RESEARCH REPORT



Responsible business in Russia

Over 20 years of experience through the lens of big data

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The Centre for Sustainable Development of the SKOLKOVO School of Management

was established in 2014 in response to the increasing relevance of the topic of sustainable development and ESG in Russia and the world. The Center promotes the sustainable development agenda, trains new ESG leaders, and develops innovative solutions in the field of sustainable development for businesses, government, and society.



Website



Telegram Channel

The Artificial Intelligence Laboratory of the SKOLKOVO School of Management

researches AI application practices in Russia and abroad, identifies current technological barriers and business demands for AI applications, and also conducts practical research, introducing AI into the educational process and changing the learning experience of students at the Moscow School of Management SKOLKOVO.



Website



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Introduction

To date, Russian companies have accumulated a significant amount of data in the field of the corporate ESG agenda, represented primarily by regular non-financial reports containing key non-financial goals of companies, as well as KPIs and actual results on ESG initiatives. The purpose of this study is to analyze this data set in order to obtain a most comprehensive understanding of the development and transformation vectors of the ESG agenda in Russia, starting with the appearance of the first corporate sustainability reports in the 2000s and ending with the changes in recent years caused by the turbulence of the external environment. It is important to note that after 2022, the level of transparency of data disclosed by Russian companies has significantly decreased. In the new conditions, non-financial reporting remains a valuable source of information that provides an opportunity to obtain additional data on business activities and efficiency.

As part of the research, we interviewed a number of experts and sustainability managers in Russian companies (large businesses, consultants, rating agencies and independent experts), which allowed us to identify a number of current key trends of sustainable development in the Russian market. These trends formed the basis for further analysis of the main hypotheses and biases that are often voiced regarding the ESG agenda. At the same time, one of the trends — automation and information analysis in the field of sustainable development using artificial intelligence — formed the basis of the methodology of this study. During data processing, we used large language models (LLM), as well as pre-trained classification models (BERT) and NLP tools (NLTK, topic modeling, sentiment analysis and discourse analysis). Using LLM to automate qualitative research, particularly encoding concepts from documents, is an innovative approach to conducting qualitative research.



Elena Dubovitskaya

Director of the Centre for Sustainable Development of the SKOLKOVO School of Management



Alexander Didenko

Head of the Artificial Intelligence Laboratory of the SKOLKOVO School of Management

The main questions posed in the framework of the study are as follows:

- How has the level of attention of business actors to the sustainable development agenda in Russia changed after 2022 compared to previous periods?
- In practice, do companies put increasingly more emphasis on social aspects? What were the turning points in this process?
- What categories of ESG initiatives and metrics do companies from various sectors of the economy focus on?
- To what extent do businesses assess the effects of implementing ESG initiatives?
- What is the tone of presentation of ESG information in public communications?
- Do Russian businesses respond to the implementation of local recommendations and initiatives in the field of sustainable development?
- What factors have a greater impact on the company's position in the ESG ranking?

We hope that the discoveries presented in the study will be in demand and result useful for all actors involved in the sustainable development agenda in Russia.





Key trends on the sustainable development agenda in Russia based on the results of expert interviews:

- 1 Localizing the agenda and strengthening the role of the regulator;
- 2 Rational and pragmatic agenda;
- 3 Reduced transparency and increased level of caution in data disclosure:
- 4 The growing importance of the social and security aspects;
- 5 Automation, digitalization, and machine-readable reporting.
- 6 Coexistence of different standards and the combination of local and international approaches

Hypothesis 1. The sustainable development agenda in Russia has been receiving less attention since 2022, primarily in export-oriented industries

- 1 The number of published sustainability reports did not decrease in 2022 instead there was a moderate increase of 11% in 2022-2023 compared to the period of 2020-2021.
- 2 The leaders in terms of the number of reports in the period before and after 2022 are energy, metallurgy, finance and the oil and gas industry.
- 3 The transport sector has demonstrated the highest increase in non-financial reporting after 2022, and the finance sector has also shown significant growth. The decline was registered in the oil and gas industry and in trade and retail.

Hypothesis 2. The social aspect (S) has become a priority for Russian businesses after 2022, whereas the level of disclosure of the governance aspect has decreased

1 There have been no significant fluctuations after 2022 in any of the ESG aspects in non-financial reporting of Russian companies, including social and governance aspects.

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- 2 In general, the social agenda has been dominating non-financial reporting since 2005, but the general trend is downward. The environmental aspect accounts for a slightly smaller share, but at the same time it shows an upward trend. The governance aspect accounts for the smallest share and also showcases an upward trend.
- 3 Overall, the ESG agenda has become somewhat more declarative after 2022: the share of ESG-related sentences among all sentences in the reports has decreased slightly.

Hypothesis 3. Industrial companies are more concerned with environmental aspects, while companies from the service sector put more emphasis on social aspects

- 1 In the service sector, reporting is dominated by the social aspect, while in the case of the manufacturing sector it is the environmental aspect. In both sectors, the governance aspect is the least represented.
- 2 The manufacturing sector has demonstrated the most stable performance in terms of the share of the ESG aspects in reporting throughout the period from 2005 to 2023. There were no significant changes in 2022.
- 3 The service sector has been quite volatile throughout the period, both on social and environmental issues. After 2022, the service sector reacted by a reduction in the share of the environmental aspect.
- 4 Although accounting for a small share in non-financial reporting in both the service manufacturing sectors, the governance aspect is characterized by an upward trend.

Hypothesis 4. Businesses do not put enough attention in assessing the effects of implementing ESG initiatives

- 1 Companies' disclosure of ESG initiatives is several times more extensive than the disclosure of metrics. At the same time, most ESG initiatives and metrics relate to the social and environmental aspects of the ESG agenda, while there are significantly fewer initiatives and metrics in the field of corporate governance.
- 2 In the social sphere, in most industries, the share of statements related to ESG initiatives is higher than the share of statements that include quantitative metrics for their assessment, whereas in the environmental field it is the contrary.

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- 3 Companies focus on initiatives that directly affect their core business risks and operational activities. The priority categories for most industries are emissions of ozone-depleting gases, industrial safety, diversity and inclusivity within the board of directors.
- 4 Among the metrics, the obvious leader for most industries is indicators related to the category of human capital development.

Hypothesis 5. Russian companies show a tendency to present ESG information in a positive way, softening the description of problem areas

- In communications with stakeholders, Russian companies demonstrate the prevalence of subjective assessments over factual data. After 2019, there has been a significant decrease in the share of factual information in public reporting, which leads to the dominance of statements reflecting opinions.
- 2 Until 2019, the tone of non-financial reporting would be negative and on other occasions neutral and positive, with a strong emphasis on positive aspects. After 2019, there has been a shift to exceptionally positive coverage.

Hypothesis 6. Businesses actively implement local recommendations and initiatives in the field of sustainable development

- 1 There is a significant increase in the use and mention of local recommendations and initiatives in non-financial reporting.
- 2 Nevertheless, non-financial reporting in Russia also reflects a growing interest in new international standards related to financial reporting.

Hypothesis 7. The analysis of public non-financial statements makes it possible to predict the company's position in the ESG ranking with a high level of accuracy

1 The leaders in the median ESG ranking are telecommunications, oil and gas, mining, and metallurgy industries, with companies from the agro-industrial complex, IT, and pulp and paper industries ranking lowest.

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2 The company's size, the volume of the report, the frequency of mentions of categories such as "biodiversity" and "economic development", as well as the frequency of mentions of such metrics as "percentage of employees covered by collective labor agreements" and "number of students participating in the program" have the greatest impact on the company's position in the ESG ranking.

Recommendations for adapting businesses to emerging trends:

- 1 Automation of ESG data processing cannot be avoided, prepare for this in advance.
- 2 Consider digital security measures.
- 3 Consider reinventing the format of non-financial reporting for various stakeholders.
- 4 Be prepared that ESG reporting may in the future form part of financial statements.
- 5 Keep track of new topics on the sustainable development agenda that are relevant to your local context.

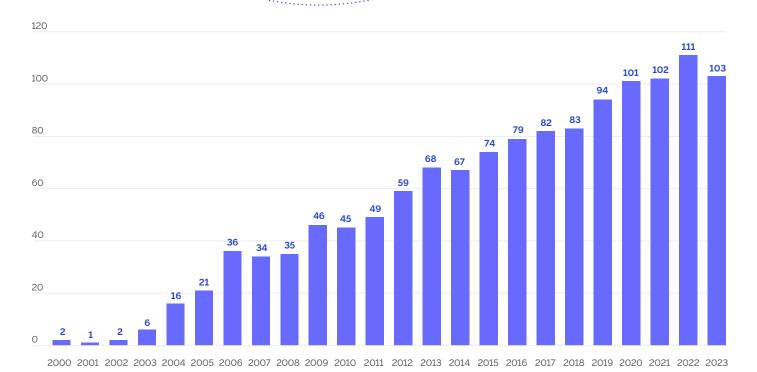
Data overview

The study used data from the Library of Corporate Non-Financial Reports 1 of the Russian Union of Industrialists and Entrepreneurs (RSPP), the largest database of non-financial reports of Russian companies, for the end of 2024. The total number of analyzed reports amounted to 1,344 for the period of 2000–2023.

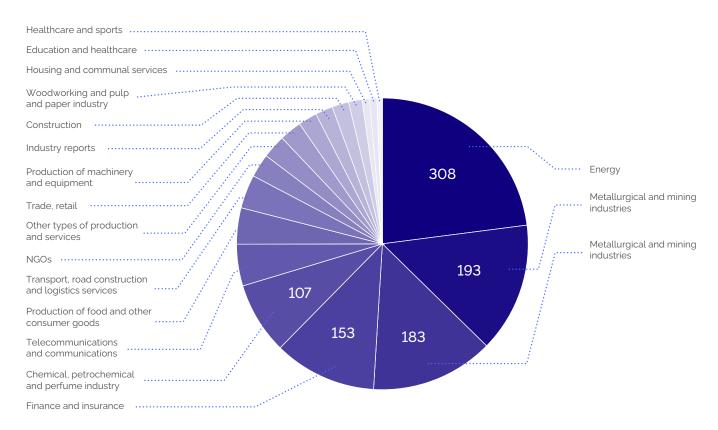


Russian Union of Industrialists and Entrepreneurs (RSPP). A Table from the Library of Corporate Non-Financial Reports as of today [Electronic resource]. URL: https://rspp.ru/tables/non-financial-reports-library/ (date of access: 12/18/2024)

Number of reports by year



Number of reports by industry



During data processing, large language models (LLM), as well as pretrained classification models (BERT) and NLP tools (NLTK, topic modeling, sentiment analysis, discourse analysis), were used.

In addition, as part of the study, a number of semi-structured in-depth interviews were conducted with experts in the field of sustainable development: consultants, heads of departments in companies leading in non-financial reporting and founders of ESG Tech startups. The interviews were conducted in spring and summer of 2025. The authors of the study would like to thank all the interview participants for their time and contribution to the preparation of this study.



Overview of sustainable development trends

Together with a number of directors and experts in the field of sustainable development, we have identified the key trends that are observed in the Russian market in 2025. This list is not comprehensive and may be elaborated depending on a specific industry or field of activity. These trends formed the basis for our further analysis of the main hypotheses and statements that are often voiced regarding the ESG agenda in Russia. Hypothesis testing is presented in subsequent chapters.

1. Localizing the agenda and strengthening the role of the regulator

Previously, the agenda was largely shaped by global trends and the demands of international investors, but today it is increasingly shifting towards domestic priorities and government regulation. This is reflected in the active development of national standards, such as the Standard for Public Business Capital (SOPB), the issuance of recommendations from the Bank of Russia and the Ministry of Economic Development, as well as the emergence of government ratings (e.g., the so-called EPG or "ecology—personnel—government" rating). Business is shifting its focus from global goals to contributing to developing national projects and solving tasks that are prioritised by public policy. There are also changes in the terminology used: the abbreviation ESG is being phased out by alternative concepts such as "sustainable development" or "social capital". Thus, the ESG agenda in Russia is becoming a tool not so much for global positioning as for internal development and responding to the demands of the national economy and society.

What we are currently noting for our clients in the Russian market is, of course, a reorientation towards local goals and objectives, and a national context. This happens for a variety of reasons: first of all, there are external economic reasons, and the tendency to localize legislative initiatives also plays an important role in this process. A lot of work is being done in this area, and it is clear that companies in the current environment are welcoming all incentives there are. And this forces them to take a closer look at standards, ratings and other initiatives in the domestic market.»

Maria Kabysheva,

2. Rational and pragmatic agenda

The current stage in the development of the ESG agenda in Russia demonstrates a marked shift towards a practice-oriented and business-efficient approach, which marks a transition from a "romanticized" agenda to a pragmatic one that can help generate more profit. Previously, sustainable development was largely perceived as a tool for reputational positioning. Companies used to adopt ambitious but elusive goals against the background of relatively weak implementation in business processes, but today business actors expect measurable returns from sustainable development projects. General declarations are being replaced by a request for a clear justification of the ROI (return on investment) from an ESG project — this vision also becomes deeply integrated into key operational processes such as risk management, supply chains, and personnel policy. This reflects a general transformation of the approach: from a stand-alone communication function to a practice-oriented tool for solving real business problems, such as staff shortages, resource optimization, or reducing operating costs. The number of ESG-based profit centers — such as, for instance, the recycled polymer division at SIBUR — is on the rise. This emphasizes the integration of sustainable development into the core of the companies' business model.

The global trend seen in the market in the field of sustainable development is that there is a more mature view of the agenda and the expectation of its business effectiveness. This does not imply that the ESG concept is being rejected or there is a crisis of the agenda — instead it is a showcase of how the vision of this concept is evolving towards a more pragmatic view. In order for changes to take place in reality, it is necessary to implement new solutions. This requires changes at the organizational and technological level, as well as a revision of resources and integration into the business function. Companies' statements must be informed and thoughtful, and every initiative must make business sense: it will no longer be possible to simply say fine words without acting upon them,»

Ksenia Lopatkina,

Head of Sustainability & ESG Consulting and Strategy Practice, You Social

3. Reduced transparency and increased level of caution in data disclosure

Under the influence of sanctions and their associated risks, as well as tougher regulatory pressure, Russian companies have revised their approaches to publishing information, becoming more selective in the process of data disclosure. There is a deliberate narrowing of the scope of data disclosed, especially in terms of corporate governance: ownership structures, supply chains, and tax policy. Instead of detailed indicators, more general descriptions are increasingly being used, avoiding direct references to the abbreviation ESG in favor of neutral terms, and sensitive data is being transferred to appendices of reports or completely excluded from public communications. This reflects the overall business strategy to reduce reputational and operational risks in the new environment, which, however, creates challenges for stakeholders who expect openness.



The most sensitive part of public reports in the current circumstances is corporate governance. The decrease in transparency, up to the exclusion of certain sections from reports, is associated with the leveling of sanctions, as well as regulatory risks, mainly associated with external influence. Therefore, it is necessary to analyze corporate governance in companies in other ways, different from the ones used in the previous years,»

Vladimir Gorchakov,

Senior Director, Head of the ACRA Sustainable Development Risk Assessment Group

4. The growing importance of the social and security aspects

This shift became particularly noticeable during the pandemic and has intensified in recent years, when companies have been facing the need to respond quickly to internal challenges. The increased focus on the social component is reflected, first of all, in the growing attention to personnel sovereignty: the efforts to overcome the shortage of professionals and the retention of key employees, support for the regions of presence and the development of social infrastructure, as well as the active participation of businesses in solving social problems on the national level. At the same time, cybersecurity and data protection issues have come to the fore, as they have become more acute with the transition to remote work formats. These changes reflect the companies' reorientation to the needs of domestic stakeholders in the new environment, while the climate agenda has somewhat receded into the background due to reduced pressure from international investors.

Social initiatives turned out to be the most easy-to-understand and clearly essential part of the ESG agenda in 2022 — in a sense, they became a life-saving driver that all specialists in sustainable development seized on. Gradually, it became clear that it was not all limited to social projects alone, and the discourse on sustainable development broadened again, but this time with a focus on projects specific to where we live and work,»

Ivan Barsola,

Executive Director of the ESG Directorate, Sberbank PJSC

5. Automation, digitalization, and machine-readable reporting

The need for automation and digitalization of ESG reporting is driven by the steadily growing volume of data collected and the need to improve the efficiency of their processing. More and more companies are seeking to implement artificial intelligence technologies to analyze reports, verify information, and search for relevant data. Standardization of formats is becoming an important step in this direction — for example, there is the Bank of Russia's initiative to transition to a single annual report in machine-readable form, which would simplify the consolidation and analysis of information. However, today the process is constrained by the high cost of implement-

ing such systems, the lack of strict requirements, and the difficulty of integrating disparate data from different departments. Nevertheless, the move towards digitalization reflects the overall desire of businesses to increase efficiency, reduce reporting costs, and ensure greater transparency and comparability of data for stakeholders.

New tools are needed to process a huge array of ESG data, as well as unify data from non-financial reports. With the advent of AI technologies on the market, these tasks have become possible. However, current models operate in a limited range, lack sufficient expertise, and often allow for "hallucinations". New analytics tools will be in demand among different audience segments: the corporate sector will be able to quickly track best practices and implement them faster; consultants will be able to correctly compare data; and financial analysts will be able to assess the value of a company more objectively.»

Vasily Fokin,

Expert on sustainable development and AI solutions for ESG

6. Coexistence of different standards and the combination of local and international approaches

On the one hand, there is a general global trend towards the harmonization of reporting standards worldwide to ensure comparability of data and the possibility of cross-sectoral analytics. On the other hand, regional fragmentation is growing, manifested in the mitigation of requirements and adaptation to local conditions. In Russia, this process has its specifics: businesses are forced to simultaneously take into account both international frameworks (for example, it is true for export-oriented companies) and actively developing local standards and ratings. However, the development of domestic assessment systems faces a key problem: the lack of government incentives. According to experts, Russian regulation is mainly based on "sticks" rather than "carrots", which does not incentivize businesses to deeply integrate ESG principles. Ratings are often perceived by businesses only as a tool for "measuring the temperature" inside the company and carrying out a self-check, without real advantages for leading companies. This creates a paradoxical situation where there is a formal alignment of standards, but harmonization on a deeper level and practical value of these activities remain limited without systemic incentives from the regulator.

Participation in the rating is always a huge project in terms of time and resources, while there are usually no advantages for companies holding a position in these ratings, apart from image-building. There are no relevant legislative provisions, and Russian customers practically do not rely on ratings when choosing a supplier. So, why is this the case? Because there is no regulation that would be aimed at creating "carrots". Our entire regulatory framework is based on 'sticks',»

Irina Bakhtina,

Chair of the Supervisory Board of the National ESG Alliance, Deputy CEO for Sustainable Development, En+ Holding, Director for Sustainable Development, RUSAL

Hypothesis 1

The sustainable development agenda in Russia has been receiving less attention since 2022, primarily in export-oriented industries

An analysis of sustainability reporting in Russia shows a **neutral/positive reaction** to the events of 2022. Contrary to the expectations (2) of a general reduction in ESG reporting due to the departure of Western companies and a reduction in international incentives, the **number of reports in 2022-2023 increased by 11% compared to 2020-2021 (3).**

The increase in the number of reports after 2022 is largely due to changes in the listing rules of the Moscow Stock Exchange for the first and second quotation lists, which also became an incentive for companies to publish non-financial statements as a separate document or as part of an annual report. Additionally, new segments of the economy were included in the agenda, where, despite restrictions in public communications, interest in this topic is also evident,»

Vladimir Gorchakov,

Senior Director, Head of the ACRA Sustainable Development Risk Assessment Group

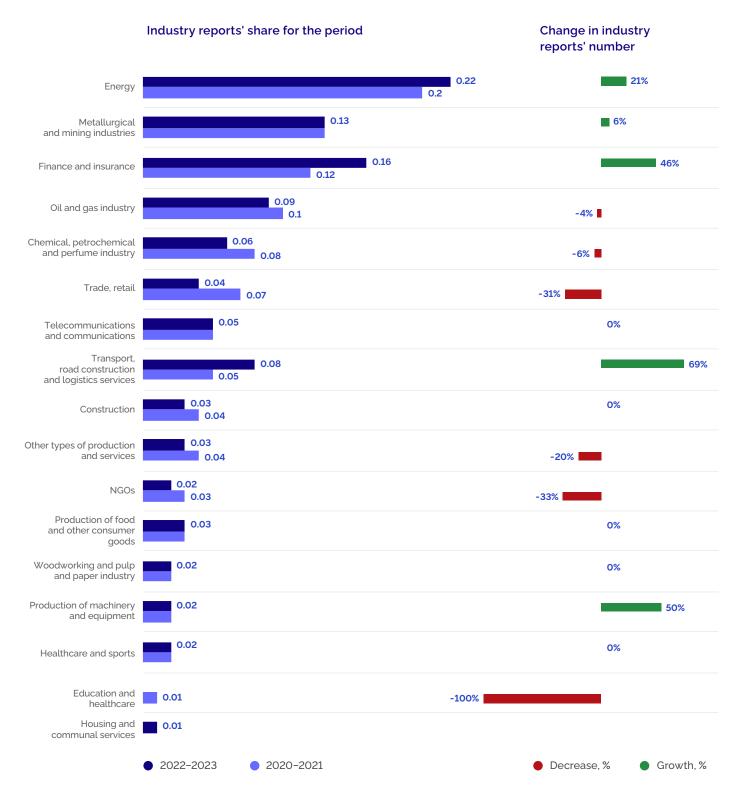
The number of reports increased in 5 out of 17 industries, and remained the same in another 5 industries. The most significant decrease is observed in industries where the number of reports was initially insignificant — in education and the non-profit sector, as well as in trade and retail — which may be due to the withdrawal of many international companies from the Russian market.



RBC. «"Steps Backwards": What Will Happen to ESG Projects After Foreign Companies Leave" [Electronic resource]. URL: https://trends.rbc.ru/trends/ green/632873db9a794758d8eef01e



In the context of this study, the designation "2022" does not refer to the date of publication of the report, but to the reporting period to which it relates

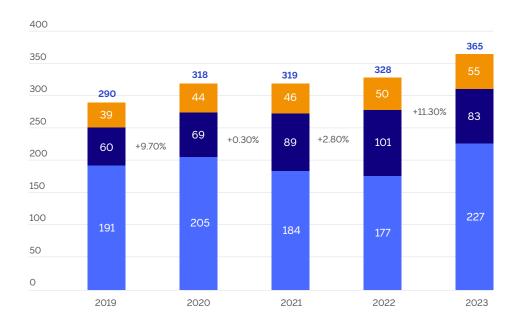


To assess the reaction of Russian companies to the publication of non-financial statements after 2022, two periods of comparable duration were identified: 2020-2021 and 2022-2023. Based on the RSPP database, the total number of reports for each period, including sustainable development reporting and integrated reports, was determined. In the case when a report was submitted to cover two years, it was taken into account for each year separately. Based on these data, the percentage change in the number of reports in 2022-2023 compared to 2020-2021 was calculated.

Diagram 1.1 Change in the number of non-financial reports when comparing two periods: 2020-2021 and 2022-2023, %

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Pacioli Consulting 4 experts also obtained similar results — since 2020, the total number of public reports with information on sustainable development had increased by 14.3 percentage points by 2023, with the largest increase occurring in 2022.



Pacioli Consulting. Atlas of Nonfinancial Reporting in Russia — 2024 [Electronic resource]. URL: https:// www.pacioliconsult.ru/presstsenter/analitica/obzor-rynka-atlasnefinansovoy-otchetnosti-rossii/

- Specialized (thematic) reports
- Sustainability reports / ESG reports
- Annual (incl. integrated) reports

Diagram 1.2

The total number of public reports with information on sustainable development (non-financial reports) for the reporting years 2019-2023

Source: Atlas of Non-Financial Reporting in Russia 2024, Pacioli Consulting, 2025

A number of factors, individually and/or their combination, played a role in maintaining the trend towards the growth of non-financial reporting:

- 1 The inertia of already established processes: preparing a report requires months of work and the participation of entire departments, and this process cannot be brought to a halt quickly:
- 2 Reputational risks failure to report would look like a sharp U-turn, undermining confidence in the company and its reputation.
- 3 Investment and automation: failure to report would lead to the loss of accumulated institutional capital and would require further resumption of work from scratch, which would entail costs.
- 4 **Demand in other markets** despite the withdrawal of Western investors, some companies continued to report due to demand in other markets, including Asian ones, and the requirements these markets impose.
- 5 A tool for maintaining communication with external stakeholders against the background of reduced annual reporting.



Kommersant. "Ot Vorot — Vostochny Povorot", an article on the ESG policy in the Asian-Pacific Region and its implications for Russia [Electronic resource]. URL: https://www. kommersant.ru/doc/5413077



Ivan Barsola,

Executive Director of the ESG Directorate, Sberbank PJSC

By the number of ESG reports published in 2020-2021, the leading industries were energy (20% of the total share), metallurgy and mining (13%), finance and insurance (12%), and the oil and gas industry (10%). Other industries accounted for a smaller share of the ESG reporting market.

After 2022, the situation has been changing, albeit slightly: the energy sector still remains in the first place (22%), the number of reports in 2022-2023 in this industry increased by 21% compared to 2020-2021. Finance and insurance come in second place (16%) instead of metallurgy, which in turn also retains its high ranking coming in third place in terms of the number of reports for the given period — 13%. The oil and gas industry dropped to 9% of the total number of reports for the specified period, but retained its leading position.

At the same time, in the leading industries in terms of the number of reports in 2020-2021 and 2022-2023, there was an increase in reporting rates: in energy by 21%, in finance by 46%, and in the metallurgical and mining industries by 6%. Meanwhile, the oil and gas industry shows a 4% reduction.

In terms of growth in the volume of non-financial reporting. **transport, road construction and logistics services** showed the **highest rates**: the number of reports in this industry increased by 69% compared to 2020-2021. After 2022, their share among other industries almost equaled the oil and gas industry — 8% and 9%, respectively — putting the industry in 5th place in terms of the number of non-financial reports.

The finance and insurance industry has also become one of the leaders in the growth of reporting rates: the indicator has increased by 46%, which may largely be due to the regulator's active efforts to stimulate responsible financing, as well as to the general trend towards mandatory reporting.

The Bank of Russia is highly active in regulating non-financial reporting, integrating into it its own understanding of sustainable development as a tool for achieving national goals and developing new financial instruments. Currently, work is underway to update approaches to listing companies, where sustainable development is positioned not as an independent element, but as an integral part of the corporate reporting system.»

Ivan Barsola,

A wider analysis of the dynamics of publishing non-financial reports in the period from 2005 to 2021 inclusive confirms the leading positions of the previously identified industries: throughout the reviewed period, the resource sectors (energy, metallurgy and mining, as well as the oil and gas industry) remain dominant, with finance and insurance prevailing among the service sectors.

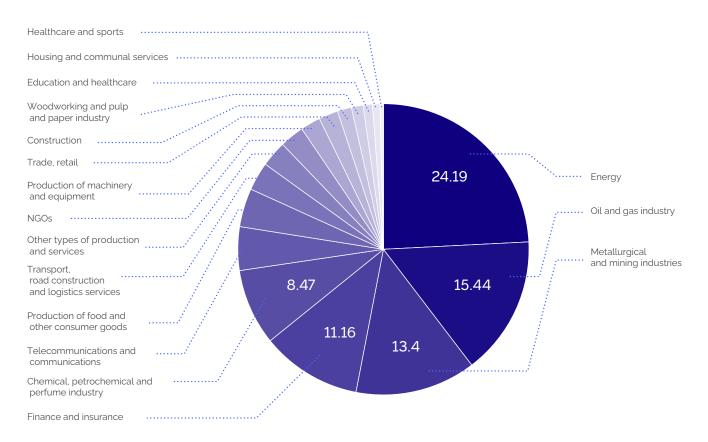


Diagram 1.3 Shares of reports by industry until 2022, % (2005–2021)

The data presented corresponds to the period of 2005 to 2021 inclusive.

Hypothesis 2

The social aspect (S) has become a priority for Russian businesses after 2022, whereas the level of disclosure of the governance aspect has decreased

We decided to analyze to what extent the observed trend towards increasing attention to the social aspects of the sustainable development agenda can be traced, including in the open non-financial reporting of Russian companies.

Methodology:

The analysis is based on the methodology from the article by Schimanski et al., 2023 $\stackrel{\frown}{6}$. As part of this approach, all individual sentences were extracted from the reports in two stages. They were further classified using three LLM models pre-trained for ESG data analysis into three groups, depending on the aspect they belong to — E, S or G. After labeling the extracted sentences, the proportion of these labels in the reports was calculated.

Despite the debate about the dominance of the social agenda, the analysis of the ESG aspects of non-financial reporting by Russian companies does not show any significant growth in the social aspect after 2022. The share of the governance aspect also remains stable — it increased slightly in 2022 compared to 2021, by 2 percentage points, however, this was rather due to a slight decrease in the share of the environmental aspect — also by 2 percentage points. There have been no significant fluctuations after 2022 in any of the ESG aspects.

Corporate governance in Russia has always existed and has been regulated both within companies and by legislation, so the G-component of the ESG still remains quite relevant,»

Andrey Kosko,

Senior Consultant at the ESG Practice Consulting Integrator You Social

In the longer term, the distribution of shares of various ESG aspects has generally shown little fluctuation since 2005. The only exception is the year 2021, when the largest increase in the share of the environmental aspect is observed: by 6 percentage points compared to 2020. At the same time, the shares of environmental and social aspects are on average equivalent, but each of them significantly prevails over the governance aspect.

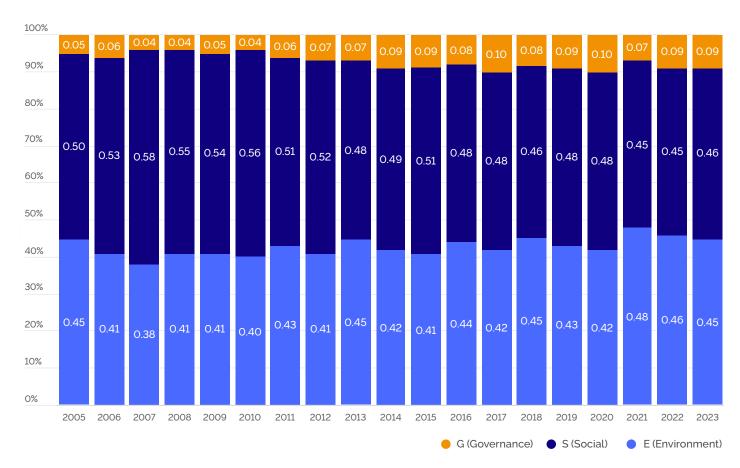


Schimanski, Tobias et al. Bridging the Gap in ESG Measurement: Using NLP to Quantify Environmental, Social, and Governance Communication [Electronic resource]. SSRN. 11/03/2023. URL: http://dx.doi. org/10.2139/ssrn.4622514

In the post-Soviet space, there have traditionally been detailed legislative requirements on environmental and social aspects, including mandatory reporting on occupational safety, industrial safety and personnel. Although these practices were called differently and did not include modern concepts like climate or employee engagement, in fact, the elements of accountability and governance have been present for a long time. The emergence of new standards has only stimulated companies to correlate existing data with new requirements and formalize them in their reports.»

Maria Kabysheva,

Deputy Director of the Operational Risks and Sustainable Development Group, Kept



Sentences from reports that, during the analysis, were not found to be related to any of the ESG aspects and the ESG agenda were not taken into account in this diagram.

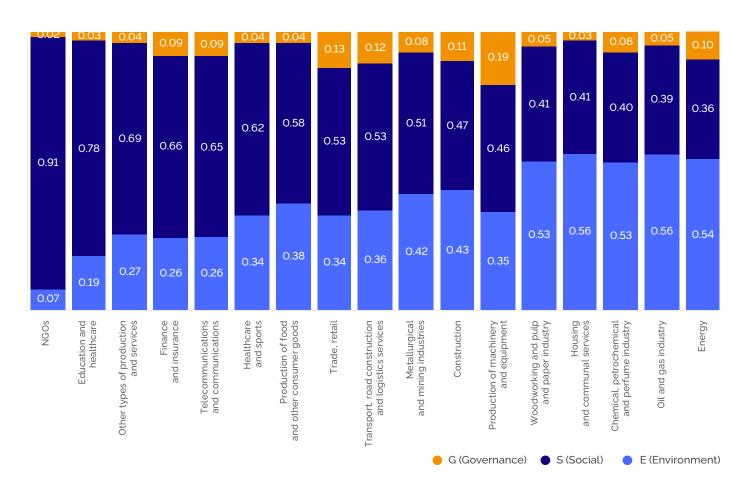
Diagram 2.1
Distribution of the thematic focus of ESG-related sentences in company reports by year, %

In terms of industries, the environmental aspect is, on average, inferior to the social one. In the vast majority of industries, the **social sector has the highest rate of representation in the reports** — **in 10 out of 17 industries**, its share accounts for over 50%. At the same time, the largest share of mentions of the social aspect is observed in such industries as non-profit organizations (91%), as well as in education and healthcare (78%), which is logical, since their activities are initially focused on solving social issues.

In Russia, a strong social agenda is largely determined by the fundamentals inherited from the Soviet Union. Almost a century of the state social system has created unique advantages, which are reflected today, for example, in the issues of women's leadership and equality. Despite the cultural peculiarities and norms of business culture, the accumulated historical experience provides Russia with a certain advantage: many social initiatives are developing against the background of an existing basis and are perceived as a natural part of public and corporate practice.»

Vasily Fokin,

Expert on sustainable development and AI solutions for ESG



Sentences from reports that, during the analysis, were not found to be related to any of the ESG aspects and the ESG agenda were not taken into account in this diagram.

Diagram 2.2

Distribution of the thematic focus of ESG-related sentences in company reports by industry, 2005–2023, %

The environmental aspect, in turn, accounts for more than 50% in 5 out of 17 industries, and it plays a particularly significant role in industries related to the production sector and resources — the most significant share is observed in the energy sector (54%), the oil and gas industry (56%), and housing and communal services (56%).

The nature of material topics in disclosing aspects of sustainable development is largely determined by the company's position in the value chain. Environmental aspects remain key for enterprises engaged in the production and extraction of natural resources (i.e. upstream), as their activities are directly related to the impact on land, water and air,

Irina Bakhtina

Chair of the Supervisory Board of the National ESG Alliance, Deputy CEO for Sustainable Development, En+ Holding, Director for Sustainable Development, RUSAL

which makes the environmental agenda a priority for the stakeholders.»

At the same time, the share of the **governance aspect** is extremely small in all ESG reports of Russian companies, which can be due to a number of factors:

- 1 Methodological limitations and specificities of keyword and sentence counting often result in overestimating the "weight" of environmental and social aspects due to the large number of indicators and detailed tables.
- 2 The governance aspect is often reflected in annual reports, whereas in sustainable development reports it can be presented **concisely** to avoid repetitions.
- 3 The distribution is also influenced by the structure of the standards themselves, where there may be a quantitative imbalance in the indicators for ESG aspects and preference may be given to the environmental and social aspects.
- 4 The specifics of initiatives and projects in the environmental and social spheres allow for a more detailed description of projects, whereas the governance aspect is limited mainly to factual information.
- Corporate governance in Russia has always been part of the background of corporate practice. In some cases, it is quite advanced, for example, in the field of joint-stock management. At the same time, the G-component of the ESG is often perceived as a separate area aimed at lawyers and compliance specialists and is disclosed in less detail in reports, although in fact it is always present and relatively stable.»

Ksenia Lopatkina,

Head of Sustainability & ESG Consulting and Strategy Practice, You Social

In general, the ESG agenda has become more declarative after 2022.

If we look at the overall dynamics of the share of ESG-related sentences among all report sentences (Diagram 2.3), we can see that since the pandemic period (2019-2020), the specifics in the reports have steadily increased and texts became less declarative — this trend was observed until 2022, when there was once again a median decrease in the share of sentences related to ESG.

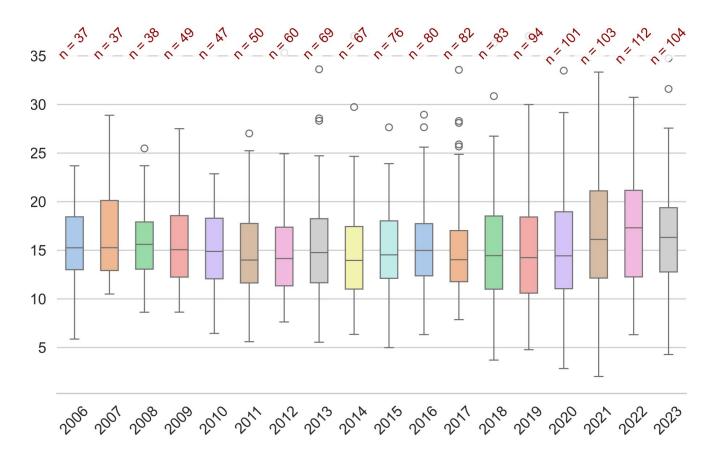


Diagram 2.3
Distribution of the percentage of ESG-related sentences by year

On the one hand, there could be fewer specific projects in the field of sustainable development after 2022 due to budget cuts 7, as well as the suspension or closure of a number of investment projects. Afterwards, companies began to increase 8 their planned budgets for the development of the ESG area again. However, this trend has not yet been reflected within the time period under review. In addition, after 2022, the level of transparency decreased 9 significantly, and companies could stop disclosing information in certain areas of activity, especially on topics related to corporate governance and the work of the board of directors.



Forbes. 40% of Russian Companies Cut Spending on ESG Policy in 2022 [Electronic resource]. URL: https:// www.forbes.ru/biznes/486426-40rossijskih-kompanij-urezali-rashodyna-esg-politiku-v-2022-godu



B1. ESG Practices of Russian Companies: Stability vs Variability [Electronic resource]. URL: https://b1.ru/analytics/b1-esg-trendssurvey-2023/



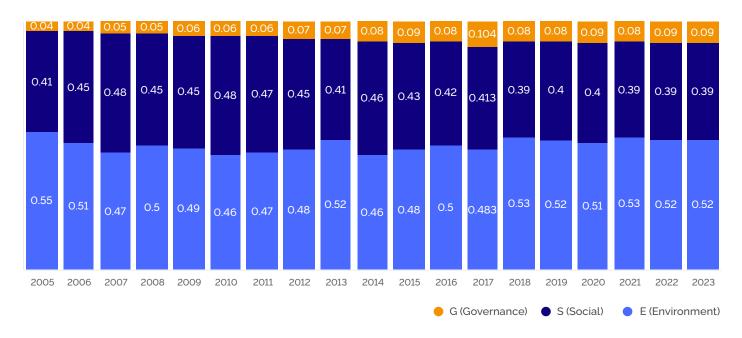
Vedomosti. Expert RA Rating Agency Has Released a Review of ESG Transparency of Russian Issuers [Electronic resource]. URL: https://www.vedomosti.ru/esg/ecology/articles/2022/11/15/950485-reitingovoe-agentstvo-ekspert-ravipustilo-obzor-esg-prozrachnostirossiiskih-emitentov

Hypothesis 3

Industrial companies are more concerned with environmental aspects, while companies from the service sector put more emphasis on social aspects

From an industry perspective, it can be seen that the **environmental aspect prevails in the manufacturing sector**. From 2005 to 2023, inclusive, the share of sentences related to the environmental sector did not fall below 45% and averaged 50% annually throughout the period under review, which is associated with the high impact of the manufacturing sector on the environment.

The average percentage of mentions of the **social aspect in the manufacturing sector** is about 43% — slightly less than the environmental aspect, however, the share also remains **significant** throughout the period.



The methodology is described in detail in Chapter 2. In the analysis, companies from the following industries were identified to comprise the manufacturing sector (according to the taxonomy developed by the Russian Union of Industrialists and Entrepreneurs): oil and gas, energy, metallurgy and mining, machinery and equipment manufacturing, woodworking and pulp and paper, food and other consumer goods production, chemical, petrochemical and perfumery industries.

Diagram 3.1 Distribution of the thematic focus of ESG-related sentences in company reports in the manufacturing sector by year, %

In 2022, there were no significant changes in the shares of each ESG aspect: the **shares of environmental**, **social and governance aspects remained almost at the level of 2021** - 52%, 39% and 9%, respectively. This indi-

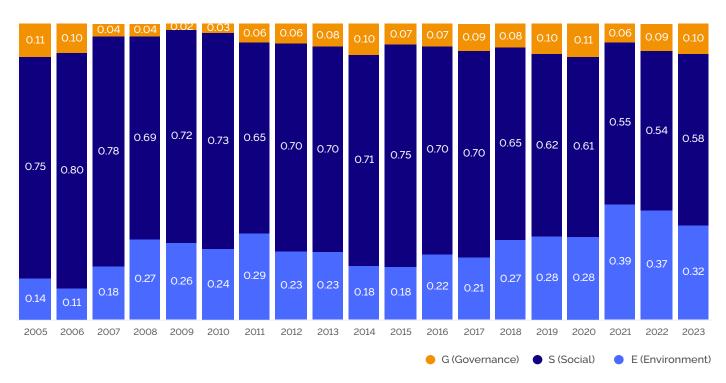
cates a stable demand from stakeholders in the manufacturing sector for ESG aspects and a minimal impact of external factors on the production of non-financial reporting.

The ESG outline for a business is shaped by none other than the expectations of all stakeholders. It is their perception of the severity of a particular problem that determines which topics are material for a particular company and which impact can beconsidered critical. The choice of topics cannot be made arbitrarily, based on public rhetoric or a fashion trend: the assessment is based solely on those areas where the company's activities affect the interests of stakeholders and where it has a significant impact for them.»

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The opposite trend is observed in the service sector — the mention of environmental issues in company reports is unstable, and growth and decline can reach from 5 to 11 percentage points in different time periods. Nevertheless, in the long term, a significant increase in the importance of the environmental aspect is noticeable — if in 2005 the figure was 14%, in 2023 it amounted to 32%, which means it grew almost two-fold.



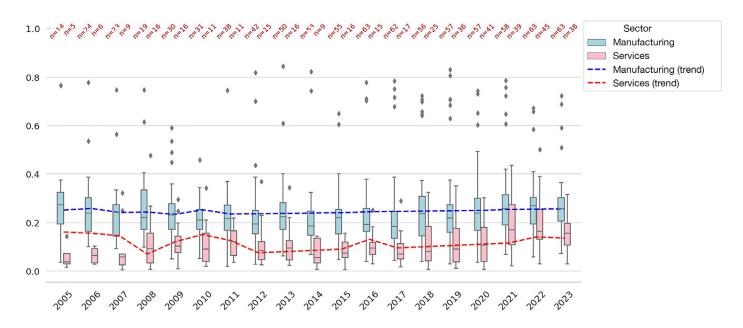
The methodology is described in detail in Chapter 2. In the analysis, companies from the following industries were identified to comprise the service sector (according to the taxonomy developed by the Russian Union of Industrialists and Entrepreneurs): telecommunications and communications, finance and insurance, trade and retail, housing and communal services, construction, transport, road construction and logistics services, healthcare and sports, education and healthcare, NGOs, and other types of service production.

Diagram 3.2

The social aspect prevails over the environmental aspect in the service sector to a greater extent in comparison with the manufacturing sector — the average share in the service sector is 68%, and in the manufacturing sector it amounts to 43%. In long-term retrospective, the share of the environmental aspect grew rapidly and rose to 32% in 2023, compared with 14% in 2005.

A comparison of trends in both sectors — manufacturing and services — for each ESG aspect shows that the **distribution of data by year regarding the environmental aspect in the manufacturing sector is more stable**: the median value over the entire period ranges from 20 to 30%. At the same time, the median value in the service sector is much lower, averaging about 10-15%.

The environmental aspect in the manufacturing sector has been consistently reflected in non-financial reporting since 2005. Slight fluctuations were observed from 2006 to 2011, followed by a steady increase in the environmental aspect.



Для каждого отчета была рассчитана доля предложений, связанных с экологической тематикой (с использованием методологии из Главы 2), после чего данные были агрегированы по секторам «производство» и «услуги» и визуализированы в виде boxplot с указанием медианы, квартилей и выбросов. Дополнительно построены трендовые линии для наглядного сравнения динамики между секторами.

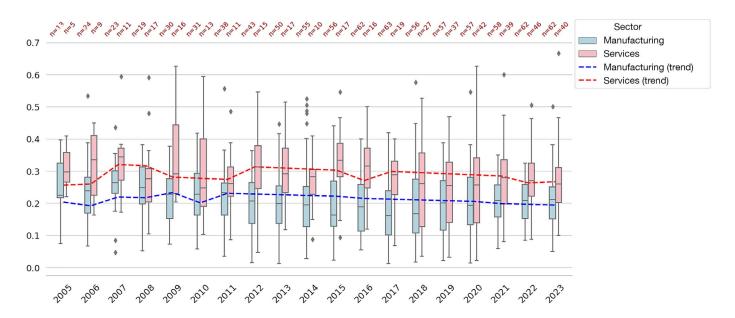
Diagram 3.3

Dynamics of Environment (E) by year for manufacturing and services sectors

In the service sector, however, the **environmental aspect was subject to a number of ups and downs**. After a fall in 2008, in 2010, the percentage of sentences in reports returned to its original levels, then declined again with a recovery in 2012-2016, followed by a new decline in 2016, after which there was a **gradual upward trend with a slight reduction in 2023**.

The dynamics of the social aspect for the service sector is also ambiguous: the service sector has seen three periods of decline — in 2007, 2012 and 2017. At the same time, the median values in the service sector are in the range of 25-35%, which is significantly higher than in the manufacturing sector. At the moment, there is a downward trend.

The median values in the manufacturing sector range slightly between 20 and 25% over the entire period. The trend line is almost horizontal, which indicates that the **attitude of** manufacturing companies towards the disclosure of social information **has been unchanged** for many years, but **since 2011** there was a long-term **downward trend**.

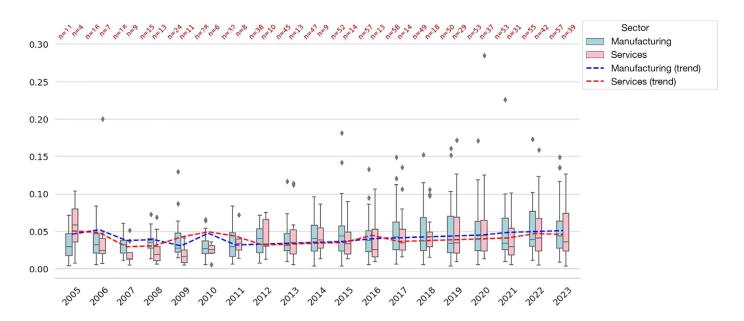


The methodology is similar to the one applied in case of the previous diagram, but it concerns sentences related to social issues.

Diagram 3.4

Dynamics of Social (S) by year for manufacturing and services sectors

Governance in both the manufacturing and service sectors remains minimal — the median values for both sectors are very low, ranging from 2 to 5%. Both sectors demonstrate very similar median values and trend lines. Trends for both sectors are almost horizontal, with some fluctuations between 2006 and 2012 and **steady growth by 2023**.



The methodology is similar to the previous diagram, but it is applied to sentences related to Governance (G).

Diagram 3.5Dynamics of Governance (G) by year for manufacturing and services sectors

Hypothesis 4

Businesses do not put enough attention in assessing the effects of implementing ESG initiatives

In 2022, only 1 out of 5 Russian directors of sustainable development reported 10 that their companies assessed the effects of each project in the field of sustainable development, while 58% reported conducting such an assessment only for some projects.

We decided to analyze how often Russian companies mentioned specific ESG metrics in their non-financial statements (compared to the general description of ESG initiatives), to see which categories of initiatives show a more pronounced effect, and whether there are significant differences between industries.

Methodology:

ESG-related sentences were extracted from the texts of the reports. Further, using the methodology described in the article Bronzini et al., 2024 11, from these sentences, we selected those structured as "category — predicate — object" ("ESG initiatives" triplet):



SKOLKOVO Center for Sustainable
Development. Corporate Governance
and ESG Transformation of Russian
Companies [Electronic resource]. URL:
https://www.skolkovo.ru/researches/
korporativnoe-upravlenie-i-esgtransformaciya-rossijskih-kompanij/



Bronzini, Marco et al. Glitter or Gold? Deriving Structured Insights from Sustainability Reports via Large Language Models [Electronic resource]. EPJ Data Sci. 13, 41. 06/07/2024. URL: https://epjdatascience.springeropen.com/articles/10.1140/epjds/s13688-024-00481-2

Component	Definition	Examples
Category	The scope or thematic area of ESG to which the statement relates (context/domain)	 Energy industry Carbon emissions Water resources Diversity and inclusivity Supply chain Wastes
Metric	An action or commitment that a company is undertaking or planning to undertake (usually a verb)	 Reduce Transition to Invest in Achieve Implement Increase the share
Result	A specific goal, metric, or object that the action is directed at	 Renewable energy sources Zero emissions by 2050 30% of leadership positions occupied by women Recycling of 90% of waste

Examples:

"The performance of the Chairman of the Board of Directors was assessed as part of the procedure for evaluating the effectiveness of the Board of Directors in the reporting period."

"The company has announced ambitious plans to reduce greenhouse gas emissions."

Category: Board of Directors

Predicate: assessed

Object: performance of the Chairman of the Board

of Directors

Category: ozone-depleting gas emissions

Predicate: reduce

Object: greenhouse gas emissions

Next, the same pre-extracted ESG-related sentences were filtered again using a methodology adapted from Bronzini et al., 2024 (12), highlighting the "category-metric—result" structure (the "metrics" triplet):



Same source.

I		
Component	Definition	Examples
Category	The scope or thematic area of ESG to which the statement relates (context/domain)	 Energy industry Carbon emissions Water resources Diversity and inclusivity Supply chain Wastes
Metric	Measurable parameter or KPI	Level of emissionsInvestment volumeProportion of women in leadership positionsNumber of installed solar panels
Result	A specific, often quantitative, value or achievement related to a metric: a number, a fact, or status	 35% of total consumption Achieved by 2050 90% 95% of employees completed

Examples:

"In 2023, the Company's gross greenhouse gas emissions in three areas of coverage amounted to 65.9 million tons of CO2-eq."

"In 2021, we released 375,000 fry of various fish species into the reservoirs."

Category: ozone-depleting gas emissions **Metric:** gross greenhouse gas emissions **Result:** 65.9 million tons of CO2-eq.

Category: biodiversity

Metric: fry of various fish species released into reservoirs

Result: 375,000

orto

In total, we obtained two groups of marked-up sentences from the reports related to ESG initiatives and metrics. It is worth noting that the total number of sentences related to ESG initiatives significantly exceeds the number of sentences related to metrics, which may indicate that companies do not disclose the effect of each implemented initiative.

Diagram 4.1 illustrates the distribution of the shares of the resulting 2 groups of sentences referring to ESG initiatives and metrics between the E, S, and G areas, as well as general sentences not related to ESG. It is worth noting that there were no significant differences in the dynamics identified in the framework of a similar analysis for the period from 2019 to 2023.

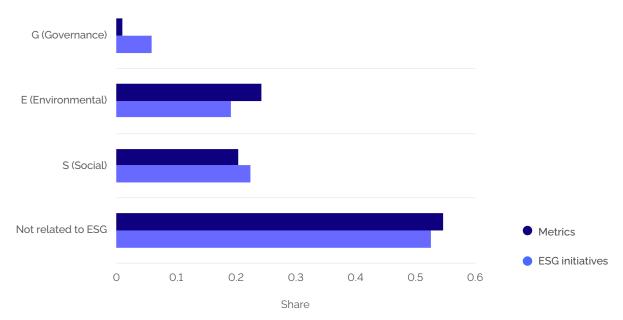


Diagram 4.1
Distribution of the thematic focus of sentences containing ESG initiatives and metrics

Most of the ESG initiatives and metrics disclosed by companies relate to the social and environmental aspects of the ESG agenda, while there are significantly fewer initiatives and metrics in the field of corporate governance. At the same time, the share of initiatives related to corporate governance is several times higher than the share of quantitative metrics for their assessment. This may be due to the predominantly qualitative rather than quantitative nature of many aspects of governance (for example, "the effectiveness of the board of directors"), as well as the lack of standardized KPIs. Governance is more concerned with processes and structures rather than operational results, which are easier to quantify.

Interestingly, in the environmental aspect, the share of metrics exceeds the share of initiatives, and this distribution is observed in all industries. This may be due to the high degree of standardization of environmental metrics recommended for disclosure, the direct relationship of environmental indicators with operating costs and financial performance of the company, as well as the greater technical ability to measure indicators in this area.

As for initiatives related to social aspects, the analysis of data by industry showed that in most industries their share exceeds the share of quantitative metrics for their assessment. Many social initiatives relate to the formation of values, culture, and employee development — they are often difficult to quantify. At the same time, the opposite trend is observed in the fields of machinery and equipment production, as well as in the chemical, petrochemical and perfume industries: measurable indicators are more often used here when discussing social aspects. This may be due to a high level of inherent risk (working with hazardous substances, the risk of occupational injury, heavy physical labor) and strict regulation with legislative requirements for providing strict quantitative reporting on OH&S.

Priority categories of ESG initiatives and metrics by industry

Each company has its own approach to prioritizing topics; it can only be adjusted from the point of view of stakeholders. And, as a rule, this is determined by the role that the business plays in the value chain. There are no uniform trends for the entire market: they will always be industry-specific. For example, stakeholders in the banking sector and metallurgical companies are completely different, their demands vary a lot and even their geography is very diverse.»

Irina Bakhtina

Chair of the Supervisory Board of the National ESG Alliance, Deputy CEO for Sustainable Development, En+ Holding, Director for Sustainable Development, RUSAL

Additionally, industry differences were analyzed for the generated triplets of ESG initiatives and metrics. We selected 10 categories that include ESG initiatives (Diagram 4.2) and 11 categories that include metrics (Diagram 4.3), and visually presented the differences in the mention of these categories by industry.

ESG initiative categories / Industry	Woodworking, pulp and paper industry	Metallurgical & mining industries	Oil & gas industry	Production of machinery & equipment	Food production	Construction	Telecommunications & communications	Trade & retail	Transport & logistics	Finance & insurance	Chemical industry	Energy industry
Ozone depleting gas emissions	11%	20%	24%	14%	10%	18%	11%	13%	16%	20%	22%	19%
Operational safety	21%	17%	20%	17%	19%	17%	11%	17%	22%	11%	17%	16%
Board diversity & inclusion	18%	14%	12%	17%	20%	12%	20%	20%	15%	21%	14%	15%
Remuneration/compensation	14%	9%	6%	10%	11%	10%	8%	9%	8%	8%	8%	11%
Business ethics	11%	8%	7%	8%	15%	11%	13%	9%	10%	10%	9%	8%
Water resources management	8%	11%	10%	15%	9%	7%	4%	7%	9%	5%	10%	11%
Information security	3%	5%	5%	4%	2%	11%	19%	10%	7%	13%	7%	5%
Biodiversity	3%	8%	8%	0%	3%	5%	1%	1%	3%	1%	5%	6%
Volunteering	6%	4%	4%	3%	3%	6%	9%	8%	7%	7%	4%	6%
Sustainable supply chain	6%	5%	4%	10%	8%	4%	3%	7%	4%	3%	5%	3%

The percentages show the proportion of mentions of a specific category of ESG initiatives among all 10 selected categories within a specific industry. For each industry, the sum of the shares of all 10 categories of ESG initiatives is equal to 100%.

Diagram 4.2

Heatmap: percentage of mentions of ESG initiative categories by industry, %

The heatmap clearly demonstrates how the principle of materiality determines ESG priorities in different industries. Companies focus more on those initiatives that directly affect their core business risks and operational activities. The leaders in the categories of ESG initiatives for most industries are ozone-depleting gas emissions, industrial safety, and diversity and inclusivity of the board of directors.

- The industries that are the main sources of ozone-depleting gases are more focused on emissions: oil and gas (24%), chemical (22%), metallurgy and mining (20%), energy (19%), as well as finance and insurance (20%).
- Industrial safety is a priority for industries with real production, physical assets and high risk of operations: transport, road construction and logistics (22%), woodworking (21%), oil and gas industry (20%).
- Industries that are closest to the end user (B2C) and/or are represented by foreign companies with developed DEI practices and high investor pressure from developed markets focus more on initiatives

related to diversity and inclusivity of the board of directors, while traditional industrial sectors do not consider this aspect as their priority.

- Information security is a marker topic for digitalization and working with data. The absolute leaders in this regard are industries whose business model and reputation directly depend on data protection (telecommunications and communications, finance and insurance). Low rates in industrial sectors indicate that cyber risks may not yet be recognized by companies as critical.
- The issue of data protection in the Internet space is a trend that is gradually gaining momentum, because it is beginning to affect almost everyone. It starts with the use of a bank card, personal data, and ends with the digitalization of HR processes, using the same electronic workbooks. One way or another, it is all the more becoming an integral part of our lives.»

Vera Smirnova,

Director of ESG Rating and Sustainable Development, Delo Group

- Biodiversity is one of the biggest blind spots on the corporate ESG agenda. In most industries, the share of this category does not exceed 5-6% (in extractive industries it amounts to 8%), which may indicate a low level of awareness about the problem and insufficiency of programs aimed at solving it.
- Initiatives related to sustainable supply chains are increasingly prioritized in industries with complex production and distribution chains. The leaders in this regard are mechanical engineering (10%), food and consumer goods (8%) and retail (7%).

ESG metric categories / Industry	Woodworking, pulp and paper industry	Metallurgical & mining industries	Oil & gas industry	Production of machinery & equipment	Food production	Construction	Telecommunications & communications	Trade & retail	Transport & logistics	Finance & insurance	Chemical industry	Energy industry
Human capital development	24%	37%	31%	47%	35%	26%	41%	15%	40%	40%	38%	31%
Climate change	4%	19%	19%	10%	13%	6%	10%	33%	8%	15%	18%	15%
Board composition and effectiveness	16%	9%	11%	10%	16%	41%	13%	3%	9%	13%	7%	16%
Labor productivity	20%	11%	11%	10%	27%	4%	5%	5%	8%	7%	9%	14%
Waste management	9%	6%	6%	2%	3%	4%	11%	22%	13%	5%	9%	4%
Labor protection and industrial safety	3%	3%	7%	12%	3%	4%	9%	12%	11%	4%	6%	6%
Water resources management	3%	6%	8%	4%	2%	4%	1%	2%	5%	3%	5%	6%
Business ethics	1%	2%	2%	1%	0%	3%	3%	4%	5%	5%	3%	5%
Biodiversity and land use	16%	1%	2%	1%	1%	0%	1%	0%	0%	2%	1%	1%
Digital security	2%	1%	1%	1%	0%	7%	4%	4%	0%	4%	1%	0%
Supply chain	2%	2%	1%	1%	0%	1%	1%	1%	1%	2%	3%	1%

The percentages show the proportion of mentions of a specific metric category among all 11 selected categories within a specific industry. For each industry, the sum of the shares of all 11 metric categories is equal to 100%.

Diagram 4.3 Heatmap: percentage of mentions of metric categories by industry, %

The heatmap of metric categories (Diagram 4.3) shows an even greater polarization.

- The evident leader for most industries is metrics related to the "human capital development" category. The exceptions are represented by construction, as well as trade and retail. Lower rates in these industries may be due to high staff turnover, which is difficult to control.
- Climate change-related metrics are less common and are more often the focus for polluting industries: metallurgy and mining (19%), oil and gas (19%) and chemical industries (18%). At the same time, the unexpected leader in this category is the area of trade and retail (33%): probably the key driver is the measurement of the carbon footprint of logistics and network energy consumption.

No one is denying the climate factor, but it is obvious that it is not the highest priority today. The climate issue does not result in the imposition of significant fines or the sudden loss of markets. It is important for developing a competitive advantage and for many other things, but if there are no employees to work in the company, then, in general, the climate issue becomes less relevant. This is a matter of priority: if ESG factors related to employees are important today, then the climate issue, although its importance is obvious, becomes less of a priority. The problem of shortage of personnel in working professions is particularly acute now: in a number of industries, their salaries are already higher than those of IT specialists.»

Andrey Kosko,

Senior Consultant at the ESG Practice Consulting Integrator You Social

- The trade and retail sector is also characterized by paying most attention to metrics related to waste management (22%). The problem of waste (e.g., packaging and overdue) in the industry implies huge transaction costs and reputational risks. At the same time, it is surprising that in the construction sector the share of metrics related to waste management is less than 5%, which may indicate a low maturity of corresponding practices.
- The abnormally high proportion of metrics related to the composition and effectiveness of the board of directors in the construction sector (41%) is probably due to the industry's high dependence on government orders and the need to demonstrate transparency and high-quality management in order to participate in tenders. Most of the construction companies in our sample are publicly traded and are required to disclose information about the board of directors in accordance with regulatory requirements.
- Little attention is paid to metrics related to digital security, even in specialized industries, such as finance and insurance or communications (4% each). Against the background of the high attention of the same industries to ESG initiatives in this category, it can be concluded that cyber risks are well understood, but not sufficiently digitized in public communications.
- Similar to ESG initiatives, metrics related to biodiversity and land use remain a blind spot for most industries, with the exception of the woodworking and pulp and paper industries (16%) — industries that are a direct "user" of natural resources.
- Other global blind spots among the metric categories are supply chain, business ethics, and water resources management. For metrics related to business ethics, such values may be related to the low measurability of the topic. Water resources management does not seem to be a systemic priority in any of the industries. At the same time, the low proportion of supply chain-related metrics represents a critical gap in ESG reporting, as no industry assesses the sustainability of its suppliers in any meaningful way.



Russian companies show a tendency to present ESG information in a positive way, softening the description of problem areas

We decided to analyze to what extent the observed trend towards reducing transparency and increased caution in data disclosure is reflected, among other things, in the tonality of vocabulary and phrasings used by companies in non-financial reporting.

Methodology:

For semantic analysis, the lexical resource RuSentiLex (2017) was used, which allows classifying vocabulary by tonality. This dictionary allows for dividing words into 3 classes of tonality: positive, negative, or neutral, as well as 3 types of sentiment: opinion, feeling, and fact. The dictionary was used to classify the elements from the texts of reports, which helped to assess the average value of the emotional charge of words and, thereby, determine the average tonality of the analyzed documents.

The analysis showed that the majority of ESG reports of Russian companies are **based on facts and opinions**, with very limited presence of the "feeling" component, see Diagram 5.1. This indicates a more or less objective communication of information to stakeholders, which allows them to receive truthful and fact-based information.

Nevertheless, **opinions still prevail over facts** in the reports of Russian companies, which allows for a potentially distorted representation of some ESG aspects through the prism of how companies want to present themselves; it also creates an opportunity to conceal certain information or justify low ESG indicators in order to present a better image.

The period 2019-2021 became one of the most favorable for the ESG agenda in Russia, and many companies published their sustainability reports. Some of them published reports to attract attention, therefore, they might not contain reliable facts, including numerical indicators, conveying "opinions" to stakeholders instead.

In a certain period, around 2020-2021, ESG became a trend and was perceived largely as a competitive advantage and marketing tool. Companies primarily saw this as an opportunity for PR, focusing on the actions of competitors and on the attractive visual presentation of initiatives.»

Ksenia Lopatkina,

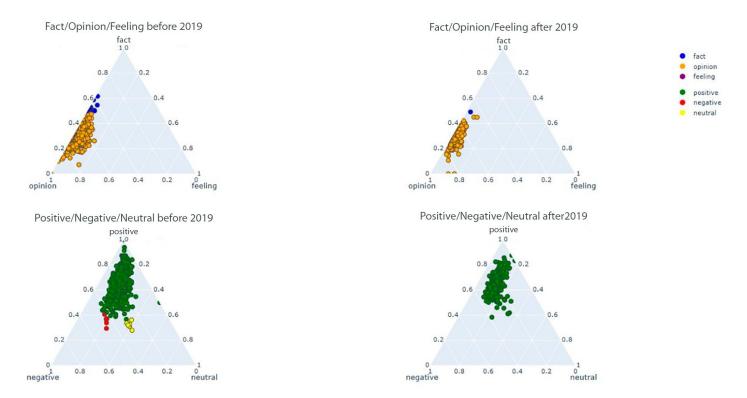


Diagram 5.1
Comparative analysis of the ternary charts before and after 2019

From the point of view of tonality, the ESG agenda has always been presented in Russian companies in a more positive way, with some exceptions prior to 2019, when in some cases the information was neutral or even negative. At the same time, it can be assumed that the negative connotations were associated with failures or lack of progress by companies in the field of ESG.

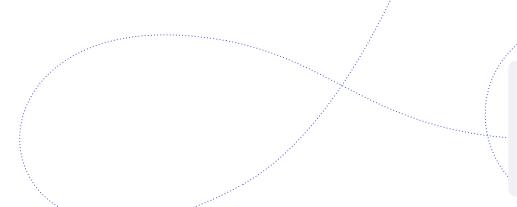
Nevertheless, after 2019, the positive tone has largely prevailed in the reports of Russian companies in the field of sustainable development, with 2019 being the only year with a significant change in tone for the entire period under review.

Firstly, this may be related to the desire and the intention of businesses to present themselves in a better light against the background of the ever-spreading ESG agenda after 2019. It may also be due to the company's perception of such a report as a PR component to improve its reputation through positive achievements, rather than a real reflection of the impact of ESG on business results.

According to the analysis, there was no significant shift in the tone of non-financial reporting by Russian companies after 2022, which may indicate a **continued positive trend**. There were also no significant changes in such critical periods as 2008-2009 and 2014.

On the one hand, such a positive presentation of information allows stakeholders to believe that companies are engaged in ESG, despite any economic, financial or political challenges. On the other hand, widespread positivity and the predominance of opinions over facts in ESG reports may, on the contrary, indicate insufficient maturity and, possibly, the risk of greenwashing and concealment of negative actions on the part of the company.

This risk is not far-fetched for Russian companies. According to a survey by the ARIR Committee for Sustainable Development, almost a quarter of respondents (23%) used greenwashing in advertising campaigns, and a quarter of them used it about 2-5 times. At the same time, 25% of the surveyed players of the advertising market who used greenwashing benefitted from a revenue increase as a result of this strategy.



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Interactive Advertising Development Association (ARIR). A Study of the Attitude of Advertising Market Participants to Greenwashing [Electronic resource]. URL: https://interactivead.ru/wp-content/uploads/2023/03/arir23_greenwashing_b2b.pdf

Hypothesis 6

Businesses actively implement local recommendations and initiatives in the field of sustainable development

Despite the fact that international **GRI standards remain the most in-demand standards** for non-financial reporting, companies are increasingly focusing on national recommendations. According to Pacioli Consulting, (14) the second and third most popular standards and methodologies to use in company reporting are the recommendations from the Bank of Russia and the Methodological Recommendations of the Ministry of Economic Development -48 reports in each case

In the future, there will be an increasing trend in Russia towards the nationalization of standards: the adoption of uniform requirements by the state or affiliated structures. At the same time, in the West; compliance will continue to develop through bureaucratic directives such as CSRD, as well as public initiatives like B Corp, which do not yet exist in Russian practice.»

14

Pacioli Consulting. Atlas of Nonfinancial Reporting in Russia — 2024 [Electronic resource]. URL: https:// www.pacioliconsult.ru/presstsenter/analitica/obzor-rynka-atlasnefinansovoy-otchetnosti-rossii/

Vasily Fokin,

Expert on sustainable development and AI solutions for ESG

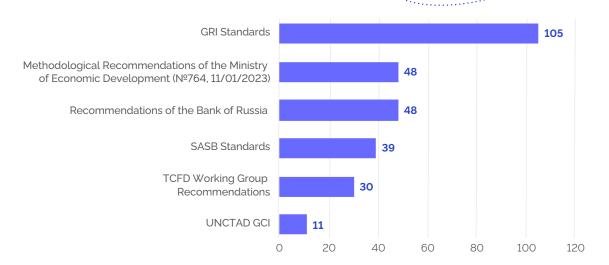


Diagram 6.1

The most popular standards and methodologies among the non-financial reporting of Russian companies for the reporting year 2023

Source: Atlas of Non-financial Reporting of Russia 2024, Pacioli Consulting, 2025.

This is confirmed by the data of our analysis. After the release of key local recommendations and initiatives, there has been a significant increase in their use and mention in non-financial reporting. Among them are

the National Project "Ecology", which actively forms the discourse around environmental policy, the Strategy for Low Carbon Development of the Russian Federation until 2050, and the recommendations of the Central Bank, which indicates a gradual expansion of interest in domestic regulation.

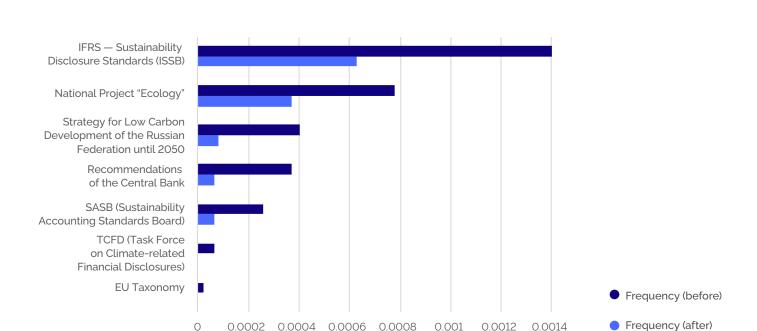
Russia is currently experiencing a kind of "bubbling up": large companies that actively participate in ratings and competitions are striving to be involved in all new initiatives and standards. In practice, there are two levels of requirements: specific international standards such as GRI, SASB or TCFD, with clear indicators and industry recommendations, and more general national recommendations, for example, from the Central Bank, which are top-level in nature. As a result, companies combine approaches: international standards serve as the foundation, and local recommendations adapt requirements to the national context and regulation.»

Maria Kabysheva,

Deputy Director of the Operational Risks and Sustainable Development Group, Kept

Methodology:

At the first stage, lists of key terms and concepts specific to each standard were formed. At the second stage, their presence and frequency of mentions in company reports were monitored for the periods before and after the publication of the relevant standards (TCFD - 2015, ISSB - 2021, SASB - 2018, EU Taxonomy - 2020, Strategy for Low Carbon Development of the Russian Federation until 2050 - 2021, National Project "Ecology" - 2018, Recommendations of the Central Bank - 2020). This approach made it possible to compare the dynamics of the terminological content of reporting and assess the degree of penetration of the new regulatory framework into corporate practices. Standards that emerged in the early 2000s, for example, GRI, were not included in the final analysis result due to the lack of data for comparison: the RSPP database contains reports starting from 2000. The results are shown in Diagram 6.2.



Normalized frequency of use of keywords

Diagram 6.2
The difference in the normalized frequency of use of keywords from standards before and after their release

Nevertheless, non-financial reporting in Russia also shows a growing interest in new international **ISSB standards developed under the auspices of the IFRS Foundation**, reflecting their rapid recognition as a global benchmark. They proved to have the greatest impact on ESG reporting after the release, as the frequency of mentions of associated keywords doubled.

The future of corporate reporting is determined by use of multiple standards: companies simultaneously use several systems, sometimes up to ten, including both international and national standards. National approaches are largely based on international ones, and international standards themselves are highly harmonized with each other. Therefore, it is not so much a matter of choosing between local and international standards, as it is one of adhering to different standards at the same time.»

Vladimir Gorchakov,

Senior Director, Head of the ACRA Sustainable Development Risk Assessment Group

Such level of interest in this standard may be explained by a number of factors:

- 1 The standard is linked to the financial performance of the company and increases the comparability and usefulness of information for investors, simplifying decision-making.
- 2 The standard takes into account the best practices of recognized international standards, such as GRI, SASB, TCFD, and therefore is more universal.

- 3 ISSB standards are increasingly being integrated in many countries, becoming the **universal language** of ESG reporting. According 15 to the IFRS Foundation, 36 jurisdictions have already adopted or are implementing these standards, of which 17 have already finalized their approach to how to apply these standards.
- After 2022, companies continued to develop reporting not only by inertia, but also with future requirements in mind. During this period, international ISSB standards appeared, which should gradually become mandatory, and internal initiatives were developed, ranging from the ones implemented by the Bank of Russia and the Ministry of Economic Development to new industry standards.»

Ivan Barsola,

Executive Director of the ESG Directorate, Sberbank PJSC



IFRS. IFRS Foundation Publishes
Jurisdictional Profiles Providing
Transparency and Evidencing
Progress towards Adoption of ISSB
Standards. [Electronic resource].
URL: https://www.ifrs.org/news-and-events/news/2025/06/ifrs-foundation-publishes-jurisdictional-profiles-issb-standards/

Hypothesis 7

The analysis of public non-financial statements makes it possible to predict the company's position in the ESG ranking with a high level of accuracy

ESG rankings assess a company's exposure to environmental and social risks, as well as risks related to corporate governance. The assessment takes into account the country, industry or type of activity of the company; the rating agency evaluates measures taken to reduce ESG risks, compliance of the company's practices with the basic guidelines, standards and best practices. Companies are ranked based on the points they receive. In the process of evaluation, as a rule, information available in open sources is used, including non-financial reports, online company resources, information from the media and other sources, as well as non-public data (if the assessment is initiated by the company).

It is important to keep in mind that the ESG assessment market in Russia operates according to different principles compared to Europe, the USA, or even China. In Russia, assessments are mostly carried out upon a request, rather than for the whole range of listed companies. Rating agencies are used to working upon request, taking into account both confidential and publicly available information.

Vladimir Gorchakov,

Senior Director, Head of the ACRA Sustainable Development Risk Assessment Group

We were interested in testing whether the predictive Catboost model would be able to accurately predict a company's place in the ESG ranking 16 based on the analysis of open non-financial reporting. We also wanted to identify factors (categories and metrics from the report texts) that would have the greatest impact on the result of this evaluation.

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The **ESG** rating involves assigning a certain rating to each company (usually on a scale from A to F or in numerical format); **ESG** rankings compare companies with each other and rank them in a list, which is more consistent with the objectives of our analysis.

Methodology:

The ESG ranking by RAEX (17) Rating Agency was used as a basis. The reports of the companies represented in the ranking for the corresponding years (2021-2023) were selected from the initial database of reports. Each of the reports was correlated with the company's ranking (percentile) for the corresponding period.

Industry differences in ESG rankings of Russian companies

Diagram 7.1 shows the distribution of normalized ESG rankings of companies (from 0 to 1, a lower value corresponds to a higher ranking) by industry.



RAEX. ESG Ranking of Companies [Electronic resource]. URL: https://raex-rr.com/ESG/ESG_companies/ ESG_rating_companies/2025.1/ (date of access: 04/07/2025)

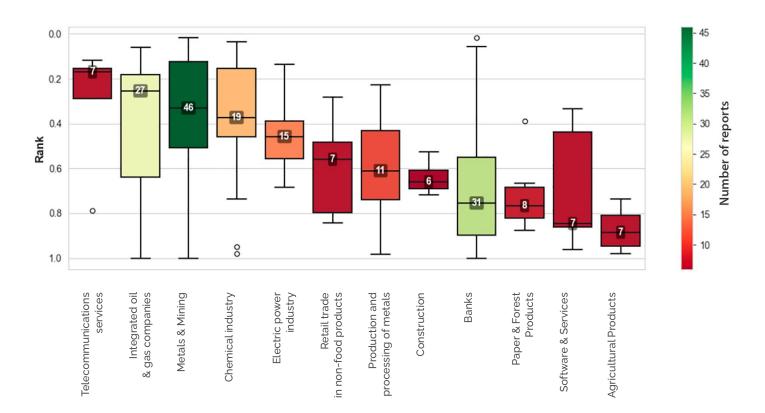


Diagram 7.1Distribution of ESG ranking depending on the industry

There are clear differences among industries: the leaders in the median ESG ranking are represented by telecommunications, oil and gas, mining, and metallurgy industries, while the lowest rates are associated with companies from the agroindustrial complex, IT, and pulp and paper industries.

At the same time, the industries with the largest amount of data — the chemical industry (46 reports), the banking sector (31 reports), oil and gas companies (27 reports) — are characterized by a high dispersion of ESG ranking indicators, which may indicate a significant intra-industry heterogeneity of practices and reporting quality.

Key categories serving as predictors of a company's ESG ranking

Methodology:

Indicators of the frequency of use for the previously identified categories and metrics (see Hypothesis 4) were added to the dataset obtained in the previous step (reports + position in the ranking of companies for the corresponding period) for each report. Apart from that, another addition was capitalization parameters (or the balance sheet in case of non-public companies) of companies for 2020 as an indicator of the size of the company.

About 70% of the data was used to train the predictive model, and based on the training results, the model predicted the companies' ESG ranking for the remaining 30% of the reports. The mean absolute error rate (MAE) amounted to 7.59%, meaning that the model was able to

predict the companies' position in the ranking with sufficient accuracy.

Diagram 7.2 shows how each of the following factors contributed to the final forecast of the predictive model, i.e., a company's position in the ESG ranking: the size of the company (quantile), the volume of the report (num_of_sentences), as well as the frequency of mentions of various categories (esg_category), metrics (metric_res) and categories with corresponding metrics (category_res).

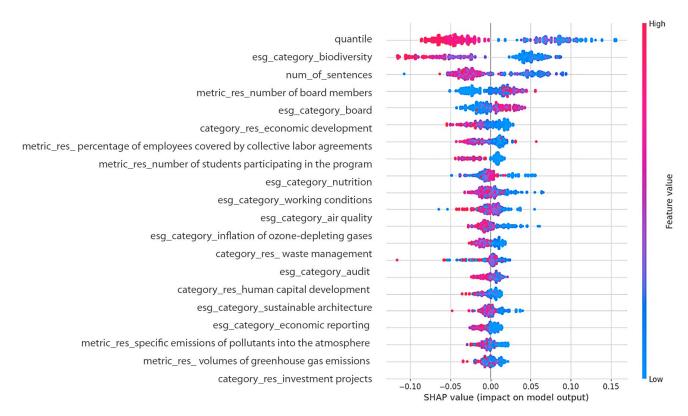


Diagram 7.2

The contribution of various factors to the company's position in the ESG ranking (SHAP values)

Interpretation:

The red dots correspond to higher values for each of the listed factors. If the red dots are located to the left of the central axis, it can be concluded that the high values for this factor are associated with a higher position of the company in the ESG ranking. The factors are sorted by the extent of their influence on the result (from higher to lower).

Test Set Results: MSE: 0.0146 R2: 0.8214 MAE: 0.0759 The factors presented below have the greatest impact on the company's position in the ESG ranking.

Positive effect (companies with higher values in these factors are positioned higher in the ESG ranking):

- Size of the company. Large companies tend to be more visible to regulators, investors, the media, and the public, which encourages transparency and accountability. In addition, they have major financial and human resources to implement large-scale ESG strategies, attract specialized specialists, conduct expensive audits and prepare voluminous reports.
- Frequency of mentioning the biodiversity category. The availability
 of specialized programs for ecosystem restoration and conservation
 of animal and plant species can be an indicator of maturity and depth
 of the company's environmental agenda and serve as evidence that
 the company takes into account not only direct but also indirect
 impacts.
- Report volume. Although volume does not always correlate with quality, it can act as a certain indicator of transparency and the scale of detalization of processes, goals and metrics. In addition, the volume of a report may correlate with the number of standards covered: the more standards there are to cover, the more detailed the report is.
- Frequency of mentions of the economic development category
 with the corresponding metrics. The company's contribution to the
 development of the regions where it operates, support for SMEs, and
 job creation are an important component of the company's social
 policy with a focus on external impacts across the region's economy.
- Frequency of mentions of the "percentage of employees covered by collective labor agreements" metric. The direct KPI, which shows how formalized and protected labor relations are in a company, is seen as one of the most objective and easy-to-measure social indicators. High values can indicate strong trade unions, social partnership, low risks of labor conflicts, as well as business stability and a high level of management of social issues.
- Frequency of mentions of the "number of students participating in the program" metric. Internship programs, partnerships with universities, and educational grants attest to the company's investments in human capital development (caring for employees and forming a talent pool).

Thus, large companies have a higher ESG ranking, which demonstrates the maturity of their ESG practices, transparency of processes and a measurable positive impact on society.

Factors such as the frequency of mentions of the "board of directors" category in the report and the "number of board members" metrics have a **negative effect** on the company's position in the ESG ranking. A possible explanation is that excessive mention of the board of directors in the report does not always indicate the high quality of corporate governance in the

company. For example, in their reports, companies may describe regulated processes and provide formal statistical indicators that do not reflect the actual effectiveness of the board of directors (number of board members, frequency of meetings, etc.). They may write extensively about their plans to improve the work of the board of directors, rather than about current achievements (e.g., "we are aware of the need to improve diversity on the board of directors and we plan to review the personnel policy next year"), without mentioning specific metrics and results. Another explanation may be related to the fact that larger companies (holding top positions in the ESG ranking) were more exposed to sanctions and other risks in 2022-2023, and therefore were not eager to disclose information about the boards of directors, which the model could interpret as a predictor for estimating the ranking position.



Perspectives and recommendations

Concluding the study, we would like to share a number of recommendations based on our interviews with experts and the results of the analysis. These recommendations relate to business adaptation to emerging trends in the field of sustainable development and answer the question "what should we start doing now to prepare for the future?"

1. Automation of ESG data processing cannot be avoided, prepare for this in advance

Interviews with experts show that in the medium term (3-7 years) it will be impossible to cope with the growing volume of data and the expanding reporting perimeter without digital solutions. Today, companies already face difficulties in aligning data, even within the financial perimeter of IFRS. The future of reporting looks less like a manually created photograph and more like a mirror reflecting the real state of affairs in close to real time. Preparation for this begins with the standardization of internal processes and data, which is a critical first step before full-fledged digitalization.

The modern world of reporting is designed in such a way that published information becomes outdated the very next day — or even the next hour on some occasions. A report, published once a year, is essentially a photograph that the company tries to adhere to for a whole year. However, throughout the year, it should be looking in the mirror, not at a photograph. Accordingly, reporting as a mirror, not as a photograph, is the desired future that we must strive for. First, the automation of processes in the standardization of data, and then the digitalization of all this, in theory, will allow you to make a sustainability report — within an hour and without human intervention.»

Vladimir Gorchakov.

Senior Director, Head of the ACRA Sustainable Development Risk Assessment Group

At this point, companies should already evaluate their internal capabilities and data requirements. Although there is not yet a single mega-platform on the market that would integrate data collection, auditing, benchmarking and analysis of ESG indicators, it is very likely to emerge within the next 10 years. Stricter regulatory requirements are expected to serve as a driver for this development — it will create not only obligations for businesses, but also financial incentives for investing in automation. Early work on structuring internal data will not only ensure compliance with future standards, but also help gain a competitive advantage through increased transparency, reporting speed, and the quality of data-based decisions.

2. Consider digital security measures

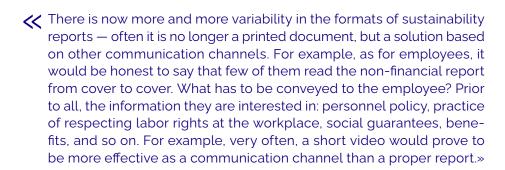
With the continuous increase in digitalization, including automation of work with ESG data, cybersecurity issues have ceased to be the domain of narrow-profile IT specialists and have reached the corporate level. This trend is gaining momentum, as it directly affects every aspect of the company's activities, from protecting confidential reports and personal data of employees and clients to digitalizing HR and financial processes. Any data collection and analysis platform may potentially suffer an attack, and information leakage can cause not only financial, but also insurmountable reputational damage, especially in the field of sustainable development, where trust is a key asset.

A proactive approach to data security should be integrated into the very foundation of digital solutions being developed and implemented — and into the sustainable development strategy of companies from all industries. When choosing software platforms and service providers, it is necessary to evaluate not only their functionality, but also their compliance with strict information security standards. The introduction of encryption, regular security audits and employee training in the basics of cyber hygiene are becoming not optional, but mandatory elements of the strategy of a modern business that strives to be sustainable.

3. Consider reinventing the format of non-financial reporting for various stakeholders

The classic 300-page PDF report, which has long been the standard for corporate sustainability reporting, today often turns out to be an ineffective communication tool. According to experts, its use is controversial: investors can only pay attention to individual metrics, employees and local communities almost never read such documents in their entirety, and boards of directors do not always use them in their work. A logical question arises: for whom and why are we creating this document? The answer to this challenge is to diversify formats, targeting specific audiences and their information needs.

The current trend consists in moving away from a universal "report for everyone" towards point-to-point and interactive communication channels. Instead of one bulky document, it may be more effective to create an ecosystem of materials: specialized databooks on key topics (water, biodiversity, social policy) for specialized experts, a short ESG digest or infographics for investors, vivid videos and posts on social networks for employees and a wider audience. This approach, which includes elements of gamification and visualization, allows not just to report on the work done, but to effectively involve each group of stakeholders, delivering the information that is relevant and useful to them, in an appealing format.



Vera Smirnova,

Director of ESG Rating and Sustainable Development, Delo Group

4. Be prepared that ESG reporting may in the future form part of financial statements

The line between financial and non-financial information is rapidly blurring, and in the coming years we may face the full integration of sustainability indicators into formal financial statements. This is due to the global trend towards digitization and unification of data, as well as the fact that ESG risks and opportunities increasingly have a direct monetary impact (financial risks, damages, cost of carbon units). As a result, responsibility for this information naturally shifts from the sphere of competence of PR and ESG specialists to the field of investor relations (IR) and financial departments, which already have tried and tested processes and automated reporting systems in place in accordance with IFRS.

In terms of financial reporting, everything related to the use of artificial intelligence and digitalization has already been fully implemented in mature companies. And now these changes are beginning to spread in the field of non-financial reporting, too. because it optimizes all the company's costs for collecting reports and publishing data. Slowly but surely, this transformation will take place.»

Vladimir Gorchakov,

Senior Director, Head of the ACRA Sustainable Development Risk Assessment Group

This trend calls into question the current organizational structure: individual sustainable development units can be transformed or integrated into financial blocks. Their role will shift from general management to deep expertise — the "metabolic" analysis of specific data, while consolidation, verification and presentation of information will fall on the shoulders of financial departments. Companies should already prepare for this shift by establishing cross-functional collaboration between teams, increasing data standardization, and evaluating the capabilities of existing IT systems to consolidate disparate information into a single, reliable, and automated flow for integrated reporting.

5. Keep track of new topics on the sustainable development agenda that are relevant to your local context

The global ESG agenda is not static — it is constantly evolving, generating new focuses that can become tangible for your business. Attention is shifting from universal topics to more specific and complex issues that require deep reflection. For example, the ethics of using artificial intelligence, working with employees of different ages (including the "silver generation"), as well as the social consequences of automating processes, such as dismissing employees whose functions can be replaced by technology.

Successful adaptation requires not just passive observation, but active horizon scanning and proactive inclusion in discussions relevant to your industry and geography of presence. Companies need to analyze how these emerging trends — be it ethical issues related to the hiring process or new regulatory requirements in the field of bioeconomics — transform stakeholders' expectations, create new risks and open up opportunities. This allows us not only to respond to changes in a timely manner, but also to shape the future of the agenda, strengthening our competitive position and business sustainability in the long term.



- 1 **B1.** ESG Practices of Russian Companies: Stability vs Variability [Electronic resource]. URL: https://b1.ru/analytics/b1-esg-trends-survey-2023/
- 2 Bronzini, Marco et al. Glitter or Gold? Deriving Structured Insights from Sustainability Reports via Large Language Models [Electronic resource]. EPJ Data Sci. 13, 41. 06/07/2024. URL: https://epjdata-science.springeropen.com/articles/10.1140/epjds/s13688-024-00481-2
- Forbes. 40% of Russian Companies Cut Spending on ESG Policy in 2022 [Electronic resource]. URL: https://www.forbes.ru/biznes/486426-40-rossijskih-kompanij-urezali-rashody-na-esg-politiku-v-2022-godu
- 4 IFRS. IFRS Foundation Publishes Jurisdictional Profiles Providing Transparency and Evidencing Progress towards Adoption of ISSB Standards. [Electronic resource]. URL: https://www.ifrs.org/news-and-events/news/2025/06/ifrs-foundation-publishes-jurisdictional-profiles-issb-standards/
- 5 Interactive Advertising Development Association (ARIR). A Study of the Attitude of Advertising Market Participants to Greenwashing [Electronic resource]. URL: https://interactivead.ru/wp-content/uploads/2023/03/arir23_greenwashing_b2b.pdf
- 6 Kommersant. "Ot Vorot Vostochny Povorot", an article on the ESG policy in the Asian-Pacific Region and its implications for Russia [Electronic resource]. URL: https://www.kommersant.ru/doc/5413077
- 7 Pacioli Consulting. Atlas of Non-financial Reporting in Russia 2024 [Electronic resource]. URL: https://www.pacioliconsult.ru/press-tsenter/analitica/obzor-rynka-atlas-nefinansovoy-otchetnosti-rossii/
- 8 RAEX. ESG Ranking of Companies [Electronic resource]. URL: https://raex-rr.com/ESG/ESG_companies/ESG_rating_companies/2025.1/ (date of access: 04/07/2025)

- 9 **RBC.** «"Steps Backwards": What Will Happen to ESG Projects After Foreign Companies Leave" [Electronic resource]. URL: https://trends.rbc.ru/trends/green/632873db9a794758d8eef01e
- 10 Russian Union of Industrialists and Entrepreneurs (RSPP). A Table from the Library of Corporate Non-Financial Reports as of today [Electronic resource]. URL: https://rspp.ru/tables/non-financial-reports-library/ (date of access: 12/18/2024)
- 11 Schimanski, Tobias et al. Bridging the Gap in ESG Measurement: Using NLP to Quantify Environmental, Social, and Governance Communication [Electronic resource]. SSRN. 11/03/2023. URL: http://dx.doi.org/10.2139/ssrn.4622514
- 12 SKOLKOVO Center for Sustainable Development. Corporate Governance and ESG
 Transformation of Russian Companies [Electronic resource]. URL: https://www.skolkovo.ru/researches/korporativnoe-upravle-nie-i-esg-transformaciya-rossijskih-kompanij/
- 13 Vedomosti. Expert RA Rating Agency Has Released a Review of ESG Transparency of Russian Issuers [Electronic resource]. URL:

 https://www.vedomosti.ru/esg/ecology/articles/2022/11/15/950485-reitingovoe-agentstvo-ekspert-ra-vipustilo-obzor-esg-prozrachnosti-rossiiskih-emitentov

