG investment would not gain explosive recognition.

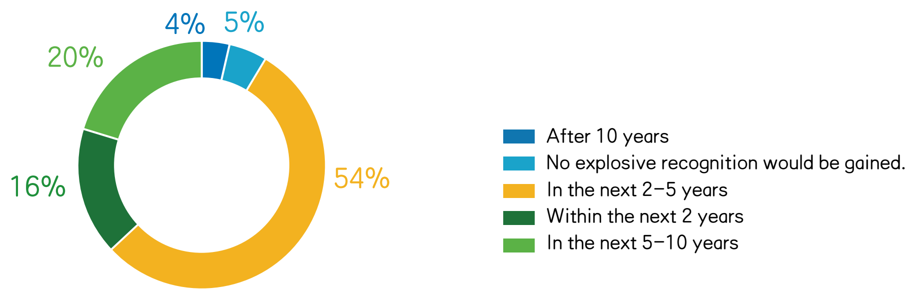

Fig. 49 Time when the ESG investment would gain explosive recognition

5.2.2 Selection of fund manager and rating system

To promote the ESG ecosystem, we further surveyed how institutions select fund managers for ESG products. 34% of the respondents chose fund managers with experience in ESG-related thematic investment, 26% chose fund managers with multi-sector investment experience, 25% had no special requirements for fund managers, and 15% preferred conservative fund managers of value and growth-oriented investment styles. ESG fund products do not have obvious thematic investment or sector-biased features, and the limited supply of ESG talent may cause ESG funds to think less about the fund manager's matching degree with ESG investment concept when selecting their fund managers. According to the research, the benchmark selected by most ESG funds is also a broad-based index.

Fig. 50 Selection criteria for ESG fund manager (multiple choice)

There are numerous ESG rating providers in the market. We counted the views and opinions of ESG fund managers on ESG ratings from third-party rating providers. Institutions believe that various ESG ratings have certain reference value, but due to the lack of ESG-related information disclosure and the quality of corporate disclosure, the existing ESG ratings are difficult to guide investment practice. According to the statistics, 34% of the institutions are skeptical about the ESG ratings provided by both domestic and foreign third-party institutions. About 23% of the institutions have verified the validity of ESG ratings by constructing factor models and quantitative back testing. Based on interviews, the limited transparency and consistency in ESG rating logic is a major concern. The way in which the ESG rating system selects and empowers key topics influences the outcome of ESG ratings. Therefore, there is a need for institutions to establish their own ESG rating systems. On the other hand, some innovative institutions combine the information derived from ESG ratings with their deep insights into the industry and enterprises, and apply ESG factors in the investment analysis framework to influence investment decision-making, making ESG deeply integrated with the investment research system and representing an effective utilization of ESG ratings.

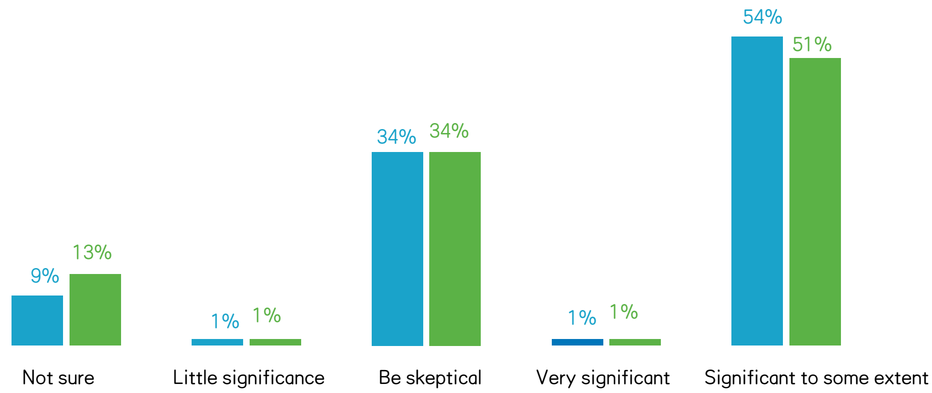

Fig. 51 Whether the ESG rating results can be used as a reference for investment decision-making

5.2.3 Decision-making and management process

67% of the respondents elaborated on how they incorporated ESG systems into their investment research and decision-making process. The degree of incorporation varied across institutions at different stages of ESG development. Institutions in the early stage of ESG development primarily applied negative screening and positive screening strategies. Institutions in the middle stage of ESG development had initially formed their own ESG integration systems, combining ESG factors and fundamental research to influence investment decision-making. Institutions experiencing rapid ESG development stage integrated ESG into the "pre-investment, investment and post-investment" process by creating a distinctive ESG investment research system, formulating ESG investment strategies, integrating ESG into the risk management process, forging an ESG talent team, and establishing a good communication mechanism with stakeholders to achieve sustainable investment returns.

About 28% of the respondents set up banning pools based on ESG strategies. There are two main types of stock banning pools established by different institutions, one prohibiting investment in addictive industries such as tobacco, gambling and pornography or high-energy-consumption and heavy-pollution industries, and the other one prohibiting investment in companies subject to regulatory penalties, negative public opinion, financial fraud and other corporate governance flaws, of which a simpler way is to prohibit investment in ST stocks.

Fewer respondents have implemented ESG shareholder engagement strategies. Only 19% of the respondents proactively communicated with investees about ESG topics. The proactive communication approach is reflected in the following aspects: first, the popularization and communication of ESG investments; second, focus on potential ESG risks and opportunities for companies, such as researching the proportion power generation by power companies using renewable energy, and the proportion of gray sales revenue and potential risks for pharmaceutical companies.

5.2.4 Return and risk characteristics

The vast majority of institutional investors are optimistic about ESG products that have been issued: they have similar or higher returns than other products, without bringing higher risks. In terms of market returns, most institutions believe that ESG products do not differ significantly from other products (43) or deliver a higher rate of return (29); only four institutions believe that ESG products have led to significantly lower returns; another three institutions see significant increase of returns for ESG-related products. At the level of investment risk, the majority of institutions consider that ESG products do not differ significantly (37) from or are less risky (26) than other products; only five institutions believe that ESG products pose a higher risk; 10 institutions consider ESG products to be significantly less risky.

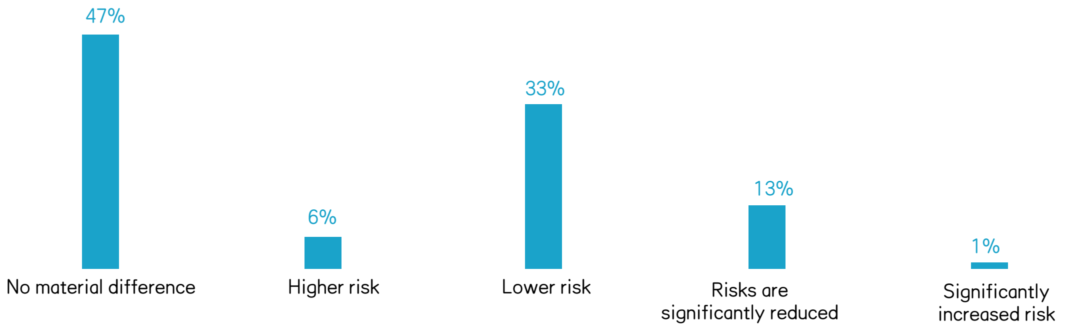

Fig. 52 Perceptions of risk characteristics of ESG products

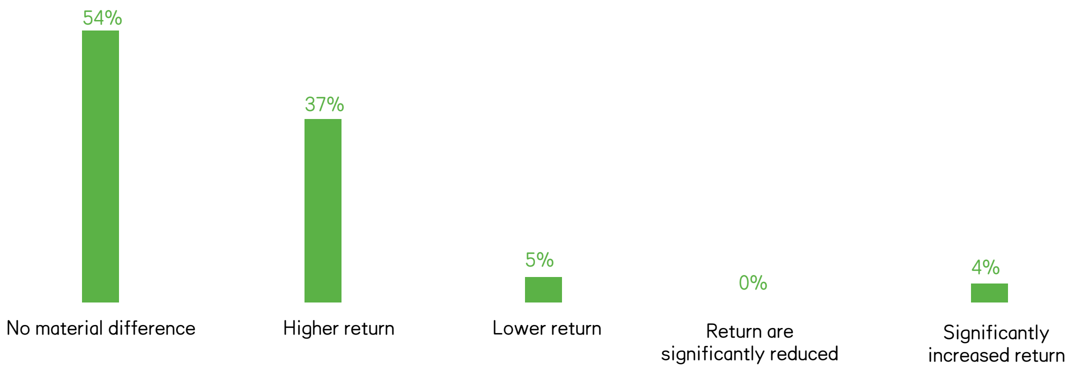

Fig. 53 Perceptions of return characteristics of ESG products

We are particularly interested in the views of the respondents on which ESG indicators will lead to excess returns. There are 57 companies believing that different combinations of all three ESG pillars would lead to excess returns. Among them, 8 institutions believe that most of the issues in E, S and G are likely to deliver Alpha. 7 institutions believe that issues in E and G lead to Alpha, 3 institutions believe that issues in S and G lead to Alpha, and 2 institutions believe that issues in both E and S lead to Alpha; 25 institutions believe that mainly the issues in G, i.e. corporate governance, will generate excess returns for the product, such as frequency of managerial change, level of corporate disclosure, employee compensation, executive incentives, etc.; 10 institutions see excess returns from issues in E, i.e. environmental governance, such as low-carbon energy efficiency, environmental measures, new energy sources, use of carbon emission resources, carbon-neutral related indicators, etc.; only 2 institutions believe that S, the issues factor in social governance, will lead to excess returns.

In line with the findings of the institutional questionnaire, although the recognition of environmental factors is still low compared to corporate governance, the carbon neutrality target will help the environmental factors gain importance. Social factor data is more difficult to obtain, while indicators lack standardization and are difficult to be analyzed and integrated, and it's still somehow difficult for it to effectively guide the investment practice. In general, although different institutions have different views on which of the three ESG indicators would lead to Alpha, most of them believe that ESG strategies lead to Alpha, which is the point of integrating ESG with investment decisions.

Appendix

I. Questionnaire design methodology

Based on the research on domestic and abroad enterprise social responsibility, responsible investment, ESG and other related academic literature, as well as the review of Chinese and foreign organizations' reports on ESG questionnaires, the joint group developed and formulated the first draft of the questionnaire. Following the common practice for academic literature, we applied an iterative process to develop the final draft of the questionnaire. We sought feedback on the first draft of the questionnaire from four academic financial researchers, a group of institutional investors and financial market organizations, conducted three rounds of Beta testing of the questionnaire, and obtained feedback through in-depth interviews, adjusting the questionnaire based on the feedback from each round, reducing bias caused by the questionnaire, and optimizing the wording and question formulation to ensure its clarity.

Specifically, in the first round, we invited a PhD in behavioral finance from Wuhan University to adjust the questionnaire and provide professional advice on the question setting. In the second round, a researcher from Huaxia Wealth Management Co., Ltd. filled out the questionnaire and refined the option settings. In the third round, we contacted fund managers and researchers from TruValue Asset Management Co., Ltd., Fullgoal Fund Management Co., Ltd., China Universal Asset Management Co., Ltd. and Harvest Fund Management Co., Ltd. to fill out the questionnaire and conducted in-depth interviews. We did a comprehensive sorting based on feedback received in three rounds of testing, and deleted, shortened and redrafted the questions. The group also discussed the questionnaire format and decided to include QFII/RQFII as the subject of the research. Finally, we hired professionals to finalize the wording of the questionnaire, the ordering of the questions, etc., and developed the final online version of the questionnaire and on wenjuan.com for participants to fill out the questionnaire and to collect relevant data. In addition, we have developed an online English version for QFIIs and RQFIIs to participate in this survey.

II.Questionnaire distribution and collection

The questionnaire distribution started on July 1, 2020 and ended on August 31, 2020. The distribution channels included: WeChat official account, where we sent invitations to domestic public fund management institutions, securities companies' capital management departments/capital management subsidiaries, QFIIs/RQFIIs and other institutions through wenjuan.com; e-mail/WeChat, in accordance with the list of public funds, securities management institutions and QFIIs/RQFIIs published on the website of the China Securities Regulatory Commission and other information.

Through the above channels, we received a total of 178 valid questionnaires. After we eliminated duplicate questionnaires from the same institutions or low-quality questionnaires, and excluded questionnaires completed in less than 2 minutes and participants whose question-answering logic was questionable, a total of 159 questionnaires remained. Based on the preliminary analysis of the contents of the questionnaire, GF Fund Management Co., Ltd., Invesco Great Wall Fund Management Co., Ltd., Penghua Fund Management Co., Ltd., AXA SPDB Investment Managers Co., Ltd., Schroder Investment Management (Shanghai) Co., Ltd., Ying Hua Fund Management Co., Ltd., China Merchants Fund Management Co., Ltd., Yingtou Information Technology (Shanghai) Co., Ltd. made suggestions on the questionnaire, based on which we have improved the analysis part of the questionnaire.

References

[1] Amel-Zadeh, A., and Serafeim, G. (2018). Why and how investors use ESG information: Evidence from a global survey. Financial Analysts Journal, 74(3), 87-103.

[2] Amel-Zadeh, A. (2018). Social responsibility in capital markets: A review and framework of theory and empirical evidence. Available at SSRN 2664547.

[3] Aragon, G. O., Jiang, Y., Joenväärä, J., and Tiu, C. I. (2019). Socially Responsible Investments: Costs and Benefits for University Endowment Funds. Available at SSRN 3446252.

[4] Banerjee, S., Chang, X. S., Fu, K., Li, T., and Wong, G. (2014). Corporate Environmental Risk and the Customer-Supplier Relationship. Available at SSRN 2533471.

[5] Barko, T., Cremers, M., and Renneboog, L. (2018). Shareholder engagement on environmental, social, and governance performance.

[6] Berg, F., Koelbel, J. F., and Rigobon, R. (2019). Aggregate Confusion: The Divergence of ESG Ratings. Working paper.

[7] Brakman Reiser, D., and Tucker, A. M. (2019). Buyer Beware: The Paradox of ESG & Passive ESG Funds. Available at SSRN 3440768.

[8] Bharali, R. (2019). ESG: Fact vs. Belief. Belief. Working Paper.

[9] Cappucci, M. (2018). The ESG Integration Paradox. Journal of Applied Corporate Finance, 30(2), 22-28.

[10] Chatterji, A. K., Durand, R., Levine, D. I., and Touboul, S. (2016). Do ratings of firms converge? Implications for managers, investors and strategy researchers. Strategic Management Journal, 37(8), 1597-1614.

[11] Clark, G. L., Feiner, A., and Viehs, M. (2015). From the stockholder to the stakeholder: How sustainability can drive financial outperformance. Available at SSRN 2508281.

[12] Dai, R., Liang, H., and Ng, L. K. (2019). Socially responsible corporate customers. Journal of Financial Economics, Forthcoming.

[13] Dimson, E., Karaka , O., and Li, X. (2015). Active ownership. The Review of Financial Studies, 28(12), 3225-3268.

[14] Eccles, R. G., Kastrapeli, M. D., and Potter, S. J. (2017). How to Integrate ESG into Investment Decision - Making: Results of a Global Survey of Institutional Investors. Journal of Applied Corporate Finance, 29(4), 125-133.

[15] Eccles, R. G., Ioannou, I., and Serafeim, G. (2014). The impact of corporate sustainability on organizational processes and performance. Management Science, 60(11), 2835-2857.

[16] Fein M.L. (2017). Social Investing in the United Kingdom (ESG). Working paper.

[17] Fein M.L. (2017). ESG Investing by Pension Fiduciaries in Canada. Working paper.

[18] Filbeck, A., Filbeck, G., and Zhao, X. (2019). Performance Assessment of Firms Following Sustainalytics ESG Principles. The Journal of Investing, 28(2), 7-20.

[19] Fulton, M., Kahn, B.M. and Sharples, C. (2012). Climate Change Investment Research. Working paper.

[20] Friede, Gunnar, Lewis, Michael, Bassen, Dr. Alexander and Busch, Dr. Timo. (2015). ESG & Corporate Financial Performance: Mapping the Global Landscape. Deutsche Asset & Wealth Management.

[21] Friede, Gunnar, Lewis, Michael, Bassen, Dr. Alexander and Busch, Dr. Timo. (2015). Digging Deeper into the ESG-Corporate Financial Performance Relationship. Deutsche Asset & Wealth Management.

[22] Friede, G., Busch, T., and Bassen, A. (2015). ESG and financial performance: aggregated evidence from more than 2000 empirical studies. Journal of Sustainable Finance & Investment, 5(4), 210-233.

[23] Geczy, C.C, Guerard Jr., J.B. and Samonov, M. (2018). Forecasting Earnings and Efficient SRI / ESG Portfolios. Working paper.

[24] Gilges, K. (2012). The Property and Environment Research Center is dedicated to improving environmental quality

through property rights and markets. Working paper.
[25] Gibson, R., Krueger, P., Matos, P. and Steffen, T. (2019). Responsible Institutional Investing Around the World. Working Paper.
[26] Gibson, R., Krueger, P., Riand, N., & Schmidt, P. S. (2019). ESG Rating Disagreement and Stock Returns. Available at SSRN 3433728.
[27] Hanson, D. (2013). ESG investing in Graham & Doddsville. Journal of Applied Corporate Finance, 25(3), 20-31.
[28] Hedblom, D., Hickman, B. R., and List, J. A. (2019). Toward an Understanding of Corporate Social Responsibility: Theory and Field Experimental Evidence (No. w26222). National Bureau of Economic Research.
[29] Hoepner, A. G., Oikonomou, I., Sautner, Z., Starks, L. T., and Zhou, X. (2018). ESG shareholder engagement and downside risk.
[30] Kaiser, L. (2017). ESG Integration: Value, Growth and Momentum, Working paper.
[31] Khan, M., Serafeim, G., and Yoon, A. (2016). Corporate sustainability: First evidence on materiality. The accounting review, 91(6), 1697-1724.
[32] Kotsantonis, S., Pinney, C., and Serafeim, G. (2016). ESG integration in investment management: Myths and realities. Journal of Applied Corporate Finance, 28(2), 10-16.
[33] Krueger, P., Sautner, Z., and Starks, L. T. (2020). The importance of climate risks for institutional investors. The Review of Financial Studies, 33(3), 1067-1111.
[34] Lin, T. C. (2018). Incorporating Social Activism. BUL Rev., 98, 1535. S.
[35] Lioui, A. (2018). ESG Factor Investing: Myth or Reality? Available at SSRN 3272090.
[36] Pastor, L.， Stambaugh, R.F., and Taylor L.A. (2019). Sustainable Investing in Equilibrium. Working paper.
[37] Riedl, A., and Smeets, P. (2017). Why do investors hold socially responsible mutual funds? The Journal of Finance, 72(6), 2505-2550.
[38] Serafeim, G. (2018). Public Sentiment and the Price of Corporate Sustainability. Harvard Business School Accounting & Management Unit Working Paper, (19-044).
[39] Schiller, C. (2018). Global supply-chain networks and corporate social responsibility. In 13th Annual Mid-Atlantic Research Conference in Finance (MARC) Paper.
[40] Schoenmaker, D., and Schramade, W. (2018). Principles of Sustainable Finance. Oxford University Press.
[41] Sjöström, E. (2011). The Performance of Socially Responsible Investment-A Review of Scholarly Studies Published 2008-2010. Available at SSRN 1948169.
[42] Starks, L. T., Venkat, P., and Zhu, Q. (2017). Corporate ESG profiles and investor horizons. Available at SSRN 3049943.
[43] Taliento, M., Favino, C., and Netti, A. (2019). Impact of environmental, social, and governance information on economic performance: Evidence of a corporate sustainability advantage from Europe. Sustainability, 11(6), 1738.
[44] Verheyden, T., Eccles, R. G., and Feiner, A. (2016). ESG for all? The impact of ESG screening on return, risk, and diversification. Journal of Applied Corporate Finance, 28(2), 47-55.
[45] Godfrey, P. C., Merrill, C. B., and Hansen, J. M. (2009). The relationship between corporate social responsibility and shareholder value: An empirical test of the risk management hypothesis. Strategic management journal, 30(4), 425-445.
[46] Oikonomou, I., Brooks, C., and Pavelin, S. (2012). The impact of corporate social performance on financial risk and utility: A longitudinal analysis. Financial Management, 41(2), 483-515.
[47] Seltzer, L., Starks, L. T., & Zhu, Q. (2020). Climate regulatory risks and corporate bonds. Nanyang Business School Research Paper, (20-05).
[48] Krueger, P., Sautner, Z., and Starks, L. T. (2020). The importance of climate risks for institutional investors. The Review of Financial Studies, 33(3), 1067-1111.

[49] Bartram, S. M., Hou, K., & Kim, S. (2021). Real effects of climate policy: Financial constraints and spillovers. Journal of Financial Economics.

[50] Nguyen, J., C. Truong, and B. Zhang. 2020. Carbon Risk and the Cost of Capital: Evidence from a Natural Experiment. Working paper.

[51] Choi, D., Gao, Z., & Jiang, W. (2020). Attention to global warming. The Review of Financial Studies, 33(3), 1112-1145.

[52] Ramelli, S., Ossola, E., & Rancan, M. (2020) Climate sin stocks: stock price reactions to global climate strikes. Working paper.

[53] Ni，X., Si，Y.& Zhang,B. (2021) The De-stabilizing Effect of Climate Vulnerability Worldwide. Working paper.

[54] Painter, M. (2020). An inconvenient cost: The effects of climate change on municipal bonds. Journal of Financial Economics, 135(2), 468-482.

[55] “Sustainable Signals the Asset Manager Perspective”, Morgan Stanley Institute for Sustainable Investing, 2016.

[56] “Sustainable Signals New Data from the Individual Investor”, Morgan Stanley Institute for Sustainable Investing, 2017.

[57] “Sustainable Signals Asset Owners Embrace Sustainability”, Morgan Stanley Institute for Sustainable Investing, 2018.

[58] “ESG institutional investor survey: ESG’s place in investment portfolios, today and tomorrow”, State Street Global Advisors, 2018.

[59] “Investors turn to ESG to fulfill personal values and performance expectations”, Natixis Investment Managers, 2018.

[60] “Sustainable Investor Poll on TCFD Implementation”, Global Sustainable Investment Alliance, 2019.

[61] “The ESG Global Survey 2019: Asset owners and managers determine their ESG integration strategies”, BNP PARIBAS, 2019.

[62] “MIRA ESG Survey: Key insights from our investors”, Macquarie Infrastructure and Real Assets, 2020.

[63] “2019 Annual ESG Manager Survey: A deep dive into the integration of ESG in investment practice”, Russel Investments, 2019.

[64] “ESG to SDGs: the road ahead, a survey of investors in alternatives”, LGT Capital Partners, 2019.

[65] “Impact/ESG Invest Survey”, Community Capital Management, 2019.

[66] “2019 ESG Survey”, Callan Institute, 2019.

[67] “Sustainable Financing and ESG Investing report”, HSBC Bank, 2019.

[68] “Environmental, Social, and Governance (ESG) Survey”, CFA Institute, 2017.

[69] “Survey on Integrating Environmental, Social and Governance Factors and Climate Risks, in Asset Management”, Hong Kong Securities and Futures Commission 2019.

[70] Special Survey Report on ESG Investment in China's Fund Industry (2019), China Securities Asset Management Association, 2019.

[71] Global Sustainable Investment Review 2020，Global Sustainable Investment Alliance，2021.

[72] Global Sustainable Investment Review 2018，Global Sustainable Investment Alliance，2019.

[73] Global Sustainable Investment Review 2016，Global Sustainable Investment Alliance，2017.

[74] Global Sustainable Investment Review 2014，Global Sustainable Investment Alliance，2015.

[75] “The ESG Global Survey 2019: The Path to ESG: No Turning Back for Asset Owners and Managers”, BNP PARIBAS, 2021.

[76] “The Development and Regulatory of Global Sustainable Investment”, Lin Xiaoming Team from Huatai Securities Company Limited.

[77] “ESG Investment Series”， Liu Junwei Team from CICC.

Website source

[1] https://eur-lex.europa.eu/eli/reg/2019/2088/oj
[2] https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32020R0852&from=EN.
[3] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32020R0852 https://www.ici.org/pdf/32847a.pdf
[4] https://www.cifsc.org/
[5] https://asic.gov.au/
[6] https://sc.sfc.hk/TuniS/www.sfc.hk/TC/Regulatory-functions/Products/List-of-green-and-ESG-funds
[7] https://www.amac.org.cn/industrydynamics/guoNeiJiaoLiuDongTai/jjhywhjs/esg/202001/P020200120441036297434.pdf
[8] https://www.unpri.org/
[9] http://www.gsi-alliance.org/

Editorial group

This research report was prepared by Shenzhen Finance Institute, The Chinese University of Hong Kong, Shenzhen and Huaxia Wealth Management Co., Ltd.

Shenzhen Finance Institute, The Chinese University of Hong Kong, Shenzhen was established by the Chinese University of Hong Kong, Shenzhen with the support of the Shenzhen Municipal Government in 2017. It is committed to becoming an internationally influential innovative talent training base and an international high-level research platform in the financial and economic field, and providing outstanding talents for the construction of the Guangdong-Hong Kong-Macao Greater Bay Area and the National Innovation Center. The Editor(s)-in-Chief of this report is Bohui Zhang, and main editorial members include Wenhao Yang, Pingping Jiang, Wanfang Xiong, all from Shenzhen Finance Institute, The Chinese University of Hong Kong, Shenzhen.

Huaxia Wealth Management Co., Ltd. was formally known as Huaxia Bank’s Asset Management Department, which initiated ESG research in 2018 and subsequently joined the PRI in March 2019, becoming the first wealth manager from the Chinese commercial banking industry to do so. Following the establishment of Huaxia Wealth Management Co., Ltd. in September 2020, the entity substituted Huaxia Bank’s Asset Management Department to be a signatory of the PRI. In 2021, the entity have developed proprietary ESG frameworks for different asset classes such as equity, fixed income, fund-of-funds. As of November 2021, the entity managed more than RMB 20 billion ESG wealth management products. The Editor(s)-in-Chief of this report is Zhihong Yuan, and main editorial members include Dachuan Zhang, Dan Qin, all from Huaxia Wealth Management Co., Ltd.

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