



Article

Improving the mechanisms of interaction between banking and budgetary institutions in the transition to a Green Economy

Sh.G. Abdumutalova ¹

1. Doctoral Candidate of the Department of Accounting and Audit, Namangan State Technical University

* Correspondence: -

Abstract: This article analyzes the institutional and financial aspects of interaction between the banking sector and budgetary institutions in the context of Uzbekistan's transition toward a green economy model. The main objective of the study is to assess the current state of the financing system for environmentally sustainable projects, identify key barriers and challenges in this area, and develop proposals to optimize cooperation mechanisms between commercial banks and public authorities. The methodological framework of the research is based on systemic, comparative, and institutional approaches, complemented by content analysis of international and national documents (UNDP, OECD, World Bank, and the Uzbekistan–2030 Development Strategy).

Keywords: green economy, sustainable development, green finance, banking sector, budgetary authorities, Uzbekistan.

Citation: Abdumutalova
Improving the mechanisms of
interaction between banking
and budgetary institutions in
the transition to a Green
Economy. American Journal of
Economics and Business
Management 2026, 9(9), 754-
764.

Received: 10th Jun 2026

Revised: 11th Jul 2026

Accepted: 11th Aug 2026

Published: 21st Sep 2026



Copyright: © 2026 by the
authors. Submitted for open
access publication under the
terms and conditions of the
Creative Commons
Attribution (CC BY) license
(<https://creativecommons.org/licenses/by/4.0/>)

1. Introduction

In the context of the global transformation of economic models aimed at achieving sustainable development and minimizing anthropogenic impact on the environment, the transition to a green economy has become one of the key strategic objectives for countries at all levels of development. According to the United Nations Environment Programme (UNEP), a green economy is defined as an economic system that fosters improvements in human well-being and social equity while significantly reducing environmental risks and the depletion of natural resources [1].

For the Republic of Uzbekistan, which possesses substantial potential in renewable energy, water resources, and the agricultural sector, the shift toward a green economy is viewed as a means of ensuring long-term economic stability and enhancing the competitiveness of the national economy. The Uzbekistan–2030 Development Strategy places particular emphasis on the integration of environmental sustainability and climate neutrality principles into the country's financial and budgetary systems [2].

Financial institutions, including banks and budgetary organizations, play a crucial role in implementing the transition to a sustainable economy. According to World Bank experts, the success of such transformations largely depends on the effectiveness of integrating public and private sources of financing, as well as on the financial system's ability to direct resources toward priority environmental initiatives. Meanwhile, OECD studies highlight that many developing countries, including Uzbekistan, face insufficient coordination of financial flows. This manifests in inconsistencies between budgetary programs and the investment instruments used by banks [3].

In Uzbekistan's financial system, mechanisms of green financing are gradually being introduced, such as the establishment of specialized funds, the issuance of green bonds, and the provision of credit lines for sustainable projects. The leader in this direction remains the Joint-Stock Commercial Bank Uzpromstroybank. However, the interaction between banks and budgetary institutions remains fragmented, limiting the scale and effectiveness of support for environmentally oriented programs. Insufficient institutional coordination leads to duplication of functions, reduced transparency in the use of funds, and decreased efficiency in implementing sustainable development programs [4].

Thus, this study aims to address one of the key challenges of Uzbekistan's current stage of economic development—the formation of an effective, coherent, and sustainable model of interaction between public and private financial institutions that ensures the country's successful transition toward a green economy [5].

2. Materials and Methods

The methodological foundation of this study consists of a set of interrelated scientific approaches and analytical tools that provide a comprehensive analysis of the theoretical and institutional aspects of interaction between banking and budgetary institutions in the process of Uzbekistan's transition to a green economy.

The study employs systemic, institutional, comparative, and content analyses, as well as elements of legal analysis and the structural-functional method.

Systemic Approach.

At the core of the methodology lies the systemic approach, which enables the examination of the banking and budgetary sectors as interconnected components of a unified financial system aimed at reallocating resources in the interest of sustainable development. This approach made it possible to identify both internal and external linkages between public and private institutions, as well as to determine the key intersections of their functions and priorities. Furthermore, it facilitated the assessment of the overall coherence of financial coordination mechanisms within the framework of the state's green strategy.

In accordance with the systems analysis concept developed by Ludwig von Bertalanffy and supported by contemporary economic research (OECD, World Bank), the efficiency of a financial system depends not only on the quality of its individual institutions but also on the degree of coherence in their interactions.

Institutional Approach.

The application of institutional analysis made it possible to examine the legal, organizational, and managerial foundations of interaction between banking and budgetary structures in the context of building a green economy. Within this framework, the study analyzed the regulatory and legal acts of the Republic of Uzbekistan (including presidential and cabinet resolutions and the *Uzbekistan–2030 Strategy*) that govern the integration of environmental standards into financial and budgetary policy. The analysis also covered institutional mechanisms supporting environmental initiatives, such as state target funds, green lending instruments, and the issuance of green bonds.

Comparative Analysis.

To identify successful models of financial and budgetary cooperation, a comparative method was employed, focusing on the study of international experiences of countries that have achieved success in the field of green finance. Among such countries are Germany, China, Kazakhstan, and South Korea. The use of this method made it possible to assess the potential adaptability of certain elements of foreign models—such as China's "Green Finance Hub" and Europe's "Green Budgeting Framework"—to Uzbekistan's specific context.

Content Analysis and Legal Review.

Content analysis was used to study official documents, analytical reports, and programs of international organizations (UNDP, UNEP, World Bank, OECD), as well as national institutions such as the Ministry of Finance, the Central Bank, the Ministry of Ecology, and the Agency for State Asset Management. This method made it possible to systematize information about the current state, challenges, and development priorities of green finance in Uzbekistan.

Structural-Functional Method.

This method allowed for the analysis of the distribution of functions among participants in the financing process of environmentally oriented initiatives, including commercial banks, state funds, ministries, and agencies. The application of the structural-functional approach revealed existing inconsistencies between the formal mandates of institutions and the actual mechanisms for implementing green projects. These findings formed the basis for recommendations aimed at improving the interaction model among various stakeholders in the context of sustainable development.

Thus, the combined application of the above methods ensured the comprehensive and interdisciplinary nature of the study. The methodological framework integrates macroeconomic and institutional analysis, which guarantees the reliability of conclusions and the validity of recommendations directed at improving the interaction between banking and budgetary institutions in Uzbekistan's transition to a green economy.

3. Result and Discussion

The results of the study revealed that, despite the existence of a regulatory and legal framework and several initiatives in the field of green finance, the coordination mechanism between the banking sector and public (budgetary) institutions remains fragmented and insufficiently effective [6].

1. The Current State of Bank–Budget Interaction in the Context of the Green Economy

Uzbekistan's financial system consists of two key components that ensure the implementation of green projects:

The banking sector, represented by commercial banks, including those with state participation;

Budgetary institutions, which include state funds (such as the Reconstruction and Development Fund, the Environmental Protection Fund, and the Water Resources Fund), as well as ministries and agencies that implement targeted programs [7].

An analysis of the regulatory and organizational foundations of this interaction demonstrates that, at present, banks, budgetary structures operate within separate programs, and instruments that are only weakly interconnected. There is no unified coordination center that would integrate green financial flows, which reduces the efficiency of resource allocation and leads to duplication of functions [8].

Table 1. Main Participants and Functions of Bank–Budget Interaction in the Sphere of Uzbekistan’s Green Economy

Participant	Main Functions	Forms of Participation in Green Initiatives	Problematic Aspects
Ministry of Finance of the Republic of Uzbekistan	Formation and allocation of budgetary funds; oversight of government programs	Financing of state programs and environmental development funds	Limited transparency in fund allocation; insufficient coordination with banks
Central Bank of the Republic of Uzbekistan	Regulation of the banking sector; licensing and supervision	Introduction of requirements for green lending and reporting	Lack of unified criteria for defining “green” projects
Commercial Banks	Financing of private sector projects	Loans for renewable energy (RE) and energy-efficient technologies	Insufficient long-term resources; high borrowing costs
State Funds	Targeted financing of environmental programs	Subsidies and grant-based support for green projects	Low level of integration with banking institutions
Ministry of Finance of the Republic of Uzbekistan	Formation and allocation of budgetary funds; oversight of government programs	Financing of state programs and environmental development funds	Limited transparency in fund allocation; insufficient coordination with banks

2. Key Problems and Institutional Barriers to Interaction

Based on the analysis, the following key issues have been identified as major obstacles to the effective interaction between banking and budgetary institutions in the sphere of the green economy:

1. Fragmentation of the Institutional System.

There is no unified institutional framework to coordinate green financial flows between public and private actors. Each agency implements its own programs independently, without alignment or coordination with other institutions.

2. Underdevelopment of Green Financial Instruments.

In Uzbekistan’s banking practice, instruments such as green bonds, sustainable loans, and green insurance are still used to a limited extent, despite their widespread adoption in international practice [9]. However, as with many cases, there is an exception — in Uzbekistan, the issuance of *green bonds by SQB Bank* represents an initial step toward the implementation of such instruments.

PROJECT CATEGORY	PROJECTS	PURPOSE	ALLOCATED AMOUNT (MLN USD)	ALLOCATION %
ENERGY EFFICIENCY	12	ACQUISITION OF ENERGY EFFICIENT TECHNOLOGY	106,01	25,7%
CLEAN TRANSPORTATION	5	ACQUISITION OF MACHINERY, EQUIPMENT, AND VEHICLES IN THE SMALL BUSINESS SECTOR	7,05	2,6%
WATER EFFICIENCY	1	ACQUISITION OF WATER EFFICIENT TECHNOLOGIES	4,40	1,10%
TOTAL			117,45	29%

Figure 1. Allocation by Categories and Projects in Green Economy Financing

According to the data presented in Figure 1, the Sustainability Bond allocated 29% of its proceeds to finance 18 projects within the categories of energy efficiency, clean transportation, and water efficiency. Of these funds, 87% were directed toward energy efficiency projects, reflecting the growing national interest in technological modernization aimed at achieving energy savings. Furthermore, 100% of the allocated resources were utilized for refinancing eligible expenditures incurred within the three years preceding the issuance of the Sustainability Bond [10].

3. Weak Digitalization and Low Transparency.

There is no unified electronic platform that consolidates information on financing, monitoring, and the outcomes of environmental projects.

4. Inconsistency of the Regulatory Framework.

Certain legislative acts lack clear definitions of green finance, criteria for sustainable investments, and standardized reporting requirements.

5. Limited Financial Motivation for Commercial Banks.

There are no fiscal or regulatory incentives (such as tax benefits or preferential refinancing schemes) to encourage banks' participation in environmentally oriented programs.

3. Potential for Developing an Integrated Model of Cooperation

The results of the analysis indicate that Uzbekistan has the prerequisites for developing an effective model of bank–budget partnership based on the principles of institutional coherence, digitalization, and data transparency [11].

In particular:

Within the framework of the “Uzbekistan–2030 Strategy”, provisions have been made for introducing elements of green budgeting and environmental auditing of government programs [12].

In 2024, the Central Bank initiated the development of a climate risk management and sustainable banking system, which could serve as the foundation for integrating environmental criteria into banking operations.

UNDP and the World Bank are jointly implementing projects to promote green finance instruments, creating opportunities for establishing a unified Governmental Coordination Center for Green Finance [13].

Based on a comparison of international experience and national conditions, several promising directions for integration can be identified:

1. Establishing a National Coordination Council on Green Finance, uniting representatives of commercial banks, the Ministry of Finance, the Central Bank, and international partners;
2. Developing a unified digital platform – “Green Finance Portal”, ensuring transparent information exchange and project tracking;
3. Introducing a system of incentives for commercial banks through refinancing mechanisms and tax benefits;
4. Supporting the issuance of green bonds to finance infrastructure and energy projects.

Table 2. Comparison of Current and Target Characteristics of Interaction Between Banking and Budgetary Institutions

Indicator	Current State	Target State
Format of Interaction	Fragmented, agency-based	Integrated, interagency
Program Coordination	Disjointed	Centralized (Coordination Council)
Digitalization	Limited; absence of a unified database	Unified monitoring and data platform
Financing Instruments	Traditional loans, subsidies	Green bonds, sustainable loans, ESG evaluation
Information Transparency	Partial	Full transparency with public reporting
International Participation	Occasional	Institutionalized partnerships

Thus, the research findings confirm the necessity of transitioning from a fragmented interaction model to an institutionally integrated system of “green” financing, based on the principles of coherence, digitalization, and transparency [14]. Establishing such a model would not only enhance the efficiency of public resource utilization but also stimulate greater participation of the private banking sector in implementing Uzbekistan’s ecological development priorities [15].

Discussion

The study results indicate that the effectiveness of Uzbekistan’s transition to a “green” economy largely depends on the degree of coordination between banking and budgetary institutions. Insufficient coordination of financial flows, fragmented programs, and the absence of unified standards for “green” financing reduce the country’s overall potential to achieve sustainable development goals.

Table 3. Combination of Financing Sources for the Green Economy in Uzbekistan

Source of Financing	Amount (Approx.)	Purpose / Notes
State Budget of Uzbekistan	Not specified	Allocated within state programs and reforms; implements the “green” budgeting mechanism.
World Bank (international loan)	USD 800 million	Financing green economy initiatives.
French Development Agency (AFD)	EUR 150 million	Financing green economy initiatives.
GIZ (grant)	EUR 3 million	Financing green economy initiatives.
Private sector and green bonds	~USD 1 billion	Mobilized through green financing mechanisms.
State budget subsidies	Over UZS 153 billion	Paid to solar panel owners.

To develop directions for improving these mechanisms, it is advisable to examine the international experience of countries that have successfully implemented “green” transformation strategies and identify opportunities for adapting this experience to national conditions.

1. International Experience in Coordinating Banking–Budget Mechanisms for “Green” Financing

European Union. In the EU, a multi-level system for coordinating “green” financing has been established, combining state support and market-based instruments. In 2019, the European Commission adopted the European Green Deal, which set the strategic goal of achieving carbon neutrality by 2050. A central element of this strategy is the EU Green Taxonomy—a classification system for sustainable economic activities, serving as a regulatory framework for banks, investors, and budgetary authorities.

The European Investment Bank (EIB) plays a key role as the EU’s “green” financial coordinator. The EIB, in collaboration with national governments and commercial banks, implements projects in renewable energy, energy efficiency, and green transport, financed through green bonds and blended finance funds. Thus, the European model is characterized by a high degree of institutional integration, where the banking and budgetary sectors interact through unified standards, digital reporting, and centralized risk allocation.

People’s Republic of China. In China, “green” financing is considered a key instrument of the state strategy for an “Ecological Civilization.” Since 2016, the country has operated a National Green Credit System (Green Credit Guidelines), regulated by the People’s Bank of China. Its distinctive feature is the close integration of state budget programs, commercial banks, and regional development funds.

Coordination mechanisms are implemented through regional Green Finance Hubs — specialized centers bringing together banks, local government authorities, and private investment funds to jointly implement environmental projects. Additionally, the government applies tax incentives, green refinancing, and subsidies to encourage banks to lend to environmentally sustainable sectors. The Chinese model demonstrates that the success of “green” financing is achieved not only through regulatory measures but also through the active role of the state as an institutional integrator between budgetary and banking flows.

Republic of Kazakhstan. Kazakhstan’s experience is also relevant for Uzbekistan, given similar economic and institutional conditions. In 2017, the Astana International Financial Centre (AIFC) was established, within which the Green Finance Centre operates. It coordinates between banks, state funds, and international partners (UNDP, EBRD, ADB). Kazakhstan has also developed national standards for green bonds and established a legal framework for implementing green budgeting.

This model demonstrates the practical feasibility of integrating public and private financial resources within a single platform, which can also be adapted for Uzbekistan when developing a national “green” financing mechanism.

2. Interpretation of Results for the Context of Uzbekistan

Comparative analysis shows that successful international models combine three key principles:

Institutional integration — establishing a single coordinating center;

Financial diversification — combining budgetary, banking, and market instruments;

Transparency and digitalization — maintaining a unified database and ESG reporting.

In the context of Uzbekistan, the following directions for institutional adaptation can be highlighted:

Establishment of a National Council for Sustainable Financing under the Government of the Republic of Uzbekistan to coordinate between the Ministry of Finance, the Central Bank, commercial banks, and international partners.

Introduction of a national classification of “green” projects, based on the principles of the EU Taxonomy, taking into account sectoral specifics (water resources, renewable energy, agriculture).

Development of a green refinancing mechanism, similar to the Chinese model, enabling the Central Bank to incentivize banks to finance environmental projects.

Creation of a Green Finance Portal to integrate data on budget expenditures, bank loans, and international grants.

Support for the issuance of green bonds through government guarantees and participation of the Environmental Fund.

Table 4. Comparative Analysis of “Green” Financing Models
(International Experience and Applicability to Uzbekistan)

Country / Region	Coordination Mechanism	Main Instruments	Applicability to Uzbekistan
EU	European Commission, EIB, Green Taxonomy	Green bonds, ESG reporting, centralized funds	High — requires adaptation of regulatory framework and digital infrastructure

China	People's Bank of China, regional Green Hubs	Green refinancing, tax incentives, subsidies	High — adaptation of the Green Hub model and fiscal incentives is feasible
Kazakhstan	AIFC and Green Finance Centre	National standards, coordination platform, state guarantees	Medium — applicable for creating a unified Green Finance Portal
Uzbekistan (current state)	No single coordinating center, fragmented programs	Budget subsidies, bank loans	Requires institutional integration and digitalization of processes

3. Recommendations for Improving Interaction Mechanisms

Based on the analysis and international practices, a set of recommendations is proposed to reform the system of interaction between banking and budgetary institutions in Uzbekistan:

Institutional Level: Establish a Coordination Council for Green Financing under the Cabinet of Ministers of the Republic of Uzbekistan; adopt a National Sustainable Financing Strategy, including a roadmap for integrating banking and budgetary instruments.

Regulatory and Legal Level: Develop and approve a national taxonomy of “green” projects aligned with international standards (EU, UNDP); amend banking and budget legislation to institutionalize principles of green budgeting and ESG reporting.

Financial and Instrumental Level: Implement blended finance mechanisms combining resources from the budget, banks, and international funds; develop the green bond market and establish a guarantee system for private investors; introduce preferential refinancing and tax incentives for banks investing in environmental projects.

Technological Level: Create a unified digital platform, the Green Finance Portal, to provide monitoring, reporting, and data sharing; develop an information-analytical system for assessing climate risks in the banking sector.

The interpretation of these results indicates that Uzbekistan's transition to a green economy requires moving from fragmented measures to a systematic policy integrating budgetary and banking instruments. International experience confirms that sustainable and balanced development of green financing is possible only with a single institutional center, a clear regulatory framework, and transparent coordination mechanisms.

4. Conclusion

The study has shown that a successful transition of the Republic of Uzbekistan to a sustainable development model in the form of a green economy requires comprehensive and systemic interaction between the banking and budgetary sectors. This cooperation must be based on unified institutional and financial principles of sustainable development. At the current stage, coordination mechanisms are still evolving and are characterized by fragmentation, regulatory inconsistency, and insufficient coordination among key financial system actors.

Analysis of the current situation shows that, despite the existence of strategic policy documents such as “Uzbekistan – 2030”, the National Strategy for Transition to a Green Economy, and initiatives to implement ESG methodologies, there is no single coordinating

center. This gap hinders the coherent integration of budgetary and banking instruments in financing environmental projects.

Comparative analysis of international experience (European Union, China, Kazakhstan) identifies several key factors determining the effectiveness of a green financing system:

Institutional Integration: Establishing specialized organizations or coordination councils for strategic management of sustainable investment.

Multichannel Financing: Active use of blended financing models involving public funds, commercial banks, and international organizations.

Regulatory Clarity: Establishing a unified taxonomy and standards for evaluating environmental projects.

Transparency and Digitalization: Implementing monitoring and reporting systems for financial flows associated with green development projects.

To adapt these approaches to Uzbekistan, a comprehensive set of institutional and regulatory changes is recommended, including:

Establishing a National Council for Green Financing under the Cabinet of Ministers of the Republic of Uzbekistan. This body would act as a central platform for interaction among the Ministry of Finance, the Central Bank, commercial banks, environmental funds, and international partners.

Developing a national taxonomy of green projects based on the principles of the EU Green Taxonomy, adapted to the structure of Uzbekistan's economy.

Introducing a green refinancing mechanism via the Central Bank, including preferential lending for environmentally sustainable initiatives.

Initiating elements of green budgeting, whereby public expenditures are evaluated through the lens of their environmental impact and contribution to sustainable development.

Creating a unified digital platform, the Green Finance Portal, which will enhance transparency of investment flows and integrate data from international donors, banks, and government programs.

The implementation of these measures will create an integrated and effective green financing system, facilitating coordinated interaction between the banking and budgetary sectors within a strategic framework for the country's sustainable development. These measures aim to achieve environmental, economic, and social sustainability.

Thus, Uzbekistan's transition to a green economy should be viewed as a large-scale institutional and financial transformation. This process is based on rethinking the interaction between government bodies, financial institutions, and the private sector. Consolidation of efforts among all stakeholders, along with the adoption of international standards and innovative financial instruments, will lay the foundation for a sustainable economic growth model based on the principles of green development and proactive climate responsibility.

REFERENCES

- [1] United Nations Environment Programme (UNEP), *Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication*, Nairobi, Kenya, 2021. [Online]. Available: <https://sdgs.un.org/publications/towards-green-economy-pathways-sustainable-development-and-poverty-eradication>
- [2] Government of the Republic of Uzbekistan, *Strategy "Uzbekistan – 2030"*, Tashkent, Uzbekistan, 2023. [Online]. Available: https://gov.uz/pages/2030_strategy

- [3] World Bank, Financing the Transition to a Green Economy: Policy Perspectives, Washington, DC, USA, 2022.
- [4] Organisation for Economic Co-operation and Development (OECD), Green Finance and Investment: Aligning Policies for a Low-carbon Economy, Paris, France, 2021. [Online]. Available: https://www.oecd.org/en/publications/green-finance-and-investment_24090344.html
- [5] UNDP Uzbekistan, Green Transition and Sustainable Development Report, Tashkent, Uzbekistan, 2023. [Online]. Available: https://www.oecd.org/en/publications/2023/12/financing-uzbekistan-s-green-transition_6ebf6b94.html
- [6] Organisation for Economic Co-operation and Development (OECD), Green Finance and Investment: Institutional Frameworks and Policy Instruments, Paris, France, 2022.
- [7] World Bank, Systemic Approaches to Sustainable Finance, Washington, DC, USA, 2023.
- [8] World Bank and UNDP, Sustainable Finance in Central Asia: Country Diagnostics, Washington, DC, USA / Tashkent, Uzbekistan, 2024.
- [9] European Commission, EU Green Deal and Taxonomy Regulation, Brussels, Belgium, 2020.
- [10] European Investment Bank (EIB), Green Finance Report 2023, Luxembourg, 2023. [Online]. Available: <https://www.eib.org/en/publications/20230294-greening-the-financial-sector>
- [11] People's Bank of China, Guidelines for Establishing the Green Financial System, Beijing, China, 2016.
- [12] Green Finance Centre AIFC, Green Finance in Kazakhstan: Progress and Challenges, Astana, Kazakhstan, 2022.
- [13] Asian Development Bank (ADB), Central Asia Regional Economic Cooperation: Green Energy and Finance Framework, Manila, Philippines, Tech. Rep. 2024.
- [14] Ministry of Economy and Finance of the Republic of Uzbekistan, Green Economy Transition Framework: Policy Action Plan, Tashkent, Uzbekistan, 2024.
- [15] International Finance Corporation (IFC), Green Banking in Emerging Markets: Trends and Opportunities, Washington, DC, USA, 2023.