"The financial soundness of the Palestinian banking sector: an empirical analysis using the CAMEL system"

NUMBER OF REFERENCES	NUMBER OF FIGURES	NUMBER OF TABLES
33	5	11

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THE FINANCIAL SOUNDNESS OF THE PALESTINIAN BANKING SECTOR: AN EMPIRICAL ANALYSIS USING THE CAMEL SYSTEM

Abstract

The purpose of this article is to evaluate the financial soundness of commercial banks listed on the Palestine Exchange using the CAMEL rating system. A content analysis, composite rating, and a one sample t-test are applied to a sample of six local banks operating in Palestine. Secondary data were obtained from the financial statements of the banks for the period of 2007–2017 in order to conduct the research and evaluate their financial performance. The empirical test has shown that Palestinian banks adhere to the Basel Committee standards in terms of capital adequacy and that they display stability in terms of profitability and liquidity. However, the paper concludes that the operational efficiency of the banks being evaluated is "fairly managed". Finally, the findings indicate significant differences amongst Palestinian banks in terms of performance, assessed using the CAMEL rating system. This paper suggests that the listed Palestinian banks should focus on long-term investments rather than short-term ones, and monitor their risk management practices to increase their profits and move towards sustainability and growth.

Keywords	capital adequacy, asset quality, nonperforming loans, performance
JEL Classification	G21, G24, G28

INTRODUCTION

The banking sector is one of the main building blocks in the development of the international economy and in particular the Palestinian national economy. It is also considered the main source of funds for businesses and is crucial for facilitating economic growth. In this context, Allay (2013) argued that the banking system plays a leading role in sustaining financial markets and institutions. Hawaldar, Lokesha, Kumar, Pinto, and Sison (2017) stated that the banking sector had a substantial impact on financial inclusion in the national economy. Besides, Abusharbeh (2017) confirmed that the banking sector is considered the main internal source of the Palestinian economy and, thus, improves the productive capacity of the national economy. Therefore, Palestinian commercial banks are taking advanced steps to improve the quality of financial services in order to offer a variety of banking services everywhere in Palestine and to gain a competitive advantage at the local level.

The performance of the banking sector is assessed using the Uniform Financial Institution Rating system (UFIRS) developed in 1997, which is based on a supervisory banking system called CAMEL. In 1988, the Basel Committee proposed this framework as a supervision rating system. This model is categorized as the following ratios: Capital Adequacy, Asset Quality, Operational Efficiency, Earnings, and Liquidity.

Consequently, the Palestinian Monetary Authority (PMA) evaluated financial soundness of banks based on the International Monetary Fund methodology. It assessed bank performance using four main aspects: capital indicators, asset quality indicators, revenue ratios, and liquidity position (PMA, 2018).

In publishing their annual reports, listed commercial banks fully disclose matters focusing on their financial activities in order to assist agents and investors in their financial decisions and investments. The primary goal of a chief executive officer is to maximize the investors' wealth, which is determined by financial decisions made by bank directors. Therefore, various technical methods are used to assess the performance of banks. Most recent studies have attempted to assess bank performance using the CAMEL model (for example, Kumari, 2017; Ishaq, Karim, Zaheer, & Ahmed, 2016; Kumar & Sayani, 2015; and Gupta, 2014). Other studies used the Du Pont model to explain the variation of bank profitability (i.e., Najjar, 2013; Kyriazopoulos, Papaioannou, & Chrissochoidou, 2013; and Doorasamy, 2016). Indeed, financial ratios are used to establish the association among variables and how they can affect each other. Different business valuation models guide the firms in terms of performance. Nevertheless, many prior literatures confirmed that the CAMEL rating system is appropriate for bank assessment (Raiyani, 2010). In this manner, Roman and Şargu (2013) argued that CAMEL is recommended to measure the financial soundness of the banking sector. It is also classified as an international supervisory rating system. Furthermore, Mekonnen, Kedir, and Shibru (2015) mentioned that this framework was adopted by the Federal Financial Institutions Examination Council in 1979 to assess the overall financial soundness of a bank. Thus, this paper argues that the CAMEL framework could be useful in assessing the financial performance of Palestinian commercial banks. Indeed, the ultimate purpose of this study is to assess bank performance and to examine whether there are any significant differences among Palestinian commercial banks in terms of performance, assessed by CAMEL.

The results of this paper are expected to validate the use of CAMEL in the Palestinian banking sector. Moreover, the results provide an empirical ranking method for Palestinian commercial banks to manage the weaknesses and threats that may prevent these banks from growing.

The remainder of this paper is arranged as follows: Section 1 contains an extensive review of the relevant literature, which assesses bank performance based on CAMEL. Section 2 describes the data and sample selection and explains the CAMEL composite rating criteria, while Section 3 gives results. The last section concludes the empirical results and provides suggestions.

1. LITERATURE REVIEW AND RESEARCH HYPOTHESES

Many researchers and academics have evaluated bank performance using the CAMEL system in different ways and over different periods. To fill the gaps of the current paper, this section describes the main components of CAMEL and explores some important empirical works aimed at evaluating the financial soundness of banks.

1.1. The CAMEL model development

This ratio-based model was developed in early 1979 and adopted by the Federal Financial Institutions Examination Council in the USA (Barr, Killgo, Siems, & Zimmel, 2002). It is considered an effective internal control instrument for assessing the soundness of financial institutions. The revisions of UFIRS consist of six significant factors: capital requirements, asset quality, management efficiency, the level of earnings, adequacy of liquidity, and sensitivity to market risk, to ensure that all banks are evaluated in a comprehensive and uniform manner (Dang, 2011). These parameters are used to measure the effectiveness and efficiency of banking systems all over the world (Hirtle & Lopez, 1999).

Under this model, the evaluation takes into consideration the sophistication of the bank's activities and its risk profile. The CAMEL rating system incorporates five financial ratios to determine the bank's financial performance, focusing on bank

records from a managerial and financial perspective to identify the weak points and evaluate risk exposure. Rostami (2015) argued that CAMEL was an effective and accurate instrument for evaluating the financial performance of banks, as it could assist managers in identifying the causes of financial problems in the bank. In addition, Soni (2012) stated that this model could be useful for bank accountability and sustainability.

As already noted in the study, the financial analysis of bank performance is based on specific financial ratios that are used in the context of the CAMEL framework. According to this system, the banking sector is rated using five key parameters, including: capital standards, asset utilization, operational efficiency, earnings, and adequacy of liquidity. Moreover, each of the five CAMEL components is rated on a scale of one to five, from a strong financial position to a weak one. These parameters are defined and described as follows.

1.1.1. Capital adequacy

Ebhodaghe (1991) defined capital adequacy (CAR) as the situation in which the adjusted capital is able to absorb unexpected losses. It also indicates the bank's ability to maintain the statutory capital requirements in order to grip loss probability. Therefore, an adequate level of capital induces the bank manager to achieve the minimum level of capitalization. Chen (2003) argues that CAR plays a critical role in preventing the bank from going bankrupt and in increasing the depositor's confidence. To calculate CAR, capital should be classified into Tier 1 and Tier 2. The former includes owners' equity and reserves, while the latter comprises bank subordinated debts (Basel Accords I and II).

1.1.2. Asset quality

Asset quality reflects the financial health of the bank against the potential loss value of its assets. Sundararajan et al. (2002) defined it as the capacity of the bank to spread risks and recover default loans. It also measures the sufficiency of loan provisions and the percentage of nonperforming loans from bank assets (Dang, 2011). Basel II stated that asset quality should comprise important factors such as the volume of bank transactions and loan

provisions, in addition to the comparison between nonaccrual and nonperforming loans. Therefore, the high utilization of loans and advances leads to a higher probability of credit risks in assets.

1.1.3. Management efficiency

According to Basel II, management efficiency reflects the ability of a company to respond to organizational circumstances that may occasionally arise. It also evaluates management competency, leadership, human resources, and corporate governance compliance with banking regulations. Similarly, Aspal and Misra (2013) mentioned that management efficiency lies in its ability to identify, monitor, and control risks associated with the bank, and to devise strategic plans based on the bank's risk perception. However, the characteristics of management are rather qualitative in nature. Therefore, it is hard to draw any conclusions regarding management capability. Nevertheless, Sarker (2006) used some indicators (such as the operating income to operating expense ratio, operating expenses per employee, and the credits and advances to deposits ratio) to evaluate management efficiency. Thus, it is considered a vital CAMEL parameter for improving the quality of a bank and efficient management practices. In fact, this measurement can control bank operating expenses and convert bank deposits into high earning loans and advances. Moreover, management soundness is considered a qualitative measure of the bank's management system. This paper argues that management capabilities can be measured using certain ratios of off-set bank evaluation, such as the credits and the advance-to-deposit and operating expenses-to-operating income ratios.

1.1.4. Earning capacity

Basel II views strong earnings as financial strength. It basically measures the profitability of the bank and describes the sustainability and growth of future earnings. It also reflects the capability of the bank to generate income from its total assets (Dang, 2011). Commonly, most previous studies use return on assets as the profitability index. This ratio indicates the extent to which the earnings after tax for each dollar are invested in the assets of the bank.

1.1.5. Liquidity position

This is the ability of banks to fulfill short-term obligations and occasional withdrawals by depositors (Correia et al., 2013). An adequate level of liquidity means that the bank has excess cash to cover its short-term obligations. Therefore, this paper uses liquid assets (cash on hand and cash on other financial institutions) as the percentage of assets to determine the liquidity position of the bank.

1.2. Relevant empirical works

In Shanghai, Liu and Pariyaprasert (2014) used the CAMEL model in thirteen listed banks over the period of 2008 to 2011 to determine bank performance. They used capital adequacy, nonperforming financing, interest margin, and loan-to-deposit ratios as indicators of each bank's performance. They found that their performance was significantly influenced by CAR, nonperforming financing, interest margin, and loans to deposits ratios.

In the Gulf, Kumar and Sayani (2015) evaluated the financial soundness of Islamic banks across five regions for the 2008 to 2014 period (Saudi Arabia, United Arab Emirates, Qatar, Bahrain, and Kuwait) using the CAMEL approach. The results indicated that all eleven Islamic banks had adequate capital. It was also found that the banks' profitability and asset quality deteriorated over the period in which the study was conducted.

In Sri Lanka, Kumari (2017) analyzed the performance of foreign commercial banks by applying the CAMEL approach from 2008 to 2014, using capital adequacy, nonperforming loans, return on assets, and loan-to-deposit ratios as parameters. The study found that indicators of the foreign banking sector in terms of capital adequacy and return on assets were more efficient than other indicators.

In Bangladesh, Rahman and Islam (2018) evaluated the performance of conventional banks using the CAMEL model from 2010 to 2016. They found that the Eastern Bank took the lead among the selected banks. Additionally, the paper found that all commercial banks achieved high capital adequacy ratios – over the standard of 10%. The selected banks also had a higher percentage of non-performing loans (NPLs). Therefore, the Central Bank

of Bangladesh should strive to overcome the potential losses that result from higher NPLs.

In Jordan, Mousa (2016) measured the performance of Islamic banks based on the CAMEL model from 2010 to 2015. The study found that all Islamic banks maintained the minimum level of capital adequacy. It also concluded that all Islamic banks ranked high in terms of asset quality and earnings.

In Palestine, Kullab and Yan (2018) evaluated the financial soundness of Palestinian banks based on the CAMEL framework from 2008 to 2017, using the OLS regression method to analyze the data. The study found that Palestinian banks maintained the minimum capital adequacy requirements and showed an increase in interest expenses, stability in profitability, and a decline in liquidity position.

In South Africa, Desta (2016) explored the financial performance of African banks using the CAMEL system from 2012 to 2014. This study found that all selected banks were highly rated in terms of capital adequacy and profitability. On the other hand, asset quality and management efficiency were rated as less satisfactory and inefficient, respectively. This paper finally concluded that all banks performed fairly.

In India, Gupta (2014) assessed the financial soundness of Indian banks using the CAMEL system from 2009 to 2013. The results indicated that Indian public banks underperformed and needed to enhance their performances in order to meet minimum standards.

1.3. Research hypotheses development

This paper evaluates and compares the performance of Palestinian commercial banks assessed by the CAMEL model through formulating the following alternative hypotheses:

H01: *The financial performance of Palestinian commercial banks assessed by CAMEL shows good results.*

H02: *There are significant differences in performance among commercial banks assessed by the CAMEL model.*

Table 1. Financial position of listed banks (million USD)

No.	Name	Code	Total assets	Customer deposits	Credit facilities	Net profits
1	Bank of Palestine	BOP	4,884.8	3,788.6	2,518.6	54
2	Al Quds Bank	QUDS	1076	856	659	11.2
3	Palestine Investment Bank	PIBC	443.3	276.8	210.6	3.9
4	The National Bank	TNB	1,079.4	808.8	653.9	9.2
5	Arab Islamic Bank	AIB	1041	791	561	6.4
6	Palestinian Islamic Bank	ISBK	1010	809.6	619.3	14.5
	Total		9,629.5	7,330.8	5,222.4	99.2

2. METHODS

2.1. Data collection and sampling

The researcher has collected data from listed Palestinian commercial banks for the 11-year period (2007–2017). Six local banks were included in the analysis, which was conducted based on the annual audited financial statements officially disclosed to the public. The time series data were extracted from the listed banks' annual reports. Table 1 presents the list of banks in the sample.

Table 1 shows the total market value of assets for all operating listed banks in Palestine – USD 9.6 billion. Meanwhile, the total customer deposits amounted to USD 7.3 billion, while credit facilities came to only USD 5.2 billion. However, an annual profit of USD 99 million was made by the end of 2018.

2.2. The CAMEL model (measuring variables)

The ratio-based CAMEL model is widely used in most recent empirical studies. Therefore, the researcher uses specific financial ratios to define the respective parameters of the CAMEL rating system. The selective ratios are commonly used by the Palestinian Monetary Authority (PMA) and demonstrated in prior studies, such as Aspal and Dhawan (2016), and Kumari (2017). Table 2 describes financial ratios that measure each acronym of the CAMEL rating system.

2.3. Composite rating criteria

The composite CAMEL rating is ranked from 1 to 5 according to the status of the bank. Thus, bank performance is assessed using a rating scale as

Table 2. Ratio-based model (CAMEL)

Ratio	Acronym	Description
Capital Adequacy Ratio	C	Bank capital/Risk weighted assets
Asset Quality	A	Nonperforming loans/Loans and Advances
Management Efficiency	M	Operating expenses/Operating income
Earnings (ROA)	E	Measured by net income/Total assets
Liquidity	L	(Cash on hand and cash in other banks)/Total assets

Table 3. Composite rating based on CAMEL

Rating	Composite range	Status	Description
1	1-1.49	Strong	The bank's performance is very strong.
2	1.5-2.49	Superior	The bank's performance is good, but there are some weaknesses.
3	2.5-3.49	Fair	The bank's performance is acceptable with some associated risks.
4	3.5-4.49	Marginal	The bank has many financial weaknesses that could potentially threaten its growth and development.
5	4.5-5	Unsatisfactory	The bank has a high probability of failure and bankruptcy.

Table 4. Classification rating of CAMEL parameters

Ratios	Composite rating				
	1	**2**	**3**	**4**	**5**
Capital Adequacy (CAR)	> 13%	12-12.99%	8-11.99%	6-7.99%	< 5.99%
Asset Quality (NPLs)	< 1.5	2.5-1.51%	3.5-2.6%	5.5-3.6%	> 5.6%
Management Efficiency (OE/OI)	< 60%	60-74.9%	75-89.9 %	90-99.9%	> 100%
Earnings Capability (ROA)	> 1%	0.6-0.99%	0.5-0.599%	0.3-0.499%	< 0.29%
Liquidity (Liquid asset)	> 50%	40-49.9%	30%-39.9%	20%-29.9%	< 19.9%

presented in Table 3. This assessment method was supported by many scholars, such as Sarker (2006), and Desta (2016).

Table 4 details the classifications of the CAMEL rating system. The selected ratios are evaluated using this rating system. A rating of one indicates strong performance, while a rating of five indicates poor performance.
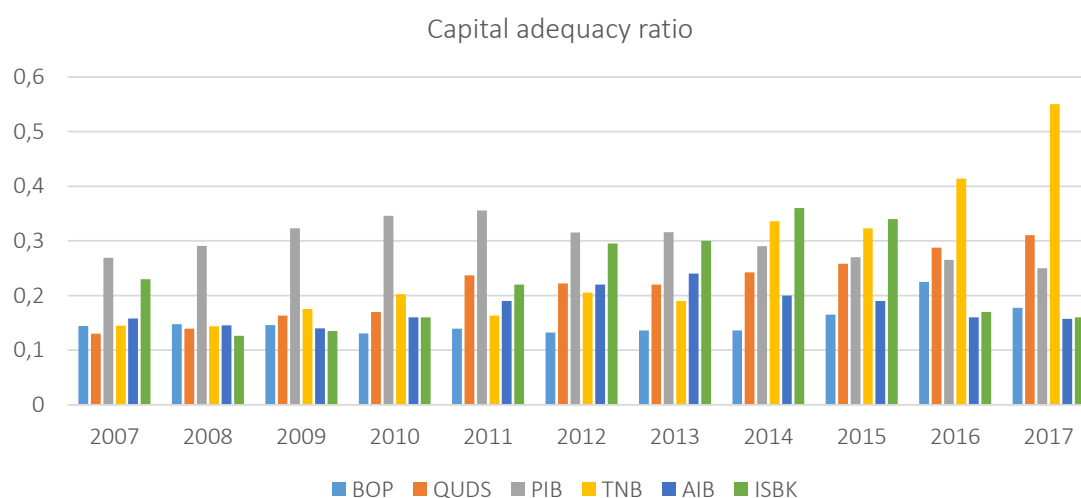
3. RESULTS

3.1. Capital adequacy

Table 5 represents the descriptive statistics of mean, standard deviation, and the composite rating of capital adequacy ratios for each bank over the past 11 years. The result shows that the lowest mean value of CAR is 15.25% for BOP, while the highest observed value is 25.88% for TNB. All banks have reached the minimum capital standards of 10%, as stated by the Basel Committee, and all have received a rating of 1. On average, Palestinian commercial banks have the ability to yield minimum revenue of 12.2% (22.2%-10%) from their existing capital to further invest in the Palestinian economy. As a result, Palestinian commercial banks are able to maintain the confidence of shareholders and customer depositors and to absorb any potential shocks that might be incurred.

Table 5. Average capital adequacy ratio (2007–2017)

Bank	Mean	SD	Composite rating	Evaluation
BOP	15.27%	2.79%	1	Good
QUDS	21.62%	5.92%	1	Good
PIBC	20.91%	3.46%	1	Good
TNB	25.88%	13.12%	1	Good
AIB	17.82%	3.23%	1	Good
ISBK	22.69%	8.45%	1	Good
Industry average	22.20%	6.16%	1	**Good**

Figure 1. Capital adequacy ratio for the listed banks (2007–2017)

3.2. Asset quality

Table 6 shows the results of nonperforming loans (NPLs) over the research period and specifies the percentages of bank loans that have been written off due to uncollectable fund. The table concludes that AIB has successfully managed its NPLs over the past eleven years. The average NPLs constituted 1.6% of loan provisions and received a rating of 1. This implies that AIB has a well-defined credit policy. On the other hand, QUDS has a high credit risk due to a higher percentage of nonperforming loans over the study period. The mean value of NPLs for QUDS was 6.24% with a deviation of 7%. However, this indicates that QUDS' bank management relatively attempted to control its credit policy through raising collateral requirements. Similarly, the NPL averages of TNB and PIB were 5.8% and 4.42%, respectively, both receiving a rating of 4. Thus, asset quality is measured using NPLs which have been relatively varied over the past 11 years, with an average of 4% among Palestinian commercial banks. Thus, the asset quality of each bank seems

sufficient to control credit risks. Therefore, NPLs are ever-fluctuating due to the Palestinian macro-economy instability and the continuous financing of unqualified projects.

3.3. Management capabilities

Table 7 reveals that the average OEOI of BOP was 54.6%, the lowest percentage out of other listed banks, but received a rating of 1. This indicates that BOP has a higher operational efficiency as compared with other local competitors. Nevertheless, TNB had the highest ratio (118%), but received a rating of 5. This implies that TNB has failed to manage its operational efficiency compared to other listed banks, which are fairly organized in their management capabilities, considering the potential risks they are exposed to.

Figure 3 demonstrates that in 2008, TNB saw a tremendous increase in operating expenses due to the deterioration of its financial position; this indicates the TNB's inability to control its opera-

Table 6. Average non-performing loans (2007-2017)

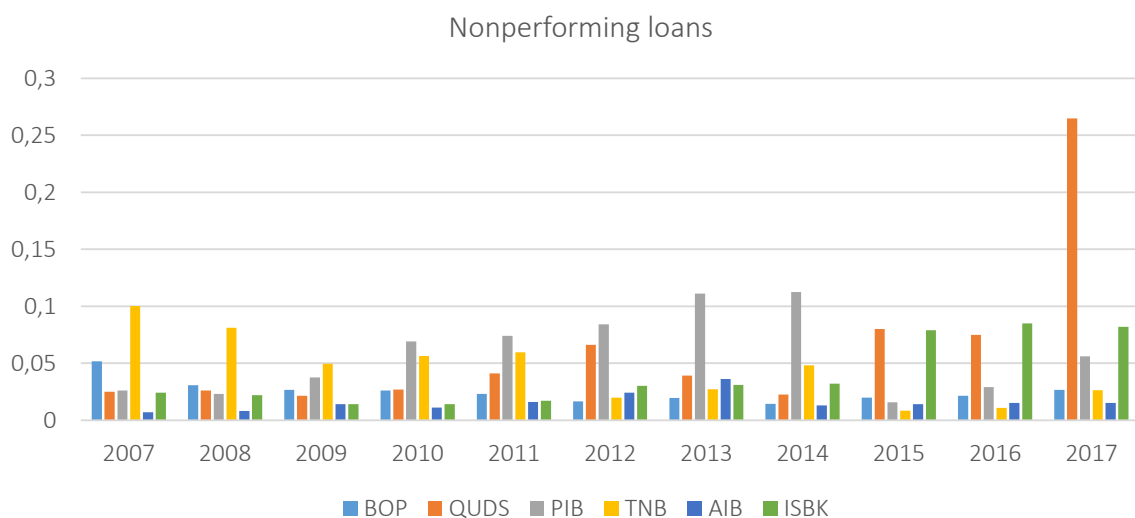| Bank	Mean	SD	Composite rating	Evaluation
BOP	2.51%	1.01%	2	Superior
QUDS	6.24%	7.05%	5	Unsatisfactory
PIBC	5.80%	3.48%	4	Marginal
TNB	4.42%	2.92%	4	Marginal
AIB	1.57%	0.81%	2	Superior
ISBK	3.91%	2.83%	3	Fair
Industry average	4.08%	3.02%	3.3	**Fair**

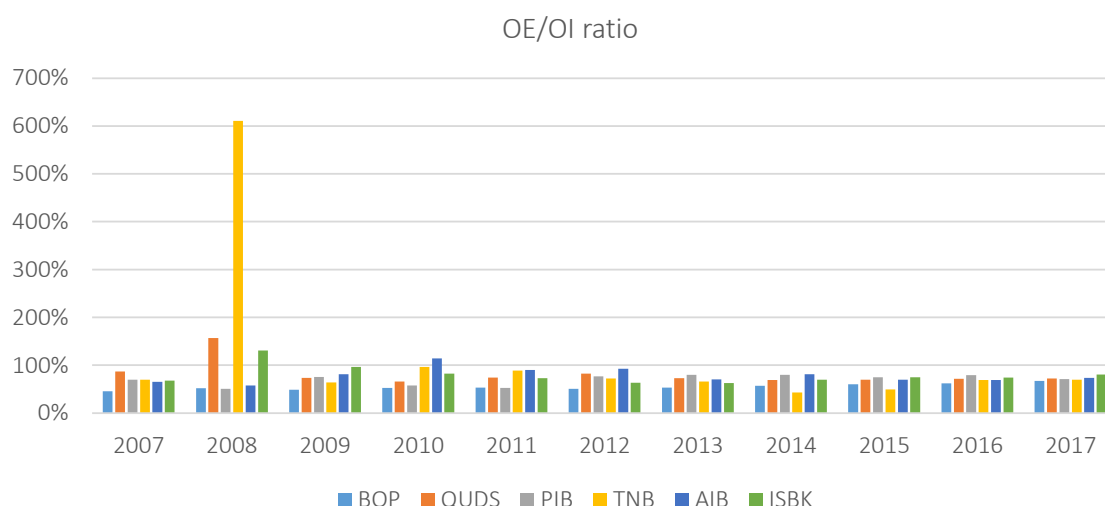**Figure 2.** Nonperforming loans of listed banks (2007–2017)

Figure 3. Operational efficiency ratio of listed banks (2007–2017)

Table 7. Operating expenses to operating income (2007-2017)

Bank	Mean	SD	Composite Rating	Evaluation
BOP	54.61%	6.26%	1	Good
QUDS	81.29%	25.75%	3	Fair
PIBC	69.74%	11.04%	2	Superior
TNB	118%	164%	5	Unsatisfactory
AIB	78.61%	15.80%	3	Fair
ISBK	73.49%	29.21%	2	Superior
Industry average	79.31%	42.01%	2.67	**Fair**

tional risks. Despite this, Palestinian commercial banks have achieved fair operational efficiency over the past eleven years.

3.4. Earnings

Table 8 shows the efficiency of Palestinian banks in investing their loans and advances. The average ROA ratio ranged between 1.9% – 0.3%. Moreover, BOP and PIB both showed adequate levels of earnings: 1.88% and 1.03%, respectively. Both received a rating of 1. However, TNB had the lowest average of 0.3% and received a rating of 4. This implies

that these banks follow a conservative lending policy to avoid risks.

3.5. Adequate liquidity

Table 9 concludes that liquid asset ratios of all listed commercial banks have slightly fluctuated over the eleven-year study period. This is due to an avoidance in granting funds provided by the banks, which indicates that the listed banks do not utilize their funds, such as credit facilities and long-term investments, efficiently. Despite this downturn, liquid assets still occupy a higher per-

Table 8. Average return on assets (2007–2017)

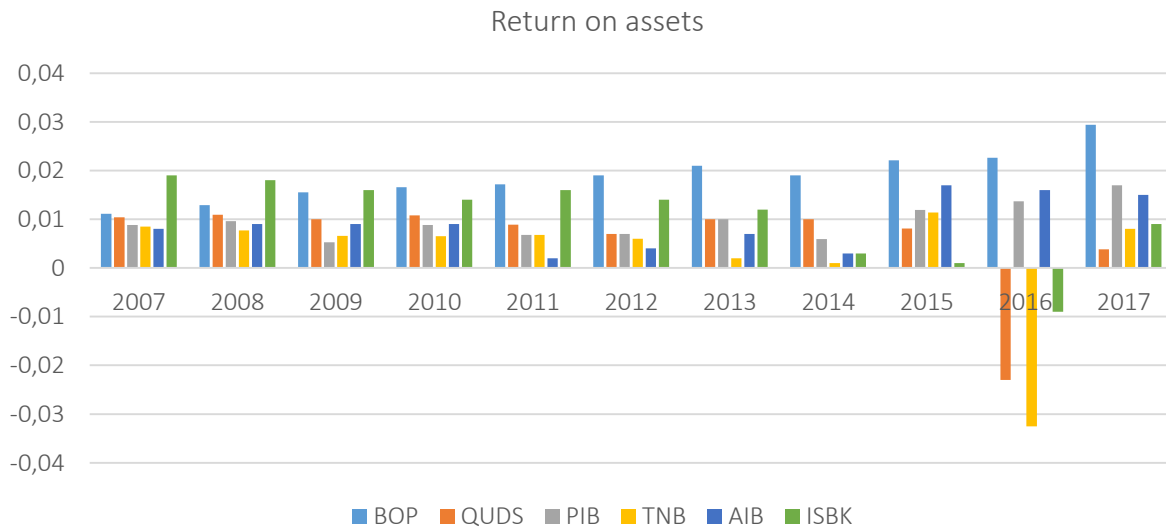| Bank	Mean	SD	Composite rating	Evaluation
BOP	1.88%	0.50%	1	Good
QUDS	0.61%	0.99%	2	Superior
PIBC	0.95%	0.35%	2	Superior
TNB	0.29%	1.21%	4	Marginal
AIB	0.90%	0.51%	2	Superior
ISBK	1.03%	0.86%	1	Good
Industry average	0.94%	0.74%	2	**Superior**

Return on assets

Figure 4. Return on assets of listed banks (2007–2017)

centage than bank assets. The average liquidity ratio is 48%, with a deviation of 12% and a ranking of 2. Thus, Palestinian commercial banks have the ability to meet their short-term obligations and to develop efficient strategies for increasing liquidity during periods of financial instability.

3.6. Overall CAMEL assessment

Table 10 reveals that BOP and ISBK demonstrated strong performance, each receiving a rating of 1. Meanwhile, AIB was ranked second among other listed commercial banks. PIBC's performance was

Table 9. Average liquid assets (2007–2017)

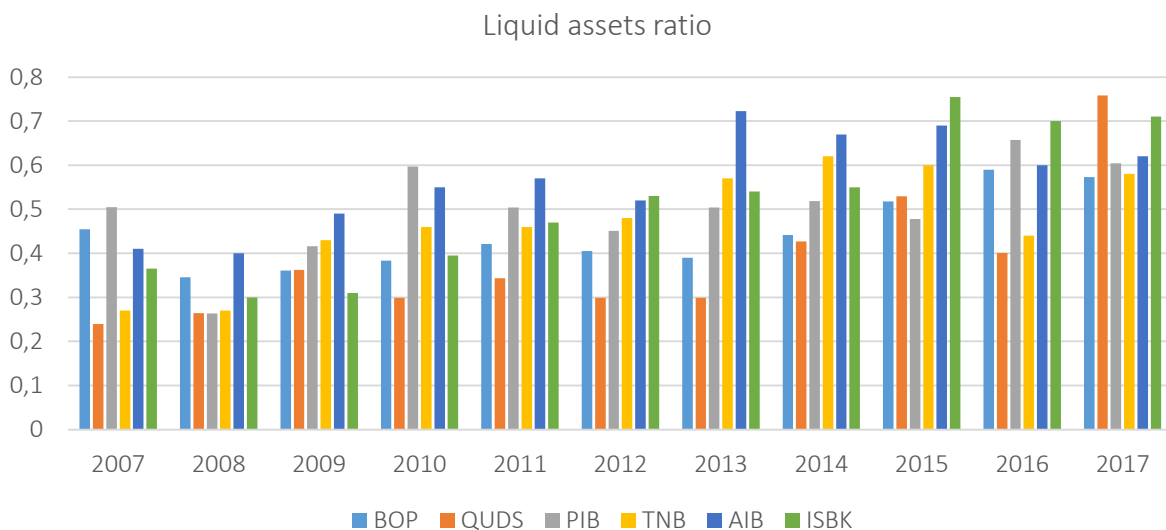| Bank	Mean	SD	Composite rating	Evaluation
BOP	44.38%	8.28%	2	Superior
QUDS	38.38%	14.91%	3	Fair
PIBC	49.98%	10.55%	2	Superior
TNB	47.09%	12.01%	2	Superior
AIB	56.75%	10.72%	1	Good
ISBK	51.14%	16.09%	1	Good
Industry average	47.95%	12.09%	1.83	**Superior**

Liquid assets ratio

Figure 5. Liquid asset ratios of listed banks (2007–2017)

Table 10. Composite rating based on the CAMEL rating system

Bank	C	A	M	E	L	Average rating	Composite rank
BOP	1	2	1	1	2	1.4	1
QUDS	1	5	3	2	3	2.8	4
PIBC	1	4	2	2	2	2.2	3
TNB	1	4	5	4	2	3.2	5
AIB	1	2	3	2	1	1.8	2
ISBK	1	3	1	1	1	1.4	1

acceptable and received a ranking of 3. However, QUDS and TNB both showed acceptable results with some weaknesses and were rated 4 and 5, respectively.

3.7. Comparative analysis

Table 11 exhibits the results of a sample t-test, used to determine whether there are differences in financial soundness among local Palestinian banks evaluated by the acronyms of CAMEL. In general, the results show that the p-value for all CAMEL components among Palestinian banks is less than 5%, thus, the second alternative hypothesis is accepted. This indicates that there are significant differences in means among listed banks assessed by the CAMEL rating system, which leads to the conclusion that the application of the CAMEL framework differs from one bank to another.

4. DISCUSSION

The results showed that all selected banks have committed to the Basel Accords capital requirements. The average capital adequacy ratio (22%) for the period of study exceeds the standard of 10%. This finding indicates that Palestinian banks have the ability to absorb any potential losses and to protect investors from external threats. Thus, this conclusion is in line with that of Chen (2003),

who argued that higher levels of capital adequacy prevent banks from bankruptcy and liquidation.

Regarding asset quality, the results indicate that non-performing loans have fluctuated over the period of study. The average of NPLs has been reduced by banks to just 4%. This means that Palestinian banks have a well-defined credit policy and are able to efficiently manage credit risk. This finding supports the prior work by Rahman and Islam (2018).

Operational efficiency was deemed fairly efficient with an average OE/OI of 79%. This indicates that bank operating revenue is higher than their operating expenses. Palestinian banks have the ability to manage their operational losses, which contradicts Desta (2016).

Profitability was fair with an average ROA of less than 1% during the study period. Due to political factors, Palestinian commercial banks have adopted a conservative credit policy regarding the issuance of loans in order to avoid credit risk. This finding is consistent with the previous study of Kullab and Yan (2018).

The results also showed that the selected banks have high liquidity. The average liquid asset ratio was 48% of bank assets during the study period. This indicates that the banks were able to meet

Table 11. The results of one sample t-test

Source: Author estimation.

Bank	C		A		M		E		L	
	t-value	Sig.	t-value	Sig.	t-value	Sig.	t-value	Sig.	t-value	Sig.
BOP	18.135	0.000	8.263	0.000	14.914	0.000	12.324	0.000	17.780	0.000
QUDS	12.106	0.000	2.938	0.015	17.406	0.000	2.044	0.068	8.536	0.000
PIBC	28.702	0.000	5.530	0.000	19.371	0.000	8.937	0.000	15.704	0.000
TNB	6.541	0.000	5.027	0.001	17.563	0.000	0.798	0.443	13.002	0.000
AIB	18.324	0.000	6.459	0.000	16.863	0.000	5.809	0.000	17.557	0.000
ISBK	8.908	0.000	4.582	0.001	11.984	0.000	3.950	0.003	10.539	0.000

their short-term obligations, which contradicts Kullab and Yan (2018).

The results of one sample t-test indicate that all p-values of CAMEL components are less than the significance level of 5%, which shows that there are significant differences amongst Palestinian banks in terms of performance, assessed by the CAMEL rating system.

CONCLUSION

Despite the unstable investment environment of the Palestinian economy, commercial banks have achieved fair financial soundness, and they are all subject to financial fluctuations due to political instability. Therefore, this paper aims to evaluate the financial performance of Palestinian banks listed on PEX, assessed by the CAMEL rating system over eleven years (2007–2017). Based on this rating system, the study ranked overall performance of the listed banks on a scale from 1 to 5. Additionally, a sample t-test was used to examine whether there are differences in terms of performance among selected banks.

The paper found that Palestinian commercial banks are committed to the Basel Accords and international standards in having a capital adequacy of 10%. The average CAR for all banks amounted to 22.2% over the past eleven years. Thus, all listed banks received a ranking of 1. This indicates that Palestinian banks follow conservative policies towards their invested capital. As for non-performing loans, this study found that Palestinian banks are tentative in minimizing their percentage of loans that are written off. Therefore, the average of NPLs for all banks is 4%, with a rating of 3. Moreover, management efficiency of Palestinian banks varies from one bank to another. However, this paper found that Palestinian banks are fairly efficient and the average ratio of OE/OI is 79%, with a rating of 3. This implies that Palestinian commercial banks perform well in terms of management efficiency. Furthermore, liquidity levels of listed Palestinian commercial banks are well managed, and they have sufficient funds to repay in the event of occasional withdrawals and short-term liabilities. The average of excess cash is 48% of assets and ranks 2.

Palestinian bank performance is assessed using the composite CAMEL rating system. The paper found that the Bank of Palestine and the Palestinian Islamic Bank topped their counterparts with a rating of 1, while the Arab Islamic Bank received a rating of 2. The Palestinian Investment Bank received a rating of 3, while Quds Bank and The National Bank received a rating of 4 and 5, respectively. Finally, the paper reveals that there are significant differences among Palestinian banks' performances assessed by the CAMEL rating system. This paper suggests that Palestinian listed banks should focus on long-term investments rather than short-term ones and closely monitor their risk management practices. This study also recommends that policymakers draw attention to the problem of credit risk management and collaterals when financing investment projects.

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