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## **The Effects of Coronavirus on The Profitability of the Banks Operating in Jordan: An Empirical study**

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**Abstract.** This paper investigates the impact of the COVID-19 pandemic on the profitability of the banking sector in Jordan, given the paucity of empirical research on the impact of the COVID 19 pandemic on profitability bank in the context of developing countries. To achieve the search objective, the study selects all Jordanian banks listed in Amman stock exchange during period from 2018 until the year of emergence of corona pandemic 2020 to cover the requirements of statistical and financial analysis. The results study show that the financial indicators extracted from the financial reports of Jordanian banks from 2018-2020 had a decline in value during the year 2020 which corresponds to the emergence of coronavirus pandemic which means that the first hypothesis is valid. Our analysis shows that net profit and total revenue and provision for credit and return on equity affect significantly the profitability banks. The value of profitability banks at the Amman stock exchange amounts to 68.5 %, while the remaining of 31.5 % refers to other variables that were not included in the construction of the study model.

**Keywords.** Profitability, Jordanian banks, coronavirus pandemic, financial reports, Amman stock exchange

### **1. Introduction**

The banking sector is considered one of the most important basic sectors in the Jordanian economy, not only for its important role in mobilizing domestic and foreign savings and financing investment, which represents the backbone of economic activity, but also because it represents the most important link with the outside world. The world overlooks us and we look at the world, and its development and strength of conditions become a criterion for judging the world the soundness of the economy and its ability to attract local and foreign capital.

Many countries of the world have taken some precautionary measures (closure) in order to contain the Corona virus and prevent the outbreak of the epidemic, but these measures taken had a significant negative impact on economic activity in a way general. Some economic sectors were particularly affected, given the special nature of some sectors; and on Although it is difficult to predict the degree of impact of the Corona pandemic on all economic activities, most studies It indicates the disruption of many economic sectors around the world, which will lead to increased financial pressure on the economy Governments and individuals alike.

With regard to the banking sector, the majority of central banks around the world have taken many monetary policies and financial measures to contain and confront the repercussions resulting from the suspension of the work of various economic activities, as the Central Bank of Jordan reduced most interest rates by 50 points (March 3) and equivalent to 100 points (March 6). In addition, the Central Bank of Jordan allowed Jordanian banks to postpone the installments due on the affected sectors and retail customers (without commission or delay interest), which as a result increased the financial pressure on the performance of the Jordanian banking sector (1)

As it is known, the Corona pandemic constituted a great shock with unprecedented effects that provoked a state of instability among the general public and a large degree of uncertainty in the global economy, but the economic system during the pandemic as a result of the exceptional measures taken by most countries in the world at the level of financial policies and monetary policy, which helped contain the risks of the pandemic on global economic activity and financial stability, and the contraction of global economic activity in 2020 amounted to about -3.3%, compared to a growth of 8.2% for 2019, while in Jordan, the economic contraction for 2020 amounted to about -6.1% compared to Economic growth reached about 2% in 2019, affected, like other countries of the world, by the Corona pandemic and its negative repercussions on most economic activities, however, the rate of contraction recorded by the Jordanian economy in 2020 was much less than what was expected at the beginning of the pandemic, as it was expected that the Jordanian economy would shrink further, at a rate of about -3.4%, indicating that the proactive and comprehensive measures taken by the government and the Central Bank contributed significantly to reducing from the severity of the contraction and led to recording a rate of contraction among the lowest in the region. Preliminary results indicate an increase in the economic growth rate in the Kingdom for the first quarter of 2021 to 3.0%, This indicates that a recovery has begun The Jordanian economy, especially with the stability of the epidemiological situation in the Kingdom, which helped to reopen the economic sectors that began to gradually recover (2).

### **Problem of the study**

- 1- To what extent has the Corona crisis affected the profitability of Jordanian banks?
- 2- What is the level of profitability of Jordanian banks which measured through the return on assets and return on equity?

### **Hypothesis of the study**

To answer the problem of the study, the following hypotheses were proposed:

H1: There is a statistically significant relationship between the emergence of the Corona crisis and the decline in the profitability of Jordanian banks.

H2: There is no statistically significant relationship between the profitability of banks, which is expressed through the return on assets, and the change in one of the following variables:

H21: There is no statistically significant relationship between banks' profitability and net profits.

H22: There is no statistically significant relationship between banks' profitability and total revenue.

H23: There is no statistically significant relationship between the profitability of banks and the provisions for credit facilities.

H24: There is no statistically significant relationship between the profitability of banks and the return on equity.

H3: There is no statistically significant relationship between the profitability of banks, which is expressed through the return on equity, and the change in one of the following variables:

H31: There is no statistically significant relationship between banks' profitability and net profits.

H32: There is no statistically significant relationship between banks' profitability and total revenue.

H33: There is no statistically significant relationship between banks' profitability and provision for credit facilities.

H34: There is no statistically significant relationship between banks' profitability and return on assets.

### **Importance of the study**

- This study gains its importance from the importance of the banking sector in the development of the national economy.

- This study acquires its importance again from the importance of financial analysis indicators to assess the financial position of the bank so that it constitutes a source of information for decision makers in building their investment decisions.

### **Objective of the study**

\* This study seeks to determine the degree of impact of the Corona crisis on the profitability of the studied Jordanian banks.

\* Attempting to build a model capable of measuring the profitability of banks based on a set of indicators.

\* This study aims to find the relationship between the outbreak of the crisis and the decline in the profitability of banks through the decline in the values of financial performance indicators.

\* Knowing the weight of each ratio, as well as its importance in explaining the profitability of banks.

## **2. Literature review**

Previous literature indicates that the profitability of institutions has been affected by the Corona pandemic in many countries of the world, and we summarize it as follow:

(3) investigates the impact of the COVID-19 pandemic on banking sector profitability in Uganda for the period spanning Q1 2000 to Q1 2021, using the autoregressive distributed lag (ARDL Bound) testing approach to co-integration while controlling for bank specific and macroeconomic determinants of bank profitability. Bank profitability is proxied by return on assets (ROA), return on equity (ROE), and net interest margin (NIM). The study finds that the COVID 19 pandemic has a significant negative effect on bank profitability only in the long run. Generally, the explanatory variables used in the study have short run and long run effects on bank profitability, although the impact is not uniform across the different measures of bank profitability. In the short run, bank profitability is generally negatively and significantly affected by the non-performing loans ratio, liquidity ratio, and market sensitivity risk, while the Treasury Bill interest rate and lending rate have a significant positive effect on bank profitability. In addition, the study finds that bank profitability has a tendency to persist in the short run, although persistence is only moderate, suggesting that the Ugandan banking sector may not have large deviations from a perfectly competitive market structure. In the long run, bank profitability is broadly positively and significantly affected by the non-performing loan ratio, real GDP, lending rate and Treasury Bill interest rate while market sensitivity risk and the

exchange rate significantly and negatively affect bank profitability. Surprisingly, the study finds inflation does not significantly affect bank profitability over both the short- and long-term.

(4) investigate the determinants of banking sector profitability in South Africa, Nigeria and the United States for the period from 1996 to 2017. The vector of bank profitability variables consists of the net income margin, return on assets before tax and return on equity before tax while the independent used in this study are the concentration bank (CN), capital adequacy ratio (CAP) and cost efficiency ratio (EFF) and the overhead cost to total assets ratio (OPTA) and non-performing loans to total loan ratio (NPL) and inflation rate (INF), growth ratio (GDP) which are extracted from the word development indicators in the world bank databank. The findings reveal that cost efficiency, the size of non-performing loans and overhead cost to total asset ratio are significant determinants of the banking sector profitability. In the comparative analysis, the findings from South Africa show that the cost efficiency ratio, overhead cost to total asset ratio and non-performing loans are significant determinants of the banking sector profitability. In the United States, capital adequacy ratio and the size of non-performing loans are significant determinants of its banking sector profitability. In Nigeria, the overhead cost to total asset ratio and cost efficiency ratio are significant determinants of the banking sector profitability. The descriptive analysis reveal that bank net interest margin and return on asset are higher in Nigeria and lowest in the United States which suggests that the Nigerian banking sector is more profitable than the US banking sector. Return on equity is higher in South Africa and lowest in the United States.

(5) aims to explore the effects of COVID-19 on profitability among Private Banks in Gondar city the case of awash bank and inform interventions and responses. Cross-sectional survey primary data were collected using self-administered questionnaires from 96 employees from five Branches of Awash Bank in Gondar city (Gondar branch, Maraki branch, Azezo branch, Fasiledes branch and Kidamiegbya), in addition interview and focus group discussion were undertaken. The result shows that resource mobilization will not be an easy to do task considering the effect of the pandemic on the critical success factors: reduced per capital income, limited expansion in branch network and saving habit and bank usage. The negative impact of the pandemic on foreign currency mobilization apparently reduce the amount of import approval and the income generated from deploying foreign exchange resources (service fees plus revaluation gains). The impact is proportional to the magnitude of reduction in foreign currency earnings in terms of liquidity, the private banking system has reached the maximum limit on loan able funds (given 5 percent mandatory reserve requirement). The pandemic impact on the construction sector, on foreign exchange earnings and liquidity determines the level of off-balance sheet and the earning thereof- which most of them remain a concern. Besides the balance sheet development, the last decade was also the time a strong performance in the earning of private banks was witnessed. However, key revenue sources will have a chance to be affected due to pressure from low demand, price reduction, accumulated low earning asset- mainly bill purchases, reduction of charges and commissions etc. Even if the impact is expected, the response from each private bank might not be the same. For instance, fee-based dependence by banks shows that small private banks are more dependent on such income sources than the relatively big private banks and the dependency reach up to 54% in some banks.

(6) aim to determine the ranking of banks by countries using the CAMELS model and compare banks within and between countries using the indicators of the CAMELS model. The financial data were collected from annual audited financial statements of the selected banks of both countries. The banks' balance sheets and income statements involved in the study were downloaded from the banks' websites. The local commercial banks selected for the analysis are

including six local commercial banks from Qatar and five local commercial banks from Kuwait for period of the study (2013–2017). The banks were analysed using two financial ratios per CAMELS factors, using a total of twelve ratios. These ratios were used to classify banks ranking and determine the level of their performance to be analysed through two statistical methods (ANOVA) to compare individual financial indicators between countries and (MANOVA) was used to examine the CAMELS factors, where the two indicators in the factors were examined together. The results show statistically significant differences between countries for four factors (Asset quality, Management efficiency, Earnings quality and Sensitivity) and none for the remaining two (Capital adequacy and Liquidity management) because the significant level is higher than 5%. However, the two factors with no significant differences are vital to the prudent operation of banks mainly that Qatari banks perform better than Kuwaiti Banks.

(7) studied the Indonesia's economic contraction eased and its Covid-19 handling improved in the first quarter of 2021, with at least 13% of the targeted population receiving their first vaccination by the third week of June. The economic improvement was driven by external sectors, but the pace of the recovery differed considerably across sectors. This Survey looks at the balance sheets of corporations and the banking sector in the midst of the pandemic. We find that the worsening of corporate balance sheets may require government intervention to prevent liquidity problems from turning into solvency problems. While the banks' capital position remains adequate, the deterioration of loan quality, reflecting real sector conditions, is worse than it appears. Recent stress testing of the banking sector confirms the potential vulnerabilities in the sector. We end the article by highlighting policies the government could consider to position Indonesia for a post-pandemic future, particularly over the next two years.

(8) studied seven Indian chemical companies in terms of financial aspect using 12 financial ratios analysis (current assets to current liabilities, quick assets to current liabilities, liquid assets to current liabilities, net credit sale to average trade debtors, total sales to total assets, cost of goods sold to average inventory, shareholder funds to total assets, total debts to total equity, total debts to total assets, fixed assets to net worth, earnings after tax to net sales, earnings before interest and tax to net capital), Technique for Order of Preference by Similarity to Ideal Solution (TOPSIS), Complex Proportional Assessment (COPRAS) and Data Envelopment Analysis (DEA) along with weighing systems of equal weighing, Entropy Shannon and Friedman test as the objective of research during 2010 to 2018. The obtained results for the efficiency of industries were approached to full efficiency of industries in most cases. The statistical analysis revealed significant differences among the data of industries. The Friedman test has provided valuable weights for raw values. The Entropy Shannon weighting system has provided the positive and negative weights for existing values and also sought the highest consistency with the COPRAS ranking system. By the way, the COPRAS ranking system had classified industries based on negative and positive criteria (expenses and revenues). The TOPSIS procedure ranked the industries based on the available ratio analysis and it has emerged a good agreement among the industries ratio values. The profit and loss analysis made clear the output incomes and input expenses. Also, it resulted in output and input criteria for introducing into the DEA model. The findings based on the COPRAS model predict the situation of industries for the further financial statement concept. With regard to a rise in the expenses, the ranking system for the income will be taken lots of fluctuations.

(9) investigates the financial performance of Erbil Bank for Investment and Finance, Kurdistan Region of Iraq during the period of 2009-2013. Several financial performance parameters are used such as financial ratios analysis which is used to measure the financial position for the bank and on broader range statistical tools also have been used for analysis

purpose of several variables which would affect the banking system in general in order to know whether these variables are significantly correlated with the financial performance for the bank. To achieve this purpose, nine financial ratios are calculated (ROA, ROE, ROD, Total revenue to total assets, provisions to loan, provisions to assets, deposits to assets, net profit margin). The findings of the study show the positive behaviour of the financial position for Erbil Bank and some of their financial factors variables influence the financial performance for the bank. Then, it is found that the overall financial performance of Erbil Bank is improving in terms of liquidity ratios, assets quality ratios or credit performance, profitability ratios (NPM, ROA, ROE). This study examines the impact on the financial performance of Erbil Bank, which was taken as a sample for the purpose of analysis of financial performance. Returns on asset, return on equity and return on deposit were taken as dependent variables while bank size, asset management and operational efficiency were taken as independent variables. Results showed that the ROA of the banks were strongly and negatively influenced by the bank size. Operational efficiency is negatively related with the ROA and results also showed that it was statistically significant. Other dependent variable interest income of the banks was strongly positive influence by the bank size and is statistically significant. Interest income showed negative relation with the operational efficiency and results were also statistically significant. On the practical dimension, this study is helpful for bankers and managers in their decision making to improve the financial performance and formulate policies that will promote effective financial system. This study suggests a set of recommendations regarding the development and enhancing of some banking operations which will boost the bank's profitability and improve the financial performance for the bank.

### 3. Methodology of the study

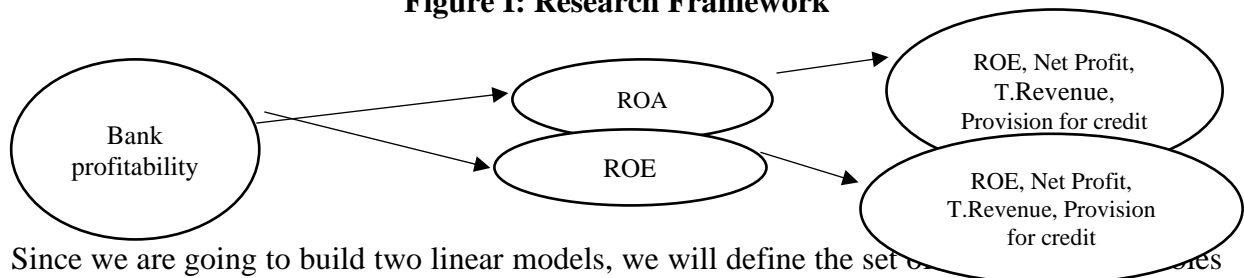
#### 3.1. Definition of variable operations

Theoretically, the operational definition of a variable is an element of research that provides an explanation or explanation of the operational variables so that they can be observed or measured. In this study the dependant variable is the bank profitability. Both the dependent variable and the independent variables represent the financial ratios of the banks study (15 Jordanian banks listed on Amman stock exchange for the period (2018-2020)) extracted from the financial reports of these banks which are available on the Amman stock exchange website (10).

#### Bank Profitability:

Profitability of the bank may be assessed through various indicators or variables measuring the bank success.

**Figure I: Research Framework**



Since we are going to build two linear models, we will define the set of independent and dependent variables for each model:

For the first model, which measures the profitability of banks through the return on assets, it consists of a set of independent and dependent variables as follows:

### 3.1.1. Independent variable (X):

- **Net profit (x1)**

It the bank ability to make a profit.

- **Total revenue (x2)**

Total bank revenues are the total income that the bank obtains as a result of carrying out its banking operations.

- **Provision for credit (x3)**

It is an estimate of the potential losses that the company may face due to credit risk, it is expected losses from bad and overdue debt or any other credit that is likely to default or become unrecoverable. Changing this variable contributes to explaining the profitability of banks.

- **ROE (x4)**

Return on assets reflects the bank's ability to achieve returns as a result of the optimal use of equity right or shareholders' equity.

### 3.1.2. Dependent variable (Y):

The return on assets is the variable dependent in this model, the return on assets reflects the bank's ability to achieve returns as a result of the optimal use of its assets.

For the second model, which measures the profitability of banks through the return on equity, it consists of a set of independent and dependent variables as follows:

### 3.1.3. Independent variable (X):

- **Net profit (x1)**

It's the bank ability to make a profit.

- **Total revenue (x2)**

Total bank revenues are the total income that the bank obtains as a result of carrying out its banking operations.

- **Provision for credit (x3)**

It is an estimate of the potential losses that the company may face due to credit risk, it is expected losses from bad and overdue debt or any other credit that is likely to default or become unrecoverable. Changing this variable contributes to explaining the profitability of banks

- **ROA (x4)**

The return on assets is the variable independent in this model, the return on assets reflects the bank's ability to achieve returns as a result of the optimal use of its assets.

### 3.1.4. Dependent variable (Y):

Return on equity reflects the bank's ability to achieve returns as a result of the optimal use of equity right or shareholders' equity. In this model is the dependent variable.

## 3.2. Data Analysis method

This study's analysis method is use to determine the effects of the independent single variables, depending variable by multiple linear regression analyses. Furthermore, to detect how much influence the independent variable has and to predict its value. Two or more for multilinear regression separate variables entered with in model are used. The linear regression multiple equations with three separate variables are as follows: in this study, the method of analysing the effect of the two or more separate variables on each dependent variable is determined by means of a multilinear regression analysis. Furthermore, it is proposed to determine how much the value of independent variables affects and predicts it. To achieve this, we had used SPSS program.

The linear regression multiple equation with five different variables is as follows:

**(Equation 1):**

$$ROA = \beta_0 + \beta_1 \text{Net profit} + \beta_2 \text{T.revenue} + \beta_3 \text{Provision} + \beta_4 \text{ROE} + \epsilon_1$$

**(Equation 2):**

$$ROE = \beta_0 + \beta_1 \text{Net profit} + \beta_2 \text{T.revenue} + \beta_3 \text{Provision} + \beta_4 \text{ROA} + \epsilon_2$$

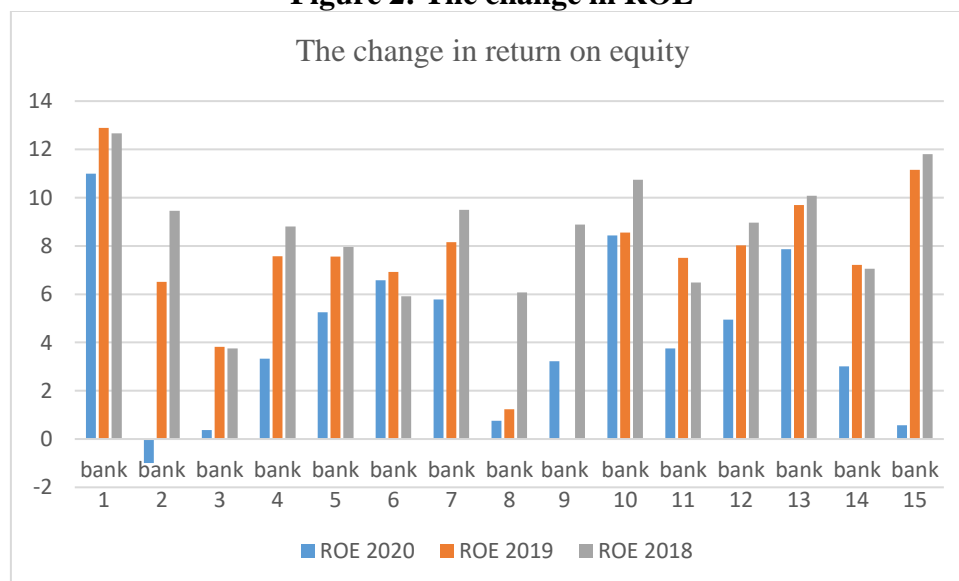
#### 4. Result and Discussion

##### 4.1.Data graphic representation:

From the following figure 2, we note that the change in the return on equity values during the study years (2018-2020) appeared as follows:

In the year 2020, all banks achieved low rates in terms of return on equity, which is represented by the blue column in the figure, which reflects the impact of the crisis on the profitability of the latter in terms of return on equity, especially since these values were calculated until the end of 2020, which reflects the impact of the first 9 months of the crisis that was It appeared in March 2020. This approve that there is a relationship between the decrease of return on equity and the emergence of corona crisis, so we accept the first hypothesis which means that there is a statistically significant relationship between the emergence of the Corona crisis and the decline in the profitability of Jordanian banks through the decline of the return on equity values. In both 2018 and 2019, these ratios took significant values compared to 2020 in all banks, which indicates the ability of these banks in these two years to achieve important financial returns from the bank's good investment of its own money or what is known as property rights.

**Figure 2: The change in ROE**

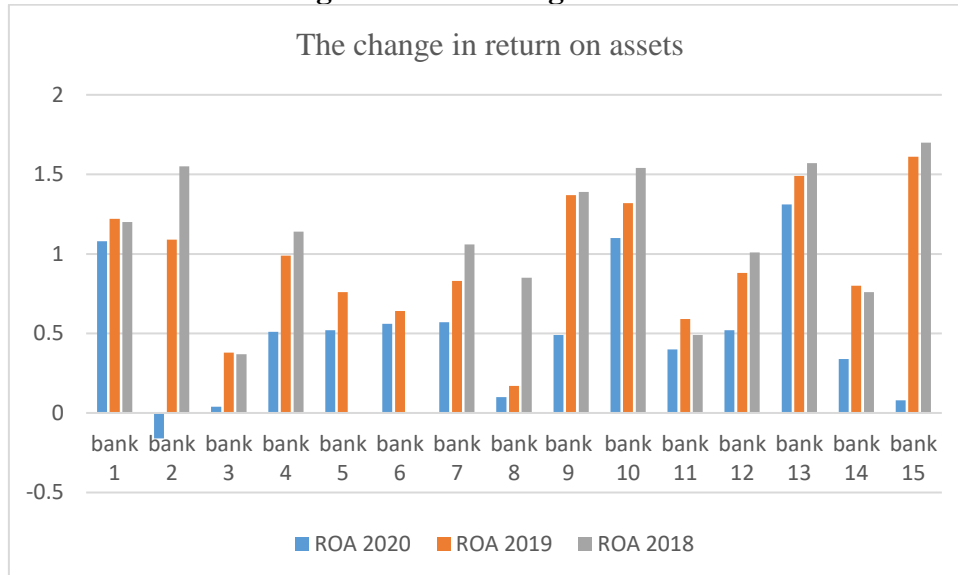


**Source: output of Excel system based on financial reports of banks for the period (2018-2020)**

We also note from the figure 3 that the rates of return on assets came at low rates in the year 2020 for all banks that showed their noticeable impact on the repercussions of the crisis. As for the rates of return on assets in both the years 2018 and 2019, although their value did not exceed 2 % in all banks, they are considered the best ratios achieved by the studied banks compared to 2020. This approve that there is a relationship between the decrease of return on assets and the emergence of corona crisis, so we accept the first hypothesis which means that there is a

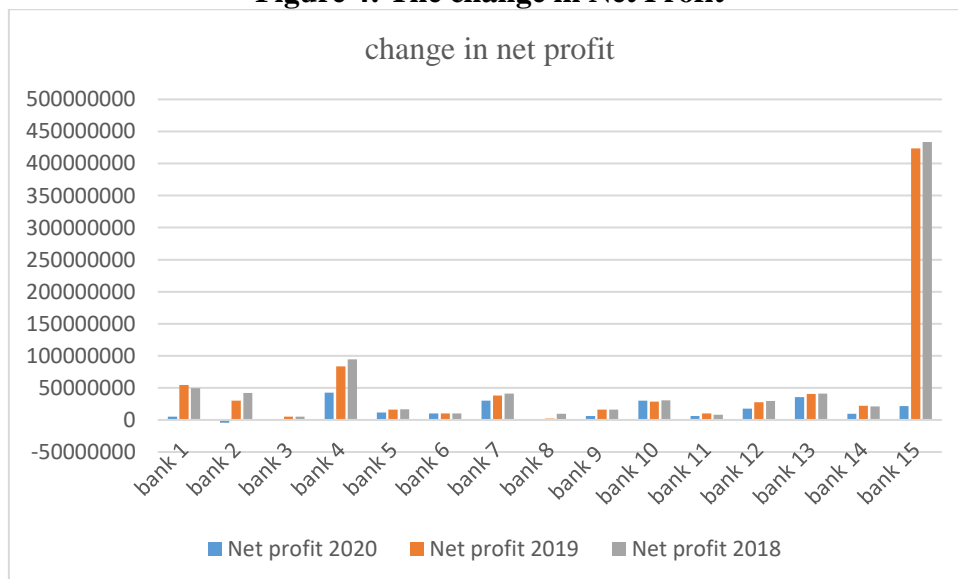
statistically significant relationship between the emergence of the Corona crisis and the decline in the profitability of Jordanian banks through the decline of the return on assets values.

**Figure 3: The change in ROA**



Source: output of Excel system based on financial reports of banks for the period (2018-2020)

**Figure 4: The change in Net Profit**

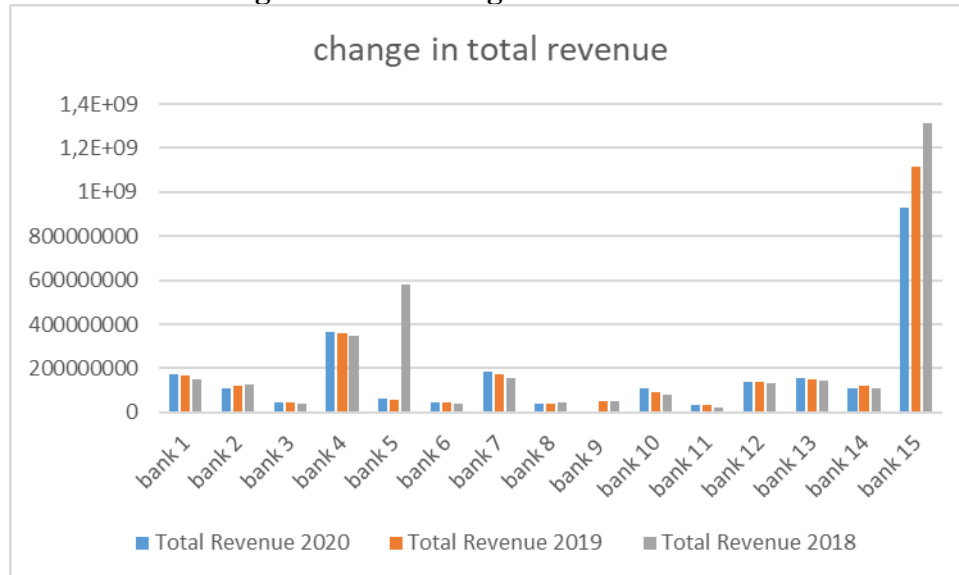


Source: output of Excel system based on financial reports of banks for the period (2018-2020)

Based on the figure 4 we note that the net profit values of the banks in general took the best values in both the years 2018 and 2019, unlike the year 2020, in which the banks achieved very low values in terms of net profits, which reflects the policy of the banks that they have taken as a result of the crisis, which is to reschedule loans or reduce the applicable interest rates as a result of the damage to all parties dealing with banks, in addition to the sudden withdrawal of deposits. This approves that there is also a relationship between the decrease of net profit and the emergence of corona crisis, so we accept the first hypothesis which means that there is a

statistically significant relationship between the emergence of the Corona crisis and the decline in the profitability of Jordanian banks through the decline of the net profit values.

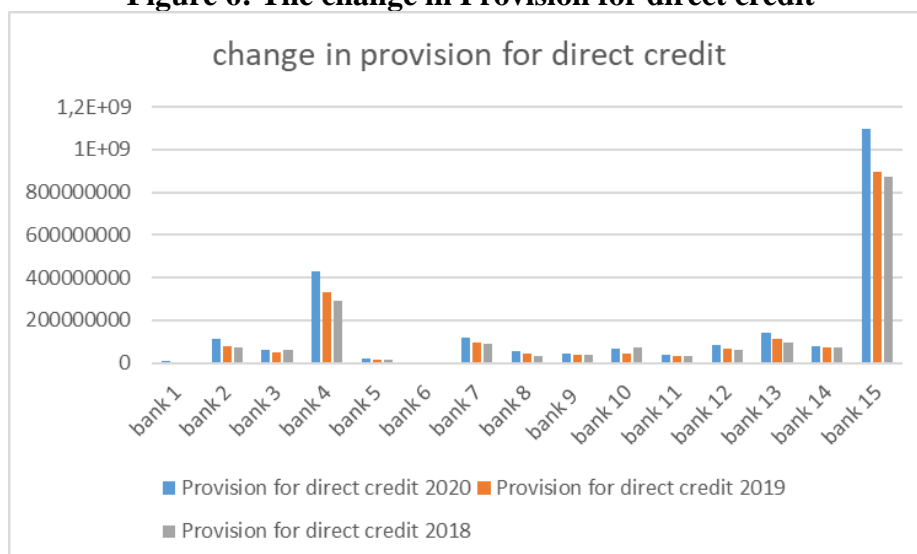
**Figure 5: The change in Total Revenue**



**Source: output of Excel system based on financial reports of banks for the period (2018-2020)**

The figure 5 describes the change in the value of the banks' total revenues during the three studied years. It also tended in the same direction as the net profits, which took the path of decline from 2018 to 2020, which actually indicates a contraction of banking transactions in particular, which contributed to the decline in their revenues and the contraction of economic transactions in general. This approve that there is a relationship between the decrease of total revenue and the emergence of corona crisis, so we accept the first hypothesis which means that there is a statistically significant relationship between the emergence of the Corona crisis and the decline in the profitability of Jordanian banks through the decline of the total revenue values.

**Figure 6: The change in Provision for direct credit**



**Source: output of Excel system based on financial reports of banks for the period (2018-2020)**

The figure 6 represents the change in provision for direct credit which means that the values of the credit facilities allocations took a remarkable increase in the year 2020, unlike in 2018 and 2019 that appeared with significant values because during this unusual period, the banks registered in Jordan like other banks in various country of the world by increasing its credit allocations to cover expected losses as a result of the repercussions of the Corona pandemic, resulting in increase in provisions for potential credit losses, therefore, the main reason behind the decrease (net profit) of banks in Jordan is attributed to an increase in the percentage of the item allocated to credit losses, which indicates that Jordanian banks still maintains its flexibility and financial adequacy. It should be noted that the provision for credit losses is an item of expenses that appears in the income statement and is allocated to cover loan losses associated with the possibility of default, there is no doubt that this policy is correct in light of the prevailing conditions and pessimistic expectations about the future. This approve that there is a relationship between the increase of provision for credit and the emergence of corona crisis, so we accept the first hypothesis which means that there is a statistically significant relationship between the emergence of the Corona crisis and the decline in the profitability of Jordanian banks through the increase of the provision for credit values.

#### 4.2. Test result:

**Table 1: Descriptive statistics**

Description	Minimum	Maximum	Mean	Std. deviation
ROA	-0.0016	0.017	0.008051	0.0050
ROE	-0.0099	0.1289	0.0664066	0.03493
Net profit	-4511275	433514000	41812817.27	86762907.89
T.revenue	0	1313228000	189544838.9	276560507.5
Provision for credit	0	1095271000	134047313.3	238272491.6

**Source: Output of SPSS statistics 25.0**

The table 1 shows that the value of the standard deviation of the net profit and total revenue and provision for credit variables are greater than the average value compared to other variables. This shows net profit and total revenue and provision for credit variables are not good enough. Net profit data has an average value of net profit of 41812817.27, with a minimum value of -4511275 which is realised by Kuwait Jordanian bank while the maximum value is 433514000 located at Alarabi . While the standard deviation of 86762907.89. Shows relatively large data deviations, because the value exceeds the average value. The same case for the total revenue data has an average value of total revenue of 189544838.9, with a minimum value of 0 which is realised by Investment bank while the maximum value is 1313228000 located at Alarabi bank. While the standard deviation of 276560507.5. Shows relatively large data deviations, because the value exceeds the average value. The provision for credit data has an average value of provision for credit of 134047313.3, with a minimum value of 0 which is realised by Safwa bank while the maximum value is 1095271000 located at Alarabi bank. While the standard deviation of 238272491.6. Shows relatively large data deviations, because the value exceeds the average value.

Return on assets data has average value 0.008051, with a minimum value of -0.0016 realised by Kuwait Jordanian bank. while the maximum value is 0.017 at Alrabi bank. While the standard deviation is 0.0050 which indicates a relatively smaller data deviation, therefore this data is good enough.

Return on equity data has average value 0.0664066, with a minimum value of -0.0099 located at Kuwait Jordanian bank. while the maximum value is 0.1289 at Jordanian Islamic bank. While the standard deviation is 0.03493 which indicates a relatively smaller data deviation, therefore this data is good enough.

#### 4.3. Result of Multilinear Regression Analysis:

##### ➤ Result of the first Multilinear regression:

**Table 2: Result of Multilinear Regression Analysis**

Variable	$\beta$	Std.error	Sig t
Constant	0.001	0.001	0.303
N.Profit	3.117	0.000	0.005
T.revenue	-1.797	0.000	0.002
Provision for credit	1.377	0.000	0.011
ROE	0.107	0.016	0.000

**Source: Output of SPSS statistics 25.0**

The results of the analysis (Table 2) show that the independent variables net profit value and total revenue and provision for credit and return on equity have the effect on return on assets with the mathematical equation as follows:

$$Y = 0.001 + 3.117X_1 - 1.797X_2 + 1.377X_3 + 0.107X_4 + \varepsilon$$

The second hypothesis (H21) test results showed the net profit had significant and positive impact on the profitability of the bank. The second hypothesis (H21) was rejected, which indicated it had no significant and positive impact on the profitability banks. The second hypothesis (H22) testing results show that total revenue affects profitability bank negatively and significantly, so the second hypothesis (H22) is rejected. The second hypothesis (H23) testing results show that provision for credit affects profitability bank positively and significantly, so the second hypothesis (H23) is rejected. The second hypothesis (H24) testing results show that return on equity affects profitability bank positively and significantly, so the second hypothesis (H24) is rejected.

##### ➤ Result of the second multilinear regression:

**Table 3: Result of Multilinear Regression Analysis**

Variable	$\beta$	Std.error	Sig t
Constant	0.023	0.007	0.001
N.Profit	-3.745	0.000	0.633
T.revenue	1.24	0.000	0.001
Provision for credit	-1.34	0.000	0.000
ROA	4.864	0.736	0.000

**Source: Output of SPSS statistics 25.0**

The results of the analysis (Table 3) show that the independent variables net profit value and total revenue and provision for credit and return on assets have the effect on return on equity with the mathematical equation as follows:

$$Y = 0.023 - 3.745X_1 + 1.24X_2 - 1.34X_3 + 4.864X_4 + \varepsilon$$

The third hypothesis (H31) test results showed the net profit had non-significant and negative impact on the profitability of the bank. The third hypothesis (H31) was accepted, which indicated it had no significant impact on the profitability banks. The third hypothesis (H32) testing results show that total revenue affects profitability bank positively and significantly, so the third hypothesis (H32) is rejected. The third hypothesis (H33) testing results show that provision for credit affects profitability bank negatively and significantly, so the second hypothesis (H33) is rejected. The third hypothesis (H34) testing results show that return on assets affects profitability bank positively and significantly, so the third hypothesis (H34) is rejected.

#### 4.4.Determination Coefficient Test Results (R2)

**Table 4: Determination coefficient value**

Model	R	R square	Adjusted R square	Std.error of the Estimate
1	0.827	0.685	0.653	0.0029777944
2	0.837	0.701	0.671	0.200405369

Source: Output of SPSS statistics 25.0

##### ✓ For the first model:

Based on determination coefficient value table in the R column, the values are obtained (R) of 0.827 (Table 4). This value indicates that the percentage of the relationship between the influence of independent variables (independent net profit and total revenue and provision credit and return on equity on profitability bank that is expressed by return on assets is 82.7%. Or the variation of the independent variables used in the independent net profit and total revenue and provision credit and return on equity) can explain 82.7% of the variation in the return on assets, when we use the value of (R) but if we use the value of (R<sup>2</sup>) this means that the variation of the independent variables used in the independent net profit and total revenue and provision credit and return on equity) can explain 68.5% of the variation in the return on assets. While the remaining 31.5% is influenced or stated by other variables not included in this model of research.

##### ✓ For the second model:

Based on determination coefficient value table in the R column, the values are obtained (R) of 0.837. This value indicates that the percentage of the relationship between the influence of independent variables (independent net profit and total revenue and provision credit and return on assets on profitability bank that is expressed by return on equity is 83.7%. Or the variation of the independent variables used in the independent net profit and total revenue and provision credit and return on assets) can explain 83.7% of the variation in the return on equity, when we use the value of (R) but if we use the value of (R<sup>2</sup>) this means that the variation of the independent variables used in the independent net profit and total revenue and provision credit and return on assets) can explain 70.1% of the variation in the return on equity, which is an important value. While the remaining 29.9% is influenced or stated by other variables not included in this model of research.

**Table 5: F-test result (ANOVA)**

Model	Sum of squares	DF	Mean square	F	sig
<b>First Model</b>					
<b>Regression</b>	0.001	4	0.000	21.700	0.000

<b>Residual</b>	0.000	40	0.000		
<b>Total</b>	0.001	44			
<b>Second Model</b>					
<b>Regression</b>	0.038	4	0.009	23.432	0.000
<b>Residual</b>	0.016	40	0.000		
<b>Total</b>	0.054	44			

**Source: Output of SPSS statistics 25.0**

F-test results obtained results that the value of  $F=21.700$  with the value of  $\text{significant}=0.000 < 0.05$ , which means that the net profit and total revenue and provision for credit and return on equity affect significantly on profitability banks (for the first model) (Table 5).

F-test results obtained results that the value of  $F=23.432$  with the value of  $\text{significant}=0.000 < 0.05$ , which means that the net profit and total revenue and provision for credit and return on assets affect significantly on profitability banks (for the first model).

**Table 6: Result of statistical T-test**

<b>Variable</b>	<b>t</b>	<b>sig</b>
<b>Net profit</b>	3.233	0.002
<b>Total revenue</b>	4.598	0.000
<b>Provision for credit</b>	3.774	0.000
<b>ROE</b>	12.750	0.000

**Source: Output of SPSS statistics 25.0**

The result shows that the value of  $t=3.233$  with a value of significance  $0.002 < 0.05$ , which means that the net profit affects positively and significantly on the banks profitability (Table 6). Thus the second hypothesis (H21) is rejected. The result also shows that the value of  $t=4.598$  with a value of significance  $0.000 < 0.05$ , which means that the total revenue affects positively and significantly on the banks profitability. Thus the second hypothesis (H22) is rejected. The result shows that the value of  $t=3.774$  with a value of significance  $0.000 < 0.05$ , which means that the provision for credit affects positively and significantly on the banks profitability. Thus the second hypothesis (H23) is rejected. The result also shows that the value of  $t=12.750$  with a value of significance  $0.000 < 0.05$ , which means that the return on equity affects positively and significantly on the banks profitability. Thus the second hypothesis (H24) is rejected.

#### **4.5. Discussion**

- **The effects of net profit on profitability banks:**

From the result of statistical T-test obtained a significant level of  $t\text{-test} = 0.002 < \alpha = 0.050$  (level of significance). Thus the effect of net profit value on profitability banks is partially significant. Because the regression results indicate a value of significance of 0.005 is smaller than  $\alpha = 0.05$ . It can be concluded that the net profit value affects the profitability banks.

- **The effects of total revenue on profitability banks:**

From the result of statistical T-test obtained a significant level of  $t\text{-test} = 0.000 < \alpha = 0.050$  (level of significance). Thus the effect of total revenue value on profitability banks is partially significant. Because the regression results indicate a value of significance of 0.002 is smaller than  $\alpha = 0.05$ . It can be concluded that the total revenue value affects the profitability banks.

- **The effects of provision for credit on profitability banks:**

From the result of statistical T-test obtained a significant level of  $t\text{-test} = 0.000 < \alpha = 0.050$  (level of significance). Thus the effect of provision for credit on profitability banks is partially

significant. Because the regression results indicate a value of significance of 0.011 is smaller than  $\alpha = 0.05$ . It can be concluded that the provision for credit value affects the profitability banks.

- **The effects of return on equity on profitability banks:**

From the result of statistical T-test obtained a significant level of t-test = 0.000 <  $\alpha = 0.050$  (level of significance). Thus the effect of return on equity on profitability banks is partially significant. Because the regression results indicate a value of significance of 0.000 is smaller than  $\alpha = 0.05$ . It can be concluded that the return on equity affects the profitability banks.

## 5. Conclusions

The value of financial indicators represented in return on assets and net profit and total revenue and provision for credit and return on equity which express the profitability banks witnessed a noticeable decline in the year 2020 with the emergence of the Corona crisis, this result approve the first hypothesis which state that there is a statistically significant relationship between the emergence of the Corona crisis and the decline in the profitability of Jordanian banks.

The effect of net profit value has an impact on profitability banks at a probability value of 0.002 less than  $\alpha = 0.05$ , the effect of total revenue has an influence on profitability banks with a probability value of 0,000 less than  $\alpha = 0.05$ , the effect of provision for credit has an influence on profitability banks with a probability value of 0,000 less than  $\alpha = 0.05$ , also the return on equity has an influence on profitability banks with a probability value of 0,000 less than  $\alpha = 0.05$ . The results of the F test analysis showed that the value of  $F = 21.700$  with a significance value = 0.000 with a value of  $p < 0.05$ ), this means that the independent net profit value and total revenue and provision for credit and return on equity have an impact on profitability banks. The influence of independent net profit and total revenue and provision for credit and return on equity can explain 68.5% of the profitability banks expressed through the rate on assets. While the remaining 31.5% is influenced Other variables that have not been included in this study.

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