

DETERMINANTS OF FINANCIAL PERFORMANCE IN THE BANKING SECTOR: A CASE STUDY OF LISTED KUWAITI BANKS



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ABSTRACT

Article History

Received: 31 January 2022

Revised: 20 June 2022

Accepted: 4 July 2022

Published: 29 July 2022

Keywords

Kuwait

Banks

GMM

Return on assets

Return on equity

COVID-19 pandemic.

JEL Classification:

G01; G21; G32; G33.

This study explores the determinants of the profitability of banks listed on the Kuwaiti stock exchange, Boursa Kuwait. This study also investigates the financial performance of the listed Kuwaiti banks during the COVID-19 pandemic. The aim of this study is to examine the correlation between profitability and the factors that determine profitability for 11 listed Kuwaiti banks from 2013 to 2020. Relevant data was statistically analyzed using the generalized method of moments (GMM) model. The empirical findings of this research indicate that deposit volume and oil prices positively impact the profitability of the Kuwaiti banking sector. Conversely, bank size, leverage, and capitalization had a significant negative impact on the earnings of the listed Kuwaiti banks. Based on the findings of this study, several policy recommendations are made that would grow the profits of the Kuwaiti banking sector and mitigate the effects of negative factors.

Contribution/Originality: This study contributes to the literature review through testing the association between financial performance, firm characteristics and macroeconomic variables for Kuwaiti listed banks on Boursa Kuwait (Kuwaiti Stock Exchange). This research is the first study to examine the effects of the COVID-19 pandemic and oil prices on the financial performance of Kuwaiti listed banks using two performance indicators.

1. INTRODUCTION

Bank profitability becomes especially critical in the banking sector during extended periods of economic crisis. One of the most momentous economic crises in human history is the COVID-19 pandemic. Therefore, this study examines the impact of the COVID-19 pandemic on profitability in the Kuwaiti banking sector. There are many studies in the literature that examine the determinants of profitability in the banking sector (Al-Matari, 2021; Alshammari, 2021; Boussaada & Hakimi, 2021; Haddad & Alali, 2021) but none of these studies examine the effects of the COVID-19 pandemic on the profitability of banks. Thus, this study explores the correlation between the COVID-19 pandemic and the profitability of banks listed on Boursa Kuwait, the Kuwaiti stock exchange. The Kuwaiti economy is heavily dependent on the oil sector; therefore, this study also examines the impact of oil prices on the profitability of listed Kuwaiti banks. When oil prices dropped in 2014, the economy of Kuwait was negatively affected. This led to the decision of the Kuwaiti government to diversify the economy, which is being achieved through Kuwait Vision 2035, "New Kuwait". Kuwait Vision 2035 was launched by the Kuwaiti government in 2018 and is aligned with the Sustainable Development Goals (SDG) proposed by the United Nations (UN). The development of the financial sector is one of the primary targets of Kuwait Vision 2035 (New Kuwait, 2018). The

organization responsible for developing and monitoring the Kuwaiti banking sector is the Central Bank of Kuwait. This study aims to examine the determinants of profitability of listed Kuwaiti banks from 2013 to 2020. Determining the positive and negative factors influencing profitability in the banking sector helps policymakers improve the potential for growth in earnings while also avoiding losses. However, previous studies have not investigated the profitability of the Kuwaiti banking sector during the COVID-19 pandemic. This study contributes to the literature review through testing the association between financial performance, firm characteristics and macroeconomic variables for Kuwaiti listed banks on Boursa Kuwait (Kuwaiti Stock Exchange) and attempts to answer the following questions:

- 1) What are the positive determinants of profitability for Kuwaiti listed banks?
- 2) What are the negative determinants of profitability for Kuwaiti listed banks?

The next section discusses the literature review and hypotheses development; Section 3 explains the methods, data description and regressions of the study; Section 4 details the results of the study; Section 5 discusses the findings of the study; and Section 6 concludes.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

In the literature, there are many studies that examine the determinants of financial performance in the banking sector (Abdelaziz, Rim, & Helmi, 2020; Başar, Bouteska, Büyükoğlu, & Ekşi, 2021; Ryu & Yu, 2021). However, there is a dearth of studies analyzing profitability factors in the Kuwaiti banking sector. Therefore, this study explores the drivers of the financial performance of the listed Kuwaiti banks, including during the COVID-19 pandemic (2019–2020). Most studies that investigate factors of profitability in the banking sector focus on commercial banks (Curak, Poposki, & Pepur, 2012; Khan, Ahmad, & Chan, 2018; Mamatzakis, Matousek, & Vu, 2016; Petria, Capraru, & Ihnatov, 2015; Rumler & Waschiczek, 2016; Shaban & James, 2018), some studies explore the indicators of profitability of both Islamic and commercial banks (Bertay, Demirgüç-Kunt, & Huizinga, 2013; Mirzaei, Moore, & Liu, 2013; Zeitun, 2012), and a few studies investigate the profitability and the determinants of profitability of Islamic banks alone (Ashraf, Rizwan, & L’Huillier, 2016; Azmat, Skully, & Brown, 2015). This study, however, focuses on commercial banks listed on Boursa Kuwait, the Kuwaiti stock exchange.

2.1. Bank Size and Financial Performance

Bank size is measured by calculating the natural logarithm of total assets. Most previous studies confirm that large banks are more profitable than smaller-sized banks (Alharthi, 2017b; Alshammari, 2021; Başar et al., 2021; Boussaada & Hakimi, 2021; Rehman, Aslam, & Iqbal, 2022; Saadaoui & Mokdadi, 2022). In contrast, a few studies argue that a smaller total assets value leads to larger earnings (Al-Matari, 2021). Guillén, Rengifo, and Ozsoz (2014) examined the indicators of profitability in Latin America throughout 1989–2005. In this study, it was found that the correlation between bank size and profitability ratios is significant and positive. Hence, there is an expectation of finding a significant and positive correlation between bank size and actual profits.

2.2. Loan Intensity and Financial Performance

One of the primary sources of profits in the banking sector is interest from loans. Thus, this research investigates the impact of loans on the profits of banks. Loan intensity is measured by calculating the ratio of loans to total assets. A significant number of studies have found that loans positively impact financial performance. Examples are the studies by Alshammari (2021) and Saif-Alyousfi and Saha (2021) on GCC countries, and the study by Sahyouni and Wang (2019) on countries in the Middle East and North Africa (MENA) region. Conversely, Alharthi (2017a) and Manlagñit (2011) found that loan intensity decreases profits significantly. The study by García-Herrero, Gavilá, and Santabárbara (2009) established that the relationship between financial performance and loan intensity is insignificant.

2.3. Capital Ratio and Financial Performance

In the banking sector, sizable capital allows banks to run large operations; however, risks may increase simultaneously. Capital ratio is calculated by dividing equity by total assets. Most studies suggest that larger capitalization increases profits (Buallay, Fadel, Alajmi, & Saudagaran, 2020; Saleh & Abu, 2020), while some studies argue that smaller capital effectively increases earnings (Boussaada & Hakimi, 2021). Chen, Liang, and Yu (2018) investigated the correlation between the performance of banks and the determinants of this performance in three Asian countries, with a focus on Islamic and conventional banks. The findings of this study indicate that large capitalization impacts earnings positively. However, it is hypothesized in this study that larger capitalization increases profits significantly.

2.4. Deposit Volume and Financial Performance

Banks entice clients to deposit more money to increase the lending capability of the bank. Alshammari (2021), Haddad and Alali (2021) and Azam and Siddiqui (2012) presented evidence that deposit volume efficiently impacts profitability in the banking sector. However, Başar et al. (2021) posit that the impact of deposit volume on the profits of banks is significant and negative. Kosmidou, Pasiouras, and Tsaklanganos (2007) found an insignificant correlation between profitability and deposits. However, in this study, there is a strong expectation that the correlation between deposit volume and profits is significant and positive.

2.5. Leverage and Financial Performance

Leverage ratio is calculated as liabilities divided by assets. Some studies posit that higher leverage ratios increase the earnings of banks significantly (Al-Matari, 2021; Haddad & Alali, 2021), while some other studies put forward the opposite, i.e., a negative correlation between leverage and financial performance (Hakimi, Rachdi, Mokni, & Hssini, 2018; Rehman et al., 2022). In this study, it is expected that leverage negatively impacts the profitability of listed Kuwaiti banks.

2.6. GDP and Financial Performance

Most studies mentioned in the literature review posit that considerable economic growth enables banks to be enormously profitable (Chitan, 2012; Dedu & Chitan, 2013; Dietrich & Wanzenried, 2011; Kutun, Ozsoz, & Rengifo, 2012; Rehman et al., 2022). Conversely, a few studies postulate that paltry economic development leads to banks earning substantial profits (Alharthi, 2016; Delis, Tran, & Tsionas, 2012; Le & Ngo, 2020). In this study, it is hypothesized that economic growth leads to listed Kuwaiti banks earning more profits than they would during periods of economic stagnation or decline.

2.7. Oil Prices and Financial Performance

Flamini, Schumacher, and McDonald (2009) investigated the impact of petroleum (fuel) prices on the economy of 41 Sub-Saharan African countries and found a significant and negative correlation between petroleum prices and profits in the banking sector. In this study, we investigate the impact of oil prices on listed banks in Kuwait, as oil accounts for a considerable proportion of the GDP of Kuwait. In this study, it is hypothesized that the correlation between oil prices and the profitability of the listed Kuwaiti banks is significant and positive.

2.8. Inflation and Financial Performance

A significant number of previous studies have explored the relationship between inflation rate and financial performance in the banking sector. Although some of these studies found a significant and positive correlation between inflation and profits (Nguyen, Tran, & Ho, 2021; Tan & Floros, 2012), others found that the inflation rate

impact profits significantly and negatively (Houston, Lin, Lin, & Ma, 2010; Kanas, Vasiliou, & Eriotis, 2012; Ongore & Kusa, 2013; Pak, 2020).

2.9. Unemployment and Financial Performance

A study by Mamatzakis et al. (2016) on American banks shows that a considerably high unemployment rate significantly and negatively impacts the profitability of these banks. Bank deposits fall when the unemployment rate rises, which lowers the earnings of banks.

2.10. COVID-19 and Financial Performance

All economies around the world have been negatively affected by the COVID-19 pandemic. Based on listings on stock exchanges, some studies postulate that firms incurred significantly high losses during the pandemic. The study by Hu and Zhang (2021) on China is one example. In contrast, Atayah, Dhiaf, Najaf, and Frederico (2021) posits that G-20 countries could have effectively achieved profitability during the pandemic. In this study, it is hypothesized that the COVID-19 pandemic impacted the profits of the listed Kuwaiti banks significantly and negatively. This study examines the determinants of profitability for the listed Kuwaiti banks. To achieve the aims of this study, this research proposes the following ten research hypotheses that have been developed through following the previous studies in the literature review:

H1: Bank size significantly and positively impacts financial performance.

H2: Loan intensity significantly and positively impacts financial performance.

H3: Capital ratio significantly and positively impacts financial performance.

H4: Deposit volume significantly and positively impacts financial performance.

H5: Leverage significantly and negatively impacts financial performance.

H6: GDP significantly and positively impacts financial performance.

H7: Oil prices significantly and positively impact financial performance.

H8: Inflation significantly and negatively impacts financial performance.

H9: Unemployment significantly and negatively impacts financial performance.

H10: The COVID-19 pandemic significantly and negatively impacts financial performance.

3. METHODS

3.1. Data Description

The data used in this study was sourced from Bursa Kuwait and covers 11 listed banks from 2013 to 2020. Data on macroeconomic variables was sourced from the World Bank. Table 1 presents information on the 11 listed Kuwaiti banks that comprise the study sample.

Table 1. Information about the 11 Kuwaiti listed banks.

Bank Code	Bank Name	Year of Establishment
101	National Bank of Kuwait	1952
102	Gulf Bank	1960
103	Commercial Bank of Kuwait	1960
104	Al Ahli Bank of Kuwait	1967
105	Ahli United Bank	1971
106	Kuwait International Bank	1973
107	Burgan Bank	1975
108	Kuwait Finance House	1977
109	Boubyan Bank	2004
818	AUB Bank	2000
821	Warba Bank	2010

Source: <https://www.boursakuwait.com.kw>.

3.2. Profitability Regression

This study examines the determinants of the profitability of listed Kuwaiti banks using the generalized method of moments (GMM) model, following the example of Başar et al. (2021). Based on the hypotheses of this study, profitability regression can be formulated as follows:

Model (1) examines the association between return on assets (ROA) and its determinants.

$$ROA_{it} = \alpha + \beta_1 LTA_{it} + \beta_2 LOANSTA_{it} + \beta_3 EQTA_{it} + \beta_4 LDEPOSITS_{it} + \beta_5 LEVERAGE_{it} + \beta_6 LGDP_{it} + \beta_7 LOIL_{it} + \beta_8 INFLATION_{it} + \beta_9 UNEMPLOY_{it} + \beta_{10} COVID19_{it} + \varepsilon_{it} \quad (1)$$

Model (2) examines the association between return on equity (ROE) and its determinants.

$$ROE_{it} = \alpha + \beta_1 LTA_{it} + \beta_2 LOANSTA_{it} + \beta_3 EQTA_{it} + \beta_4 LDEPOSITS_{it} + \beta_5 LEVERAGE_{it} + \beta_6 LGDP_{it} + \beta_7 LOIL_{it} + \beta_8 INFLATION_{it} + \beta_9 UNEMPLOY_{it} + \beta_{10} COVID19_{it} + \varepsilon_{it} \quad (2)$$

ROA and ROE are return on assets and return on equity, respectively; i denotes the bank; t is the year; α represents a constant; β is a coefficient; LTA denotes the natural logarithm of total assets, which is a proxy for bank size; $LOANSTA$ denotes loan intensity (ration of loans to total assets); $EQTA$ denotes capital ratio (ratio of equity to total assets); $LDEPOSITS$ represents the natural logarithm of deposits; $LEVERAGE$ denotes leverage (liabilities over total assets); $LGDP$ denotes the natural logarithm of gross domestic product; $LOIL$ denotes the natural logarithm of oil prices; $INFLATION$ represents inflation rate; $UNEMPLOY$ denotes unemployment rate; $COVID$ denotes a dummy variable representing the period of the COVID-19 pandemic, with 1 denoting the years 2019–2020 and 0 otherwise.

4. RESULTS

Table 2 presents the descriptive statistics for the variables in this study, including 88 observations. The means that the ROA and ROE ratios are 0.009068 and 0.07725, respectively. The smallest ROA value is -0.014 , while the largest is 0.02. Regarding the ROE ratio, the smallest is -0.118 and the largest is 0.184. The mean bank size is 8.7136, the mean loan intensity is 0.6312, the mean capital ratio is 0.1209, the mean deposit volume is 8.4947, the mean leverage is 0.8085, the mean GDP is 25.5962, the mean oil price is 1.0023, the mean inflation rate is 2.2462, the mean unemployment rate is 2.9512, and the mean of the dummy COVID-19 pandemic variable is 0.25.

Table 2. Descriptive statistics for the variables of the study.

Variable	Obs.	Mean	Std. Dev.	Min.	Max.
ROA	88	0.009	0.005	-0.014	0.020
ROE	88	0.077	0.043	-0.118	0.184
LTA	88	8.713	1.017	6.010	10.600
LOANSTA	88	0.631	0.088	0.470	0.820
EQTA	88	0.120	0.022	0.070	0.220
LDEPOSITS	88	8.494	1.048	5.510	10.330
LEVERAGE	88	0.808	0.080	0.550	0.910
LGDP	88	25.596	0.170	25.390	25.880
LOIL	88	1.002	0.358	0.770	1.915
INFLATION	88	2.246	0.931	0.540	3.270
UNEMPLOY	88	2.951	1.476	2.160	6.790
COVID	88	0.250	0.435	0	1

Table 3. Correlation matrix for the variables.

Variable	ROA	ROA	LTA	LOANSTA	EQTA	LDEPOSITS	LEVERAGE	LGDP	LOIL	INFLATION	UNEMPLOY	COVID
ROA	1											
ROE	0.655	1										
LTA	0.555	0.571	1									
LOANSTA	-0.184	-0.201	-0.625	1								
EQTA	-0.092	-0.270	-0.277	-0.083	1							
LDEPOSITS	0.556	0.581	0.694	-0.623	-0.322	1						
LEVERAGE	0.144	0.230	0.189	-0.105	-0.519	0.289	1					
LGDP	0.093	0.122	-0.096	-0.132	0.135	-0.093	0.001	1				
LOIL	-0.424	-0.399	0.076	0.012	-0.129	0.061	-0.115	-0.251	1			
INFLATION	-0.106	-0.062	-0.111	-0.028	-0.078	-0.097	0.128	-0.120	-0.051	1		
UNEMPLOY	-0.423	-0.402	0.083	0.024	-0.134	0.068	-0.116	-0.339	0.994	-0.048	1	
COVID	-0.270	-0.267	0.133	0.021	-0.070	0.114	-0.155	-0.277	0.640	-0.403	0.648	1

Table 4. Information on the profitability (ROA and ROE) of the listed Kuwaiti banks over the 2013–2020 period.

Dependent Variable: ROA	Coef.	P > z	Dependent Variable: ROE	Coef.	P > z
LTA	-0.086*	0.053	LTA	-0.300	0.348
LOANSTA	0.030	0.218	LOANSTA	0.031	0.852
EQTA	0.023	0.173	EQTA	-0.283*	0.096
LDEPOSITS	0.090**	0.042	LDEPOSITS	0.333	0.296
Leverage	-0.125*	0.060	Leverage	-0.380	0.402
LGDP	-0.017	0.660	LGDP	-0.017	0.763
LOIL	0.042*	0.085	LOIL	0.214	0.326
INFLATION	-0.000	0.442	INFLATION	-0.000	0.786
UNEMPLOY	-0.012*	0.058	UNEMPLOY	-0.064	0.235
COVID	-0.002	0.229	COVID	-0.015*	0.072
Constant	0.498	0.614	Cons	0.709	0.627
AR(1) test	-1.080	0.302	AR(1) test	-1.780	0.058
AR(2) test	-1.450	0.144	AR(2) test	-1.730	0.054
Sargan test	215.450	0	Sargan test	266.320	0
Hansen test	11.840	1	Hansen test	12.710	1
R ²	0.641		R ²	0.629	

Note: * and ** represent the statistical significance levels of 10% and 5%, respectively.

Table 3 presents the correlation matrix of the variables in this study. The values in the correlation matrix confirm that there is no multicollinearity between the variables.

Table 4 presents information on the profitability (ROA and ROE) of the listed Kuwaiti banks over the period 2013–2020.

From the data in Table 4, it can be seen that deposit volume and oil prices impact ROA positively, while bank size, leverage, and unemployment significantly impact ROA negatively. Regarding ROE, the size of capital and the COVID-19 pandemic impacted ROE negatively. In this study, multiple tests were run to check the validity and readability of the GMM models, including the Arellano–Bond test (AR(1) test and AR(2) test) and the Sargan and Hansen tests. The Arellano–Bond test evaluates the p-order autocorrelation (AR(p)) of the error term (Prob. > Z and Z-test). The Sargan and Hansen tests examine the validity of the instrumental variables (Prob. > χ^2 and χ^2 test). The results of the AR(1) and AR(2) tests show that the GMM model is significant and fit to be utilized because the p-values for both models are greater than 0.05 (see Table 4). The R-squared of the correlation between the ROA and the independent variables is 0.6414, and for the correlation between the ROE and its factors, the R-squared is 0.6297.

Table 5 presents the hypothesis testing results, which support the hypotheses on bank size, capital ratio, deposit volume, leverage, oil prices, unemployment, and the COVID-19 pandemic. However, the hypotheses on loan intensity, economic growth, and inflation rate are not supported.

5. DISCUSSION

The results of this study (see Table 4 and Table 5) indicate that the profitability of the listed Kuwaiti banks is impacted by the following:

- 1) Bank size.
- 2) Capital ratio.
- 3) Deposit volume.
- 4) Leverage.
- 5) Oil prices.
- 6) Unemployment.
- 7) The COVID-19 pandemic.

5.1. Bank Size

The correlation between ROA and bank size is significant and negative. This means that small banks are more profitable than larger banks. This result is similar to the findings of the studies by Alshammari (2021); Başar et al. (2021); Rehman et al. (2022) and Shaban and James (2018). In contrast, Al-Matari (2021); Başar et al. (2021) and Bertay et al. (2013) found that large banks are more profitable than smaller-sized banks.

This study's finding should discourage Kuwaiti banks from opening more branches or acquiring more assets, as that may increase the risk exposure of the bank.

5.2. Capital Ratio

The GMM model results indicate that large capital ratios decrease ROE significantly, similar to the findings of Boussaada and Hakimi (2021); Chen et al. (2018) and Curak et al. (2012). However, studies by Buallay et al. (2020) and Saleh and Abu (2020) report an opposing outcome. This finding directs banks to reduce their capital outlay to increase their profitability. In essence, Kuwaiti banks should reduce equity intensity to enhance earnings.

5.3. Deposit Volume

The relationship between ROA and deposit volume is significant and positive. This finding is in line with the findings of Alshammari (2021); Haddad and Alali (2021) and García-Herrero et al. (2009). In contrast, studies by Başar et al. (2021) and Dietrich and Wanzenried (2011) report an opposing finding, i.e., the correlation between deposit volume and profitability is significant and negative. For the banks, this study's finding indicates that accepting more deposits contributes positively to earnings growth. Therefore, to enhance profitability, banks can attract more deposits by increasing deposit interests.

Table 5. Hypotheses testing results.

Hypothesis	Correlation	Decision
H1	Bank size impacts financial performance significantly and positively	Supported
H2	Loan intensity impacts financial performance significantly and positively	Not supported
H3	Capital ratio impacts financial performance significantly and positively	Supported
H4	Deposits size impacts financial performance significantly and positively	Supported
H5	Leverage impacts financial performance significantly and negatively	Supported
H6	GDP impacts financial performance significantly and positively	Not Supported
H7	Oil prices impacts financial performance significantly and positively	Supported
H8	Inflation impacts financial performance significantly and negatively	Not supported
H9	Unemployment impacts financial performance significantly and negatively	Supported
H10	COVID-19 impacts financial performance significantly and negatively	Supported

5.4. Leverage

The research findings indicate that higher levels of leverage (liabilities) increase the risk of incurring significant losses. Rehman et al. (2022) and Hakimi et al. (2018) arrived at the same conclusion, but Al-Matari (2021) and Haddad and Alali (2021) reached the conclusion that the correlation between profitability and leverage is significant and positive. In this case, based on this study's finding, the listed Kuwaiti banks can increase their profits by reducing their liabilities.

5.5. Oil Prices

The correlation between ROA and oil prices is significant and positive. When the price of oil increases, the Kuwaiti economy expands, and consequently, the Kuwaiti banking sector achieves significant profitability. Flamini et al. (2009) reported that the correlation between ROA and petroleum (fuel) prices is significant and positive in 41 Sub-Saharan African countries. Kuwait depends heavily on its oil sector to fund its expenditures, and the oil

markets are currently risky and uncertain; therefore, Kuwait should diversify its economy to reduce the impact of fluctuations in oil prices.

5.6. Unemployment

High rates of unemployment significantly decrease the profitability of listed Kuwaiti banks. This result is in line with the findings of Mamatzakis and Bermpel (2016) regarding US Commercial banks. This finding suggests that the Kuwaiti government and the private sector should create more jobs to enhance banking sector profits. Controlling the unemployment rate is hinged on many factors, including foreign direct investment (FDI). Hence, the Kuwaiti government could attract more FDI to improve employment rates.

5.7. COVID-19 Pandemic

During the COVID-19 pandemic, the profits of the listed Kuwaiti banks declined significantly. A study by Hu and Zhang (2021) reports the same finding. This finding suggests that policymakers should formulate more strategies to mitigate the economic risks posed by the pandemic. In the future, banks can increase their reserves to enable them to cope with unexpected crises, as uncertainty levels are rising rapidly.

6. CONCLUSION

The main goal of this study is to explore the determinants of profitability for Kuwaiti listed banks for the period between 2013 and 2020. The data was collected from Boursa Kuwait for the firm characteristics' variables, while country-specific factors were gathered from the World Bank. The data was analyzed through the generalized method of moments (GMM) model, and the results reveal that a higher number of deposits leads to better financial performance in the banking sector. Moreover, loans support earnings positively. These findings suggest that banks can focus on accepting more deposits and offering more lending. In addition, the correlation between oil prices and ROE is significant and positive. This should encourage the Kuwaiti government to diversify the economy of Kuwait to avoid the effects of the volatility of oil prices on banks' financial performance. This study also found negative indicators that can reduce the profits negatively – the size of banks, capitalization, unemployment, and leverage. In this case, decreasing the total assets and equity is suggested to increase profits. Additionally, banks should control their liabilities through finding more sources of profits and being more competitive. Regarding employment, the government and the private sectors can support the creation of jobs to support the financial performance in the banking sector. During the COVID-19 pandemic, the profitability of banks in Kuwait decreased significantly due to slower growth of the world's economy and the increase of uncertainty. According to the policy implications of this study, the findings may help policymakers in the banking sector to identify the factors that can enhance financial performance and avoid negative indicators. For example, the findings encourage banks to attract more deposits from clients. In addition, the results suggest decreasing the total assets, equity and leverage to support profitability. Moreover, this study supports the Central Bank of Kuwait in drawing up policies and regulations to improve the profitability of Kuwait's banking sector. The Central Bank of Kuwait can allow Kuwaiti banks to increase the percentage of accepting more deposits and to offer more loans. Finally, the findings of this study can help the Kuwaiti government to support employment plans and draw more prudential strategies against crises, such as the COVID-19 pandemic, to increase financial performance in the banking sector. The limitation of this study is that the data for listed Kuwaiti banks is only available from 2013 on the Kuwaiti stock market website. For further research, groups of countries, such as MENA and GCC countries, can be included. In addition, more models and variables can be examined with up-to-date data.

Funding: This study received no specific financial support.

Competing Interests: The author declares that there are no conflicts of interests regarding the publication of this paper.

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