EVALUATION OF FINANCIAL INSTRUMENTS IN THE CONTEXT OF SUSTAINABLE FINANCE

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Abstract: *Sustainable finance generally refers to the process of taking due account of environmental, social, and governance (ESG) considerations when making investment decisions in the financial sector, leading to increased longer-term investments into sustainable economic activities and projects. Throughout the pandemic, sustainable finance in global capital markets has seen strong growth. The rise of sustainability-themed investment products has been accompanied by an increasing number of principles and standards. The purpose of this article is to present the impact of evaluation of financial instruments in the context of sustainable finance on development on current financial market, the challenges of assessment of financial instruments in the process on management and analyses.*

Keywords: *financial instruments, sustainable finance, evaluation, financial market*

1. Introduction

The European Union (EU) Taxonomy Framework (henceforth, the Taxonomy) and the regulation on the "Sustainability-related disclosures in the financial services sector" (Regulation (EU) 2019/2088) will usher in a new era of sustainability measurement and reporting. In the context of heterogenous regulations, and given the need to develop clear standards, the Organization for Economic Cooperation and Development (OECD) urged the financial world to develop a common understanding of impact measurement, calling it an "impact imperative" [9].

In the investment world, sustainability is generally represented by the environmental, social and governance pillars (ESG) [13]. Despite the two terms being used interchangeably, sustainability is rather focused on the impact humanity has on the planet and society while ESG frames the notion in terms of material risks posed by the environmental and social factors to businesses. In the management domain, the discussion is concentrated around the topics of corporate sustainability performance (CSP) and the triple bottom line theory [10]. Impact measurement in the context of sustainable investing can be defined as "the process of measuring and monitoring the amount of change created by an organization's or an investor's activities" [8]. Existing measurement and reporting tools do not reflect in totality the direct contribution of financial investments to sustainability goals. A recent working paper from the OECD suggests four categories for impact measurement in sustainable investment at large: "(1) principles and guidance, (2) frameworks and methodologies, (3) standards, certifications and ratings and (4) metrics and indicators" [8].

Current literature assures the value of green finance and sustainability disclosure; however, some controversies are identified. Due to the lack of one generally accepted set of standards that guide the reporting of sustainability and the lagged development of third party assurance, the main challenges for sustainability reporting are its reliability, consistency and comparability. These issues further confound the

effectiveness of green financial instruments and raise concerns about the potential opportunistic use of the proceeds (i.e. greenwashing). Mindful of the challenges, we then review the literature to examine the economic consequences of green finance and green practice. In general, the literature agrees that green finance leads to green results such as emission reduction and energy saving. Overall, a firm's green practice is positively associated with its financial performance measured by stock market valuation and accounting-based measurements and negatively related to a firm's cost of capital. Our review suggests that there are primarily three channels. First, the green practice lowers a company's real and perceived risk of environmental violation and the associated potential financial and reputational costs. Second, green practice is consistent with the general sentiment of environmental concerns and is favored by capital market participants as they see the green practice as consistent with their personal beliefs or as a way for them to make an impact through investment. Third, green firms may see improved cash flow as green practices are supported by national and regional governments in the form of government procurement, subsidy and tax credit. As a result, the literature has also documented that green financial instruments contribute to firms' access to capital and innovation related to environmental efforts. In addition, we also find a positive association between green finance and poverty alleviation and economic development [6].

2. Methodology

The methodology used is based on general scientific methods of scientific knowledge - analysis, synthesis, induction and deduction, as well as on specific methods, specifically applying the systematic approach, the historical approach, the method of comparison and the abstract-logical method. Research is based on the review of relevant and available professional and academic literature.

3. Sustainable finance

Sustainable development is an integrated concept with three aspects: economic, social and environmental. According to the different definitions, the green financial instruments are defined as private loans, public bonds (corporate,municipal and sovereign), private equity, public equity, investment funds and other financial instruments that fund environmental and climate-friendly projects such as renewable energy, recycling and green infrastructure that supports the net-zero carbon economy and mitigates climate change. Surveying the trends and developments of green financial instruments, the most common and influential financial instruments are green bank loans and green bonds. In terms of the main areas of investment targets, most of the green financial instruments are used to fund renewable energy (e.g. solar and onshore wind), primarily from the private sector, with the low-carbon transport being the second largest and fastest-growing sector in attracting investment. With the increased global and regional environmental policies, there is a significant increase in green finance practices, and the adoption of green financial instruments as investors become more sensitive to climate-related matters. Specifically, the pressure on governments, financial institutions and firms to implement environmental protection and climate change has risen after the signing of the Paris Climate Agreement in 2015 [6].

Regardless of the form of green finance, what is embedded in these green instruments is a commitment made by the issuer/borrower that the funds raised will be used toward "green projects". The efficiency of these instruments, therefore, depends on the confidence of market participants in how the proceeds are used for

their intended purpose and the actual sustainability performance of the projects funded. Taking green bonds as an example, the key difference between a green bond and a traditional bond is that the issuer of the bond would self-designate the bond as green. Such a label conveys commitment that the funds raised from the bond would be used exclusively to support low-carbon and climate-resilient investment projects. An indispensable aspect of green finance is the disclosure of environmental impacts of business operations, green initiatives and performance and environmental risk management practices to the stakeholders of companies. As green finance directs investment toward environmentally sustainable businesses, demand rises for business entities to provide transparent information about their green initiatives and sustainability performance to the public in order to facilitate investment decisions and hold the business entities accountable [6]. Sustainability reporting started as voluntary disclosures. As this trend increases, some countries established regulations that require mandatory disclosure. Corporate disclosure of sustainability benefits the reporting entities and leads to "improved reputation, better risk management, and increased customer and employee loyalty" [12].

The financial sector holds enormous power in funding and bringing awareness to issues of sustainability, whether by allowing for research and development of alternative energy sources or supporting businesses that follow fair and sustainable labor practices. Sustainable finance is defined as investment decisions that take into account the environmental, social, and governance (ESG) factors of an economic activity or project. Environmental factors include mitigation of the climate crisis or use of sustainable resources. Social factors include human and animal rights, as well as consumer protection and diverse hiring practices. Governance factors refer to the management, employee relations, and compensation practices of both public and private organizations. Figure 1 illustrates the three levels of sustainable finance and the ranking between them. At the level of the economy, the financial return and risk trade-off is optimised. This financial orientation supports the idea of profit maximisation by organisations and economic growth of countries. Next, at the level of society, the impact of business and financial decisions on the society is optimised. And finally at the level of the environment, the environmental impact is optimized.

According to the theory [11] was defined five principles of sustainable development:

1. Comprehensiveness: the concept of sustainable development is holistic or all-embracing in terms of space, time and component parts. Sustainability embraces both environmental and human systems, both nearby and far-away, in both the present and the future;

2. Connectivity: sustainability demands an understanding of the world's challenges as systemically interconnected and interdependent;

3. Equity: a fair distribution of resources and property rights, both within and between generations;

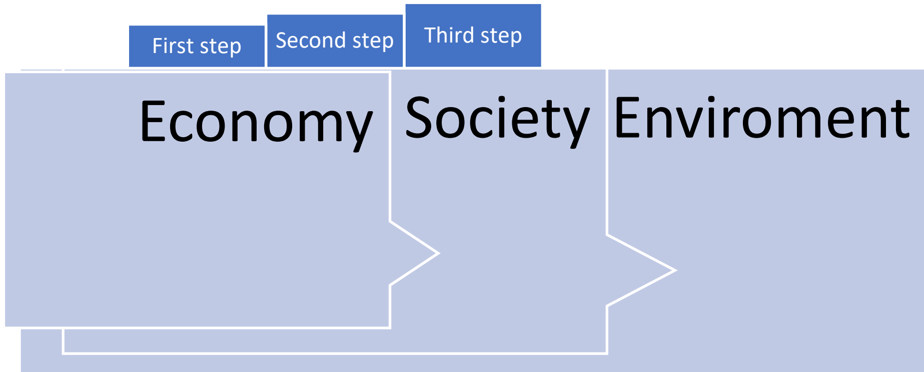

Figure 1. Sustainable Development Challenges at Different Levels
Source: prepared by Author

4. Security: sustainable development aims at ensuring a safe, healthy, high quality of life for current and future generations.

Green finance is the way to increase the level of financial flows (banking, micro-credit, insurance, and investment) from the public, private, and not-for-profit sectors to promote sustainable development priorities. As such, green finance is instrumental in achieving the objective of sustainable development goals that consider green growth. Hence, inclusive green growth can be achieved through inclusive green finance, as inclusive green finance helps to mitigate and build resilience against the negative impacts of climate change. Under the concept of the inclusive green finance remit, financial institutions are mandated to provide those finances vital support to those navigating an uncertain environment by promoting green products within savings, credit, insurance, money transfers, and new digital delivery channels [2].

5. Evaluation of financial instruments and sustainable finance

The main challenges in the areas of green finance and sustainability disclosure center around the measurement of the green effects and the reliability and comparability of the reported corporate environmental performance data. The measurement issue then leads to concerns about the legitimacy of using sustainability indicators in contracts such as executive compensation. Bebchuk and Tallarita [1] find that in almost all cases in which S&P 100 companies use ESG metrics, it is difficult if not impossible for outside observers to assess whether this use provides valuable incentives or rather merely lines the chief executive officer's pockets with performance insensitive pay. They, therefore, conclude that the current ESG metrics likely serve the interests of executives, not of stakeholders and that the expansion of ESG metrics should not be supported even by those who care deeply about stakeholder welfare [6]. For instance, Edmans [3] posit that insights from mainstream finance and economics can be applied to ESG, as ESG "is economically no different to other intangible assets that create long-term financial and social value." The same applies to green finance. The rich literature on corporate finance research has examined how to create long-term financial values and how to value investments, and research on asset pricing has explored how the stock market prices risks. Abundant economic research has looked at how to investigate externalities and enhance social welfare. In the area of risk management, in general, green finance is accompanied by potential losses, especially with the long-term nature of investment in green projects.

In 2018, the Commission adopted its first action plan on financing sustainable growth. Based on that plan, the EU has put in place the three building blocks for a sustainable financial framework. These building blocks are: 1) a classification system, or 'taxonomy', of sustainable activities, 2) a disclosure framework for non-financial and financial companies, and 3) investment tools, including benchmarks, standards and labels. Within a few years, major progress has been made in laying the foundations for the sustainable finance framework. The three building blocks are underway, but work remains to be done. The Commission is committed to completing the implementation of its ambitious 2018 action plan. However, since 2018, our understanding of what is needed to meet the sustainability goals has evolved, and the global context has changed. For these reasons, a new phase of the EU's sustainable finance strategy is required. This strategy identifies four main areas where additional actions are needed for the financial system to fully support the transition of the economy towards sustainability. They are:

1. Financing the transition to sustainability – This strategy provides the tools and policies to enable economic actors across the economy to finance their transition plans and to reach climate and broader environmental goals, whatever their starting point.
2. Inclusiveness – This strategy caters for the needs of and provides opportunities to individuals and small and medium companies to have greater access to sustainable finance.
3. Resilience and contribution for financial sector – This strategy sets out how the financial sector itself can contribute to meet Green Deal targets, while also becoming more resilient and combatting greenwashing.
4. Global Ambition - This strategy sets out how to promote an international consensus for an ambitious global sustainable finance agenda [5].

A taxonomy for sustainable finance is a set of criteria that provide the basis for an evaluation of whether and to what extent a financial asset will support given sustainability goals. Its purpose is to provide a strong signal to investors, and other stakeholders, and assist their decision making – by identifying the type of information needed to assess the sustainability benefits of an asset and to classify an asset based on its support for given sustainability goals. In addition to providing clarity to investors and other stakeholders about the sustainability benefits of a given asset, taxonomies following the above principles can greatly facilitate their comparability and interoperability across different firms and markets – including emerging markets. The definition implies that the starting point of a taxonomy are sustainability goals (see Figure 2). By aligning the sustainability goals with high-level policy objectives, sustainable finance taxonomies can be important instruments for achieving these objectives.

High-level policy option

Legal restrictions on damaging activities

Taxes and charges; Pricing of externalities

Public investment and subsidie for activities with positive impact

Primary purposes

Enable investors to identify assets with sustanaible benefits

Improve the assessment and arket price of sustainability risks

Sustainability disclosure and accounting standards

Taxonomies

Financial sector regulation: Risk management requirements; Stress tests; Capital requiremets etc.

Increase awareness ofsustainability risks

Increase communicate supervisory expectations through public statements, reports and research

Figure 2. Policy instruments for taxonomies

Source: Prepared by Author

The effectiveness of taxonomies in contributing to sustainability objectives ultimately depends on sustained investor interest in assets that receive a taxonomy-based label. Well-designed taxonomies can not only increase investor interest, but also help to raise market transparency, by reassuring investors that their funding is effectively contributing to defined sustainability goals. As a result, well-designed taxonomies safeguard market integrity by ensuring that those assets that cannot achieve the sustainability benefits required for the label are clearly identifiable by investors. Market integrity, in turn, helps to sustain longer-term investor interest in sustainable finance markets, as well as prod firms that are not so sustainable to improve their performance [4].

There are, as yet no agreed standards of sustainable finance measurement and reporting. The consequence is a lack of consistent and comparative impact data with which to inform investing decision-making and analysis. As a result, it may be difficult to discern which types of investment generate the largest impact, as well as to address more complex questions of how impact performance relates to financial performance and does each have a different risk and return profile. Nevertheless, globally, a range of initiatives aims to resolve this lack of agreed sustainability impact

standards, both broad ESG finance standards and more bespoke green finance and social finance standards [7].

Sustainability risks are already material, and will have adverse impacts on financial stability and the financing of the real economy. The physical impact of climate change and the loss of biodiversity create risks that can be systemic and may not be visible at the individual asset level. Risks might also arise from a disorderly and sudden reaction to the transition. It is therefore vital to understand the nature and degree of these exposures and how they interact and evolve over time. Complementary steps are needed to ensure a consistent integration of sustainability factors in risk assessment and management in the financial sector. Enhancing economic and financial resilience to sustainability risks are connected with (1) reflecting sustainability risks in financial reporting standards and accounting; (2) improving transparency of credit ratings and rating outlooks; (3) Identifying and managing sustainability risks by banks and insurers; (4) managing sustainability risks at system level; (5) improving science-based target setting, disclosure and monitoring of the financial sector's commitments.

6. Conclusions

To address the social and environmental challenges in our economic system, the United Nations has developed the Sustainable Development Goals for 2030. Sustainable finance looks at how finance (investing and lending) interacts with economic, social, and environmental issues.

Overall, we find that the Paris Agreement Capital Transition Assessment tool (PACTA), the Cambridge Institute for Sustainability Leadership Investment Impact Framework, and the Net Environmental Contribution (NEC) come the closest to meeting all criteria, while carbon footprint and ESG ratings under deliver. While the three best-practice tools could be used for a robust assessment, we argue that, in order to address the complexity of sustainability, tools need to develop to satisfy the complete set of criteria. Data availability remains a major hurdle for the advancement of sustainability assessment of investment funds. Reporting by investee companies is still scarce, existing data are often unreliable and hard to access, given that many methodologies are proprietary. Without satisfying the criterion of reliability, a measurement tool may suffer in credibility. Future research should investigate the way in which missing data can be estimated and reported data verified, in order to reduce the greenwashing risk. [10].

Monitor and supervise the evolution of certification and verification processes. To mitigate the risk of greenwashing which falsely asserts favorable placement within a taxonomy, a high-quality and consistent verification process is critical. Supervisors and regulatory authorities should provide uniform standards of conduct for the providers of certification and verification services. Ex post assessment of performance should also be conducted. Viable models for the supervision and regulation of providers of those services include those currently in place for credit rating agencies in the United States and Euro area.

The path towards the achievement of a sustainable society and a climate-neutral economy encompasses different disciplines. Effective regulation, technological improvements, scientific research, and changes in consumption patterns have been considered for many years the main engines of the transition. However, finance has recently arisen as an essential enabling factor, capable of having a concrete impact on the feasibility and the speed of the changeover. In this context, the notion of

sustainable finance has emerged to catalyse the financial efforts of policy makers, financial industry, and civil society in reaching sustainability.

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