



## DEVELOPMENT OF ANALYTICAL SUPPORT FOR THE FINANCIAL CONTROLLING SYSTEM IN GOVERNMENT BODIES OF THE RUSSIAN FEDERATION

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### ABSTRACT

**Objective:** This article aims to develop analytical support for the financial controlling system in government bodies of the Russian Federation. The focus is on distinguishing financial controlling from financial management by grouping control indicators into areas such as strategic financial goal-setting, strategic financial planning, budgeting, internal control, and risk management.

**Methods:** The study employs factorial and comparative analysis, along with a review of existing literature on financial controlling in the public sector. The authors propose specific financial controlling indicators to reflect the efficiency and effectiveness of government activities.

**Results:** The article identifies and proposes a set of indicators to measure the efficiency and effectiveness of government bodies. Indicators such as net profit of the public sector, investment efficiency ratio, and zero return point from beneficiaries are adapted for the public sector, providing comprehensive coverage of government agency activities.

**Conclusions:** The authors conclude that the developed analytical support offers a more comprehensive and complex view of the activities of government bodies. The use of indicators adapted to the public sector enhances decision-making capabilities, promoting more efficient management of public resources.

**Keywords:** Government body. Financial controlling. Analytical support. Efficiency of government agencies. Effectiveness of government agencies.





# DESENVOLVIMENTO DE SUPORTE ANALÍTICO PARA O SISTEMA DE CONTROLE FINANCEIRO EM ÓRGÃOS GOVERNAMENTAIS DA FEDERAÇÃO RUSSA

## RESUMO

**Objetivo:** Este artigo tem como objetivo desenvolver um suporte analítico para o sistema de controle financeiro em órgãos governamentais da Federação Russa. O foco está em diferenciar controle financeiro de gestão financeira, agrupando indicadores de controle nas áreas de definição de metas financeiras estratégicas, planejamento financeiro estratégico, orçamento, controle interno e gestão de riscos.

**Métodos:** O estudo utiliza análise fatorial e comparativa, além de uma revisão da literatura existente sobre controle financeiro no setor público. Os autores propõem indicadores de controle financeiro específicos para refletir a eficiência e a eficácia das atividades dos órgãos governamentais.

**Resultados:** O artigo identifica e propõe um conjunto de indicadores para medir a eficiência e a eficácia dos órgãos governamentais. Indicadores como lucro líquido do setor público, índice de eficiência de investimento e ponto de retorno zero dos beneficiários são adaptados para o setor público, permitindo uma cobertura abrangente das atividades desses órgãos.

**Conclusões:** Os autores concluem que o suporte analítico desenvolvido permite uma visão mais abrangente e complexa das atividades dos órgãos governamentais. A utilização de indicadores adaptados ao setor público melhora a capacidade de decisão financeira e gerencial, promovendo uma gestão mais eficiente dos recursos públicos.

**Palavras-chave:** Órgão governamental. Controle financeiro. Suporte analítico. Eficiência dos órgãos governamentais. Eficácia dos órgãos governamentais.

## 1 INTRODUCTION

Intensification of efforts to achieve the established goals of national development in the Russian Federation determines the search for new conceptual approaches to management in the public sector. The volume of tasks and requirements for the results of activities and the content and quality of information used to make management decisions are increasing. Global economic changes and complex external conditions increase the responsibility of the management of public organizations for the effectiveness and efficiency of activities and the use of financial resources (Polovchenko, 2021; 2023). The solution to these issues is facilitated by financial controlling, whose formation in the public sector should consider the features and specifics of each activity.

However, the issues of forming a financial controlling system in the public sector are poorly studied. There is often a formal transfer of theoretical aspects and methods of



financial controlling developed for the private sector to public organizations without due consideration of their specifics, objective limitations, and goal-setting. This article proposes a set of target indicators of financial controlling for government bodies, which, in accordance with the functional areas of controlling, is divided into five areas of financial controlling: goal-setting, strategic planning, budgeting, internal control, and risk management. The set of target indicators of the financial controlling system conveys the scientific and practical approaches to identifying, evaluating, analyzing, and monitoring indicators crucial for making management decisions by a government agency.

Financial controlling is the process “by which managers ensure that resources are obtained and used effectively and efficiently to achieve organizational goals” (Anthony, 1965, p. 25). This definition emphasizes the relationship between financial controlling and management. Van Helden and Reichard (2019) and Felício et al. (2021) study the implementation and impact of controlling in the public sector and compared it with the concept of New Public Management (NPM). The need to achieve maximum results from public finances is noted by Brady (Jegers, 2012). Brady claims that financial management in the public sector should not be limited only to mobilizing and distributing public resources. Lorenz et al. (2024) consider the positive experience of disseminating and applying business models typical of the commercial sector to the public sector. The need to measure the effectiveness of the public sector in terms of joint ventures is noted by Cepiku et al. (2022) and Speklé et al. (2022). The implementation of management control and performance systems in the public sector is emphasized by Felício et al. (2021). Ramos et al. (2021) propose the creation of tools for assessing the effectiveness of sustainable development for public organizations. Thus, numerous scientific publications confirm the need to develop tools and methods for analytical support of financial controlling.

## 2 METHODS

Analytical support and target indicators for financial controlling in relation to the activities of government bodies should consider their specifics. Each government body of the Russian Federation is assigned the legal responsibility for implementing a direction of state policy within the general economic development. Directions of financial controlling for government bodies can be fit into the following general scheme (Table 1).

**Table 1.** Purpose of financial controlling for government bodies

Purpose of financial controlling	Government bodies			
1	2	3	4	5
Strategic financial goal-setting	Mission of a government body in the sphere of financial support for the relevant direction of state policy			
	Strategic financial plan of the activities of a government body (including a strategic financial map) (implementation of measures in the relevant direction of state policy)			
	Directions of state policy	Goals of financing activities within state policy	Tasks of financing activities within state policy	Key financial results (in accordance with the strategic planning documents of the Russian Federation)
	1) Regulation of cash flows			
	2) Income formation of cash funds			
3) Use of income from cash funds				
Decomposition of goals and objectives	Schedule-plan of financial support for activities within the framework of the relevant direction of state policy			
	Target financial performance indicators			
Goal achievement management	Schedule-plan of financial support of measures within the framework of the relevant direction of state policy (including a strategic financial map)			
	Financial measures	Stages (timeframes)	Results (including financial)	

Source: compiled by the authors based on (Vasyunina, 2021).

In accordance with the functional and professional areas of controlling, five directions of financial controlling are identified for which it is necessary to develop target indicators: goal-setting, strategic planning, budgeting, internal control, and risk management. Each can be interpreted for financial controlling (Table 2).

**Table 2.** Directions of financial controlling

Direction of controlling	Interpretation of directions for financial controlling	Information base
Goal-setting	Identification of financial objectives within the relevant directions of state policy assigned to a government body; adjustment of financial objectives in accordance with changes in the internal and external environment of the body's activities	Addresses and decrees of the President of the Russian Federation
Strategic planning	Strategic financial planning in providing the necessary resources for measures within the relevant direction of state policy assigned to a government body; ensuring interaction and coordination of strategic and operational financial levels of management	Strategic planning documents of the Russian Federation, except for addresses and decrees of the President of the Russian Federation; regulatory legal acts in the sphere of activity of a government body
Budgeting	Drawing up, execution, control, and analysis in the sphere of budgeting by blocks of activities within the relevant direction of state policy assigned to a government body	Budgets: estimates, financial plans (general for a government body, for structural divisions of a government body (directorates, departments, divisions, etc.),



Internal control	Internal financial control (monitoring the financial implementation of activities within the relevant areas of state policy; financial plan-fact analysis)	and other areas of activity of a government body (for example, government procurement of goods, works, services to meet government needs, training of employees, etc.); departmental (internal) acts of a government body
Risk management	Management of the most significant risks in terms of frequency and potential damage to the Russian Federation in financing events within the relevant areas of state policy assigned to a government body, diagnostics of deterioration in the financial activities of a government body and development of alternative financial and economic activities	

Source: compiled by the authors.

To elaborate on the set of indicators, financial controlling was divided into strategic and operational levels, in accordance with the approach generally accepted by the international community of controllers (Karminsky et al., 2023). Goal-setting and strategic planning are implemented in strategic controlling, while budgeting, internal control, and risk management are included in operational controlling to make financial management decisions in the short and medium term. The International Controller Association (ICV), the International Group of Controlling (IGC), and the Russian Association of Controllers classify annual and medium-term periods of management decisions as operational controlling. Budgeting by government bodies for the medium term is conducted for the financial year and planning period within the framework of drafting, reviewing, approving, and implementing the federal law on the federal budget (for a total of three years) similar to the long-term budgeting of commercial organizations and for the short term in the form of a cash plan for the execution of the federal budget similar to current budgeting in the commercial sector. According to Article 170.1 of the Budget Code of the Russian Federation, long-term budget planning means drawing up a budget forecast every six years for 12 or more years.

To distinguish between the functional responsibilities of financial management and controlling (Table 3), we analyzed the Order of the Ministry of Finance of the Russian Federation of June 18, 2020 No. 112n “On Approval of the Procedure for Monitoring the Quality of Financial Management by the Ministry of Finance of the Russian Federation” (Ministry of Finance of the Russian Federation, 2020). Order No. 112n contains a list of the main budget procedures (business processes) of both financial and economic activities of any government body, regardless of the direction of public policy it implements, to form a comparative characteristic by directions, areas of application, results of the measures implemented, users of the results, and the focus of the results.





**Table 3.** Distinction between financial management and controlling

Comparison criterion	Financial management	Financial controlling
1	2	3
Direction	Effective performance of job responsibilities	Comprehensive support for making effective management decisions in the process of coordinating management and control activities
Sphere of application in a government body	Internal financial control, internal financial audit, decision-making at the management level	Analysis of the financial and economic situation, and making effective management decisions on its basis
Results of activities	Management decisions to improve the efficiency and rationality of accounting events (one-time decision)	Making effective management decisions, planning (forecasting) the results of decision-making (repeated (repetitive, iterative) decision)
Users of results	Management level, special positions (authorized persons)	Management level (upper middle levels)
Focus of results	General activities, identification, and forecast of violations, their minimization (elimination)	Narrow, problem-based areas of activity; maintaining structural liquidity

Source: compiled by the authors.

A criteria comparison of financial management and controlling in relation to government bodies laid the basis for grouping financial controlling indicators based on financial management quality monitoring indicators. The philosophy of financial controlling as an integral part of intra-organizational (corporate) culture is closely related to the concept of value-based management (VBM). The classical VBM concept focuses on maximizing the market value of a company to maximize its owners' welfare (rather than obtaining maximum profit). VBM for government bodies focuses on maximizing the socioeconomic utility of measures in public policy to maximize the citizens' welfare (Morozko & Didenko, 2018). Table 4 presents the differences between the classical VBM concept and the VBM concept for government bodies and proposes indicators of financial controlling in government bodies.

**Table 4.** Differences between the classical VBM concept and the VBM concept for government bodies

Varieties of the classical VBM concept (examples)	Provisions of the VBM concept for government bodies	Prospective indicators of financial controlling for government bodies
1	2	3
SVA (shareholder value added) or increase in shareholder capital	Increasing the socioeconomic cost (significance) of measures performed by a government body within the relevant areas of state policy; assessing the effectiveness of management decisions taken	<ul style="list-style-type: none"> <li>– Change in financing and financial result of the activities of a government body due to change in financing from the federal budget (budget of a constituent entity of the Russian Federation) (amount in monetary terms);</li> <li>– Market value of the amount of funds by which the financing of a government body was changed;</li> </ul>

		– Cost of organizing the direct activities of a government body within the relevant directions of state policy
CVA (cash value added) or cash yield management RCF (Residual Cash Flow) or cash value-added management	Financial efficiency of activities within the relevant areas of state policy pursued by a government body, minus the costs of direct organization and implementation of these activities (by third parties)	Cost of activities within the relevant areas of state policy pursued by a government body, minus expenses for the direct organization and implementation of these activities (by third parties)
MVA (market value added) or management of market-added value	Market-added value calculated as the difference between the market value of government funds allocated to finance activities within the relevant areas of government policy and the market value of the socioeconomic effects of beneficiaries	

Source: compiled by the authors based on (Damodaran, 2012).

These differences were used in developing promising indicators of financial controlling for government bodies, based on VBM adapted to the public sector.

### 3 RESULTS

We developed a system of financial controlling indicators based on the indicators of financial management quality monitoring (Table 5). Financial controlling indicators can be qualitative and quantitative, logical, etc. Based on them, it is possible to determine target indicators of the financial controlling system of an economic entity. Target indicators should be divided into efficiency indicators and effectiveness indicators (ISO9001): efficiency is “the relationship between the results of activities and the resources used in the process of achieving them” and effectiveness is “the implementation of planned goals by determining the relationship between the planned and real results” (International Organization for Standardization, 2015). The modern economic dictionary provides an identical interpretation of the concepts under consideration: efficiency is “the ratio of the result to the costs that ensured its achievement” and effectiveness (management) is “the achievement of the management goal, the expected state of the management object” (Raizberg et al., 2022, p. 146).

**Table 5.** Indicators of monitoring the quality of financial management and their interpretation as indicators of financial controlling

Group of indicators for monitoring the quality of financial management	Group indicators	Functional area of financial controlling	Directions and indicators of financial controlling (examples)	
			Strategic	Operational
1	2	3	4	5
Budget expense management	– The quality of justifying (calculating) planned estimate indicators;	Financial goal-setting	– The implementation of the activities of a government body within the relevant areas of state policy;	x



	<ul style="list-style-type: none"> <li>- The timeless formation of budget estimate; Information on budgetary obligations;</li> <li>- The quality of forming information on budgetary obligations;</li> <li>- The suspension of operations on spending funds on personal accounts of the recipient of budgetary funds;</li> <li>- An error in cash planning for budget expenditures at the beginning (end) of the reporting period;</li> <li>- An error in cash planning for expenses on payments to personnel; social security</li> </ul>	Strategic financial planning	<ul style="list-style-type: none"> <li>- Not exceeding the maximum deviations in the expenses of a government body;</li> <li>- Centralized management of certain groups of expenses</li> </ul>	x
	<ul style="list-style-type: none"> <li>- Claims for monetary obligations of recipients of budget funds;</li> <li>- The uniform implementation of budget cash expenditures for the purchase of goods, works, and services;</li> <li>- Demand for maximum amounts of financing for the purchase of goods, works and services;</li> <li>- The efficiency of managing accounts receivable (payable) for budget expenditures for the purchase of goods, works services, etc.</li> </ul>	Budgeting	x	<ul style="list-style-type: none"> <li>- The degree of maintaining the required level of solvency and liquidity indicators of a government body;</li> <li>- The sufficiency of the regulatory, departmental (internal) framework for the timely and complete implementation of expenses;</li> <li>- The recalculation of the expenses incurred considering the inflation rate;</li> <li>- Grouping expenses of a government body;</li> <li>- The cost-effectiveness of accounting, preparation and submission of reports</li> </ul>
		Internal financial control	x	<ul style="list-style-type: none"> <li>- The number of claims for the recovery of damages caused to the Russian Federation from illegal and other actions (inactions) of a government body;</li> <li>- The validity of information sent from supervisory and other inspection bodies;</li> <li>- The validity of excess expenditure on financing activities implemented within the relevant areas of a government body's state policy;</li> <li>- The validity of reasons for delays in the repayment of obligations;</li> <li>- A system of financial and economic accounting and analysis</li> </ul>
		Financial risk management (general areas)	x	<ul style="list-style-type: none"> <li>- Capacity for analyzing reasons for the non-fulfillment of the budget expenditure plan;</li> <li>- Capacity for the risk of underfunding activities within the relevant areas of state policy of a government body</li> </ul>
Budget revenue management	<ul style="list-style-type: none"> <li>- The timeless provision of justifications for the forecast of budget revenue receipts;</li> <li>- The quality of forecasting budget revenue receipts at the beginning (end) of the reporting period;</li> </ul>	Financial goal-setting	<ul style="list-style-type: none"> <li>- The implementation of the activities of a government body within the relevant areas of state policy;</li> <li>- Not exceeding the maximum deviations in the income of a government body;</li> <li>- The centralized management of certain income groups</li> </ul>	x







	including by sources of budget revenue; – The quality of generating accrual notifications; – The quality of managing overdue accounts receivable for payments to the budget and compensation of budget expenses, etc.	Strategic financial planning	<ul style="list-style-type: none"> <li>– The financial stability of a government body;</li> <li>– The uniformity of a government body's income;</li> <li>– The accuracy of planning (forecasting) deviations in a government body's expenditure</li> </ul>	x
		Budgeting	x	<ul style="list-style-type: none"> <li>– The achievement of the required level of indicators of revenue administration of a government body;</li> <li>– The sufficiency of the regulatory, departmental (internal) framework for timely and complete revenue administration; grouping of revenues of a government body;</li> <li>– The cost-effectiveness of accounting, preparation, and submission of reports</li> </ul>
		Internal financial control	x	<ul style="list-style-type: none"> <li>– The number of claims for the recovery of damages caused to the Russian Federation from illegal and other actions (inactions) of a government body;</li> <li>– The validity of information sent from regulatory and other inspection bodies;</li> <li>– A system of financial and economic accounting and analysis</li> </ul>
		Financial risk management (general areas)	x	<ul style="list-style-type: none"> <li>– Capacity for analyzing reasons for the non-fulfillment of the budget revenue plan;</li> <li>– Capacity for the risk of failure to receive the required revenues for the implementation of activities within the relevant areas of state policy of a government body</li> </ul>
Asset management	<ul style="list-style-type: none"> <li>– The quality of preparation of documents for submission to the Federal Agency for State Property Management, the Government of the Russian Federation;</li> <li>– The cash execution of expenses for the maintenance of state property, including the payment of utility bills for the maintenance of state property, etc.</li> </ul>	Financial goal-setting	<ul style="list-style-type: none"> <li>– The provision of production areas for employees of a government body, subordinate organizations, branches (representative offices);</li> <li>– The continuous provision of utilities to employees of a government body, subordinate organizations, branches (representative offices);</li> <li>– The sufficiency of equity capital</li> </ul>	x
		Strategic financial planning	<ul style="list-style-type: none"> <li>– The efficiency of distribution of production and other areas between employees of a government body, subordinate organizations, branches (representative offices) of various groups (administrative and managerial personnel, production workers, technical workers, and others);</li> <li>– The fulfillment of the capital repair plan (reconstruction, modernization, etc.) of state property of a government body, subordinate organizations, branches (representative offices)</li> </ul>	x
		Budgeting (for government bodies and subordinate organizations,	x	<ul style="list-style-type: none"> <li>– The balance of expenditure areas for the maintenance of state property; sufficiency of cash expenditures for the proper maintenance of state property, including utilities;</li> </ul>





		branches (representative offices)		<ul style="list-style-type: none"> <li>- The quality of separate accounting of expenses for the maintenance of state property (real estate, movable property and further detailing: fixed assets, intangible assets, inventories, etc.);</li> <li>- The degree of compliance with standards in the area of expenses for the maintenance of state property;</li> <li>- The average value of cash expenditures for the maintenance of state property, including payment for utilities for the maintenance of state property;</li> <li>- The cost-effectiveness of accounting, preparation, and submission of reports</li> </ul>
		Internal financial control (for government bodies and subordinate organizations, branches (representative offices))	x	<ul style="list-style-type: none"> <li>- The legality of the use of state property; the degree of completeness and proper execution of documents in the sphere of securing the relevant types of rights to state property;</li> <li>- The legality of cash expenditures for the proper maintenance of state property, purchases of goods, works, and services for the maintenance of state property, including utilities;</li> <li>- The validity of materials from internal and external state financial control audits (theft, shortages, other violations);</li> <li>- The number of substantiated claims of control and supervisory bodies (court cases) in the sphere of state property</li> </ul>
		Financial risk management (general areas)	x	<ul style="list-style-type: none"> <li>- Capacity of the risk of inefficient distribution of areas of state property between categories of employees of a government body, subordinate organizations, branches (representative offices) (the ratio of employees of a government body and areas of state property of this body);</li> <li>- Capacity of the risks of uneven distribution of expenses for the maintenance of state property by types of state property (for a government body and subordinate organizations, branches (representative offices));</li> <li>- The balance sheet of a government body, subordinate organizations, branches (representative offices) of unused state property, including undistributed</li> </ul>
Distribution of budgetary allocations and budgetary commitment limits (by subordinate organizations, branches (representative offices))	<ul style="list-style-type: none"> <li>- The formation of budget estimates indicators;</li> <li>- Demand for maximum funding;</li> <li>- The timeless adoption of budget estimates;</li> <li>- The approval (of drafts) of budget estimates, justifications (calculations) of planned estimate indicators and others</li> </ul>	Financial goal-setting		<ul style="list-style-type: none"> <li>- The performance of functions assigned to subordinate organizations, branches (representative offices), in full in accordance with the specifics of the activities of a government body;</li> <li>- The achievement of performance indicators of subordinate organizations, branches (representative offices)</li> </ul>
		Strategic financial planning		<ul style="list-style-type: none"> <li>- The complete provision of subordinate organizations, branches (representative offices) with financial resources;</li> <li>- The development of traffic regulations of subordinate</li> </ul>



			organizations, branches (representative offices)	
		Budgeting	x	<ul style="list-style-type: none"> <li>- The balance of financial resources allocated to finance the activities of subordinate organizations, branches (representative offices);</li> <li>- The coefficient of savings of allocated financial resources considering the achievement of the duties assigned to the subordinate organization, branch (representative office) in full;</li> <li>- The availability and quality of separate accounting of expenses for the maintenance of state property (real estate, movable property, and further detailing: fixed assets, intangible assets, inventories, etc.);</li> <li>- The cost-effectiveness of accounting, preparation, and submission of reports</li> </ul>
		Internal financial control	x	<ul style="list-style-type: none"> <li>- The completeness and extent of public procurement of subordinate organizations, branches (representative offices);</li> <li>- The completeness of reporting on financial resources distributed by the state body to subordinate organizations, branches (representative offices);</li> <li>- The number of claims for recovery from subordinate organizations, branches (representative offices) of damage caused to the Russian Federation from illegal and other actions (inactions) in the process of using distributed and communicated budgetary allocations and budget obligation limits</li> </ul>
		Financial risk management	x	<ul style="list-style-type: none"> <li>- Hidden reserves for optimizing expenses in the areas of activity of subordinate organizations, branches (representative offices);</li> <li>- Risks of underfunding the activities of subordinate organizations, branches (representative offices)</li> </ul>

Source: compiled by the authors.

The system of target indicators of financial controlling for government bodies includes groups, areas, area-specific indicators, types, calculation, and target values. Due to the large volume of recommended indicators, this article presents only an excerpt for the first group of monitoring the quality of financial management “Management of budget revenues and expenses” of the controlling area “Financial goal-setting” (Table 6). The full version also contains two groups “Asset management” and “Distribution of budget appropriations and limits of budget obligations”. Each group includes a list of indicators for the previously designated controlling areas: financial goal-setting; strategic financial planning; budgeting; internal financial control; risk management.

The groups of indicators are adapted to the indicators of financial management and the corresponding areas of financial controlling, which allows for a controlling analysis of target indicators in a government body in the event of emergency, accidents, and other

situations from the viewpoint of influence on management decisions in the relevant area. For government bodies, there are no calculated indicators of liquidity, financial stability, and solvency since they are fully financed by budget funds. For each of the developed indicators, it is proposed to assess the dynamics by growth and increase rates.

Considering the characteristics of financial controlling concepts and the differences between classical VBM and VBM for government bodies (Table 4), promising indicators of financial controlling for government bodies were developed and presented in Table 7.

When assessing these indicators, mathematical models, methods and tools of economic-statistical, correlation-regression, and investment analysis can be used.

**Table 6.** Extract from the system of target indicators of financial controlling for government bodies

Group of indicators <sup>s*</sup>	Direction of financial controlling	Indicator	Indicator type <sup>**</sup>	Calculation	Target value of the indicator <sup>***</sup>
Budget income and expenditure management	Financial goal-setting	The degree of financial implementation (financing) of activities of a government body within the relevant directions of state policy <sup>****</sup> (income (expenses))	E	Actual value of expenses of a government body for the implementation of activities within state policy, thousand rubles $\frac{\text{Planned value of expenses of a government body for the implementation of activities within state policy, thousand rubles}}{\text{Actual value of expenses of a government body for the implementation of activities within state policy, thousand rubles}} \times 100\%$	100%
				Actual value of income of a government body received as part of the implementation of activities within state policy, thousand rubles $\frac{\text{Planned value of income of a government body received as part of the implementation of activities within state policy, thousand rubles}}{\text{Actual value of income of a government body received as part of the implementation of activities within state policy, thousand rubles}} \times 100\%$	100%
	The degree of exceeding limit deviations in revenues (expenses) of a government body	E	When conducting a plan-fact analysis (analysis of deviations) of expenses according to the formula: $\frac{\text{Actual value of income (expenses) of a government body, thousand rubles}}{\text{Planned value of income (expenses) of a government body, thousand rubles}} \times 100\%$	<5%	
	The overall financial stability of a government body (excluding subordinate institutions, branches (representative offices))	E	Total amount of income of a government body, thousand rubles $\frac{\text{Total amount of expenses of a government body, thousand rubles}}{\text{Total amount of income of a government body, thousand rubles}} \times 100\%$	100%	
	The centralized management of certain groups of income (expenses) of a government body	P	If there are financial responsibility centers in a government body with the division of income (expenses) by types and areas of activity (income: accounting, economic, marginal; expenditure: purchases, utility expenses, expenses for legal support of activities), the value is 100%. 0% in other cases		

Source: compiled by the authors.

Note: \*For each group of financial controlling indicators, there is a plan-fact analysis of expenses for their maintenance and execution of court decisions, as well as an analysis of the number of claims in the presence of legal proceedings; \*\*E is the efficiency indicator; P is the performance indicator; \*\*\*Target values of financial controlling indicators can be adjusted for each government body depending on the specifics of their activity and unforeseen circumstances that affected the achievement of target values; \*\*\*\*Measures can be grouped, for example, within the framework of national projects.



**Table 7.** Prospective indicators of financial controlling for government bodies

Example of a financial controlling indicator	Functional area(s) of financial controlling	Type of an indicator*	Calculation formula/formation mechanism/ratio	Indicator interpretation
Socioeconomic duration	Budgeting  Internal financial control  Financial risk management	E	$D_{se} = \frac{\sum_{t=1}^n \frac{t * CF_g}{(1 + ds)^t} + \frac{VE_g * n}{(1 + ds)^n}}{mv_g}$ <p>where <math>D_{se}</math> is socioeconomic duration, years;  <math>n</math> is the number of payments equal to the number of events financed within the relevant area of public policy;  <math>t</math> is the time of implementation of events within the area of public policy until the receipt of socioeconomic effects by beneficiaries, years;  <math>VE_g</math> is the repayment of the nominal value of events within the area of public policy, thousand rubles;  <math>CF_g</math> is the market cash flow of interest income, consisting in increasing the consumption of goods created in the context of events within the relevant area of public policy, thousand rubles;  <math>ds</math> is a social discount rate, %;  <math>mv_g</math> is the market value of the good, whose financing is determined in the context of events within the area of public policy, thousand rubles</p>	The period of full return of invested funds. The shorter the duration, the less risk a government body assumes
Net profit of a government body	Strategic goal-setting  Strategic financial planning  Budgeting	P	<p><i>Gross profit</i> (total income received from consumption by citizens (beneficiaries) of provided benefits in the context of activities within the framework of public policy directions)                      → <i>Explicit profit</i> (gross profit minus accounting (explicit, actual) costs)                      → <i>Implicit profit</i> (explicit profit minus economic (implicit, transaction, alternative) costs)                      → <i>Market profit</i> (implicit profit recalculated with due regard to market prices for explicit and implicit costs)                      → <i>Net profit</i> (market profit minus the market value of socioeconomic effects from consumption by beneficiaries of benefits in the context of activities within the framework of public policy directions)</p>	Real (market) assessment of socioeconomic effects from measures carried out within the framework of state policy directions
Net profit margin of a government body	Strategic financial planning  Budgeting	E	$\frac{\text{Net profit of a government body, thousand ruble}}{\text{Gross profit of a government body, thousand rubles} \times 100\%}$	Profitability of the activities of a government body
Investment efficiency ratio** of a government body	Budgeting (short-term projects with uniform income)	E	$ER_g = \frac{P_n}{\frac{1}{2}(II_{av} + II_r)} \times 100\%$ <p>where <math>ER_g</math> is the coefficient of investment efficiency of a government state body, %***;  <math>P_n</math> is the net profit of a government body, thousand rubles;  <math>II_{av}</math> is the average annual value of initial investments, thousand rubles;  <math>II_r</math> is the residual value of initial investments, thousand rubles</p>	Impact of government investments on the accounting rate of return
Return on invested capital of a government body	Strategic financial planning  Budgeting	E	$RI_g = \frac{P_n}{II_{av}} \times 100\%$ <p>where <math>RI_g</math> is the return on investment of a government body, %;  <math>P_n</math> is the net profit of a government body, thousand rubles;  <math>II_{av}</math> is the average annual value of initial investments, thousand rubles</p>	Relative level of profitability of investments of a government body







Weighted average cost of investment of a government body	Budgeting	E	$WACI_g = \sum_{i=1}^n (RI_{gi} \times S_i) \times 100\%$ <p>where <math>WACI_g</math> is the weighted average cost of investments of a government body, %;  <math>n</math> is the number of measures (projects) of a government body implemented within the relevant areas of state policy;  <math>RI_{gi}</math> is the return on investment of a government body for a specific measure (project) within the relevant areas of state policy, %;  <math>S_i</math> is the share of budget funds in a specific event (project) within the relevant area of state policy, %</p>	The relative level of the total amount of expenditure of a government body to form the financial base of a measure (project) within the relevant direction of state policy (a criterion for making management decisions in the sphere of real investment)
Point of zero return from beneficiaries (threshold of profitability of invested funds of a government body)****	Strategic goal-setting  Strategic financial planning	E	$Ret_0 = \frac{\text{Gross profit of a government body} + \text{Target net profit of a government body} \times \text{Exp}_{per, \text{thousand rubles}}}{\text{Gross profit of a government body} - \text{Exp}_{var, \text{thousand rubles}}} \times 100\%$ <p>where <math>Ret_0</math> is the point of zero return from beneficiaries (the threshold of profitability of invested funds of a government body), %;  <math>Exp_{per}</math> is the sum of fixed expenses of a government body for the implementation of activities within the framework of state policy directions, thousand rubles;  <math>Exp_{var}</math> is the sum of variable expenses of a government body for the implementation of activities within the framework of state policy directions, thousand rubles</p>	The value of the return from beneficiaries, at which a government body breaks even
Financial stability reserve of a government body	Strategic goal-setting  Strategic financial planning	E	$FSR = \frac{\text{Gross profit of a government body} - Ret_0, \text{thousand rubles}}{\text{Gross profit of a government body, thousand rubles}}$ <p>where FSR is the financial strength reserve of a government body;  <math>Ret_0</math> is the point of zero return from beneficiaries (the threshold of profitability of invested funds of a government body), %</p>	> 0.5
The Golden Rule of the public sector of the economy	Strategic goal-setting  Strategic financial planning	P	<p>Growth rate socioeconomic effects of beneficiaries &gt; Growth rate net profit of a government body &gt; Growth rate population of the state          (recommended standard value &gt; 100%)</p>	Assessing the growth balance of areas of a government body (in aggregate)
Sustainable growth rate*****	Strategic goal-setting  Strategic financial planning	E	$SGR = \frac{P_n}{\Pi_{av}} \times 100\%$ <p>where SGR is the coefficient of sustainable growth, %;  <math>P_n</math> is the net profit of a government body reinvested in similar activities within the relevant direction of state policy, thousand rubles;  <math>\Pi_{av}</math> is the average annual value of initial investments, thousand rubles;          When <math>SGR = RI_g</math>, this indicates the maximum growth rate of the national economy sector</p>	Condition for the growth of the national economy sector corresponding to the volume of reinvested net profit of a government body (the rate of development of the national economy sector under the existing structure of capital, financing, return on assets, capital and labor





				intensity of measures and other conditions)
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Source: Compiled by the authors based on (Gubernatorov, 2024).

Note: \*E is the efficiency indicator; P is the performance indicator; \*\*Investments of a government body are understood as funds aimed at obtaining socioeconomic benefits for beneficiaries (citizens); \*\*\*Here and below, when calculating percentage indicators, fractions of numbers are used; \*\*\*\*Analog of the break-even point; \*\*\*\*\*The calculation is based on the assumptions that: a) a specific government body corresponds to a specific sector of the national economy; b) the growth of the economic sector depends on the conditions created by a government body.

#### 4 DISCUSSION

The results obtained confirm the opinions of modern scholars on the feasibility of applying the principles and tools of controlling in the public sector. Garcia-Sanchez and Cuadrado-Ballesteros (2016) associated the use of new tools for managing public finances with increasing the efficiency of their use. The issues of applying the Golden Rule in the public sector were most often considered from the viewpoint of its application in public finances (Groneck, 2010; Kamiguchi & Tamai, 2019; Ueshina, 2018; Zeyneloglu, 2018). The issues of measuring and assessing the financial strength of a government body are practically not addressed in existing studies. An emphasis is laid on the role of governments in the financial development policy of individual sectors of the economy (Becerra et al., 2012; Egan & Bergin, 2023), state regulation of public finances (Hoshi & Ito, 2004), state support for industry and innovation (Djibo et al., 2022), and the impact of state support on the stability of the financial system (Berger et al., 2020).

As for the application of VBM for government bodies, we reviewed more than 80 scientific publications and described the issues of mutually beneficial public-private partnerships (Morawakage et al., 2023; Raghutla & Kolati, 2023; Wang et al., 2020), the impact of public investment on economic growth (Meka'a et al., 2024), the impact of government digitalization on the efficiency of companies' investments (Xu & Jin, 2024), and the impact of public investment on increasing renewable energy consumption (Qamruzzaman & Karim, 2023). However, we did not identify methodological approaches to assessing the net profit margin, the point of zero return from beneficiaries (the threshold for return on invested funds), the return on invested funds, or the efficiency ratio of government body investments. In this regard, we should pay attention to the scientific work by Castells and Solé-Ollé (2005), proposing mathematical methods for measuring the rational distribution of public investment in infrastructure in terms of efficiency and regional equity. From the viewpoint of assessing the cost of public investment, the study by Ang et al. (2023) is of interest, in which an attempt is made to assess the cost of financing local self-





government bodies.

Analytical support for the controlling system in government bodies proposed in the study makes an undoubted contribution to the scientific direction under consideration and indicates interesting directions for further research.

## 5 CONCLUSIONS

Thus, analytical support for the financial controlling system in government bodies is closely related to their activities and the tasks being solved. The distinction between strategic and operational financial controlling allows not only to distinguish between financial controlling and financial management but also to group controlling indicators in financial goal-setting, strategic financial planning, budgeting, internal control, and risk management and to determine their information base and target values. We also divided indicators into those that reflect the efficiency of government bodies and those that reflect the effectiveness of their activities. This division ensures a comprehensive and more complex coverage of the activities of government agencies.

Within the framework of this study, we introduced such indicators as net profit of the public sector, net profit rate of the public sector, investment efficiency ratio of a government agency, weighted average cost of investments of a government agency, point of zero return from beneficiaries, financial stability margin of a government agency, and sustainable growth ratio. In addition, we adapted the indicators of socioeconomic duration, return on invested capital, and the Golden Rule for the public sector.

The financial controlling indicators are flexible and can adapt to the current geopolitical changes.

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