

# The Role of Green Financial Institutions in the Development of Responsible Business Management in Russia and Central Asia

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**Abstract:** The research aims to determine the role of green financial institutions in developing responsible business management in Russia and Central Asia. With reference to the official international statistics from the Global Green Growth Institute, the authors identified the level and correlation of manifestations of responsible business management with the effectiveness of green financial institutions in Russia and Central Asia. The main conclusion drawn from the conducted research is that the role of green financial institutions in the development of responsible business management in Russia and Central Asia lies in ensuring the growth of ecological responsibility in international trade through green exports and imports, as well as in increasing the activity of implementing green innovations for environmental protection. The contribution of this research to the literature lies in advancing scientific propositions within the concept of responsible business management by refining the influence of green financial institutions on the development of responsible business management in Russia and other Central Asian countries. The theoretical significance of the author's findings lies in the examination of the unique experience of Russia and Central Asian countries in the field of responsible business management, as well as in the reevaluation of green financial institutions

through the lens of Sustainable Development Goals (SDGs). The practical significance of this research lies in the fact that the disclosed perspective on the development of responsible business management enables the enhancement of green financial institutions in Russia and other Central Asian countries in the Decade of Action.

**Keywords:** Green financial institutions, sustainable development, responsible business management, Russia, Central Asia

*JEL codes:* G32, G34, N25, Q56

Responsible business management is a contemporary approach to business administration that relies on corporate social and environmental responsibility. Recent crises in the global economy have affected the business environment in such a way that the inefficiency of green financial institutions has become the key barrier to responsible business management.

Malfunctions in the functioning of these institutions lead, first, to a deficit in green financing. Due to the gap between the stock market and commodity markets, green investors often cannot clearly track the directions of the use of the financial resources they provide to businesses, as well as the social and environmental consequences of using these resources in business. This hinders green investments.

Second, there is a distortion of the nature of green finances. From the perspective of institutions, there is a risk of misallocation of green investments in business, as well as errors of the first kind (supporting business entities that do not practice responsible business management with green investments) and the second kind (denying green investments to business entities practicing responsible business management due to their absence from the list).

The problem lies in the fact that the institutional environment varies significantly among regions worldwide. This prevents the development of universal recommendations for improving green financial institutions and necessitates research on these institutions in the context of global regions. The Central Asian region deserves special attention because it includes dynamically developing economies. Seeking to address this problem, this research aims to define the role of green financial institutions in developing responsible business management in Russia and Central Asia.

## **Literature Review**

The fundamental basis of this research is the concept of responsible business management (Karrieva et al., 2021). In accordance with this concept, the existing literature identifies the following manifestations of responsible business management in the contemporary economy, which are reinterpreted in this research through the prism of the Sustainable Development Goals (SDGs):

- Environmental liability in international trade through green exports and imports (Litvinova et al., 2016) in support of SDG 17;
- Creation of green jobs (Khakimova & Kayumova, 2022; Vanchukhina et al., 2022) in support of SDG 8;

- Implementing green innovations to protect the environment (Veselovsky et al., 2018) in support of SDGs 9–15;
- Social responsibility through the provision of public and socially important benefits and poverty alleviation (Turginbayeva & Shaikh, 2022) in support of SDG 1;
- Ensuring gender neutrality in the workplace (Mamyralieva et al., 2022) in support of SDG 5;
- Support for reducing social inequalities (Popkova, 2023) в поддержку in support of SDG 10;
- Legal social protection (Popkova and Sergi, 2023) in support of SDG 16.

The experience of responsible business management development in Russia and Central Asian countries is studied by Osovtssev et al. (2018) and Bogoviz and Sergi (2018). The issues of functioning and development of green financial institutions are considered by Tolmachev et al. (2023) and Vechkinzova et al. (2022). However, the existing publications do not explain the role of green financial institutions in developing responsible business management in Russia and Central Asia, which remains unknown. The identified gap in the literature raises the research question of how green financial institutions influence the development of responsible business management in Russia and other Central Asian countries.

### Materials and Methods

The empirical basis for this research is the official international statistics of the Global Green Growth Institute (2023), reflecting the development of green financial institutions and responsible business management in Russia and Central Asia in 2022 (Table 1).

**Table 1**

Level of development of green financial institutions and responsible business management in Central Asia in 2022, scores 0–100

Country	Green investment	Green trade	Green employment	Green innovation	Access to basic services and resources	Gender balance	Social equity	Social protection
	GFI	Rbm <sub>1</sub>	Rbm <sub>2</sub>	Rbm <sub>3</sub>	Rbm <sub>4</sub>	Rbm <sub>5</sub>	Rbm <sub>6</sub>	Rbm <sub>7</sub>
Afghanistan	60.46	0.00	1.00	0.00	39.39	25.88	63.00	13.40
China	83.11	38.34	73.79	40.08	66.65	55.19	84.32	78.84
India	81.29	23.11	51.96	27.05	51.80	38.68	79.64	35.98
Iran	0.00	0.00	73.79	0.00	82.45	52.45	88.00	53.48
Kazakhstan	62.93	3.27	30.12	1.00	88.30	57.81	91.72	34.26
Kyrgyzstan	62.64	11.03	37.40	1.00	71.58	52.59	82.75	77.34
Mongolia	55.31	2.17	1.00	1.00	62.91	68.09	53.52	66.74
Pakistan	76.70	12.20	22.84	0.00	43.96	16.54	75.89	26.13
Russia	66.75	11.18	95.63	27.05	87.41	52.29	84.62	74.88

Tajikistan	63.25	0.00	1.00	1.00	62.00	55.66	94.34	68.56
Turkmenistan	0.00	0.00	1.00	0.00	88.42	62.24	80.75	0.00
Uzbekistan	0.00	0.00	0.00	1.00	67.71	58.73	87.59	63.26

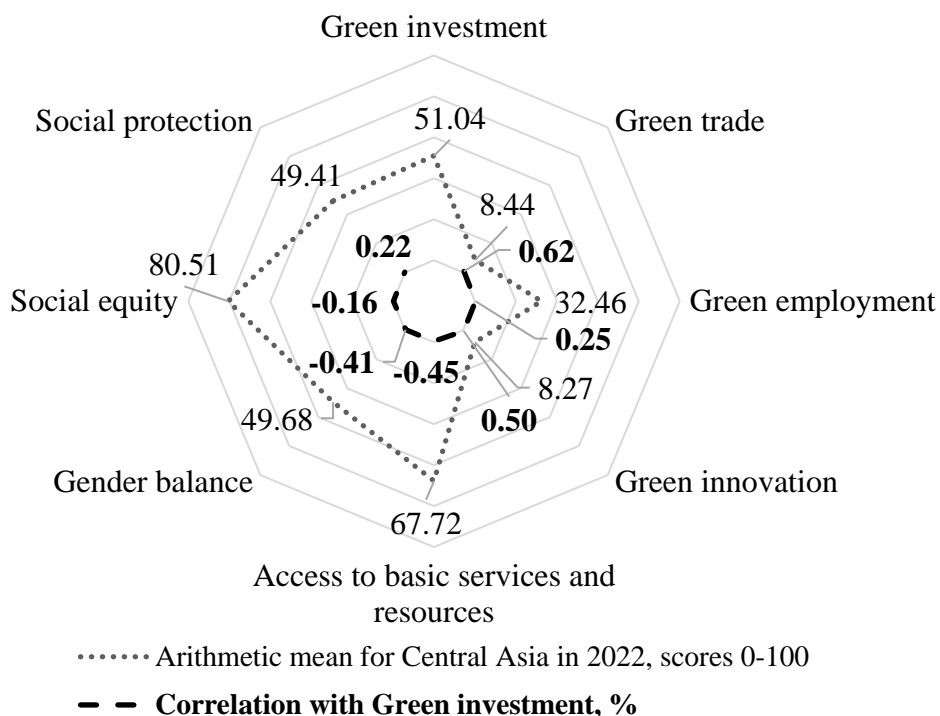
Source: Compiled by the authors based on Global Green Growth Institute (2023)

The authors applied the method of correlation analysis to determine the average level and correlation of manifestations of responsible business management in Russia and Central Asia with the effectiveness of green financial institutions based on the statistics from Table 1. Manifestations of responsible business management are selected for which positive and statistically significant (exceeding 0.5) correlation coefficients were obtained.

Using the regression analysis method, the authors modeled the dependency of the selected manifestations of responsible business management in Russia and Central Asia on the effectiveness of green financial institutions. Based on the obtained regression models, the authors determined the perspective of developing responsible business management in Russia and Central Asia by enhancing the effectiveness of green financial institutions in the Decade of Action.

## Results

Using the statistics from Table 1, the authors determined the average level and correlation of responsible business management in Russia and Central Asia with the effectiveness of green financial institutions.



**Figure 1**

Average level and correlation of manifestations of responsible business management with the efficiency of green financial institutions

Source: Calculated and developed by the authors

According to Figure 1, positive and statistically significant (exceeding 0.5) correlation coefficients were obtained only for two manifestations of responsible business management: Green trade (Rbm<sub>1</sub>: 0.62) and Green innovation (Rbm<sub>3</sub>: 0.50). The regression dependence of the selected manifestations of responsible business management in Russia and Central Asia on the efficiency of green financial institutions was determined (Table 2).

**Table 2**  
 Results of regression analysis

Rbm <sub>1</sub> =F(GFI)	Regression statistics						
	Multiple R	R <sup>2</sup>	Normalized R <sup>2</sup>	Standard error	Observations		
	0.6207	0.3852	0.3238	9.7923	12		
	Variance analysis						
		<i>df</i>	<i>SS</i>	<i>MS</i>	<i>Tabular F</i>	<i>Observed F</i>	<i>Significance F</i>
	Regression	1	600.8928	600.8928		6.2666	0.0313
	Residual	10	958.8892	95.8889			
	Total	11	1559.7820				
		<i>Coefficients</i>	<i>Standard error</i>	<i>t-statistics</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
	Y-intercept	-3.3819	5.5045	-0.6144	0.5527	-15.6466	8.8828
GFI	0.2317	0.0925	2.5033	0.0313	0.0255	0.4379	
Rbm <sub>3</sub> =F(GFI)	Regression statistics						
	Multiple R	R <sup>2</sup>	Normalized R <sup>2</sup>	Standard error	Observations		
	0.5011	0.2511	0.1762	12.9956	12		
	Variance analysis						
		<i>df</i>	<i>SS</i>	<i>MS</i>	<i>Tabular F</i>	<i>Observed F</i>	<i>Significance F</i>
	Regression	1	566.2317	566.2317		3.3528	0.0970
	Residual	10	1688.8570	168.8857			
	Total	11	2255,0887				
		<i>Coefficients</i>	<i>Standard error</i>	<i>t-statistics</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
	Y-пересечение	-3.2125	7.3051	-0.4398	0.6695	-19.4893	13.0643
GFI	0.2249	0.1228	1.8311	0.0970	-0.0488	0.4985	

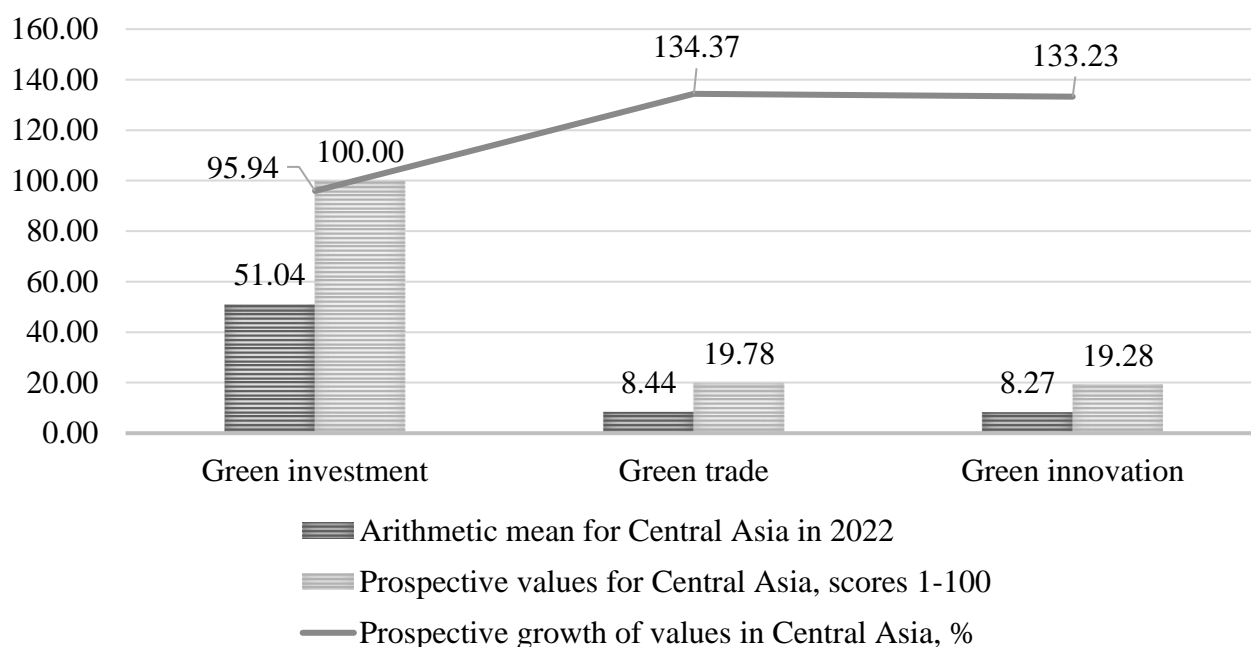
Source: Calculated and compiled by the authors

The results from Table 2 allow us to compose the following system of pairwise linear regression equations:

$$\left\{ \begin{array}{l} Rbm_1 = -3.3819 + 0.2317GFI; \\ Rbm_3 = -3.2125 + 0.2249GFI. \end{array} \right. \quad (1)$$

Equation system (1) indicates that with a one-point increase in the effectiveness of green financial institutions in Russia and Central Asian countries, environmental responsibility in international trade through green exports and imports increases by 0.2317 points (Fisher's F-test and Student's t-test passed at a significance level of 0.05), and the adoption of green innovations for environmental protection increases by 0.2249 points (Fisher's F-test and Student's t-test passed at a significance level of 0.10).

Based on equation system (1), the authors determined the perspective of developing responsible business management in Russia and Central Asia by enhancing the effectiveness of green financial institutions in the Decade of Action (Figure 2).



**Figure 2**

Perspective of development of responsible business management through increasing the efficiency of green financial institutions

*Source:* Calculated and compiled by the authors

The perspective demonstrated in Figure 2 indicates that by maximizing the effectiveness of green financial institutions (+95.94%) in Russia and Central Asian countries, environmental responsibility in international trade through green exports and imports will increase by 134.37% (to 19.78 points), and the adoption of green innovations for environmental protection will rise by 133.23% (to 19.28 points).

## Discussion

The contribution of this research to the literature lies in developing scientific propositions within the concept of responsible business management by clarifying the impact of green financial institutions on the development of responsible business management in Russia and other Central Asian countries. The research question posed has been answered.

The authors conclude that increasing the effectiveness of green financial institutions leads, first, to an increase in environmental responsibility in international trade through green exports and imports (supporting SDG 17 – as confirmed by Litvinova et al. (2016)). Second, it leads to an increase in the adoption of green innovations for environmental protection (supporting SDGs 9–15 – as confirmed by Veselovsky et al. (2018)).

In contrast to existing literature, the results of this research revealed that the increase in the effectiveness of green financial institutions does not necessarily lead to the creation of green jobs (does not support SDG 8 as opposed to Khakimova and Kayumova (2022) and Vanchukhina et al. (2022)); it also does not directly contribute to social responsibility through the provision of public and socially significant goods, as well as the fight against poverty (does not support SDG 1 as opposed to Turginbayeva and Shaikh (2022)); gender neutrality in the workplace (does not support SDG 5 as opposed to Mamyralieva et al. (2022)); support for reducing social inequality (does not support SDG 10 as opposed to Popkova (2023)); and legal social protection (does not support SDG 16 as opposed to Popkova and Sergi (2023)).

## Conclusion

The main conclusion drawn from the conducted research is that the role of green financial institutions in the development of responsible business management in Russia and Central Asia lies in ensuring the growth of ecological responsibility in international trade through green exports and imports, as well as in increasing the activity of implementing green innovations for environmental protection.

The theoretical significance of the author's findings lies in the examination of the unique experience of Russia and Central Asian countries in the field of responsible business management, as well as in reevaluating green financial institutions through the lens of SDGs. The practical significance of this research lies in the fact that the disclosed perspective on the development of responsible business management enables the enhancement of green financial institutions in Russia and other Central Asian countries in the Decade of Action.

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