

ORGANIZATIONAL AND METHODOLOGICAL ASPECTS OF INTERNAL AUDIT IN PUBLIC ADMINISTRATION

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ABSTRACT

Background: This article traces the transformation of internal financial audits into internal audits within public organizations in the Russian Federation. The need for such a transformation became apparent after Russia's higher external audit bodies assessed the achievements of federal executive authorities in internal financial auditing and its impact on the efficiency and effectiveness of budgetary funding. **Objective:** The study aims to examine both organizational and methodological aspects of this transformation. The study focuses on establishing a comprehensive model integrating internal financial audit, internal financial control, departmental control, and founder's control systems within the framework of sustainable development concepts. **Methods:** The research presents the architecture of the internal audit system in public organizations and emphasizes a wide range of activities to ensure its continuous improvement. This approach is based on the principles of cyclicity and ongoing development. The model considers the subject of internal audit to encompass not only the financial activities of public sector entities and assessment of internal control systems but also the achievement of current and strategic development goals, minimization of financial crime risks, and risk-laden business processes under uncertain external and internal conditions. **Results:** The study introduces a comprehensive model that proposes to harmonize the systems of internal financial audit systems, internal financial control, departmental control, and founder's control. It extends the scope of internal audit beyond financial analysis to include evaluating the achievement of operational and strategic objectives, minimizing financial risks, and managing risky business processes amid uncertainties. **Conclusions:** The research conclusions could be useful for public organizations in developing an effective internal audit system. The proposed model not only enhances financial auditing and control but also aligns these processes with the broader objectives of sustainable development and strategic risk management.

Keywords: Public sector; Internal audit; Transformation; Risk-oriented internal audit; Internal audit methodology; Efficiency.



ASPECTOS ORGANIZACIONAIS E METODOLÓGICOS DA AUDITORIA INTERNA NA ADMINISTRAÇÃO PÚBLICA

RESUMO

Histórico: Este artigo traça a transformação das auditorias financeiras internas em auditorias internas nas organizações públicas da Federação Russa. A necessidade de tal transformação tornou-se aparente depois que os órgãos superiores de auditoria externa da Rússia avaliaram as realizações das autoridades executivas federais na auditoria financeira interna e seu impacto sobre a eficiência e a eficácia do financiamento orçamentário. **Objetivo:** O objetivo do estudo é examinar os aspectos organizacionais e metodológicos dessa transformação. O estudo se concentra no estabelecimento de um modelo abrangente que integre a auditoria financeira interna, o controle financeiro interno, o controle departamental e os sistemas de controle do fundador dentro da estrutura dos conceitos de desenvolvimento sustentável. **Métodos:** A pesquisa apresenta a arquitetura do sistema de auditoria interna em organizações públicas e enfatiza uma ampla gama de atividades para garantir seu aprimoramento contínuo. Essa abordagem baseia-se nos princípios de ciclicidade e desenvolvimento contínuo. O modelo considera que o assunto da auditoria interna abrange não apenas as atividades financeiras das entidades do setor público e a avaliação dos sistemas de controle interno, mas também a realização das metas de desenvolvimento atuais e estratégicas, a minimização dos riscos de crimes financeiros e os processos de negócios carregados de riscos sob condições externas e internas incertas. **Resultados:** O estudo apresenta um modelo abrangente que propõe a harmonização dos sistemas de auditoria financeira interna, controle financeiro interno, controle departamental e controle do fundador. Ele amplia o escopo da auditoria interna para além da análise financeira, incluindo a avaliação da realização de objetivos operacionais e estratégicos, minimizando os riscos financeiros e gerenciando processos de negócios arriscados em meio a incertezas. **Conclusões:** As conclusões da pesquisa podem ser úteis para organizações públicas no desenvolvimento de um sistema de auditoria interna eficaz. O modelo proposto não apenas aprimora a auditoria e o controle financeiro, mas também alinha esses processos com os objetivos mais amplos do desenvolvimento sustentável e do gerenciamento estratégico de riscos.

Palavras-chave: Setor público; Auditoria interna; Transformação; Auditoria interna orientada a riscos; Metodologia de auditoria interna; Eficiência.

1 INTRODUCTION

In recent years, government bodies of the Russian Federation have been discussing the legislative transformation of the internal financial audit system into an internal audit system within the public administration sector. The proposal was initiated by the Accounts Chamber of the Russian Federation at the end of 2019. Its report highlighted the ineffectiveness of the current internal financial audit and formulated proposals for its further development (Blinova, 2019). T.V. Blinova further developed these conclusions and proposals in her article "From internal financial audit to internal audit" (2021), which mentioned a draft concept for the transition from internal financial audit to internal audit in the public sector. The concept is currently under consideration by the Government of the Russian Federation. The



transformation of internal financial audit into internal audit is associated with the need to solve problems that form the institutional control environment, i.e., the excessive formalization and inconsistency of control and analytical procedures; a formal approach to the implementation of internal audit; overlapped activities of state financial control bodies; the non-extension of internal audit to budgetary procedures of budgetary and autonomous institutions, etc. This predetermines the objective need to rethink and develop a new concept of internal audit in the public administration sector, which involves the harmonization of systems of internal financial audit, internal financial control, departmental control, and founder's control within the concept of sustainable development. As part of solving this problem, **the objective of this study** is to develop organizational and methodological support for internal audit in the public sector. As a result, we have **concluded** that the subject area of a comprehensive internal audit should be broader than the analysis of the financial activities of an economic entity in the public sector. Internal audit should assess the achievement of strategic indicators; minimize risks and risk-intensive business processes caused by variability in the external and internal environment; identify and analyze deviations from the target planned indicators; compare performance with indicators of similar organizational units; lower the likelihood of violations and shortcomings in financial, economic and other professional activities; evaluate the reliability of internal audit. The **main research results** are as follows: we have developed the architecture of internal audit in public sector organizations; offered a range of measures to ensure its self-improvement, cyclicity, and continuity; put forward the matrix of risk-oriented internal audit.

2 LITERATURE REVIEW

The role of internal audit in ensuring safety, saving budgetary funds, and limiting corrupt practices within public sector organizations is noted by H. Alqudah et al. (2019) and M. Nerantzidis (2022). The authors substantiate the need for regulatory authorities to consolidate new norms and powers of internal audit to fulfill the tasks assigned to it. N. Carrera and M. Mareque (2023) mention similar goals and principles of auditing the financial statements of organizations in the public and private sectors, as well as the relevance of internal audit for the public sector. They also highlight the influence of external factors on the quality and independence of internal audit. A.N. Cioban (Lucan) et al. (2015) and R. Pilcher et al. (2011) indicate that internal audit in the public sector is affected by the quality of internal audit, as well as early and accurate identification of risks, while the organizational structure and attributes of audit do not have a serious impact on its effectiveness.



Emphasizing the importance of internal control and internal audit systems in public sector organizations, H.I.A. Rabaiah et al. (2022) claim that audit quality could be influenced by the type of public organizations, laws and regulations, management practices, and information systems used. A. Alzeban and D. Gwilliam (2014) trace transformational processes in internal audit from the traditional monitoring of internal control and compliance with financial requirements to the expansion of its role as an internal consultant on risk management. In this context, the authors evaluate the effectiveness of internal audit and the fulfillment of its tasks. The role of internal auditors and the need to expand their organizational functions in the public sector is also discussed by W.O. Abuazza et al. (2015). The scholars comprehensively study the factors influencing the scope of internal audit and analyzed the viewpoints of stakeholders on the internal audit function.

Thus, the analysis of international studies confirms the relevance of introducing internal audit in the public administration sector. The reviewed works do not address the methodological aspects of the transformation of internal financial audit into internal audit. This conclusion predetermined the need for additional research in this scientific sphere.

This study aims to develop organizational and methodological support for the internal audit system in the public sector of the Russian Federation.

3 METHODS

In the course of the study, we proceeded from the fact that internal audit in the public administration sector of the Russian Federation can be influenced by organizational and legal forms and goal setting of economic entities of the public sector. When forming organizational and methodological support for the internal audit system in the public administration sector, we studied the best practices of internal audit in various economic entities of the public sector (Mozer, 2023). The public administration sector of the Russian Federation includes government bodies, state non-profit organizations, and state commercial organizations (Figure 1).



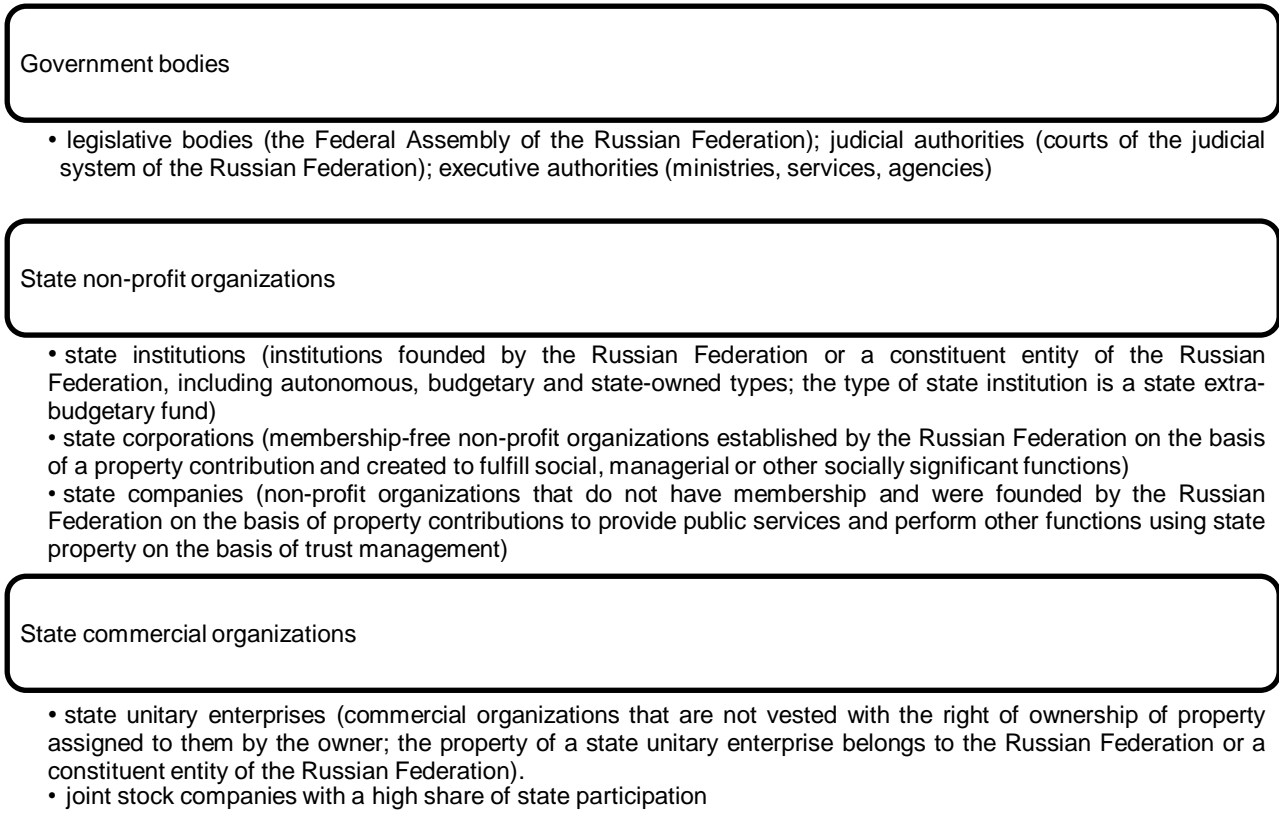


Figure 1. The composition of economic entities of the public sector in the Russian Federation

From each group of economic entities (Figure 1), we selected organizations that are of greatest interest for this study. The government bodies under consideration included the Ministry of Finance of the Russian Federation, the Federal Treasury, and the Federal Agency for Technical Regulation and Metrology (Rosstandart). The reason for sampling was their leading positions in organizing and implementing internal financial audit, as well as high compliance (up to 80%) with the Standards for Internal Control in the Federal Government. Among state non-profit organizations, we considered the experience of the Financial University under the Government of the Russian Federation (the authors of the study are employees of this university and its organization of internal audit is worth mentioning) and the North-Eastern Federal University named after M.K. Ammosov (this institution is among 10 federal universities in Russia that focus on solving geopolitical problems and meeting the personnel needs of large interregional investment projects). Public institutions were not selected for the study since the internal financial audit implemented in these institutions as recipients of budgetary funds seems to be too general when considering internal financial audit in government bodies.

The state commercial organizations under analysis included Rosatom (the State Corporation Rosatom was recognized as the winner in the category “Best Design of an Internal Control System” of the National Award “Effective Internal Control and Audit” at the



end of 2022), Roscosmos (an authorized management body of certain industries acting on behalf of the Government of Russia) and Rostec (winner of the competition for effective internal control and audit in 2018). State commercial organizations are represented by unitary enterprises (the A.P. Aleksandrov Scientific Research Technological Institute and “Irkutskavtodor”) and joint-stock companies (Russian Railways, Aeroflot, Gazprom, Rosseti, Federal Corporation for the development of small- and medium-sized businesses (SME Corporation) implementing activities in strategically important areas of the Russian Federation and corresponding to the highest level of maturity of the internal audit system.

According to Article 160.2-1 of the Budget Code of the Russian Federation, the internal audit of government bodies (ministries, departments, and services as chief administrators of budgetary funds) is implemented in the form of internal financial audit, whose organizational and methodological support is regulated by the Standards for Internal Control in the Federal Government. Specific organizational and methodological approaches to internal financial audit in government bodies are the preparation of departmental (internal) acts that ensure the compliance of internal financial audit with federal standards.

4 RESULTS

After analyzing various organizations and the internal audit tools and methods used in the sampled public sector economic entities, we obtained the following results (Table 1).

Table 1. Analysis of internal audit tools and methods in economic entities of the public sector of the Russian Federation

Economic entity	Internal audit processes	Internal audit tools and methods
Ministry of Finance of the Russian Federation	Planning, conducting, and implementing the results of audit activities, preparing annual reports Risk management	Compilation of budgeting risks for similar operations (optimization of the register of budgeting risks) and scoring of the degree of influence of risks A subsection in the internal portal dedicated to the organization of internal audit Establishment of technical requirements for documentary support and regulation of procedures for monitoring measures to minimize (eliminate) budgeting risks Regulation of thematic audit activities
Federal Treasury	Conducting internal audit Implementing the results of internal audit	Detailed requirements for reviewing the results of internal audit and monitoring the implementation of management decisions made after reviewing the results of internal audit
Federal Agency for Technical Regulation and Metrology (Rosstandart)	Organizational and methodological support for internal audit Organizing internal audit Conducting internal audit Risk management	Expanding the object of internal audit to the procedures and operations of subordinate federal budgetary institutions in terms of the efficiency of performing types of work approved by the state



		Developing a scale of probability levels (consequences) of budgeting risks ranked in accordance with its possible consequences Consolidating the specifics of conducting audit to confirm the reliability of reporting
Financial University under the Government of the Russian Federation	Organizational and methodological support for internal audit	Substantial approaches to the categories of internal control and internal audit Specification of goals and tasks, subject-object composition, forms, stages, methods, and tools (control actions) of internal audit
North-Eastern Federal University named after M.K. Ammosov	Organizational and methodological support for internal audit	Consolidating the principles of the internal audit system Specification of internal audit tasks which are not limited to inspections of the financial activities of the institution
Rosatom State Atomic Energy Corporation	Organizational and methodological support for internal audit Risk management Conducting internal audit Improving the qualifications of employees of internal audit bodies	Expanded subject area of internal audit: audit of IT projects in terms of assessing their effectiveness; audit of the intellectual property management system; supplier sustainability audit; audit of the effectiveness of the production planning process within projects; audit of data reliability in various areas; audit of business processes, etc. Consolidating the preventive nature of internal audit aimed at developing timely, complete, and executable corrective measures Conducting internal audit through effective interaction with production departments at all stages of their activities Ensuring a proactive attitude toward changes Consulting services to the internal audit body by the heads of the Corporation Creating a memo "On the internal control system in simple words" Implementing a leadership model that increases the responsibility of the internal audit body. Setting priorities for the development of control activities in terms of facilitating business processes in the implementation of the Sustainable Development Goals Focusing internal audit on the implementation of federal projects and strategic programs Ensuring the continuous improvement of professional knowledge and skills of employees Developing a methodology for assessing the effectiveness of the risk management system and assessing the effectiveness of internal control Forming a checklist of questions in the area of sustainable development and an information system for calculating the business reputation index of suppliers as one of the main tools for assessing procurement risks
Roscosmos State Corporation for Space Activities	Organizational and methodological support for internal audit	Establishing functional areas regarding the financial activities of an economic entity
Rostec State Corporation for the Promotion of the Development, Manufacture, and Export of High Tech Products	Organizational and methodological support for internal audit Risk management Conducting internal audit	Internal risk management Automation processes to improve the efficiency of internal audit systems (AVACOR system)



		<p>Optimization of key business processes, increasing the efficiency of financial and economic activities in conjunction with the strategic goals of the Rostec State Corporation</p> <p>Expanded structure of internal audit with due regard to not only financial but also all key business processes</p> <p>Developing regulations on the internal risk management system and maintaining a register and risk map</p>
A.P. Aleksandrov Scientific Research Technological Institute	<p>Organizational and methodological support for internal audit</p> <p>Risk management</p>	<p>Risk management system for production and financial processes</p> <p>Monitoring of efficiency and remodeling of business processes in ever-changing conditions of the external and internal environment. Expanded subject area of audit activities</p>
Municipal unitary enterprise "Irkutskavtodor"	<p>Organizational and methodological support for internal audit</p> <p>Assessing the effectiveness of the internal audit system</p> <p>Risk management</p> <p>Conducting internal audit</p>	<p>Building a system for combating illegalities among employees of the enterprise</p> <p>Establishing the need to formulate criteria for the performance of structural units, including the quality of the internal control system, as well as identifying and assessing potential and existing risks</p> <p>Expanded subject area of audit activities in addition to financial and other areas of activity of an economic entity: personnel, production, purchasing, legal, environmental, and other professional areas</p>
OAO "Russian Railways"	<p>Organizational and methodological support for internal audit</p> <p>Risk management</p> <p>Conducting internal audit</p>	<p>Detailing internal audit tasks</p> <p>Establishing functional and administrative subordination of the internal audit system</p> <p>Consolidating a systematic approach to the analysis and assessment of risk management and internal control, as well as corporate governance practices</p> <p>Establishing internal audit directions (extended subject area): operational audit of business processes; financial audit of business blocks; compliance audit; audit of individual activities of departments; audit of the actual state, reliability, and efficiency of internal control and risk management systems; monitoring the state of internal control and risk management systems; monitoring the timely and complete elimination of identified violations; analysis of the causes of violations; development of proposals and recommendations for improving business processes; monitoring the development, implementation, and application of control procedures; monitoring the implementation and assessing the effectiveness of plans and programs; creation of a unified database on identified violations, risks, and shortcomings; methodological assistance to departments</p>
PAO "Aeroflot"	<p>Organizational and methodological support for internal audit</p> <p>Risk management</p>	<p>Establishing goal setting that ensures the economic efficiency and effectiveness of not only financial but also operational indicators</p> <p>Detailing forms and methodological support in terms of assessing the effectiveness of</p>



		procedures and analyzing the implementation of policies in the field of risk management and internal control
PAO “Gazprom”	Organizational and methodological support for internal audit	Establishing goal-setting that considers activities to provide independent and objective guarantees and consultations aimed at improving the activities of the Company Consolidating the functionally centralized internal audit model Forming methodological recommendations for conducting inspections in subordinate institutions; methodological recommendations for risk management within internal audit
PAO “Rosseti”	Organizational and methodological support for internal audit	Expanded list of internal audit tasks related to financial activities of an economic entity
AO “Federal Corporation for the development of small- and medium-sized businesses (SME Corporation)”	Organizational and methodological support for internal audit Risk management	Goal setting that ensures the effective functioning of business processes of the SME Corporation, as well as managing compliance risks

Table 1 shows that there are different levels of internal audit maturity in economic entities of the public sector. The organization of internal audit at the North-Eastern Federal University named after M.K. Ammosov deserves special attention. It is characterized by functional features for auditing educational, scientific, and business processes of structural divisions and branches; and identifying internal reserves to improve the results of financial and economic activities. All this indicates a high level of the internal audit system.

A meaningful analysis of the public annual report of the Rosatom State Corporation for 2021 shows that the subject area of internal audit is not limited to financial aspects and affects other areas: audit of IT projects; audit of the intellectual property management system; audit of sustainable development; audit of project activities; audit of data reliability; business process audit. Among the key characteristics of the internal audit system, we can note its preventive nature aimed at developing timely, complete, and executable corrective measures; effective interaction with departments at all stages of their activities; demand for consulting services of the internal audit subject on the part of the corporation’s managers. In this regard, the internal audit system aims at providing an open, modern mechanism for promoting the efficient and effective activities of an economic entity, in particular, a memo “On the internal control system in simple words” has been created; a leadership model has been introduced to increase the responsibility of the internal audit subject; priorities for the development of control activities have been established in terms of facilitating business processes to achieve the Sustainable Development Goals; methodological approaches to project audits have been developed; continuous improvement of professional knowledge and skills of the internal audit subject has been ensured; a methodology for assessing basic



competences has been developed based on the quality and effectiveness of audit activities; a methodology has been developed for assessing the effectiveness of risk management and internal control of business processes. All this confirms the maturity of internal audit.

On the contrary, the internal audit system in the Roscosmos State Corporation for Space Activities seems less informative and does not show a high level of maturity. This is indicated by the functional powers of the Internal Audit Service aimed exclusively at the financial and economic activities of this corporation.

From the experience of organizing internal audit in the Rostec State Corporation for the Promotion of the Development, Manufacture, and Export of High Tech Products, we should pay attention to AVACOR (Digital Design, 2020). This SaaS platform allows generating a list of priority risks and identifying distortions in accounting (financial) statements, which are automatically summarized and compared with the corporate level of materiality. The high level of the internal audit system is evidenced by tendencies to optimize key business processes and regulations on the internal risk management system (Rostec, 2017).

Internal audit at the A.P. Aleksandrov Scientific Research Technological Institute aims at managing production and financial risks, as well as monitoring the effectiveness of controls for remodeling business processes in ever-changing external and internal conditions.

The development of internal audit in joint stock companies with a high share of state participation is associated with the introduction of corresponding amendments to the law on joint stock companies in 2018. The law obliged the implementation of the internal audit system aimed at assessing the reliability and effectiveness of risk management and internal control from January 1, 2021. Among joint-stock companies with state participation, we need to highlight the experience of organizing internal audit by PAO "Russian Railways". The areas of its internal audit are as follows: operational audit of business processes; financial audit; compliance audit; assessment and monitoring of internal control and risk management reliability; control over the elimination of violations; application of control procedures for financial management, etc. The subject area of internal audit is broader than financial aspects and covers the compliance of business processes with strategic and operational goals and objectives.

The results of the analysis can be used to formulate general organizational and methodological approaches to internal auditing in the public sector of the Russian Federation (Table 2).



Table 2. Organizational and methodological approaches to conducting internal audit in the public sector

Criteria	Government bodies	State non-profit organizations	State commercial organizations
Regulation defined by internal documents	Budget Code of the Russian Federation Standards for Internal Control in the Federal Government Departmental (internal) acts	Federal Law 402-FZ "On Accounting", Public Sector Standard (IPSAS 3) "Accounting Policies, Changes in Accounting Estimates and Errors"; accounting policy; internal regulatory documents	Federal Law 402-FZ; recommendations in the field of internal audit of the Federal Property Management Agency, Listing Rules of the Moscow Exchange, professional standard "Internal Auditor", International Professional Practices Framework on internal audit
Subject	Structural unit or authorized official (employee) of the chief administrator of budgetary funds vested with the authority to implement internal financial audit	Structural unit (for example, internal control and audit service; internal audit department)	Structural unit (for example, internal audit center)
Object	Budgeting procedures and/or operations (actions) constituting this procedure to implement the budgeting procedure	Budgeting procedures, business processes	Business processes
Objective (goals)	1) Assessing the reliability of internal financial control 2) Confirming the reliability of budget reporting and compliance of the procedure for maintaining budget accounting with the unified methodology of budget accounting, preparation, presentation, and approval of budget reporting 3) Improving the quality of financial management, including preparing proposals to improve the efficiency and economy of using budgetary funds	Ensuring the legal, efficient, and effective use of budgetary and other resources, the safety of financial and non-financial assets, compliance with legal requirements, the reliability of accounting, the correct preparation and presentation of reports, and identifying ways to improve financial and economic activities; providing an open, modern mechanism for promoting the efficient and effective activities of an economic entity	Ensuring the accuracy, reliability and completeness of information, compliance with laws, policies, procedures and plans; asset safety; resource efficiency; achieving the tasks and goals of an economic entity; assessment of the reliability and effectiveness of risk management and internal control; assistance in increasing management efficiency, improving financial and economic activities through a systematic and consistent approach to the analysis and assessment of risk management and internal control systems, as well as corporate governance practices as tools for providing reasonable confidence in achieving the goals set
Methods	Analytical procedures, inspection, recalculation, request, confirmation, observation, and monitoring of internal financial audit procedures	Inquiries, study of the internal control system and documents, inspection, recalculation, analytical procedures	Monitoring, methods of operational audit, financial audit, compliance audit, assessment, analysis



Tools	Register of budgeting risks	Checklist, information system for calculating indices, memo "On the internal control system in simple words"	Letters of instruction
Form of conduct	Audit event	Revision, verification, expert activities, analytical activities; audit event	Control and audit activities
Subject area	Financial and economic activity of an economic entity	Financial and economic activities of an economic entity, project activities, production processes, sustainable development; strategic and operational plans and objectives	Financial and economic activities of an economic entity; strategic and operational plans and objectives; production and financial processes

Source: Compiled by the authors

The analysis of internal audit in the public sector allowed us to draw a conclusion about the heterogeneous development of internal audit systems. It is recommended to create and apply internal methodologies regulating various types of internal auditing (operational audit, financial audit, compliance audit) in public administration organizations.

An important conclusion is the conviction that a comprehensive internal audit system in the public sector should be preventive, i.e., ensure a timely response to risk-intensive operations and the likelihood of negative consequences arising in business processes (budgeting procedures). This system should also be consistent with the strategic and operational goals of an economic entity, as well as help to evaluate the progress and results of planned and target indicators. In this regard, the internal audit system of economic entities in the public sector is influenced by several factors that determine its institutional environment.

First, audit activities are primarily regulated by a set of laws and external standards (goal setting, tasks, stages, order, forms of procedure, tools, powers of officials, etc.). The regulation of internal audit focuses on the financial activities of economic entities by minimizing risks, improving the quality of financial management, ensuring the reliability of accounting and reporting, etc.

Second, the organizational and methodological effectiveness of internal audit is the subject area of analytical activities of state financial control bodies, as well as other authorized bodies assessing the quality of financial management. In this regard, the issues of internal quality assessment (self-diagnosis) of internal auditing are recognized as relevant.

Third, the instrumental and methodological support of internal audit is mainly associated with the analysis and assessment of deviations of actual indicators from both strategic and operational perspectives. Thus, methods are selected depending on the goal setting and



objectives of an audit event and are limited to the specific activities of an economic entity. In our opinion, organizational and methodological support for internal audit should focus on the following aspects (Figure 2).

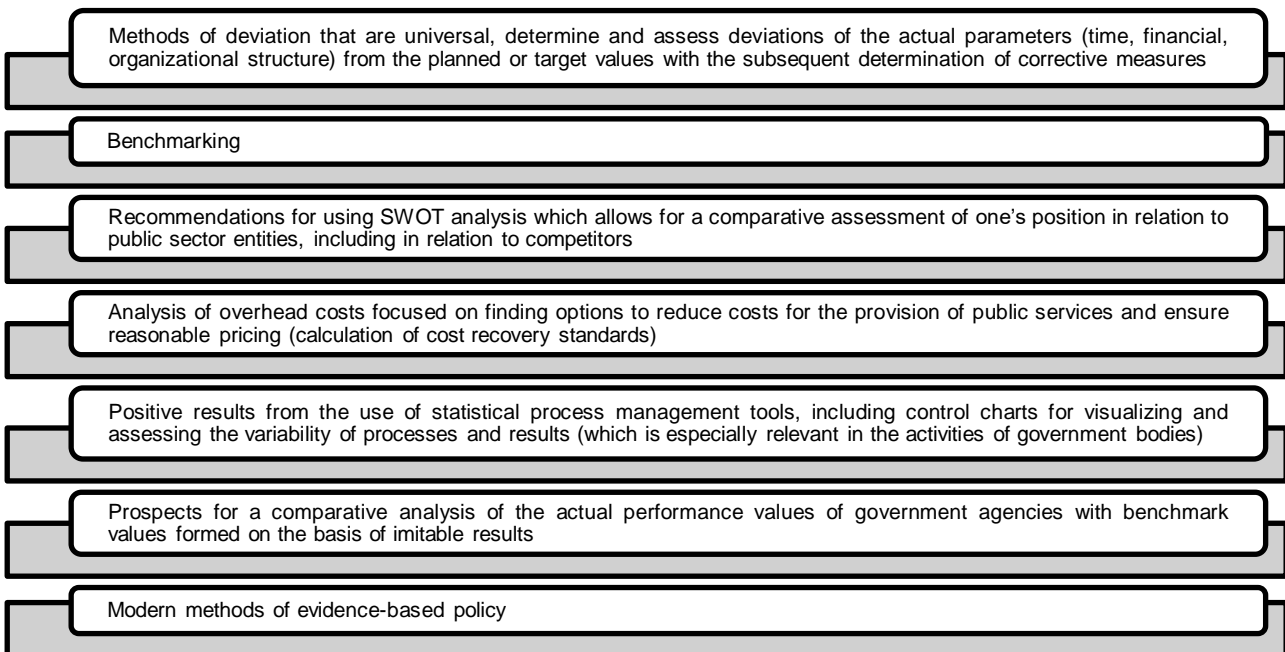


Figure 2. Prospective organizational and methodological support for internal audit
 Source: compiled by the authors

It is worth mentioning that the comparison of operational productivity (between structural divisions/organizational units of high levels) is an effective methodological tool for improving the quality of business processes of an economic entity. The comparison method is used to simulate a competitive environment, reduce the asymmetry of information support, and increase the valid distribution of resources between organizational units. All this proves the effectiveness of such a methodological tool as benchmarking, which involves analysis of the strengths and weaknesses of an economic entity going beyond the standard comparison of indicators and involving the exchange of experience in the compared areas.

Fourth, the internal audit system should respond to any changes in the activities of an economic entity in the public sector according to the developed maturity model.

Fifth, the internal audit system should facilitate internal reporting that meets the needs of management, complemented by the requirements of external users. This is due to the fact that the use of non-standard reporting forms and algorithms hinders the digitalization of analytical and instrumental-methodological support of management processes, and their integration into a single electronic base of accounting and reporting data.

Summarizing the above, a comprehensive internal audit system should be broader in the subject area than the analysis of the financial activities of an economic entity. Internal



auditing should assess the achievement of strategic indicators; minimize risks and risk-intensive business processes caused by variability in the external and internal environment; identify and analyze deviations from the target planned indicators; compare performance with those indicators of similar organizational units; reduce the likelihood of violations and shortcomings in financial, economic and other professional activities; evaluate the reliability of internal control.

The quality of internal auditing is determined by internal and external conditions, whose change entails the need to adapt the requirements to the corresponding system. The structure of internal audit focuses on the business processes (budgeting procedures) of an economic entity in the subject areas of the system maturity stages and reflects the values, culture, knowledge, and results of the organization's activities (Rosstandart, 2015). The external environment reflects the influence of legislative, technological, competitive, cultural, and social aspects formed at the inter- and intra-state levels (Rosstandart, 2015). In relation to public sector entities, the internal audit system provides support for internal management processes, primarily based on macroeconomic parameters, characteristics of the competitive environment, documented information of state strategic planning and forecasting, state standards and legal support, international principles and requirements (ESG, G20/OECD Principles of Corporate Governance, etc.), organization of the budgeting process at various levels.

The internal audit system corresponding to the highest level of maturity should be based on the Sarbanes-Oxley Act which ensures that economic entities comply with the criteria for organizing and maintaining internal audit systems, and can assess their effectiveness in making management decisions. In this regard, it is necessary to develop and justify a new approach to the creation and implementation of audit procedures within an economic entity based on the Sarbanes-Oxley Act since their compliance ensures the balance of internal business processes (budgeting procedures) as subject areas of audit. The Sarbanes-Oxley Act aims to ensure the reliability of corporate reporting. The law requires more detailed disclosure of information; applies to any company whose securities are registered with the US Securities and Exchange Commission; controls the activities of public companies and auditors; ensures the independence of auditors and audit committees; indicates the responsibility of management for organizing the internal control system and the audit committee for verifiable reporting. According to a study by Ch. Leuz (2007), the Sarbanes-Oxley Act had a major impact on the corporate sector in the US and other countries. Thus, several corporations decided to leave the market without agreeing to disclose more information about their financial and economic activities. On the contrary, several small- and



medium-sized companies reached a higher level thanks to successful management decisions made based on prepared financial data. However, the initial subject area of the law was reduced to the financial activities of economic entities, which seems irrelevant within the framework of this study. Therefore, it is proposed to use only the basic provisions of the law for building a high-quality internal audit system. The advantage of the Sarbanes-Oxley Act is to ensure the self-improvement of the internal audit system and its cyclicity and continuity.

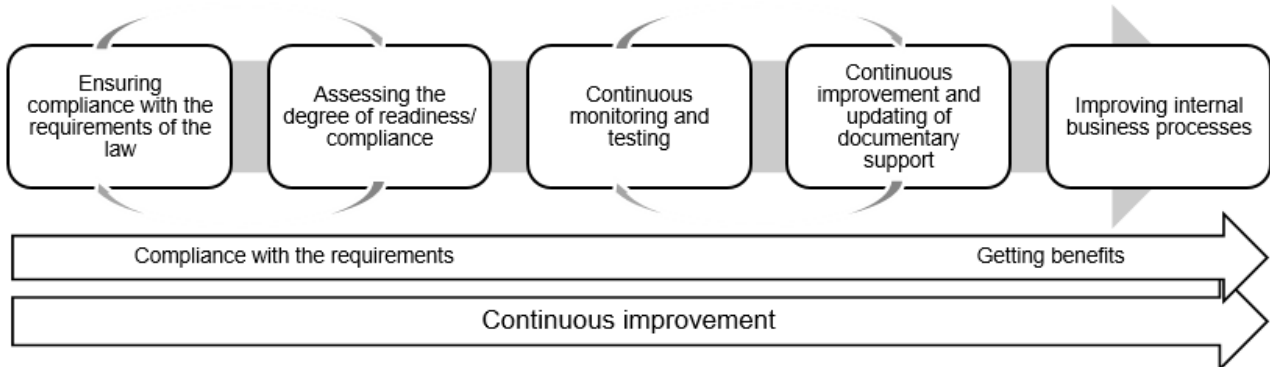


Figure 3. Measures to comply with the Sarbanes-Oxley Act
 Source: compiled by the authors

Compliance with the law involves three conceptual domains: prevention, detection, and response. Prevention provides for the implementation of a risk-based approach to the organization of the internal audit system. Detection identifies risk-intensive business processes. Response involves measures to minimize internal risks and improve the implementation of risk-intensive business processes. The focus point of the internal audit system corresponding to the highest level of maturity is the category of internal risks and the matrix of key characteristics of risk-oriented internal auditing in the economic entity of the public sector (Figure 3).

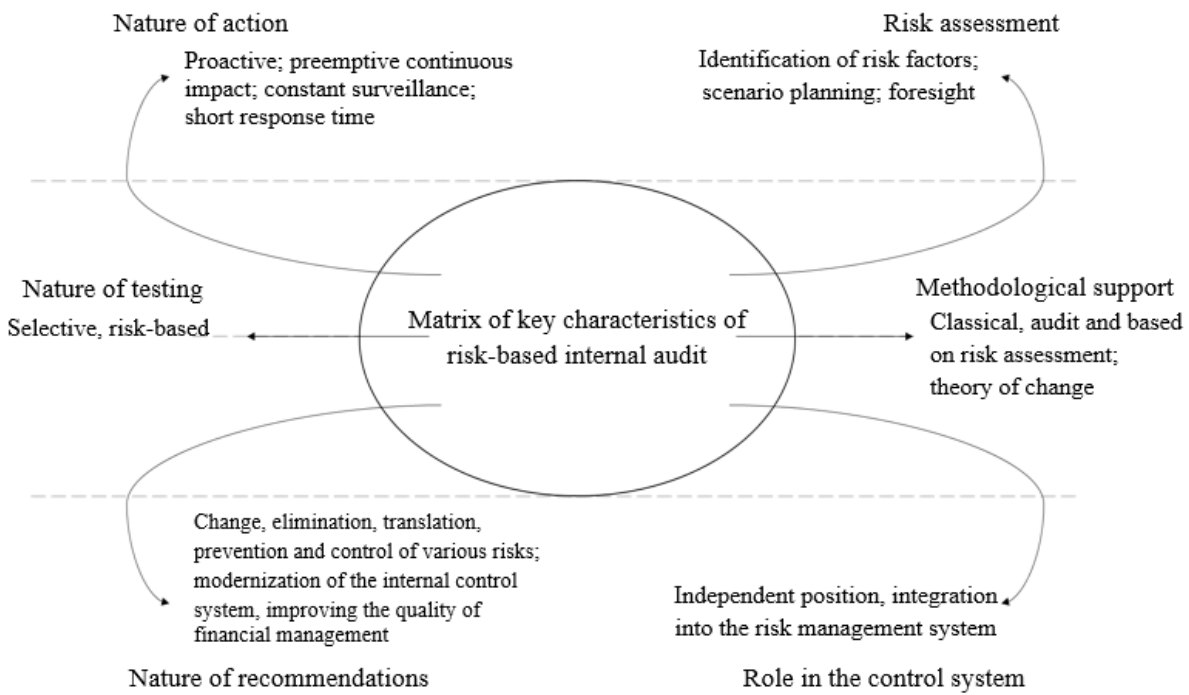


Figure 4. Matrix of risk-oriented internal audit
 Source: compiled by the authors

Thus, we presented a system of risk-oriented internal audit according to the key features of different levels (the first is substantive; the second is methodological; the third is organizational (a level in the management system characterized by the superstructure of business processes forming recommendations for their improvement)).

5 DISCUSSION

In contrast to the Russian practice, internal auditing is mandatory in the public finance sector of developed countries. For example, the Federal Managers' Financial Integrity Act was adopted in the US in 1982. This legal act consolidated the need for continuous improvement of internal control and internal audit systems in each government department with the mandatory publication of a statement on the adequacy and effectiveness of this system. By the mid-1980s, almost all developed countries had followed the example of the US by introducing mandatory internal audit in their public administration organizations. A proper internal audit is a necessary component of the modern budgeting process.

Today, internal audit has entered public administration globally and continues to evolve. Initially, its role was limited to only checking accounting records but later the emphasis shifted towards monitoring financial compliance and internal control (Kagermann et al., 2008). Today the key task of internal audit is to assist a public sector organization in achieving its goals by assessing and improving the effectiveness of risk management



processes, controls, and management decisions (Assakaf et al., 2018; Gustavson & Sundström, 2016; Noor et al., 2023; Karatueva, 2023). A similar opinion is expressed by H. Ahmad (2015) who claims that it is important not just to create an internal audit function but also to ensure its high quality and efficiency. In his studies of the prerequisites for the effectiveness of internal audit, Ahmad considers the combination of resources-based and institutional aspects. This approach correlates with our conclusions about the importance of internal and external factors when building an effective internal audit system.

The transformation processes in internal audit from monitoring financial performance to consulting activities are also reflected in its definition by the Institute of Internal Auditors (IIA) of 2020: "Internal auditing is an independent, objective assurance and consulting activity designed to add value and improve the organization's operations" (Institute of Internal Auditors, n.d.). It is also concluded that modern internal auditing in public sector organizations should aim at achieving current and strategic goals by applying a systematic, disciplined approach to assessing and improving the effectiveness of risk management and control.

A. Lutfi and H. Alqudah (2023) highlight the decisive role of information technology and its impact on the effectiveness of internal audit in the public sector. We also believe that full compliance with the Sarbanes-Oxley Act in relation to the public sector (prevention, detection, and response) is impossible without the digitalization of analytical and instrumental-methodological support of management processes and their integration into a single electronic base of accounting and reporting data. In this case, the relationship between internal audit and the organization's information security should be considered (Steinbart et al., 2018). The higher the level of management support for the IT department, the higher the quality of internal auditing.

6 CONCLUSIONS

We compiled the substantive elements of internal auditing and determined the criteria and directions to ensure its maturity. This formed the basis for the architecture of internal audit in economic entities of the public sector and the matrix of risk-oriented internal audit. According to the "Concept for increasing the efficiency of budget expenditures in 2019-2024" approved by order of the Government of the Russian Federation of January 31, 2019 No. 117-r, we suggest implementing our internal audit system and the matrix of risk-oriented internal audit in public sector organizations, as well as using a set of measures to ensure the self-improvement of internal auditing and its cyclicity and continuity.



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