

Article

Sustainable Business Model of Modern Enterprises in Conditions of Uncertainty and Turbulence

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Abstract: The purpose of the article is to analyze the impact of the openness of a company to stakeholders on the effectiveness of the business model of the enterprise. The hypothesis. We believe that conducting a socially responsible business, i.e., disclosing non-financial information about the activities of enterprises, leads to the improvement of their financial indicators and is therefore evidence of a more effective implementation of their business models. Methods of the study. The following methods were used in the study: analysis and synthesis, comparative, induction and deduction, scientific abstraction, decomposition and logical generalizations in the analysis of scientific literature; computational–analytical, diagnostic, tabular and economic–statistical methods to assess the effectiveness of the implementation of business models of enterprises; diagnostic, statistical, index, method of expert assessments and rating to assess the corporate sustainability and transparency of enterprises; the use of the method of integrated indicators allowed the grouping of enterprises by classes of efficiency of business models, corporate sustainability and transparency. According to results of the study, it was determined that an effective business model is formed on the basis of maximum transparency and corporate sustainability in conditions of unpredictability and instability of the external environment.

Keywords: sustainable development; sustainable agriculture; stakeholders; significant issues; corporate sustainability; enterprise transparency



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1. Introduction

Rapid and dynamic changes in the environment, crises and increasing uncertainty and an increase of economic, environmental, social and political risks necessitate changes in approaches and technologies for the managing of modern enterprises. Dominant concepts of the traditional management paradigm, aimed only at making a profit and ensuring high productivity, have ceased to meet the new requirements of the business environment. Sustainable development in the long run and competitiveness of modern enterprises depend on the ability to create and continuously improve their own business model. Such a business model should be based on a systematic approach to environmental analysis, to take into account and optimize the various interests of stakeholders [1].

The successful integration of Ukraine into the European and world business environment necessitates the implementation in the practice of national enterprises of the fundamental principles of sustainable development. An important factor in their success in the face of intensifying global competition can be the formation and implementation

of effective business models that ensure effectiveness in economic, social, environmental and corporate governance spheres through the establishment of constructive interactions with stakeholders. Successful implementation of such business models will increase the adaptability of Ukrainian enterprises to adverse changes in the operating environment; thus, it will stabilize and improve their financial and economic conditions and increase their market value.

Theoretical and practical aspects of creating an effective business model of the enterprise in the face of intensifying competition are covered in the works of A. Afuah [2], G. Bernarda [3], A. Gambardella, A. McGahan [4], D. Debelak [5], A. Jablonski [6], H. Kupalova [7], A. Magomedova [8], J. Magretta [9], Mahmoodi, M.; Roman, M.; Prus, P. [10], A. Osterwalder, Y. Pigneur [11], M. Porter [12], Š. Slávik [13], N. Strekalova [14], P. Thomson [15], G. Kharitonova [16], H. Chesbrough [17], D. Sjödin, V. Parida [18], C. Zott [19] and others. In the works of these scientists, scientific approaches to the essence of the business model of the enterprise are studied. Thus, one such approach in the 20th century, in our opinion, was the value-added chain model proposed by M. Porter as a tool of strategic enterprise management [12]. This model considers the enterprise as a chain of basic actions, each of which adds value to the product and the optimization of these basic actions maximizes profits and/or minimizes costs. The value-added chain model involves the interconnection of business processes through a combination of main (inbound logistics, operations, outbound logistics, marketing and sales, service) and ancillary (enterprise infrastructure maintenance, personnel management, technology development, supply) activities. The innovation of this model is that it allows you to assess the existing activities in the company aimed at increasing revenue and/or reducing losses:

1. Communication with suppliers;
2. Communication with consumers;
3. Technological connections within the value chains in the same division of the enterprise, as well as the connection between the value chains in several divisions of the enterprise;
4. Connections in the processes of design, production, marketing, as well as in the performance of ancillary functions.

The value chain occupies a central place and a separate unit in the business model of a number of researchers, in particular in the work of A. Osterwalder and Yves Pigneur in creating the business model “Canvas” [11].

J. Magretta, continuing M. Porter’s research, focuses on the process of creating values for enterprises for consumers and other key stakeholders [9]. According to the scientist, in order to achieve a competitive advantage in the industry, the company needs to build a value chain that focuses the attention of managers on certain actions that generate costs and create value for customers. She emphasizes that if there are already competing business models in the industry, it is necessary to build a value chain for each of the customer segments and then look for differences between competitors.

In the mid-1990s, R. Kaplan and D. Norton developed the balanced scorecard (BSC), which was based on the four main components of enterprise activity: finance, customers, internal business processes and the learning and development component [20]. According to the scientists, the business model of the enterprise should include a balanced scorecard; each value chain in the company should correspond to one or more indicators of a balanced scorecard.

Since the beginning of the 21st century, business models have become increasingly the subject of research by scholars and practitioners. A. Afuah considers the business model as a way to increase the value of the enterprise itself, focusing on maximizing profitability [2]. N. Strekalova demonstrates a broader view of the business model, which includes both aspects, i.e., the creation and the increase of value [14].

As we see, in the late of 20th century, and even at the beginning of the 21st, century in the economic literature the concept of “business model” was used mainly in the context of business processes, engineering and business reengineering. Since 2000, researchers have

defined the business model as a set of elements related to the study of efficient allocation of enterprise resources, the use of key competencies of the enterprise, establishing and regulating relationships with consumers and studying consumer priorities (current and future). In addition, there are approaches in the scientific literature for creating a value chain based on a value proposition.

In the early 2000s, P. Thomson, studying the effectiveness of the company in the field and ways to increase its competitiveness, notes that the concept of “business model” of the company is closely linked, above all, with the client, his desires, needs and fears [15]. Investigating these factors, it becomes clear to the company which product it is necessary to produce to meet the needs of the consumer, from the consumption of which the customer will receive the maximum benefit and positive impressions.

Thus, the researcher approaches the formation of the concept of “value proposition”, which was later researched and refined by Yves Pigneur and A. Osterwalder and became the basis of the business model “Canvas”. Value proposition is a key element of the business model, the central place in which is occupied by consumer segments, each of which has its own needs, problems and values [11]. Different consumers solve different problems in their daily activities and have different perceptions of the products offered by the company. The value proposition template reflects the key benefits of the product and shows the reasons why consumers are likely to buy it.

Thus, we can summarize that the elements of the business model of the enterprise that determine its content are:

1. Value proposition, which is in the products and services and which the company offers to their customers;
2. Value creation system, which includes the company’s relationships with suppliers, key consumer segments, as well as the value chains themselves;
3. Assets that the company uses to create value proposals;
4. Financial model of the enterprise, which determines both the structure of income and the structure of costs that the enterprise generates to create value for the consumer.

In addition, based on the analysis of the essence of the concept of “business model of the enterprise”, we can conclude that the scientific literature clearly distinguishes three main approaches:

- (1) Focused on a profit and business processes of the enterprise: Afuah, A., Gambardella, A., Debelak, D., Mullins, J., Wheelen, T., Chesbrough, H.;
- (2) Focused on internal business processes and structure: Strekalova, N., Kharitonova, G., Klimchuk, A.;
- (3) Focused on the formation of value for the external client of the enterprise: Magretta, J., Osterwalder A., Pigneur, Y., Porter, M., Rappa, M., Revutskaia, N., Slávik, Š., Teece, D., Thomson P., Watsons, D., Zott, C., Amit, R., Massa, L.

The first approach is to study the technologies within the company and the business processes of the company, which serve to make a profit. The second involves an even greater concentration on the internal environment and effective organization of the enterprise. The third involves focusing on the value that the company creates for their customers (concentration on the external environment of the enterprise). This approach among the selected is, in our opinion, the most promising, and can provide the company with competitive advantage in the market and financial success.

Methodical bases for assessing the relationship between enterprises and stakeholders are studied in the works of such scientists as: N. Butenko [21], P. Drucker [22], K. Govindan, K. Shankar [23], Kaminski, R.; Marcysiak, T.; Prus [24], I. Nesterova [25], J. Remme, A. De Waal [26], I. Oleksiv [27], K. Richter- Akulenko, G. Fyliuk [28], O. Seroka-Stolka, K. Fijorek [29], C. Temperli [30] and others.

Thus, I. Oleksiv, in his works, studied the impact of stakeholders on the company, and G. Fyliuk and K. Akulenko assessed the impact of investment attractiveness on the business model of the company. In addition, Ukrainian scientists have proposed a model

for assessing the competitiveness and sustainable development of the enterprise [31]; P. Drucker paid special attention to staff as a key stakeholder of the enterprise [22]; research related to socially responsible business and the disclosure of non-financial information about the activities of enterprises, which in turn leads to improved financial performance and is taken to evince a more effective implementation of their business models, is covered in the works of N. Butenko and L. Kot [32], S. Waddock and S. Graves [33], K. Komarova, N. Kovalchuk, [34], J. Krasodomska and J. Dyduch [35], H. Tarasiuk, T. Mostenska [36] and others.

Paying tribute to the results of scientific achievements in this field, some theoretical and practical issues have not yet received proper scientific justification. In particular, the aspects related to the assessment of the dependence of business models of Ukrainian enterprises on their impact on the environment and society and the dependence of business models on the impact of stakeholders remain insufficiently covered. The question remains whether the business model of the company, which does not take into account the needs of stakeholders and operates solely to maximize profits in the interests of owners and shareholders, can be considered sustainable and stable in the long run.

2. Materials and Methods

The aim of the study is to analyze the impact of the openness of a company to its stakeholders on the effectiveness of the business model of the enterprise. We believe that conducting a socially responsible business and disclosing non-financial information about the activities of enterprises leads to the improvement of their financial indicators, and is therefore evidence of a more effective implementation of their business models.

We propose to measure the quality of work with the range of significant issues for the studied enterprises on the basis of two factors:

1. An integrated indicator of corporate sustainability;
2. The transparency index of the enterprise.

An integrated indicator of corporate sustainability characterizes the quality of corporate governance in the field of accounting and management of financial and non-financial risks, i.e., the company's ability to ensure sustainable development in the long run. The integrated score can vary in the range of 0 to 1000 points.

An assessment of corporate sustainability should be carried out in four areas (dimensions): financial–economic, environmental, social and corporate governance. Each of the spheres is a set of areas (from 3 to 8) of significant issues. Each of the areas has a different specific weight in the integrated indicator of the enterprise, which depends on the industry to which it belongs. The distribution of the specific weight between the areas of significant issues is calculated taking into account the distribution of areas of significant issues, based on the methodology of the sustainability assessment model (SAM), Corporate Sustainability Assessment 2019 [37].

Hypothesis testing: the higher the index of information disclosure on significant issues, the more efficiently the enterprise implements its business model. Similarly, the greater the integrated indicator of corporate sustainability, the more efficiently the company implements its business model. To test the hypothesis, Pearson's correlation coefficient was calculated, which is a confirmation of the presence, strength and direction of the correlation (positive or negative). The correlation was calculated between:

1. Class of efficiency of implementation of the business model of the enterprise and class of the enterprise on corporate sustainability;
2. Class of efficiency of implementation of the business model of the enterprise and class of the enterprise on transparency.

Based on the obtained values, it was concluded that there is a relationship between the effectiveness of the business model of the enterprise and the quality of corporate governance (corporate sustainability and transparency).

A positive correlation indicates that taking into account the interests of stakeholders has a positive impact on the results of the enterprise and, accordingly, on the implementation of its business model. If there is a negative correlation, it will mean that insufficient disclosure to stakeholders about the company's activities on significant issues negatively affects its performance.

The purpose of the work led to the formulation of, and the need to solve, relevant tasks:

1. To analyze theoretical approaches to the impact of the openness of a company to its stakeholders on the effectiveness of business models of enterprises;
2. To propose a methodological approach to assessing the corporate sustainability and transparency of enterprises as important components of the formation and implementation of their business models;
3. To study the activities of Ukrainian enterprises of different types of economic activity and identify their distribution by classes of corporate sustainability and transparency;
4. To develop an algorithm for evaluating the effectiveness of the implementation of the business models of Ukrainian enterprises and to divide them into classes;
5. To reveal the relationship between corporate sustainability and transparency of enterprises on the one hand and the effectiveness of their business models on the other;
6. To formulate proposals by which to increase the efficiency of formation and implementation of business models of Ukrainian enterprises in the conditions of sustainable development.

The theoretical and methodological basis of the paper is a set of general and special methods of scientific research, the use of which is due to the aim and tasks.

The following methods were used in the research process: analysis and synthesis, comparative, induction and deduction, scientific abstraction, decomposition, logical generalizations in the analysis of scientific literature; computational, analytical, diagnostic, tabular and economic–statistical methods to assess the effectiveness of the implementation of business models of enterprises; diagnostic, statistical, index, method of expert assessments and rating to assess the corporate sustainability and transparency of enterprises; the use of the method of integrated indicators allowed the grouping enterprises by classes of efficiency of business models, corporate sustainability and transparency.

3. Description of the Studies

We conducted a survey of large enterprises in Ukraine which are the largest taxpayers. That should help to strengthen the control over the activities of enterprises in terms of compliance with environmental, social and corporate governance standards and practices. In our opinion, it increases the efficiency of their business models and ensures their sustainable development. Main branches that are presented in the study are agriculture, food production, power industry, metallurgy, transport, telecommunications, banking system, retail trade and the manufacturing industry.

A special emphasis in the study is placed on the agriculture because agriculture plays an important role in the national economy of Ukraine. The current stage of a development of agriculture of Ukraine is characterized by the fact that Ukraine produces about 3–4% of the world's production of cereals [38]. Since 2000, the agriculture of Ukraine produces 16–18% of GDP; from 2012 to 2021, it produces 8–10% of GDP [39].

Agricultural lands of Ukraine occupy 42 million ha, or 70% of the total sown area of the country, where mainly grain crops are grown. Ukraine ranks one of the first places in the world by the area of agricultural land [39]. Ukraine is a strategic partner for Europe, Asia and the Middle East because of competitive advantages such as:

- A favorable geographical location;
- The largest bank of arable land in Europe (around 33 million ha), which represents 12% of arable land in Europe and 2.2% of arable land in the world;
- One-third of black earth in the world.

At the present stage, Ukraine is one of the leading manufacturers and exporters of grains, oilseeds, pulses, sunflower oil and soybean oil in the world. According to the Ministry of Agrarian Policy and Food of Ukraine, export of grains and pulses in 2021/22 season amounted to 48.6 mln tonnes: wheat—18.7 mln tonnes; barley—5.8 mln tonnes; rye—161.5 thsd tonnes; corn—23.5 mln tonnes; flour—70.9 thsd tonnes. The volume of exports of grains and legumes from Ukraine in season 2022/23 amounted to 7.2 mln tonnes, which is 43% less than last season due to the war [38].

Grains and oilseeds are mostly produced by big companies in Ukraine. Therefore, exactly these enterprises (big agriholdings) were taken for the study.

In the Ukrainian economic–scientific literature, there is the suggestion that big forms of enterprises in agriculture are non-sustainable; only the small and medium ones are sustainable [40,41].

As we see from Figure 1, the share of big enterprises is 55% in general agricultural production; this is due to the fact that these enterprises were also included to the research to assess their business models for sustainable development.

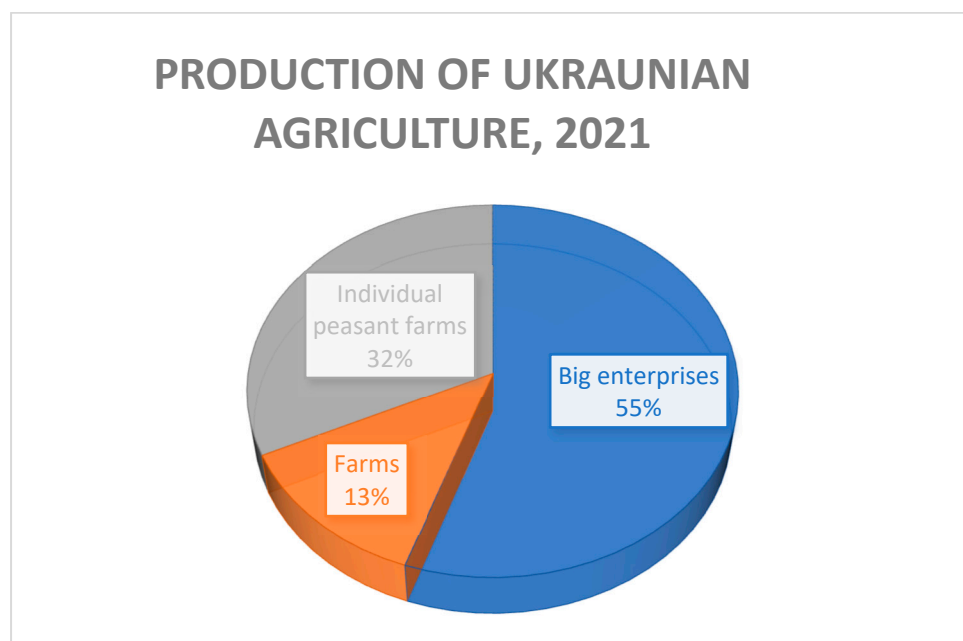


Figure 1. The production of Ukrainian agriculture in 2021 year [39].

The main goal of the study is to test the hypothesis of the positive impact of transparency of enterprises (disclosure of non-financial performance) on the effectiveness of their business models. In this context, we should note the unsystematic interest of Ukrainian enterprises in conducting socially responsible business. As practice shows, the disclosure of non-financial information in Ukraine is at an early stage. At the end of the second decade of the 21st century, only some companies in Ukraine began to create non-financial reports or general annual reports. In these reports, some sections (or paragraphs) disclose information about non-financial performance and the impact of their activities on the environment and society. Today, most of companies that prepare non-financial reports have produced only one or a few in previous years.

In contrast, there are many studies in the world that have shown that conducting socially responsible business, i.e., disclosing non-financial information about the activities of enterprises, leads to improving their financial performance and is therefore evidence of the more effective implementation of their business models. Thus, a study by S. Waddock and S. Graves, which aimed to compare companies of approximately the same size in one industry, found better financial performance in companies with high social responsibility [33]. The researchers surveyed 22 companies, half of which ran socially responsible businesses and

half of which did not. The study showed that in companies that implement the concept of social responsibility, such financial indicators as income from invested capital were higher by 9.8%, income from assets by 3.55%, income from sales by 2.79%, and profit was higher by 63.5% [34].

We assume that the increase in efficiency of non-financial indicators of the enterprise and its openness to stakeholders increases the corporate sustainability of the enterprise and the efficiency of the realization of the business model of the enterprise.

4. Results and Discussion of Studies

4.1. Methodical Approach to the Evaluation of Enterprises

We developed a questionnaire at the end of 2019 in cooperation with the consulting company LLC “Premier Business Consulting and Communications” (hereinafter LLC “PBCC”) and collected information from 40 large Ukrainian companies which are the largest taxpayers for 2018 on socio–environmental and economic activities in 2016–2018. This was undertaken in order to disseminate the practice of preparing non-financial reports and assessing the impact of Ukrainian enterprises on society and the environment. This, in turn, was undertaken to test the hypothesis of a direct correlation between quality and completeness of non-financial indicators in environmental, social, financial, economic and corporate governance spheres on the one hand, and the effectiveness of the business model-realization of enterprises on the other hand. In particular, data were collected on the activities of the 40 largest enterprises in Ukraine.

The questionnaire included more than 250 questions, which were grouped into 21 areas of important issues and revealed 129 indicators of business performance. Areas of important issues were selected, taking into account the international experience and expertise of specialists of PBCC LLC and grouped into four areas, each of which included from four to seven areas of important issues (Table 1). All this allows us to make a comprehensive assessment of the performance of selected enterprises, as well as to draw conclusions about their corporate sustainability and transparency.

Table 1. Spheres and Areas of important issues.

Sphere	Area of Important Issues
Financial and economic sphere	Financial results
	Anticompetitive actions
	Anti-corruption
	Supply chain
Ecological sphere	Resource efficiency
	Energy efficiency and energy saving
	Aquatic resources
	Biodiversity
	Emissions into the atmosphere
Social sphere	Waste
	Labor relations
	Occupational safety and health
	Personnel management and development
	Human Rights

Table 1. *Cont.*

Sphere	Area of Important Issues
Sphere of corporate governance	Local communities
	Marketing and labeling
	Confidentiality of information
	Ethics and integrity
	Corporative management
	Reporting practice
	Interaction with stakeholders

Source: compiled by authors.

After receiving all the questionnaires and supplementing the information from open sources (in case of incomplete or missing information in the questionnaire) an evaluation procedure was conducted. An evaluation sheet in the form of a matrix was formed for evaluation (Table 2).

Table 2. Fragment of the enterprise evaluation letter.

Sphere	Area	Indicator	Question	Evaluation Model	Enterprise 1	...	Enterprise X
Corporate Governance sphere	SU200: Corporate governance	SU200.1—«The structure of corporate governance»	200.1.1 Please indicate what is the supreme corporate governance body of your organization.	Boolean	1	1	0
			200.1.2 Please describe the corporate governance structure of the organization. If available, provide a snippet of the corporate governance structure.	Qualitative	1	0	0.7

Table 2. Cont.

Sphere	Area	Indicator	Question	Evaluation Model	Enterprise 1	...	Enterprise X
		SU200.2—«The composition of the supreme body of corporate governance»	200.1.3 Please indicate whether there are officials in the higher body who are responsible for making decisions on the economic, environmental and social impact of the organization. If so, provide provisions for such organizational units.	Qualitative	0	0	1
			200.2.1 Please provide information on the composition of the supreme body of corporate governance, indicating: (a) The general composition; (b) The number of executive directors; (c) The number of independent members; (d) The number of women.	Plural	1	0.7	1
			200.2.2 Please specify the term of office of each member of the supreme body of corporate governance.	Plural	0.7	0.4	1

Source: compiled by authors.

The proposed methodological approach for evaluating the relevant enterprises included evaluation of the indicator with all questions that were planned to be answered. Each of the questions was evaluated in a percentage from 0% to 100% (or from 0 to 1) according to one of the three models: “Boolean”, “Quality” and “Set”.

The Boolean evaluation model was used to assess the issues on which it was necessary to determine whether the company deals with the issues mentioned in the question or not. In response to such a question, the company can provide an answer of either “yes” or “no” and, accordingly, receive either 100% or 0% (no intermediate option is provided). In the case where the question was irrelevant for the enterprise, and the representative of the enterprise gave the answer to the question “Irrelevant”, the proposed Evaluation Letter opposite such an indicator was 100%.

The plural evaluation model has been applied to questions that ask about several aspects of the activity at the same time. In this case, for the maximum score for the answer involves obtaining the information on all the components of the question. For such a question, the company can get 0%, 40%, 70% or 100%. In this case, in the absence of an answer to this question, the company received 0%. The company had to answer at least one of the components of the question in order to get 40%. The company received 70% when disclosing most of the issue. Finally, the company received 100% in cases where complete and relevant answer to all components of the question was provided.

Qualitative evaluation model. This type of question not only involves answers “yes” or “no”, but also requires some details, i.e., a document or a reference to such a document. For this question, the company received similar scores as in the plural evaluation model, namely, 0%, 40%, 70% or 100%. The company received 0% for the question in case of no answer. The company received 40% for a relevant answer to the question, including if the answer was “no”. The company received 70% for a positive answer to the question and after providing some relevant explanations about its problems. Finally, the company received 100% cases of disclosure of the issue and when reference to the relevant internal or external regulatory document was provided. The company also received a score of 100% for the answer “Not relevant” if the question is not really relevant to the company and the industry in which it operates.

The percentage of each indicator was calculated as the arithmetic mean of all the questions that reveal it. In order to obtain the indicator of a certain number of points (in order to further calculate the integrated indicator of corporate sustainability of the enterprise) the following actions were performed:

- (1) Depending on the industry to which the company belongs, we get the maximum number of points for the area of important issues to which the indicator belongs;
- (2) The maximum score of each indicator in this area of important issues is calculated by dividing the maximum number of points for the area of important issues by the total number of indicators that are part of it;
- (3) We calculated the actual scores for the indicator for the company by multiplying the maximum possible score of the indicator by the evaluation of the indicator in percentage, obtained as the arithmetic mean of the scores obtained for the issues that reveal the indicator.

Thus, scores were calculated for each indicator from all of 21 areas of important issues for each enterprise. Then the scores for all areas of important issues and for areas were summed up. The sum of points of all spheres for a single enterprise determined the overall integrated indicator of its corporate sustainability in the range from 0 to 1000.

4.2. Assessment of Corporate Sustainability of Enterprises

According to our proposed methodological approach, based on the adaptation of investment classes according to the “Fitch” methodology to Ukrainian realities, enterprises were divided into 10 classes from level AAA to level D [42]. Table 3 below describes the qualitative characteristics of each of the classes of corporate sustainability of enterprises.

Table 3. Classes of corporate sustainability of enterprises.

Class	Characteristics of the Class
AAA	Highest level of corporate sustainability
AA	Very high level of corporate sustainability
A	High level of corporate sustainability
BBB	Sufficiently high level of corporate sustainability
BB	Sufficient level of corporate sustainability
B	The level of corporate sustainability is not high enough
CCC	The level of corporate sustainability is below sufficient
CC	Significantly insufficient level of corporate sustainability
C	Corporate sustainability is uncertain
D	Absolutely uncertain and unpredictable level of corporate sustainability. The enterprise is completely closed

Source: compiled by authors.

From the total number of enterprises participating in the research, 10% with the highest value of the integrated indicator were selected, on the basis of which the arithmetic mean integrated index of these leading enterprises was calculated. The obtained value was identified as the “baseline value of the corporate sustainability rating” (BV of CSR), which was used to build the corporate sustainability rating scale. In 2019, the sum of points of four leading companies amounted to 3316 and the calculated BV of CSR was 829 points (3316/4).

Based on the BV of CSR, ranges were selected and a scale of division of enterprises by classes was built on the basis of the previously calculated step of the scale. Since all enterprises were divided into 10 classes from AAA to D, the BV of CSR was divided into 9 ranges to calculate the step of the scale. Thus, the step of the scale was calculated as a whole from (829/9) and obtained 92 (Table 4).

Table 4. Scale of distribution of enterprises by classes of corporate sustainability.

Range	Scale	Class
$[\geq BV]$	≥ 829	AAA
$[\geq BV - \text{Step}] \text{ AND } [< BV]$	$\geq 737 \text{ AND } < 829$	A
$[\geq BV - \text{Step} \times 2] \text{ AND } [< BV - \text{Step}]$	$\geq 645 \text{ AND } < 737$	A
$[\geq BV - \text{Step} \times 3] \text{ AND } [< BV - \text{Step} \times 2]$	$\geq 553 \text{ AND } < 645$	BBB
$[\geq BV - \text{Step} \times 4] \text{ AND } [< BV - \text{Step} \times 3]$	$\geq 461 \text{ AND } < 553$	BB
$[\geq BV - \text{Step} \times 5] \text{ AND } [< BV - \text{Step} \times 4]$	$\geq 368 \text{ AND } < 461$	B
$[\geq BV - \text{Step} \times 6] \text{ AND } [< BV - \text{Step} \times 5]$	$\geq 276 \text{ AND } < 368$	CCC
$[\geq BV - \text{Step} \times 7] \text{ AND } [< BV - \text{Step} \times 6]$	$\geq 184 \text{ AND } < 276$	CC
$[\geq BV - \text{Step} \times 8] \text{ AND } [< BV - \text{Step} \times 7]$	$\geq 92 \text{ AND } < 184$	C
$[\lt; BV - \text{Step} \times 8]$	< 92	D

Source: compiled by authors.

The distribution of enterprises by classes of corporate sustainability in accordance with the proposed methodology is given in Table 5.

Table 5. Distribution of enterprises by classes of corporate sustainability.

Class	Number of Enterprises
AAA	1
AA	3
A	4
BBB	1
BB	1
B	0
CCC	2
CC	6
C	6
D	16

Source: compiled by authors.

4.3. Assessment of Enterprise Transparency

Based on the calculation of the corporate sustainability index, the transparency index was calculated. This index shows the extent to which a company discloses its own information to stakeholders on a range of important issues. The index ranges from 0% to 100%. As a result of evaluation of each indicator, each enterprise received a certain percentage of disclosures on the principle of “Yes/No”. Accordingly, the company received 1 point for disclosing the indicator or even for demonstrating attention to the relevant topic specified in the indicator (e.g., gender equality, CO₂ emissions, etc.) and 0 points for undisclosed or incomplete indicator.

The transparency index of each enterprise was calculated by dividing the sum of the scores of all indicators by the number of indicators from the questionnaire (129 indicators).

$$\text{Transparency index} = \frac{\sum \text{scores of all indicators}}{\sum \text{all indicators from the questionnaire}} \times 100\% \quad (1)$$

Similarly to the corporate sustainability classes, the surveyed enterprises were divided into 10 transparency classes from level AAA to level D. From the total number of surveyed enterprises, 10% with the best transparency index was selected and their arithmetic mean value was calculated, which was determined as the “baseline value of the transparency rating” (BV od TR). On the basis of this value, the scale of a rating of the enterprises on transparency is created. In 2019, the arithmetic mean of the transparency index was 92.1%.

Based on the “basic value of the transparency rating” ranges are selected and the scale of distribution of enterprises between classes is built taking into account the previously calculated step of the scale. All enterprises in the sample were also divided into 10 classes from AAA to D. Thus, the step of the scale $(92.1\%/9) = 10.2\%$ (Table 6).

Table 6. Scale of distribution of enterprises by classes of transparency.

Range	Scale	Class
[\geq BV]	$\geq 92.1\%$	AAA
[\geq BV—Step] AND [$<$ BV]	$\geq 81.8\%$ AND $< 92.1\%$	AA
[\geq BV—Step \times 2] AND [$<$ BV—Step]	$\geq 71.6\%$ AND $< 81.8\%$	A
[\geq BV—Step \times 3] AND [$<$ BV—Step \times 2]	$\geq 61.4\%$ AND $< 71.6\%$	BBB
[\geq BV—Step \times 4] AND [$<$ BV—Step \times 3]	$\geq 51.1\%$ AND $< 61.4\%$	BB
[\geq BV—Step \times 5] AND [$<$ BV—Step \times 4]	$\geq 40.9\%$ AND $< 51.1\%$	B
[\geq BV—Step \times 6] AND [$<$ BV—Step \times 5]	$\geq 30.7\%$ AND $< 40.9\%$	CCC
[\geq BV—Step \times 7] AND [$<$ BV—Step \times 6]	$\geq 20.5\%$ AND $< 30.7\%$	CC
[\geq BV—Step \times 8] AND [$<$ BV—Step \times 7]	$\geq 10.2\%$ AND $< 20.5\%$	C
[$<$ BV—Step \times 8]	$< 10.2\%$	D

Source: compiled by authors.

The distribution of enterprises by classes of transparency is shown in Table 7.

Table 7. Distribution of enterprises by classes of transparency.

Class	Number of Enterprises
AAA	2
AA	5
A	2
BBB	1
BB	0
B	6
CCC	6
CC	3
C	3
D	12

Source: compiled by authors.

4.4. Assessment by Areas of Important Issues by Spheres

Our preliminary analysis necessitates a more detailed study of the fact that the weight of the enterprise is given to the selected areas in the questionnaire of important issues. The first area is “Corporate governance”, which is disclosed by the largest number of indicators in the questionnaire: 21 out of 129 (16.3%). The guarantee of corporate sustainability of the enterprise is undoubtedly a transparent structure of corporate governance, the distribution of powers and areas of responsibility between the executive body and the highest body of corporate governance and the prevention of conflicts of interest [43]. Among the important issues that companies reveal to their stakeholders in the field of corporate governance are as follows:

1. Composition of the highest body of corporate governance;

2. The procedure for nominating and selecting candidates for members of the highest body of corporate governance;
3. Development, approval and updating of strategic priorities;
4. Assessment of the activities of the highest body of corporate governance;
5. Corporate governance code;
6. Organizational structure and powers of officials of the organization;
7. Rules for remuneration of members of the highest corporate governance body and senior executives;
8. International management standards and practices;
9. Business processes of organization and management;
10. Effectiveness of risk management processes;
11. Identification, analysis and management of economic, environmental and social issues.

Five companies became leaders in the study of important issues in this area. Most of them disclose information about the supreme body of corporate governance, its composition, committees of the supervisory board, etc. and publish it on the company's website. The procedure for selecting members, distribution of rights and powers and management remuneration are fixed either in the corporate governance code or in other regulatory documents of the enterprise, in particular in the Corporate Policy of Social Responsibility and Sustainable Development. All companies use international corporate governance standards and practices, including the Corporate Law of the Duchy of Luxembourg, corporate governance rules set out in the Best Practices of the Warsaw Stock Exchange, OECD Guidelines for Corporate Governance for State-Owned Enterprises (edition 2015), ISO 9001:2015 "Quality Management System", ISO 14001:2015 "Environmental Management System", ONHAS 18001:2007 "Occupational Health and Safety System", etc. [44].

In addition, companies pay a lot of attention to preventing conflicts of interest. Thus, members of the board of directors must refrain from professional (or other) activities that may cause a conflict of interest or adversely affect their reputation as members of the governing bodies. In cases of conflict of interest, they should immediately provide information to the board of directors. Any director who has a direct or indirect conflict of interest should inform the board and abstain from discussing or voting on the relevant agenda item. Any conflict of interest must be properly covered and documented.

Thus, important issues in the field of corporate governance are sufficiently disclosed in both leading companies and other companies that participated in the study. It should be noted that in order to obtain maximum transparency and confirm the highest level of corporate sustainability, companies need to provide supporting documents or references to them in open sources.

The second area of corporate governance is "Ethics and integrity", which is revealed by three indicators:

1. Values, principles, standards and norms of behavior;
2. Regulation and codification of management practice in the field of ethics and integrity;
3. Internal and external mechanisms for reporting unethical or illegal behavior/dishonesty.

This is an extremely important area of corporate governance, which gives all stakeholders an understanding of the company's intolerance of unethical behavior towards suppliers and partners. An indicator that describes the values that companies transmit to the internal and external environment is fully disclosed in many companies, especially leaders. Some companies are developing the Code of Corporate Ethics, which is a public normative document that regulates what is considered ethical and unethical behavior and how to behave in relations with stakeholders. The purpose of such a code is to identify and prevent potential risks within the interaction between the company's employees and their relationships with partners, contractors, customers and other stakeholders. Some companies have documents such as the Anti-Corruption and Bribery Policy or similar.

Based on the analysis, it has been determined that in companies with a high level of ethical behavior, it is mandatory to report any unethical behavior to any employee at any time, which he may observe or expose. The tools are hotlines, special corporate mail, etc.

This practice allows maintaining a high level of trust of customers and partners, which is a very important aspect of building and implementing an effective business model of the enterprise.

The third area of important issues in the sphere of corporate governance is “Interaction with stakeholders”. It is described by six indicators that comprehensively reveal the principles of selection and interaction with stakeholders. The set of indicators provides answers to the following important issues:

1. Complete list of stakeholders and principles of their detection and selection;
2. The organization’s approach to interaction with stakeholders and regulation of management practices on these issues;
3. Consultations with stakeholders and issues discussed with them.

To build long-term relationships with stakeholders, the company should identify them in some way. Such work is similar to the definition of the main consumer segments in the process of forming a business model for which the company should create value proposals. However, in this case, it is determined by those stakeholders who have the greatest influence on the company. Such persons are disclosed in the indicator SU202.1 “List of stakeholders of the organization”.

The vast majority of leaders in this area of important issues have a clear understanding of how they affect stakeholders and how these stakeholders affect the company. Indeed, one of the largest leading companies is integrated into a large number of social and political processes that are bilateral. Enterprises are influenced by decisions of public authorities, ministries and departments and local governments in the regions of presence. At another leading company, it is believed that the priority in the interaction with stakeholders depends on the functional need for such interaction. In order to identify important issues in 2019, the company conducted a special survey during a meeting of stakeholders with the participation of more than 200 representatives of all groups of stakeholders. The company uses such communication channels as:

1. Meetings, negotiations;
2. Conferences, forums, panel discussions, press events;
3. Web-site of the enterprise, the form of online application through the site;
4. “Single window” and mailbox for sending documents;
5. Social networks: Facebook, LinkedIn, Instagram, YouTube channel, SlideShare presentations.

The fourth and last area of important issues in the field of corporate governance is “Reporting practice”. This area is described by six indicators that reveal the practice of preparing regular non-financial statements:

1. Corporate report (integrated report, sustainable development report, non-financial report, annual report, social report, etc.) and reporting cycle;
2. Identification of important topics for the enterprise;
3. Compliance of the prepared reporting with international standards and verification of data;
4. Interaction with stakeholders in the framework of reporting.

This group of indicators explains the features and frequency of preparation and publication of non-financial statements by the company, which includes the specifics of the company’s interaction with stakeholders. According to the results of research in this area, four companies became leaders. Different companies have different documents, e.g., the integrated report, sustainable development report, non-financial report, annual report, social report, etc. Using each of them, companies try to meet stakeholders and their needs.

A special online survey was conducted at one of the leading companies to determine the content of the non-financial report. Thanks to this survey, they found out how important the main aspects of the company were for stakeholders and how important, in their opinion, were the manifestations of economic, social and environmental impact of these aspects.

Respondents were able to assess the importance of economic, environmental and social impacts as a consequence of the enterprise.

The research of enterprises in the corporate governance sphere revealed a fairly high level of information disclosure in all four areas of important issues. This is evidence of a high level of corporate sustainability and transparency of the sampled enterprises.

The next sphere that was revealed in the questionnaires was financial and economic. The sphere includes 4 areas of important issues, the first of which is SU300: "Financial results". Of course, the financial results of the company are important for all its stakeholders, as almost all stakeholders (except, perhaps, direct competitors) are interested in the stable and efficient operation of the company. The area of important issues "Financial results" is revealed by the following indicators:

1. Created and distributed direct economic value;
2. Financial support received from the state;
3. Wages;
4. Violation of the law.

These indicators are in fact additions to the financial statements of enterprises. All leading companies disclosed detailed information about their income, the structure of costs in terms of wages, taxes (by their types) and investments in local communities. Some companies provided information on support received from the state and on the payment of environmental fines, if any, during the reporting period. In international practice, it is believed that the detailed disclosure of such information to stakeholders indicates the high social responsibility of such enterprises.

The second area of important issues of the financial and economic sphere is "Anti-competitive actions", which includes only to indicators that are designed to demonstrate the practice of management at the enterprise to avoid anticompetitive actions and cases of impeding competition and antitrust violations. According to the results of the survey, most of the sample companies either did not have problems with antitrust law or did not disclose these indicators.

The third area of important issues in the financial and economic sphere is "Anti-corruption" which is extremely important for both national enterprises and the Ukrainian state. If the company actively opposes corruption, it inevitably provides undeniable benefits to both the company and Ukrainian society as a whole.

It should be noted that the purpose of the survey was not only to identify policies and other regulations on corruption risk management in the surveyed enterprises. It was also provided with the aim to identify measures to prevent corruption and cooperation with business partners in this area of important issues. A separate block of the study was dedicated to identifying the total number and nature of confirmed cases of corruption at the enterprises, i.e., cases of dismissal or punishment of employees for corruption.

In particular, at one of the leading companies, significant financial transactions are assessed for the impact of corruption risks and each employee is required to read in detail the Policy on Conflict-of-Interest Management and Combating Fraud and Corruption. Another leading company discusses anti-corruption policies and relevant procedures with all business partners. Contracts negotiated with business partners and suppliers of the company have a mandatory anti-corruption clause.

The fourth area of important issues in the financial and economic sphere is "Supply chain". This area is among the five least disclosed. It is represented by three indicators:

1. Supply chain of the organization;
2. Costs for local suppliers;
3. Negative impact on the practice of labor relations in the supply chain.

Thus, for one of the leading companies, the procedures for selecting suppliers and contractors and managing relationships with them are among the key areas of the company's procurement. After successful completion of the tender procedures and approval of the supplier, the provisions of the "Guidelines for work with suppliers" should be added

to the contract with the supplier, which sets out the basic requirements for suppliers. Upon the performance of services or supply of goods, suppliers are evaluated, based on the results of which their rating is formed. The evaluation received by the supplier affects the determination of the winner in the following tender procedures of this company [45].

In another company, on the other hand, the supply chain is created in the form of the “source to pay” model; areas of responsibility in the procurement process are divided not by individual functions, but by categories; that is, the sales department is responsible for the purchase of raw materials, purchases of machinery and technology are carried out by the technical department, goods and services necessary to ensure marketing activities are carried out by the marketing department and so on [46].

The results of the questionnaire revealed that, compared to the corporate governance sphere, enterprises disclose much less information related to the financial and economic sphere.

The environmental sphere consists of six areas of important issues. The first is SU400: “Resource efficiency”, which includes indicators that demonstrate the availability and quality of regulations and practices in the field of efficient use of resources, including secondary raw materials.

Thus, due to the implementation of measures of the energy and resource saving program, one of the enterprises saved 26,634 tonnes of conventional fuel in 2018. Another large enterprise, in order to improve energy efficiency and resource conservation, implemented an energy management system in accordance with the requirements of the international standard ISO 50001:2011 “Energy conservation; energy management systems; requirements and instructions for use “. However, the results of the study show that Ukrainian enterprises do not pay enough attention to resource efficiency, despite the fact that positive practices in this area increase the profitability of enterprises by reducing costs (rational use of resources).

The area of important issues “U401: “Energy efficiency and energy saving” is covered by six indicators. In this area of important issues, most issues, such as resource efficiency, relate to document analysis and practice. Investing in the implementation of measures and programs to reduce energy consumption provides companies with long-term significant savings in energy and, consequently, financial resources. The group of leaders includes enterprises of the energy sector, mechanical engineering and the agro-industrial complex.

The beginning of the introduction of a large enterprise in this group of energy management systems based on the international standard ISO50001 was the training of employees of the enterprise under the program “Energy Management”. Due to the implementation of measures to reduce energy consumption in 2018, another company in this group received savings of about 3 million kWh of electricity.

The next area of important issues is SU402: “Water resources.” This area reveals eight indicators, including documents and practices on water abstraction, water reuse, water purification and discharge. This area of important issues is specific and therefore not relevant to a significant part of the sampled enterprises.

The area of important issues SU403: “Biodiversity” includes five indicators. This area of important issues, as well as water resources, is specific. In particular, one of the leading companies in this group invested UAH 183 million in biodiversity conservation in 2017 and environmental protection [47] and, in 2018, invested UAH 148 million [48]. Another enterprise cultivates only those lands that have been used for decades for growing crops, and are thus not contributing to deforestation. The company grows only crops that are typical for the regions in which it operates. The regulations and documentations of another leading company state that the company does not carry out agricultural work in reserves, national parks and areas with high biodiversity; thus, the operate without affecting endangered species.

The next area of important issues is SU404: “Atmospheric emissions”, which is determined by 10 indicators, including: the disclosure of policies and practices in the field of

greenhouse gas emissions, ozone-depleting and pollutants and their types, investment in protection projects atmospheric air.

Nuclear power plants (hereinafter NPPs), managed by a large enterprise-leader of this group, do not significantly affect the state of atmospheric air, but environmental monitoring of the air basin is carried out by the company in accordance with developed regulations, instructions and schedules. NPPs conduct an inventory of stationary and mobile sources of chemical emissions, obtain permits for pollutant emissions, keep primary records of pollutants and report to state statistical authorities [49].

All the hydroelectric power plants (hereinafter HPPs) of another large enterprise have insignificant sources of pollutant emissions into the atmosphere, from mobile sources (vehicles) to stationary sources (woodworking workshops, welding stations, lathes, refrigeration plants). All HPPs have permits from regional environmental inspectorates for air emissions. Periodically, every 5 years, an inventory of emission sources is carried out and payments for emissions are made accordingly. Thus, even with low emissions of pollutants, leading companies take care of these problems and try to reduce their negative impact on the environment.

The last area of important issues from environmental sphere is SU405: "Waste". This area is covered by six indicators, including regulations and policies on waste management, management of significant spills and hazardous waste transportation. The enterprises that most fully disclose information on waste management include four large enterprises in Ukraine.

At a large enterprise-leader in this group, there is a system of environmental management. At another enterprise, much attention is paid to the treatment of both industrial and household waste, including the separate collection and proper storage of waste. In 2018, the company sold more than 90% of industrial waste for reuse; the rest was disposed of.

Summarizing the results of the survey of all sample enterprises, it is important to note that enterprises (with few exceptions) are reluctant to disclose to their stakeholders information on important issues of environmental sphere, as well as important issues of financial and economic sphere.

The social sphere includes seven areas, the first of which is SU500: "Labor relations". It includes three indicators:

1. Employees and staff turnover;
2. Employees entitled to maternity/paternity leave;
3. Collective agreement.

This area of important issues is insufficiently covered in many companies that participated in the study. Only the five largest Ukrainian enterprises disclosed these issues in the most detail. These companies keep a clear record of hired employees and statistics on age groups and staff turnover by age groups and calculate the coefficient of implementation of the hiring plan.

The area of important issues SU501: "Occupational safety and health" is covered by seven indicators. The study found that large enterprises with tens of thousands of employees have a proper attitude to the safety and health of their employees. Thus, in 2018, one of the largest enterprises in Ukraine, for the first time in Ukraine, passed the certification audit according to ISO 45001: "Policy and principles of the group in the field of labor protection, health and environment." The company has 15 corporate standards in the field of labor protection and fire safety, which provide a unified approach to labor protection, health and industrial safety as in enterprises. In 2017–2018, the company spent \$31 million to purchase personal protective equipment. The company has a system of analysis and risk assessment of production processes using the world's leading practices and international methods. According to another large enterprise of Ukraine, in 2016–2018, the volume of investments to improve safety and labor protection exceeded UAH 111 million, and the amount of funding for personal protective equipment for employees during this period amounted to UAH 33 million. The company has a system of risk identification and hazard classification, which is the basis for creating an appropriate

system of precautionary measures. All jobs at the company are classified according to the level of danger. This determines the frequency of mandatory occupational safety training, which the company regularly organizes for all employees.

The area of important issues “SU502: Personnel management and development” is determined by six indicators. Personnel is one of the key stakeholders of any company and at the same time is one of its main resources. By investing in staff development, the company gains competitive advantage, stability and sustainable development. Thus, at one leading enterprise, all new employees attend several meetings for adaptation, where the heads of different departments present their activities.

This practice allows new employees to better understand the organization of the company’s business, helping to increase their productivity. The company also has a special program designed to create a reserve of the most promising employees for further appointment to management positions. A corporate MBA program in the areas of enterprise activity has been introduced for senior executives. On average, the company spends from 18 to 21 h of training per employee per year.

The next area of important issues, SU503: “Human Rights”, reveals indicators that describe the company’s attitude to human rights, discrimination in the workplace, the risks of using child labor. According to the study, this area of important issues is not sufficiently disclosed by companies to stakeholders.

The first leading company declares that the protection and observance of human rights is achieved by providing safe working conditions and equal opportunities for all employees and non-discrimination on all grounds. One of the means of monitoring human rights is an effective mechanism for submitting calls to the hotline (anonymous at the request of the applicant). Each application is investigated, and feedback is provided to the applicant within the prescribed period. Child labor, discrimination based on sex, age or other aspects are unacceptable in the company.

Work with staff at another large enterprise aims to prevent discrimination in employment, provide flexible working conditions for family workers and ensure gender equality in the workplace. This company uses job reservations to employ young professionals, both women and men, using the equal participation of employees of both sexes in production, economic, social and managerial decisions.

The area of important issues SU504: “Local Communities” includes four indicators:

1. Regulation and codification of management practices on social investments and local communities;
2. Investments in community development;
3. Implementation, realization of initiatives on development of local communities;
4. Negative impact on local communities.

This is an extremely important area of important issues, which demonstrates the company’s attitude to communities and areas of its location. Five leading companies have been identified in this area. One of them, in 2017–2018, invested \$13.4 million in the development of local social infrastructure. This company regularly concludes social partnership agreements with local authorities. When implementing projects, the company takes into account the development strategy of each community, the views of local residents through sociological research. This company has moved from point charity to systemic strategic investments, thus building a solid foundation for effective social partnership with the territories of presence.

In addition, for the ensuring of stable employment and tax compliance, another large company has made a voluntary commitment to create comfortable living conditions in the regions of its presence. The company keeps on its balance and annually finances social infrastructure facilities, including sanatoriums, sports complexes, cultural and business centers and recreation centers. By building social infrastructure in the regions of presence, the company creates conditions for health and recreation not only for employees but also for the local population. The contribution of this enterprise to the socio-economic development of the territories of presence, in addition to the formation of the revenue base of regional

and local budgets, includes the implementation of a range of social projects and programs aimed at creative and educational initiatives, support for children, youth and the elderly.

SU505: “Marketing and Labeling” as an area of important issues in the social sphere is revealed by three indicators. This area of important issues is either insufficiently disclosed to stakeholders in the entire group of surveyed enterprises or is not relevant for many enterprises in the sample, so it is impractical to select leaders.

Finally, the last area of important issues SU506: “Confidentiality of information” is represented by four indicators that reveal the size of investment in information protection, as well as the processing of complaints about privacy. Thus, the large enterprise-leader has implemented IT uninterrupted operation of business processes and data recovery policies, multifactor authentication and authority management system, etc. Another large enterprise has implemented comprehensive information protection systems for automated systems designed to process information with limited access and to conduct instrumental control of existing systems. It enters into non-disclosure agreements with employees and develops documents defining information security policy requirements. The organization and management of information security is carried out in accordance with the requirements of a series of international standards ISO/IEC 18044-2007, ISO/IEC 27000-2012, ISO/IEC 27001-2013, ISO/IEC 27005-2011, ISO/IEC 27035-2015 and others.

5. Conclusions

Thus, the study showed that some Ukrainian companies pay attention to many areas of important issues and disclose them to their stakeholders. At the same time, many companies are informationally closed to stakeholders (do not publish the information on important issues in the public domain, do not prepare non-financial or integrated reporting or provide very limited information in the survey).

Based on the study, we can conclude that a business model can be sustainable only when it takes into account not only financial indicators and creates value for customers, but when it meets the needs of a wide range of stakeholders, has a margin of safety and manages financial and non-financial risks.

The research has shown that companies that disclose non-financial results to stakeholders have more efficient business models. It was also argued that the effectiveness of evaluation increases with an increase in the number of subjects on the one hand, and detailed disclosure of information by each of the respondents on the other. It is also advisable to consider the possibility of refining indicators and issues based on past experience.

Among the studied Ukrainian enterprises, only about 23% have a high degree of transparency, and more than 37% of Ukrainian companies are closed to stakeholders.

Based on the results of the questionnaire survey, an integral indicator of the activity of Ukrainian enterprises was calculated using scores in four areas—financial, economic, environmental, social and governance—which showed that only about 20% of all enterprises from the sample are characterized by high corporate sustainability; the lowest are 55%.

The evaluation of the efficiency of business models of Ukrainian enterprises is based on a comparative analysis of 11 performance indicators (including return on assets, return on equity, share of administrative expenses in the total income of the enterprise, etc.). The efficiency of the implementation of business models of each enterprise is determined on the basis of the calculated integral indicator, taking into account the corresponding scores. The grouping of enterprises by classes of efficiency of implementation of their business models based on the calculated integral indicator showed that 32% of Ukrainian enterprises successfully implement their business models, but not all of them have effective business models.

According to the results of the calculation, the obtained Pearson correlation coefficients of 0.1413 and 0.126 for corporate sustainability and transparency, respectively, indicate a positive impact of corporate sustainability and transparency of the surveyed enterprises on the efficiency of their business models. To increase the closeness of the relationship, it is

necessary to improve the quality of filling in the questionnaires by enterprises and increase the sample of enterprises.

To clarify the degree of dependence of business models on the quality of corporate governance and non-financial risk management, it is necessary regularly to monitor the corporate sustainability and transparency of large Ukrainian enterprises. For this purpose, it is advisable to conduct an annual analysis of the activities of large Ukrainian enterprises using non-financial indicators.

To strengthen the link between corporate sustainability and transparency and efficiency in the implementation of business models of enterprises, it is necessary to expand the list of enterprises; this will allow us to identify industry leaders, and secondly, to encourage companies to create socially responsible business, disclose information to stakeholders and better fill out questionnaires.

In the following cycles of research and evaluations for 2023–2030, it is important, in the procedures for evaluating of enterprises, to:

1. Use industry indicators and industry areas of significant issues, which will the identification of industry leaders and more accurately assess enterprises in terms of conducting socially responsible business;
2. Monitor the media and interview stakeholders in order to identify the reactions of enterprises to adverse events that were caused by their activities or inaction. The result of monitoring should be the adjustment of the values of certain indicators (relating to the area (/areas) of significant issues in which there occurred a negative event that caused (/could cause) image loss, financial damage, etc.) to the correction factor reflecting quality and speed the enterprise's response is not such a negative event.

Moreover, among the recommendations, it makes sense to conduct a similar analysis of enterprises in selected EU countries (Bulgaria, Poland, Germany), and compare the data with data from Ukrainian enterprises that participated in the study in 2019.

We can conclude that high corporate sustainability and transparency of the enterprise and high-quality management of financial and non-financial risks will help enterprises resist pandemics, wars and other instabilities of the turbulent environment in the future.

The use of the algorithm for calculating integrated indices of corporate sustainability and transparency of enterprises (preferably with state support at the national level) on an annual basis, followed by the division of enterprises into classes, the formation of a rating on this basis and its publication for a wide range of stakeholders and potential investors will lead to:

1. For enterprises—increasing the efficiency of business models by reducing the impact of non-financial risks on their activities;
2. For society and the state—increased competition for higher places in the rating, which will lead to real ESG programs and projects that will positively affect the quality of the environment and social processes in the country;
3. For enterprises—attracting of cheaper investments in development from the sources of so-called “green investors”;
4. For enterprises—increasing the investment attractiveness of the enterprise, which is caused by its sustainable development;
5. For enterprises—an opportunity to become a partner of a transnational corporation that requires their partners to adhere to the principles of sustainable development and corporate social responsibility.

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References

1. Dziekański, P.; Prus, P.; Maitah, M.; Wrońska, M. Assessment of Spatial Diversity of the Potential of the Natural Environment in the Context of Sustainable Development of Poviats in Poland. *Energies* **2021**, *14*, 6027. [CrossRef]
2. Afuah, A. *Business Models: A Strategic Management Approach*; McGraw-Hill Companies: Newyork, NY, USA, 2003; 432 p.
3. Osterwalder, A.; Pigneur, I.; Bernarda, G.; Smith, A. *Value Proposition Design*; Wiley: Hoboken, NJ, USA, 2014; p. 320.
4. Gambardella, A.; McGahan, A. Business-Model Innovation: General Purpose Technologies and their Implications for Industry Structure. *Long Range Plan.* **2010**, *43*, 262–271. [CrossRef]
5. Debelak, D. *Business Model Made Easy*; McGraw-Hill Companies, Inc.: New York, NY, USA, 2006; 240p.
6. Jablonski, A.; Jablonski, M. Business Models in Water Supply Companies-Key Implications of Trust. *Int. J. Environ. Res. Public Health* **2020**, *17*, 2770. [CrossRef] [PubMed]
7. Ivashkiv, I.; Kupalova, H.; Goncharenko, N.; Andrusiv, U.; Streimikis, J.; Lyashenko, O.; Yakubiv, V.; Lyzun, M.; Lishchynskiy, I.; Saukh, I. Environmental Responsibility as a Prerequisite for Sustainable Development of Agricultural Enterprises. *Manag. Sci. Lett.* **2020**, *10*, 2973–2984. [CrossRef]
8. Magomedova, A.; Ignatyuk, A.; Liubkina, O.; Murovana, T. FinTech as an innovation challenge: From big data to sustainable development. In Proceedings of the International Conference on Sustainable Futures: Environmental, Technological, Social and Economic Matters, Kyiv, Ukraine, 20–22 May 2020; Volume 166. [CrossRef]
9. Magretta, J. Why Business Models Matter. HBR Publishing Corporation, 2002. Available online: <https://hbr.org/2002/05/why-business-models-matter> (accessed on 22 September 2022).
10. Mahmoodi, M.; Roman, M.; Prus, P. Features and Challenges of Agritourism: Evidence from Iran and Poland. *Sustainability* **2022**, *14*, 4555. [CrossRef]
11. Osterwalder, A.; Yves, P. *Business Model Generation: A Handbook For Visionaries, Game Changers, and Challenger*; Wiley: Hoboken, NJ, USA, 2010.
12. Porter, M. *What Is Strategy?* *Harvard Business Review*; Harvard Business School Publishing Corporation: Brighton, MA, USA, 1996; pp. 61–78.
13. Slávik, Š. Komparatívna analýza podnikateľských modelov. *Ekon. A Manaz.* **2011**, *11*, 23–43.
14. Strekalova, N. *The Concept of Business Model: The Methodology of System Analysis*; Vestnik (Herald) of Saint Petersburg State University: Saint Petersburg, Russia, 2009; pp. 92–105.
15. Thomson, P.; Brennan, R. *Tickle: Digital Marketing for Tech Companies*; London, UK, 2013; 288p.
16. Kharitonova, G.; Klimchuk, A. The Use of Business Models in Managing a Company in a Crisis. Russia's Transport Business. 2009, pp. 105–109. Available online: <https://cyberleninka.ru/article/v/ispolzovanie-biznes-modeley-pri-upravlenii-kompaniyev-usloviyah-krizisa-1> (accessed on 22 September 2022).
17. Chesbrough, H. *Open Business Models*; Harvard Business School Press: Boston, MA, USA, 2006; 272p.
18. Sjödin, D.; Parida, V.; Jovanovic, M.; Visnjic, I. Value Creation and Value Capture Alignment in Business Model Innovation: A Process View on Outcome Based Business Models. *J. Prod. Innov. Manag.* **2020**, *37*, 158–183. [CrossRef]
19. Zott, C.; Amit, R.; Massa, L. The Business Model: Recent Developments and Future Research. *J. Manag.* **2011**, *37*, 1019–1042. [CrossRef]
20. Kaplan, R.S.; Norton, D.P. *Balanced Scorecard. Translating Strategy into Action*; Harvard Business Review Press: Brighton, MA, USA, 1996; 336p.
21. Butenko, N.; Prokopenko, O.; Kazanska, O.; Deineha, I.; Omelyanenko, V. Communication business processes of industrial enterprises in the conditions of globalization. *Int. J. Manag.* **2020**, *11*, 884–895. Available online: <https://www.iaeme.com/MasterAdmin/uploadfolder/IJM.11.05.081/IJM.11.05.081.pdf> (accessed on 22 September 2022). [CrossRef]
22. Drucker, P. *Effective Enterprise Management*; Williams: St. Petersburg, Russia, 2008; 224p.
23. Govindan, K.; Shankar, K.M.; Kannan, D. Achieving sustainable development goals through identifying and analyzing barriers to industrial sharing economy: A framework development. *Int. J. Prod. Econ.* **2020**, *227*, 107575. [CrossRef]
24. Kaminski, R.; Marcysiak, T.; Prus, P. The development of green care in Poland. In Proceedings of the 2018 International Conference Economic Science for Rural Development, Jelgava, Latvia, 9–11 May 2018; pp. 307–315.
25. Nesterova, I. Degrowth Business Framework: Implications for Sustainable Development. *J. Clean. Prod.* **2020**, *262*, 121382. [CrossRef]

26. Remme, J.; de Waal, A. High performance stakeholder management: What is needed? *Meas. Bus. Excell.* **2020**, *24*, 367–376. [CrossRef]
27. Oleksiv, I.; Kharchuk, V. Theoretical and methodological ambushes of enterprise management at ambushes of interests of stakeholders. *Democr. Vryduvannya* **2014**, *13*, 48–53.
28. Akulenko, K.; Fyliuk, G. Methodological principles of evaluation of investment attractiveness of enterprise. *Balt. J. Econ. Stud.* **2018**, *4*, 387–395.
29. Seroka-Stolka, O.; Fijorek, K. Enhancing Corporate Sustainable Development: Proactive Environmental Strategy, Stakeholder Pressure and the Moderating Effect of Firm Size. *Bus. Strategy Environ.* **2020**, *29*, 2338–2354. [CrossRef]
30. Temperli, C.; Blattert, C.; Stadelmann, G.; Brändli, U.-B.; Thürig, E. Trade-Offs between Ecosystem Service Provision and the Predisposition to Disturbances: A NFI-Based Scenario Analysis. 2020. Available online: <https://link.springer.com/article/10.1186/s40663-020-00236-1> (accessed on 22 September 2022).
31. Pimenova, O.; Fylyuk, H.; Pimenov, S. Model of assessment of competitiveness and sustainable development of Ukrainian agricultural enterprises. *Manag. Theory Stud. Rural. Bus. Infrastruct. Dev.* **2020**, *42*, 330–338. [CrossRef]
32. Butenko, N.; Kot, L. Methodological approaches to the evaluation of the effectiveness of partnership relations. *Balt. J. Econ. Stud.* **2019**, *5*, 42–49. Available online: <http://www.baltijapublishing.lv/index.php/issue/article/view/703> (accessed on 22 September 2022). [CrossRef]
33. Graves, S.; Waddock, S. Institutional Owners and Corporate Social Performance. *Acad. Manag. J.* **1994**, *37*, 1034–1046. [CrossRef]
34. Komarova, K.; Kovalchuk, N. Social responsibility as a component of business development strategy at Ukrainian enterprises. *Innov. Econ.* **2016**, *162*, 25–30.
35. Fitch. Rating Criteria. Available online: <https://www.fitchratings.com/criteria> (accessed on 22 September 2022).
36. Dyduch, J.; Krasodomska, J. Determinants of Corporate Social Responsibility Disclosure: An Empirical Study of Polish Listed Companies. *Sustainability* **2017**, *9*, 1934. [CrossRef]
37. Tarasiuk, H.; Mostenska, T.; Pashchenko, O.; Rudkivskyi, O.; Burachek, I. Optimization of operation program of manufacturing. *Int. J. Sci. Technol. Res.* **2020**, *9*, 24–28. Available online: <http://www.ijstr.org/final-print/jan2020/Optimization-Of-Operation-Program-Of-Manufacturing-Enterprise-.pdf> (accessed on 22 September 2022).
38. SAM Corporate Sustainability Assessment-Annual Scoring & Methodology Review. 2019. Available online: https://www.spglobal.com/esg/csa/static/docs/DJSI.CSAMethodology_MethodologyReview.pdf (accessed on 22 September 2022).
39. Ministry of Agrarian Policy and Food of Ukraine. K: Ministry of Agrarian Policy and Food of Ukraine. 2022. Available online: <http://surl.li/dzcda> (accessed on 22 September 2022).
40. State Statistics Service of Ukraine. K: State Statistics Service of Ukraine. 2022. Available online: <http://ukrstat.gov.ua/> (accessed on 22 September 2022).
41. Moldavan, L.; Pimenova, O. “Holdingization” of the agricultural sector of Ukraine: Consequences and ways of their prevention. *Manag. Theory Stud. Rural. Bus. Infrastruct. Dev.* **2021**, *43*, 217–224. [CrossRef]
42. Lupenko, Y.; Kropyvko, M. Agroholdings in Ukraine and strengthening the social orientation of their activities. *Econ. Agro-Ind. Complex* **2017**, *7*, 5–21.
43. ISO 26000; 2010 Guide on Social Responsibility. Translated and published by EY. 2010; 129. Available online: http://meraua.com/files/ISO_26000.-Rus--draft.pdf (accessed on 22 September 2022).
44. ISO 9001; Family Quality Management. Translated and published by Gorbunkov. 2022; 28. Available online: [https://pqm-online.com/assets/files/pubs/translations/std/iso-9001-2015-\(rus\).pdf](https://pqm-online.com/assets/files/pubs/translations/std/iso-9001-2015-(rus).pdf) (accessed on 22 September 2022).
45. Coca-Cola System Sustainability Report in Ukraine. 2018. Available online: <https://www.coca-colaukraine.com/content/dam/journey/ua/uk/private/2019/July/Coca-Cola-Corporate-Report-GRI-2018.pdf> (accessed on 22 September 2022).
46. Pimenov, S. Choosing a location for a logistics center as a strategic advantage. Coll. Science. In Proceedings of the International Scientific and Practical Conference “Small and Medium Business: Problems and Prospects for Development in Ukraine, Kyiv, Ukraine, September 2016; pp. 168–171.
47. Integrated Report of PJSC Ukrzaliznytsia. 2017. Available online: <https://www.uz.gov.ua/files/file/Інтегрований%20звіт%202017.pdf> (accessed on 22 September 2022).
48. Integrated Report of JSC Ukrzaliznytsia. 2018. Available online: [https://www.uz.gov.ua/files/file/Book%20UZ_18_Final\(new\).pdf](https://www.uz.gov.ua/files/file/Book%20UZ_18_Final(new).pdf) (accessed on 22 September 2022).
49. Non-Financial Services of NJEC “Energoatom”. 2018. Available online: <http://nfr2018.energoatom.kiev.ua/ua/Chiste-dovkillya.php> (accessed on 22 September 2022).

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