

THE ECONOMIC POLICIES AND SUSTAINABLE FINANCE – CHALLENGES AND PROBLEMS

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Abstracts

Sustainable development is an integrated concept with three aspects: economic, social and environmental. Green finance represents a positive shift in the global economy's transition to sustainability through the financing of public and private green investments and public policies that support green initiatives. Against the background of environmental problems such as climate change and loss of biodiversity, green finance has become an important strategy for the financial sector and an important point of reference for government policies. 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 aim of this paper is to present a model for applying modern economic policies to create sustainable finance. Challenges related to implementing monetary and financial reforms for green finance are explored.

Key words: economic policy, sustainable finance, evaluation, challenges

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 heterogeneous 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” (OECD, 2019).

In the investment world, sustainability is generally represented by the environmental, social and governance pillars (ESG) (UN Global Compact, 2004). 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 (Popescu, 2021). 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” (OECD, 2020). 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” (OECD, 2020).

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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 (Liu and Shuo, 2023).

A broad discussion exists in literature about the relationship between finance and sustainability. The overall conclusion based on the research results is that conventional finance is inadequate and unsuitable for financing SDGs as the three-dimensional perspective of sustainable development is not considered, leaving no room for environmental and social issues. Some postulates have been formulated in the scope of financing sustainable development that may improve financing, such as (1) incorporating non-financial (ESG) factors into risk analysis of financial institutions (OECD, 2020); (2) developing sustainable finance roadmaps and increasing cooperation regionally, and (3) developing typology of sustainable assets and finance. Sustainable finance is a common part of the proposed postulates (Ziolo et al., 2021).

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. Economic policy for 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 (Liu and Shuo, 2023). 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 (Liu and Shuo, 2023). 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” (Schooley and Saab, 2019).

According to Pisano et al. (2012), a vast gap remains between sustainable development and the actions of most financial markets. Vandekerckhove and Leys (2012) identify especially issues that must be revised to cover the gap between sustainable development and finance among them: better indicators for analysing sustainable development goals (SDGs); recommendations for sustainable financing strategies and investments (Ziolo et al., 2019). Sustainable finance is developing concept and a kind of response to financial markets to sustainable development challenges related to its financing. Gerster (2011) points out that sustainable finance is defined as a kind of financing addressing environmental, social, and governance (ESG) impacts of financial services. Schoenmaker (2017) propose framework for Sustainable Finance based on sustainable finance models (SFM). Schoenmaker (2017) distinguishes SF 1.0 – Profit maximisation, while avoiding “sin” stocks; SF 2.0 – Internalisation of externalities to avoid risk; SF 3.0 – Contributing to sustainable development, while observing financial viability. Interdependencies between finance and sustainable development are the most commonly analysed in the context of: ESG risk and integrating non-financial factors into business practices ; ESG risk and financial performance (Ziolo et al., 2021).

Even taking into account the wide range of estimates of the financing needs of green investments, public financial sources will be insufficient to finance the green transformation. Hence, a significant amount of private capital is needed. However, private green finance is still scarce due to a range of microeconomic challenges, including problems in internalising environmental externalities, information asymmetry (e.g., between investors and recipients), inadequate analytical capacity of issuers and investors, a lack of generally accepted green definitions and maturity mismatches. The unclear definition of green finance leaves room for “green-washing”, with issuers of “green assets”, for example, making misleading claims about the environmentally friendly nature of their assets (Berensmann and Lindenberg, 2016).

The promotion of green finance by the financial industry is a product differentiation tactic that helps to attract new groups of private investors as clients and allows the industry to offer “new and improved” forms of profitable financial services. However, it may be doubted even against a background of neoclassical environmental economics that relying exclusively or mainly on these private strategies will effectively help solve global environmental problems. Policies and regulations that create and support markets can be subsumed under the banner of market-making neoliberal green finance. Such policies do not just include regulations regarding property rights but also standards such as “green” taxonomies. Standardization measures are expected to increase transparency and facilitate the creation and functioning of markets and financial instruments. This is expected to make markets work more effectively for environmental goals (Dziwok and Jägerq 2021).

4. Sustainable finance - challenges and problems

Justifications for sustainable finance measures can be divided into two broad categories: theoretical and practical. Theoretical justifications focus on externalities that hinder the low-carbon transition. Practical justifications highlight two potential threats to policy objectives posed by climate change: practical limitations to the concept of externalities, and the need for central banks and financial supervisors to manage the systemic risks generated by climate change and, potentially, other ecological crises. The standard approach to environmental problems in economics has been to define the latter as negative externalities, that is, activities that—if not corrected by policies—have a direct negative impact on others’ production and consumption possibilities, including those of future generations. A second complementary theoretical justification for sustainable finance measures can be envisioned, whereby measures aimed at promoting sustainable finance could be considered as second-best policies. Going further, it has been argued that market economies regularly generate new externalities, such that regulatory systems are overrun by externalities (Kapp, 1950). According to this view, climate change should not be approached as a market failure (no matter how massive) but rather as a systemic challenge that calls for an unprecedented level of coordination among, and commitment from, multiple actors (private and public), involving multiple instruments (pricing, sectoral regulations, and so on), and with multiple consequences (on inequality, for instance). These considerations point towards a third theoretical underpinning for sustainable finance, in which, more than being second best, sustainable finance could in fact have a central role to play in addressing climate change. Indeed, finance is critical for funding the new kinds of innovation and investments that are needed for deep decarbonization (Oman and Svartzman, 2021). This three-pronged conceptual framework helps us understand why central

banks and financial supervisors have started to pay attention to climate change by collaborating through the NGFS, and how they rapidly became stakeholders of the low-carbon transition within the financial sector. The main contribution of the NGFS is to consider that, insofar as climate change poses a risk to financial stability, it “falls squarely within the mandates of central banks and supervisors to ensure the financial system is resilient to these risks” (NGFS, 2019). NGFS members focus on two types of climate-related financial risks: physical and transition risks. Physical risks correspond to financial losses resulting from more frequent and severe weather and climate extremes (e.g., storms, wildfires) and long-term changes in climate patterns (e.g., rising sea levels). Transition risks correspond to financial losses resulting from a rapid or disorderly low-carbon transition. Such avenues nevertheless pose at least three significant challenges. First, they require central banks’ to know what other actors will do, to enable them to adjust their own actions. For instance, knowing how climate policy will affect the economic outlook, and its implications for monetary policy. Another example relates to the path and speed of the transition induced by climate policy, which may also have financial stability implications. Second, some of the measures mentioned above may be considered to impinge on the principle of market neutrality, according to which monetary policy should be asset neutral. Third, certain forms of policy coordination (e.g., fiscal-monetary) to achieve climate-related goals raise questions about central bank independence (Oman and Svartzman, 2021).

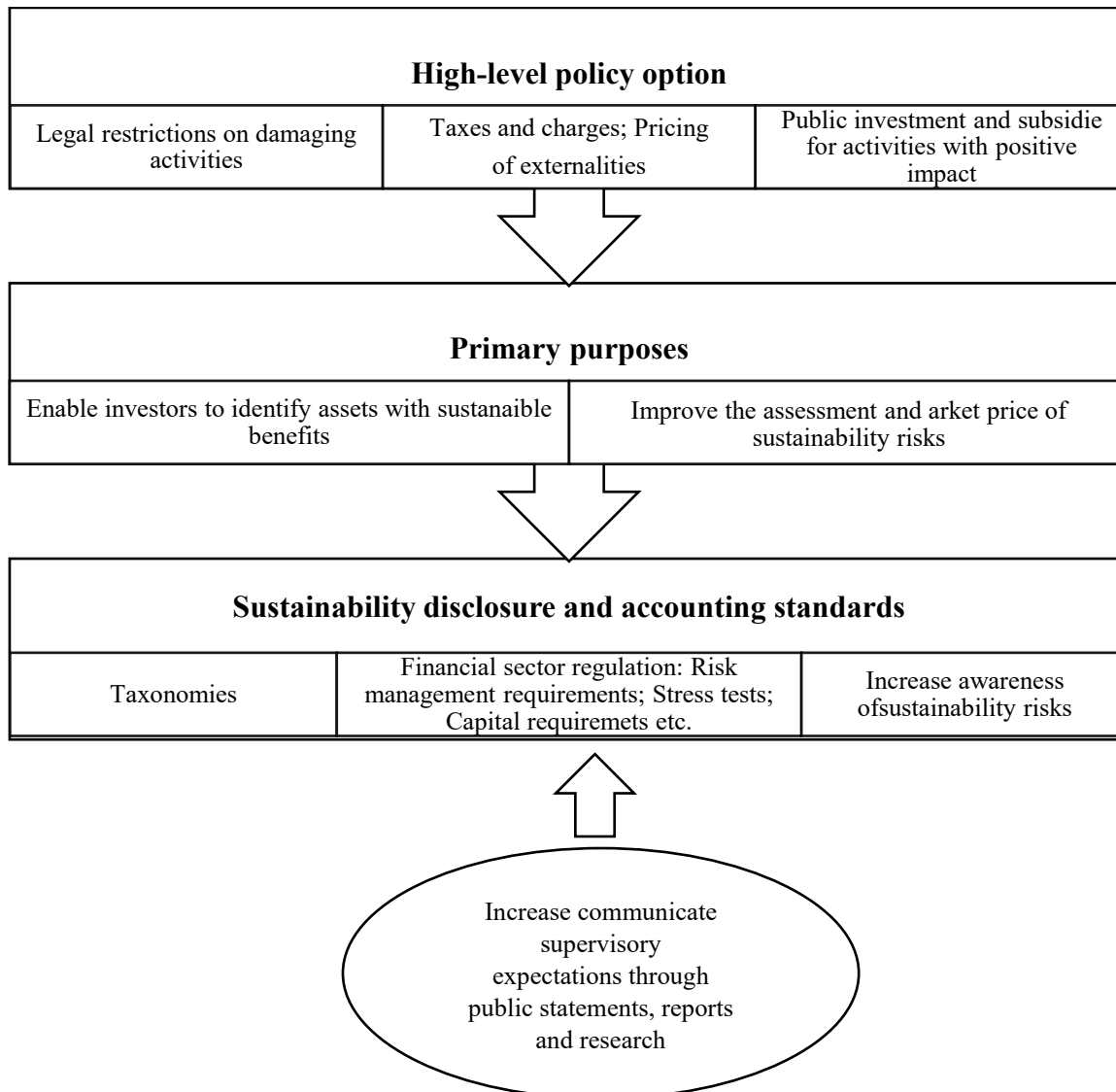
A taxonomy for sustainable finance is a set of criteria that provide the basis for an evaluation of whether and to what extent a financial asset will support given sustainability goals. Its purpose is to provide a strong signal to investors, and other stakeholders, and assist their decision making – 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 1). By aligning the sustainability goals with high-level policy objectives, sustainable finance taxonomies can be important instruments for achieving these objectives (Velinova-Sokolova, 2023).

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 (Ehlers et al., 2021).

Important participants and their instruments

There are a number of crucial financial intermediaries and institutions driving the greening of the financial system, including banks, institutional investors and international financial institutions (IFIs), as well as regulatory authorities and central banks.

- *Banks* - Banking system assets play an important role in the international financial system because they represent an important share of global financial assets. In particular, emerging markets and developing countries have established numerous measures to mobilise finance for sustainable development.
- *Institutional investors* - It is widely acknowledged that a large share of needed to finance green investments has to come from institutional investors, including pension funds, sovereign wealth funds and insurances. Generally, even if institutional investors would be willing to invest in long-term and sustainable projects, the prevailing regulation often prevents them from doing this.



Source: Prepared by Author

Figure 1. Policy instruments for taxonomies

- *International financial institutions*- In order for investments in green products and projects to be significantly up-scaled, pioneering work is necessary. IFIs can support the green

transformation in three specific ways. First, they have a pioneering role in testing new ways of financing sustainable development. Second, IFIs have an important role to play in the mobilisation and rechanneling of private and institutional capital for green investments by the provision of innovative instruments such as green bonds. Finally, IFIs are predestined to build a coalition of green financiers with the aim of reforming global financial governance to become supportive of sustainable development (Lindenberg, 2016).

- *Central banks and regulatory authorities* - Apart from IFIs, central banks and other regulatory authorities could push financial markets towards more sustainability by establishing adequate policies and regulations. Banking stress tests and standards of due diligence for banks and financial institutions could give greater consideration to climate risks in order to impact the common investment behaviour. One main problem with green regulation in the financial sector has been that financial and environmental policy approaches have often not been coordinated (Berensmann and Lindenberg, 2021).

The EU taxonomy is an important and well-developed example defining standardized criteria for classifying and rating green investments, allowing, for example, for the comparison of different (green) mutual funds. In developing the taxonomy, the EU relied heavily on input from private finance. The taxonomy is expected to provide a level playing field for the banking industry and improve its reputation in the context of accusations of greenwashing. In so doing, it should enhance business opportunities by increasing the demand for green financial products.

However, it is criticized that a standardization and increasing transparency do not offset the problems that go with commodification of nature. Markets based on private property rights assume commensurability of different environmental goods and physical capital and nature. According to this critical perspective, the privatization of nature often implies dispossession. Therefore, the creation of (financial) markets for environmental goods does not contribute effectively to solving environmental problems and has potentially adverse distributional implications (Dziwok and Jägerq 2021).

The United Nations Environment Programme (UNEP) developed a set of four Principles for Positive Impact Business and Finance focused on building standards for ESG capital. The four principles are:

- ✓ Principle 1: Definition. Positive impact finance provides funds to positive impact businesses that aim to make additional contributions to ESG issues and sectors. The principles acknowledge the interconnectedness of ESG issues.
- ✓ Principle 2: Frameworks. Standard methodologies and tools are required to monitor and manage the impact activities of ESG finance.
- ✓ Principle 3: Transparency. Full disclosure of ESG impact performance—negative as well as positive—is required. The principles do not prescribe which methodologies to use to identify, analyze, and verify positive impact. They only require that these be disclosed and transparent.
- ✓ Principle 4: Assessment. The assessment of positive impact finance delivered by entities should be based on the actual impacts achieved, including the magnitude of the impacts delivered; the scale of impacts delivered relative to amount of funds spent; the degree of

leverage of private funds relative to public funds and/or donations; the level of additionality or underserved sustainable development need and, hence, constitute a significant step for the attainment of the SDGs) (Nicholls,2021).

Currently, there is a wide range of competing standards that aim to capture sustainable finance and ESG performance. the EU nonfinancial information disclosure regulations and the IFRS consultation on sustainable disclosure are very significant steps also towards common standards. Table 1 summarised the Sustainable Finance Standards.

Table 1. Basic Sustainable Finance Standards

Category of Standards	Example
ESG Disclosure: Principles	Principles for Responsible Investing International Integrated Reporting Council Principles
ESG Disclosure: Green Finance Standards	Carbon Disclosure Project Carbon Risk Assessment Framework Principles for Positive Impact Business and Finance Carbon Price Leadership Coalition
ESG Disclosure: Organizational Standards	Global Reporting Initiative Social Accounting Standards Board
Regulation	European Union Non-Financial Reporting Directive UK Climate Disclosure Regulation IFRS International Sustainability Standards Board

Source: Prepared by Authors on the Nicholls,2021

In addition to these general policy recommendations, all important actors for green finance should contribute to the further development of green finance:

- Banks should accelerate their green finance instruments, notably priority-lending requirements and capital adjustments.
- All institutional investors should state in their annual report in which way their investment policy considers environmental, social and governance factors and disclose their carbon footprint.
- In order to ensure financial stability, central banks should assess the potential effects of environmental degradation, climate change impacts and resource scarcities on price and financial stability.

- Similarly, regulatory authorities should take into account environmental risks. Financial regulation such as Basel III and Solvency II should include exceptions with regard to capital and liquidity requirements for green investments (Berensmann and Lindenberg, 2021).

Sustainable finance in Bulgaria

According to the The National Development Programme BULGARIA 2030 (Bulgaria 2030, 2022) the main policy objective by 2030 is to accelerate the economic convergence with the EU standard, through targeted and focused government support for increasing specialisation in products and industries characterized by a high technological and research intensity. The implementation of the strategic goals is envisaged through targeted policies and interventions, grouped into five interconnected and integrated development axes: (1) Innovative and Intelligent Bulgaria; (2) Green and Sustainable Bulgaria; (3) Connected and Integrated Bulgaria; (4) Responsive and Just Bulgaria. The introduction of eco-innovation activities, including new eco-products and technologies, will play an important role in supporting businesses. At the same time, efforts will be made to create new jobs in the green and blue economy. Low resource efficiency will also be addressed through actions to reduce the amount of waste generated in the production process, including in the implementation of projects within the framework of public procurement and concessions (Velinova-Sokolova,2022).

Bulgarian Stock Exchange following the mission to promote responsible investment in sustainable development and advance corporate performance on environmental, social and governance factors in Bulgaria, together with Independent Bulgarian Energy Exchange take the initiative of the establishment of Green Finance & Energy Centre - a NGO that concentrates the efforts of the business, the state and other stakeholders towards sustainable development of the country.

Green Centre aims at establishing itself as a think tank for policies in the fields of sustainable finance and energy with the following objectives:

- ✓ To give the topics of sustainable finance and energy top priority among decision-makers in the business and the country
- ✓ To be a unifying factor and to lead the public debate on the topics of sustainable finance and energy in Bulgaria
- ✓ To participate in the development of policies in the field of sustainable finance and energy
- ✓ To take part, representing Bulgaria, in the European and global networks for sustainable finance and energy
- ✓ To generate ideas for developing an index methodology, financial instruments based on sustainability factors
- ✓ To promote the ideas among stakeholders and the public through various trainings, seminars, discussions and other initiatives (BSE,2022)

5. 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.

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.

Finance is designed to tackle the challenges of economic recovery in ways that help not only reduce risks and vulnerabilities to the economy but also reduce the emissions that cause climate change and increase development uncertainty. In the financial industry, data deployment and collection is becoming key, and the only thing that matters are whether the financial product that real customers want can be delivered in sufficient green packaging and adequate liquidity.

Further research is needed to mobilise the necessary resources, bridge obvious knowledge gaps and make progress in addressing questions on how to close the green finance gap.

References

1. Berensmann, K., Lindenberg, N., (2016). German Development Institute / Deutsches Institut für Entwicklungspolitik (DIE). www.die-gdi.de, ISSN 1615-5483
2. BSE, (2022). BSE is a partner of UN Sustainable Stock Exchange Initiative, <https://www.bse-sofia.bg/en/sustainability>
3. Bulgaria 2030. (2022). National Development Programme. available at: <https://www.minfin.bg/upload/41549/Bulgaria%202030%20analiz.pdf>
4. Dziwok, E.; Jäger, J. A, (2021). Classification of Different Approaches to Green Finance and Green Monetary Policy. Sustainability 2021, 13, 11902. <https://doi.org/10.3390/su132111902>
5. Ehlers, T. et al., (2021). BIS Papers No 118 A taxonomy of sustainable finance taxonomies. ISSN 1682-7651 (online), ISBN 978-92-9259-512-8 (online). Bank for International Settlements.
6. Gerster, R. (2011). Sustainable finance: Achievements, Challenges, Outlook. Gerster Consulting, Richterswill.
7. Kapp, K. W. (1950), The Social Costs of Private Enterprise, Harvard University Press, Cambridge.

8. Lindenberg, N. (2016): Coordinating the willing. D+C Development and Cooperation e-Paper, 7/2016, 38-39.
9. Liu, C., Shuo Wu, S., (2023). Green finance, sustainability disclosure and economic implications. Fulbright Review of Economics and Policy Emerald Publishing Limited. e-ISSN: 2635-0181. p-ISSN: 2635-0173. DOI 10.1108/FREP-03-2022-0021
10. Nicholls, A. (2021). Impact Measurement and Management in Sustainable Finance. Asian Development Outlook 2021: Financing a Green and Inclusive Recovery
11. OECD, (2019). Social Impact Investment 2019 - the Impact Imperative for Sustainable Development
12. OECD, (2020), Measuring and Managing the Impact⁴ of Sustainable Investments - a Two Axes Mapping
13. Oman, William; Svartzman, Romain (2021) : What Justifies Sustainable Finance Measures? Financial-Economic Interactions and Possible Implications for Policymakers, CESifo Forum, ISSN 2190-717X, ifo Institut - Leibniz-Institut für Wirtschaftsforschung an der Universität München, München, Vol. 22, Iss. 03, pp. 03-11, available at: <http://hdl.handle.net/10419/250915>
14. Pisano, U., Martinuzzi, A., & Bruckner, B. (2012). The financial sector and sustainable development: Logics, principles and actors (ESDN Quarterly Report No 27).
15. Popescu, I. et al, (2021). Measuring the sustainability of investment funds: A critical review of methods and frameworks in sustainable finance. Journal of Cleaner Production 314 (2021) 128016. <https://doi.org/10.1016/j.jclepro.2021.128016>
16. Schoemaker, D. (2017). Investing for the common good: A sustainable finance framework. Bruegel essay and lecture series. https://bruegel.org/wp-content/uploads/2017/07/From-traditional-to-sustainable-finance_ONLINE.pdf
17. Schooley, D. K., & English, D. M. Sasb, (2015). A pathway to sustainability reporting in the United States. The CPA Journal, 85(4), 22–27.
18. UN Global Compact, (2004). Who Cares Wins: Connecting Financial Markets to a Changing World Connecting Financial Markets to a Changing World, 2004
19. Vandekerckhove, W., & Leys, J. (2012). Dear Sir, We are Not an NGO. The Journal of Sustainable Finance & Investment, 2(2), 152–161.
20. Velinova-Sokolova, N., (2023). Evaluation Of Financial Instruments In The Context Of Sustainable Finance. 6th International Conference on Governance and Strategic Management (ICGSM) “ESG Standards and Securing Strategic Industries”. Conference Proceedings Book, 239-246, ISBN 978-619-253-024-2
21. Velinova - Sokolova, N., 2022. Challenges of management of green finance after the pandemic, Economic Challenges In The Context Of Pandemic And War Circumstances, 2022, pp. 1-18, ISSN (online):2534-9600
22. Ziolo, M., Filipiak, B. Z., Bąk, I., & Cheba, K. (2019). Finance, sustainability and negative externalities. An overview of the European context. Sustainability, 11(15), 4249. <https://doi.org/10.3390/su11154249>
23. Ziolo et al., (2021). The role of sustainable finance in achieving sustainable development goals: does it work?, Technological and Economic Development of Economy, 2021, 27(1): 45–70 47, ISSN: 2029-4913 / eISSN: 2029-4921, <https://doi.org/10.3846/tede.2020.13863>