

CHAPTER 10. THEORETICAL AND APPLIED ASPECTS OF SUSTAINABILITY ACCOUNTING, NON-FINANCIAL (INTEGRATED) REPORTING OF BUSINESS ENTITIES AND ITS AUDIT

FINANCING OF SOCIAL CAPITAL AS AN OBJECT OF ACCOUNTING, REPORTING, ANALYSIS AND AUDIT OF SUSTAINABLE DEVELOPMENT OF MINING AND METALLURGICAL CORPORATIONS

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Abstract. The principles of social responsibility of business, the main directions of its implementation are systematized. The essence of social capital, its place in the system of enterprise capital is defined. The main approaches to the formation of sustainable development reporting of key mining and metallurgical corporations of Ukraine and the reflection of social capital in it. Generalized social projects and activities of mining and metallurgical corporations, the order of their reflection in sustainable development reporting. Their role in combating the spread of COVID-19 was determined. The composition and structure of social expenditures of mining and metallurgical corporations of Ukraine were analyzed. The role of audit in the formation of transparency of social capital financing was determined.

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Introduction. Permanent socio-economic crises, a long unfinished military-political conflict in eastern Ukraine lead to insufficient budgetary resources to finance social expenditures. Under these conditions, there is a need to divide the social function between the state and business. At the present stage of development the idea of socially responsible business in the context of following the principles of the UN Global Compact is becoming increasingly popular in our country. The main areas of social responsibility include: protection of human rights, non-disclosure of labor relations, care for the environment, and the fight against corruption.

The UN Global Compact is a voluntary initiative and network structure represented in 160 countries, including Ukraine. Dialogue and training platform is designed to achieve sustainable development of business, investors, civil society, labor organizations, local government and government [1]. It brings together about 80 participants. In total, more than 12,000 commercial companies and 3,000 non-profit organizations have signed the UN Global Compact. Voluntary nature of signing the UN Global Compact means rejection of state imperatives and transition to self-initiation of business structures in the social sphere, which is accompanied by public control over the commitments made. The functioning model of the signatories is based on the principle of continuous improvement in order to achieve the best performance in the world in the face of constant competition and increasing demands on the functioning of business structures. At the initial stage they set a certain minimum level, but then the organization begins a continuous cycle of improvement «plan – execute – check – act» [2, p. 99]. The concept of results is complex and therefore stimulates a comprehensive assessment of the role of this enterprise in the social context.

Among the Ukrainian signatories of the UN Global Compact are large corporate structures represented by agricultural, fuel and energy, mining and metallurgical holdings. Joining the Global Reporting Initiative offers them the following benefits: the opportunity to demonstrate leadership by implementing universal principles and responsible corporate citizenship; increased public trust, which is an important key to business success; the opportunity to share effective methods, practices and experiences; establishing and building relationships with other companies, government agencies, labor, non-governmental and international organizations; the

opportunity to cooperate and implement projects with UN agencies and NGOs aimed at supporting global development goals; improving the quality of company or production management, improving employee morale and work efficiency; public recognition and increased reputation.

The activity of large national mining and metallurgical corporations is of strategic importance for Ukraine and is a source of currency earnings from exports and a guarantee of our country's economic security. The issues of social responsibility of industrial giants of the mining and metallurgical complex of Ukraine are studied by many scientists. Galushko O.S. focuses on the financial levers of implementation of its principles [3]. Khorolskyi V.P., Burlakova Y.M. consider the issues of modeling corporate social responsibility of enterprises of the mining and metallurgical complex, its management on the basis of stakeholder theory for sustainable development of the regional mining and metallurgical cluster [4]. Regional aspects of socio-economic development of the metallurgical complex was also studied by But T.V. [5]. Gonchar V.V., Yangol G.V. emphasize the need to increase social responsibility and effective activities of large metallurgical enterprises at the stage of building sustainable business and society, as well as the use of their key performance indicators [6; 7]. Appreciating the scientific contribution of these authors, it should be recognized the lack of attention to the issues of financing social capital of mining and metallurgical enterprises, its reflection in accounting, reporting, analysis and audit, etc. The relevance of strengthening the financial and accounting levers of social capital management of large corporations of the mining and metallurgical complex has necessitated this study.

1. The importance of social capital for sustainable development and its peculiarities in the mining and metallurgical complex

The concept of social responsibility emerged in the 1950s, but in America it began to spread intensively 20 years later, in Europe almost 40 years later in connection with the formation of sustainability reporting, or integrated reporting.

Socially responsible business is a concept according to which companies voluntarily integrate social and environmental aspects into their commercial activities and interaction with stakeholders, and report on their contribution to the country's sustainable development issues through the formation

and distribution of non-financial reporting [8, p. 92]. The activities of a socially responsible corporation must meet the economic, legal, ethical and discretionary expectations that society has of it at a given time.

In the process of evolution, non-financial reporting has acquired the following forms: arbitrary, complex, standardized.

1. The arbitrary form report is intended for external users and does not require a social audit. Its advantages include the simplicity of preparation, and its disadvantages include the complexity, or inability to compare the activities of the reporting entity with other entities.

2. Complex reports, which are a supplement to the financial statements and disclose information on corporate responsibility and sustainable development. They contain detailed information on non-financial activities of the company, its plans, strategies, depending on the definition of the report.

3. Standardized reports are prepared according to certain reporting guidelines and allow comparison with reports of other companies, which allows to determine the company's social rating and recognition in the international business community. However, there is no single recognized standard, the formation of reports is voluntary, which leads to a large variety of reports, despite their standardized nature.

In 1997, the UN Environment Program published *GRI (Global Reporting Initiative)* standards, or Guidelines for reporting on sustainable development. It contains provisions suggesting the inclusion in the reporting of information on the economic activities of industrial enterprises, which is important and essential for most of them and is of interest to a wide range of stakeholders [9, p. 93].

Currently, the main forms of non-financial reports published by business organizations are: GRI-3 Sustainability Reporting, Sustainability Reporting based on AA1000 (*AccountAbility Principles*), Sustainability Reporting based on SASB (*Sustainability Accounting Standards Board*), Progress Report, Social Responsibility Report, Social Report, EGS (*Environmental, Social, and Corporate Governance*) Report.

The components of AA1000 standards are shown in Figure 1.

The AA1000AP series of standards, adopted in 2018, guides organizations in setting long-term priorities on sustainability issues to improve performance and address the factors that reduce performance.

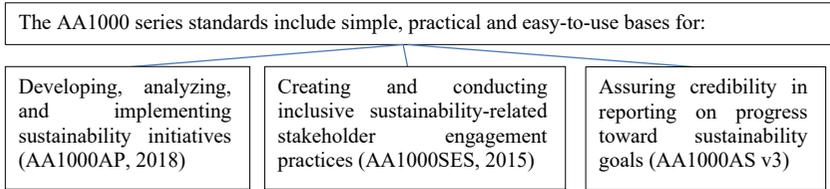


Figure 1. Components of AA1000 standards

Source: compiled based on data [10]

The national characteristics of countries and the model of social responsibility significantly affect the accounting and reporting of sustainable development. The latter implies a form of interaction between business, government and non-profit organizations, which is determined by the degree of importance of different stakeholder groups.

The Anglo-American model of social responsibility is based on the principle of individualism and case law, where corporate governance measures are implemented directly by corporations and social programs are funded by both corporate and charitable foundations. The objects of social responsibility for this model are: creation of jobs, ensuring the efficiency of their use through wages, creation of decent working conditions, timely and full payment of taxes. Features of the Anglo-American model are: a high degree of economic freedom of subjects, self-regulation of many spheres of social relations, tax incentives for corporate philanthropy. Priority objects of social responsibility in Canada are the quality of the workplace and labor protection to preserve the health of the employee, in Europe – collective solidarity, ethical responsibility of corporations to society, targeted social programs and business projects. The high level of taxes in Europe creates a financial basis for balancing the social responsibility of business and government. In some countries, government social responsibility prevails over business social responsibility (oil-producing countries of the Arab East, China). A mixed model of social responsibility, whose objects are the economy, employment and environmental protection, has become widespread.

The Ukrainian model of social responsibility began to form in the late 90s of the last century and passed from the traditions of charity and

patronage to financing social programs on the basis of competitive selection of projects. Its distinctive features are: priorities of social policy, the structure of social programs, training programs for managers in the field of social responsibility, the structure of the non-financial report.

Non-financial reporting is a norm of social behavior for corporations that are leaders in their industry, sell their products in foreign commodity markets, attract resources on international financial platforms, intend to attract the attention of financial analysts and investors, demonstrate loyalty to innovative management approaches and new rules of the game in international markets.

Non-financial reporting is voluntarily disclosed information that reflects the main aspects and results of the company's activities related to the implementation of the sustainable business development strategy in a reliable and accessible way for stakeholders. It is a systematization and publication of the steps that were implemented by the socially responsible company for the reporting period. Non-financial reporting information ensures management of non-financial risks, information transparency, trust in the company, strengthening of business reputation, development of interaction with stakeholders, improvement of competitiveness, and contribution to improvement of the business community's image.

The non-financial report is an accessible, reliable, balanced description of the company's activities, reflecting the issues of interest to key stakeholders. The key issues are strategy, management, results, interaction with stakeholders. The main purpose of the non-financial report is to inform the shareholders, employees, partners, customers, society about the implementation of strategic goals in the direction of economic stability, social stability and environmental safety of production. In addition, non-financial reporting is a tool for self-assessment of economic, social and environmental activities of the company, which allows to conduct a dialogue with stakeholders and realize additional competitive advantages.

Non-financial reporting affects the quality of corporate governance, including planning, monitoring and evaluation of company activities. The most important purposes of its formation are:

- raising stakeholders' awareness of the company's activities, socially important projects, charity, environmental impact and savings, corporate and social responsibility;

- strengthening the company’s position on the market; increasing the company’s value through intangible assets;
- building the company’s reputation as open, accountable, engaging in a dialogue with stakeholders, and socially responsible;
- structuring the internal organization of the company: awareness of the need for a development strategy, comprehension of the policy of social and corporate responsibility;
- building an optimal infrastructure for managing the company’s social activities.

On this basis, non-financial reporting is aimed both at strengthening the company’s position in the global space and at optimizing relationships and processes within the company. It can be used by both external users and internal managers and the internal audit service. Non-financial reporting is ready to create the most favorable impression of the state of affairs of a particular company, and thus to attract more investors, consumers, potential partners and employees.

The main advantages of non-financial reporting include: increasing internal and external information exchange of the business entity; providing a conceptual and structured view of business entities’ activities, which cannot be presented through financial reporting; increasing the efficiency of internal controls, preventing fraud and abuse of professional activities; direct interaction with stakeholders in the process of making management decisions; availability of information base for justification of investment, innovation projects, as well as public-private partnership projects; guarantee that the partner supports the concept of sustainable development and is able to take responsibility for the results of his company; full statistical base.

Sustainability reporting is based on the fundamental concept of capital, business model and value creation. Capital is a source of business value and resources, it consists of financial, production, intellectual, human, social and natural components and is constantly changing in the process of activity. The business model is based on the development strategy, the maximum use of existing opportunities, the prevention of risks, the efficient use of resources in the process of enterprise activity. The value of the corporation is embodied in the capital that the company uses, and changes under the influence of various factors and depends on the efficiency of the enterprise resource management. In the formation of integrated reporting it is necessary to take

into account the relationships and interdependencies between the various factors affecting the ability of the enterprise to create value. Such factors are: the capitals of the enterprise, their optimal allocation, as well as their relationship; the ability of the enterprise to respond to changing needs, to meet the interests of key stakeholders; the formation of the business model and strategy of the enterprise in response to the external environment, as well as opportunities and risks that it faces; the relationship of business operations of the organization and their results.

Social capital is a non-economic form of capital of an economic entity, a specific category of resources, which is formed in interpersonal relations and is based on the potential of mutual trust and mutual assistance.

The peculiarities of mining and metallurgical corporations' activities are significant volumes of economic activity, industrial insecurity for employees, dependence on mining and geological conditions of production, receiving part of the mining rent, indirect subsidization by JSC "Ukrainian Railways" due to relatively low tariffs for transportation of industry products, high level of its monopolization, noticeable negative impact on the environment. The quality of corporate governance and the level of corporate social responsibility directly affect the financial efficiency of mining and metallurgical corporations [11, p. 305]. The strategic guidelines for their development are: investment in social and environmental programs, an increase in the cost of personnel health care, reduction of dust and carbon dioxide emissions into the environment, innovative development of resource-saving production technologies. Dynamic Pareto-efficient equilibrium is provided by expropriation of control rights of one group of stakeholders from other groups, as well as the indifference curve «risk-profitability» for investors [12, p. 64]. The management of mining and metallurgical enterprises uses various ways of influencing the labor motivation of personnel, a set of sociological and psychological methods for the purposeful enrichment of the content of subordinates' labor, personnel involvement in management, increasing the share of employees' wages in the total cost of metal production, etc. [13, p. 62].

For further improvement of corporate social responsibility methods it is necessary to use the «catch up with the leader» strategy and apply benchmarking tools, which will allow to use key success factors of world industry leaders, introduce the best company management practices and ensure long-term business sustainability.

2. Social projects and activities of mining and metallurgical corporations, the procedure for their reflection in the accounting and reporting of sustainable development

The objects of the research are mining and metallurgical corporations: *Metinvest*, *ArcelorMittal Kryvyi Rih*, *Interpipe* (Figure 2).

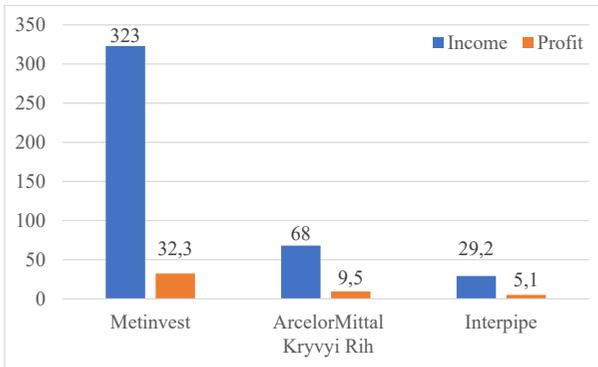


Figure 2. Key performance indicators of mining and metallurgical corporations in 2019, billion UAH

Source: plotted based on data [14–16]

The surveyed corporations differ significantly in the scale of activity. The largest of them is *Metinvest*, whose revenues are more than 10 times higher than the corresponding indicator of *Interpipe*, and its profit volume is 6.3 times higher. *ArcelorMittal Kryvyi Rih*'s revenues and profits are 2.3 and 1.86 times higher than those of *Interpipe*, respectively.

Metinvest is Ukraine's largest corporation in terms of revenues and profits and holds a monopoly position in the ore mining and steel production market. For a long period of time, since 2008, the company has been preparing reports on sustainable development in accordance with GRI and SASB standards. In the report, social aspects are represented by personnel management and development, occupational health and safety, and local community development.

ArcelorMittal Kryvyi Rih has been preparing sustainability reports according to GRI standards since 2011. Social capital financing is disclosed in the sections «Active Participation in Local Communities», «Training

of Talented Scientists and Engineers», «Our Contribution to Community Development». The section «Corporate Responsibility» on the website under the heading «Taking Care of Personnel» discloses issues of labor remuneration, social sphere, recreation of employees and their families, interaction with trade unions. During 2007–2011, *Interpipe* prepared an annual report for the UN Global Compact on the results achieved and overall progress. Currently, information on social capital financing is disclosed in the ESG Report.

These reports of mining and metallurgical corporations are prepared according to the data of sustainable development accounting, which is a combination of monetary and natural accounting, and, if necessary, the integration of environmental, social and financial components of activity [17, p. 90]. Accounting for sustainable development contains: first, the monetary (economic) accounting and, secondly, natural accounting. The system of the first includes financial and management accounting, which contains cost estimates of environmental, social, innovative and investment activities of the economic entity. The object of monetary (economic) accounting is entrepreneurial and financial capital.

Financial and management accounting mainly reflects the state of previous management facts. However, the needs of sustainable development require accounting, monitoring, planning and forecasting of such indicators as environmental efficiency, energy efficiency and social efficiency. The relevant information requests of users are satisfied by the systems of strategic management accounting and natural accounting of sustainable development. Engineering theory of strategic management accounting interprets business management as a continuous process, focused on continuous improvement through: formation of the mission, strategic goals and strategy; dissemination of information about the chosen strategic direction in the organization and the definition of target programs (short-term and long-term); development of continuous forecasting to achieve the strategy and budget planning; introduction of control methods to monitor the implementation of programs; monitoring the success of practical steps to make progress in the strategic goals [18, p. 423].

The system of natural accounting of sustainable development contains indicators of environmental and social impact of the company on the environment, expressed in physical units. Social and environmental

accounting can be considered as components of natural accounting of sustainable development. The objects of the first are human and social capital, the object of the second is ecological capital.

Socially responsible activity of an enterprise, depending on the object of responsibility, can be direct or indirect. An example of a direct nature is feeding and recreation of employees, providing them with material assistance and improving their level of education. An example of an indirect nature is the recreation of employees' families, the provision of education for their children, etc. [19, p. 92]. For successful implementation of the goals of sustainable development in terms of financing social capital, the business entity must declare environmental and social program with the allocation of the goal, objectives, functions, levels of responsibility, etc. It is necessary to define the goals and objectives, they must be consistent with social policy, maintain and improve the social level of the region, meet the requirements of the legislation and the requirements of consistent improvement of the social environment [20, p. 73]. The organization must develop, implement and maintain a program to achieve its social goals and objectives in accordance with the mission and protomission of the enterprise, which contains: a list of activities; expected results and benchmarks; necessary resources; timing of tasks; distribution of responsibility for achieving goals and objectives; control over the implementation of the program. The goal must be defined for a long-term planning period of three years or more. To make it more specific, the periods for achieving social goals are set for such terms as month, quarter, half-year and year.

To consider the peculiarities of the formation of social programs and activities in the studied mining and metallurgical corporations.

Within *Metinvest*, social capital is financed at the level of regions of presence, in particular, in the cities of Mariupol, Kryvyi Rih, Avdiivka, the settlement of Novhorodske, as well as at the level of business entities that are part of the holding. The main social programs are «Social Partnership» and «The City – With Our Hands». The objects of social investments are: health care, education, culture and sports institutions, public transport and road infrastructure, environment, recreation areas, parks and squares, reconstruction of residential areas. In particular, the activities of *Metinvest* in terms of restoring the infrastructure affected by the military actions in eastern Ukraine (Avdiivka Coke Plant, residential, industrial, social

facilities of Avdiivka, Skhidny residential area in Mariupol) should be emphasized.

The corporate program «We improve our town with our own hands» has been implemented by *Metinvest* since 2011 through contests of social projects among non-profit organizations, municipal institutions and local residents, the winners of which receive financial support from *Metinvest*. An example of successful implementation of these projects is the modernization of beach infrastructure in Mariupol and the opening of the following facilities: a modern rock climbing wall in Ingulets district of Kryvyi Rih, the Museum of Mining Equipment at Ingulets College of Kryvyi Rih National University, the Center for Vision Correction in Mariupol, an interactive area for people with special needs in Zaporizhzhia.

Social capital at *ArcelorMittal Kryvyi Rih* is financed on the basis of the collective agreement, which contains the company's obligations in the field of labor protection and healthcare, organization and remuneration of employees, personnel training and social protection. The collective agreement also determines the main directions of social guarantees and benefits for the personnel: paid vacations, periods of temporary disability, medical insurance, treatment and rest in the company's recreation centers and health resorts in Ukraine, material payments and benefits both for the employees and veterans of the company. *ArcelorMittal Kryvyi Rih's* priority is to improve rehabilitation, recreation and medical services for its employees.

The components of *Interpipe's* ESG report are: development, health and safety; environment; innovation; local communities, governance and ethics. *Interpipe* has state-of-the-art metallurgical technologies, adheres to the principles of safe production, complies with Kyoto Protocol carbon dioxide emission standards and other international environmental standards, in particular *ISO 14001* and *ISO 45001*. An area of social capital financing is the creation of a unique production culture. In particular, a zoning system was created in the company's living quarters with a division into a homewear zone, a hygiene zone, and a special clothing zone. A comfortable modern canteen for the staff was built. Art installations combining modern production and modern art are a special feature of *Interpipe*. The most famous art object is the 60-meter "Dnipro Sunrise" that symbolizes the industrial revival of Ukraine.

Interpipe is actively involved in the Dnipropetrovsk Oblast, supporting local communities in the fight against COVID-19. To prevent the spread of the coronavirus infection during 2020–2021 a charity fund «Revive the region» was established and about USD 10 million was sent to 25 medical institutions in Dnipropetrovsk Oblast for charitable assistance, purchasing AVL equipment, PCR-diagnostic equipment, etc.

Thus, the indicators of in-kind accounting of sustainable development in terms of social capital financing are: the number of social partnership projects, the number of vouchers purchased for employees for treatment and rehabilitation, the number of units of medical equipment purchased, etc.

3. Analysis and audit of social capital financing of mining and metallurgical corporations

The analysis of social capital financing was carried out according to the indicator of expenditures on social activities and their share in the profit of mining and metallurgical corporations (Figure 3).

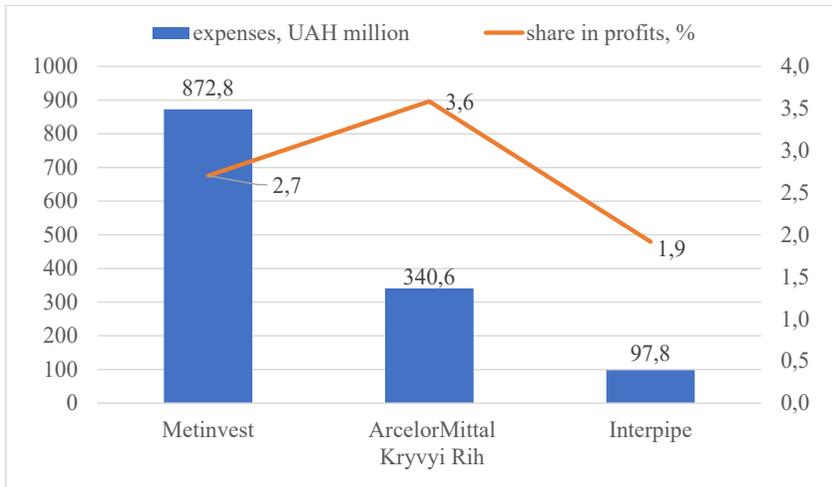


Figure 3. Social activity expenses and their share in the profit of mining and metallurgical corporations in 2019

Source: plotted based on the data [14–16]

Collective monograph

The rating of social expenditures of the analyzed corporations corresponds to their rating in terms of income and net profit. Financing of social capital in 2019 made up, in UAH million: *Metinvest* – 872,8, *ArcelorMittal Kryvyi Rih* – 340,6, *Interpipe* – 97,8. *ArcelorMittal Kryvyi Rih* is the leader in terms of the share of profits allocated to social activities – 3.6%, *Metinvest* is second with 2.7%, and *Interpipe* is third with 1.9%. Table 1 shows the composition and structure of *ArcelorMittal Kryvyi Rih*'s social activities expenses in 2019.

Table 1

Composition and structure of expenses for *ArcelorMittal Kryvyi Rih*'s social events in 2019

Article of expenditures	Total, UAH million	Structure, %
Recreation, treatment and rehabilitation of employees and their families	160,2	47,03
Reconstruction of social facilities and maintenance of social facilities	78	22,90
Social benefits and cultural events	56,6	16,62
Transportation of employees	21,4	6,28
Contributions to unions	12,3	3,61
Employee health insurance	12,1	3,55
Total	340,6	100,00

Source: compiled based on the data [15]

In the structure of *ArcelorMittal Kryvyi Rih* social expenses, the major part is spent on rest, treatment and health improvement of employees and their families (47.03%), the second major expense item is repair of household facilities and maintenance of social sphere facilities (22.90%), the third one is social payments and cultural events (16.62%). Transport expenses of employees, deductions to trade unions, health insurance of employees are 6.28%, 3.61%, 3.55%, respectively.

In the context of the spread of integrated reporting, in addition to the audit of financial statements, new types of audit appeared – social and environmental audit, energy efficiency audit, etc.

Social audit is one of the tools of social development management and regulation of social and economic relations through voluntary social

dialogue of all stakeholders to achieve social consensus. Social audit is important for owners, civil society institutions, investors, consumers, managers and employees. The prerequisites for the emergence of social audit are: the realization by private businesses that a positive social image of the enterprise significantly increases its competitiveness; increasing the role of the social factor and human capital; the result of public pressure on business to regulate socially significant aspects of the enterprise; the trend towards an increasing number of non-financial reports.

The subject of the study of social audit are: material assets of the social sphere, financial and economic information of social orientation, human resources. It is necessary to use all available resources, so that the personnel was the main factor in increasing the competitiveness of the organization, had goals, correlated with the main objectives of the organization, worked productively and had a good motivation. Social audit will help to reveal them and to develop the program of improvement of personnel management system. The object of the study of social audit are not only tangible assets or financial, economic and other information, but also human resources. Social audit can be used by the state to ensure sustainable and long-term social development. Social audit can be used as a tool to establish a full-fledged dialogue and cooperation between the state, business and institutions of citizens.

Conclusions. 1. Systematized the principles of social responsibility of business, the most important of which are: accountability, transparency, ethical behavior, interaction with stakeholders, compliance with international and national legal standards, protection of human rights, continuous improvement of the organization to achieve the best performance in the world in conditions of constant competition and increased requirements for the functioning of business structures.

2. It was shown that the fundamental concepts of capital, business model and value creation, embodied in the following types of capital: financial, industrial, intellectual, human, social and natural, are the basis for the formation of sustainable development reporting. Social capital was defined as a non-economic form of capital of an economic entity, a specific category of resources, which is formed in interpersonal relations and is based on the potential of mutual trust and mutual assistance.

3. The main approaches to sustainability reporting by the largest mining and metallurgical corporations of Ukraine and their reflection of social capital were outlined. It was established that *Metinvest* prepares reports on sustainable development according to *GRI* and *SASB* standards, *ArcelorMittal Kryvyi Rih* – according to *GRI* standard. During 2007–2011, *Interpipe* prepared an annual report for the UN Global Compact on the results achieved and overall progress. Currently, information on social capital financing is disclosed in the ESG Report.

4. The indicators of in-kind accounting of sustainable development of the investigated mining and metallurgical corporations in terms of social capital financing are: the number of social partnership projects, the number of vouchers purchased for employees for treatment and rehabilitation, the number of units of medical equipment purchased, the list of measures to counter the spread of COVID-19, etc.

5. Social audit is the result of the development of other forms of audit, in particular, management and financial, by expanding the criteria of effectiveness, as it includes mainly social factors. This is a specific form of analysis, reviewing the conditions of the social environment of the enterprise in order to identify social risk factors and make proposals for their reduction.

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