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THE IMPACT OF GLOBALIZATION ON THE FINANCIAL SUSTAINABILITY AND LOGISTICS INFRASTRUCTURE OF TRANSITION ECONOMIES

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ABSTRACT

The article investigates the transformation processes of financial systems and logistics infrastructure of transition countries in the conditions of globalization of financial markets. It has been determined that, in general, certain improvements have been achieved in ensuring financial stability in the transition economies over the past ten years. Countries with transition economy are at an average level of integration in the global environment in terms of economy openness. Access to international markets and infrastructure is one of the negative integration factors. The quality of logistics infrastructure remains at low level for most transition economies. Transition economies have experienced declining capital sufficiency over the past ten years. With an increase of the of openness level, transition economies face problems of reducing financial stability, manifested in a decrease of the capital adequacy level of the financial sector. The level of financial instability has been increasing. Herewith, globalization has a positive effect on the quality of financial assets of the financial sector in transition economies. These tendencies are driven by improved market access and infrastructure development. There was no significant link between the globalization of transition

economies and the return on assets and capital of the financial sector, logistics infrastructure.

Keywords: Globalization, Transition, Financial sustainability, Logistics infrastructure

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1. INTRODUCTION

Transformation of transition economies, related to integration into international markets under the influence of globalization, and the desire to ensure the competitiveness of the economy require the research of these processes. There are no thorough studies in the scientific literature concerning the impact of globalization on the financial sustainability of transition economies. At the same time, over the past ten years, transition economies have significantly improved access to markets, logistics, management, providing positive changes in economic growth. If the globalization of developed countries contributes to positive changes in the infrastructure, are the same effects observed in transition economies? Does globalization have a positive impact on the financial sustainability of the transition economy?

The lack of fundamental developments in the sphere of globalization' influenceon the stability of the financial system and the logistics of transition economies have determined the choice of this topic. The purpose of the investigation is to study and analyze theoretical views on the impact of globalization on the financial system and the formation of the author's viewpoint of the studied issues. Scientific abstraction, analysis, synthesis, comparisonmethods, methods of mathematical modeling have provided the methodological basis of the research. The results, obtained during the study, contribute to the development of modern financial science and maybecome the blueprint forfurther scientific research.

2. LITERARTURE REVIEW

Financial globalization should provide more effective international risk mutualization for the country. Countries with transitional economies and emerging markets constitute an increased risk group in terms of the dangers of financial globalization. The accelerated liberalization of the foreign economic activity of developing countries makes them attractive for world capital, especially speculative one [1, 2] have revealed in their study insignificant level of distribution of financial globalization risks among different groups of countries. Developing countries lose control over capital due to the globalization of financial markets, and do not provide risk sharing. The country should ensure the stability of the financial system in order to benefit from the globalization of the financial markets [3]. In the context of globalization of the financial markets, an important condition for ensuring their financial stability is institutional capacity and discipline, competitive banking and non-banking financial market, absence of gaps in the institutional and market structure of the transition economy. Herewith, globalization stimulates institutional reforms in transition economies and promotes financial development [4]. Thus, the globalization of the transition economy contributes to ensuring the country's financial stability by enhancing its institutional capacity. Institutional volatility (including the ownership of property rights) is observed in the transitional economy due to democratic changes that cause financial instability [5]. The transition to a market economy and financial liberalization causes financial instability. The structure of the financial system causes financial fluctuations in transition economies. Management resources in this case are able to counterbalance the negative short-term fluctuations [6].

The openness of the financial market is a significant factor in the development of the banking and non-banking sectors [7]. The central bank's in dependence due to the globalization provides maintenance of financial stability: the central bank's political indefiniteness prevents financial instability [8].

After the financial liquidity crisis of 2008-2009, the emergence of which has been caused by the lack of liquidity of the financial sector, countries are faced with the need to ensure financial reliability. In the context of globalization, financial markets need effective state supervision [9].

In study [10] have conducted an investigation of the financial stability of European countries and the impact of outstanding loans on the level of sovereign risk. A significant relationship has been revealed between the risks of the financial sector of countries and the adequacy of banking capital, diversification of the banking sector (foreign banks and a high level of competition) [10].

The financial stability of the banking sector is procyclical. This conclusion was made in the work [11]. Increasing bank loans raise the riskiness and volatility of the financial system, while capital accumulation promotes financial stability. It should also be noted about the procyclical nature of the impact of small banks' lending and capital on financial stability and anti-cyclicality; it is subject to large banks. In work [12] have proved that the economy of the country should be strong in order to ensure financial stability. The regulatory activity of the central bank ensures the financial stability of the country, which has a non-linear effect on ensuring economic security [12].

Stability in globalized financial markets can be achieved by establishing floating exchange rates, slowdown and taxation of influx of foreign capital, establishing national economic sovereignty [13]. The globalized financial markets are characterized by volatility due to the intermediate exchange rate regime [14].

The structural transformation of the transition economy provides new institutional foundations for the development of the financial system. Accordingly, the logistics infrastructure is being transformed. An additional factor for transformation is liberalization and integration into the international financial market. Consequently, the financial system, in particular the banking sector, will undergo fundamental reforms and become more efficient, transparent, stable and internationally competitive.

3. MATERIALS AND METHODS

The impact of globalization on the financial sustainability of the transition economies has been assessed using panel data of the followingcountries, namely: Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Georgia, Kazakhstan, Kyrgyzstan, Montenegro, Serbia, Yugoslav Republic of Macedonia, Republic of Moldova, the Russian Federation, Tajikistan, Turkmenistan, Ukraine, Uzbekistan. The Global Index of Economic Openness for 2018 was used toassessglobalization; Logistics performance index for 2018 was used to assess the development of logistics infrastructure; Financial Stability Indicators by the International Monetary Fund were used to assess the financial stability of financial systems. The fixed-effects model based on panel data for transition economies of the 2010-2018 periods was selectedto determine the impact of globalization on financial sustainability. For models with panel data, the variation of the dependent variable for intragroup and intergroup regression models is assessed differently. In this case, the fixed-effects model has been selecteddue to the different level of socio-economic development. Each economic unit (country) is "special" and cannot be considered as the result of a random selection from some statistical universe.

4. RESULTS AND DISCUSSION

Countries with transitioneconomiesare at a medium level of integration in the global environmentin terms of the economy openness. Access to international markets and infrastructure is one of the negative factors of integration, despite their stable improvement, the effect of which is enhanced by the low level of the investment environment. The management and conditions for entrepreneurship over the past few years have improved slightly, which negatively affects the development of infrastructure and access to financial markets. However, such elements as transparency, integrity and management quality are being improved. Therefore, improvement of market access and infrastructure is ensured through the development of communications (Figure 1).

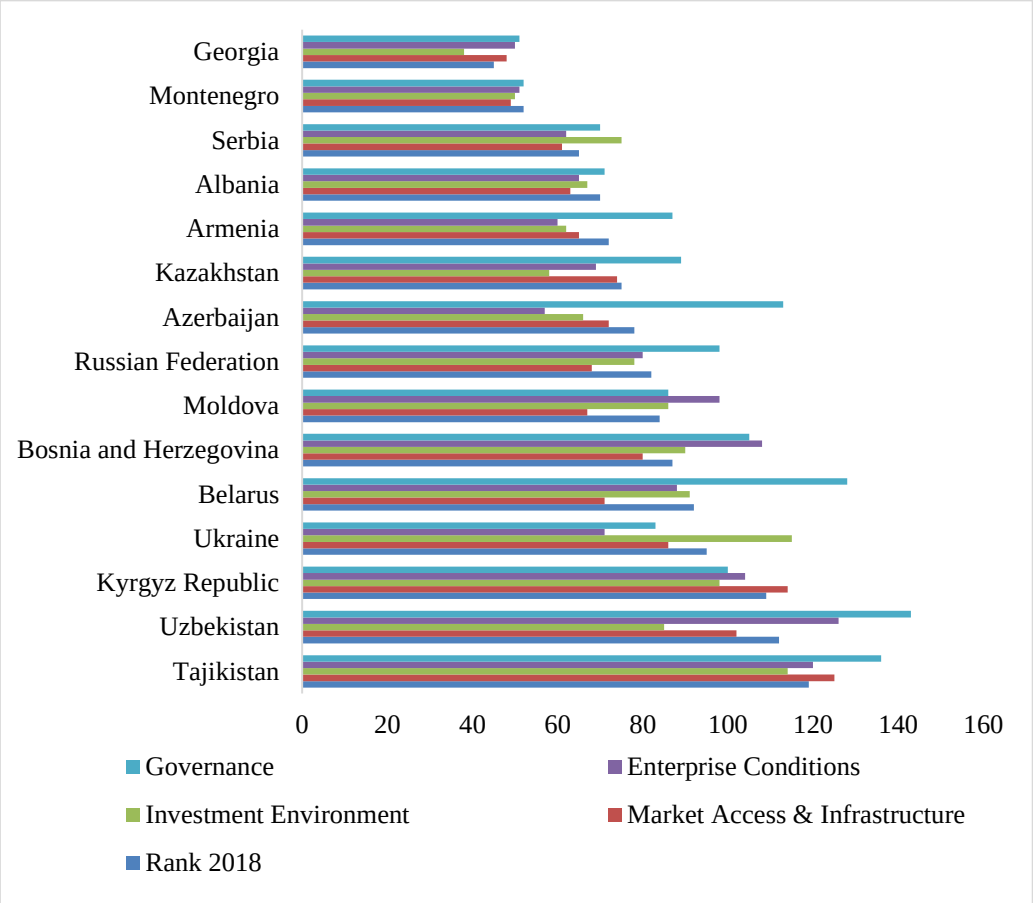

Figure 1 Global Index of Economic Openness in transition economies, 2018 [15]

Ukraine and Bosnia and Herzegovina are the weakest performers at 94th and 93rd places respectively. Albania has provided access to marketsby expanding and improving communications infrastructure.

Logistic Performance Index in transition economies is on medium level compared to the global indicator (2,866). The quality of logistics infrastructure for most transition economies remains at low level (Figure 2).

Over the past ten years, processes of reduction in the level of regulatory capital adequacy have been observed (Regulatory Capital to Risk-Weighted Assets), indicating a decrease in the volatility of financial markets and ensuring financial stability (Table 1). Such countries as: Albania, Bosnia and Herzegovina, Georgia, Kazakhstanare the exceptions, where the indicator of Regulatory Capital to Risk-Weighted Assets has increased or remained unchanged. In transition economies, the Regulatory Tier 1 Capital to Risk-Weighted Assets averaged 15,61%

for 2010-2018, which meets the requirements of the Basel I agreement and indicates an increased level of financial instability; it requires such countries to maintain the maximum level of this indicator. On average for transition economies, the indicator decreased by 2,2% except for Albania, Bosnia and Herzegovina, Georgia, Kazakhstan, Montenegro. Such tendencies indicate an increase in the level of financial stability in transition economies as a whole.

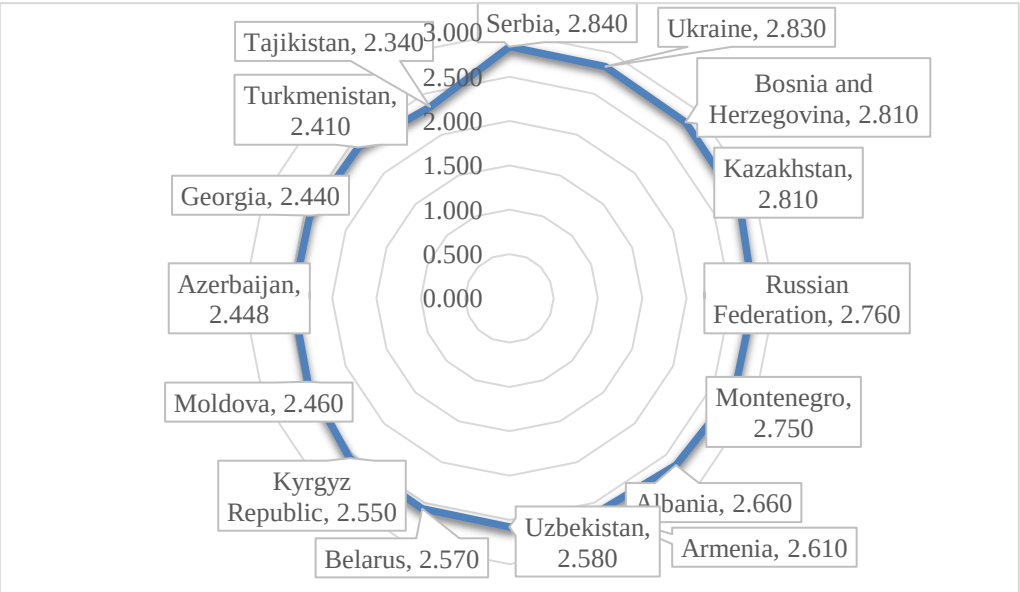

Figure 2 Logistic Performance Index in transition economies, 2018(1=low to 5=high) [16]

Table 1 Financial Stability Indicators in Transition Economies based on data of 2010-2018 [16]

Country	Regulatory Capital to Risk-Weighted Assets	Regulatory Tier 1 Capital to Risk-Weighted Assets	Non-performing Loans Net of Provisions to Capital	Non-performing Loans to Total Gross Loans	Return on Assets	Return on Equity
Albania	16,49	14,66	34,24	18,03	0,87	8,68
Armenia	17,87	15,55	14,43	5,16	1,53	8,65
Azerbaijan	-	-	-	-	-	-
Belarus	19,15	14,88	20,35	6,61	1,96	14,30
Bosnia and Herzegovina	16,48	14,43	25,41	12,25	0,63	4,38
Georgia	17,16	12,72	5,82	3,53	2,72	17,71
Kazakhstan	18,22	14,07	28,75	13,80	1,99	16,58
Kyrgyz Republic	25,65	20,93	8,69	7,77	2,11	10,93
Moldova	26,20	25,57	17,98	13,22	1,47	8,62
Montenegro	15,69	13,95	51,57	15,01	-0,59	-6,16
The Russian Federation	13,60	9,97	13,67	7,94	1,53	11,33
Serbia	-	-	-	-	-	-
Tajikistan	20,38	17,82	25,60	15,47	-1,58	-9,98
Turkmenistan	-	-	-	-	-	-
Ukraine	16,55	11,98	59,05	27,14	-2,64	-25,57
Uzbekistan	18,22	16,37	3,87	1,59	1,86	15,78

Country	Regulatory Capital to Risk-Weighted Assets	Regulatory Tier 1 Capital to Risk-Weighted Assets	Non-performing Loans Net of Provisions to Capital	Non-performing Loans to Total Gross Loans	Return on Assets	Return on Equity
Average, 2010-2018	**18,59**	**15,61**	**23,80**	**11,35**	**0,91**	**5,79**
Standart diviation	3,66	4,02	16,68	6,93	1,58	12,55
Minimum	13,60	9,97	3,87	1,59	-2,64	-25,57
Maximum	26,20	25,57	59,05	27,14	2,72	17,71

Non-performing Loans Net of Provisions to Capital declined by 8,5% for 2010-2018. Positive dynamics indicates an increase in the quality of assets of the financial sector in transition economies, in particular the banking sector. Non-performing Loans to Total Gross Loans remained practically at the same level (increase by 0,5%), averaging 11,35% in transition economies. Return on Assets and Return on Equity were 0,91% and 5,79% respectively; herewith, Return on Assets did not differ significantly within transitive economies, while Return on Equity within the country fluctuated significantly. Thus, in general, certain improvementshave been achieved concerning financial stability in transitional economies over the last ten years.

Negative dependence between the Global Index of Economic Openness and the Logistic Performance Index is observed in transition economies, which indicates a deterioration in the quality of the logistics infrastructure in the context of integration into international markets. It may be assumed that the absence of effective reforms in the context of liberalization and promoting openness of the economy adversely affects the logistics of transition economies. Globalization of transition economies also has a negative effect on the financial system's capital sufficiency level, causing financial instability (Table 2).

Table 2 The correlation matrix of IEO, LPI and Financial Stability Indicators in transition economies according to data of 2010-2018

	IEO	LPI	Regulatory Capital to Risk-Weighted Assets	Regulatory Tier 1 Capital to Risk-Weighted Assets	Non-performing Loans Net of Provisions to Capital	Non-performing Loans to Total Gross Loans	Return on Assets	Return on Equity
IEO	1,000	-	-	-	-	-	-	-
LPI	-0,263	1,000	-	-	-	-	-	-
Regulatory Capital to Risk-Weighted Assets	-0,517	0,407	1,000	-	-	-	-	-
Regulatory Tier 1 Capital to Risk-Weighted Assets	-0,512	0,354	0,941	1,000	-	-	-	-
Non-performing Loans Net of	0,481	-0,166	-0,327	-0,287	1,000	-	-	-

	IEO	**LPI**	**Regulatory Capital to Risk-Weighted Assets**	**Regulatory Tier 1 Capital to Risk-Weighted Assets**	**Non-performing Loans Net of Provisions to Capital**	**Non-performing Loans to Total Gross Loans**	**Return on Assets**	**Return on Equity**
Provisions to Capital								
Non-performing Loans to Total Gross Loans	0,347	0,039	-0,098	-0,083	0,891	1,000	-	-
Return on Assets	-0,179	-0,238	0,205	0,154	-0,806	-0,815	1,000	
Return on Equity	-0,182	-0,202	0,137	0,119	-0,798	-0,805	0,979	1,000

Source: calculated by the author.

Thus, increasing the openness of the transition economynegatively affects the country's financial sustainability. Herewith, globalization has a positive effect on such indicators as Non-performing Loans Net of Provisions to Capital and Non-performing Loans to Total Gross Loans.However, there is a negative link between globalization and Return on Assets and the Return on Equity of transition economies. Constructed fixed-effects models testify to the negative impact of globalization on such indicators of financial stability of transition economies: Regulatory Capital to Risk-Weighted Assets (Student's t-statistic = -2,180) and Regulatory Tier 1 Capital to Risk-Weighted Assets (Student's t-statistic =-2,151). This indicates an increase in prudential supervision over the quality of capital of financial institutions, liquidity and risks, the availability of sufficient information for central banks to assess the reliability of certain banks and to ensure control by supervisors over liquidity risk management systems. There is not very important positive link between globalization and Non-performing Loans Net of Provisions to Capital (Student's t-statistic = 1,978) (Table 3).

Table 3 Summary data of constructed models: dependent variable of high-technology exports (% of manufactured exports)

Independent variables	**Dependent variables**						
	Regulatory Capital to Risk-Weighted Assets	Regulatory Tier 1 Capital to Risk-Weighted Assets	Non-performing Loans Net of Provisions to	Non-performing Loans to Total Gross Loans	Return on Assets	Return on Equity	LPI
Model number	1.1	1.2	1.3	1.4	1.5	1.6	1.7
Const*	46.710	46.226	-95.418	-24.423	5.125	39.808	171.071
Student's t-statistic **	3.615	3.242	-1.581	-0.910	0.796	0.782	1.895
p-value	0.003	0.006	0.137	0.379	0.440	0.448	0.080
IEO	-10.690	-11.639	45.321	13.599	-1.602	-12.931	-33.682
Student's t-statistic **	-2.180	-2.151	1.978	1.336	-0.656	-0.669	-0.984

Independent variables	Dependent variables						
	Regulatory Capital to Risk-Weighted Assets	Regulatory Tier 1 Capital to Risk-Weighted Assets	Non-performing Loans Net of Provisions to	Non-performing Loans to Total Gross Loans	Return on Assets	Return on Equity	LPI
Conclusion on the significance of the coefficient	Significant at 5%	Significant at 5%	Significant at 5%	Non-significant	Non-significant	Non-significant	Non-significant
p-value	0.048	0.051	0.069	0.205	0.523	0.515	0.343
R Square	0.268	0.262	0.231	0.121	0.032	0.033	0.069
Conclusion on the level of explanatory ability of the model	Below average	Below average	Below average	Low	Low	Low	Low
F	4.753	4.628	3.914	1.784	0.431	0.447	0,967
F (critical) at 0,01; 2; 78	4.768	4.768	4.768	4.768	4.768	4.768	4.768
F (critical) at 0,05; 2; 78	3.064	3.064	3.064	3.064	3.064	3.064	3.064
Significance F	Significant at 5%	Significant at 5%	Significant at 5%	Non-significant	Non-significant	Non-significant	Non-significant
Conclusion on the adequacy of the model	Adequate at 5%	Adequate at 5%	Adequate at 5%	Non-adequate	Adequate at 1%	Adequate at 5%	Non-adequate
t critical (0,01; 78)	2.613	2.613	2.613	2.613	2.613	2.613	2.613
t critical (0,05; 78)	1.977	1.977	1.977	1.977	1.977	1.977	1.977
Number of observations	135	135	135	135	135	135	135

Source: calculated by the author.

* - coefficient (model parameter), constant term

** - Student's t-statistic to assess the significance of parameters, F - Fisher test, p-value - significance level of parameters (1%, 5%).

It has been revealed that globalization and openness of transition economies do not affect Non-performing Loans to Total Gross Loans, Return on Assets, Return on Equity, LPI. Therefore, this confirms the conclusion that obtaining the benefits of the economy openness are possible if the country is provided with financial stability by establishing the independence of regulators. The openness of transition economies leads togrowth of financial instability, the volatility of the financial system is also increased. As a result of the transformation of the financial sector of the country's transitional economy, the institutional environment is changing; it constitutes a certain set of institutions: rules, norms, procedures, etc., which can arise both spontaneously and consciously, and even import. Each institute can have a different influence (positive, neutral, negative) on the development of the financial sector; it has its basic attributes and scope of application. Concerning its genesis, it can be formal and informal [17]. The results of modeling indicate institutional changes in transition economies in the banking sector, which is reflected in an increase in the quality of assets. The structure of the banking sector remains unchanged, profitability indicators indicate that there are no positive transformations under the influence of globalization. Due to the fact that the logistics infrastructure of the transition economies is transformed through the development of

communications within the country, globalization has not affected its development in any way. Countries with emerging markets and undergoing convergence processes should more carefully manage the process of rapid deepening of financial markets; other countries with emerging markets should further develop their financial systems.

5. CONCLUSION

The conducted research makes it possible to draw a number of important conclusions. Countries with transition economies are at a medium level of integration in the global environmentin terms of openness of the economy. Access to international markets and infrastructure is one of the negative factors of integration, despite their steady improvement, which is enhanced by the low level of the investment environment.

Over the past ten years, transition economies have experienced a decrease in capital adequacy, which indicates a reduction in the volatility of financial markets and financial stability. In general, tendencies indicate an increase in the level of financial stability in transition economies, the qualityrunup of assets in the financial sector of transition economies, in particular, the banking sector. Over the past ten years, some progress has been made in provision financial stability in transition economies.

With an increase in the level of openness,transitional economies are faced with problems of reducing financial stability, which is manifested in a decrease of the capital adequacylevel of the financial sector. The level of financial instability increases. At the same time, globalization has a positive effect on the quality of financial assets of the financial sector in transition economies. These tendencies are driven by improved market access and infrastructure development. No significant link was found between globalization of the transition economies and financial sector assets and return on assets, logistics infrastructure.

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