

<https://doi.org/10.17073/2072-1633-2026-3-1684>

Methodological approaches to developing ESG ratings for public sector entities in the Russian Federation

E.A. Fedchenko  , L.V. Gusarova , I.M. Vankovich , A.A. Sokolovskaya 

*Financial University under the Government of the Russian Federation,
49/2 Leningradsky Ave., Moscow 125167, Russian Federation*

 ea-fedchenko@fa.ru

Abstract. Sustainable development of the Russian economy, in line with national strategic priorities, requires a governance system that balances long-term economic efficiency, environmental responsibility, and social performance. Public sector entities are directly involved in implementing national projects, government programs, and the Sustainable Development Goals. Assessing their performance is essential to determining the public sector's actual contribution to sustainable development, identifying challenges and opportunities for improvement, and providing feedback on the exercise of public mandates. ESG ratings can provide a basis for organizational change within public sector entities and, consequently, for broader economic, social, and environmental transformation. However, existing international and Russian ESG ratings primarily target large commercial companies, leaving public authorities, local self-government bodies, and government, budgetary, and autonomous institutions largely outside the scope of ESG assessment. Closing this gap is necessary to integrate the public sector into the national ESG transition. Accordingly, this article proposes methodological approaches to developing ESG ratings for public sector entities in the Russian Federation, taking into account their organizational and legal characteristics and the limited applicability of existing commercial-sector methodologies. The approaches employed by five leading international and four Russian rating agencies were examined. The analysis demonstrates that existing ESG rating methodologies are poorly suited to public sector entities. The resulting methodology comprises a classification of rating participants by area of activity; a system of indicators covering the environmental, social, and governance pillars; a mechanism for incorporating risk management into the assessment; and a scale for interpreting results from low to high. An additional adjustment factor rewards advanced ESG initiatives. The proposed methodology closes a gap in assessing the public sector's contribution to the Sustainable Development Goals, improves transparency, and enables comparisons across regions, municipalities, and public institutions.

Keywords: ESG rating, public sector, sustainable development, assessment methodology, corporate governance, social responsibility, environmental responsibility, rating agencies

Acknowledgments. This article reports findings from research funded through the state assignment awarded to the Financial University under the Government of the Russian Federation.

For citation: Fedchenko E.A., Gusarova L.V., Vankovich I.M., Sokolovskaya A.A. Methodological approaches to developing ESG ratings for public sector entities in the Russian Federation. *Russian Journal of Industrial Economics*. 2026;16(3):319–333. <https://doi.org/10.17073/2072-1633-2026-3-1684>

Подходы к формированию ESG-рейтингов экономических субъектов государственного сектора Российской Федерации

Е.А. Федченко  , Л.В. Гусарова , И.М. Ванькович , А.А. Соколовская 

Финансовый университет при Правительстве Российской Федерации,
125167, Москва, Ленинградский просп., д. 49/2, Российская Федерация

 eafedchenko@fa.ru

Аннотация. Устойчивое развитие экономики Российской Федерации, согласно стратегическим ориентирам государства, обеспечивается построением системы управления, формирующей баланс долгосрочной экономической эффективности, экологической ответственности и социальной результативности. Экономические субъекты государственного сектора являются непосредственными исполнителями национальных проектов, государственных программ и целей устойчивого развития. Без оценки их деятельности невозможно определить реальный вклад государственного сектора в цели устойчивого развития, выявить проблемы и точки роста экономики и обеспечить обратную связь при реализации полномочий. Основу для изменений в деятельности экономических субъектов государственного сектора и, как следствие, трансформации в экономической, социальной и экологической сферах закладывает ESG-рейтингование. Вместе с тем в настоящее время международные и российские ESG-рейтинги ориентированы преимущественно на крупные коммерческие компании, в то время как экономические субъекты государственного сектора (органы государственной власти, местного самоуправления, казенные, бюджетные и автономные учреждения) остаются вне поля ESG-оценки. Устранение этого разрыва является необходимым условием для интеграции государственного сектора в национальную ESG-трансформацию. В связи с этим в статье представлены методические подходы к формированию ESG-рейтингов для экономических субъектов государственного сектора Российской Федерации с учетом их организационно-правовых особенностей и ограниченной применимости существующих коммерческих методик. Для этого проведен анализ подходов пяти ведущих международных и четырех российских рейтинговых агентств к ESG-оценке хозяйствующих субъектов. Выявлено, что существующие ESG-методики слабо адаптированы для государственного сектора. Результатом исследования стала авторская методика рейтингования, включающая классификацию участников по сфере деятельности, систему индикаторов по трем ESG-компонентам (экология, социальная политика, управление), механизм учета управления рисками и шкалу интерпретации результатов (от «низкого» до «высокого» уровня). Введен дополнительный коэффициент за продвинутые ESG-инициативы. Разработанная методика позволяет устранить пробел в оценке вклада государственного сектора в достижение целей устойчивого развития, повысить прозрачность и обеспечить сопоставимость результатов между различными субъектами (регионами, муниципалитетами, государственными учреждениями).

Ключевые слова: ESG-рейтинговой, государственный сектор, устойчивое развитие, методика оценки, корпоративное управление, социальная ответственность, экологическая ответственность, рейтинговые агентства

Благодарности. Статья подготовлена по результатам исследований, выполненных за счет бюджетных средств по государственному заданию Финансового университета при Правительстве Российской Федерации.

Для цитирования: Федченко Е.А., Гусарова Л.В., Ванькович И.М., Соколовская А.А. Подходы к формированию ESG-рейтингов экономических субъектов государственного сектора Российской Федерации. *Экономика промышленности*. 2026;16(3):319–333. <https://doi.org/10.17073/2072-1633-2026-3-1684>

俄罗斯联邦公共部门经济主体ESG评级体系的构建方法

E.A. 费德琴科 、L.V. 古萨罗娃 、I.M. 万科维奇 、A.A. 索科洛夫斯卡娅 

俄罗斯联邦政府财政金融大学, 125167, 俄罗斯联邦莫斯科列宁格勒大街49/2号

 eafedchenko@fa.ru

摘要: 根据国家战略方针, 俄罗斯联邦经济的可持续发展将通过构建一套管理体系来实现, 该体系在长期经济效益, 环境责任与社会绩效之间形成平衡. 公共部门经济主体是国家项目, 国家计划及可持续发展目标的直接执行者, 如果不对其绩效进行评估, 就无法确定公共部门对可持续发展目标的实际贡献, 也无法识别经济中存在的问题与增长点, 无法在职能履行过程中形成反馈机制. ESG评级为公共部门经济主体的活动变革奠定了基础, 进而推动经济, 社会和环境领域的转型. 然而, 当前国际和俄罗斯的ESG评级主要面向大型商业公司, 而公共部门经济主体 (包括国家机关, 地方政府, 国有企业, 预算机构和自治机构) 仍处于ESG评估范围之外. 消除这一差距是公共部门融入国家ESG转型的必要条件. 为此, 本文提出了针对俄罗斯联邦公共部门经济主体形成ESG评级体系的方法学方法, 考虑了公共部门经济主体的法律与组织特点, 以及现有商业方法的局限性. 研究分析了领先的五家国际评级机构和四家俄罗斯评级机构对经济主体的ESG评估方法, 结果表明, 现有的ESG方法对公共部门的适应性较差. 研究成果是作者提出的评级方法, 该方法包括: 按活动领域对参与主体进行分类; 按ESG三要素 (环境, 社会政策, 治理) 构建指标体系; 风险管理会计机制以及结果解读等级 (从“低级”到“高级”). 此外, 还引入了针对高级ESG举措的附加系数. 所开发的方法有助于弥补公共部门对可持续发展目标贡献评估的空白, 提高透明度, 并确保不同主体 (地区, 市政当局, 国家机构) 之间结果的可比性.

关键词: ESG评级, 公共部门, 可持续发展, 评估方法, 公司治理, 社会责任, 环境责任, 评级机构

致谢: 本文系根据财政预算资金资助的俄罗斯联邦政府财政金融大学国家课题研究成果撰写而成.

Introduction

The strategic priorities for sustainable development in the Russian Federation were formalized in 2021, when two key documents were adopted: Order of the Government of the Russian Federation No. 1912-r dated July 14, 2021¹, which established the goals and principal areas of sustainable (including green) development, and Resolution of the Government of the Russian Federation No. 1587 dated September 21, 2021², which set out the criteria for sustainable development projects and requirements for verifying financing instruments in this area. The institutional framework was further developed in 2024 with the introduction of the national standard

Business Reputation Index (EPS Rating)³, which currently covers more than 7 million business entities. A multilevel sustainability assessment system has thus been established, although it remains focused primarily on the commercial sector. At the same time, public sector entities (public authorities, local self-government bodies, and state, budgetary, and autonomous institutions) continue to demonstrate a relatively low level of sustainable development; specialized assessment tools are lacking, and interest in the ESG agenda⁴ remains limited. Existing international and Russian ESG rating methodologies primarily target large commercial companies and take insufficient account of public sector characteristics, including the non-commercial nature of their activities, their social mission, budget financing, and specific reporting formats. This makes the present study particularly relevant.

¹ On Approval of the Goals and Principal Areas of Sustainable (Including Green) Development in the Russian Federation: Order of the Government of the Russian Federation No. 1912-r dated July 14, 2021.

² On Approval of the Criteria for Sustainable (Including Green) Development Projects in the Russian Federation and Requirements for the Verification System for Sustainable Development Financing Instruments in the Russian Federation: Resolution of the Government of the Russian Federation No. 1587 dated September 21, 2021.

³ GOST R 71198–2023, Business Reputation Index of Business Entities (EPS Rating): Assessment Methodology and Procedure for Establishing the EPS Rating of Responsible Businesses.

⁴ ESG: Environmental, Social, and Governance.

The proposed methodology draws on Russian and international ESG rating practices and follows the principles of accounting for the sectoral and organizational characteristics of rating participants, ensuring transparency of the methodology and research findings, and minimizing expert judgments that could influence the results.

Literature review

The ESG agenda has received considerable attention in the academic literature. Most studies address the commercial sector [1–7], while substantially fewer focus on public administration [8–11].

An analysis of approximately 100 publications in highly ranked journals likewise found that academic research on ESG performance assessment predominantly concerns the corporate sector [12–14].

Based on a retrospective analysis of 169 journal articles, Ed-Dafali et al. [15] found that the set of ESG indicators affecting corporate financial performance varies by industry, corporate governance system, ownership structure, and the financial metrics used. They highlight emerging ESG trends in the digital era and the need for further research in this area.

Yu et al. [16] substantiate the relationship between digital technologies and ESG performance. Using Siemens and Unilever as examples, they show how the adoption of digital technologies in data management can facilitate sustainability, social responsibility, and corporate governance initiatives.

ESG ratings have also been examined in academic publications. For example, Tong et al. [17] demonstrate that higher ESG ratings are significantly associated with a lower stock price crash risk among Chinese companies. Fedorova and Salnikova [18] assess how disclosures concerning environmental initiatives in Russian corporate reporting affect share prices. Huang and Ge [19] link the transparency of ESG reporting to firm value.

However, Fikru et al. [20] argue that corporate financial performance is not always correlated with ESG ratings. Although large companies received higher ESG ratings than small companies, an analysis of 200 small mining companies

found no direct effect of ESG ratings on their financial performance. The authors nevertheless acknowledge that ESG ratings influence investment decisions and industry risk management strategies.

A substantial body of research addresses disagreement and inconsistency among ESG ratings. Bissoondoyal-Bheenick et al. [21], for example, analyzed three major ESG ratings (Sustainalytics, MSCI, and Asset4) and identified a relatively high correlation between Asset4 and Sustainalytics, whereas MSCI ratings were negatively correlated with both. The authors therefore stress the importance of considering and aggregating multiple ratings when assessing corporate ESG performance. Chen and Lin [22] attribute ESG rating divergence to information asymmetry between companies and rating agencies and propose addressing the problem through transparent digital disclosure.

Other reported drivers of ESG rating uncertainty include common ownership [23], market-based environmental regulation [24], the quality characteristics of board members [25], and CEO compensation [26].

This study analyzed the ESG rating approaches used by several international rating agencies and Russian market leaders. The analysis showed that no universal methodology exists: the same entity may receive widely divergent assessments from different agencies, transparency is limited, and the results are difficult to interpret. Although Russian agency methodologies reflect national legislation, they focus on large businesses rather than the public sector. International rating agencies assess countries across various ESG dimensions. *MSCI Government Ratings*, for example, evaluates risks in three areas: natural resources and climate (Environmental), social inclusion and the economic environment (Social), and political stability and corruption (Governance). The *Swisscanto ESG Sovereign Rating*⁵ assesses

⁵ The Swisscanto ESG Sovereign Rating is a country sustainability rating compiled by the Asset Management division of Zürcher Kantonalbank (Switzerland). It assesses countries using Environmental, Social, and Governance criteria. Available at: <https://www.robeco.com/en-me/insights/2025/12/denmark-extends-country-esg-winning-streak> (accessed on March 31, 2026).

199 countries using approximately 80 indicators, including cybersecurity (Governance) and biodiversity. The *Carmignac Proprietary Model*⁶ assumes that environmental and social policies cannot function effectively without strong government and therefore assigns Governance a weight of 40%, compared with 30% each for Environmental and Social. The studies reviewed provide a general framework for corporate social responsibility but offer no tools for rating public authorities. The present study is the first to propose such an assessment framework, drawing on best practices and adapting them to the needs of the public sector. The study aims to develop methodological approaches to ESG ratings for public sector entities in the Russian Federation, with due regard to their organizational and legal characteristics and the limited applicability of existing commercial-sector methodologies.

Materials and methods

To substantiate the authors' methodology, five leading international and four Russian ESG rating methodologies were compared. The international methodologies selected were Sustainalytics⁷, MSCI ESG⁸, ISS ESG⁹, S&P Global ESG¹⁰, and Bloomberg ESG Disclosure¹¹. Despite their shared objective of assessing companies' non-financial risks and opportunities, the methodolo-

gical approaches of leading international agencies vary considerably in both their underlying approach to measurement and their selection of indicators. All ratings focus on industry-specific factors, combine multiple data sources with proprietary algorithms, and seek to standardize assessments in response to investor demand. Their rating scales, however, follow different underlying logics: Sustainalytics and MSCI use opposite directions (a lower Sustainalytics score is better, while MSCI ranges upward from CCC to AAA), which calls for caution in cross-rating comparisons. S&P Global ESG emphasizes a weighted assessment of environmental, social, and governance dimensions and reviews the weights annually, whereas Bloomberg ESG Disclosure focuses primarily on the completeness and depth of corporate disclosure rather than actual performance. ISS ESG is distinguished by its detailed country- and regulation-specific framework and the use of threshold scenarios. A SWOT analysis of the methodological frameworks used by international ESG rating agencies identified their principal strengths and weaknesses (**Table 1**).

The SWOT analysis showed that international methodologies cannot be directly replicated for the public sector. They must instead be adapted by retaining universal principles – such as methodological variety and the use of a broad range of sources – while replacing opaque and complex elements with formalized, transparent algorithms.

Table 1

SWOT analysis of the methodological frameworks used by international ESG rating agencies

Strengths	Weaknesses
– variability in approaches to developing ESG ratings, allowing each external user to select the rating that best meets their needs; – a broad range of data sources used in ESG ratings, enabling the most accurate possible assessment of a rating participant's activities	– the absence of standardized ESG rating approaches, resulting in divergent assessments of the same participant by different international agencies; – limited opportunities to communicate with rating agencies, obtain additional explanations, and verify rating assessments; – insufficient transparency of rating methodologies for external users; – difficulty interpreting the final score

Source: Compiled by the authors based on their SWOT analysis of the ESG rating methodologies

⁶ Carmignac is a French asset management company founded in 1989. It uses proprietary models and systems to analyze and manage investment processes, including ESG criteria. Available at: <https://www.carmignac.com/en-gb/articles/taking-another-look-at-esg-integration-in-sovereign-investments-3218-11127> (accessed on March 31, 2026).

⁷ Sustainalytics is an independent research firm specializing in environmental, social, and governance (ESG) research.

⁸ MSCI ESG Ratings assess companies' resilience to long-term, financially material risks and opportunities arising from environmental, social, and governance (ESG) factors.

⁹ ISS ESG is the responsible investment arm of ISS, a global leader in corporate governance and responsible investment solutions.

¹⁰ S&P Global ESG Scores measure a company's effectiveness in managing material ESG risks, opportunities, and impacts. The assessment combines data from public corporate disclosures, media and stakeholder analysis, modeling techniques, and in-depth engagement with companies through the Corporate Sustainability Assessment (CSA).

¹¹ Bloomberg ESG Disclosure assesses the transparency of companies with respect to environmental, social, and governance (ESG) factors. It helps investors and analysts evaluate how openly a company discloses information on its ESG practices, risks, and opportunities.

The approaches of Russian rating agencies were examined in greater detail. A comparative analysis of the methodologies used by four Russian agencies (Expert RA¹², ACRA¹³, NRA¹⁴ and NCR¹⁵) identified parameters that informed the selection of specific research methods. The analysis covered the following areas: rated entities, the ESG rating determination procedure, the assignment of weights to rating components, and information sources.

The analysis of rated entities yielded the following methodological conclusions. Nearly all rating agencies primarily rate commercial financial and non-financial companies. Although every agency covers public sector entities to some extent, this coverage is limited to public authorities. The public sector, however, also includes state-owned non-profit organizations and state-owned commercial organizations. We therefore consider stratified classification appropriate for ESG ratings of public sector entities: each entity is first assigned to a specific category based on material characteristics, after which a corresponding set of indicators is applied.

An analysis of ESG rating determination procedures identified the principal methods used by Russian rating agencies (**Table 2**).

An analysis of the rating procedures applied by the agencies under review showed that none is fully suitable for the public sector because they do not address the objectives of an ESG rating methodology for public sector entities: supporting the achievement of national development goals and a sustainable economic growth trajectory; establishing sustainable development indicators for public sector entities; organizing interaction and obtaining feedback as public sector entities exercise their mandates; and disclosing compliance with ESG principles in the activities of public sector entities¹⁶.

The analysis of component weights showed that Russian rating agencies assign different weights to individual ESG rating components (E, S, and G), ranging from equal to highly differentiated. ACRA and NCR, for example, assign equal weights to all components (E = 33.3%, S = 33.3%, G = 33.3%). Expert RA and NRA use weight ranges (Expert RA: E = 15–30%, S = 35–40%, G = 35–45%; NRA: E = 30–50%, S = 30–50%, G = 20–40%). This variation – from equal to highly differentiated weights – indicates a lack of consensus regarding the relative importance of ESG aspects. In the public sector, where Governance is of paramount importance (including anti-corruption policy and the effectiveness of government program implementation), the analytic hierarchy process is required to derive weights that reflect the priorities of the national ESG strategy.

¹² Expert RA refers to Expert RA Rating Agency JSC. Available at: <https://raexpert.ru/> (accessed on March 31, 2026).

¹³ ACRA refers to Analytical Credit Rating Agency JSC. Available at: <https://www.acra-ratings.ru/> (accessed on March 31, 2026).

¹⁴ NRA refers to National Rating Agency LLC. Available at: <https://www.ra-national.ru/> (accessed on March 31, 2026).

¹⁵ NCR refers to National Credit Ratings LLC. Available at: <https://ratings.ru/> (accessed on March 31, 2026).

¹⁶ GOST R 71198–2023, National Standard of the Russian Federation, Business Reputation Index of Business Entities (EPS Rating): Assessment Methodology and Procedure for Establishing the EPS Rating of Responsible Businesses, enacted by Order of the Federal Agency for Technical Regulation and Metrology (Rosstandart) No. 1765-st dated December 29, 2023.

Comparison of ESG rating methodologies

Table 2

Rating agency	Factors used to assess rating components
Expert RA	Parameters are scored on a scale from 1 to –1; upward and downward adjustments may be applied. <i>Factors for the Environmental component:</i> impacts on air, climate, the aquatic environment, and biogeocenoses; waste management; environmental protection expenditures; plans to reduce adverse environmental impacts; a green office; and responsible investment/financing practices (environmental aspects). <i>Factors for the Social component:</i> employee remuneration; working conditions; staff turnover; occupational health and industrial safety; community engagement; and responsible investment/financing practices (social aspects). <i>Factors for the Governance Quality component:</i> business reputation; development strategy; board effectiveness; executive body performance; risk management; degree of information transparency; responsible supply chains; and responsible investment policy. A stress factor may reduce the rating by 0.2–0.4 or 1 point, while a support factor may increase it by 0.2 or 0.4 points

End of Table 2

Rating agency	Factors used to assess rating components
ACRA	For each component: 1. Factors are assessed (factor weight within the component: 40%; all factors have equal weights). In the Environmental and Social Responsibility components, a rank-based score from 1 to 5 is assigned (1 indicates that the company is among the top 15% for the indicator, while 5 indicates that it is among the bottom 15%), taking into account performance over the preceding three years and allowing an adjustment from –1 to +1. The Governance component is scored from 1 to 5, with positive and negative modifiers applied across all components. <i>Factors for the Environmental component:</i> waste generation, water consumption, air pollutant emissions, greenhouse gas emissions, energy consumption, and wastewater discharges. <i>Factors for the Social Responsibility component:</i> employee turnover, average wages, gender composition, occupational injuries, fatal occupational injuries, and social investment. <i>Factors for the Corporate Governance component:</i> board independence; stability of board membership and members' industry experience; concentration of share ownership; information disclosure; and management strategy. 2. Risk assessment within each component (weight within the component: 30%): the Environmental component assesses environmental impact risks; the Social Responsibility component assesses social risks (social unrest, acute shortages of skilled personnel, etc.); and the Governance component assesses risks inherent in the company's business culture. Each risk is scored from 1 to 5, where 1 reflects the company's maximum effort to minimize the risk and 5 reflects minimum effort. 3. Assessment of compliance with ESG best practices (weight within the component: 30%). A list of factors is scored as 0 (non-compliant), 0.5 (partially compliant), or 1 (compliant)
NCR	Each component (factor) is assessed on the basis of scores assigned to the corresponding subfactors on a scale from 1 to 7. The baseline subfactor score may be adjusted through expert judgment within a range from –3 to 3. Each subfactor is assigned a methodology-defined weight, including weights based on the organization's Russian Classification of Economic Activities (OKVED) code. <i>Indicators for the Environmental component:</i> – environmental impact (carbon footprint, energy consumption and energy efficiency, air pollutant emissions, impacts on water resources, waste management, and land resource management); – exposure to environmental risks and the effectiveness of their management (trends in quantitative indicators, sensitivity to resource depletion, hazardous natural phenomena and environmental regulation, internal documentation, investment and advanced technologies, and engagement with counterparties). <i>Indicators for the Social component:</i> – employee incentive system (the ratio of the company's minimum wage to the statutory minimum wage for the working-age population; the ratio of the company's median wage to the subsistence minimum for the working-age population; the ratio of the company's average monthly wage to the industry average; total and voluntary employee turnover; the share of employees who received training in the average headcount; the share of vocational training expenditures in total labor costs; and the proportion of employees covered by supplementary health insurance); – diversity and equality (employee age structure, the ratio of men to women in the company, and the gender pay gap); – occupational health and safety; – engagement with counterparties and the community. <i>Indicators for the Governance component:</i> – ownership structure and the exercise of shareholder (member) rights (assessment of ownership transparency and the business reputation of the largest beneficiaries and senior management); – governing bodies (effectiveness assessment); – senior management remuneration system (assessment of the existence and transparency of the remuneration policy); – risk management system (assessment of the structure and effectiveness of the risk management system); – quality of statutory and additional disclosure; – development strategy (assessment of corporate plans, including their alignment with the Sustainable Development Goals and the planning horizon)

End of Table 2

Rating agency	Factors used to assess rating components
NRA	The Environmental, Social Policy, and Corporate Governance components are assessed as the arithmetic mean of their constituent elements. Each element is assigned a score of 0, 0.5, or 1, or alternatively 0 or 1. In cases specified by the methodology and at the rating agency's discretion, the aggregate score for all three components may be adjusted downward by 0.5 to 1 point. <i>Indicators for the Environmental component:</i> – climate (emissions trends, greenhouse gas reduction planning, climate risk management, probability of risk occurrence, the existence of a climate adaptation program, and climate-related disclosure); – energy consumption and energy efficiency (trends, the share of the organization's production/logistics capacity powered by green energy, and energy-efficiency improvement planning); – air (trends, planning to reduce impacts on ambient air, compliance with established limits, and air-quality monitoring); – water resources (trends, the share of recirculated water use, planning to reduce impacts on water resources, compliance with established limits, and monitoring of water bodies); – production and consumption waste management (trends, the share of waste sent to landfill, waste management planning, and compliance with established limits); – land use (trends in contaminated land, areas of reclaimed land, and planning for the sustainable use of land resources); – forests and biodiversity; – environmental management; – environmental protection expenditures (expenditure trends, pollution charges, compensation paid, and fines); – supply chains (environmental requirements for contractors); – responsible investment. <i>Indicators for the Social Policy component:</i> – employee incentive system; – equality policy; – occupational health and safety; – engagement with the community and third parties (participation in social projects in the regions of operation; charitable and corporate volunteering programs; and a policy for engagement with local communities); – engagement with customers and other counterparties. <i>Indicators for the Corporate Governance component:</i> – ownership structure and the exercise of shareholder (member) rights (ownership transparency, business reputation, the influence of different shareholder groups, the exercise of minority shareholder rights, corporate conflicts, procedures for organizing and holding general shareholder meetings, dividend policy and dividend payment procedures, the human capital quality of governing bodies, and auditor disclosure); – organizational governing bodies (the existence of formal rules and a board work plan; board self-assessment; executive body powers; an audit committee and a board-level sustainable development committee; and board independence, competence, and balance); – strategic management (the existence, content, and public availability of the development strategy and ESG strategy; the board's contribution to sustainable development; formal strategic decision-making procedures; the percentage of the development strategy implemented; and disclosure of implementation results); – remuneration system; – risk management, internal control, and internal audit

Source: Compiled by the authors based on the following documents: Methodology for Assigning ESG Ratings. Available at: https://www.ratings.ru/upload/iblock/f72/ihcoi10nq17kj86tqpm9evgq2tfrift7/ESG_methodology_250625.pdf; Methodology for Assigning ESG Ratings. Available at: <https://raexpert.ru/docbank/f68/dcc/9cd/aa57868f4c66ae7bc20fe8b.pdf>; Principles for Assigning ESG Ratings to Non-Financial Companies. Available at: https://www.acra-ratings.ru/upload/iblock/meth/20250708_ESG%20Methodology_Appendix_Non-Financial.pdf; Methodology for Assigning ESG Ratings. Available at: <https://www.ra-national.ru/wp-content/uploads/2025/06/metodologija-prisvoenija-esg-rejtingov-versija-5.1.pdf> (accessed on 24.03.2026).

The analysis of the information sources used by rating agencies showed that data submitted by the rated entity constitute the principal source. Because the risk of bias from self-reported data is particularly high in the public sector, information should instead be obtained from objective sources, including government information systems, Federal State Statistics Service data, financial and non-financial reporting indicators, and information held by authorized public bodies.

Thus, the direct adoption of existing methodologies developed by international and Russian agencies for ESG rating of public-sector economic entities does not appear entirely appropriate, given the identified limitations: lack of standardization, insufficient transparency, reliance on self-assessment data, and a focus on large commercial companies.

The study found that ESG ratings are not widely used in the public sector. Between 2022 and 2025, only two state corporations and one state-owned company applied for an ESG rating¹⁷. ESG rating coverage was therefore 66.67% among state corporations, 33.33% among state-owned companies, and 0% among other public sector organizations [27]. The limited adoption of ESG ratings in the public sector can be attributed to the following principal reasons:

- 1) the absence of competition for investment because of budget financing;
- 2) the absence of a statutory ESG reporting requirement;
- 3) the incompatibility of existing rating methodologies with public sector characteristics;
- 4) fee-based rating services and limited budget resources;
- 5) reputational risks that discourage low-performing entities from seeking assessment;
- 6) the absence of statutory liability for non-compliance with ESG principles.

The present study focuses on the third of these factors: the lack of an ESG rating methodology developed by Russian rating agencies that is suitable for assessing public sector organizations.

¹⁷ For 2025, the information is presented as of August 24, 2025.

Results

Experience in developing sustainability ratings for public and corporate sector entities suggests two approaches to constructing sustainable development indicators¹⁸. The first establishes a system in which each indicator reflects a rating participant's position in a specific area of sustainable development. The second calculates a single indicator of the participant's overall level of sustainable development by aggregating groups of environmental, social, and governance indicators. In this case, the indicators quantify both past performance and future prospects, assuming that the participant maintains its current strategy. Effective integration of public sector entities into the ESG rating system requires the use of best practices and adherence to the principles outlined above. Each sustainable development component must therefore be represented by an indicator calculated on a common scale. This approach prevents a low score for one component from being offset by a high score for another, which would otherwise distort the participant's overall profile. The proposed methodology constructs indicators for each component to characterize the extent to which ESG principles are reflected in the rating participant's activities, thereby producing an entity profile as of the rating date (**Fig. 1**).

The methodology assesses rating participants in four successive stages.

At the *first stage*, information on the rating participant is collected and analyzed using data from government information systems, financial and non-financial reporting indicators, and registers maintained by authorized executive authorities.

¹⁸ ESG Corporate Rating. Official website of Institutional Shareholder Services Inc. Available at: <https://www.issgovernance.com/esg/ratings/corporate-rating/> (accessed on March 24, 2026).

Sustainable Fitch: ESG Rating. Official website of Sustainable Fitch. Available at: <https://www.sustainablefitch.com/products/esg-ratings> (accessed on March 24, 2026).

Methodology for Assigning ESG Ratings to Corporates. Official website of Rating-Agentur Expert RA GmbH. Available at: https://raexpert.eu/files/methodology/Methodology_ESG_Corporates.pdf/ (accessed on March 24, 2026).

Reporting Guidance 2025. Official website of CDP. Available at: <https://cdp.net/en/disclose/question-bank> (accessed on March 24, 2026).

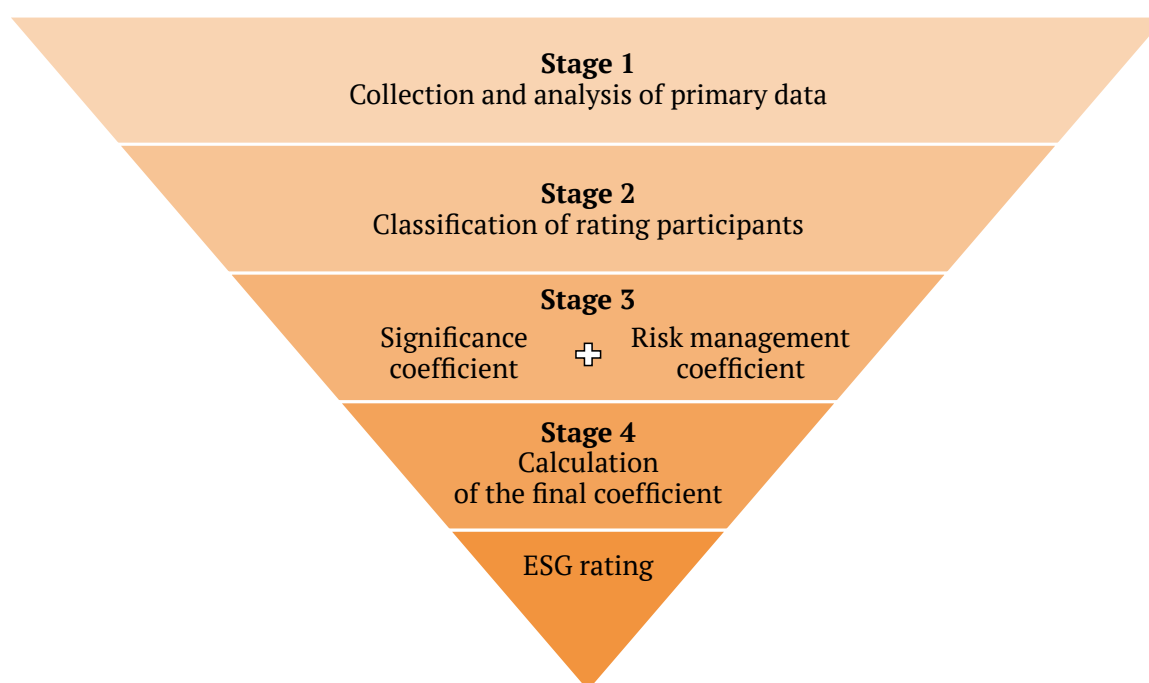


Fig. 1. ESG rating framework and assessment workflow

At the *second stage*, the rating participant is classified by organizational and legal form (government body, state-owned non-profit organization, or state-owned commercial organization) and by area of activity. The information reviewed is then used to determine the structure of each component for the participant's area of activity. The composition of the Environmental, Social, and Governance indicators may therefore vary depending on the participant's classification. Rating agencies' accumulated experience in developing sustainability ratings makes it possible to differentiate the principles used to identify indicators for each component as applied to public sector entities.

Indicators may be drawn from the list of key (core) sustainability reporting indicators approved by order of the Ministry of Economic Development of the Russian Federation¹⁹ and organized into four dimensions: (1) economic, (2) environmental, (3) social, and (4) governance. In the proposed system for assessing the sustain-

able development of public sector entities, the Environmental component includes indicators such as the environmental impact of operations, the use of advanced technologies, environmental policy, and the implementation of environmental initiatives. The Social component covers socially oriented activities for citizens, working conditions, payroll structure and trends, and employee benefits. The Governance component covers the effectiveness of government program and national project implementation, the implementation of anti-corruption policy, and economic indicators. For each sustainable development component – Environmental, Social, and Governance – the study proposes a system of indicators, calculation formulas, and assessment criteria.

The central methodological approach maps EPS Rating scores onto a scale from 0 to 1 and then uses the mapped values to estimate the probability of risk occurrence. A cascading step function is specified for each indicator: scores of $P = 5, 4, 3, 2, 1, 0$ and 0 correspond to risk probability levels of $E(P) = 1; 0.8; 0.6; 0.4; 0.2; 0$, respectively, differentiating low, moderate, above-average, and high threat levels. Thus, at

¹⁹ On Approval of Methodological Recommendations for Preparing Sustainability Reports: Order of the Ministry of Economic Development of the Russian Federation No. 764 dated November 1, 2023.

$E(P) = 1$ the probability of risk is classified as low; at 0.8, moderate; at 0.4–0.6, above average; and at 0–0.2, high. For example, the Environmental Performance Indicator, an external parameter for assessing a public authority, is calculated as follows:

$$P = Q_i,$$

where Q_i is the score assigned according to the scale of environmental project implementation, for example:

$Q_1 = 5$ points when large-scale regional environmental projects are implemented to remediate environmental damage not caused by the public authority's activities;

$Q_2 = 4$ when large-scale regional environmental projects are implemented;

$Q_3 = 3$ when environmental campaigns are implemented using the entity's own resources and third-party resources;

$Q_4 = 2$ when environmental campaigns are implemented independently;

$Q_5 = 1$ when the entity participates in environmental campaigns;

$Q_6 = 0$ when no environmental activities, campaigns, or projects are undertaken.

Once the scores have been assigned, the corresponding assessment criterion and risk level are determined (Table 3).

Thus, the higher the P score, the lower the estimated probability of environmental and technological risk for the public sector entity.

At the *third stage*, rating participants' activities are assessed against sustainable development indicators reflecting each of the Environmental, Social, and Governance components. The calculated indicators are used to construct a measure of the participant's compliance with the requirements embedded in each component. To calculate the significance coefficient for the Environmental, Social, and Governance components, the indicator values are summed as follows:

$$K_{sig(E,S,G)} = \sum k_i,$$

where $K_{sig(E,S,G)}$ is the significance coefficient for each component – Environmental, Social, and Governance – and; k_i denotes the indicator values for each component.

When selecting risk management approaches that affect indicator values, rating participants choose the measures best aligned with their strategies. Measures may address sustainable development, social, environmental, economic²⁰, and governance risks and may include risk avoidance, transfer, mitigation, and acceptance. Each risk is, in turn, described through the factors that give rise to it, which determines the choice of response. Risk avoidance entails completely excluding risk-generating factors from the participant's activities, even if doing so results in lost opportunities for the entity's further development. Risk transfer involves transferring risks to third parties, for example through insurance. Risk mitigation reduces the probability of a risk occurring or its impact on the participant's activities through response measures. Risk acceptance entails tolerating expected losses if risk events materialize. Each risk response option can be implemented through appropriate measures.

Each measure is assigned a numerical coefficient that identifies the rating participant's policy for managing risks affecting the indicators within the relevant dimension,

$$K_{RM} = \sum K_{RM_i},$$

where K_{RM_i} is the risk management coefficient for dimension i .

²⁰ Economic risks are reflected in the Governance component.

Table 3

Criteria for determining risk levels

Environmental performance score (P)	Assessment criterion ($E(P)$)	Risk level criterion
5	1	Low probability of risk
4	0.8	Moderate probability of risk
3	0.6	Above-average probability of risk
2	0.4	
1	0.2	High probability of risk
0	0	

Table 4

Interpretation of ESG rating scores

Score	Level	Interpretation
121–140	High	A structured, proactive approach to sustainable development. Policies and concrete action on key issues, with detailed implementation information. Comprehensive indicator-level reporting on actions and results. Innovative practices and external recognition
91–120	Advanced	A structured, proactive approach to sustainable development. Policies and concrete action on key issues, with detailed implementation information. Substantial indicator-level sustainability reporting on actions and results
61–90	Moderate	A structured, proactive approach to sustainable development. Policies and concrete action on key issues. Basic reporting on actions and results
31–60	Satisfactory	A minimally structured approach to sustainable development. Several policies and concrete actions addressing selected issues (a reactive approach)
0–30	Low	No sustainable development policies or concrete action. Evidence of misconduct in certain cases (pollution or corruption)

Source: Compiled by the authors based on [28]

At the *fourth stage*, the final coefficients are calculated for each component to assess the influence of ESG principles on the participant's activities and the approaches used to manage ESG risks. These coefficients are used to assign the participant to a specific rating group. The coefficient for each component is therefore calculated as follows:

$$K_{final(\exists, C, K)} = K_{sig(E, S, G)} + K_{RM(E, S, G)} + K_{add},$$

where $K_{final(\exists, C, K)}$ is the coefficient identifying the participant's risk management policy; $K_{sig(E, S, G)}$ is the significance coefficient by dimension used to obtain the result for each component; and K_{add} is the additional coefficient.

Rating participants demonstrating an advanced level of adherence to ESG principles within each component may be awarded additional points through the K_{add} coefficient (for membership in specialized professional associations concerned with the ESG agenda and for ESG initiatives). A maximum of 3 additional points may be awarded. The calculated final coefficient for each component determines the participant's position in the overall ranking and its assignment to an established group, as well as an indicator of its degree of compliance with sustainable development principles. An example of ESG rating score interpretation is presented in **Table 4**.

Thus, the sustainable development of public sector entities, as an integral part of the broader ESG transformation of the economy, requires clear criteria for assessing progress toward established goals. Assessing each public sector entity's contribution to the integration of ESG principles and comparing the results make it possible to identify trends and problems requiring action. ESG ratings based on specified indicators are a tool for achieving sustainable development goals and provide a foundation for change in the activities of public sector entities and, consequently, for transformation in the social, economic, and environmental spheres.

Conclusion

The study yields several key conclusions regarding the ESG rating methodology for public sector entities.

First and foremost, the proposed methodology provides a comprehensive, structured approach to assessing the sustainable development of public sector organizations while accounting for their sectoral, organizational, and legal characteristics. The consistent implementation of four stages – from collecting primary data from government information systems to the final interpretation of results – ensures a systematic and reproducible assessment.

A key advantage is the adaptation of an existing national tool (the EPS rating) to the assessment of public sector entities, which enhances the methodology's practical relevance.

The proposed transformation of point scores into probabilistic risk indicators ranging from 0 to 1 makes it possible not only to rank participants but also to interpret the degree of threat in the environmental, social, and governance dimensions. The cascading step assessment function provides a transparent mechanism for converting qualitative characteristics of activities, such as project implementation and participation in campaigns, into quantitative indicators suitable for statistical analysis and comparison. The interpretation scale, ranging from low to high, enables an organization to understand

both its position in the rating and specific gaps in its policies, actions, and reporting.

Overall, the proposed ESG rating methodology addresses an important gap in the system for assessing public sector organizations by linking national sustainable development priorities to specific measurable indicators and risk management procedures. Its implementation establishes a methodological basis for comparative analysis, the identification of best practices, and evidence-based management decisions as part of the ESG transformation of the public sector in the Russian Federation.

Further research may test the methodology using empirical data, refine the weighting coefficients, and automate calculations through government information systems.

References

1. Sheveleva G.I. Corporate governance in generating companies of the Russian electric power industry in the context of ESG agenda. *Global Energy Interconnection*. 2022;5(5):512–523. <https://doi.org/10.1016/j.gloi.2022.10.005>
2. Fedchenko E.A., Gusarova L.V., Uskenbayeva A.R. Green building in the esg agenda for sustainable development of Russia: conditions and trends. *Construction Materials and Products*. 2024;7(3):9. <https://doi.org/10.58224/2618-7183-2024-7-3-9>
3. Chernysheva T.K. European approaches to the development of conceptual frameworks for ESG policy. *Outlines of Global Transformations: Politics, Economics, Law*. 2024;17(1):136–155. <https://doi.org/10.31249/kgt/2024.01.08>
4. Bhullar S., Joshi M., Sharma Sh., Kaur A., Phan D. Greenwashing and ESG: Bibliometric analysis and future research agenda Pritpal. *Pacific-Basin Finance Journal*. 2025;93:102846. <https://doi.org/10.1016/j.pacfin.2025.102846>
5. Adardour Z., Ed-Dafali S., Sbair H., Hussainey Kh. ESG performance, family ownership, and corporate risk-taking: The moderating role of the CSR committee. *International Journal of Finance & Economics*. 2025;31(2):1979–1994. <https://doi.org/10.1002/ijfe.70026>
6. Bhat A.A., Mir A.A., Allie A.H., Lone M.A., Al-Adwan A.S., Jamali D., Riyaz I. Unlocking corporate social responsibility and environmental performance: Mediating role of green strategy, innovation, and leadership. *Innovation and Green Development*. 2024;3(2):100112. <https://doi.org/10.1016/j.igd.2023.100112>
7. Bosi M.K., Lajuni N., Wellfren A.C., Lim T.S. Sustainability reporting through environmental, social, and governance: A bibliometric review. *Sustainability*. 2022;14(19):12071. <https://doi.org/10.3390/su141912071>
8. Erin O., Ackers B., Bamigboye O. The state of SDGs and sustainability practices of public sector entities: Evidence from under-investigated context. *Journal of Cleaner Production*. 2024;465:142772. <https://doi.org/10.1016/j.jclepro.2024.142772>
9. Argento D., Grossi G., Persson K., Vingren Th. Sustainability disclosures of hybrid organizations: Swedish state-owned enterprises. *Meditari Accountancy Research*. 2019;27(4):505–533. <https://doi.org/10.1108/MEDAR-07-2018-0362>
10. Mansi M., Pandey R., Ghauri Eh. CSR focus in the mission and vision statements of public sector enterprises: evidence from India. *Managerial Auditing Journal*. 2017;32(4/5):356–377. <https://doi.org/10.1108/MAJ-01-2016-1307>
11. Zheng H., Zhang Y. Do SOEs outperform private enterprises in CSR? Evidence from China. *Chinese Management Studies*. 2016;10(3):435–457. <https://doi.org/10.1108/CMS-10-2015-0225>
12. Belousov A.L. Legal and organizational aspects of introducing ESG-standards in the Russian banking sector. *Russian Journal of Economics and Law*. 2022;16(3):577–586. (In Russ.). <https://doi.org/10.21202/2782-2923.2022.3.577-586>
13. Krinichansky K.V., Rubtsov B.B. Financial sector regulation on the agenda of economic Policy reforms. *Finance: Theory and Practice*. 2022;26(5):6–21.

- (In Russ.). <https://doi.org/10.26794/2587-5671-2022-26-5-6-21>
14. Advocatova A.S., Zavorykin A.A. ESG agenda and aggressive tax planning. *Economics, Taxes & Law*. 2023;16(3):144–152. (In Russ.). <https://doi.org/10.26794/1999-849X-2023-16-3-144-152>
 15. Ed-Dafali S., Patel M., Adardour Z., Theodoraki Ch. Mapping ESG-Driven sustainable development: A retrospective review and future research agenda. *Innovation and Green Development*. 2026;5(1):100326. <https://doi.org/10.1016/j.igd.2026.100326>
 16. Yu Y., Chan H.-L., Cho E. Enhancing ESG performance through digital transformation: Recent development, cases and relationships. *Journal of Business Research*. 2026;202:115763. <https://doi.org/10.1016/j.jbusres.2025.115763>
 17. Tong X., Lyu X., Jin J., Bian H. ESG ratings and stock price crash risk: Role of herding behavior and network media attention. *Pacific-Basin Finance Journal*. 2026;97:103114. <https://doi.org/10.1016/j.pacfin.2026.103114>
 18. Fedorova E., Salnikova P. Impact of environmental initiative disclosures on share prices of Russian public companies. *HSE Economic Journal*. 2024;28(2):223–247. (In Russ.). <https://doi.org/10.17323/1813-8691-2024-28-2-223-247>
 19. Huang Sh., Ge J. Is there heterogeneity in ESG disclosure by mining companies? A comparison of developed and developing countries. *Environmental Impact Assessment Review*. 2024;104:107348. <https://doi.org/10.1016/j.eiar.2023.107348>
 20. Fikru M.G., Brodmann J., Eng L.L., Grant J.A. ESG ratings in the mining industry: Factors and implications. *The Extractive Industries and Society*. 2024;20:101521. <https://doi.org/10.1016/j.exis.2024.101521>
 21. Bissoondoyal-Bheenick E., Bennett S., Lehnerr R., Zhong A. ESG rating disagreement: Implications and aggregation approaches. *International Review of Economics & Finance*. 2024;96(6(Part A)):103532. <https://doi.org/10.1016/j.iref.2024.103532>
 22. Chen J., Lin H. Corporate digitalization and ESG rating divergence: Evidence from China. *Research in International Business and Finance*. 2026;82:103264. <https://doi.org/10.1016/j.ribaf.2025.103264>
 23. Yang H. The role of common ownership in shaping ESG rating uncertainty: A collaborative governance perspective across time horizons. *International Review of Financial Analysis*. 2025;102:104083. <https://doi.org/10.1016/j.irfa.2025.104083>
 24. Zhang J., Qi F., Wu M. Market-oriented environmental regulation and ESG rating divergence. *Research in International Business and Finance*. 2025;79:103074. <https://doi.org/10.1016/j.ribaf.2025.103074>
 25. Bataeva B.S., Karpov N.A. Transparency of information disclosure by Russian companies with state participation: the impact of the composition and structure of the board of directors. *Lomonosov Economics Journal*. 2025;60(1):129–150. (In Russ.). <https://doi.org/10.55959/MSU0130-0105-6-60-1-7>
 26. Liu X., Peng Y., Li Q., Wu Ch.-H. CEO pay structure and ESG rating disagreement. *International Review of Financial Analysis*. 2025;102:104101. <https://doi.org/10.1016/j.irfa.2025.104101>
 27. Pavlova A.S. The problems of ESG-rating of economic entities in the public sector. *Modern Economics: Problems and Solutions*. 2025;9:107–122. (In Russ.). <https://doi.org/10.17308/meps/2078-9017/2025/9/107-122>
 28. Grishankova S.D. ESG ratings. In: *Collection of articles of the Moscow State Institute of International Relations (University) "ESG transformation as a vector of sustainable development"*. In 3 volumes. Ed. by K.E. Turbina and I.Yu. Yurgens. Moscow: Aspect-Press; 2022. Pp. 305–444. (In Russ.)

Conflict of interest

No conflict of interest is declared by the authors

Authors' declared contributions

E.A. Fedchenko – problem statement, development of the article concept and research methodology, research quality control.

L.V. Gusarova – writing the original text, collecting and analyzing material, finalizing the text, new scientific results;

I.M. Vankovich – analysis and description of the results, formation of research conclusions.

A.A. Sokolovskaya – critical analysis of literature, collection of statistical data, tabular and graphical presentation of results.

Конфликт интересов

Авторами не заявлен

Заявленный вклад авторов

Е.А. Федченко – постановка проблемы, разработка концепции статьи и методологии исследования, контроль качества исследования.

Л.В. Гусарова – написание исходного текста, сбор и анализ материала, доработка текста, новые научные результаты;

И.М. Ванькович – анализ и описание результатов, формирование выводов исследования.

А.А. Соколовская – критический анализ литературы, сбор статистических данных, табличное и графическое представление результатов.

Information about the authors

Elena A. Fedchenko – Dr.Sci. (Econ.), Associate Professor; Professor and Deputy Head, Department of Financial Control and Treasury Affairs, Faculty of Finance; Chief Researcher, Institute for Financial Research, Faculty of Finance, Financial University under the Government of the Russian Federation, 49/2 Leningradsky Ave., Moscow 125167, Russian Federation; ORCID: <https://orcid.org/0000-0002-4844-0991>; e-mail: EAFedchenko@fa.ru

Lyubov V. Gusarova – Dr.Sci. (Econ.), Associate Professor; Professor, Department of Financial Control and Treasury Affairs, Faculty of Finance; Chief Researcher, Institute for Financial Research, Faculty of Finance, Financial University under the Government of the Russian Federation, 49/2 Leningradsky Ave., Moscow 125167, Russian Federation; ORCID: <https://orcid.org/0000-0001-8068-0357>; e-mail: lvgusarova@fa.ru

Inna M. Vankovich – PhD (Econ.); Associate Professor, Department of Financial Control and Treasury Affairs, Faculty of Finance; Leading Researcher, Institute for Financial Research, Faculty of Finance, Financial University under the Government of the Russian Federation, 49/2 Leningradsky Ave., Moscow 125167, Russian Federation; ORCID: <https://orcid.org/0000-0003-0917-2952>; e-mail: imvankovich@fa.ru

Anastasia A. Sokolovskaya – Senior Lecturer, Department of Financial Control and Treasury Affairs, Faculty of Finance; Junior Researcher, Institute for Financial Research, Faculty of Finance, Financial University under the Government of the Russian Federation, 49/2 Leningradsky Ave., Moscow 125167, Russian Federation; ORCID: <https://orcid.org/0009-0009-5459-3423>; e-mail: analyzenko@fa.ru

Информация об авторах

Елена Алексеевна Федченко – д-р экон. наук, профессор, доцент кафедры финансового контроля и казначейского дела; главный научный сотрудник Института финансовых исследований, Финансовый факультет, Финансовый университет при Правительстве Российской Федерации; 125167, Москва, Ленинградский просп., д. 49/2, Российская Федерация; ORCID: <https://orcid.org/0000-0002-4844-0991>; e-mail: EAFedchenko@fa.ru

Любовь Васильевна Гусарова – д-р экон. наук, профессор, доцент кафедры финансового контроля и казначейского дела; главный научный сотрудник Института финансовых исследований, Финансовый факультет, Финансовый университет при Правительстве Российской Федерации; 125167, Москва, Ленинградский просп., д. 49/2, Российская Федерация; ORCID: <https://orcid.org/0000-0001-8068-0357>; e-mail: lvgusarova@fa.ru

Инна Михайловна Ванькович – канд. экон. наук, доцент кафедры финансового контроля и казначейского дела; ведущий научный сотрудник Института финансовых исследований, Финансовый факультет, Финансовый университет при Правительстве Российской Федерации; 125167, Москва, Ленинградский просп., д. 49/2, Российская Федерация; ORCID: <https://orcid.org/0000-0003-0917-2952>; e-mail: imvankovich@fa.ru

Анастасия Андреевна Соколовская – старший преподаватель кафедры финансового контроля и казначейского дела; младший научный сотрудник Института финансовых исследований, Финансовый факультет, Финансовый университет при Правительстве Российской Федерации; 125167, Москва, Ленинградский просп., д. 49/2, Российская Федерация; ORCID: <https://orcid.org/0009-0009-5459-3423>; e-mail: analysenko@fa.ru

Received 31.05.2026; Revised 06.08.2026; Accepted 09.08.2026

Поступила в редакцию 31.05.2026; поступила после доработки 06.08.2026; принята к публикации 09.08.2026