



A study on the financial performance of banking industry in Afghanistan: A Comparative Analysis through CAMELS rating system

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ABSTRACT: This study aims to examine the financial performance of the banking sector in Afghanistan using the CAMELS rating system, a widely recognized framework for evaluating the financial health of banks between 2015-2020. The CAMELS system considers six key components: Capital Adequacy, Asset Quality, Management Quality, Earnings, Liquidity, and Sensitivity to Market Risk. By applying regression analysis, the research investigates how these components impact the overall performance of Afghan banks. The findings suggest that capital adequacy is a crucial factor influencing the profitability of banks in Afghanistan, and have the significant relationship, while asset quality, liquidity, and management practices don't have significant relationship with the profitability. The study highlights the importance of improving capital buffers, along with effective risk management strategies, to enhance the financial stability and resilience of the banking sector in Afghanistan. Furthermore, the research provides recommendations for policymakers and banking institutions to foster a more robust financial system.

KEYWORDS: Bank, Financial performance, CAMELS system, Return on Assets, Financial ratios, Afghanistan

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I. INTRODUCTION

Banks play a significant role in the economic growth and development of a country (Mohammady, 2019). The banking sector, by mobilizing and directing small resources into productive activities, contributes substantially to increasing investments and gross domestic product (GDP) (Boateng, 2019). Undoubtedly, banks can be considered the engine of economic growth, as their progress fosters economic development and facilitates the optimal use of financial resources. Despite the fact that banks support economic growth and development, it should be acknowledged that the banking sector occasionally faces economic crises, leading to substantial negative repercussions and imposing unpleasant consequences on a nation's economy (Kumari, 2017). One example of this is the 2007-2008 U.S. banking crisis, which was triggered by excessive lending in the mortgage sector and culminated in the collapse of major banks and the eventual breakdown of the financial system (Hassan & Kalhoefer, 2011). This reality highlights that while the banking sector can drive economic growth and development, it can also-in the absence of proper management- cause significant financial and monetary failures at the national level (Litterman, 2003).

Considering the above, it is essential to recognize that the banking sector, being both a major contributor to economic growth and a potential source of financial crises if mismanaged, requires careful attention. Ensuring the proper functioning of the banking system without any disruptions is crucial. To prevent banking system malfunctions, various supervisory and inspection systems have been developed to monitor the activities of banks and avoid their failure (Sarker, 2005).

One of the most important supervisory systems that can monitor the banking system and provide a comprehensive assessment of its performance is the CAMELS system. First introduced in the United States in the 1970s, the CAMELS system is widely used in the country's financial sector. The term CAMELS is an acronym derived from the first letters of five key factors: C represents Capital Adequacy, A stands for Asset Quality, M denotes Management Quality, E refers to Earnings, and L stands for Liquidity. The final S, which was added in 1979, represents Sensitivity to Market Risk (Adeusi et al., 2014). By assessing these factors and analyzing their ratios, the financial health and activities of a banking system can be evaluated comprehensively

and continuously. This ensures that any shortcomings or weaknesses in a bank's operations are identified, and timely and appropriate measures are taken to prevent failures and manage the bank's financial activities effectively (Farehat, 2009). Banks, being profit-oriented enterprises that consist of assets, personal capital, and debts, can achieve a strong financial position in the banking sector through sound management. However, if their operations deviate from banking laws, their financial standing will weaken, and their inevitable fate will be failure and bankruptcy. Given these facts, a bank's financial position and performance can be understood by analyzing the financial statements it prepares during each financial period. The CAMELS system, which also analyzes a bank's activities and financial health by using financial ratios extracted from its financial statements, serves as a useful tool for evaluating the soundness of banks (Jabbari & Walazagard, 2013).

Although Afghanistan has had a banking system for nearly a century, it has experienced many ups and downs throughout its history. The foundation of Afghanistan's banking system was laid with the establishment of the first bank, Bank-e-Milli Afghan, in 1939, and gradually developed with the emergence of numerous public and private banks. However, due to poor management, lack of sufficient personnel with expertise in banking, and decades of war, the banking system, despite its continuous growth until 1991, regressed and deteriorated significantly (Mohammady, 2019). Nevertheless, after the end of political turmoil in Afghanistan, many private, public, and foreign banks resumed operations, and they continue to function to this day. Nevertheless, concerns remain about the extent to which the activities of Afghan banks are satisfactory and their financial standing. This has been a pressing question raised by various stakeholders in Afghanistan's banking sector, including foreign partners. The Central Bank of Afghanistan also monitors and audits banks to ensure the legitimacy and soundness of their operations. This has led to reforms, such as in the early 2000s, when several banks that lacked sufficient capital and assets to conduct sound operations, which would have otherwise harmed the national economy, were closed down (Da Afghanistan bank, 2018).

Although the Central Bank of Afghanistan continuously supervises the liquidity, assets, debts, and capital of banks to ensure their financial health, it has been observed that Afghanistan's current supervisory systems are insufficient to guarantee the soundness and safety of the country's banking activities. A clear example of this shortfall is the collapse of Kabul Bank in 2009, despite the Central Bank's comprehensive supervision. The bank lost its liquidity, depositors' savings were squandered, and a major scandal in Afghanistan's banking system ensued. To prevent the recurrence of such undesirable outcomes, it is imperative that the Central Bank adopts a modern, effective supervisory system tailored to both national and international requirements to avoid further scandals in Afghanistan's financial and banking systems (Mohammady, 2019).

Given the above realities and considering that no research has yet utilized the CAMELS system to assess the financial performance of Afghanistan's banking sector, there is a pressing need for such a study. This research, applying the CAMELS system to 9 prominent private, public, and foreign banks in Afghanistan from 2015 to 2020, aims to determine the financial standing and performance of these banks, and to rank them accordingly. Such a study is of great importance and will undoubtedly provide policymakers in the banking sector, particularly the Central Bank of Afghanistan, with a valuable tool for comprehensive monitoring of the banking system. Moreover, it will assist Afghanistan's banks in assessing their performance and striving to improve their financial health. The author hopes that this research will contribute modestly to addressing critical issues in Afghanistan and open a gateway for further studies on banking performance assessment using the CAMELS system by potential researchers.

II. LITERATURE REVIEW

The CAMELS rating system, introduced by U.S. regulators, has become a globally recognized tool for assessing bank performance. The acronym CAMELS represents six critical areas: Capital Adequacy, Asset Quality, Management Quality, Earnings, Liquidity, and Sensitivity to Market Risk. Developed by the Federal Reserve and other regulatory bodies, the CAMELS framework evaluates banks' stability and risk management capabilities (Baral, 2005; Prasad & Ravindra, 2012). Over time, it has been widely adopted and adapted to various regional contexts, reflecting its adaptability to diverse economic environments (Adeusi et al., 2014).

In India, the CAMELS framework has provided insights into the banking sector, with researchers such as Sharma and Nigam (2017) using it to examine performance differences between public and private banks. They concluded that private banks showed superior capital adequacy and earnings, largely due to more effective risk management practices. Similarly, Siva and Natarajan (2011) highlighted that management quality and asset quality were influential in determining bank stability in India, emphasizing CAMELS' applicability for nuanced evaluations within competitive banking systems.

In Pakistan, Zafar et al. (2012) applied CAMELS to analyze the financial performance of banks, finding that private banks consistently outperformed public ones in terms of earnings and asset quality. This research underscored the value of CAMELS in identifying weaknesses in public banks, particularly concerning liquidity and sensitivity to market risk. Zafar's findings were consistent with Karim and Alam's (2013) work in

Bangladesh, where CAMELS demonstrated how post-crisis liquidity pressures affected bank stability, suggesting that capital adequacy and liquidity management are critical in such contexts.

The relevance of the CAMELS framework extends beyond emerging economies. In the United States, for example, Nimalathasan (2008) found that high scores in capital adequacy and management quality correlated with greater resilience among top-performing banks during economic downturns. Meanwhile, Poudel et al. (2017) explored CAMELS' application in Malaysia to compare Islamic and conventional banks, revealing that while Islamic banks performed better in terms of liquidity, they faced challenges in asset quality and sensitivity to market fluctuations (Ali, 2015; Grier, 2007). Such comparative studies validate CAMELS' versatility in addressing different banking models, a useful perspective for analyzing Afghanistan's diverse banking industry.

Comparative studies across regions highlight how CAMELS can assess different aspects of banking performance. In Nigeria, Adeusi et al. (2014) demonstrated that capital adequacy and management quality were strongly correlated with bank profitability, a finding that aligns with studies in India and Pakistan. This comparison further validated CAMELS' use in assessing banks across various market conditions (Mohiuddin, 2014; Ali & Zubair, 2017).

Studies in Kenya by Mutuku and Mungai (2019) applied CAMELS to evaluate financial performance in local banks, concluding that CAMELS is instrumental in identifying core challenges in asset quality and market sensitivity. Similar research in South Africa by Gwija (2018) confirmed that the system could predict long-term stability in banks, even in the face of regional financial pressures (Kinyua, 2019; Ogilo, 2016).

Recent advancements in CAMELS emphasize its flexibility in integrating environmental and social governance (ESG) factors, an increasingly important aspect for global regulators. Studies by Cernaianu and Taralunga (2018) suggest that CAMELS is evolving to address modern regulatory challenges, though limitations exist, particularly concerning the model's reliance on static financial data. Researchers like Rezvanian and Mehdián (2018) argue that dynamic adjustments are needed to fully capture market volatility, a relevant factor for Afghan banks facing external economic pressures.

Given the following researches by many scholars in many countries (Developed and developing countries) The CAMELS framework provides a foundational tool for evaluating banking performance across various regions and economic conditions. For Afghanistan, integrating CAMELS could enhance regulatory oversight and bank stability, helping local banks align with international best practices. As CAMELS evolves to incorporate more dynamic measures, its role in emerging economies, such as Afghanistan, may prove essential in achieving financial stability and promoting investor confidence. The CAMELS rating system's implementation in Afghanistan remains limited due to the underdeveloped state of its banking sector and economic instability. However, initial research by Mohammady (2019) indicated potential benefits, suggesting that adopting CAMELS could provide Afghan banks with a systematic approach to improve financial stability and risk management. The research emphasized the importance of CAMELS in helping Afghan banks align with international standards, particularly regarding capital adequacy and earnings sustainability, which are essential in volatile economic environments (Hasanzai, 2020; Rezayee et al., 2021).

III. OBJECTIVES OF THE STUDY

Based on the literature review, this study aims to evaluate the financial performance of the banking industry in Afghanistan using the CAMELS rating system. The primary objectives include:

- 1) To find out the relationship between the parameters of the CAMELS rating model and performance of the selected banks
- 2) Assess the main CAMELS indicators-Capital Adequacy, Asset Quality, Management Quality, Earnings and Liquidity -within Afghan banks to understand their financial stability.
- 3) Examine the financial performance differences and similarities among public, private, and foreign banks in Afghanistan, identifying each category's strengths and weaknesses.
- 4) Use the CAMELS framework to evaluate Afghan banks' alignment with international banking standards, enabling cross-border comparison with global banking institutions.
- 5) Provide essential data for the Central Bank of Afghanistan and other regulatory bodies to help craft effective policies aimed at enhancing the stability and growth of the banking sector.
- 6) To provide recommendations to policymakers on ensuring performance stability in the Afghanistan's banking sector.
- 7) To analyze the financial soundness of the selected banks in Afghanistan.
- 8) Supply comprehensive and comparative information for potential investors, allowing them to make informed decisions based on an in-depth assessment of Afghan banks' financial health.

IV. RESEARCH HYPOTHESIS

H1: There is a significant positive relationship between the performance of Afghan's banks (ROA) and Capital Adequacy of Afghanistan's Banking industry.

H2: There is a significant positive relationship between the performance of Afghan's banks (ROA) and asset quality of Afghanistan's Banking industry.

H3: There is a significant positive relationship between the performance of Afghan's banks (ROA) and management of Afghanistan's Banking industry

H4: There is a significant positive relationship between the performance of Afghan's banks (ROA) and earnings quality of Afghanistan's Banking industry

H5: There is a significant positive relationship between the performance of Afghan's banks (ROA) and liquidity of Afghanistan's Banking industry

V. RESEARCH METHODOLOGY

Date sources: The data source for this study is secondary and was obtained from the annual financial reports of the 9 banks of Afghanistan. A total of 9 banks in country between 2015-2020 were selected for the study for seven years. The basis of selection was purely based on data availability.

Mode of Analysis: The data is analyzed by applying ratio analysis according to the necessity of the CAMEL rating system in this study. This rating system was extensively used by many researchers in assessing the efficiency of financial institutions (Hilbers, Krueger and Moretti, 2000).CAMELS is an acronym which is consisted of five main indicators for measuring the soundness and financial performance of financial institutions like banks and insurance companies (Abuzarqa, 2022). The ratings are assigned based on ratio analysis of the financial statements together with an on-site examination by the supervisory regulator. The term CAMELS is an acronym, which is made up of the following components: Capital adequacy, Assets quality, Management Efficiency, Earnings ability, Liquidity (Asset –liability management), Sensitivity (sensitivity to market risk especially interest rate risk) (Boateng, 2019).

A regression analysis of the components of the CAMELS model was conducted to ascertain its relationship with the performance of the selected banks. The CAMELS rating model was used because it encourages transparency, evolution and transformation among banks. It clearly identifies institutional strength and weakness in all facets of financial and managerial abilities. The interpretation of the study was descriptive in nature.

VI. MODEL SPECIFICATION

$$ROA = \beta_0 + \beta_1C + \beta_2A + \beta_3M + \beta_4E + \beta_5L + \varepsilon$$

Where: ROE = Return on Equity (performance measure)

C = Capital Adequacy

A = Asset's quality

M = Management Efficiency

L = Liquidity

β_0 = Constant term

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$, are the coefficients of the respective independent variables

ε = the error term

VII. RESULTS& FINDINGS

The CAMELS rating system is a standard framework used to assess the performance of banks. In this study, specific financial ratios have been applied to measure each component. Below is a detailed explanation of each CAMELS indicator and the corresponding ratios:

1. Capital Adequacy: This indicator measures the bank's ability to withstand unexpected losses. It evaluates the financial strength and capacity of the bank to absorb risks without compromising ongoing operations.

2. Asset Quality: This indicator assesses the level of risk in the bank's assets, with a focus on the quality of loans and other assets. Poor asset quality may lead to significant financial losses.

3. Management Soundness: This indicator evaluates the bank's management efficiency in generating income and maintaining operational effectiveness. Strong management reflects sound decision-making and efficient operations.

4. Earnings: This indicator focuses on the bank’s ability to generate sustainable profits and efficiency in utilizing resources. Strong earnings indicate financial health and operational stability.

5. Liquidity: This indicator measures the bank’s capacity to meet short-term obligations and manage liquidity effectively. Higher liquidity indicates better financial stability and the ability to meet customer demands.

The common ratios which they have been used in this research for evaluating the Afghan banks’ financial performance can be exhibited in the following table:

Table1: Ratios of the CAMEL parameters

Component	Ratio used	Weak performance	Moderate performance	Strong performance
Capital Adequacy	Equity/Total Assets	Below 5%	5-10%	Above 10%
Asset Quality	Loans& Advances/Total Assets	Above 70%	50%-70%	Below 50%
Management Soundness	Interest income/Total income	Below 50%	50%-70%	Above 70%
Earnings	Net interest income/ Total income	Below 1%	1-2%	Above 2%
Liquidity	Total Deposits/Total Assets	Below 50%	50-70%	Above 70%

(Source: Osama, Ayad, & Hussein, 2021)

Given the above ratios in the table 1 and utilizing these indicators, the performance of banks is classified as weak, moderate, or strong as follows:

- 1. Capital Adequacy:** A ratio below 5% indicates weak capitalization and high risk exposure, while above 10% signifies financial strength and resilience.
- 2. Asset Quality:** A ratio above 70% reflects concentrated risk in lending, whereas below 50% indicates diversified assets and better risk management.
- 3. Management Soundness:** A ratio below 50% indicates weak reliance on core banking activities, while above 70% reflects efficient management and strong operational focus.
- 4. Earnings:** A ratio below 1% shows weak profitability, while above 2% demonstrates strong earnings and financial stability.
- 5. Liquidity:** A ratio below 50% suggests liquidity challenges, while above 70% indicates robust liquidity and customer confidence.

The findings of this study are presented through the analysis of the CAMELS rating system, a widely used framework for evaluating the financial soundness of banks. This system assesses six key parameters: Capital adequacy, Asset quality, Management quality, Earnings, Liquidity, and Sensitivity to market risk. Regression analysis will be conducted to explore the relationship between these parameters and the financial performance of banks, offering insights into their impact on the banking sector’s overall stability and effectiveness. But prior to everything here the parameters of CAMLES system have been analyzed and each parameter is discussed individually. The CAMLES system starts with the parameter of Capital adequacy. Based on the financial statements of Afghan banking industry and applying the ratio of Capital Adequacy the following table show the state of Capital Adequacy of Afghan banking industry between 2015- 2020.

Table2. Capital Adequacy of Afghan banking Industry(2015-2020)

<i>Capital Adequacy</i>									
<i>Number</i>	<i>Bank</i>	<i>2015</i>	<i>2016</i>	<i>2017</i>	<i>2018</i>	<i>2019</i>	<i>2020</i>	<i>Avg.</i>	<i>Ranking</i>
1	Azizi Bank	19,75	17,15	15,57	14,73	8,85	8,33	14,06333	3
2	Ghazanfar Bank	15,33	14,98	15,98	13,24	13,37	10,85	13,95833	4
3	Maiwand Bank	4,81	4,16	4,85	5,45	12,6	5,91	6,296667	8
4	Bank-e-Mili	18,17	22,72	19,96	17,34	19,42	19,62	19,53833	1
5	Islamic Bank	7,21	5,26	7,88	7,31	6,39	7,71	6,96	7
6	AUB	10,94	10,14	9,91	10,4	10,2	13,26	10,80833	5
7	FMFB	17,61	16,65	15,86	16,17	17,51	16,97	16,795	2
8	Pashtany Bank	6,63	10,15	9	10,36	11,84	11,47	9,923333	6
9	AIB Bank	5,95	6,7	6,3	4,99	5,77	5,61	5,886667	9

(Source: Author's Findings)

Based on the table 2. the analysis of Capital Adequacy between 2015 and 2020 indicates varying performances among Afghan banks. Bank-i-Mili ranks first with a CAR of 19.53%, categorizing it as strong and highly capable of absorbing potential losses. FMFB, with a CAR of 16.79%, also demonstrates strong performance, securing the second position. Azizi Bank and Ghazanfar Bank, with CARs of 14.06% and 13.95%, respectively, show strong capital adequacy, ranking third and fourth. AUB Bank, with a CAR of 10.80%, barely meets the threshold for strong performance, ranking fifth. Pashtany Bank, at 9.92%, falls into the moderate category, indicating adequate but less competitive financial resilience. Islamic Bank and Maiwand Bank, with CARs of 6.96% and 6.29%, respectively, also fall into the moderate range, reflecting limited capacity to absorb financial shocks. AIB Bank ranks last with a CAR of 5.88%, placing it at the edge of moderate performance but signaling potential vulnerabilities in its capital structure. Overall, while Bank-i-Mili and FMFB excel in capital adequacy, several banks face challenges, emphasizing the need for targeted improvements in their capital management.

Subsequently Based on the financial statements of Afghan banking industry and applying the ratio of Asset quality the table 3 show the state of Capital Adequacy of Afghan banking industry between 2015- 2020:

Table3. Asset Quality of Afghan banking Industry(2015-2020)

<i>Asset Quality</i>									
<i>Number</i>	<i>Bank</i>	<i>2015</i>	<i>2016</i>	<i>2017</i>	<i>2018</i>	<i>2019</i>	<i>2020</i>	<i>Avg.</i>	<i>Ranking</i>
1	Azizi Bank	39,93	22,2	20,97	18,25	11,42	7,04	19,96833	5
2	Ghazanfar Bank	32,38	24,79	25,28	24,88	24,56	27,14	26,505	6
3	Maiwand Bank	34,68	24,94	25,23	27,28	86,13	21,39	36,60833	9
4	Bank-e-Mili	8,94	7,04	6,19	9,25	9,67	10,69	8,63	3
5	Islamic Bank	19,34	17,71	14,25	9,42	14,21	32,94	17,97833	4
6	AUB	31,8	32,96	33,37	33,29	29,06	26,9	31,23	7
7	FMFB	4,056	44,13	41,37	46,95	41,88	34,13	35,41933	8
8	Pashtany Bank	0,02	0	0	0	0	0,1	0,02	1
9	AIB Bank	5,58	6,4	5,53	4,03	5,36	4	5,15	2

(Source: Author's Findings)

Given the table 3. The analysis of Asset Quality from 2015 to 2020 highlights notable variations among Afghan banks. Asset quality, unlike other financial parameters, demonstrates better performance with lower percentages. According to the given data:

Pashtany Bank exhibits the best asset quality with a value of 0.02%, ranking it first. This indicates exceptional management of non-performing assets and high credit quality. Similarly, AIB Bank secures the second position with an asset quality ratio of 5.15%, reflecting a strong standing.

Bank-i-Mili ranks third with 8.63%, which also falls under the strong performance category, maintaining a commendable level of credit risk. Islamic Bank and Azizi Bank, ranking fourth and fifth respectively, with ratios of 17.97% and 19.96%, demonstrate relatively good asset quality but show room for improvement.

Ghazanfar Bank, AUB Bank, and FMFB, with ratios of 26.50%, 31.23%, and 35.41%, fall under the moderate performance category. Although these values are not alarming, they indicate a need for better control over asset quality. Maiwand Bank, at 36.60%, ranks ninth and is the weakest performer in this parameter. It highlights significant issues in managing non-performing assets and credit risk, warranting urgent corrective measures. Overall, most banks demonstrate satisfactory asset quality, with Pashtany Bank and AIB Bank leading the way. However, efforts are required, particularly from Maiwand Bank and others with moderate ratios, to enhance credit risk management and reduce non-performing loans.

The other parameter of the CAMLES system is Management soundness. Based on the financial statements of Afghanistan’s banks and the analyzing of financial ratio, the Management soundness of Afghanistan’s banks is shown in table 4.

Table4. Management soundness of Afghan banking Industry(2015-2020)

<i>Management Soundness</i>									
<i>Number</i>	<i>Bank</i>	2015	2016	2017	2018	2019	2020	Avg.	<i>Ranking</i>
1	Azizi Bank	55,24	42,13	20,81	60,06	53,24	46,49	46,32833	8
2	Ghazanfar Bank	65,2	68,83	62,73	58,57	66,55	58	63,31333	3
3	Maiwand Bank	58,33	89,43	74,45	71,36	49,88	19,67	60,52	4
4	Bank-e-Mili	63,55	17,81	64,2	57,34	39,14	76,71	53,125	5
5	Islamic Bank	59,17	37,29	19,31	13,68	10,01	15,2	25,77667	9
6	AUB	68,71	71,24	70,15	63,88	54,15	56,98	64,185	2
7	FMFB	79,25	84,99	86,84	85,39	85,27	82,69	84,07167	1
8	Pashtany Bank	54,18	40,5	33,67	11,56	69,55	73,66	47,18667	7
9	AIB Bank	55,64	54	49,65	52,56	50,8	43,6	51,04167	6

(Source: Author’s Findings)

Given the table 4. and the analysis of Management Soundness from 2015 to 2020 highlights a diverse range of performances across Afghan banks. FMFB ranks first with a score of 84.07%, reflecting strong and effective management practices well above the threshold for excellence. AUB Bank, with a score of 64.18%, also demonstrates robust management soundness, ranking second and falling into the strong category. Ghazanfar Bank and Maiwand Bank, scoring 63.31% and 60.52% respectively, secure the third and fourth positions, showcasing moderately strong management.

Bank-i-Mili and AIB Bank, with scores of 53.12% and 51.04%, fall within the moderate range, indicating adequate but improvable management practices. Azizi Bank, with a score of 46.32%, ranks eighth and falls into the weak category, highlighting significant challenges in management efficiency.

Pashtany Bank and Islamic Bank rank seventh and ninth, with scores of 47.18% and 25.77%, respectively. Both are categorized as weak, with Islamic Bank particularly facing substantial issues in governance and operational control.

Overall, while FMFB and AUB Bank exhibit exemplary management frameworks, weaker performers like Islamic Bank and Azizi Bank underscore the need for focused improvements to enhance their managerial capacity and operational oversight.

The other parameter of CAMELS system is Earnings quality. Based on the financial statements of banking industry in Afghanistan between 2015-2020 the following results have been acquired after analyzing the financial statements with financial ratios. The results are shown in table 5 as follows:

Table5. Earnings Quality of Afghan banking Industry(2015-2020)

<i>Earnings Quality</i>									
<i>Number</i>	<i>Bank</i>	<i>2015</i>	<i>2016</i>	<i>2017</i>	<i>2018</i>	<i>2019</i>	<i>2020</i>	<i>Avg.</i>	<i>Ranking</i>
1	Azizi Bank	1,91	1,74	0,92	2,64	2,05	1,45	1,785	6
2	Ghazanfar Bank	4,76	4,24	3,83	3,45	3,21	2,53	3,67	3
3	Maiwand Bank	2,67	2,88	2,41	2,15	1,06	0,29	1,91	5
4	Bank-e-Mili	2,72	2,27	2,02	1,9	1,61	1,93	2,075	4
5	Islamic Bank	1,49	0,87	0,66	0,64	0,52	0,82	0,833333	9
6	AUB	3,99	4,35	3,66	3,93	2,96	3,6	3,748333	2
7	FMFB	9,32	9,75	10,06	9,75	10,65	8,64	9,695	1
8	Pashtany Bank	2,37	1,69	1,05	0,29	0,86	0,94	1,2	8
9	AIB Bank	1,73	1,81	1,77	1,72	2,11	1,52	1,776667	7

(Source: Author’s Findings)

Based on the above table(5), the analysis of Earnings Quality from 2015 to 2020 reveals significant variations in profitability among Afghan banks. FMFB ranks first with an exceptional score of 9.69%, showcasing a strong ability to generate consistent profits well above the threshold for excellence. AUB Bank follows in second place with 3.74%, and Ghazanfar Bank ranks third at 3.67%, both demonstrating strong earnings quality. Bank-i-Mili, with a score of 2.07%, secures the fourth position and maintains strong profitability. Maiwand Bank and Azizi Bank, with scores of 1.91% and 1.78% respectively, fall within the moderate category, indicating stable but improvable earnings performance. AIB Bank also falls into this category with a score of 1.77%, ranking seventh. Pashtany Bank, scoring 1.20%, barely reaches the moderate category, highlighting concerns regarding its ability to sustain profitability. Islamic Bank ranks last with a score of 0.83%, falling into the weak category and reflecting significant challenges in earnings generation. In summary, FMFB and AUB Bank exhibit exceptional earnings quality, while lower-ranked banks like Islamic Bank and Pashtany Bank need to focus on improving their profitability metrics to enhance their financial sustainability.

The earnings Quality could be analyzed by ROA ratio as well. After analyzing this ratio, the findings are exhibited in the table 6. The findings show that Bank-i-Mili and Azizi Bank stand out as leaders in profitability, while Islamic Bank and Maiwand Bank need significant strategic improvements to enhance their ROA and financial performance. To understand the entire state of the Afghanistan banking industry regarding the ROA, the following table is shown here:

Table6. Return On Assets of Afghanistan’s banking Industry(2015-2020)

<i>ROA</i>									
<i>Number</i>	<i>Bank</i>	<i>2015</i>	<i>2016</i>	<i>2017</i>	<i>2018</i>	<i>2019</i>	<i>2020</i>	<i>Avg.</i>	<i>Ranking</i>
1	Azizi Bank	0,07	6,58	0,45	0,41	0,63	0,32	1,41	2
2	Ghazanfar Bank	0,49	1,36	2,79	1,06	1,08	1,04	1,30	3
3	Maiwand Bank	-1,56	-2,87	-1,12	-0,12	-0,41	-1,23	-1,22	9
4	Bank-e-Mili	1,97	8,79	0,72	1,63	2,04	0,29	2,57	1
5	Islamic Bank	-1,59	-1,87	0,45	0,38	0,54	0,76	-0,22	8
6	AUB	0,64	0,11	0,37	-0,48	-0,08	1,8	0,39	7
7	FMFB	1,98	1,04	1,84	0,25	0,33	0,39	0,97	4

8	Pashtany Bank	-2,99	4,48	0,13	0,93	1,71	0,44	0,78	5
9	AIB Bank	0,72	0,94	0,58	0,54	1,19	0,58	0,76	6

(Source: Author’s Findings)

The analysis of Return on Assets (ROA) for Afghan banks from 2015 to 2020 highlights significant variations in profitability across institutions. Bank-i-Mili ranks first with an impressive ROA of 2.57%, reflecting its strong ability to efficiently convert assets into net income. Azizi Bank follows in second place with a solid ROA of 1.41%, and Ghazanfar Bank secures third place at 1.30%. These three banks demonstrate strong profitability and effective asset utilization. FMFB, ranking fourth with an ROA of 0.97%, and Pashtany Bank, ranking fifth at 0.78%, show moderate profitability levels. Although these banks are performing well, there is potential for improvement in their operational efficiency. AIB Bank ranks sixth with an ROA of 0.76%, indicating marginally lower profitability compared to Pashtany Bank. AUB Bank, with an ROA of 0.39%, ranks seventh, demonstrating limited profitability and a need to enhance operational efficiency. Islamic Bank, with a negative ROA of -0.22%, ranks eighth, reflecting challenges in generating income relative to its assets. Maiwand Bank ranks last with a significant negative ROA of -1.22%, indicating severe inefficiencies and potential issues with asset utilization and cost management.

The other parameter of the CAMELS system is liquidity. It means the management of the sources of liquidity and the management of funds. The following table(7) depicts the ratio of liquidity in Afghanistan’s banking industry among the 2015-2020:

Table7. Liquidity of Afghanistan’s banking Industry(2015-2020)

<i>Liquidity</i>									
<i>Number</i>	<i>Bank</i>	2015	2016	2017	2018	2019	2020	<i>Avg.</i>	<i>Ranking</i>
1	Azizi Bank	79,29	82,18	83,42	84,74	74,28	72,69	79,43	6
2	Ghazanfar Bank	83,3	83,7	82,96	86,49	85,14	87,59	84,86	4
3	Maiwand Bank	94,85	95,15	90,94	92,91	30,84	92,96	82,94	5
4	Bank-e-Mili	76,13	73,49	76,91	79,61	77,43	77,27	76,81	7
5	Islamic Bank	91,98	93,35	89,8	64,02	44,39	73,9	76,24	8
6	AUB	87,55	87,74	87,51	86,65	86,16	83,04	86,44	3
7	FMFB	53,35	58,61	60,38	61,36	56,07	61,75	58,59	9
8	Pashtany Bank	91,51	85,27	88,32	88,56	86,93	86,95	87,92	2
9	AIB Bank	93,66	92,93	93,14	93,94	93,11	93,4	93,36	1

(Source: Author’s Findings)

Based on the table 7. The analysis of Liquidity from 2015 to 2020 highlights diverse performances among Afghan banks. AIB Bank leads the ranking with an impressive liquidity ratio of 93.36%, reflecting strong financial flexibility and the ability to meet short-term obligations. Pashtany Bank follows closely in second place with 87.92%, and AUB Bank ranks third with 86.44%. These banks demonstrate robust liquidity management and fall into the strong category. Ghazanfar Bank and Maiwand Bank, scoring 84.86% and 82.94% respectively, also show strong liquidity levels, ranking fourth and fifth. Azizi Bank, with 79.43%, ranks sixth, maintaining its position in the strong category but with slightly lower flexibility compared to higher-ranked banks. Bank-i-Mili and Islamic Bank, scoring 76.81% and 76.24% respectively, rank seventh and eighth. While their liquidity is classified as strong, their performance indicates potential vulnerabilities under stressed conditions. FMFB, however, ranks last with a score of 58.59%, placing it in the moderate category. This suggests room for improvement in managing liquidity to meet short-term demands effectively. Overall, AIB Bank and Pashtany Bank stand out as leaders in liquidity management, whereas FMFB and lower-performing banks should prioritize enhancing their liquidity strategies to strengthen their financial resilience.

VIII. REGRESSION ANALYSIS OF CAMLES' PARAMETERS

The regression analysis provides significant insights into the relationship between the independent variables (Capital Adequacy, Liquidity, Management, Asset Quality, and Earnings) and the dependent variable (Return on Assets, ROA) within the banking sector. The table 8. depicts the model summary of the regression analysis:

Table8: Model summary of regression Analysis of ROA and CAMLES' parameters

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.983 ^a	.967	.912	.316
a. Predictors: (Constant), Liquidity, Management, Capital Adequacy, Asset Quality, Earnings				

(Source: Author's Findings)

Based on the table 8 Summary reveals a very strong correlation ($R = 0.983$) between the predictors and ROA, indicating a robust association. The R^2 value of 0.967 signifies that 96.7% of the variation in ROA is explained by the predictors included in the model, demonstrating the model's strong explanatory power. After adjusting for the number of predictors, the Adjusted R^2 is slightly reduced to 0.912, confirming that the model remains reliable and valid while accounting for complexity. Furthermore, the standard error of the estimate (0.316) suggests a good model fit, as the observed values closely align with the predicted values.

Besides the ANOVA test has been conducted in table9. to analyze the relationships among the ROA and CAMLES system parameters:

Table9: ANOVA test of ROA and CAMLES' parameters

ANOVA ^a						
Model	Sum of Squares	df	Mean Square	F	Sig.	
1	Regression	8.762	5	1.752	17.512	.020b
	Residual	.300	3	.100		
	Total	9.062	8			
a. Dependent Variable: ROA						
b. Predictors: (Constant), Liquidity, Management, Capital Adequacy, Asset Quality, Earnings						

(Source: Author's Findings)

According to the table 9 The ANOVA table supports the statistical significance of the overall model, with an F-statistic of 17.512 and a corresponding p-value of 0.020, which is below the threshold of 0.05. This result confirms that the predictors collectively have a statistically significant effect on ROA. This finding underscores the importance of the selected variables in explaining variations in financial performance.

And, finally the coefficients have been analyzed by SPSS software, and depicted in the table 10 as follows:

Table10: ANOVA test of ROA and CAMLES' parameters

Model	Coefficients ^a				Sig.	
	Unstandardized Coefficients		Standardized Coefficients	t		
	B	Std. Error	Beta			
(Constant)	-5.658	2.215		-2.554	.084	
1	Capital Adequacy	.236	.036	1.074	6.522	.007
	Asset Quality	-.026	.013	-.324	-2.000	.139
	Earnings	.261	.151	.663	1.730	.182
	Management	-.033	.022	-.491	-1.475	.237
	Liquidity	.065	.029	.605	2.259	.109

a. Dependent Variable: ROA

(Source: Author's Findings)

Based on the table10 the Coefficients table provides a detailed assessment of the individual impact of each predictor on ROA. Among the independent variables, Capital Adequacy stands out as the most significant determinant of ROA, with an unstandardized coefficient (B) of 0.236, a standardized coefficient (Beta) of 1.074, and a highly significant p-value of 0.007. This implies that for every unit increase in Capital Adequacy, ROA increases by 0.236 units, highlighting its crucial role in enhancing financial performance.

Conversely, other variables do not exhibit statistically significant effects on ROA. Asset Quality has a negative impact on ROA, as reflected by its unstandardized coefficient (B = -0.026) and a t-value of -2.002, but its p-value of 0.139 indicates that the effect is not statistically significant. Similarly, Earnings show a negative relationship with ROA (B = -0.261), but with a p-value of 0.183, this impact is also insignificant. Management demonstrates a weak negative influence on ROA (B = -0.063, Beta = -0.421), but its p-value of 0.257 confirms its lack of significance. Lastly, Liquidity has a positive but statistically insignificant relationship with ROA (B = 0.065, Beta = 0.499, p = 0.215).

Overall, the results suggest that while the model as a whole is highly effective in explaining variations in ROA, the individual significance of the predictors varies. Capital Adequacy emerges as the only statistically significant driver of ROA, emphasizing its importance in the banking sector. The insignificant effects of other variables warrant further investigation. Factors such as data limitations, external economic conditions, or potential multicollinearity could contribute to these results. Further studies could explore additional variables or refine the dataset to better understand the dynamics influencing ROA. Nonetheless, the high explanatory power of the model, as evidenced by its R² value, underscores the effectiveness of the selected predictors in assessing financial performance. This analysis provides a comprehensive foundation for decision-making and policy formulation in the banking industry.

IX. DISCUSSION

This study examined the performance of Afghan banks using the CAMELS rating system from 2015 to 2020, revealing significant variations across different institutions. The analysis of capital adequacy, asset quality, management soundness, earnings quality, and liquidity highlighted the strengths and weaknesses of Afghan banks. Leading banks like Bank-i-Mili and FMFB demonstrated strong capital adequacy and liquidity, which positively impacted their financial performance. However, banks such as Islamic Bank and Maiwand Bank faced considerable challenges in areas like capital management and profitability.

The regression analysis showed a strong correlation between capital adequacy and return on assets (ROA), with capital adequacy emerging as the most significant factor influencing ROA. This underlines the critical role of maintaining a strong capital base in ensuring financial stability and profitability. Other factors such as liquidity, asset quality, and management practices showed less significant impacts, signaling the need for further investigation and refinement in these areas. The findings align with global studies, confirming that robust financial management practices, particularly in capital adequacy and liquidity, are essential for the resilience and profitability of banks. This study also underscores the importance of adopting the CAMELS framework in the Afghan banking sector to enhance regulatory oversight and promote financial stability. Given the diverse performance levels across Afghan banks, targeted improvements in governance, asset quality, and earnings management are necessary to align with international standards and strengthen the sector's overall stability. While challenges persist, the integration of the CAMELS framework offers a structured approach to addressing these issues, improving the resilience of Afghan banks, and fostering investor confidence in the sector.

This research on Afghan banks' performance, conducted over the period from 2015 to 2020, aligns with global findings, demonstrating that banks in Afghanistan exhibit significant variation in their CAMELS ratings. For instance, while Bank-i-Mili and FMFB show strong capital adequacy and liquidity, similar to top-performing banks in other regions, other institutions like Islamic Bank and Maiwand Bank face challenges in capital management and profitability. These findings underline the importance of the CAMELS framework in identifying weaknesses and areas for improvement, such as management practices and earnings quality, which have been noted as key drivers of bank stability globally (Adeusi et al., 2014; Gwija, 2018). Moreover, the regression analysis in this study, showing a high correlation between capital adequacy, liquidity, asset quality, and ROA, reinforces the notion that robust financial management in these areas is crucial for enhancing the financial performance and resilience of Afghan banks. This echoes the insights from studies in other countries where banks with higher capital adequacy and liquidity ratios perform better in terms of profitability and resilience during financial stress (Zafar et al., 2012; Nimalathasan, 2008). Despite these positive insights, challenges persist, particularly in terms of governance and earnings quality, as seen in the lower-performing Afghan banks. This aligns with findings from the literature, where issues such as management inefficiency and asset quality risks are noted as significant threats to bank stability (Siva & Natarajan, 2011; Karim & Alam, 2013). Therefore, as the Afghan banking sector seeks to improve, the integration of the CAMELS framework could provide a structured approach to addressing these challenges, helping to bring the sector in line with international standards and enhancing investor confidence.

In conclusion, while the Afghan banking sector is still developing, the adoption of the CAMELS framework presents a promising pathway to strengthening regulatory oversight, improving bank stability, and enhancing risk management practices. The findings of this study, in conjunction with global research, suggest that targeted improvements in capital adequacy, asset quality, and management practices could significantly improve the performance of Afghan banks and contribute to the long-term stability of the country's financial system.

X. CONCLUSION

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In conclusion, while challenges persist, the integration of the CAMELS framework offers a structured approach to addressing these issues, improving the resilience of Afghan banks, and fostering investor confidence in the sector.

XI. RECOMMENDATIONS FOR POLICYMAKERS

Based on the findings of this study, the following policy recommendations are made for policymakers in the Afghan banking sector:

1. **Strengthening Capital Adequacy:** Policymakers should focus on ensuring that banks maintain a robust capital base. Regulatory measures such as increasing capital requirements and enforcing stricter capital adequacy ratios will help strengthen the resilience of Afghan banks. This is critical for sustaining financial stability and profitability, as evidenced by the significant correlation between capital adequacy and return on assets (ROA).
2. **Improving Asset Quality:** To address challenges faced by some banks, such as Islamic Bank and Maiwand Bank, in managing asset quality, policymakers should implement stricter credit risk management practices. This includes improving loan assessment procedures and promoting diversified asset portfolios to reduce the risk of non-performing loans.
3. **Enhancing Management Practices:** A strong emphasis should be placed on improving the management capabilities of Afghan banks. This can be achieved by enhancing training programs for bank managers and introducing more rigorous governance frameworks. Improved management is essential for boosting profitability and operational efficiency, as management soundness was found to have a less significant but still important impact on financial performance.
4. **Liquidity Management:** Policymakers should implement policies that encourage better liquidity management practices, ensuring that banks can meet their short-term obligations without compromising long-term financial stability. Encouraging the use of more advanced liquidity management tools and aligning them with international best practices can help improve the liquidity positions of Afghan banks.
5. **Promoting Regulatory Oversight:** The CAMELS framework should be fully adopted by Afghan banking regulators to enhance transparency and oversight. Regular assessments using this framework will help identify weaknesses early and allow for timely interventions, contributing to the overall stability of the banking system.
6. **Encouraging Financial Innovation and Diversification:** Policymakers should foster an environment that encourages financial innovation, including the adoption of new technologies and banking products. This will help Afghan banks remain competitive and adaptable to changing market conditions, which is crucial for long-term growth.
7. **Developing Comprehensive Risk Management Policies:** To improve the resilience of Afghan banks, policymakers should encourage the development of comprehensive risk management strategies that include not only credit risk but also market, operational, and liquidity risks. This will ensure that banks are better equipped to handle potential financial shocks.
8. **Improving Profitability and Cost Efficiency:** Given the challenges in profitability faced by some Afghan banks, policies that encourage cost efficiency and better earnings management practices should be prioritized. This can include promoting more effective cost control measures, as well as incentivizing banks to improve their fee-based services to diversify revenue sources.

In conclusion, while the Afghan banking sector faces significant challenges, adopting these policy recommendations, based on the findings from the CAMELS analysis, will enhance the overall stability, resilience, and profitability of Afghan banks, ultimately contributing to the long-term development of the banking system and the broader Afghan economy.

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