

# Corporate Architecture of Sustainable Development Reporting as a Tool Market Capitalization of Agrarian Business of Ukrainian Companies

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**Abstract:** Successful economic activity of companies in the field of agribusiness requires consideration of the most important for current and future generations issues of environmental, social and economic security of social development. The implementation of the principles of sustainable development in practice requires appropriate information and analytical support provided by corporate non-financial reporting of economic entities. The purpose of the article is to substantiate the methodological principles of building a corporate architecture of reporting on sustainable development of Ukrainian agricultural companies and assess the degree of impact of such reporting and the cost of agribusiness.

The analysis of the current level of sustainable development of agriculture in Ukraine has shown the existence of significant problems and deterioration of environmental, social and economic components of the industry. The proposed architecture of sustainable development reporting of Ukrainian agricultural companies should be built in the system of agro-industrial complex, as part of the national concept of sustainable development of the national economy. The implementation of the architecture of reporting on sustainable development in practice requires supplementing the methodological basis of the conceptual basis of reporting, which was done in terms of its key qualitative characteristics. The assessment of the degree of impact of corporate reporting on sustainable development on the financial results and value of agribusiness showed the presence of close direct links in large agricultural holdings and uncertainty in medium and small agricultural companies. The main problem was the low motivation of the management of medium and small agricultural companies in Ukraine to participate in sustainable development programs. The results convincingly show that corporate reporting on sustainable development as an element of meeting the needs of internal and external users and potential investors is an important component of corporate responsibility of modern agribusiness in Ukraine and improves reputational, financial, economic and socio-environmental performance.

**Keywords:** Sustainability accounting, Sustainability, Reporting, Architecture, Standards, Agricultural companies, Corporate responsibility, Accountability, Agribusiness, Business Reputation, Cost, Accounting development, Agriculture, Management.

## INTRODUCTION

Successful development of agrarian business in Ukraine under modern conditions is impossible without taking into account the key trends related to solving the most important

environmental, social and economic issues. The set of these activities of companies, industries and national economies in world practice has been systematized within the concept of sustainable development, which today is the basis for all developed countries and is the economic foundation of future generations. Ukraine seeks to increase the level of competitiveness of the national economy in European and world markets, entrusts to the world's leading economic communities, seeks to ensure a high quality of life and food security.

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The solution of these most important tasks for the national economy in modern conditions is impossible without the implementation in the practice of agricultural management of key strategic principles of sustainable development, which have already become dominant for most countries in Europe and the world. Addressing current and strategic issues of ensuring a decent level of well-being of present and future generations requires the implementation of principles and standards of sustainable development in the economic activity of agricultural companies in Ukraine today.

The complexity of modern business processes, business conditions and the emergence of new challenges and threats in the macro and microbusiness environment require business owners and managers to take objective approaches to assessing business, understanding current trends and opportunities to improve its development. The definition of key priorities for the continued existence of agricultural business units today is inextricably linked with economic, social, environmental, ethical aspects that shape the potential for value creation and increasing the value of business. With increasing requirements and risks to socially responsible business activities to make effective management and investment decisions is no longer enough information contained in the financial statements of companies. The information and analytical basis of modern corporate governance, based on the principles of social responsibility and the creation of socially necessary value, is reporting on sustainable development. Today it forms the potential for trust in the company, the commitment of buyers and consumers, the margin of safety to increase the value indicators of the brand and the business as a whole.

Exacerbation of global social, environmental and economic problems of mankind today form new prerequisites for determining the criteria for business performance. High profits will no longer be the most important indicator of business success [Annisa Hayatun N. Burhan Wiwin Rahmanti]. Increasingly, indicators of social significance and value of goods, works, services, types and results of companies are coming to the fore. Many multinational corporations today confidently demonstrate that future success is guaranteed for businesses that are not indifferent to the socially significant problems of mankind (climate, environment, poverty, social justice, etc.) and publish their corporate accounts to address these important challenges.

Today, government initiatives fully support and form the framework of standards for corporate reporting on sustainable development by adopting international sustainable development programs, financing relevant projects, subsidizing socially responsible companies and implementing measures to harmonize efforts to address pressing issues in modern society.

Global analysts acknowledge that disclosure of financial and non-financial performance of companies, in particular in the environmental, social and managerial components, improves financial performance, return on investment and growth of company assets. However, companies whose activities are indifferent to environmental and social criteria have a high risk of declining share value and future business value of the firm (Ngwakwe, 2008).

Of the world's 250 largest and largest companies, 93% compile and publish sustainability reports. According to Mohin (2018), a quarter of them use GRI standards. In Europe, 96 percent of companies in the major European indices, including FTSE, CAC, DAX, MIB, IBEX, AEX, BEL, PSI, and SMI, publish a sustainability report.

Large companies clearly show the connection between their activities in the field of sustainable development with the formation of the value of individual business and social value. Today, it is important to demonstrate this dependence to buyers, staff, investors, shareholders and all interested social groups, to show that such dependence has a commercial effect and solves the most important environmental and social issues (Partridg). This connection is a means of increasing profitability and increasing value for investors. Ferrell, Hao, & Renneboog (2016) prove that, on the stock exchanges, financial instruments of companies that demonstrate corporate reporting on sustainable development are in greater demand.

Research conducted in American companies has shown that sustainable development reporting has a positive and significant impact on return on equity, return on assets and profitability in the forecast period (McWilliams & Siegel, 2000). Whetman & Lancee (2017) adds that corporate reporting on sustainable development has a particularly significant impact on the profitability of companies with a low level of institutional ownership.

Lack of information and reporting of companies on sustainable development is increasingly seen by potential investors as cost risks (Stammers, 2017). As a management factor, sustainable development reporting forms a strong information and analytical basis, the scope of which is much broader than conventional reporting, which contains mainly financial data on business. According to research, the degree of relevance of sustainable development reporting is much higher, which increases the effectiveness of management and investment decisions and reduces potential risks to management.

Under modern conditions, sustainable development reporting is an important indicator of business reliability and stability, a marker of its long-term goals and intentions, a guarantor of corporate responsibility of customers to customers, society and the environment. Sustainable development reporting is a necessary tool to determine the company's strategic investment priorities, form a comparative picture of its attractiveness in its industry sector, provide information to society on the unity of goals and objectives of business development with socially significant and important tasks today and future.

The corporate strategy of ensuring and protecting the interests of investors and shareholders is no longer limited to the value of net income, which is an indicator of the present and does not guarantee increased efficiency in the future. A more promising indicator and source of satisfaction of economic interests of investors is the value of the business, which generates the potential for productivity and increase the income of its owners in the future. Sustainable development reporting is a tool for shaping and increasing the value of business

while increasing the level of its social responsibility in addressing the most important tasks of society.

## LITERATURE REVIEW

### Sustainability Reporting

In recent years, the concept of sustainable development reporting has been the focus of scholars, practitioners, government and international organizations, and is constantly being supplemented and improved. Complications of public life and the emergence of new challenges and threats to the sustainable existence of mankind lead to the replenishment of areas and directions of sustainable development, its key components, objectives and tools to achieve goals. According to the Global Reporting Initiative (GRI), sustainable development reporting is a company's report on the economic, environmental and social impacts of its normal activities.

Today, users of corporate reporting pay considerable attention to the guarantees of high-quality financial reporting. With the increasing role of sustainable development reporting, the low quality of corporate reporting is a new risk in the direction of protecting the interests of investors and ensuring the sustainable development of the company.

Research conducted by scientists to identify the relationship between financial performance and the level of corporate social responsibility has had very different results. A review of the literature has revealed that the absence of such a relationship or its zero value has been repeatedly found in studies of the last century, for example, Wright, Ferris (1997) & Teoh, Welch & Wazzan (1999). Since the 2000s, Nakao, Yuriko, Akihiro, Amano, Kanichiro, Matsuma, Kiminori Genba, & Makiko, Nakano (2007), King & Lenox (2001) have found a close statistical relationship between the level of environmental responsibility of companies and the size of their profits.

The EU Directive of 2014 stipulates that large companies in the European Union (companies with more than 500 employees) must disclose non-financial information (provide non-financial reporting). Non-financial reporting is required to be prepared and submitted by financial sector entities and public interest entities. The information presented in the non-financial reports relates to environmental issues, social issues and relations with company staff, respect for human rights, the fight against bribery and corruption, and diversity in management. In 2021 The Corporate Reporting Directive on Sustainable Development (CSRD) was adopted, which applies to all companies operating in regular markets, includes reporting on the green course of economic development and requires a mandatory audit of its reliability.

Compilation and disclosure of reports on sustainable development of companies today is considered by investors on the principle of double materiality. The financial significance of reporting is determined by the formation of the value (value) of the business for investors and is an internal view (This approach is sometimes referred to as taking an "outside-in" perspective). The social and environmental significance of business for society is necessary to determine the nature of the company's external influence and is called the "inside-out" perspective.

According to the International Federation of Accountants, today about 91% of companies in the world report on sustainable development. Of these, about 51% of companies provide relative confidence in the accuracy of such reporting, about 9% of companies provide guarantees of sustainable development reporting, which are confirmed by professional auditors or affiliated with audit firms (Financial Reporting Council, 2021).

Today, a proposal has been agreed at the international level on the need and timeliness of the adoption of a global reporting standard in the field of sustainable development. At the same time, attention in reporting on sustainable development should be focused on taking into account the specifics of the industry, qualitative and quantitative information on sustainable development and the peculiarities of standardization in sustainable development by type of economic activity. An indispensable common criterion for corporate reporting should be reporting on sustainable development in terms of climate change and the risks associated with business or economic activities that lead to such changes.

Corporate reporting on sustainable development should comprehensively address important issues at several levels of government: 1) at the company level - increase confidence in the company's reporting and increase investment flows and business value; 2) at the industry level - the creation of added value (value), ensuring an increase in the value of goods with added value in the social product; 3) at the level of the country's economy - solving problems of sustainable development of society; 4) at the international level - the solution of global problems of mankind, in particular, the problem of climate change.

Today, the corporate reporting architecture model is based on the Global Reporting Initiative (GRI), a set of sustainable development accounting standards developed by the SASB (Sustainability Accounting Standards), and the International Task Force on Climate Change. on Climate-related Financial Disclosures (TCFD), a set of tasks in the field of sustainable development, justified by the UN (Sustainable development goals), EU Sustainable Finance Disclosure Regulation (SFDR), Directive on Non-Financial Reporting (NFRD - EU), a set of characteristics of the company's management taking into account the solution of social and environmental issues (Environmental, Social, and Corporate Governance, ESG).

All these standards are characterized only by relative comparability, different types of economic activity and are not mandatory for practical application, although they are required by the financial and stock exchanges of most countries (Villiers & Tsagas, 2020).

To meet the needs of strategic management in modern conditions by investors, the requirements for corporate reporting of companies are increasing. Today, integrated reporting must be based on the use of environmental, social and corporate standards. To make sound economic decisions, investors need information on the effectiveness of the company's development projects, projects related to increasing the value of human capital and business, projects related to the use of renewable energy sources and their risk. Corporate reporting should contain sufficient information to ensure the confi-

dence of owners and investors in the sustainable development of the company. Companies that compile and publish sustainable development reports have increased credibility from its users, which potentially increases the level of investment attractiveness of the business. In addition, the high level of transparency and openness of the management of companies in the field of sustainable development are a tool for building image capital and increase the degree of commitment from consumers and buyers of the company's products.

In modern practice, the value of business on the basis of sustainable development is determined in several ways. Some of them - according to actual ratings and indices of sustainable development (DJSI, FTSE4 Good, Euronext Vigeo Eiris, STOXX ESG-X, Sustainalytics), which are taken into account by investors for investment decisions (Buchholz1, H., Eberle, T., & Klevesath M, 2020).

Significant contributions to the development of sustainable development standards have been made by accounting concepts, in particular, the Value Balancing Alliance initiative, which is actively supported by the Big Four accounting firms (Value balancing alliance, 2020).

The concept of Sustainable Business Value (SBV) is well-known, which includes six main areas in which companies are accountable: environment, economic value, consumer welfare, ethics, governance and the social sphere (Hayatun & Wiwin, 2012).

There is a close link between brand value, which demonstrates respect for the needs of the environment, society, staff and consumers, and additional opportunities to generate dividends and maximize future profits for shareholders by increasing the company's reputation (Loh & and Tan, 2020).

Indicators of sustainable development.

The system of indicators of sustainable business development includes a set of indicators that can be systematized by various criteria. Most researchers divide indicators of sustainable development into quantitative and qualitative, absolute and relative.

Bae, H. & Smardon, S.R. (2011) to the system of indicators of sustainable development of companies includes seven categories of indicators: 1) environmental indicators (22); 2) economic indicators (14); 3) social indicators (16); 4) environmental performance indicators (15); 5) socio-environmental indicators (7); 6) socio-economic indicators (6), 7) integrated indicators (10). A. AZAPAGIC and S. PERDAN among the 10 best indicators of sustainable business development are the following: the percentage of recycled materials, energy consumption per unit of output, energy savings by improving energy efficiency, the percentage of water reuse, greenhouse gas emissions, wastewater (Azapagic & Perdan, 2000).

Butnariu, A. & Avasilcai, S. (2015) propose an aggregate model of the aggregate indicator of sustainable development by three groups of indicators (economic, environmental, social) and taking into account the time factor. The weight of each component of the indicator, which differs in the nature

of the activity in different companies, in the integrated one is determined according to the expert survey.

In the working report on ways to ensure sustainable food development from 2014. the set of indicators of sustainable development of agriculture is determined by three methodological levels: 1 level - national agricultural policy (availability of national programs that provide for the ecological development of agricultural production with low levels of harmful emissions, conservation of natural and biological resources); Level 2 - practical activities (percentage of arable land, agricultural land, which will use resource conservation technologies and biological methods of processing); Level 3 - resource efficiency (crop yields, share of eroded soils, water stress ratio, nutrient balance in soil, etc.) (Reytar, 2013).

In its report, the Organization for Economic Co-operation and Development (OECD) presents sustainable agricultural development on the following indicators: agricultural GDP, land use change, farmers' incomes, government spending on agricultural support, number, farms, employment, farm education. At the level of farming, the key indicators of sustainable development are: organic farming, pest management practices, irrigation and water management, nutrient balance. The risks associated with the use of natural and biological resources are identified separately.

Zhang, X., Yao, G., Vishwakarma, S., Musumba, M., Heyman. A. & Eric A., Davidson. (2021) in their research propose a model of 18 indicators of sustainable development of agriculture, which are important to consider when assessing this area in the context of its impact on the development of technologically interrelated industries, such as the food industry. Under the SAM model, scientists offer indicators: water availability, pollution levels, biodiversity loss, climate change, soil health, credit availability, farming risks, agricultural support, market access, food loss rate, health, farmer welfare, equality, farmers' rights.

The European Commission has substantiated a set of 28 indicators of sustainable agricultural development in terms of basic areas: 1) the intensity of agriculture and changes in land use; 2) the structure of animal husbandry; 3) risks of loss of natural and biological resources, 4) clogging; 5) emissions of harmful substances; 6) management of genetic and biological diversity (Królczyk, J.B. & Latawiec, A.E., 2015).

In the analysis of the achieved indicators of sustainable development of farms, analysts use a system of indicators of three TBL pillars, which consist of three groups of indicators: 1) economic (productivity, profitability, profit, income, payback, net present value, internal rate of return, prices, sales channels), 2) social (age, sex, employment, labor rights, image of the farm, quality of life, nutrition), environmental (water use, soil fertility, air quality, fertilizers, biodiversity, sunlight, reuse of resources. Wohlenberg, J., Rosana, CD Schneider & Hoeltz, M., 2020). The group of individual indicators is formed by data on the availability of voluntary programs of sustainable development and ethical investment in various areas of public life, which are financed by companies (availability of such programs, dissemination of information about them, the amount of funding).

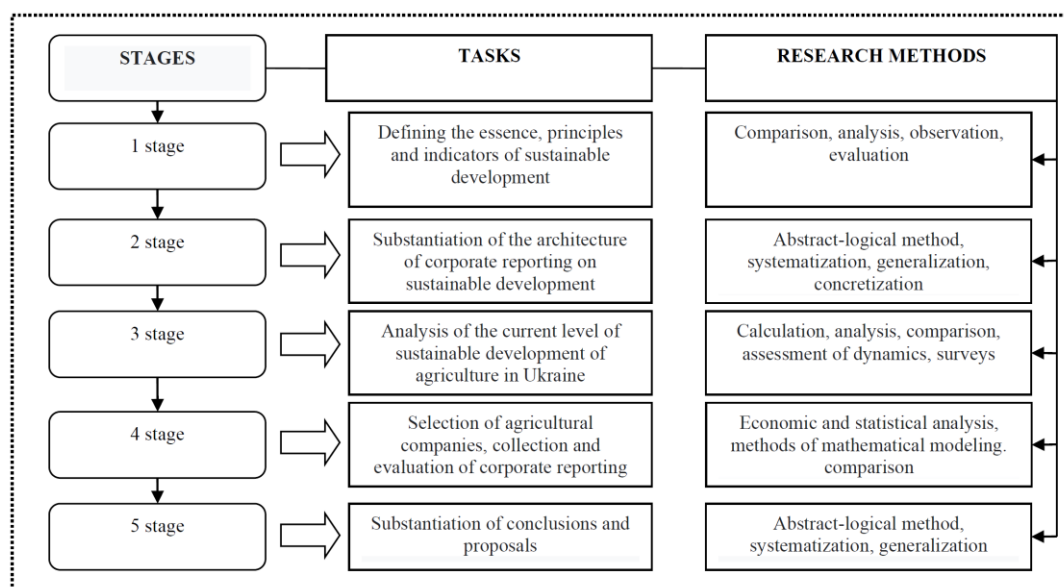


Fig. (1). General research methods.

## RESEARCH METHODOLOGY

The study used financial and non-financial corporate reporting of 110 agricultural companies of Ukraine, different in size and scale of activity. Corporate reporting on the sustainable development of major agricultural brands in Ukraine has been analyzed over the past five years on the basis of official websites. . Autonomous reporting of medium and small agricultural companies was analyzed according to the approved forms of statistical and financial reporting in Ukraine, which were obtained from enterprises based on the results of scientific activities of the departments of the two universities. Additional information was obtained by questioning the administration of agricultural companies on the basis of a voluntary survey in electronic format. Websites, scientific journals, and information from the State Statistics Service of Ukraine were used as sources of information for the analysis of the current level of sustainable development of agriculture in Ukraine. The algorithm for conducting research is shown in Fig. (1).

## RESULTS AND DISCUSSION

The research analyzed the corporate reporting of 110 companies in the agricultural sector of Ukraine, as well as assessed the content and quality of corporate reporting, in particular, sustainable development reporting by individual investors (owners of company shares). According to the results of surveys of company owners, the following results were obtained: 1) 98.5% of agricultural company owners determined the importance of the company's corporate reporting in terms of disclosure of indicators and data on the achieved level of sustainable development of the company; 2) 81.2% of investors consider information on sustainable development incomplete and insufficiently informative; 3) 83.6% of respondents expressed a desire to supplement the corporate reporting of companies with quantitative indicators of sustainable development; 4) more than 96% of respondents wished to provide more detailed analytical information and

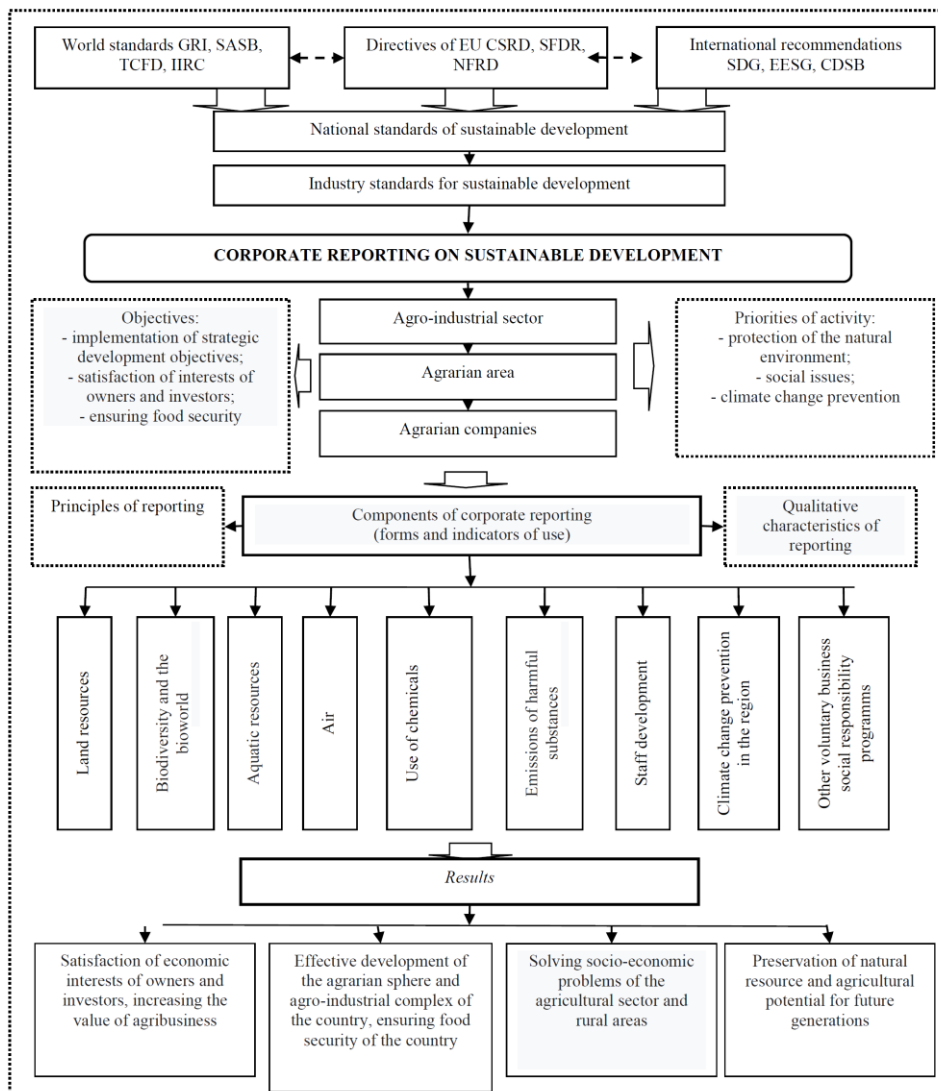
explanations on trends and prospects for sustainable development of the company and a detailed assessment of the risks associated with the implementation of specific programs of sustainable business development.

Research has shown that the financial and corporate reporting of Ukrainian companies is rather limited in terms of quantifying the value of future investments in sustainable development programs, analytical information on assessing the relationship and results between investments in sustainable development programs and future opportunities and business growth prospects.

Significant difficulties in the formation of sustainable development reporting in Ukraine are due to the fact that financial reporting, its structure, content, forms and set of indicators are rigidly defined at the state regulatory level and reporting cannot be supplemented by its main users (owners), investors, stakeholders, etc.). Under such conditions, the use of international accounting and financial reporting standards or the formation of additional internal management reporting, which is not regulated by national frameworks and standards, remains options for compiling full corporate reporting in the field of sustainable development for Ukrainian companies.

At the present stage, corporate reporting on sustainable development of Ukrainian agricultural companies is characterized by the following shortcomings:

- 1) lack of systematic and clear criteria for its preparation and provision;
- 2) the lack of a single reporting period, structure and forms of a set of forms of such reporting;
- 3) a free set of indicators and reporting items, which do not always fully disclose information on sustainable development, program implementation costs and results obtained;
- 4) the predominance of financial reporting indicators over non-financial ones, which are key in matters of sustainable development;



**Fig. (2).** Architecture of corporate reporting on sustainable development of agricultural companies of Ukraine

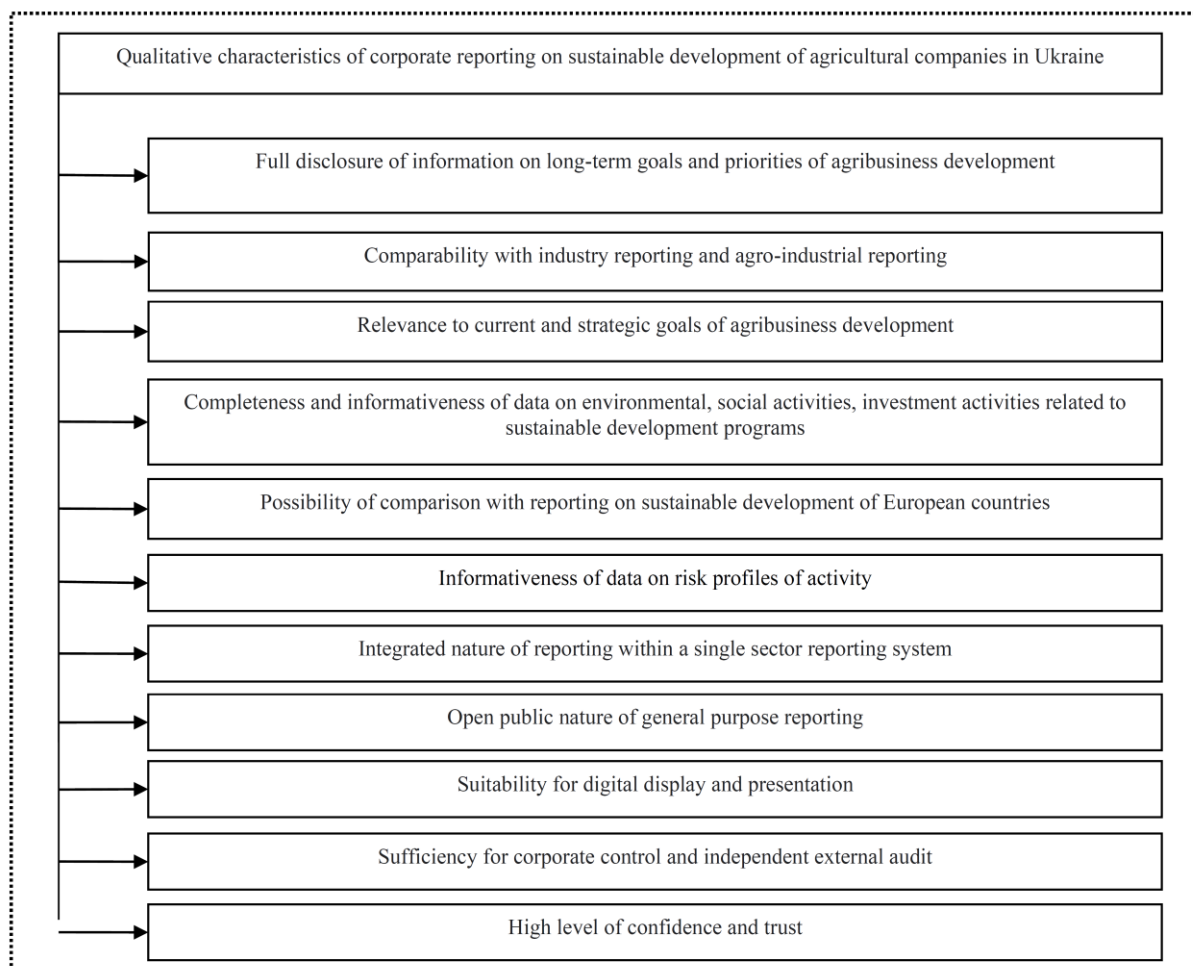
5) lack of quality assessment of strategic prospects for agribusiness development, in particular, through progress in ensuring sustainable development, limited number of indicators for assessing future risks and the results of the impact of sustainable development on the further development of the company;

6) the lack of clear guidelines for the requests of key users, especially investors, staff, social groups. The predominant focus of corporate reporting of medium and small enterprises on the public sector.

The key guidelines for compiling corporate reporting on the sustainable development of national agricultural companies should be: 1) the creation and increase of value and its time in the industry chain; 2) increasing the size of incoming investment flows and the value of the business as a whole; 3) satisfaction of economic interests of owners and investors; 4) implementation of social responsibility programs to society and company staff; 5) unification with world standards, requirements and indicators of sustainable development; 6) clear reflection of strategic development goals; 7) transparency, high level of trust and public nature of representation.

Corporate reporting on sustainable development of Ukrainian agricultural companies should be an element of the unified reporting architecture of the agro-industrial complex, as part of the national concept of formation, use and publication of results in the field of sustainable development of the national economy. At the same time, drawing up a conceptual framework for corporate reporting on sustainable development should take into account the specifics and features of agricultural production, rural development, the system of relations with other areas of agro-industrial complex to ensure common sustainable development goals at the agro-industrial level of the country. International standards and recommendations, adapted to national realities, harmonized and unified in various types of economic, social and environmental activities, should be the basis for drawing up the conceptual framework for corporate reporting on sustainable development. Based on the results of our own development, we offer the following type of corporate reporting architecture for sustainable development of agricultural companies in Ukraine (Fig. 2).





**Fig. (3).** Qualitative characteristics of corporate reporting on sustainable development of agricultural companies of Ukraine.

The principles of its compilation and qualitative characteristics are of exceptional importance for the formation of corporate reporting on the sustainable development of agricultural companies. They determine the content of key indicators, articles and forms of reporting, methods of its preparation, ease of use for users and suitability for the management process to achieve sustainable development goals of companies, industries, agro-industrial complex as a whole.

Among the main principles of corporate reporting of agricultural companies of Ukraine for sustainable development, we consider it appropriate to identify the following: 1) the fullest possible satisfaction of information needs of users of reporting; 2) harmonization of national reporting (standards, indicators, indicators and forms) with international recommendations and standards in the framework of cooperation in sustainable development of national economies; 3) formation of the regulatory environment of principles and standards for sustainable development of economic entities of Ukraine; 4) inclusion of medium and small agricultural enterprises in the unified national system of corporate reporting on sustainable development of agro-industrial complex; 5) taking into account the sectoral specifics of agricultural production and rural areas in the formation of reports on sustainable development at the level of the national agro-industrial complex; 6) taking into account the value of agricultural land resources

as an element of creating social value and the value of agribusiness; 7) a combination of financial and non-financial indicators and indicators; 8) separation of value-added indicators in the value chain of agro-industrial complex, 9) disclosure of prospects for long-term value creation.

In accordance with the conceptual basis of financial reporting, its key qualitative characteristics are: relevance, materiality, truthful presentation, comparability, verifiability, timeliness, comprehensibility. Experts of the International Federation of Accountants (IFA) in the context of creating a new generation of non-financial reporting on sustainable development draw attention to ensuring its compliance with the following parameters: content, objectivity, ecosystem performance, reliability, issuer proportionality, modernity, timeliness. Fully agreeing with these qualitative parameters, we consider it appropriate to supplement them in terms of corporate reporting on sustainable development for agricultural companies in Ukraine, taking into account the current level of development of theory, national methodology and practice (Fig. 3).

Corporate sustainability reporting today should include indicators and analytical explanations on information on economic activity and its results, technical standards and their implementation in the field of social development of personnel, environmental development, climate change, combating

**Table 1. Indicators of Sustainable Development of Agriculture in Ukraine.**

Indicators	2000	2010	2015	2018	2020
Number of employees in the industry, thousand people	2551	724,8	569,4	545,7	499,9
Salaries of employees per month, UAH USD USA	20,9	185,6	151,5	325,5	361,9
Annual amount of capital investments, million USD USA	297,2	1458,8	1380,7	2430,3	1879,8
Including the 1 <sup>st</sup> enterprise, thousand dollars USA	14,0	25,8	30,4	49,4	39,5
Gross value added, billion dollars USA	5,4	10,4	10,9	13,3	14,4
Share in total value added in the economy	16,3	8,3	14,2	11,9	10,8
Annual profit for the 1 <sup>st</sup> agricultural enterprise, thousand dollars USA	20,4	38,5	102,7	52,6	63,2
Percentage of plowed agricultural land lands, %	77,8	78,1	78,4	79,1	79,5
Grain yield, c/ha	18,3	27,6	43,8	52,2	46,1
The amount of mineral fertilizers per & ha, kg	60	84	98	134	152
Pesticide treatment area, %	28,5	37,7	42,6	89,5	91,4
Part of the area on which organic products were produced, %	78,0	30,0	19,0	9,0	7,0
Biodiversity conservation, thousand cattle units	9423,7	4494,4	3750,3	3332,9	2874,0
Carbon dioxide emissions, million tons	152,0	193,2	161,1	150,5	135,3
The share of used water for production needs in the agriculture, %	23,6	26,4	20,3	24,5	21,8

bribery, results of investing in corporate social responsibility programs. social activity of agricultural companies and participation in solving important tasks for Ukrainian society

According to research, today Ukraine lags far behind the average level of indicators of sustainable development of European countries. The main problems of agriculture and rural areas of the national economy today remain: a significant percentage of degradation of agricultural land, a small share of the area under organic farming, increasing the use of chemicals in tillage, high energy intensity of production, significant reduction of biodiversity of farm animals, insufficient financial support of the state and rural areas, low degree of intersectoral integration and low share of agricultural products in value added, low income and welfare of rural residents, indifference to environmental issues in the context of temporarily maximizing farmers' profits. At the same time, these negative phenomena are determined by the tendency of deterioration (Table 1).

In 2020, according to Forbes lists, the largest agricultural companies (in terms of annual income) of Ukraine were: Kernel (4.4 billion US dollars), MHP (1.9 billion dollars), Nibulon (0.9 billion hryvnias), Eridon (\$ 786 million), Santrade (\$ 853 million), Cargill (\$ 682 million), ADM Ukraine (\$ 856 million), Delta Wilmar (\$ 241 million). These agricultural companies are the largest in Ukraine, compile their financial statements according to both national and international standards, and compile and publish non-financial statements that include indicators of sustainable development. Corporate reporting on the sustainable development of these agricultural companies has many common features. It is formed within the framework of social responsibility programs of agrarian business, is the result of voluntary contribution of companies to the social, economic and

environmental spheres and meets the strategic goals and guidelines of their activities. The main directions of sustainable agricultural development policy of these companies are: environmental protection, resource saving, programs and projects of social protection of personnel, high level of quality and responsibility for products, support of local territorial, in particular, rural communities.

Corporate reporting on sustainable development of these enterprises is available, disclosed to all interested users, based on international principles and GRI indicators, partly on ESG, ISO (in terms of product quality, environmental protection and labor protection), on national principles of corporate social responsibility. Companies compile and report key non-financial indicators in three areas, indicating: personnel injuries, environmental pollution, greenhouse gas emissions, energy consumption, costs of implementing social and environmental measures and programs, anti-corruption measures and economic results of sustainable development policy. Already today, these Ukrainian agricultural companies take into account the basic provisions, requirements and principles of sustainable development of EU countries.

The main directions of sustainable development of the largest agricultural companies in Ukraine are: 1) achieving environmental and social goals of sustainable development through the management of the company's value chains; 2) transition to the use of bioenergy (biomass CHP); 3) development and implementation of corporate climate strategies for the use of low-carbon industries; 4) further certification of environmental management systems, personnel health and product safety and quality; 5) staff development.

However, this practice of implementing sustainable development programs and corporate reporting today is character-



istic only of large agricultural formations that work on common capital, satisfy the interests of both domestic and foreign investors, represented in world markets for agricultural products and financial instruments. Due to the high level of social responsibility, participation in programs and corporate reporting on sustainable development, large agricultural companies were excluded from the statistical sample when forming a mathematical model of dependence of reporting on sustainable development and business value of medium and small agricultural enterprises in Ukraine.

The equation of multiple linear regression with three factors was accepted as a mathematical model:

$$Y_i = b_0 + b_1x_{1j} + b_2x_{2j} + b_3x_{3j}, \text{ where}$$

$X_1$  – costs per 1 ha of arable land;

$X_2$  – the amount of investment in social development per 1 ha of arable land;

$X_3$  – coefficient of disclosure of information on sustainable development by the company in the reporting, % (according to the method of expert assessment in comparison with the reference company).

The mathematical model showed a fairly high level of reliability ( $R^2 = 0.96$ ), which confirmed the close relationship

between selected factors and the value of business (total assets) of domestic agricultural companies. The mathematical model built on the basis of economic and statistical indicators of activity of agrarian companies has the form:

$$Y_i = 734,3 + 0,48x_{1j} + 0,84x_{2j} + 45,4x_{3j}$$

The impact of the level of transparency of corporate reporting on sustainable development on the amount of income of agricultural companies (large, medium and small) and the impact of investment costs on the value of business (in terms of large, medium and small agricultural companies) were also analyzed separately. The study confirmed a positive relationship between corporate sustainability reporting and revenue and asset values of large agricultural companies. The relationship between reporting and the value of agribusiness of medium and small companies is ambiguous due to the limited (absence) of such reporting. The economic interpretation of the model for estimating the impact of factors on the value of agribusiness is described in Table 2.

The research allowed to identify the main weaknesses of medium and small agricultural companies in the management of agricultural activities on the basis of sustainable development: lack of systematic planning and ignoring the

**Table 2. Matrix for Assessing Corporate Reporting on Sustainable Development of Agricultural Companies in Ukraine.**

Evaluation Criteria	Large Enterprises (13 Companies)	Medium Enterprises (55 Companies)	Small Enterprises (42 Companies)
Existence of the concept of sustainable management	Relevant departments and executors in the management structure. Existence of a concept that contains strategic directions of action. High level of social responsibility, environmental ethics and corporate culture. The desire to	Lack of officials responsible for achieving the goals of sustainable development.  Existence of separate purposes and tasks of sustainable development in the context of medium-term business plans.  Low level of corporate culture.	Limited planning as the main function of management. Lack of development plans in general and sustainable development goals in particular.  Lack of organizational principles of corporate culture. Anthropocentric ecological consciousness
Availability of corporate reporting on sustainable development	Preparation and publication of reports on sustainable development, non-financial reporting, use of international standards in activities.	Preparation and submission of complete forms of financial statements within the limits regulated by applicable law.  The predominant lack of an official brand, the lack of its own website.	Preparation and submission of financial statements in a simplified form.  Complete lack of official brand, lack of own website.
Motivation to report on sustainable development	High compliance with global trends and standards for sustainable development	Mediated by specific circumstances and investment proposals. Lack of a consistent basis and understanding of the importance of corporate non-financial reporting.	The economic basis of the business is short-term land lease agreements and the desire to maximize profits in the near future.
Relationship between corporate reporting on sustainable development and financial results	Strong ( $R^2 = 87\%$ )	Unclear and uncertain due to lack of sufficient statistical data	Absent due to lack of statistical model variables
Relationship between costs (investments) for sustainable development programs and business value (total assets)	Strong ( $R^2 = 86\%$ )	Average in terms of personnel costs, investment in resource-saving production technologies, investment costs for rural development (at the level of $R^2 = 59\%$ )	In terms of social responsibility to staff - weak ( $R^2 = 38\%$ )

current practice of investing in sustainable development programs; weak (or no) communication systems, lack of intangible assets, predominant focus on short-term development

goals (profit maximization), low level of corporate culture and reporting. For small agricultural enterprises is characterized by a costly approach to agricultural management.

The obtained results testify to the successful development of methods and forms of responsible management on the basis of sustainable development and environmental ethics in large agricultural companies of Ukraine. Current practice is also the compilation and publication of corporate reports on sustainable development by representatives of large agricultural businesses in Ukraine on official websites. At the same time, the research demonstrates debatability and the need for further research in the direction of substantiation and search for effective tools to attract medium and small agricultural companies to participate in sustainable agricultural development programs in Ukraine. A problematic aspect for small agrarian formations is the system of implementation in practice of motives and incentives for long-term sustainable development. Thus, the involvement of small enterprises of Ukraine in the voluntary implementation of sustainable development programs through self-financing in Ukraine today is a difficult issue and needs further elaboration both at the level of company management and at the level of institutional management of agriculture of the country.

Today, Ukraine's agriculture needs to approve a comprehensive long-term development strategy (until 2030), which should take into account national development priorities and international experience in ensuring and institutional support for sustainable development of agriculture and rural areas. In its conceptual basis, domestic scientists of the NSC IAE UAAS (Pugachev, M., 2021) have substantiated a set of economic, social and environmental measures that could form the basis of such a strategy, which have many features in common with the European strategy "Green Deal". An important aspect of this document should be the mechanism of participation of Ukrainian agricultural companies, in particular, medium and small, in the implementation of sustainable development programs and effective motivation of agricultural producers in disclosing non-financial corporate reporting on sustainable development of domestic agriculture and rural areas. Today, these provisions correspond to the best European practice and reflect the priority national interests of the agricultural sector of Ukraine as a leading sector of the national economy. The combination of joint efforts and approaches to the regulation of economic activity on the basis of sustainable development at the level of national economy, domestic agro-industrial complex, agriculture and agricultural companies should be a prerequisite for the formation of modern corporate culture of agricultural management and addressing the pressing challenges of ensuring the dignified existence of present and future generations in the context of world best practice.

## CONCLUSION

The conducted research has shown the exceptional importance, relevance and global scale of the use of standards and requirements of sustainable development in the practice of corporate reporting of companies. Ukraine's gradual entry into the single European space requires minimizing the unbalanced use of natural resources, increasing the priority of environmental ethics and business reputation of companies in accordance with the goals of sustainable development. Sustainable development reporting includes three main groups of indicators: environmental, social and economic. The methodological basis of the set of indicators of sustaina-

ble development and the development of an effective mechanism for access to and trust in public information in accordance with global trends remains debatable and emerging.

The results of research have shown that the owners and investors of Ukrainian agricultural companies consider corporate reporting, which is compiled and published, incomplete and insufficiently informative in terms of sustainable development indicators. A significant difference between the national practice of corporate reporting of Ukrainian companies is the predominant focus on the public sector management and strict regulation of the composition, forms and content of financial statements of enterprises. In the process of system analysis it was concluded that corporate reporting on sustainable development of Ukrainian agricultural companies should be part of a single reporting architecture of the agro-industrial complex, as part of a national concept of formation, use and publication of sustainable economic development. Taking into account this principle, the model of corporate reporting architecture for sustainable development of Ukrainian agricultural companies was substantiated. In addition to the conceptual framework for non-financial reporting, it was determined that the key qualitative characteristics of corporate reporting on sustainable development of Ukrainian agricultural companies should be comparability with reporting on agriculture and long-term focus, comparability with practice, openness, transparency and information, high level of trust and suitability for digitization, compliance with the International Environmental Performance Index.

An assessment of the current level of sustainable development of agriculture over the past 20 years has shown a sharp trend of deteriorating key environmental performance of Ukrainian agricultural companies, biodiversity loss, low incomes of rural residents, significant problems in preserving natural resources, including land, increasing global pressure on the environment and the viability of ecological systems.

The principles of sustainable development based on ecological-resource, economic and social principles and appropriate institutional support must be adhered to when strategizing modern competitive policy aimed at stable management of natural resources, ie acting in the interests of both present and future generations. In addition, accounting, analytical and control processes are directly related to the social, economic and environmental aspects of global and regional nature, the economic situation of any state, so they not only increase production, thereby contributing to gross national income, developing economic competition, meeting the demand for goods and services. Thus, the above conditions lead to the search for the most favorable sources of investment that can stimulate the viability of environmental systems, increase investment potential and improve accounting and analysis of sustainable development of the company. The modern economy is forcing entrepreneurs to develop new methods of assessment and reporting, capacity analysis and social responsibility for further implementation of the global sustainable development strategy. Every enterprise that has a strategic development plan must commit to continuously promote the three components of sustainable development - social, economic and environmental, keep them accountable, control and report, develop and implement measures to reduce global pressure on the environment. In

terms of investment in business growth - it is necessary to develop a global program of maximum assistance to sustainable enterprises, which will also be useful corporate reporting on sustainable development, which will play a key role in establishing a positive reputation of companies, and the actual use of financial and natural resources in accordance with the concept of sustainable development. Social and environmental responsibility of the enterprise determines the success of its economic and social positions, forms a unique image of the enterprise for consumers, investors, competitors, financial institutions, suppliers, media.

Assessment of the level of impact of corporate reporting on the value of agribusiness revealed significant differences in the results obtained depending on the size of agricultural companies. In large agricultural holdings in Ukraine, a close direct relationship was found between financial indicators (revenue) and business value. In medium and small enterprises, the existence of such a link was ambiguous and showed the need for further research. The research revealed a significant problem of motivating the management of medium and small agricultural companies in Ukraine to compile corporate reports on sustainable development. In the near future, it is necessary to create appropriate sustainable and socially responsible systems, as they promote common values, trust and cooperation and develop a mechanism for involving medium and small agri-food companies in the reporting system for sustainable development. The substantiation of such a mechanism should be based on the principles of combining sustainable development management at all levels of institutional regulation: at the level of agro-industrial complex, agriculture, agricultural management of companies.

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