

The financial sphere and sustainable development are interrelated and collaborative research categories. Sustainable development has been widely described in the literature of the subject, in terms of an economic category and as a research problem. Despite numerous publications devoted to this issue, this area of research remains underdeveloped from a definition point of view, an impact on assessment, on the economy and stakeholders. This mostly concerns the insufficiently researched issue of sustainable development financing, which on the basis of the current publication focuses on almost exclusively a narrow section, namely the characteristics of the sources of financing. Crisis 2008 has revealed the imperfections of a traditional approach to finance; particularly the mechanisms used so far by financial markets, and has become the impetus for creating new dedicated financial solutions, especially in the context of ensuring long-term financial stability and security. In this context, the role of sustainable finance in stabilizing financial markets, after the crisis, appears to be significant. Conventional finance on the complexity of the phenomenon of sustainable development, and the challenges and requirements involved in financing such development processes are highly dysfunctional. This is expressed in particular by the following: the role and function of finances, the category of profit and risk, as well as approaches to perceiving values and economic benefits.

In the context of such a framework for the problem, the paradigm of conventional finance turns out to be inadequate in the face of the increasing complexity of modern financial phenomena, which is determined by the influence of sustainable development. The nature and complexity of sustainable development as an economic category requires an appropriate funding mechanism and a new approach to the perception of phenomena and financial decisions, which should take into account the three-dimensional, economic, social and environmental perspective. Under the influence of financially sustainable adjustment processes, a new sustainable finance paradigm emerges. Taking into account the economic, social and environmental perspectives that characterize sustainable finance, this allows for a more appropriate adaptation of the financial sphere to financing requirements determined by the specific nature of sustainable development.

The sphere of sustainable finance remains poorly recognized in the theoretical field of finance. There is no in-depth research and analysis in this field. From the perspective of ensuring efficient financing for sustainable development, it is crucial to adapt and design financial model, so that it meets the requirements for sustainable development financing and take into account the financing of each of the three pillars of this development. Conventional finance focus on, and take into account only one dimension of the phenomenon, which is the economic dimension; hence, it does not allow for adequate financing of sustainable development. Efficient financing of sustainable development therefore requires an extension of the perception of finance to two of the other dimensions, social and environmental and thus, the design of sustainable finance model, in line with the sustainable finance paradigm, and in harmony with the three dimensions of sustainability. The financial theory has not defined or described in detail the paradigm of sustainable finance, the sustainable finance model, nor has there been a time when the separation of a sustainable financial system has neither been established nor has sustainable financial systems been explored. The theoretical achievements in finance are lacking of a comprehensive definitional and methodological approach that allows for in-depth research into the efficiency of sustainable development financing. **The project is innovative, assuming the assumptions, construction and verification of a sustainable finance model using experimental methods, as well as a fuzzy approach. Thus, the research undertaken in the project is pioneering in both theoretical and methodological considerations.**

The main objective of the project is to develop a mathematical and fuzzy model of sustainable finance that enhances the efficiency of sustainable development financing with ESG risk representation. For this purpose, two main research tasks have been identified: 1/ Developing a theoretical framework that contributes to the theory of finances in the field of sustainable finance. The financial theory lacked conceptual apparatus, identification of functions, methodology, instrumentation for sustainable finance, and in particularly the theory that identifies the links between the financial sphere and sustainable development in terms of the interplay of these two categories. It is also important for the scope of research to develop a methodology for conducting sustainable financial research in terms of capacity to ensure effective capital transfer and sustainable financing. 2/ The second task will be to examine the degree of sustainability of OECD finance. As a result, the model of sustainable finance will emerge. The model will be validated and verified using the OECD countries concerned. Quantitative and qualitative research will also be carried out on the basis of national and international databases.