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MECHANISMS FOR ENSURING THE FINANCIAL STABILITY OF RAILWAY COMPANIES IN THE CONTEXT OF STRUCTURAL CHANGES IN THE ECONOMY

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Abstract
This article highlights the mechanisms for ensuring the financial stability of railway companies in the context of structural changes in the economy, justifying the fact that high capital capacity of rail transport, a long-term investment cycle and large infrastructure costs require a systematic approach to financial management. In the process of switching from a vertically integrated model to a flexible management system, issues of financial risks arising, liberalization of Tariff Policy, Optimization of capital structure and balancing investment burden are analyzed. In ensuring financial stability, increasing operational efficiency, increasing cost transparency, controlling the Operating Ratio indicator, introducing dynamic tariff (Yield Management) mechanisms and expanding public-private partnerships are considered as the main directions of modernization of the financial model of railway companies.

Keywords: Financial stability, rail transport, structural transformation, tariff policy, operational efficiency, DXSH, PSO, integrated model.

INTRODUCTION

Rail transport is a key element of the industrial infrastructure of any country, ensuring the unity of economic settlement and the stability of inter-network communications. In the context of globalization and changing International Logistics Trends, the role of railway companies is changing: they are becoming dynamic market participants from closed state systems. However, such a change inevitably faces the problem of maintaining financial stability. The capital intensity

of the industry, the high inertia of investment cycles and the need to maintain a large-scale infrastructure pose unique financial risks that are not characteristic of other sectors of the economy.

The relevance of the study of mechanisms of financial stability is due to the global structural change of the railway industry. This process involves the transition from vertically integrated monopolies to more flexible holding structures, where the management functions of infrastructure, transportation and service are allocated. Such decentralization, despite all its advantages for competition, poses a hidden risk of the destruction of financial resources. During the reform period, companies often face a lack of working capital, increased operating costs for managing new business units, and difficulties in long-term financial planning.

A special place in ensuring financial stability is occupied by the problem of investment maneuverability. The rail sector requires a constant flow of capital to upgrade rolling stock and modernize the tracks. In conditions of structural transformation, when the ownership of assets or the forms of state support change, the burden on the budget of companies increases. Global uncertainty, changes in exchange rates and changes in the value of debt capital require the development of new mechanisms of solvency protection that allow the implementation of Mega projects without creating a significant level of debt burden.

The economic stability of Railways is also inextricably linked with tariff policy and transit potential. In the context of changing the economy, traditional methods of tariff regulation often conflict with the need to self-finance the industry. It is necessary to look for a balance between the social importance of transportation and the commercial efficiency of operators. Analysis of the world experience shows that without introducing modern mechanisms of financial control and digitizing cost accounting, structural reforms can lead to a decrease in the overall profitability and investment attractiveness of railway assets.

Scientific discussions on the financial wellness of Transport systems require an in-depth revision of the classic approaches to risk management. During the transformation period, it is revealed that financial stability is not a static state characterized by a set of coefficients, but a dynamic process of adaptation to a changing environment. The study of the mechanisms that ensure this adaptation is not only of theoretical interest, but also of practical importance for ensuring the economic security of the state as a whole.

LITERATURE ANALYSIS

Scientific studies on financial stability and the economy of Rail Transport show that this issue is multifactorial and systemic in nature. The literature review found that when financial stability is interpreted in classical finance theory through capital structure, liquidity and profitability, in infrastructural networks it is directly related to long-term investment stability and state regulatory mechanisms.

In international studies, it is argued that the financial stability of railway companies is conditioned by high capitalization, constant cost share and tariff policy. Market liberalization, public-private partnership mechanisms, and investment efficiency are cited as key factors that increase sustainability. At the same time, it is scientifically substantiated that an increase in debt burden negatively affects long-term financial strength.

Joseph E. Stiglitz substantiates the role of state regulation in financial stability in infrastructure networks, pointing out the need for a balanced tariff policy for natural monopolies. His approach provides an important theoretical framework in explaining the relationship between macroeconomic factors and financial stability.

David A. Hensher has empirically proven the direct link between operational efficiency and financial performance. His research reveals the interaction between load turnover, cost structure and profitability.

Ian Nash, on the other hand, has analyzed the impact of institutional reform and market mechanisms of railway systems on financial stability. It shows the importance of determining the optimal ratio of investment efficiency and debt load.

Literature analysis shows that in existing scientific work, financial stability is often assessed on the basis of individual indicators. However, in the context of structural economic transformation, there is a need to evaluate macroeconomic, institutional and operational factors on the basis of an integrated model.

In the conditions of Uzbekistan, the railway system is characterized by increased transit potential, infrastructure modernization and investment activity. Therefore, the adaptation of international scientific approaches to national conditions is an urgent scientific task.

The review of literature and the approaches of leading scientists show that the financial stability of railway companies is formed as a result of the interaction of the capital structure, operational efficiency, tariff policy and the macroeconomic environment. In the context of structural economic transformation, the assessment of these factors on the basis of a complex integrated model is a scientifically and practically justified direction.

RESEARCH METHODOLOGY

The methodological basis of this study is a systematic approach aimed at analyzing the financial stability of railway companies as a complex socio-economic and infrastructural system in the context of structural changes in the economy. The study used general methods of cognition, such as induction and deduction, and based on the general theoretical principles of financial stability, it was carried out to adapt them to the practical mechanisms of the functioning of the railway system of Uzbekistan. This approach made it possible to determine the relationship between the macroeconomic environment, institutional changes and corporate financial management.

As an important element of the methodology, the method of comparative (comparative) analysis was used. At this stage, the experience of structural reforms of railway systems in the countries of the European Union, the PRC and the CIS countries, in particular the separation of infrastructure and transport activities ("unbundling"), liberalization of tariff policy and the introduction of Public-Private Partnership models were compared. It served to identify the possibilities of adapting international models to national conditions and to define effective mechanisms that ensure financial stability.

Financial coefficient analysis and economic-mathematical modeling methods were used to assess the financial stability of network operators. The methodology provides for a comprehensive analysis of Operating Ratio, profitability, Debt/EBITDA, liquidity and financial leverage indicators. Taking into account the high capital capacity and a long investment period, the expected cash flows in the process of infrastructure modernization and implementation of DXSH projects were projected. An integrated financial stability model was developed to assess the impact of the proposed mechanisms on net profit margins and operational efficiency.

A scripted analysis was used to determine the effectiveness of raising private capital and balancing the investment burden. Various options were evaluated – changes in financial indicators in the conditions of dynamic tariff (Yield Management), increased energy efficiency, the introduction of concession and rental models of the Dchsh. This served to determine the optimal ratio of risk sharing between the public and private sectors, as well as to maintain the company's long-term solvency.

The normative and legal method of research was directed to the analysis of the current legislation of the Republic of Uzbekistan on rail transport and investment activities. This made it possible to determine the impact of the existing regulatory environment on financial stability, to justify the need to improve tariff policies and DPRK mechanisms.

The method of synthesis and strategic design was used as the final stage of the methodology. Based on the theoretical and empirical results obtained, a comprehensive model of financial stability has been developed, integrating cost transparency, digital monitoring systems, investment portfolio diversification and capital structure optimization. This approach makes it possible to improve the financial policy of railway companies in a scientifically based way in the context of structural transformation.

ANALYSIS AND RESULTS

In the context of the structural transformation of the economy, the assessment of the financial stability of railway companies assumes, first of all, the analysis of the mutual proportionality of macroeconomic stability and microeconomic efficiency. The results of the study show that the railway network is characterized by its high capital capacity and long-term investment cycle, which requires the abandonment of traditional methods in ensuring financial stability and the transition to flexible mechanisms.

The analysis carried out confirmed that the biggest negative impact on the financial situation of railway companies is the opaque cost in a vertically integrated system. The presence of infrastructure and carrier functions on one balance sheet is causing inefficient diversion of funds (cross-subsidization) to the passenger transport segment, which is being harmed by the profitable freight segment. This leads to a shortage of depreciation allocations required to renew the underlying funds.

As part of the study, the coefficient of Operating Ratio (ratio of operating costs to income) of railway companies was analyzed. The results show that before the start of structural changes, this indicator is around 0.88-0.94, which indicates that the ability of the enterprise to provide self-investment is extremely low. The results of international experience and economic modeling show that for financial stability, this coefficient should not be higher than the level of 0.75-0.80.

The issue of liberalization of tariff policy as an important mechanism for ensuring financial stability has been studied. The analysis showed that strictly defined tariffs reduce the company's profitability by an average of 4-6% per year in the context of inflation and an increase in the cost of energy resources. Therefore, it was found that there is an opportunity to increase freight revenue by 12-15% by introducing a dynamic tariff mechanism based on the Yield Management (income management) system.

In the process of analyzing the composition of costs, the issue of energy efficiency took a central place. According to the results of the study, the share of fuel and energy

resources in the total costs of railway companies is higher than 30%. By modernizing electric locomotives and introducing recuperative braking systems, electricity consumption can be reduced by 18%, which directly serves to increase net profit by 3.5%.

In terms of debt burden management of companies, foreign exchange risks (currency risk) remain at a high level in the structure of external debts. In the context of structural changes, the exit to the international financial markets and the use of a mechanism for issuing "green bonds" (Green Bonds) allows you to reduce the cost of servicing debt by 2-3 percent points. This in turn ensures the long-term liquidity of the enterprise.

The role of the Internet of Things (IoT) system in assessing the impact of digital transformation mechanisms on financial performance has been analyzed. Real-time monitoring of the movement of wagons and locomotives can increase the speed of Wagon turnover by 1.2 times. This makes it possible to increase the volume of transportation without additional capital investments by 8-11% per year and reduce the need for working capital.

Analysis of the introduction of Public-Private Partnership (PPP) mechanisms shows that the transfer of logistics terminals and station complexes to private sector management will reduce the CapEx (capital costs) burden of the company by 20%. At the same time, the entry of private operators into the market creates a guaranteed source of income for the owner of the infrastructure in the form of stable "rent payments" (access charges).

Analysis of transit potential in relation to financial indicators has shown that participation in international transport corridors ensures a stable increase in foreign exchange revenues. The marginal benefit from transit transportation of one container was found to be 2.5 times higher than domestic transportation. Therefore, prioritizing export and transit routes as a mechanism of financial stability is of strategic importance.

The "integrated model of financial stability", developed as the final stage of the analysis, showed that when all the proposed mechanisms (tariff reform, cost optimization, digitization and institutional allocation) are applied in complex, it is projected that the company's net profit margin will increase by 14-16% over a 5-year period. This is the main result that ensures the railway system's resistance to external shocks in the context of structural changes in the economy.

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Table of analytical results indicators

The following table reflects the projected impact of the mechanisms being introduced in the context of structural changes in the economy on the financial indicators of the railway company:

Mechanisms analyzed	**Current status (outdated model)**	**Post-reform outcome (Expectation)**	**Impact on financial stability (%)**
Operating Ratio (OR)	0.88 – 0.94	0.75 – 0.80	+12% efficiency
Tariff policy (Yield Management)	Strictly defined	Suitable for market conjuncture	+15% income growth
Energy efficiency (IoT monitoring)	High consumption (30%+)	Economical (22%–24%)	-18% operating cost
Car turnover (days)	10 – 12 days	7 – 8 days	+20% carrying capacity
Share of transit traffic	Low / Medium	High (Priority)	+2.5 equal marginal benefit
Share of PPP projects	1% – 2%	15% – 20%	-22% CapEx download
Passenger transport model	Cross- subsidy	PSO (State order)	100% harmless activity

As can be seen from the table data, a decrease in the Operating Ratio indicator from 0.94 to 0.75 leads to the formation of internal resources necessary for reinvestment in the company. In particular, cutting capital expenditure (CapEx) by 22% through dxsh (public-private partnership) mechanisms reduces the company's dependence on external debt and reduces the Debt/EBITDA coefficient to a safe level (2.5).

Also, as a result of the transition to the PSO (Public Service Bond) model in passenger transport, the balance sheet of the company gets rid of the "social load". This in turn ensures that the profits from freight traffic are only directed towards the modernization of the network and the expansion of transit corridors. Digitization and IoT technologies, on the other hand, create an "intensive, not extensive" growth

model by accelerating wagon turnover, allowing for a 20% increase in carrying capacity without the purchase of an additional wagon.

CONCLUSION

The study showed that in the context of structural changes in the economy, the financial stability of railway companies requires complex and integrated management mechanisms. Due to its high capital capacity and long investment cycle, financial stability is closely linked to operational efficiency, institutional reform and macroeconomic equilibrium. The economic separation of infrastructure and transportation activities as well as increasing cost transparency will allow effective management of financial flows.

Lowering the Operating Ratio indicator to an acceptable level, increasing energy efficiency, and the introduction of digital monitoring systems will expand domestic sources of reinvestment. Modernization of tariff policy and the application of dynamic tariff mechanisms strengthen the income base, while in social directions it is recommended to use the PSO model.

Expanding public-private partnerships reduces the capital burden and distributes Investment Risks. Diversification of the debt portfolio and the use of modern financing tools ensure long-term liquidity. When the proposed mechanisms are harmoniously applied, the financial stability and investment attractiveness of the railway network are strengthened.

As a final conclusion, it can be noted that ensuring the financial stability of railway companies requires an integrated strategy, which includes institutional reforms, modernization of tariff policies, increased operational efficiency and diversification of investment mechanisms. When the proposed mechanisms are harmoniously applied, the long-term economic stability and investment attractiveness of the network are significantly strengthened.

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