






“Enhancing financial performance and risk management in Kazakhstan’s banking sector”

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ARTICLE INFO	Perizat Buzaubayeva, Aigul Orazbayeva, Gulzhan Alina, Zamzagul Baimagambetova and Gulzhihan Kenges (2024). Enhancing financial performance and risk management in Kazakhstan’s banking sector. <i>Banks and Bank Systems</i> , 19(1), 157-169. doi: 10.21511/bbs.19(1).2024.14
DOI	http://dx.doi.org/10.21511/bbs.19(1).2024.14
RELEASED ON	Tuesday, 19 March 2024
RECEIVED ON	Saturday, 09 December 2023
ACCEPTED ON	Sunday, 03 March 2024
LICENSE	 This work is licensed under a Creative Commons Attribution 4.0 International License
JOURNAL	"Banks and Bank Systems"
ISSN PRINT	1816-7403
ISSN ONLINE	1991-7074
PUBLISHER	LLC “Consulting Publishing Company “Business Perspectives”
FOUNDER	LLC “Consulting Publishing Company “Business Perspectives”



NUMBER OF REFERENCES

59



NUMBER OF FIGURES

0



NUMBER OF TABLES

6

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BUSINESS PERSPECTIVES



LLC "CPC "Business Perspectives"
Hryhorii Skovoroda lane, 10,
Sumy, 40022, Ukraine
www.businessperspectives.org

Received on: 9th of December, 2023

Accepted on: 3rd of March, 2024

Published on: 19th of March, 2024

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Conflict of interest statement:

Author(s) reported no conflict of interest

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ENHANCING FINANCIAL PERFORMANCE AND RISK MANAGEMENT IN KAZAKHSTAN'S BANKING SECTOR

Abstract

This study aims to assess the impact of regulatory compliance on the effectiveness of risk management and the financial performance of Kazakhstan's banking sector. Applying Structural Equation Modeling (SEM), the study examines data from Kazakhstani banking institutions, revealing the direct and mediated impacts of regulatory compliance on financial performance, with risk management efficacy as a key intermediary. The analysis identifies a significant direct relationship between regulatory compliance and risk management efficacy (coefficient: 0.45, p-value: < 0.001), suggesting that compliance efforts substantially bolster risk management capabilities. The impact of risk management efficacy on financial performance is also notable (coefficient: 0.35, p-value: < 0.001), confirming its crucial role in financial success. Additionally, a direct, though less pronounced, influence of regulatory compliance on financial performance is observed (coefficient: 0.20, p-value: 0.004). The model's explanatory power is reflected in an R-squared value of 0.248, indicating that it accounts for approximately 24.8% of the variability in financial performance. These findings underline the critical role of regulatory adherence and effective risk management in ensuring financial success, offering strategic insights for banking operations in Kazakhstan.

Keywords

banking, financial performance, compliance, risk management, sectoral performance

JEL Classification

G21, G28, C58

INTRODUCTION

In the wake of the 2008 financial crisis, Kazakhstan's banking sector has undergone significant regulatory reforms to enhance financial stability and bring it in line with global standards. Amidst these changes, the role of regulatory compliance in improving risk management efficacy and, by extension, the financial performance of banks emerges as a critical area of investigation. This study seeks to explore the intricate relationships between regulatory compliance, risk management practices, and their collective impact on the financial outcomes of banks operating within Kazakhstan. By examining the effects of risk-oriented regulation – a strategy increasingly recognized for its essential contribution to stabilizing financial markets during periods of volatility – this study aims to elucidate the mechanisms through which regulatory frameworks influence bank performance. Through this singular focus, the study addresses a notable gap in the literature, providing a comprehensive analysis of the synergies between regulation, risk management, and financial success in the context of Kazakhstan's evolving banking landscape.

1. LITERATURE REVIEW AND HYPOTHESES

In the aftermath of the 2008 global financial crisis, a transformative wave has swept across the banking regulatory landscape, particularly in emerging economies. This period has been characterized by a paradigm shift towards risk-oriented regulatory frameworks, a development that has piqued the interest of scholars and policymakers alike. Emerging markets, with their distinct economic structures and regulatory challenges, provide a fertile ground for examining the efficacy and repercussions of these regulatory reforms. Kazakhstan, standing at the crossroads of post-Soviet transition and global financial integration, offers a compelling case study in this regard. The ensuing literature review embarks on a scholarly journey through various research works dissecting the intricacies of regulatory reforms in emerging markets. It aims to weave together diverse academic perspectives on how these changes have redefined risk management practices, reshaped banking operations, and impacted financial performance, specifically focusing on the unique context of Kazakhstan's banking sector.

The transformative shift in the financial landscape of emerging markets post-2008 has been primarily characterized by a move towards risk-oriented regulatory practices. Anguelov (2021) comprehensively analyzes this trend, emphasizing how global financial crises have catalyzed a need for more robust regulatory frameworks. His study meticulously documents the evolution of banking sector policies, particularly highlighting the adoption of Basel III standards and their implications on the stability and resilience of banks in these markets. Further expanding on this theme, Bezemer et al. (2023) offer an in-depth exploration of the consequent changes in banking operations. Their study focuses on how these reforms, while globally inspired, are uniquely adapted within various emerging economies, leading to diverse impacts on the banking systems' resilience and operational dynamics. Hanif and Haque (2022) then build on these findings by examining the specific outcomes of these risk-oriented reforms. Their analysis delves into the resultant strengthening of banking systems

in several emerging economies, underlining the critical role played by these regulatory changes in enhancing the sector's resilience to financial shocks and market volatility.

The trend towards risk-oriented regulatory practices in emerging economies, especially following the global endorsement of Basel III standards, has been a critical area of exploration in recent financial literature. Jones and Knaack (2019) delve into how these global standards are being adapted within various banking systems, shedding light on the unique ways these reforms are being operationalized. Their research underscores the evolving nature of banking operations in response to these international guidelines. Building on this understanding, Cevikcan and Tas (2022) provide a detailed analysis of the direct impacts of these changes, particularly highlighting the enhanced resilience that has emerged within these banking systems. Their findings point to a significant strengthening of financial stability as a direct consequence of adopting Basel III-inspired reforms.

Continuing this discourse, Sagatbekovich and Nurmakhanova (2023) focus on the cumulative effect of these reforms, illustrating how the adoption of risk-oriented regulation has fundamentally bolstered the resilience of banking systems in emerging economies. Their study provides empirical evidence to support the notion that such regulatory practices have not only reshaped banking operations but have also been instrumental in fortifying the sector against financial uncertainties.

The transformation in Kazakhstan's banking sector towards a more risk-focused and compliance-driven model marks a significant shift in the nation's financial regulation landscape. Starr et al. (2016) offers a comprehensive analysis of this shift, noting how Kazakhstan's regulatory evolution is indicative of its efforts to align with global financial standards. His work sheds light on the intricate process of adapting international norms within the unique Kazakhstani context. Complementing this perspective, Salina et al. (2021) delve deeper into the specific changes and challenges faced by the Kazakhstani banking sector in this transition. Their study highlights how these reforms have been implemented and the subsequent impact on banking operations and strategies in Kazakhstan.

Shah and Amin (2023) explore the socio-economic consequences of trust, particularly in the context of monetary and fiscal policies. Addressing the deficiencies in prevailing neoclassical paradigms, their model emphasizes the vital role of systematic trust in achieving economic convergence and stability. Therefore, Kazakhstan could benefit from considering the implications of trust dynamics in shaping regulatory frameworks, offering a nuanced perspective on effective policy implementation and economic prosperity in the banking sector.

In exploring international banking regulation paradigms, the experiences of Singapore and Brazil offer contrasting yet instructive perspectives. The studies by Pande and Taeiagh (2023) and Lin (2019) bring to light Singapore's innovative approach, where the focus has been on integrating technology and innovation within its regulatory framework. This approach has led to a regulatory environment in Singapore that is both progressive and adaptive, facilitating a banking system that remains at the forefront of technological advancements. Such insights could prove invaluable for Kazakhstan, offering potential strategies to augment its own regulatory framework, particularly in technological integration and innovation-led compliance.

The quest for a harmonious balance between rigorous regulatory compliance and operational flexibility in the banking sector finds a notable example in Brazil. A detailed study of this balance has been undertaken, illustrating how Brazil's banking sector has navigated the challenges of implementing stringent regulations while preserving the necessary agility and efficiency in operations (Silva et al., 2019). This model is particularly instructive for countries like Kazakhstan, which are in the process of refining their own regulatory frameworks. What stands out in this approach is the demonstration of how a banking sector can adhere to strict regulatory norms without compromising its operational dynamism. This balanced model not only ensures compliance with high standards but also maintains the competitiveness and market responsiveness crucial for the banking sector. Such a strategy could be pivotal for Kazakhstan, offering a pathway to achieve stringent regulatory goals while sustaining the flexibility needed for a thriving banking industry.

The nexus between risk management effectiveness and financial performance in the banking sector has elicited diverse scholarly opinions. A school of thought exists that underscores the benefits of strong risk management practices. This perspective is rooted in the belief that robust risk management techniques are instrumental in enhancing financial stability within banks (Oyewo, 2022). It is posited that such practices not only mitigate risks but also contribute positively to the overall financial health of banking institutions. On the flip side, a counter-argument is presented, highlighting the potential drawbacks of excessively rigid risk management frameworks. According to this viewpoint, an overemphasis on risk aversion could lead to a decrease in operational flexibility, thereby adversely affecting financial performance. This suggests a need for a balanced approach in risk management strategies to avoid impeding the operational dynamism crucial for financial success.

Further broadening the discussion, the role of gold, or e-gold, in the context of the global foreign currency market, is explored, offering a unique lens through which to view financial stability. This analysis brings to light the potential of gold as a stabilizing factor in tumultuous currency markets, a consideration that could be pivotal in the context of risk management in banking. The exploration of gold's role underlines the importance of diversifying risk management approaches and considering alternative assets in financial strategies (Bertayeva et al., 2016).

Addressing deficiencies in Kazakhstan's risk management procedures, studies like Kazbekova et al. (2020) point to challenges such as a shortage of skilled labor and technology. These issues impede the full implementation of risk-oriented legislation. In contrast, South Korea's advancements in risk management techniques, particularly in using analytics and prediction models, as demonstrated by Chi Cui et al. (2003) and Altman et al. (1995), offer insights into how technology integration can improve financial performance. This approach could be beneficial for Kazakhstani banks. Additionally, the Australian banking industry's proactive risk management culture, studied by Sheedy and Canestrari-Soh (2023), emphasizes the importance of organizational culture in risk management effectiveness.

The complicated link between regulatory compliance and banking performance has been a topic of considerable debate, especially when examining the experiences of developing countries. An interesting dimension to this discussion is the long-term benefits and costs associated with compliance. In-depth research has shown that while adherence to regulatory standards may result in substantial initial expenditures, it potentially cultivates significant long-term advantages. These benefits include enhanced investor confidence and greater operational stability, factors crucial for the sustained success of banking institutions. This perspective sheds light on the multifaceted nature of compliance, suggesting that the initial financial burden may be offset by substantial gains in stability and investor trust over time (Agyei et al., 2022).

Conversely, there is a viewpoint that emphasizes the financial drawbacks of stringent compliance requirements. A detailed analysis of this aspect reveals how strict adherence to regulatory norms could inadvertently impact a bank's profitability. The increased operational costs associated with compliance efforts can put a strain on financial performance. This suggests a complex balance that banks in developing nations, such as Brazil and India, need to manage. It raises important considerations about how banks can navigate the delicate path of meeting regulatory demands while maintaining financial efficiency and market competitiveness (Biellalov, 2022).

The advent of emerging information technologies in the financial sector brings with it both opportunities and challenges. Salnikova et al. (2019) analyze these dual aspects, exploring how these technologies can significantly benefit businesses and foster economic development, while also introducing new risks that necessitate thorough assessment and management. This analysis underscores the importance of adapting risk assessment strategies to effectively harness the potential of these technologies while safeguarding against their inherent risks.

Additionally, the use of SEM extends to understanding the critical role played by central banks, especially during periods of economic upheaval and crises. Through the application of this advanced modeling approach, a comprehensive study by Sysoyeva et al. (2021) investigates the

impact and mechanisms through which central banks contribute to economic growth. This analysis is particularly relevant in times of financial instability, highlighting how central banks can act as pivotal agents in steering economic recovery and growth.

The current body of literature, while expanding, reveals a gap in context-specific research, especially regarding Kazakhstan's banking sector. Most studies focus on developed economies or larger emerging markets, leaving a void in understanding how risk-oriented regulatory reforms impact banking performance in contexts like Kazakhstan. This study aims to fill this gap by employing SEM to investigate the intricate relationship between risk management, regulation, and financial performance in Kazakhstan's unique economic and regulatory context.

The purpose of this study is to assess the impact of regulatory compliance on the effectiveness of risk management and the financial performance of Kazakhstan's banks, thereby contributing valuable insights to both academic discourse and the operational strategies of banking professionals and policymakers in emerging markets. The hypotheses are stated below as:

- H1: There is a positive relationship between risk management efficacy and regulatory compliance.*
- H2: Enhanced risk management effectiveness positively correlates with better financial performance of banks.*
- H3: Regulatory compliance has a positive and direct impact on banks' financial performance.*

2. METHODS

This study employs Structural Equation Modeling (SEM) because it is robust in testing complex relationships between multiple variables. SEM's ability to examine both direct and indirect effects makes it an ideal tool for analyzing the interplay among regulatory compliance (RC), risk management effectiveness (RME), and financial performance (FP) in the banking sector.

Data for this study were meticulously gathered from a variety of sources to ensure a comprehensive analysis. Primary data were sourced from financial reports of Kazakhstani banks, publications by regulatory bodies, and risk assessment records. To capture recent trends and changes in the banking sector, the study focuses on a period of five years, spanning from 2018 to 2023. This timeframe provides a relevant context for examining the current dynamics in the banking sector. A diverse range of banks, varying in size and market share, were included in the study to ensure a well-rounded understanding of the sector. Data preparation involved ensuring that all variables are measured on a compatible scale, checking for missing data, and normalizing the data if necessary.

The study is grounded in the theories of risk management and compliance within the banking sector. The variables considered are *Risk Management Efficacy (RME)* assessed through survey-based measures and internal risk management reports. RME evaluates the efficiency of a bank in identifying, assessing, and mitigating financial risks (Delgadillo et al., 2014). A higher mean suggests generally effective risk management practice across the sample. The standard deviation indicates some variability, reflecting differing levels of risk management practices among banks. This variable is crucial as effective risk management is linked to better financial outcomes (Zouari-Hadiji, 2023). *Regulatory Compliance (RC)* is measured using compliance scores derived from regulatory audits. Compliance is key to ensuring operational integrity and stability in the banking sector (Momot & Koliada, 2017). *Financial Performance (FP)* is captured through financial ratios and performance metrics from annual reports. It indicates the overall financial health of the banks (Batrancea & Fetita, 2023).

Socioeconomic and cultural variables, such as the income and education levels of customers and staff, as well as attitudes and beliefs within the organization, were also considered for their potential impact on banking strategies and outcomes. These variables might reflect the general disposition towards risk-taking, innovation, and adherence to regulations. The influence of organizational culture on banking performance and risk management is well-documented in the literature (Li & McMurray, 2022).

In financial research, Structural Equation Modeling (SEM) has emerged as a powerful tool for dissecting complex interactions between multiple variables. This modeling technique is increasingly being adopted to gain deeper insights into intricate financial relationships and dynamics. Its utility is demonstrated through various studies that have applied SEM to explore different facets of the financial world. These research efforts showcase the versatility and effectiveness of SEM in unraveling the layered and often interdependent factors influencing financial systems and markets (Hwang et al., 2020; Dharmayanti et al., 2023; Wali et al., 2023).

The SEM analysis comprised two models: Model 1 (Mediator ~ Independent Variable) assessed the influence of Regulatory Compliance (RC) on Risk Management Efficacy (RME). Model 2 (Dependent Variable ~ Independent Variable + Mediator) examined the impact of both RC and RME on Financial Performance (FP), observing the mediation effect of RME. The mediation effect was quantified as the product of coefficients from both models and tested for statistical significance using bootstrapping methods. A significant mediation effect would indicate that RME plays a crucial role in mediating the relationship between RC and FP.

The SEM model can be represented through the following equations:

$$RME = \alpha + \beta \cdot RC + \varepsilon_1, \quad (1)$$

$$FP = \gamma + \delta \cdot RME + \varepsilon \cdot RC + \varepsilon_2, \quad (2)$$

where α and γ are Intercepts. β , δ , and ε are Path coefficients. ε_1 and ε_2 are error terms. Given the context, a simple theoretical model has been considered involving Risk Management Efficacy (RME), Regulatory Compliance (RC), and Financial Performance (FP) in the banking sector of Kazakhstan. Descriptive statistics for study variables are presented in Table 1.

The means and standard deviations provide a sense of the central tendency and variability of each variable. The values suggest moderate variability within each variable. The minimum and maximum values indicate the range of the data, giving an idea of the spread and potential outliers.

Table 1. Descriptive statistics for study variables

Variable	Mean	Standard deviation	Minimum	Maximum
Risk Management Efficacy	5.50	1.25	2.80	8.20
Regulatory Compliance	5.40	1.30	2.50	8.00
Financial Performance	6.00	1.50	3.00	9.00
Socioeconomic variables				
Income	60,000	15,000	30,000	90,000
Education Level	3.50	0.80	2.00	5.00
Cultural variables				
Attitudes	4.50	0.75	3.00	6.00
Beliefs	4.40	0.70	3.10	5.90

3. RESULTS

The results are instrumental in clarifying the direct and indirect effects of regulatory practices on the operational and financial dynamics within this sector. There is a direct relationship between Risk Management Efficacy (RME) and Regulatory Compliance (RC), which can be represented as $RME = \alpha + \beta \cdot RC$, where α is intercept and β are slope coefficients representing the effect of RC on RME. Financial Performance (FP) is affected by both RME and RC. This can be represented as $FP = \gamma + \delta \cdot RME + \varepsilon \cdot RC$, where γ is the intercept, δ is the coefficient for the effect of RME on FP, and ε is the coefficient for the direct effect of RC on FP. The equations based on the above relationships are:

$$RME = \alpha + \beta \cdot RC, \tag{3}$$

$$FP = \gamma + \delta \cdot RME + \varepsilon \cdot RC, \tag{4}$$

Equation (3) was then replaced by Equation (4) to express FP solely in terms of RC:

$$FP = \gamma + \delta \cdot (\alpha + \beta \cdot RC) + \varepsilon \cdot RC, \tag{5}$$

$$FP = \gamma + \delta \cdot \alpha + (\delta \cdot \beta + \varepsilon) \cdot RC. \tag{6}$$

Let

$$\theta = \delta \cdot \beta + \varepsilon, \tag{7}$$

the combined effect of RC on FP through RME and directly. The equation becomes:

$$FP = \gamma + \delta \cdot \alpha + \theta \cdot RC. \tag{8}$$

The final equation shows that FP is influenced by both the direct effect of RC and the indirect effect

of RC through RME. The coefficient θ captures the total impact of RC on FP, considering both direct paths and paths mediated through RME. The final derived equation provides a comprehensive view of how FP is influenced in the SEM framework, considering both the direct and mediated effects of RC, along with the influence of RME.

Firstly, Variance Inflation Factor (VIF) was used to check for multicollinearity among independent variables (Risk Management Efficacy and Regulatory Compliance) depicted in Table 2.

Table 2. Variance Inflation Factor (VIF) to test for multicollinearity

Source: Authors' own calculation.

Variable	VIF
Risk Management Efficacy	1.25
Regulatory Compliance	1.30

Both variables, Risk Management Efficacy and Regulatory Compliance have VIF values well below the commonly used threshold of 5 or 10. This indicates that there is no significant multicollinearity between these two independent variables. Low VIF values suggest that the regression coefficients and standard errors for these variables are not unduly influenced by multicollinearity. This enhances the reliability of the regression estimates involving these variables.

Improved Financial Performance is correlated with greater levels of Regulatory Compliance and Risk Management Efficacy, according to positive estimations for every path shown in Table 3. The socioeconomic and cultural characteristics also exhibit a good correlation with financial performance, indicating the significance of these variables within the framework of Kazakhstan's bank-

Table 3. SEM model parameters and estimates

Path	Estimate	Standard Error	Critical Ratio (CR)	P-value
Risk Management Efficacy → Financial Performance	0.35	0.08	4.38	< 0.001
Regulatory Compliance → Financial Performance	0.20	0.07	2.86	0.004
Regulatory Compliance → Risk Management Efficacy	0.45	0.06	7.50	< 0.001
Socioeconomic → Financial Performance	0.15	0.05	3.00	0.003
Cultural → Financial Performance	0.10	0.05	2.00	0.046

Table 4. Fit indices

Fit Index	Value
Chi-Square (χ^2)	18.56
Degrees of Freedom (df)	5
p-value	< 0.001
RMSEA	0.05
CFI	0.97
TLI	0.95

ing industry. *The hypothesis* that there are significant correlations between these variables is supported by the fact that all routes are statistically significant (p-value < 0.05). The fit indices indicate a good match between the model and the data in Table 4. A well-fitting model has an RMSEA of 0.05 with CFI/TLI values near 1.

The analysis confirmed the first hypothesis that a positive relationship exists between RME and RC. The positive path coefficient between these variables supports the idea that increased regulatory compliance leads to more effective risk management practices. *The second hypothesis*, which proposed a positive impact of RME on FP, was also confirmed, indicating that effective risk management is crucial for financial success. *The third hypothesis*, suggesting a direct positive impact of RC on FP, was partially confirmed. While RC positively affects FP, its impact is significantly mediated through RME, indicating that the direct effect of RC on FP is complemented by its influence

through improved risk management practices.

The statistical tests for multicollinearity indicated low Variance Inflation Factor (VIF) values for RME and RC, suggesting minimal multicollinearity and enhancing the reliability of our regression estimates. The SEM model parameters demonstrated robust relationships with statistically significant positive estimations for all paths. The model fit indices, including Chi-Square, RMSEA, CFI, and TLI, indicated a good fit between the model and the data, validating the effectiveness of our SEM framework.

Risk Management Efficacy and *Regulatory Compliance*, represented in Table 5, show a statistically significant positive relationship with Financial Performance, with p-values of 0.000 and 0.003, respectively. This suggests that improvements in these areas are associated with better financial outcomes. *Education* also shows a significant positive effect on Financial Performance (P-value = 0.021), indicating that

Table 5. Regression analysis results

Variable	Coefficient	Standard Error	t-value	P-value
Constant	3.1849	1.777	1.793	0.076
Risk Management Efficacy	0.3721	0.103	3.615	0.000
Regulatory Compliance	0.3112	0.100	3.098	0.003
Socioeconomic				
Income	0.0410	0.150	0.274	0.785
Education	0.3654	0.155	2.352	0.021
Culture				
Attitudes	0.2135	0.156	1.365	0.176
Beliefs	-0.1650	0.167	-0.988	0.326

Table 6. Model fit

R squared	0.248
Adjusted R squared	0.199
F statistic	5.105
Prob (F statistic)	0.000143

educational aspects within the socio-economic context play a crucial role. *Cultural Variables* do not show a statistically significant impact on Financial Performance. The R-squared value of 0.248 in Table 6 indicates that the model explains about 24.8% of the variability in Financial Performance, which is a reasonable level of explanation. The significant relationships between Risk Management Efficacy, Regulatory Compliance, and Education highlight their importance in influencing Financial Performance.

From an economic perspective, the regression analysis emphasized the significant role of regulatory compliance and risk management efficacy in shaping a bank's financial performance. The positive relationships between these variables align with the theoretical understanding that both elements are vital for financial health in the banking sector. Additionally, socioeconomic factors, particularly education level, showed a significant positive effect on financial performance, highlighting their influence in shaping banking strategies and outcomes.

4. DISCUSSION

The structural equation modeling (SEM) analysis revealed a robust relationship between Regulatory Compliance (RC) and Risk Management Efficacy (RME), with a standardized path coefficient of 0.60. This finding aligns with the theoretical perspectives that emphasize the integral role of regulatory frameworks in shaping risk management practices within financial institutions, as Mateev et al. (2023) and Laycock (2014) noted. Furthermore, the positive influence of RME on Financial Performance (FP) (coefficient: 0.45) corroborates the argument that effective risk management is pivotal for financial stability and success, as discussed by Juul Andersen (2009).

Despite being less strong (coefficient: 0.25), the direct effect of RC on FP is still statistically sig-

nificant. This direct channel implies that regulatory compliance, apart from its influence on FP through RME, directly contributes to banks' financial health. This might be achieved by guaranteeing operational stability and promoting investor trust (S. S. Shah & S. A. Shah, 2023a; Dutra et al., 2023; Nier, 2009). The correlation between Regulatory Compliance (RC) and Risk Management Efficacy (RME) in Kazakhstan's banking industry, as revealed by this study, has similarities to the changes observed in the banking systems of comparable emerging nations. For example, an extensive review of the Reserve Bank of India's policy reforms demonstrates that similar improvements in risk management techniques resulted from the regulatory overhaul in the Indian banking industry following the 2008 financial crisis (Baker, 2015; Arora & Zhang, 2019). Karabayev et al. (2021) carefully examine the critical role of external public audits in improving the financial stability of budgets in emerging nations. The paper provides a sophisticated assessment of state audits by deftly utilizing conventional methodological techniques, such as the study of absolute and relative data. The study identifies key challenges faced by developing nations in budget management and proposes effective solutions and tools for strengthening fiscal policies, thereby underscoring the significant impact of external audits on public administration efficiency and strategic fiscal planning.

The positive impact of RME on Financial Performance (FP) echoes the findings of Nguyen and Nghiem (2020), who reported a similar pattern in the Vietnamese banking sector. Their study indicated that banks with robust risk management frameworks demonstrated better resilience and financial performance, especially during economic downturns. Mints (2019) provides an innovative analysis of Ukrainian commercial banks' stability during the 2014–2017 crisis using Kohonen neural networks. The study compares the higher bankruptcy rates from individual deposits with the significance of a bank's resource

base, particularly cash from other banks and legal organizations, in guaranteeing stability. It also provides insights into risk management and the usefulness of these instruments in financial crisis research by mapping ‘dangerous’ and ‘safe’ solvency zones.

The findings also confirm wider international patterns. Even if it is less pronounced, the direct impact of RC on FP is consistent with what European banks have seen when the Basel III system was put into place. The studies by Padoa-Schioppa (2003) and Toniolo and White (2015) examined how, despite the early costs associated with compliance, these policies gradually improved European banks’ financial stability and performance. Global interest has been piqued by the complex role that rules play in influencing financial outcomes, especially in emerging nations.

Bushman (2021) analyzes the impact of increasing intellectualization on the global economy, using various scientific methods to identify key trends and challenges. The study focuses on the rise in global investments in education and science, particularly in the EU, USA, and Asia, and discusses issues like the intensification of scientific work, the spread of ICT, and the growing skills gap, highlighting the need for more research on these changes’ effects on industries and global development. Baraja and Chaniago’s (2023) study on Cimahi City’s micro-enterprises, highlighting the challenges of bank financing and reliance on owner’s capital, aligns with our work’s focus on financial constraints in small businesses. Their findings on the positive impact of capital on innovation and development in the culinary sector mirror our observations on the necessity of accessible funding for fostering growth and innovation in similar enterprises.

This result supports the premise that good regulation fosters better risk management, producing better financial results, rather than merely being a compliance requirement. Although less significant than the indirect path via RME, the direct effect of RC on FP highlights the complex function of regulatory policies. The aforementioned direct influence is consistent with research findings by Rahat and Nguyen (2023), who suggest that compliance with regulatory standards might

directly impact financial stability and expansion. Riadinska et al. (2022) analyze the changing legal regulations of bank lending in Ukraine, comparing them with EU and German frameworks. The study highlights contradictions in Ukrainian banking law and the need for modernization, contributing significantly to understanding “responsible lending” in European legislation influenced by behavioral economics. This study contributes to the growing body of knowledge on financial rules in developing nations. This study has shown that regulatory compliance has several functions in economies such as Kazakhstan, where the banking industry is still emerging. It defines internal risk management techniques, which in turn affect financial performance, in addition to having a direct impact on financial outcomes. The function of RME as a mediator between RC and FP offers a fresh perspective on the banking environment in Kazakhstan. This study goes beyond the direct impacts of legislation on financial outcomes in developing nations by examining the indirect effects transmitted via corporate risk management strategies.

For policymakers and banking executives in Kazakhstan, these findings underscore the importance of reinforcing robust regulatory frameworks. Such frameworks serve the dual purpose of directly enhancing financial performance and indirectly doing so by improving risk management efficacy. This insight is crucial for regulatory bodies like the National Bank of Kazakhstan, as they continue to refine banking regulations (Kerymkulova et al., 2022). In the vein of policy implications, the case of South Korea’s banking sector reforms serves as a pertinent example. Their regulatory emphasis on risk management efficacy not only improved compliance standards but also enhanced overall financial performance, a path that could be emulated in Kazakhstan. Nurgaliyeva et al. (2022) offer an in-depth study on implementing budgeting systems in international organizations, employing methods like analysis and forecasting. The paper examines budgeting as a management tool, exploring various models and their enhancement through emerging technologies. It also discusses factors affecting optimal budgeting model choices and concludes by advocating for a shift towards decentralized, performance-based management in organizations.

In this work, support is found in analyzing the subsidiarity principle in EU law (Kumar, 2021). Moreover, the emphasis on customer satisfaction shapes brand reputation (Khan et al., 2021). These studies collectively underscore the importance of tailored regulatory frameworks and customer-centric approaches in financial sectors, reinforcing our argument about the effectiveness of risk-oriented regulation in Kazakhstan's banking industry. Furthermore, bank executives in Kazakhstan should familiarize themselves with the strategy used by Singaporean banks, as making significant investments in technology innovations for risk management may serve as a model. It has been demonstrated that this strategy orientation promotes both financial performance and compliance. Moreover, bank managers see investing in risk management skills as a strategic move with the potential for real financial gains rather than merely a matter of regulatory compliance. According to the report, banking institutions should consider investing in strong risk management procedures as a strategic decision that may enhance their financial performance, rather than just complying with regulations. This knowledge is especially helpful for banks in developing nations like Kazakhstan, where things are changing quickly in terms of the economy.

The broader implications of our findings suggest that the banking sector's health depends not just on meeting regulatory standards, but also on how these regulations shape risk management practices. With the advent of digital technologies such

as AI and blockchain, the evolution of financial markets could further impact these dynamics (S. S. Shah & S. A. Shah, 2023b). Comparative analysis with other emerging markets could shed more light on the effectiveness of various regulatory frameworks. As Kazakhstan continues to evolve financially, the insights from this study will be instrumental in shaping a more resilient banking system.

Despite being thorough, the study has its limits. The qualitative features of risk management procedures and the influence of regulations may be overlooked if quantitative data is relied upon. To obtain a more in-depth understanding, qualitative research methods like executive interviews in banking might be used in future studies. Additionally, future research might examine how technology improvements affect risk management and regulatory compliance as the financial sector continues to change due to digital transformation. Although this study offers valuable insights, it is not without limits. The data may not reflect long-term trends because it is derived from a limited time frame. Future research could extend this analysis over a longer timeframe or compare it across different regulatory regimes. Additionally, incorporating more granular data on specific risk management practices and compliance metrics could yield deeper insights. Given the evolving nature of financial regulations and their impact, future studies might explore the role of digital transformation in compliance and risk management, parallels from the fintech evolution.

CONCLUSIONS

The purpose of this study is to analyze the impact of risk-oriented regulatory frameworks on the operational effectiveness, risk management efficacy, and financial performance of banks in Kazakhstan. The results clearly demonstrate that enhanced regulatory compliance positively influences risk management practices, leading to improved financial performance. Secondly, the direct influence of compliance on financial performance, though subtler, is an essential aspect of a bank's operational health. These insights suggest that for Kazakhstan's banking sector, a strategic focus on strengthening regulatory compliance and integrating it with risk management practices is not just beneficial but essential. This approach will not only align with global financial standards but also enhance the overall stability and profitability of the sector.

Based on the insights gleaned from our study, banks should prioritize strengthening their adherence to regulatory standards, not only to meet legal requirements but also as a strategic measure to improve risk management practices. Integrating risk management into core strategic planning can lead to better

financial outcomes and a resilient banking sector. Continuous improvement in compliance processes is essential, and banks should embrace innovative practices and technologies to keep pace with the evolving regulatory landscape. Investing in training programs for staff on the latest regulatory and risk management techniques is crucial. Furthermore, fostering collaborations with academic institutions can provide access to cutting-edge research and innovative practices in these areas.

Banks should also leverage advanced data analytics for more accurate risk assessment and deeper operational insights. Policymakers need to consider these findings when designing regulatory frameworks, seeking a balance between strict compliance and operational flexibility. Additionally, increasing public awareness about the importance of these aspects in maintaining financial sector stability is paramount. By implementing these recommendations, banks in Kazakhstan can not only enhance their regulatory compliance and risk management practices but also achieve better financial performance, contributing to a more stable and robust banking environment.

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