



**OPPORTUNITIES FOR REGULATING FINANCIAL MARKETS IN  
DEVELOPING COUNTRIES: RESULTS OF A MULTIPLE FACTOR  
ANALYSIS**

**OPORTUNIDADES DE REGULAMENTAÇÃO DOS MERCADOS  
FINANCEIROS NOS PAÍSES EM DESENVOLVIMENTO:  
RESULTADOS DE UMA ANÁLISE DE MÚLTIPLOS FATORES**

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**ABSTRACT**

**Objective:** This study unveils the outcomes of a comprehensive multiple factor comparative analysis delving into the development and regulatory frameworks governing financial markets across five developing nations: Hong Kong, India, the United Arab Emirates, Russia, and Kazakhstan.

**Methods.:** Employing the index method for computation and analysis, countries were evaluated and ranked based on comprehensive indices for three distinct periods: 2014, 2017, and 2020.





**Results:** Through correlation and regression analyses, we discerned the intricate relationship between each country's economic development indicators and the evolving dynamics of their respective financial markets.

**Conclusions:** These findings have culminated in the formulation of practical management recommendations aimed at enhancing the regulatory efficacy of financial markets.

**Keywords:** Competitiveness rating of financial centers; Financial sector; Assessment of the financial sector stability; Dynamics of the national currency; Stock market capitalization; Average annual return on shares.

## RESUMO

**Objetivo.** Este estudo revela os resultados de uma análise comparativa abrangente de múltiplos fatores que investiga o desenvolvimento e as estruturas regulatórias que regem os mercados financeiros em cinco nações em desenvolvimento: Hong Kong, Índia, Emirados Árabes Unidos, Rússia e Cazaquistão.

**Métodos.** Empregando o método de índice para cálculo e análise, os países foram avaliados e classificados com base em índices abrangentes para três períodos distintos: 2014, 2017 e 2020.

**Resultados.** Por meio de análises de correlação e regressão, discernimos a intrincada relação entre os indicadores de desenvolvimento econômico de cada país e a dinâmica em evolução de seus respectivos mercados financeiros.

**Conclusões.** Essas descobertas culminaram na formulação de recomendações práticas de gerenciamento que visam aumentar a eficácia regulatória dos mercados financeiros.

**Palavras-chave:** Classificação de competitividade dos centros financeiros; Setor financeiro; Avaliação da estabilidade do setor financeiro; Dinâmica da moeda nacional; Capitalização do mercado de ações; Retorno médio anual das ações.

## 1 INTRODUCTION

The scholarly interest in assessing the development degree of financial markets emerged long ago and for good reason (Adesina et al., 2015; Nitsenko et al., 2017). Researchers studying long-term trends in economic evolution discovered a relationship between economic growth and the evolution of financial markets from 1930 to 1960 (Allen et al., 2018; Godil et al., 2021). The period between 1980 and 1990 witnessed a proliferation of theoretical models (Brei et al., 2018; Kamal et al., 2021; Lawless et al., 2015). These models considered not only the internal development of financial markets but also the endogenous processes of economic growth (Liu et al., 2023; Samargandi et al., 2015; Shaheen & Cohen, 2019).

By 2000, most researchers had reached a consensus that strengthening the financial structure is directly related to increasing the efficiency of economic processes and accelerating the country's economic growth. Some note a close connection





between the development of the financial system and economic growth, despite existing differences in views (Anser et al., 2024). Demirgüç-Kunt and Levine conducted a multidimensional comparative analysis and concluded that the development of the financial system, in terms of breadth and depth, mitigates costs associated with information gathering and processing, along with other transactional overheads. This, in turn, catalyzes additional capital inflows and exerts a favorable influence on overall economic development (Demirgüç-Kunt et al., 2020; Levine et al., 2016).

Financial markets not only combine the demand for capital with its supply but also enable the inclusion of small savings in the accumulation process, directly impacting the level of savings (Osadchy et al., 2024). The development of financial markets influences the selection of technologies (Vysotskaya et al., 2022), labour and material costs for intermediary operations, research and engineering development, innovative activity of entrepreneurs, and the rate of economic growth. By affording additional avenues for selecting investment projects, underpinned by effective oversight from financial markets, resources are allocated more efficiently, thereby fostering an environment conducive to accelerated enhancements in total factor productivity (Kuznetsova et al., 2020).

The analysis unveils a consistent and affirmative correlation between the advancement of the financial system and the openness of commodity markets within their respective countries. This correlation underscores the pivotal role of the financial system in curbing the sway of individual monopolistic entities while broadening the scope of competitive market dynamics. The importance of financial institutions as intermediaries in facilitating oversight and mitigating information asymmetries becomes apparent in this context (Serbina, 2023).

The examination of issues surrounding international disparities in financial market risks and their ramifications on economic growth warrants significant attention. In the late 1990s, a fresh wave of scholarly inquiries surfaced following seminal works by Shleifer, R. La Porta, F. Lopez-de-Silanes, and R. Vishny in 2012-2013. These studies delved into the intricate interplay between firms' financing structures and the degree of investor protection. Noteworthy contributions by M. Melecky and A. Podpiera (2020), S. Bartram, G. Brown and R. Stulz (2012) merit emphasis, as they offer comprehensive insights into various facets of national stock market volatility. These encompass the level of investor safeguarding, the evolution of the securities market,





and firms' allocations towards research and development initiatives (Bartram et al., 2012).

During the 2000s, scholars focusing on the economies of developing and transitioning nations began voicing skepticism regarding the role of financial markets (Garnov et al., 2024). They underscored the potential adverse impacts of financial system institutions and mechanisms on economic growth (Kirillova et al., 2023). Theoretical models positing that financial markets foster a more efficient resource allocation often diverge from reality. This discrepancy arises from phenomena such as fund withdrawals from corporations, expropriation of small shareholders and investors, and the prevalence of 'kleptocratic behavior' among senior company executives and officials (Eskerhanova et al., 2023). Some authors contend that financial systems which primarily attract resources and channel them to individuals with financial and political connections can erect barriers linked to corruption, impeding both economic growth and the realization of entrepreneurial endeavors (Fernández-Villaverde et al., 2020; Mazina et al., 2022).

In recent years, an increasing number of studies have delved into the evolution of financial markets concerning factors of uncertainty (Starovoitov et al., 2023). Empirical research substantiates that heightened uncertainty significantly exacerbates the negative repercussions of crisis scenarios. For instance, between 1981 and 2014, global financial uncertainty accounted for roughly 20% of the variance in global economic growth and one-seventh of the variation in global inflation (Kang et al., 2020). During the Great Recession, over a third of the economic downturn in the United States was attributed to uncertainty (Caggiano et al. 2017). According to Baker et al. (2020), uncertainty stemming from the pandemic played a pivotal role in contracting the US economy by approximately 50% in 2020.

Another consequential factor is 'economic policy uncertainty', which denotes the uncertainty among economic agents regarding the decisions to be made by the government and central bank, including those pertaining to budget deficits or refinancing rates. This uncertainty arises from authorities' desire to retain discretion in responding to non-standard situations necessitating urgent decisions, such as economic sanctions (Shugurov et al., 2023) or pandemics (Degtev et al., 2022; Zelinskaya & Takmasheva, 2023). Empirical research demonstrates that policy uncertainty exerts a detrimental impact on investment, production, labor, and financial markets. Consequently, an increase in the 'economic policy uncertainty' index by one





standard deviation augments the likelihood of a recession by 14% and prolongs its duration by 27%, all else being equal. In essence, uncertainty amplifies both the probability and duration of financial crises (Nguyen, 2022).

To explore the origins of economic uncertainty, scholars often analyze various sources, including political (Pourali et al., 2019) or geopolitical uncertainty (Caldara & Iacoviello, 2022), alongside financial uncertainty (pertaining to uncertainty about financial conditions within a country) and uncertainty regarding monetary or fiscal policies (Gurinovich et al., 2023). Husted, Rogers, and Sun's study (Husted et al., 2020) illustrates that their proposed indicator of monetary policy uncertainty amplifies bank borrowing costs and diminishes overall economic activity, with effects comparable in magnitude to those of conventional economic policies (Vilkov et al., 2023). The level of uncertainty in the economic processes of major countries directly influences oil prices (Bahmani-Oskooee et al., 2018). Concurrently, fluctuations in oil price uncertainty in the US, Europe, Russia, and China yield short-term effects, whereas an upsurge in economic policy uncertainty in China has enduring repercussions on oil price uncertainty (Galanov et al., 2023). This is comprehensible, given that global oil demand in recent decades has been substantially influenced by consumption dynamics in China. Conversely, escalating oil prices adversely impacts industrial production in oil-exporting nations, as well as the exchange rates of national currencies in emerging markets like Russia or Mexico (Smiech et al., 2021).

Thus, this study addresses the critical need for enhancing the stability of financial markets, which is essential for supporting all sectors of society.

## 2 METHODS

Various approaches and methodologies can be employed to analyze government regulation of financial markets, with quantitative analysis, assessment and analysis of aggregate indicators, calculation of indices, and comparative analysis being among the most prevalent methods worldwide. In our research, we systematically crafted a methodology to evaluate the influence of government regulation on the financial markets of five developing countries: Hong Kong, India, the United Arab Emirates, Russia, and Kazakhstan.





At the first stage, we calculated the composite index based on financial market indicators for five countries observed over a ten-year period from 2012 to 2021. The indicators we used were: the dynamics of the national currency in relation to the dollar; the ratio of stock market capitalization to GDP; the turnover ratio; the share of the 10 largest issuers in the total capitalization of the stock market; the growth rate of the main financial market indices which is of great interest to market participants ( in Russia, this is represented by the Moscow Exchange index (IMOEX), in Kazakhstan - by the KASE index, in Hong Kong - by the Hang Seng index (HSI), in India - by the Nifty 50 index (NIFTY), and in the United Arab Emirates - by the FTSE ADX General Index (FADGI)); the average annual return of shares of the 15 largest issuers paying dividends; the interbank lending rate; the ratio of public debt to gross domestic product; the Z-score of the banking system, indicating the probability of default in the country's banking system; and the volume of foreign direct investment inflows. All indicators were denominated in the respective national currencies and then converted into US dollars for uniform analysis. We selected three distinct periods from the collected data for indexation. The indicators were indexed using positive and negative dependence formulas. The positive dependence formula was applied when the indicator's growth impacted positively the area under assessment. The formula is as follows:

$$I_j^i = \frac{x_{ij} - x_{\min j}}{x_{\max j} - x_{\min j}} \quad (1)$$

where  $x_{ij}$  – value of the  $j$ -th indicator for the  $i$ -th country;

$x_{\min j}$  – minimum value of the  $j$ -th indicator among the countries;

$x_{\max j}$  – maximum value of the  $j$ -th indicator among the countries.

For indicators such as the dynamics of the national currency against the US dollar, the share of the 10 largest issuers in total stock market capitalization, the interbank lending rate, and the share of public debt in the country's GDP, we employed the opposite formula. In these instances, a positive effect was deemed to occur when the values of these indicators decreased.

$$I_j^i = \frac{x_{\max j} - x_{ij}}{x_{\max j} - x_{\min j}} \quad (2)$$





where  $x_{ij}$  – value of the j-th indicator for the i-th country;

$x_{\min j}$  – minimum value of the j-th indicator among the countries;

$x_{\max j}$  – maximum value of the j-th indicator among the countries.

Following the indexing of the data, the results were then multiplied by their respective weighting coefficients. The rationale behind utilizing weighting coefficients lies in the heterogeneity of the indicators, each carrying differing degrees of influence and significance. These weights were designated and organized based on input from experts in the consulting, auditing, and banking sectors (refer to Table 1). Importantly, the total sum of all weights equates to one, ensuring comprehensive coverage and balance in the evaluation process.

**Table 1.** Weights of the country's financial market development indicators

Dynamics of the national currency to the dollar	0.08	Average annual yield on shares of 15 largest issuers	0.04
Stock market capitalisation to GDP	0.13	Interbank lending rate	0.13
Turnover ratio	0.08	Public debt to GDP	0.11
Share of top 10 issuers in total market capitalisation	0.09	Z-score of the banking system	0.13
Growth rate of the main index	0.1	Foreign direct investment	0.11

Hence, the composite index for each country was computed by aggregating the individual indicators according to their respective weighting coefficients.

$$I_i = \sum_{j=1}^n (I_j^i * W_j) \tag{3}$$

where n – total number of indicators (10 in our case);

j –indicator number;

i –object number;

W – indicator weight.

In the second stage, correlation and regression analyses were conducted. Historical data encompassing stock market capitalization, trading volume on the stock market, dynamics of the national currency, fluctuations of the primary stock index,





alongside GDP dynamics and the interbank lending rate, were utilized as the indicators under investigation.

### 3 RESULTS

Based on the calculations derived from the initial stage of the described methodology, the indexed indicators results for the five countries by year are presented in Table 2.

**Table 2.** Indexed indicators for 2014, 2017 and 2020

Country Value, %	Russia			Kazakhstan			Hong Kong			India			UAE		
Year	2014	2017	2020	2014	2017	2020	2014	2017	2020	2014	2017	2020	2014	2017	2020
Dynamics of the national currency to the dollar	0.39	1.00	1.00	0.82	0.24	0.22	1.00	0.14	0.22	0.00	0.00	0.00	1.00	0.14	0.19
Stock market capitalisation to GDP	0.01	0.01	0.01	0.00	0.00	0.00	1.00	1.00	1.00	0.07	0.06	0.04	0.04	0.03	0.03
Turnover ratio	0.56	0.48	0.52	0.00	0.00	0.00	0.61	0.95	0.66	0.61	1.00	1.00	1.00	0.38	0.16
Share of top 10 issuers in total market capitalisation	0.37	0.38	0.38	0.05	0.00	0.00	0.89	0.81	0.80	1.00	1.00	1.00	0.00	0.19	0.17
Growth rate of the main value	0.00	0.80	1.00	0.06	1.00	0.00	0.21	0.00	0.25	0.10	0.00	0.23	1.00	0.09	0.06
Average annual yield on shares of 15 largest issuers	0.89	1.00	0.65	1.00	0.73	1.00	0.31	0.31	0.31	0.00	0.00	0.00	0.59	0.83	0.38
Interbank lending rate	0.02	0.00	0.68	0.17	0.02	0.00	1.00	1.00	1.00	0.00	0.33	0.71	0.94	0.87	0.98
Public debt to GDP	1.00	1.00	1.00	0.99	0.87	0.92	0.66	0.55	0.57	0.00	0.00	0.00	1.00	0.84	0.73
Z-score of the banking system	0.17	0.22	0.21	0.00	0.00	0.00	0.68	0.74	0.90	0.60	0.55	0.84	1.00	1.00	1.00
Foreign direct investment	0.35	1.00	1.00	1.00	0.24	0.22	0.00	0.14	0.22	0.83	0.00	0.00	0.62	0.14	0.19

Based on the data presented in the table, several observations can be made. In 2014, Russia exhibited generally moderate values across the indicators considered. However, its stock market capitalization, main index growth rate, and interbank lending







rate were relatively poorer compared to other countries in the study, despite a relatively high dividend yield and low levels of public debt. In Kazakhstan, the stock market appeared underdeveloped, characterized by low levels of market capitalization and turnover ratio. The dominance of the largest issuers was notable. Despite good conditions for market growth, such as foreign direct investment and low loan interest rates, the banking sector's activity was assessed at a low level. Hong Kong, being the financial hub of the Asian region, stood out with a notably high stock market capitalization relative to GDP. Its stock market boasted a diverse array of equally valued companies, indicating less reliance on specific entities. The banking sector demonstrated resilience, with lending rates remaining close to zero. Low public debt and a high z-score underscored the stability of the system. India's stock market emerged as a crucial component of the country's financial framework. It showcased the highest issuer diversification within the peer group and a high turnover ratio. The robustness of the banking sector and substantial foreign direct investment further bolstered India's financial market. The financial market of the United Arab Emirates was characterized by elevated profitability, turnover ratio, and banking sector stability. The stability of the banking sector was also evident. Notably, the dynamics of local currencies in Hong Kong and the UAE reflected their commitment to maintaining a tight peg to the US dollar.

In contrast to 2014, Russia experienced a substantial improvement in the dynamics of its national currency in 2017, outperforming the other countries in the study. Additionally, both Russia and Kazakhstan witnessed notably higher growth rates in their main stock indices during this period. Meanwhile, the United Arab Emirates emerged as the top recipient of foreign direct investment.

Upon calculating the Composite Index for 2020, several noteworthy changes emerged. Kazakhstan's average annual stock returns decreased relative to other countries, indicating a decline in performance. On the other hand, Russia's interbank lending rate showed improvement, while other indicators remained relatively stable across the board.

Taking into account the weighting coefficients outlined in the described methodology, we have derived composite indices for all objects of the study across the selected periods, as illustrated in Figure 1.

Positive trends are evident in countries like Russia and India. Hong Kong maintains its leading position and continues to excel, whereas Kazakhstan and the





United Arab Emirates fall behind their competitors in terms of growth rates. According to the analysis, by 2020, the countries were ranked as follows (from less developed to more developed): Kazakhstan, United Arab Emirates, India, Russia, and Hong Kong.

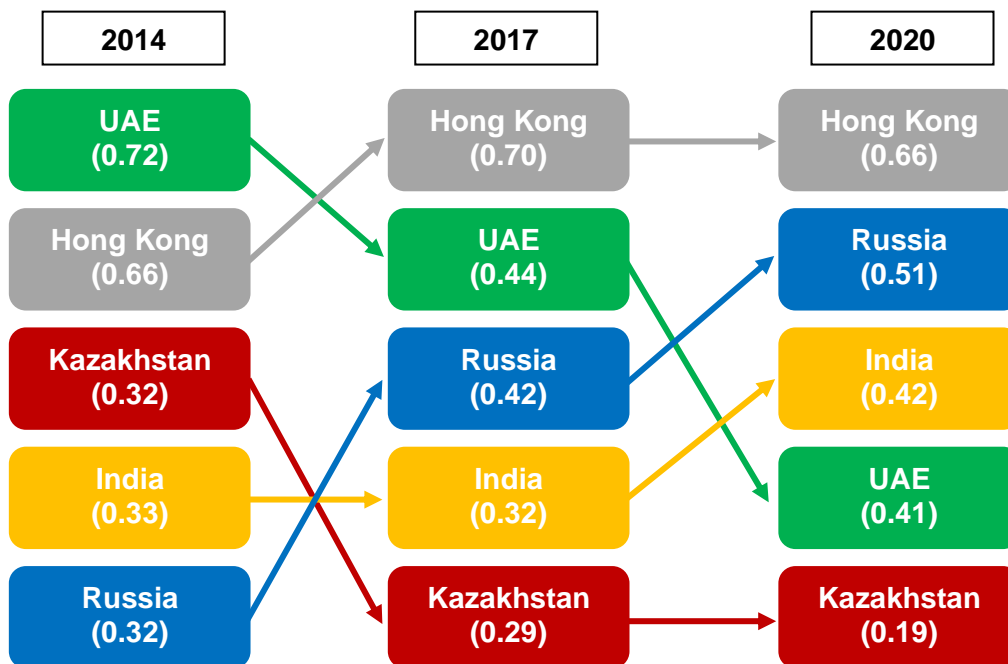


Figure 1. Composite indices of the five countries

Considering the aforementioned facts, it can be inferred that weaknesses within the Russian financial market encompass several aspects, including the low capitalization of the stock market, the dominance of a few major companies, the undervaluation of the banking sector, and the limited presence of foreign direct investment.

Transitioning to the second phase of analysis, our aim was to explore the correlation between economic indicators of territorial development and financial market dynamics. Specifically, we sought to ascertain potential correlations between financial market development and a country's GDP, as well as between interest rates and financial market development. This exploration utilized data from the five countries examined spanning from 2007 to 2022. Independent variables included financial market indicators such as stock market capitalization (X1), trading volume (X2), national currency dynamics (X3), and main stock index dynamics (X4), while GDP (Y1) and interbank lending rate (Y2) served as dependent variables. Correlation analysis integrated data obtained in the initial stage of the study alongside International





Monetary Fund data on global GDP (International Monetary Fund, n.d.). To ensure a comprehensive assessment, numerical indicators were converted into US dollars.

Table 3 displays the results of the correlation analysis specifically for the Russian Federation.

**Table 3.** Correlation coefficients between indicators of the Russian Federation

	X1	X2	X3	X4	Y1	Y2
X1	1	0.824	-0.648	0.527	0.108	-0.778
X2	0.824	1	-0.771	0.670	0.204	-0.793
X3	-0.504	-0.771	1	-0.426	-0.029	0.571
X4	0.527	0.670	-0.426	1	0.479	-0.594
Y1	0.108	0.204	-0.029	0.479	1	-0.156
Y2	-0.778	-0.793	0.571	-0.594	-0.156	1

Based on the data provided in the table, several significant correlations emerge. The highest correlation between the GDP of the Russian Federation and the dynamics of the main stock index is 0.479, indicating a weak positive relationship. Additionally, the strongest correlation with the interbank interest rate is observed with the indicators of stock market capitalization (-0.778) and trading volume on the stock market (-0.793), both indicating a high negative relationship. Furthermore, notable strong correlations exist among independent variables. For example, there is a high positive correlation between stock market capitalization and trading volume (0.824), as well as between trading volume on the stock market and the dynamics of the main stock index (0.670). Conversely, a high negative relationship is observed between the volume of trading on the stock market and the dynamics of the national currency (-0.771).

The results of the correlation analysis for Kazakhstan are presented in Table 4.

**Table 4.** Correlation coefficients between the indicators of Kazakhstan

	X1	X2	X3	X4	Y1	Y2
X1	1.000	-0.200	0.644	-0.446	-0.411	0.565
X2	-0.200	1.000	0.064	-0.403	0.427	0.035
X3	0.644	0.064	1.000	-0.588	0.406	0.929
X4	-0.446	-0.403	-0.588	1.000	-0.188	-0.526
Y1	-0.411	0.427	0.406	-0.188	1.000	0.355
Y2	0.565	0.035	0.929	-0.526	0.355	1.000

The table indicates that Kazakhstan's GDP exhibits weak correlations with other indicators. This circumstance may stem from the relatively underdeveloped state of the country's financial system, as Kazakhstan possesses the smallest share of the financial market among all entities considered, along with notably low trading volumes on the stock exchange. Notably, the highest correlation with the interbank interest rate





is observed with the indicator of the dynamics of the national currency (0.929), representing a very high positive relationship. The indicators demonstrated consistent growth throughout the review period, which is reflected in the existence of a relationship between them. Additionally, there exists a moderate relationship between the capitalization of the stock market and the dynamics of the national currency.

The results of the correlation analysis for Hong Kong are consolidated in Table 5.

**Table 5.** Correlation coefficients between Hong Kong indicators

	X1	X2	X3	X4	Y1	Y2
X1	1.000	0.442	0.129	0.402	0.912	0.199
X2	0.442	1.000	0.444	0.626	0.385	0.580
X3	0.129	0.444	1.000	0.497	0.223	0.760
X4	0.402	0.626	0.497	1.000	0.624	0.166
Y1	0.912	0.385	0.223	0.624	1.000	0.015
Y2	0.199	0.580	0.760	0.166	0.015	1.000

Based on the data in Table 5, several conclusions can be drawn: there is a very high correlation between stock market capitalization and GDP of Hong Kong (0.912). This strong correlation can be attributed to the exceptionally high share of the stock market in the economy of the special administrative region. Currently, the capitalization of the stock market is more than 15 times higher than the GDP of Hong Kong. There is a high correlation between the dynamics of the national currency and the interbank lending rate (0.76). This relationship is explained by their weak dynamics in the period under consideration, as the national currency is pegged to the U.S. dollar, and the rates are approximately zero. An average correlation is observed between independent capitalization indicators and trading volume (0.626). Moving on to the analysis of India, the results of the correlation analysis are presented in Table 6.

**Table 6.** Correlation coefficients between the indicators of India

	X1	X2	X3	X4	Y1	Y2
X1	1.000	0.837	0.714	0.343	0.765	-0.763
X2	0.837	1.000	0.442	0.530	0.424	-0.789
X3	0.714	0.442	1.000	0.635	0.965	-0.662
X4	0.343	0.530	0.635	1.000	0.770	-0.550
Y1	0.765	0.424	0.965	0.770	1.000	-0.595
Y2	-0.763	-0.789	-0.662	-0.550	-0.595	1.000

In India, a strikingly high correlation of 0.965 is observed between the dynamics of the national currency and the country's GDP. This strong correlation suggests a





significant reliance on exports within the economy. Consequently, a depreciation of the national currency translates into augmented earnings for export-oriented companies due to more favorable exchange rate differentials. Moreover, medium to high correlations are noted between the interbank lending rate and all other indicators, with the strongest connection observed with trading volume on the stock market (-0.789). Notably, during the analyzed period, India experienced a downward trend in interest rates, while other variables demonstrated an upward trajectory. Furthermore, a high correlation is evident in the capitalization of the stock market with two indicators: trading volume and the dynamics of the national currency in India.

Turning to the United Arab Emirates (UAE), where the national currency is strictly pegged to the US dollar, attempting to establish relationships with other indicators proves impractical. Consequently, the indicator of the national currency dynamics in the UAE was excluded from the correlation analysis, as depicted in Table 7.

**Table 7.** Correlation coefficients between United Arab Emirates indicators

	X1	X2	X4	Y1	Y2
X1	1.000	0.121	0.679	0.481	-0.257
X2	0.121	1.000	0.247	-0.225	-0.033
X4	0.679	0.247	1.000	0.471	-0.059
Y1	0.481	-0.225	0.471	1.000	-0.335
Y2	-0.257	-0.033	-0.059	-0.335	1.000

Thus, the following conclusions can be drawn: UAE GDP and interbank lending rate have weak relationships with independent variables. This suggests that the development of these indicators in the UAE is influenced by factors other than those analyzed in this study. An average correlation is observed between the capitalization of the stock market and the dynamics of the main stock index (0.679), indicating an upward trend in the data.

## 4 DISCUSSION

Various indices are employed to assess and analyze the state of financial markets globally, with one prominent example being the Global Financial Centres Index (GFCI) (Avia, 2023; Wikipedia, the free encyclopedia, n.d.). Established in 2007





by the British think tank Z/Yen Group in partnership with other organizations, the GFCI relies on a worldwide survey that incorporates insights from reports issued by esteemed international institutions. These include the World Bank, the International Monetary Fund, the Organisation for Economic Co-operation and Development, and specialized departments within the United Nations.

Methodologically, the GFCI employs a "factor evaluation model" that integrates data from international periodic studies, statistical sources, and insights obtained from expert interviews with professionals in finance, management, and business. With a total of 138 indicators, the GFCI categorizes them into five core competitiveness dimensions. This framework enables the computation of a competitiveness rating for financial centers of global importance.

To explore the most recent insights, let's analyze the latest indicators from the 2023 assessment, as outlined in Table 8.

**Table 8.** Position of the surveyed countries in the GFCI ranking in 2023

Country ranking in the GFCI rating	Financial center	Rating	Country	Ranking among the 5 research objects
4	Hong Kong	741	Hong Kong	1
21	Dubai	719	UAE	2
35	Abu Dhabi	702	UAE	2
60	Astana	675	Kazakhstan	3
77	New Delhi	657	India	4
109	Almaty	604	Kazakhstan	5
114	Moscow	598	Russia	6

Russia's ranking in the Global Financial Centres Index (GFCI) undoubtedly reflects a challenging position, largely influenced by various factors arising from the global environment in recent years. Geopolitical instability, heightened economic and political risks and the imposition of international sanctions against Russia have all significantly affected its standing. Given these circumstances, it becomes imperative to emphasize the measures of state regulation implemented in Russia to maintain financial market stability. A comparative analysis demonstrates that these measures largely correspond with actions taken by other nations to strengthen their domestic financial markets and enhance global competitiveness. These measures can be categorized into two groups:

The first category entails the establishment of a comprehensive legislative framework, including laws governing various aspects such as joint stock companies,





banks and banking activities, securities markets, investment funds, and insurance businesses; privatization; the creation of an adequate foreign exchange regulation regime or its liberalization (typical for most countries with emerging financial markets in the early 1990s); the establishment of a financial industry (banks, professional participants in the securities market, insurance companies, institution, etc.); and financial market infrastructure (exchanges, clearing institutions, accounting and settlement infrastructure institutions, etc.); creation of financial regulation and supervision bodies.

Within the second group, there is significant alignment among the measures implemented in various countries, including Russia. These steps largely correspond with recommendations from international financial institutions and are consistent with actions taken by countries with developed financial markets, such as India and others. However, despite this convergence in strategies, the outcomes for Russia diverge significantly from those of its competitors in the global capital market.

Contrary to expectations, Russia has not only failed to make strides in the development of its financial market but has also experienced a noticeable decline in its competitive position within the global financial landscape, as evidenced by numerous objective indicators.

In our view, three groups of reasons contribute to the differences between the Russian (and partially Kazakh) experience and the experiences of more successful financial sector development and reform programs in countries competing with Russia in the global financial market:

1. There are “ideological” constructs, often referred to as national culture or socio-cultural characteristics, which impede creating not only a favorable investment climate but also many other prerequisites for successful financial sector reform. These institutions contribute to a state where individuals are “stuck in a rut,” hindering Russia’s transition to a higher development path. In contemporary economy, the modernization of the financial sector is essential, leading to accelerated development and increased efficiency. Relying on large public and quasi-public investments does not necessarily foster the creation of an efficient and dynamic economy. The argument that the underdevelopment of the financial sector is due to a lack of money in the population is sometimes cited, but examples from countries like China and India refute this idea. In China, retail investors have become the main drivers of demand for





financial instruments, while in India, the per capita net asset value of mutual funds surpasses that of Russia by a significant margin.

2. The most crucial determinants of the success of financial development programs are factors directly linked to the quality of the state's performance of its functions, primarily in terms of strategic planning and management. In Hong Kong, India, and the United Arab Emirates, national financial market reform programs were executed unconditionally. While there might have been slight delays in implementation, the reforms were carried out, and the established objectives were attained. Subsequent stages may encounter lingering issues that could not be resolved during the initial reforms but are addressed in subsequent phases. In all countries that have successfully implemented financial sector reforms, the necessary mechanisms have been established to ensure such implementation, including:

- The presence of accountable individuals overseeing the implementation of the entire development program and its components, with responsibility primarily being political in nature. Failure to implement it effectively can lead to the automatic termination of a political career without the prospect of securing well-compensated positions in the private sector.

- A correct and balanced hierarchy of program objectives, meticulously aligned with the broader goals and objectives of government bodies.

- Involvement of all stakeholders in achieving the program objectives and their continual effective interaction, resulting in the formulation of well-rounded strategies and the adoption of optimal solutions.

- Effective assistance from all government bodies responsible for the implementation of the strategy or program being developed.

Thus, achieving a high level of government quality relies on a favorable socio-cultural environment and effective legal institutions, including security of property rights and an efficient judicial system. In India and Hong Kong, successful strategies for financial market development are implemented within a framework of favorable cultural attitudes, characterized by a focus on achieving results and a perception of zero results as unacceptable within these cultural norms. Additionally, there is a tendency to operate with long-term perspectives when developing and implementing strategies. Unfortunately, in Russia and Kazakhstan, where similar programs were not realized, there was a lack of a government body capable of clearly monitoring the







implementation of set goals and assessing the effectiveness of program implementation.

3. The final and most substantial group of differences between Russia and more successful countries pertains to fundamental strategic decisions and applied measures implemented within successfully executed programs for financial market development, but not adopted in Russia. Despite the recommendations from international financial organizations that are available to all national governments and financial regulators, not all jurisdictions implement the full scope of these recommendations. Moreover, many countries with developing financial markets tailor their measures to account for the specific characteristics of their financial market and national conditions conducive to development, a practice that has not been as actively pursued in Russia. Within this group of differences, it is necessary to indicate a set of measures which are considered as factors for successful reforms in the financial sector of other countries, but were not fully implemented in Russia:

- the existence of a number of effectively working institutions and mechanisms aimed at protecting investors (compensation funds, including those combined into a single compensation system; centers for protecting the rights of those investing in securities and investor protection programs);

- specialized courts and arbitrations;

- multi-level mechanisms to resolve disputes in the financial market, including the services of professional mediators in conflicts related to securities; coordination between mediation and arbitration, etc.;

- paying attention to the problems of financial stability, the stability of the financial market as a whole, its individual sectors and individual financial organizations (corporatization and listing of the largest banks that were previously non-public companies; privatization of state-owned banks; expanding access of foreign capital to the national banking system).

At the same time, India found an effective alternative to the privatization of banks in cases where the state wants to prevent the takeover of the banking system by foreign investors. Such an alternative is to improve the quality of corporate governance in commercial banks with “bad” debts, especially in banks with predominant state participation. Restructuring the banking system and transforming it into a three-tier national banking system has worked well in Hong Kong as a measure to increase the stability of the banking sector.





The successful reforms in the financial market show that institutional investors play a most important role in the growth of global competitiveness of the national financial market. There are two main areas of measures that ensured the strengthening of institutional investors in the national market:

- to increase diversity in the forms of collective investment institutions, including through the admission of foreign institutional investors, expanding the list of assets permitted for investment, etc.;

- to establish an effective infrastructure that ensures the functioning of collective investment scheme and their interaction with investors (setting up a system of services for routing orders and settlements for transactions with instruments of collective investment schemes, the introduction of an electronic digital signature, etc.).

## 5 CONCLUSIONS

The current trajectory for enhancing state regulation of the Russian financial market is intricately linked with the challenges confronting the Russian economy. During periods of transformation and adaptation to new economic landscapes, state oversight of the Russian financial sector inevitably confronts emerging issues, including the undercapitalization of the stock market, a significant share of state-owned enterprises dominating the economy, limited attractiveness within the banking sector, a lack of openness and transparency, and subdued tax incentives.

In 2022, amidst heightened geopolitical risks, Russia encountered unprecedented sanctions, severely constraining access to external capital markets. In response, the significance of internal financing sources, particularly citizens' savings, as catalysts for economic growth, has gained newfound prominence. Notably, there is a burgeoning demand among citizens for long-term savings instruments, prompting the financial system to develop a diverse array of options that cater to their needs for profitability, security, and inflation protection. To bolster the allure of long-term investments for various investor groups, continuous refinement of the individual investment account (IIA) mechanism is imperative. This involves augmenting the maximum tax deduction limit and broadening the spectrum of financial intermediaries and platforms facilitating IIA establishment, such as financial platforms and mutual fund





management firms. Consequently, citizens can utilize IIAs as pension savings vehicles.

Addressing the challenge of low stock market capitalization can be steered by fortifying financial market infrastructure. Despite strained relations with Western counterparts, Russia still maintains access to sizable international markets in China and India. Thus, the state must forge a seamless financial infrastructure to integrate foreign counterparties and brokerage firms.

Furthermore, it is essential to implement tools and preferential regimes for securities placement among companies operating in promising sectors, including high-tech industries, import substitution, non-resource exports, and infrastructure development. These tools may encompass government and institutional guarantees via the sovereign investment fund, initiatives supporting market entry for enterprises, and tax incentives for investors. To ensure transparency and accessibility of measures supporting market entry, precise criteria for companies contributing to Russian economic transformation must be established. This entails classifying companies and projects, mandating information disclosure, crafting guidelines for entities and investors, and tailoring governmental support measures.

Embracing modern technologies is pivotal for fortifying the resilience of the banking sector. Globally, financial regulators are increasingly leveraging digital technologies for market supervision, streamlining interactions between regulatory bodies and market participants. Utilizing Supervisory Technology (SupTech) to digitize data transmission and enhance regulatory-participant interactions ensures streamlined administrative processes, improves financial information reliability, and proactively identifies risks and suspicious transactions, safeguarding against fraud.

## REFERENCES

Adesina, J.B., Nwidobie, B.M., & Adesina, O.O. (2015). Capital structure and financial performance in Nigeria. *International Journal of Business and Social Research*, 5(2), 21-31.

Allen, F., Gu, X., & Kowalewski, O. (2018). Financial structure, economic growth and development. In T. Beck, & R. Levine (Eds.), *Handbook of finance and development* (pp. 31-62). Cheltenham; Northampton: Edward Elgar Publishing. <http://dx.doi.org/10.4337/9781785360510.00008>





Anser, M.K., Khan, M.A., Khan, M.A., Huizhen, W., & Haider, A. (2024). The effectiveness of emerging markets' legal structure in explaining financial development. *PloS One*, 19(4), e0299831. <https://dx.doi.org/10.1371/journal.pone.0299831>

Avia. (2023, September 29). *Rating of world financial centers 2023 - Global Financial Centers Index (GFCI)*. Vkontakte. Retrieved from [https://vk.com/wall-179507608\\_28327](https://vk.com/wall-179507608_28327)

Bahmani-Oskooee, M., Harvey, H., & Niroomand, F. (2018). On the impact of policy uncertainty on oil prices: An asymmetry analysis. *International Journal of Financial Studies*, 6(1), 12. <http://dx.doi.org/10.3390/ijfs6010012>

Baker, S., Bloom, N., Davis, D., & Terry, S. (2020). COVID-induced economic uncertainty. NBER Working Papers 26983. Cambridge: National Bureau of Economic Research.

Bartram, S., Brown, G., & Stulz, R. (2012). Why are U.S. stocks more volatile? *Journal of Finance*, 67(4), 1329-1370. <https://doi.org/10.1111/j.1540-6261.2012.01749.x>

Brei, M., Ferri, G., & Gambacorta, L. (2018). Financial structure and income inequality. BIS Working Papers No 756. Bank for International Settlements. <http://dx.doi.org/10.13140/RG.2.2.14133.32487>

Caggiano, G., Castelnuovo, E., & Pellegrino, G. (2017). Estimating the real effects of uncertainty shocks at the zero lower bound. *European Economic Review*, 100, 257-272.

Caldara, D., & Iacoviello, M. (2022). Measuring geopolitical risk. *American Economic Review*, 112(4), 1194-1225. <https://doi.org/10.1257/aer.20191823>

Degtev, G., Shelygov, A., Lizina, O., Shichkin, I., & Kochetkov, E. (2022). Impact of globalization factors on inflation risks during covid-19 pandemic. *Relacoes Internacionais no Mundo Atual*, 4(37), 775-795.

Demirgüç-Kunt, A., Pedraza, A., & Ruiz-Ortega, C. (2020). Banking sector performance during the COVID-19 crisis. World Bank Policy Research Working Paper 9363. The World Bank. <https://dx.doi.org/10.2139/ssrn.3689789>

Eskerkhanova, L.T., Beloglazova, L.B., Masyutina, N.M., Romanishina, T.S., & Turishcheva, T.B. (2023). Increasing the competitiveness of future economists for work in industry 4.0. *Perspektivy nauki i obrazovania – Perspectives of Science and Education*, 62(2), 158-173. <https://doi.org/10.32744/pse.2023.2.9>





Fernández-Villaverde, J., Guerrón-Quintana, P., & Kuester, K. (2020). Uncertainty shocks and business cycle research. *Review of Economic Dynamics*, 37(Suppl1), S118-S146. <https://doi.org/10.1016/j.red.2020.06.005>

Galanov, V., Chelukhina, N., Perepelitsa, D., Asyaeva, E., & Afanasyev, E. (2023). Changing the nature of stock risk over time the long-term aspect. *Relações Internacionais no Mundo Atual*, 1(39), e06274.

Garnov, A., Chelukhina, N., Myagkova, Yu., Asyaeva, E., & Kaderova, V. (2024). Achieving sustainable development and national interests in the context of geo-economic fragmentation. *Revista Jurídica*, 1(77), 503-513

Godil, D.I., Sharif, A., Ali, M.I., Ozturk, I., & Usman, R. (2021). The role of financial development, R&D expenditure, globalization and institutional quality in energy consumption in India: New evidence from the QARDL approach. *Journal of Environmental Management*, 285(11), 112208. <http://dx.doi.org/10.1016/j.jenvman.2021.112208>

Gurinovich, A., Barakina, E., & Lapina, M. (2023). Approaches to legal regulation of the use of digital currencies: risks or economic potential. *Revista Jurídica*, 1(73), 433-456.

Husted, L., Rogers, J., & Sun, B. (2020). Monetary policy uncertainty. *Journal of Monetary Economics*, 115, 20-36.

International Monetary Fund. (n.d.). *GDP, current prices*. Retrieved January 11, 2023 from <https://www.imf.org/external/datamapper/NGDPD@WEO/OEMDC/ADVEC/WEOWORLD>

Kamal, M., Usman, M., Jahanger, A., & Balsalobre-Lorente, D. (2021). Revisiting the role of fiscal policy, financial development, and foreign direct investment in reducing environmental pollution during globalization mode: Evidence from linear and nonlinear panel data approaches. *Energies*, 14(21), 6968. <https://doi.org/10.3390/en14216968>

Kang, W., Ratti, R., & Vespignani, J. (2020). Impact of global uncertainty on the global economy and large developed and developing economies. *Applied Economics*, 52(22), 2392-2407. <https://doi.org/10.1080/00036846.2019.1690629>

Kirillova, E., Otcheskiy, I., Ivanova, S., Verkhovod, A., Stepanova, D., Karlibaeva, R., & Sekerin, V. (2023). Developing methods for assessing the introduction of smart technologies into the socio-economic sphere within the framework of open innovation. *International Journal of Sustainable Development and Planning*, 18(3), 693-702. <https://doi.org/10.18280/ijstdp.180305>





Kuznetsova, I., Okagbue, H., Plisova, A., Noeva, E., Mikhailova, M., & Meshkova, G. (2020). The latest transition of manufacturing agricultural production as a result of a unique generation of human capital in new economic conditions. *Entrepreneurship and Sustainability Issues*, 8(1), 929-944. [https://doi.org/10.9770/jesi.2020.8.1\(62\)](https://doi.org/10.9770/jesi.2020.8.1(62))

Lawless, M., O'Connell, B., & O'Toole, C. (2015). Financial structure and diversification of European firms. *Applied Economics*, 47(23), 2379-2398. <http://dx.doi.org/10.1080/00036846.2015.1005829>

Levine, R., Lin, C., & Xie, W. (2016). Spare tire? Stock markets, banking crises, and economic recoveries. *Journal of Financial Economics*, 120(1), 81-101. <http://dx.doi.org/10.1016/j.jfineco.2015.05.009>

Liu, W., Shen, Y., & Razzaq, A. (2023). How renewable energy investment, environmental regulations, and financial development drive renewable energy transition: Evidence from G7 countries. *Renewable Energy*, 206, 1188-1197. <http://dx.doi.org/10.1016/j.renene.2023.02.017>

Mazina, A., Syzdykova, D., Myrzhykbayeva, A., Raikhanova, G., & Nurgaliyeva, A. (2022). Impact of green fiscal policy on investment efficiency of renewable energy enterprises in Kazakhstan. *International Journal of Energy Economics and Policy*, 12(5), 491-497. <http://dx.doi.org/10.32479/ijeeep.13437>

Melecky, M., & Podpiera, A. (2020). Institutional structures of financial sector supervision, their drivers and historical benchmarks. *Journal of Financial Stability*, 9(3), 428-444. <http://dx.doi.org/10.1016/j.jfs.2013.03.003>

Nguyen, T. (2022). Economic policy uncertainty: The probability and duration of economic recessions in major European Union countries. *Research in International Business and Finance*, 62(C), 101701. <http://dx.doi.org/10.1016/j.ribaf.2022.101701>

Nitsenko, V., Nyenno, I., Kryukova, I., Kalyna, T., & Plotnikova, M. (2017). Business model for a sea commercial port as a way to reach sustainable development goals. *Journal of Security & Sustainability Issues*, 7(1), 155-166.

Osadchy, E., Abdullayev, I., Bakhvalov, S., Klochko, E., & Tagibova, A. (2024). Jellyfish search algorithm based feature selection with optimal deep learning for predicting financial crises in the economy and society. *Fusion: Practice and Applications*, 14(2), 186-198. <https://doi.org/10.54216/FPA.140215>

Pourali, M.R., Largani, M.S., Ebrahimi, M., & Hasanpour, H. (2019). Corporate governance, environmental uncertainty, and profit fluctuations. *International Transaction Journal of Engineering, Management, & Applied Sciences & Technologies*, 10(10), 1-12. <http://doi.org/10.14456/ITJEMAST.2019.130>





Samargandi, N., Fidrmuc, J., & Ghosh, S. (2015). Is the relationship between financial development and economic growth monotonic? Evidence from a sample of middle-income countries. *World Development*, 68, 66-81. <http://dx.doi.org/10.1016/j.worlddev.2014.11.010>

Serbina, A.S. (2023). Economic instruments of the EU's political influence in Central Asia. *Konfliktologiya / nota bene*, 4, 1-22. <https://doi.org/10.7256/2454-0617.2023.4.68783>

Shaheen, S., & Cohen, A. (2019). Shared ride services in North America: Definitions, impacts, and the future of pooling. *Transport Reviews*, 39(4), 427-442. <http://dx.doi.org/10.1080/01441647.2018.1497728>

Shugurov, M.V., & Pechatnova, Y.V. (2023). The sanctions regimes of Germany and Great Britain in the field of international scientific cooperation with the participation of Russia: The political and legal nature and consequences. *Mezhdunarodnoye pravo*, 4, 1-35. <https://doi.org/10.25136/2644-5514.2023.4.44106>

Smiech, S., Papiez, M., Rubaszek, M., & Snarska, M. (2021). The role of oil price uncertainty shocks on oil-exporting countries. *Energy Economics*, 93, 105028. <https://doi.org/10.1016/j.eneco.2020.105028>

Starovoitov, V.G., Krupnov, Y.A., & Lapenkova, N.V. (2023). Investment activity in Russian regions under sanctions and restrictions. *Voprosy bezopasnosti*, 4, 1-14. <https://doi.org/10.25136/2409-7543.2023.4.44135>

Vilkov, I.N., Liman, I.A., & Kiselitsa, E.P. (2023). Loan debt burden of the population in constituent entities of the Russian Federation. *Relações Internacionais no Mundo Atual*, 1(39), 174-195.

Vysotskaya, N., Repina, M., Bogacheva, T., & Kryanev, V. (2022). The impact of the development of financial technologies on the legal regulation of the financial services sector. *Revista Juridica*, 2(69), 740-752.

Wikipedia, the free encyclopedia. (n.d.). *Global Financial Centres Index*. Retrieved from [https://en.wikipedia.org/wiki/Global\\_Financial\\_Centres\\_Index](https://en.wikipedia.org/wiki/Global_Financial_Centres_Index)

Zelinskaya, A., & Takmasheva, I. (2023). Mechanisms for effective interaction between authorities and business entities in the context of the covid-19 pandemic and post-covid economy. *Revista Jurídica*, 3(75), 652-666.

