STATISTICAL STUDY OF THE DEVELOPMENT OF ESG-INVESTING

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Abstract

In the modern world, business efficiency is largely determined not only by financial results, but also by its social mission, the ability to influence the global problems of society. Many companies are actively incorporating sustainable development goals into their business strategies, and social responsibility is becoming the basis for long-term business performance.

In this regard, the concept of responsible investment, carried out taking into account environmental, social and governance factors (ESG), is becoming more popular. However, a clear definition and understanding of the boundaries of ESG investment has not yet been formed. This determined the relevance of the study to identify the nature and scope of ESG investment.

A statistical assessment of the scale of ESG investment was carried out in the context of the geographical distribution of socially responsible investments, types of strategies and the structure of investors. In order to objectively assess the mobility, mobility of structural changes in sustainable investment by regions of the world, structural changes in the volume of global sustainable investment assets were analyzed. In the context of global transformation processes, the results of the study can be used in the process of developing and implementing ESG investments in economic systems of various levels.

Key words: ESG, responsible investment, statistical analysis, structural shifts

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Introduction

Sustainable development, as well as sustainable growth (Matyash, 2018), is a multidimensional phenomenon, focused on the continuous process of adapting and reacting to regional conditions and signals coming from the society and environment in order to ensure long-term development and an appropriate level of life quality for residents. It covers the process of changes, in which the positive driving force, allowing structural transformations takes the form of the achievements of science and knowledge in all areas of life, including the production patterns, governance, coexistence, management and others (Bal-Domanska, 2019).

The concept of responsible investment, taking into account environmental, social and governance factors - ESG (environmental, social, governance), is becoming more and more popular in the world. This is especially noticeable when analyzing the agenda of the St. Petersburg Economic Forum, which took place in the early summer of 2021, where several panels were devoted to ESG topics. Participation in this initiative becomes a kind of “visiting card” or “record” for business, according to which international rating agencies judge the reliability and stability of the company.

As part of the “Concept for organizing a methodological system for the development of green financial instruments and responsible investment projects”, adopted in 2019, the following interpretation of the ESG criteria is given:

1. Environmental criteria (environmental) determine how much the company cares about the environment. These include environmental pollution, compliance with environmental laws, depletion of natural resources (including lack of drinking water), etc. An effective ESG strategy involves combating operating costs, such as the consumption of raw materials, water and carbon, which can positively affect the company's profit.

2. Social criteria (social) reflect the attitude towards staff and suppliers, clients and partners. It was found that a well-thought-out ESG strategy helps attract and retain competent employees, increases employee motivation and productivity.

3. Management criteria, corporate governance criteria (qovernance) are associated with the effectiveness of management, with the validity of the remuneration of managers, with the rights of shareholders, the quality of audit, fraud and corruption. The key elements of good corporate governance are financial and accounting transparency, complete reliability of the issuer's financial statements.

1 ESG criteria as a new investment decision paradigm

In accordance with neoclassical microeconomic models, economic efficiency is a key criterion for assessing the feasibility of investments. However, ESG criteria are now coming to the fore: in order to be considered successful, a company, in addition to demonstrating sustainable growth in financial and economic indicators, must have a certain reputation. Thus, ESG investing is a form of socially responsible investment, when the decision to invest in a business is made taking into account the company's contribution to the development of society.

The origins of responsible investment can be traced back to the 18th century. (Pastor, 2021). For example, in the United States, representatives of one of the Protestant denominations, Methodism, opposed investments in gambling companies, alcohol and tobacco business (Sparkes, 2004). In the XX century. interest in socially responsible investment began to emerge in the 1960s and 1970s. In the US, students opposed to the Vietnam War demanded that university foundations stop investing in US defense companies. Similarly, American students protested against apartheid in South Africa, demanding that universities stop supporting businesses operating in that country. This social activity subsequently became the basis for legislative and institutional reforms.

The explosive growth of ESG investment in the 21st century. in developed countries is largely explained by the values of the new generation of millennials. They are more than others concerned about global problems, including climate change, and seek to influence the reduction of the harmful impact of humans on nature. And although the ethical side of business has long worried people, it was the millennial generation that influenced the emergence of “conscious” capitalism and the growth in popularity of the ESG concept.

An analysis of the theoretical concepts and main approaches that influenced the formation and development of ESG investment allows us to better understand the spread of initiatives that have taken place since the second half of the 20th century and to assess the current scale of ESG investment. The most significant theoretical approaches that influenced the formation and development of ESG investing include the concepts presented in Table 1.

The main reason for the attention to ESG-criteria is that investors, government bodies and firms themselves believe that the application of these criteria will identify factors (non-financial) that can have a long-term impact on the company's activities (its financial performance).). As a result of the application of ESG criteria, those firms are identified and financed by investors whose activities meet certain standards of corporate social responsibility, ethical standards and which have a certain reputational capital in the eyes of consumers and society as a whole.

The attention to some elements of investment management based on ESG criteria has a logical and understandable explanation. In particular, firms tend to demonstrate sustainable development if they are well managed, if their employees are satisfied with the behavior of management (Elkington, 1994), or if the rights of owners are secured and protected (Gorokhova, 2021).

Tab. 1: Concepts behind the ESG approach

	Concept	Representatives and work	Fundamentals
1	The concept of externalities	• Henry Sidgwick Principles of Political Economy, 1883 • Alfred Marshall Principles of Economics, 1890 • Arthur Pigou The Economics of Welfare, 1920	Attention is focused on the importance of non-market interdependencies of economic agents and the need to take into account the impact on their activities of external effects and factors.
2	The concept of sustainable development	• Jay Forrester World Dynamics, 1970 • Dennis Meadows The Limits to Growth, 1972 • G.Kh. Braundtland Our common future, 1987 • Herman Daly On Wilfred Beckerman's Critique of Sustainable Development, 1995 • Joseph Stiglitz Mis-measuring our lives. Why GDP doesn't add up, 2010	Sustainable should be considered development that, thanks to the greening of production, social justice and economic efficiency, does not undermine its natural basis, ensures social stability and economic dynamism of society for both present and future generations.
3	Stakeholder Theory	• Edward Freeman Strategic Management: A Stakeholder Approach, 1984 • Ronald Mitchell Toward a Theory of Stakeholder Identification and Management Review, 1997 • Timothy Rowley Moving beyond Dyadic Ties: a Network Theory of Stakeholder Influences, 1997	The tasks of the functioning of a commercial organization should not be limited only to the enrichment of its owners, they should also include the tasks of creating some values for a wider range of subjects of market relations, which in turn will contribute to the well-being of the organization itself.
4	The concept of corporate social responsibility of business	• Howard Bowen The social responsibility of the businessman, 1953 • Wayne Visser The Age of Responsibility: CSR 2.0 and the New DNA of Business, 2010	Corporate social responsibility can be defined as the obligation of a business to act on an economic and environmental basis, generally pursuing the interests of its shareholders.

Source: compiled by the authors

Currently, the number of publications that reveal the causes and consequences of the use of ESG criteria in making investment decisions has increased significantly. However, the issues of quantitative measurement of ESG investments at various levels of the economic hierarchy remain insufficiently developed. In this regard, there is a need for a statistical assessment of the current scale of ESG investment.

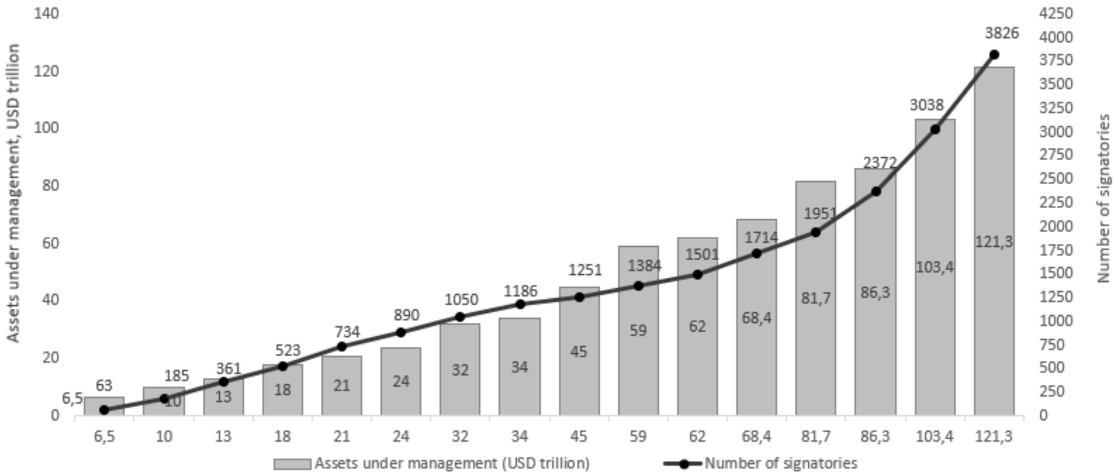
2 Statistical approach to assessing the scale of ESG investment

Policies and regulation aimed at meeting ESG criteria, as well as responsible investment, are a phenomenon of the 21st century. According to the consulting company KPMG, more than

500 legal regulations have been introduced in 50 countries around the world that relate to ESG. The main drivers were the Paris Agreement and the UN Sustainable Development Goals adopted in 2015.

In 2006, the United Nations (UN) introduced the Principles for Responsible Investment (UN PRI) and 63 investment companies, which managed $6.5 trillion, signed a commitment to consider ESG factors in their investment decisions. Figure 1 shows the dynamics of the spread of the Principles for Responsible Investment.

Fig.1: Trends in the dissemination of the Principles for Responsible Investment (PRI), 2006-2021

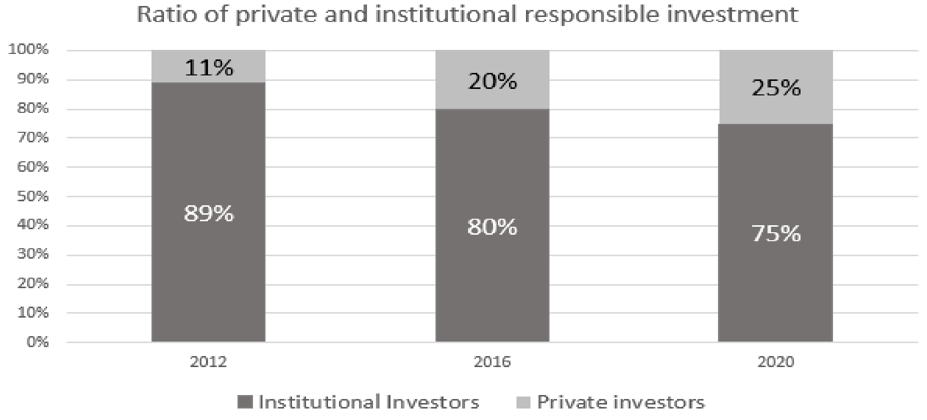


Source: according to the Global Sustainable Investment Review (GSIR)

For 2006-2021 the growth rate of the number of participants was 5973%, and the growth rate of assets under the management of responsible investment participants PRI 1766%, which indicates the explosive growth of the scale of ESG investment. Among the management companies that supported the PRI initiative were the French AXA Group, the German Allianz Global Investors, the American Franklin Templeton Investments, Goldman Sachs Asset Management (GSAM), the Japanese Nomura As-set Management Co. other. This initiative was also supported by 18 rating agencies (Vostrikova, 2020).

In 2012, institutional investors owned 89% of assets, in 2016 - 80%, and in 2020 - 75% (see Fig. 2). Thus, despite the fact that institutional investors dominate the financial market, there is a steady trend of increasing interest in ESG investment from private investors.

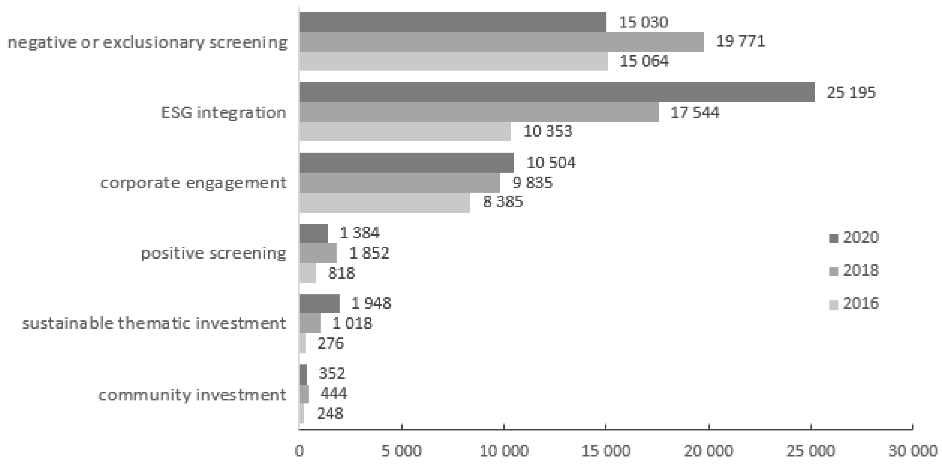
Fig.2: The ratio of private and institutional investors in the ESG investment market, 2012-2020



Source: PwC PE Responsible Investment Survey

Figure 3 shows the dynamics of investment strategies for sustainable development in the world in 2016-2020.

Fig.3: Investment strategies for sustainable development in 2016-2020, billion US dollars

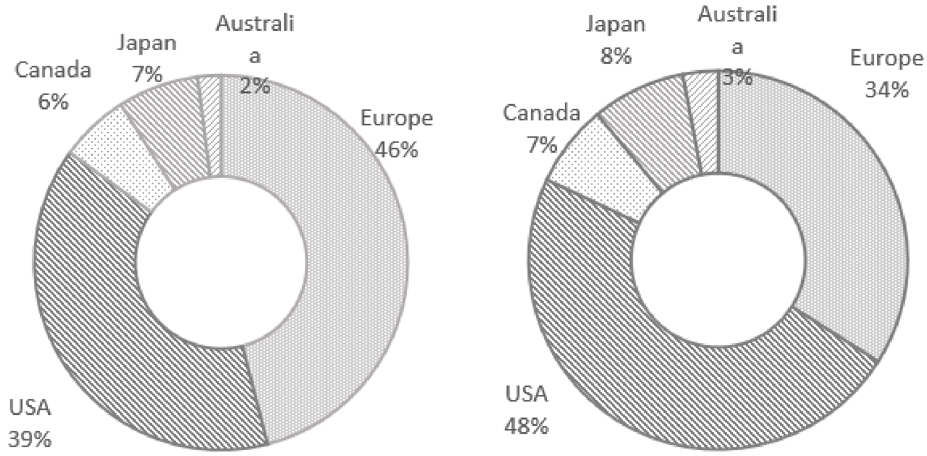


Source: according to the Global Sustainable Investment Review (GSIR)

In 2016 and 2018, the most popular strategy was the negative or exclusionary screening strategy, in 2020 it was the ESG integration strategy. The growth rate of the value of assets as part of the implementation of the ESG strategy in 2020 compared to 2018 was 43.6%, and compared to 2016 - 143.4%. At the same time, in 2020, negative or exclusionary screening and corporate engagement strategies were most popular in Europe, and the ESG integration strategy in the United States.

On fig. 4 shows the structure of global assets of sustainable investment by regions of the world.

Fig.4: Structure of global assets of ESG investments by regions of the world, 2018-2020



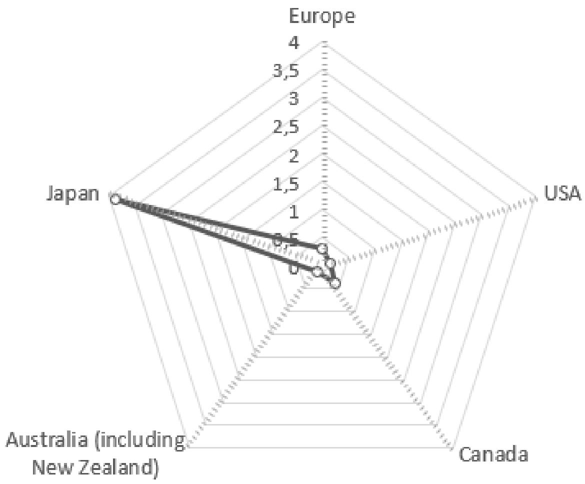
Source: according to the Global Sustainable Investment Review (GSIR)

For the period 2018-2020 The US and Europe accounted for over 80% of global sustainable investment assets, Canada for 7%, Japan for 8% and Australia for 3%. However, it should be noted that if the dynamics of ESG investment during the period under review in Canada, Japan and Australia remained approximately at the same level, then in Europe it decreased from 46% to 34%, and in the USA it increased from 39% to 48%. At the same time, the share of sustainable investment assets from the total volume of investments in 2020 in the USA was 37.9%, in Europe - 41.6%, in Canada - 61.8% (the highest figure in the world), in Japan - 33.2%, in Australia - 37.9%.

Statistical methods of analysis make it possible to study specific socio-economic structures in certain conditions of place and time, which consists, first of all, in their exact quantitative measurement, identification of proportions and patterns (Karelina, 2020). The structure of a complex socio-economic phenomenon, such as ESG investment, has a certain degree of mobility, tends to change over time both quantitatively and qualitatively as part of sustainable business development. Therefore, the study of the structure in dynamics, the assessment of structural changes, the identification and characterization of the main trends in the development of ESG processes are of great practical importance.

In order to objectively assess the mobility, mobility of structural shifts in sustainable investment by region of the world, we will analyze structural shifts (Mkhitarian, 2019) in terms of the “volume of global assets of sustainable investment” indicator. Linear and quadratic coefficients of absolute structural shifts show how many p.p. on average, compared specific weights deviate from each other (Efimova, 2010). In the absence of shifts in the structure of the population, these indicators are equal to 0 (Eliseeva, 2005). The coefficients do not have an upper limit of change: the greater the change in the structure, the higher the values of the coefficients. An analysis of the linear relative structural shift shows that structural shifts in all regions of the world for 2016-2020. are characterized as large structural shifts (>0.1). The distribution of the countries of the world by the value of a linear structural shift with a constant base of comparison (2016) of the volume of sustainable investment assets in 2020 is shown in Fig. 5.

Fig.5: Linear relative structural shifts in the volume of global assets of sustainable investment of the countries of the world, 2020



Source: according to the Global Sustainable Investment Review (GSIR)

An analysis of Fig. 5 shows that Australia is characterized by the least mobile structure in terms of the volume of global sustainable investment assets, and Japan is the most mobile structure. There is currently a high demand among investors for ESG products in Japan. Launched in July 2020, the Global ESG High-Quality Growth Equity Fund raised 383 billion yen, the second largest initial launch amount in history. Nomura Asset Management's 2020 ESG Investment Awareness Survey found that 50% of all respondents who already own shares are interested in investing in ESG.

Conclusion

The concept of responsible investment is an approach to investment that takes into account, within the framework of traditional financial analysis, the social and environmental consequences of investments (Bataeva, 2016). It is about taking into account the social and environmental consequences of the firm's activities (both positive and negative) and integrating them into the classical investment process.

A statistical assessment of the current scale of responsible investment has shown an explosive growth in the scale of ESG-investment. The structure of investors is dominated by institutional ones, but their share in the ESG investment market is gradually decreasing. A characteristic feature of the structure of global sustainable investment assets over the past few years is that ESG-investments in Europe and the USA have a significant impact on it. An analysis of the linear relative structural shift shows that structural shifts in all regions of the world for 2016-2020 are characterized as large structural shifts

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