FINANCIAL AND CREDIT SUPPORT SYSTEM FOR SUSTAINABLE DEVELOPMENT OF INDUSTRY IN UKRAINE

Vasily Shvets, Prof. Dr.-Econ. *Dnipro University of Technology, Ukraine*

Introduction. In the context of global sustainable development goals, Ukraine is seeking to promote financial inclusion, i.e., greater access to financial services for all firms, as part of their overall strategies for economic, innovative and equitable development. However, unfortunately, so far no industrial enterprise in Ukraine can rely on financial stability and reliability. Due to a series of stresses over the past few years, they are forced to regularly adapt their production, purchasing and supply programs to a changing external environment, which significantly undermines their internal capabilities. Especially large enterprises are becoming increasingly dependent on the stability of the financial services market.

Fluctuations and limitations in the financial stability of an enterprise become destructive not only for him, but also for his partners in the value chain. Thus, one of the factors affecting the sustainable development of large and medium-sized enterprises is access to means of sustainable sources. At the same time, we are seeing the growing need to receive reliable and timely information on the business activities in different markets along the entire value chain, including the economic, legal, technological and other environment, the state of business operators and service structures — banks, insurance companies, carriers, etc. (Paliekhova, 2021).

Presentation of the main research. Financial and credit support infrastructure is an extremely urgent and universal concern for the implementation of sustainable development goals, technical reequipment and reduction of emissions and discharges of pollutants. The transformation processes in the financial sector are needed in order to keep global value chains in the face of today's global turmoil and to contribute towards coherent and coordinated support towards sustainable production and consumption. For Ukraine, this problem is especially relevant, because the main economic function of Ukrainian financial and credit system in the period of accession to the EU is the

credit and investment activity to support sustainable development projects of their clients.

Ukrainian researchers represent financial and credit infrastructure as a set of interconnected and interacting financial institutions, directly involved in financial activities and contributing to its implementation, that is associated with the movement of cash flows. The results of many also studies showed that the Ukrainian financial structure did not change significantly during the last period.

In 2021, there were 75 banks and 2,084 participants in non-bank financial services markets in the financial market of Ukraine, which include 144 leasing companies that are not financial institutions; 1031 financial companies (licensed for lending, leasing, and factoring, guaranteeing) and 63 insurance brokers. However, a bank-centric model of the financial market (about 90% of assets goes through the banking system) in the country has remained (NBU Statistic, 2022). As Table 1 shows that over the past 2 years, government lending to projects has decreased by almost 40%. However, in the first months of 2021, the corporate loan portfolio already increased by 1.3% to UAH 747.2 billion (NBU Statistic, 2022).

Table 1

Dynamics of assets of the banking system of Ukraine, UAH billion (compiled from NBU Statistic, 2022)

Indicator	01.01.2018	01.01.2019	01.01.2020
Net assets	1316,85	1254,39	1256,30
Loan portfolio	1006,36	965,09	1005,92
Investments in securities	168,93	198,84	332,27
Highly liquid assets	155,64	191,26	199,50
Official exchange rate, UAH / USD, UAH	28,06	27,67	23,67
Average interest rate on loans in national currency,%	18,80	21,47	17,70
Average interest rate on foreign currency loans,%	8,30	6,88	8,20

The results of the study displayed a positive trend in the development of external financing from 2016 to 2021. However, the share of external financing rose not due to an increase in bank loans but due to informal sources. The researchers found no arguments to support the hypothesis of the existence of a strong statistical relationship between them (Oliynyk-Dunn et al., 2020).

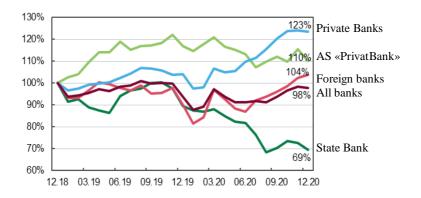
We have also identified additional significant sources of financing for sustainable development projects that are not related to the development of the financial system and those that do not meet traditional notions of financing patterns. In particular, joint projects of partners along value chains are increasingly becoming such sources.

Nevertheless, according to Ukrainian analysts, the Ukraine's financial and credit infrastructure offers favourable prospects for access to the sources of credit, finance and investment necessary to the modernization and sustainable development of industrial enterprises.

Figure 1 represents, in the fourth quarter of 2020, the volume of net hryvnia loans to economic entities increased by 4.2% (+4.3% y/y). Real estate lending revived significantly: net hryvnia loans in this segment grew by 7.5% for the quarter and by 11.5% y/y.

Figure 1

Net loans to business entities, in hryvnas (compiled from NBU Statistic, 2022)



Yet, banks have so far weakly adjusted to supporting sustainable development in the industrial sector. Loans for environmental projects accounted for only 5% of total bank lending. As we see from Table 2, during this period, emissions from stationary sources (mainly from pipes of industrial enterprises) decrease very slowly (NBU Statistic, 2022).

Table 2

Emissions of pollutants into the atmospheric air of Ukraine (compiled from NBU Statistic, 2022)

	Unit	2018	2019	2020	2021		
Emissions of the main pollutants							
Sulphur	1000	716,7	695,8	619,2	595,3		
dioxide (SO ₂)	t/year						
Stationary		698,1	676,0	601,0	575,7		
sources							

The EU is determined to the transition to a low-carbon, more resource-efficient and sustainable economy and has been at the forefront of efforts to build a financial-banking system that supports sustainable growth. Including, In the EU's policy context, sustainable lending is understood as supporting the transparency when it comes to risks related to ESG factors that may also have an impact on the financial system of banks (EU Finance, 2021).

EU integration lies at the core of the updated National Bank of Ukraine Strategy until 2025, which identifies three priorities and 12 strategic goals. The first priority is the promotion of economic recovery and development. The second priority is the development of digital finance as a driver for the further digitalization of the Ukrainian economy (EU Finance, 2021). The third priority is institutional development and operational excellence, which involves implementing the central bank's digital transformation, and promoting green policies in support of sustainable development.

The sustainability of banking system refers to the ongoing process of taking environmental, social and governance (ESG)

considerations into account when making decisions in the credit sector, leading to more long-term investments in sustainable economic activities and projects (Gutiérrez-López et al. 2020).

According to the IFC estimates, \$23 trillion in climate-smart investment opportunities exists in the emerging markets globally by 2030, while in Ukraine the estimate is \$73 billion. The new Sustainable Finance Policy will help Ukraine tap this potential. At the same time, enterprises should take advantage of new opportunities to improve your sustainability. It is also important to conduct research to develop effective market policies in order to realize own industrial potential in the most rational way and reach the ultimate aim: balancing the company's profitability while reducing the environmental footprint (Paliekhova, 2020).

Based on the information obtained because of market research, it is possible to discover profitable directions of sustainable production, in which it is expedient to direct financial investments, to determine the types of environmentally neutral products, which should be oriented during development of production plan, as well as to choose segments of more sustainable consumers.

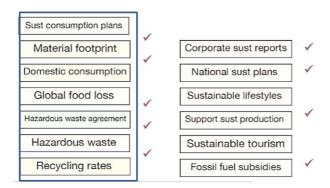
Market studies play an integral role in the planning of sustainable production process, especially strategic planning in value chains. Current circumstances must be highlighted and also utilized in formulating integration strategic plans. The broad spectrum of publications discuss approaches to investments to improve sustainability, namely: (i) disassembly for recycling, (ii) from product to raw material recycling, and (iii) by-products and co-production. (Suzanne et al., 2020).

A crosscutting analysis of the reviewed literature brought forward a number of research gaps and revealed multiple research opportunities to support the "right" investments in development. Analysis show an ever-growing interest in making sustainable the traditional linear industrial processes within a circular economy context. Also in the literature, much attention is paid to the problem of sustainable management. That requires careful and sensible sequencing of management activities, including resource analysis, technology assessment, data dissemination and communication (Sarkar et al., 2022).

The use of sustainability tools in the creation of the production program of the enterprise has a generally recognized importance in the modern economy, as ignoring environmental factors leads to an increase in risks and the emergence of direct and indirect damages. Directly for this reason in the developed countries the management of enterprises invests significant funds in the development of sustainable management, monitoring of external environment, as well as conducts market research (see Figure 2). For example, plastic waste management projects are made in developed nations for achieving sustainable management of plastic waste (Tejaswini et al., 2022).

Figure 2

Main directions of investment projects in the industrial sector (Paliekhova, 2020)



Conclusions. The results of the study displayed a positive trend in the development of the Ukrainian financial and credit support system from 2016 to 2021. Однако the analysis of the current state of the Ukrainian financial and credit sector allowed to identify several problems, in particular: low quality of bank assets in the context of supporting sustainable development projects; insufficient development of alternative sources of financing and lending; high concentration of the market for financial and credit services. It should also be noted that banks should be supportive of large-scale projects that address sustainability issues along value chains.

References

Bukhtiarova, A., Semenog, A., Razinkova, M., Nebaba, N., & Haber, J. A. (2023). Assessment of financial monitoring efficiency in the banking system of Ukraine.

EU Finance (2021). Overview of sustainable finance. *An official website of the European Union*. https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance/overview-sustainable-finance_en

Gutiérrez-López, C., & Abad-González, J. (2020). Sustainability in the banking sector: A predictive model for the European banking union in the aftermath of the financial crisis. *Sustainability*, 12(6), 2566.

NBU Statistic (2022). Composition of financial markets of Ukraine. National Bank of Ukraine. https://bank.gov.ua/ua/statistic/sector-financial/data-sector-financial#2fs

Oliynyk-Dunn, O., Wasilewski, M., Kvasha, S., & Adamenko, V. (2020). Financial system development and financing patterns of firms: Evidence from Ukraine. *Journal of East-West Business*, 26:1, 1-16, https://doi.org/10.1080/10669868.2019.1630045

Paliekhova, L. (2020). Sustainable Development Governance: A Handbook of Basic Concepts. Dnipro: NTU Dnipro Polytechnic [in Ukrainian].

Paliekhova, L. (2021). From supply chains to value chains: sustainability management. Sustainability in the industrial sector: Proceedings of the Study Seminar at NTU Dnipro Polytechnic - BTU Cottbus-Senftenberg, 24th Dec. 2020 - 18th Jan. 2021. Ed.: Shvets V., Paliekhova L. Dnipro-Cottbus: Accent, 33-40.

Sarkar, B., Dissanayake, P. D., Bolan, N. S., Dar, J. Y., Kumar, M., Haque, M. N., & Ok, Y. S. (2022). Challenges and opportunities in sustainable management of microplastics and nanoplastics in the environment. *Environmental Research*, 207, 112179.

Suzanne, E., Absi, N., & Borodin, V. (2020). Towards circular economy in production planning: Challenges and opportunities. *European Journal of Operational Research*, 287(1), 168-190.

Tejaswini, M. S., Pathak, P., Ramkrishna, S., & Ganesh, P. S. (2022). A comprehensive review on integrative approach for sustainable management of plastic waste and its associated externalities. *Science of the Total Environment*, 825, 153973.