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INTEGRATION OF SOCIAL AND ENVIRONMENTAL GOALS INTO FINANCIAL CORPORATE MANAGEMENT SYSTEM

Статтю присвячено недостатньо дослідженій проблемі трансформації фінансового менеджменту підприємств, що необхідно для реалізації стратегії сталого розвитку. Метою дослідження є розробка методологічної основи інтеграції екологічних і соціальних цілей у корпоративне фінансове управління. У роботі проаналізовано ESG рейтинги українських суб'єктів господарювання та виявлено основні недоліки їх діяльності в контексті проблематики сталого розвитку. Обґрунтовано принципи формування системи фінансового менеджменту підприємств, що відповідає задачам забезпечення збалансованості їх стратегічних цілей. У результаті дослідження визначено взаємопов'язані специфічні функції сталого менеджменту, та розроблено механізм їх системної інтеграції у складові корпоративного фінансового управління.

Ключові слова: ESG, фінансовий менеджмент, сталі фінанси, управління фінансовими ризиками, інвестиційний менеджмент.

Introduction. Achieving the interconnected United Nations Sustainable Development Goals (UN SDGs) objectively requires reforming the institutional environment in which businesses operate. Currently, a leader in sustainability regulations is the European Union. Only during the last three years, a few directives of the European Parliament and the Council of the European Union have been issued, in particular on improving the EU Emissions Trading System (EU ETS), corporate sustainability reporting, and corporate sustainability due diligence [1;2;3] which significantly influence companies' strategies. Moreover, the EU introduces the Carbon Border Adjustment Mechanism (CBAM) to promote cleaner industrial production in non-EU countries.

This not only presents new challenges for businesses but also creates significant opportunities for attracting investment in the expanding sustainable finance market. As companies strive to meet new sustainability demands, they have the potential to engage with investors who are increasingly focused on environmental, social and governance (ESG) practices. According to the research results of the IBM Institute for Business Value, sustainability is the most rapidly rising issue on the agenda of CEOs worldwide [4, p. 3]. At the same time, 17% of finance leaders and 15% of CEOs indicate that their organizations have not yet made any enterprise-wide investments in

sustainability. Some of them have even no such plans.

Thus already today, businesses are in the process of a complex transformation of their development model. In the context of corporate finance, this signifies integrating environmental and social goals into financial management practices. The dynamism of changes in the institutional environment and the underdevelopment of the sustainable finance methodology emphasize the relevance of research in this area. They are of particular importance for the corporate sector of the Ukrainian economy given the intensive process of the country's European integration.

Literature review. The analysis of publications on the topic of the study shows that they are still mostly devoted to the influence of sustainable practices on corporate financial performance. This makes sense, as harmonizing financial with social and environmental goals without their positive relationship is problematic. Although empirical research findings in this domain remain varied, a considerable body of literature suggests a predominantly positive relationship between sustainability initiatives and financial performance. For example, recent studies demonstrate that companies receiving high ESG ratings from MSCI consistently achieve better performance than their lower-rated counterparts primarily due to better earnings fundamentals [5], prove a positive relationship between business sustainability and financial performance [6], and show that sustainable investments stimulate companies' growth [7].

Certain studies indicate that the relationship between social and financial performance is ambiguous. Based on empirical research, Aydoğmuş et al. [8] concluded that the ESG score, and its social

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and governance components, demonstrate a significant positive correlation with a company's profitability but this is not the case for the environmental component. This conclusion differs from the results of the previous study on companies in the FTSE 350 Index [9] only concerning the influence of the social and governance components of ESG which was defined as uneven.

Pileckaitė and Subačienė [10] argue that the relationship between environmental sustainability and financial performance varies by country and sector of the economy. They found that a negative correlation between net profit and carbon dioxide emissions and a positive correlation between net profit and environmental investments, which is generally characteristic of companies in the Baltic countries, is practically absent in some sectors, particularly in transport and storage. Additionally, it was determined that the net profits of companies in Lithuania and Estonia exhibit a stronger correlation with CO₂ emissions than with investments in environmental initiatives. In contrast, Latvian companies demonstrate an inverse trend.

Undoubtedly, cross-country differences in the institutional environment for business operations are a significant factor. It should be noted that examining the dataset of international companies in Latin America showed a negative relationship between ESG scores and corporate financial performance [11] in contrast to the studies mentioned above, which were conducted on other samples. Conflicting results of the empirical studies can also be explained by an inverted U-shaped relationship between social and financial performance [12, p.36 - 50]. As government regulation of sustainable development increases, studying its impact on corporate financial outcomes becomes increasingly relevant to form a dynamic management system for the company. Thomsen [13], analyzing the impact of environmental regulation on competitiveness using the example of the Danish economy, proves its non-linear nature. At the initial stage of implementation of environmental regulation, its effect is negative but as the innovation process unfolds, there is an eventual increase in competitiveness.

Significantly fewer publications are devoted to connecting sustainable development issues with management practices. Aldowaiish et al. having conducted a comprehensive literature review based on the SALSA framework found only 29 studies related to the links between ESG and business models [14]. Of these, 28 publications discuss the outcome of incorporating ESG into business practice. One study introduces a value driver adjustment approach addressing the challenges

associated with integrating ESG into the investment decision-making processes [15]. Another publication analyzes the ESG performance of a copper recycling company operating with a circular business model [16].

The authors of this review note that the literature lacks a holistic approach to ESG integration into the business models providing only a conceptual understanding of it. Research results published over the next three years also focus on specific issues of corporate sustainability management. This includes risk management [17], sustainability issues integration in banks' control systems [18], sustainability balanced scorecards [19], etc. Thus, the above conclusion of Aldowaiish et al. about the lack of a holistic approach to the problem remains relevant. Furthermore, it is important to highlight that the specificity of the transformation of financial management within the framework of the sustainable development concept is one of the least explored issues.

Therefore, **the purpose of this study** is to develop a methodological framework for the system integration of environmental and social goals into corporate financial management.

Presentation of the main research data.

To develop a mechanism for integrating social and environmental goals into corporate financial management, first of all, the ESG practices of Ukrainian financial and non-financial corporations were analyzed based on the dataset of leading rating agencies such as ISS, Moody's Investors Service, MSCI, Refinitiv, S&P Global, Sustainalytics, and CSRHUB. The research reveals two main groups of domestic business entities that implement ESG practices. The first group is represented by companies registered abroad but operating production facilities in Ukraine. These companies are part of holding groups owned by Ukrainian businessmen. Among them are DTEK Renewables Ukraine BV, Interpipe Holdings PLC, Kernel Holding SA, Metinvest Holding LLC, MHP SE, and Ferrexpo PLC. The second group comprises large state corporations and banks, such as Naftogaz Group, PrivatBank, Savings Bank of Ukraine, and Ukreximbank. The sectoral structure includes pipes and steelmaking, agriculture, food production, renewable energy, telecommunications, utilities, and banking. The lack of representation of Ukrainian companies in ESG ratings highlights their underdeveloped ESG practices. It is worth noting that Ukrainian subsidiaries of multinational companies are not represented in the dataset of ESG providers. In contrast, the subsidiaries of these multinationals in other countries are often rated individually. This applies to subsidiaries of Credit

Agricole in Egypt and Italy, Unilever in India and Indonesia, ArcelorMittal in South Africa, etc.

The rating agencies' assessments turned out to be quite contradictory. Sustainalytics classifies the risks faced by Ukrainian companies as high or even severe. Moody's Investors Service views the impact of ESG considerations on the ratings of Ukrainian banks and non-financial corporations as negative or highly negative. However, Ukrainian businesses appear significantly more attractive to socially responsible investors in the ratings of ESG providers such as Refinitiv and CSRHUB. The discrepancies in ESG ratings are unrelated to the specifics of Ukrainian business. Developing ESG reporting regulations in the European Union concerning data availability and quality, measuring indicator values and weighting factors will likely decrease the divergence in ESG ratings.

Given that the ratings represent the leaders of Ukrainian businesses in the context of ESG practices, some generalizations can be made despite the limited sample size. The most significant weakness in the ESG practices of non-financial companies lies in their environmental component. All Ukrainian firms in the Refinitiv ratings have worse environmental scores than their overall ESG scores. The primary reason is insufficient innovative activity, which negatively affects the ESG scores of all the firms without exception. In this regard, there are no discrepancies in the conclusions of the rating agencies Refinitiv and Moody's Investors Service. The latter assigned the worst environmental scores to all Ukrainian non-financial companies. Low environmental standards pose a significant challenge for Ukrainian businesses, hindering the country's progress in European integration.

A different situation is observed in the financial sector. The Ukrainian state-owned banks have unsatisfactory ESG indicators, except for environmental ones. Moody's Investors Service assessed the social component of the activities of PrivatBank, Ukreximbank, and the Savings Bank of Ukraine as negative as possible. Institutional Shareholder Services (ISS) has assigned the Savings Bank of Ukraine an ESG corporate rating of D, where D is the lowest possible rating. Alongside the ESG corporate rating, ISS also assesses the SDG Impact Rating. This rating evaluates how well companies manage negative impacts and capitalize on opportunities to achieve the UN Sustainable Development Goals (SDGs). The only Ukrainian bank with an ISS SDG Impact Rating is The Savings Bank of Ukraine. However, its score of -1.5, categorized as Limited Negative Impact, indicates significant challenges in meeting sustainable development goals.

The analysis of literary sources and ESG practices allows us to determine the basic principles for integrating social and environmental goals into corporate financial management. It is worth noting that discussing the integration of ESG into financial management is terminologically incorrect since not all ESG practices fall within its scope. For example, among Moody's governance risk categories is Financial Strategy & Risk Management [20]. At the same time, other categories in particular Compliance & Reporting, Board Structure, Policies & Procedures relate not only to financial management.

The fact that ESG practices are typical only for a few Ukrainian corporations is explained primarily by the underdevelopment of financial mechanisms for sustainable development. Unlike the countries of the EU, Ukraine has not carried out environmental tax reform, has not implemented a system similar to the EU ETS, the rights of minority shareholders are not sufficiently protected, low environmental tax rates do not affect the choice of corporate investment strategy, and the opportunities to avoid penalties for damage to the environment are still high. In addition, the low profitability of many enterprises does not contribute to their development in environmental and social dimensions. For example, according to the State Statistics Service of Ukraine, even in pre-war 2021, 17.5% of industrial enterprises were loss-making. In 2020, their share was even higher and amounted to 36.2%.

As institutional factors of sustainable development mature, the dependence of the company's financial performance on its social performance increases [12, p. 31 - 32]. This leads to the need to transform corporate finances into sustainable finances. Such a transformation cannot objectively be saltatory. It is a step-by-step process driven by the formation of financial mechanisms for sustainable development. Thus, integrating environmental and social goals into the corporate management system should be based on the principle of constructing a dynamic sustainable financial management model.

Schramade emphasizes that one of the main reasons for the unsuccessful integration of sustainability issues is "not having a proper framework for linking ESG to decision-making" [15]. In practice, financial management tasks are often supplemented only by seeking resources for investing in environmental technologies and assessing their impact on key performance indicators. However, to achieve the best possible outcomes, it's essential to consider all aspects of sustainability alongside the various management functions. The above dictates the second integration principle – using a holistic approach.

When properly organized, financial management functions as a system due to its characteristics of integrity, hierarchy, emergence, multiplication, integration, communication, and dynamism. Therefore, formatting sustainable financial management should be based on the systematic principle, considering the interrelationship and interaction between the system elements. This applies not only to financial management subsystems but also to specific functions of sustainable management.

The process of integrating social and environmental goals into corporate financial management based on the principles outlined is shown in the figure. Visser and Kymal were the first to introduce the Integrated Value Creation Process methodology, which aims to transform societal aspirations and stakeholder expectations into effective corporate management [21]. They also outlined the steps necessary for implementing this process (Context Analysis, Stakeholder Assessment, Leadership Review, Risk Assessment, Opportunity Analysis, Process Redesign, and Systems Integration). As can be seen from the Figure, the proposed sequence for integrating sustainable management functions and their interrelation generally corresponds to these steps. The most significant differences, as will be shown below, are manifested in the content of the stages of the integration process, which is primarily determined by the specifics of financial management.

Creating a sustainable financial management system begins with identifying, assessing, and managing environmental, social, and governance risks based on monitoring the impact of the external and internal environment on the company's ESG performance. This falls within the scope of sustainable financial management since the realization of environmental and social risks as well as risks caused by institutional factors of sustainable development usually lead to changes in the values of economic indicators. In the context of the modern realities of the Ukrainian economy, it is crucial to manage such risks and opportunities as the shortage of qualified personnel caused by demographic processes and low wages, the increase in environmental tax rates, applying the Carbon Border Adjustment Mechanism by EU countries, the implementation in Ukraine of a system similar to the EU ETS, and the possibility of socially responsible investing (SRI) in the post-war reconstruction of the country. It is advisable to carry out risk identification and management in accordance with international standards ISO 31000:2018 Risk management – Guidelines and IEC 31010:2019 Risk

management – Risk assessment techniques. Risk analysis should consider stakeholders' perspectives. The outcome largely depends on how correctly risk assessment techniques are chosen from those proposed by IEC 31010:2019. To form a sustainable financial management system, it is also important to apply such standards as ISO 9004:2018 – Quality management – Quality of an organization – Guidance to achieve sustained success, ISO 14001:2015 Environmental management systems — Requirements with guidance for use, ISO 45001: 2018 – Occupational health and safety management system, ISO 37301: 2021 – Compliance management systems – Requirements with guidance for use and ISO 26000 – Social responsibility.

Management standards are based on the concept of Plan-Do-Check-Act. They relate to the environmental and social business aspects and promote self-assessment as an essential tool for assessing an organization's maturity. The risk analysis results form the basis for revising the company's key performance indicators (KPI). For the KPIs generated in this way, target values and controlled deviation intervals should be set, which can be designated as “green” (interval of acceptable KPI values), “yellow”, signaling the need for an urgent response, and “red” (critical situation). Thus, the early warning and response information system, which is an integral part of risk management, receives a new dimension corresponding to corporate sustainable development goals.

System analysis of financial and ESG risks opens up opportunities for forming other sustainable financial management subsystems. At all stages of this process, environmental goals must not simply be added to, but integrated into, the financial management system, otherwise the result will be an artificial, poorly managed structure with unrelated, often contradictory objectives and functions. The choice of target priorities and constraints is a key issue in this context. For example, the distribution of financial resources between investment areas depends on it.

Economic theory and business practice have not yet developed a unified methodological approach to the interrelationship of environmental, social, and financial corporate strategies. Sometimes they are developed by different structural divisions of the company, have uncoordinated goals and independent budgets. Another approach involves maximizing the financial result adhering to constraints related to social performance. Epstein et al. note that leading companies such as Nike, Procter & Gamble, The Home Depot and Nissan North America maximize the firm value while unconditionally complying with

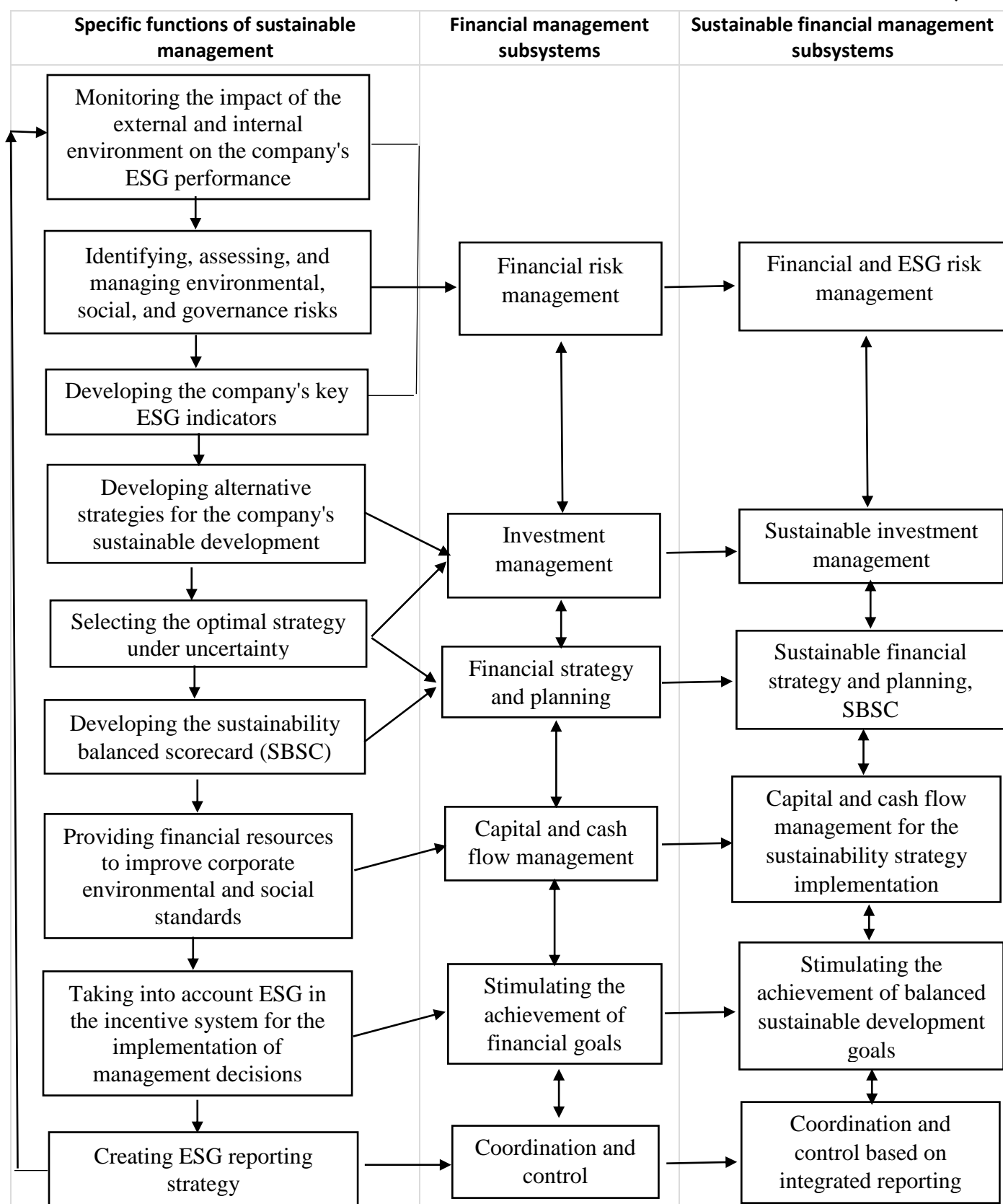


Figure 1. Integrating social and environmental goals into corporate financial management

environmental and social standards that meet legal requirements and business rules [22]. In some cases, ESG is proposed as a criterion for choosing between equivalent investment options in terms of economic

efficiency.

However, these approaches do not provide an answer to the question of the advisability of increasing wages and improving working conditions

for personnel, financing the needs of local communities, investing in environmental modernization of production, cutting-edge waste management technologies, and the like. In other words, the problem of choosing the optimal investment strategy for a company under conditions of uncertainty requires a different decision-making algorithm.

De Adelhart Toorop et al. see the solution to the problem in maximizing integrated value, calculated as the sum of possible values of its financial, social and environmental components [23]. The social and environmental values are considered with a preference coefficient set as a result of discussion between the company and its stakeholders. Assessing the social and environmental values authors proceed from the fact that market prices, tend to underestimate them from a welfare perspective. It should be noted that this approach is primarily designed for large successful companies operating in an institutional environment that encourages sustainable development. In the conditions of, for example, the Ukrainian market today, it does not seem quite realistic.

The concept of sustainable development does not imply a rejection of maximizing business value. It points to the need for balanced development in economic, environmental and social dimensions. The firm value maximum corresponds to different levels of corporate social performance, depending on the institutional environment. For example, increasing environmental tax rates, subject to general fiscal neutrality, strengthening penalties for environmental damage, and considering environmental indicators when assessing the company's creditworthiness contribute to green investing. Institutional changes in the EU and elsewhere demonstrate a steady trend toward strengthening incentives for sustainable development. Thus, a company should focus on maximizing the business's value from a strategic perspective rather than just for the short term.

Assessing changes in the strategic perspective of tax legislation, stakeholder influence, bank credit policies, socially responsible investment and sustainable insurance practices is probabilistic because businesses operate in conditions of uncertainty. In this context identifying the most likely scenarios of strengthening the impact of institutional factors of sustainable development and the emergence of new ones is important. As a rule, companies develop strategies in alternative versions. If a company intends to implement the sustainable development concept, each strategy option must include certain ESG goals. None of the alternative strategies should violate applicable laws, business

rules, customs, and the principles the company is founded on. It is advisable to select the optimal strategy for investing in corporate sustainable development based on the firm's value matrix for each strategy option under each scenario of changes in institutional factors using Wald, Hurwitz, Bayes-Laplace, or Savage criteria [12, p. 340 - 346].

To define and decompose strategic goals and planning based on the balance of stakeholder interests, it is necessary to transform the classical balanced scorecard (BSC) into a sustainability balanced scorecard (SBSC). There are several types of SBSC architectures that include sustainability or ESG as distinct perspectives. The methodological approach, assuming the priority of strategic financial goals, corresponds to the SBSC architecture, in which social and environmental indicators are embedded into the four perspectives of BSC. The strategic vision of the business goals and the content of the SBSC prospects should change in the process of forming the system of financial incentives for sustainable development. It is advisable to expand the content of the "Customer" and "Training and Development" prospects so that they respectively cover relations with external and internal stakeholders. The Internal Business Processes perspective should focus on improving corporate environmental and social standards. SBSC only meets the requirements when its financial perspective is linked to the social and environmental development of the company. This can be achieved by using a combination of lagging and leading indicators.

One possible option is to supplement the strategic business value indicator, measured based on such indicators as SVA, CVA, EVA, and MVA, by leading indicators, for example, ESG score as an indicator of investment attractiveness, risks of sanctions for violation of environmental legislation, income from trading allowances in the European carbon market, etc. The following may be indicators for other SBSC perspectives. For the external stakeholder perspective – the amount of investment in local community development, stakeholder satisfaction level; for the internal stakeholder perspective – the average salary level in the company to the industry average, the strategic retraining coefficient, the change in the share of minority shareholders; for the internal business processes perspective – the change in the volume of pollutant emissions into the atmosphere and discharges into water bodies, the volume of investment in energy-efficient environmental technologies. Achieving the target values of these indicators must be taken into account in the

incentive system for the implementation of management decisions.

Capital and cash flow management must consider the specifics of financing activities aimed at improving corporate environmental and social standards. First, high ESG ratings open up opportunities for attracting socially responsible investment (SRI). Secondly, to achieve corporate sustainability performance targets special funding sources are used such as green loans and sustainability-linked loans. In addition, the tax legislation of some developed countries, such as Australia and the Netherlands, provides special conditions for accelerated depreciation of assets for environmental protection activities (EPA). The specificity of financing EPA also presents itself in the tariff policy of insurance companies that adhere to the principles for sustainable insurance.

An essential part of sustainable financial management is creating an integrated reporting system that combines financial and sustainability reporting. For this purpose, it is necessary to develop an ESG reporting strategy for the company. This strategy must define the objectives and appropriate reporting frameworks consistent with the company's external and internal environment, the need to engage outside experts and contain a sequence of implementation stages and review criteria.

The results of coordination and control based on integrated reporting are an important information component of financial and ESG risk management, providing feedback in the system. The interrelation of elements in the system of sustainable financial management creates conditions for its reproduction and improvement. The criterion of sustainable financial management as a system is its emergence - a property that its constituent elements do not possess. This property ensures corporate

sustainability through the integrated use of financial methods and instruments.

Conclusions and prospects for further research. The study shows that only a limited number of Ukrainian corporations, predominantly those headquartered in EU member states and state-owned banks engage in ESG practices. Overall, their ESG ratings fall below the industry average. Non-financial companies' ESG practices are rated the worst in environmental terms due to a lack of innovative efforts. The social dimension of ESG frameworks within state-owned banks is significantly underdeveloped. In this regard, the corporate financial management system requires updating to create a dynamic sustainable management model, using a holistic approach, and considering the interrelationship and interaction between the system elements.

The formation of a sustainable financial management system requires consistent inclusion of such special functions as monitoring the impact of the identifying, assessing, and managing environmental, social and governance risks, elaborating the company's key ESG indicators and alternative strategies for its sustainable development, selecting the optimal strategy under uncertainty, creating SBSC, providing financial resources to improve corporate environmental and social standards, implementing ESG in the incentive system and reporting strategy. The interplay among the elements within the framework of sustainable financial management establishes conditions conducive to its reproduction and enhancement. The prospect for further research lies in examining the development of corporate sustainable financial management as the implementation of the European Union regulatory framework in Ukraine progresses

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