
| RESEARCH ARTICLE

Determinants of Macroeconomics in Jordanian Islamic Banks

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| ABSTRACT

This study aimed to identify the determinants of macroeconomics in Jordanian Islamic banks. The study sample consisted of (3) Islamic banks during the period (2010-2020), and the descriptive and analytical approach was followed, and many statistical methods were used, such as descriptive statistics and regression analysis. The results showed that there is a statistically significant impact at the significance level ($\alpha=0.05$) for the determinants of the macroeconomics in Jordanian Islamic banks, while it was found that there is no statistically significant impact at the significance level ($\alpha\leq 0.05$) of institutional ownership on the macroeconomic in Jordanian Islamic banks, but there is a statistically significant impact at the significance level ($\alpha\leq 0.05$) of financial leverage, bank size, and profitability on the macroeconomic in Jordanian Islamic banks. The study recommended that banks be very keen on distributing profits appropriately in order to encourage investors to continue investing in the bank or invest by new investors from the macroeconomic level.

| KEYWORDS

Macroeconomics, Determinants, Islamic Banks, Amman Stock Exchange.

| ARTICLE INFORMATION

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1. Introduction

Macroeconomic stability is a necessary and important condition for development and growth, and the recommendations circulated by international organizations regarding the conditions that constitute good and appropriate macroeconomic management to achieve stability have led many developing countries to results contrary to what was desired.

Developments in recent periods have led to changing perceptions in the world about the nature of desirable macroeconomic policies, and financial crises and the process of economic collapse have shown the possibility that prudent financial strategies can be apparently, which led to the possibility of such crises, and the clear focus that was placed by many countries and society The international focus on achieving the Millennium Development Goals and the need to secure adequate financing for development operations, which indicated the need to change the focus in the methods of macroeconomic management in open developing economies through the development of macroeconomic policies within a coordinated framework and financial and monetary policies, local currency exchange rate policies and head account management money in the balance of payments is homogeneous with each other.

The recent developments that befell the whole world have led to a change in the nature and the expected and desirable macroeconomic policies, and the financial crisis that occurred in 2008 led to a decline in the economic level in general for the whole world, meaning that the macroeconomic level was in a noticeable decline, which was reflected in exports, and imports to

the world, especially in developing countries, the macroeconomic variables differ from one country to another depending on the level and nature of their economy, and the research problem can be concluded through the following question:
What are the determinants of macroeconomics in Jordanian Islamic banks?

2. Literature Review

The current research focused on identifying the determinants of macroeconomics in Jordanian Islamic banks by identifying several determinants such as (bank size, institutional ownership, financial leverage, and profitability).

2.1 Research Implication

The importance of this research appears from the extent of the importance of the determinants of macroeconomics, as in practice, it will provide a lot of evidence for Jordanian Islamic banks, managers, and employees, and the importance of the research becomes clear through:

Scientific Importance: The current research focused on the topic of macroeconomic determinants in terms of explaining the concept of macroeconomics, its importance, and objectives, and the focus in this research is on macroeconomic determinants by explaining their concept, so perhaps this research will be of interest to researchers and those interested mainly who have an interest in this topic.

Practical Importance: The importance of this research emerges by examining and testing the determinants of macroeconomics in Jordanian Islamic banks, so this research will be of importance to Jordanian banks in general and Jordanian Islamic banks in particular because of the recent results it will present related to macroeconomics and its determinants in Jordanian Islamic banks, in particular, identify the factors that hinder the level of the macroeconomic of Islamic banks and thus put forward a set of suggestions and recommendations that serve and help in improving and developing the work of Jordanian Islamic banks.

2.2 Macroeconomics and its Determinants

Macroeconomics has many determinants, such as the interest rate. The interest rate expresses the accumulation of savings from the saved units and its transfer to the invested units, so the interest rate is considered the economic variable for the borrowers; it is the price paid by the borrower as a result of using the borrowed money for a certain period of time, it is the credit price (Laubach, 2003). Among the determinants of the macroeconomic is the gross domestic product, which is the market value of the goods and services produced within the borders of one country during a certain period of time and is often measured annually (الأمين وعبد الوهاب، 1983).

Shleifer and Vishny (1986) pointed out that institutional ownership in banks contributes to achieving a high level of control over managers and board members in order to ensure the achievement of adequate benefits, and thus has an impact on the macroeconomic. These shareholders, like other shareholders, have the ability and resources to discipline managers and keep them away from opportunistic behavior. Smith (1996) praised the existence of a positive relationship between institutional ownership and performance. On the contrary (Agrawal and Knoeber, 1996) concluded that there is no significant relationship between institutional ownership and performance.

The bank's financial leverage is an important factor in the policy of profit distribution, and the financial leverage indicates the level of the bank's dependence in financing its assets on sources of financing that have a fixed income, whether they are loans or bonds, and this is reflected in the profits obtained by the owners (القرشي، 2020). High-leverage banks have high fixed payments to use for external financing, this interpretation is consistent with agency cost theory, but a bank's earnings can generate a higher rate of return than what you pay for borrowed money so that higher levels of debt can be used in their capital structure to take advantage of the tax savings (Brahmaiah et al., 2018).

Increasing the bank size and concentrating production is one of the most important features of economic activity in the modern era, as the activity in banks did not differ from others in the fields of economic activity, ease of collecting funds due to the huge of the bank size instills confidence in customers and suppliers (Khediri & Ben-Khedhiri, 2011).

Profitability has an operational concept, as it is achieved that the revenues generated are greater than the expenditures or costs consumed (Kosmidou, 2008). Profitability indicates the actual embodiment of the results achieved by the bank and the interest of specific parties such as shareholders, lenders, suppliers, workers, and others, which made its concept more relative to be

identified and linked to the goals that each of these parties is working to achieve. The profitability measure is used in order to identify the bank's ability to achieve the appropriate return for the money invested in its activities (Samad, 2015).

3. Methodology

This chapter includes a description of the research methodology, which includes a definition of the research method, the research population, its sample, data collection sources, a description of the study variables, and its model, in addition to the statistical method used in data analysis.

3.1 Research Method

This research is descriptive-analytical research, where the researcher used the descriptive and analytical method, an analytical study in which the research population was completely relied on through its sample, using the financial reports of Jordanian Islamic banks and information from the World Bank in line with the assumptions that were adopted in the current research, and in order to carry out the process of statistical analysis and reach the objectives set within the framework of this study, the significance level ($\alpha \leq 0.05$), which corresponds to a confidence level (0.95), was adopted to interpret the results of the tests.

3.2 The Population and the Research Sample

The research population consisted of all banks listed on the Amman Stock Exchange during the period (2010-2020), while the research sample consisted of (3) Jordanian Islamic banks listed on the Amman Stock Exchange during the research population so that banks were relied upon according to several conditions:

- a. Banks that do not include all the data for the search are omitted.
- B. The financial statements of the banks were approved for the financial year ending on 31/12.

3.3 Data Collection

In order to achieve the objectives of the current research, the researcher relied on a type of information source; which:

Secondary Sources: The available data and information sources were collected for other purposes related to the theoretical aspect of research and its data, and they are as follows:

- a. References and books related to the topic of macroeconomic determinants.
- b. Research published in specialized scientific journals.
- c. The financial reports of Islamic banks for the study sample.

3.4 Research Hypotheses

The research consisted of a set of hypotheses, and the following is an explanation of each of them:

Macroeconomic:

The research hypothesis was formulated as follows:

The Main Hypothesis: There is a statistically significant impact at the significance level ($\alpha \leq 0.05$) for macroeconomic determinants in Jordanian Islamic banks.

Institution Ownership

$$\text{Institution Ownership} = \frac{\text{The total number of owners in the bank}}{\text{Total owners of the bank}}$$

The hypothesis for this variable was formulated as follows:

The First Sub-Hypothesis (H1.1): There is a statistically significant impact at the significance level ($\alpha \leq 0.05$) of institutional ownership on the macroeconomics in Jordanian Islamic banks.

Financial Leverage

$$\text{Financial Leverage} = \frac{\text{Total Liabilities}}{\text{Total Assets}}$$

The hypothesis for this variable was formulated as follows:

The Second Sub-Hypothesis (H1.2): There is a statistically significant impact at the significance level ($\alpha \leq 0.05$) of financial leverage on the macroeconomics in Jordanian Islamic banks.

Bank Size

It was measured in the current research by the ratio of the natural logarithm to the total assets. The hypothesis for this variable was formulated as follows:

The Third Sub-Hypothesis (H1.3): There is a statistically significant impact at the significance level ($\alpha \leq 0.05$) of bank size on the macroeconomics in Jordanian Islamic banks.

Profitability

Profitability was measured by the return on assets through the following equation:

$$ROA = \frac{\text{Net Income}}{\text{Total Assets}}$$

The hypothesis for this variable was formulated as follows:

The Fourth Sub-Hypothesis (H1.4): There is a statistically significant impact at the significance level ($\alpha \leq 0.05$) of ROA on the macroeconomics in Jordanian Islamic banks.

Sixthly: Research Model

$$M.D = \beta_0 + \beta_1 \text{Log T.A}_{it} + \beta_2 D.R_{it} + \beta_3 \text{InstitOwn}_{it} + \beta_4 ROA_{it} + e$$

So that each explains the following:

M.D= Macroeconomic Determinants.

β = Regression ($\beta_0, \beta_1, \dots, \beta_4$).

it= Bank and Year.

Log T.A= Bank Size (Logarithm to total assets).

D.R= Leverage.

Instit Own= Institution Ownership.

ROA= Profitability through return on assets.

e= random error.

Variables	Measure
Bank Size	Total Assets
Leverage	Total Liabilities / Total Assets
Institution Ownership	Institutional ownership percentage of banks
Profitability	Return on Assets (Net Income/Total Assets)

4. Statistical Analysis Methods

In order to analyze the research data and test hypotheses, the statistical program (SPSS) (Statistical Package for Social Sciences) was used, which includes many statistical methods for research variables, and the following is an explanation of those statistical methods:

- Descriptive Statistic: It includes means and standard deviations related to all research variables.
- Multiple Linear Correlation Test: using the Pearson correlation coefficient and the variance inflation factor (VIF), and the autocorrelation test using the Durbin Waston correlation coefficient to test the validity level of the research model.
- Multiple Regression Analysis: This method is used to test the impact of the independent variable on the dependent variable.

4.1 Practical Side

This section presents the analysis of the study data, which includes a description of the study variables, and the testing of the independent variables, in order to test the hypotheses in terms of their acceptance or rejection.

4.1.1 Describe the study Variables

This part includes the means and standard deviations of all study variables, and the following is an explanation of each variable:

Table (1): Means and Standard Deviations of the Study Variables

Variables	Mean	Std.Deviation	Minimum	Maximum
Macroeconomic	6.50	4.59	4.00	9.80
Institution	45.438	29.899	1.364	98.707
Leverage	33.602	18.402	4.082	76.788
Bank Size	91904926	2.435	3459791	1166347000
ROA	.556	7.503	-24.227	14.063

The previous table shows the descriptive statistics for the study variables. The mean of the macroeconomic variable, which was measured through the gross domestic product, was (6.50), while the standard deviation was (4.59), the lowest value was (4.00), and the highest value was (9.80), which is what it reflects the level of the country's GDP annually during the period (2010-2020), while the macroeconomic determinants have focused on a group of variables such as institutional ownership, which averaged (45,438), the debt ratio (33.602), the bank size (91904926), and profitability company measured by return on assets through (.556).

4.2 Testing the Study Variables

In order to test the suitability of the study model for linear regression analysis and parametric tests, multiple linear correlation and autocorrelation were tested, and the following is an explanation of each of these tests:

4.2.1 Multicollinearity Test:

This phenomenon indicates the existence of a near-perfect linear correlation between two or more variables, and it works to inflate the value of the coefficient of determination R², making it greater than its actual value. Therefore, the value of the coefficient was calculated between the independent variables as in the study model, and the results related to it were as follows:

Table (2): Correlation Matrix for Independent Variables

Variables	Bank Size	Leverage	Institution	Profitability
Bank Size	1.000			
Leverage	0.058	1.000		
Institution	.392**	.099	1.000	
Profitability	.229**	-.503**	.153	1.000

(**) A function at the level of significance (0.01).

(*) A function at the level of significance (0.05).

Table No. (2) shows that the highest correlation coefficient was between the two variables (institutional ownership and bank size), and it reached (0.392) at the significance level (0.01), which is less than (0.80), which indicates the absence of the multiple linear correlation phenomenon between the variables, as the value of the correlation coefficient that exceeds (0.80) is an indication of the existence of a problem of high multi-linearity between the variables (Gujarati, 2004). To confirm the previous result, the coefficient of variance inflation was calculated for all independent variables to ensure the presence of multiple linear correlations, and the results were as follows:

Table (3): The results of the multiple association test between independent variables

Variables	VIF	Tolerance
Bank Size	1.546	.647
Leverage	1.848	.541
Institution	1.482	.675
Profitability	1.592	.628

Table (3) shows the values of the coefficient of variance inflation, it was found that all the variables were greater than 1 and less than 10, and the value of (Tolerance) varied between the two numbers (0.1-1), which indicates that there is no correlation problem Multiple linear between all study variables.

4.2.2 Autocorrelation Test

Among the conditions of the regression is that the data is free from any problem of self-correlation, as it indicates the existence of a correlation between the limits of random error in the regression model, and it also results in a bias in the value of the estimated parameters known as (Estimated Parameters), in addition to the weak ability of the model to predict, so that this is confirmed by the (D-W) test (Durbin-Waston Test), it is more common and used, and the value of the (D-W) test should range between the two numbers (0-4), thus rejecting the existence of the phenomenon of autocorrelation in the event The (D-W) value was equal to or close to (2) (Gujarati, 2004, p. 496).

Thus, the work of the previous tests reflects the validity of the application of the multiple linear regression analysis of the study's hypotheses.

4.3 Hypotheses Testing

Hypotheses were tested through regression analysis so that the hypothesis was accepted or rejected according to the statistical significance of all hypotheses.

Table (4): Hypothesis Testing According to Macroeconomic Determinants

Variables	1	2	3	4	5
Constant	-1.548a (.000)	-1.552a (.000)	-1.527a (.000)	-1.608a (.000)	-1.757a (.000)
Log TA	.224a (.000)	.225a (.000)	.232a (.000)	.246a (.000)	.260a (.000)
DR	-.008a (.000)	-.007a (.000)	-.008a (.000)	-.008a (.000)	-.007a (.000)
Institution	5.934 .957	**	**	**	**
ROA	.023a (.000)	.023a (.000)	.023a (.000)	.023a (.000)	.022a (.000)
R2	.582	.582	.580	.579	.573
Adj R2	.552	.556	.559	.562	.560
F	19.277	22.720	27.362	34.333	45.148
Standard Error	.273	.271	.271	.270	.270

- a= Statistical significance at the 1% level.
- b= Statistical significance at the 5% level.
- c= Statistical significance at the 10% level.
- **= The variable is excluded from the equation.

Testing The Main Hypothesis: There is a statistically significant impact at the significance level ($\alpha \leq 0.05$) for macroeconomic determinants in Jordanian Islamic banks.

The multiple regression analysis models were applied in the previous table, and it was found that the regression model that was used is statistically significant, with the value of (F) "19.277" with a statistical significance of ".000", which is less than the significance level "0.05", and this indicates the presence of influential determinants on the macroeconomic in Jordanian Islamic banks, and the value of Adj R2= 0.552, so that the independent variables explain about 55.2% of the change in the dependent variable as determinants of the macroeconomics.

All hypotheses related to all macroeconomic determinants have been tested, the results of which, as in the previous table, lead to the following:

First Sub-Hypothesis Test (H1.1): There is a statistically significant impact at the significance level ($\alpha \leq 0.05$) of institutional ownership on the macroeconomic in Jordanian Islamic banks.

The value of the statistical significance of the "institutional ownership" variable reached (0.957), which is higher than all levels of statistical significance (1%, 5%, 10%), which indicates that there is no impact of institutional ownership on the macroeconomic in the Islamic banks listed on the Amman Stock Exchange, so that the institution's ownership from Islamic banks, regardless of the percentage of institutions ownership, does not impact the level and percentage of the macroeconomic, so this hypothesis will be rejected and replaced with the alternative hypothesis, which states that "There is no statistically significant impact at the level of significance ($\alpha \leq 0.05$) Institutional Ownership on Macroeconomic in Jordanian Islamic Banks".

Second sub-Hypothesis Test (H1.2): There is a statistically significant impact at the significance level ($\alpha \leq 0.05$) of financial leverage on the macroeconomic in Jordanian Islamic banks.

By looking at the previous table, it becomes clear to us that the statistical significance of the variable "financial leverage" has reached (.000), which is less than the level of statistical significance (1, 5%, 10%), so it becomes clear to us that the higher the financial leverage, the higher the banks bear the Islamic financial system listed on the Amman Stock Exchange has a high debt level, which will lead to a decrease in the level of the macroeconomic, and for that the second sub-hypothesis will be accepted, which states that "There is a statistically significant impact at the significance level ($\alpha \leq 0.05$) of the financial leverage on the macroeconomic in Jordanian Islamic Banks".

The Third Sub-Hypothesis Test (H1.3): There is a statistically significant impact at the significance level ($\alpha \leq 0.05$) of the bank size on the macroeconomic in Jordanian Islamic banks.

The value of the statistical significance of the variable "bank size" reached (.000), which is less than all the values of the statistical significance (1, 5%, 10%), so it becomes clear to us that there is a positive impact of the bank size on the macroeconomic in the Islamic banks listed in Amman Stock Exchange, and concludes that the bank size, measured by total assets, affects the level of the macroeconomic annually. Therefore, the third sub-hypothesis is accepted, which states that "There is a statistically significant impact at the significance level ($\alpha \leq 0.05$) of the bank size on the macroeconomic in Jordanian Islamic banks".

Fourth Sub-Hypothesis Test (H1.4): There is a statistically significant impact at the significance level ($\alpha \leq 0.05$) of profitability on the macroeconomic in Jordanian Islamic banks.

The percentage of statistical significance for the variable "profitability" reached (.000), which is less than all levels of statistical significance (1%, 5%, 10%), so it is clear that the profitability, which was measured through the return on assets, has any positive impact on the macroeconomic in Islamic banks listed on the Amman Stock Exchange, as the return on assets the higher it leads to a rise in the macroeconomic, so the fourth sub-hypothesis will be accepted, which states that "There is a statistically significant impact at the significance level ($\alpha \leq 0.05$) of profitability on the macroeconomic in Jordanian Islamic banks".

5. Conclusion and Recommendations

This study aimed to identify the determinants of macroeconomics in Jordanian Islamic banks. The study sample consisted of (3) Islamic banks during the period (2010-2020), and the descriptive and analytical approach was followed, and many statistical methods were used, such as descriptive statistics and regression analysis. A set of results were reached for the study according to the previous section. First, there is a statistically significant impact at the significance level ($\alpha \leq 0.05$) for macroeconomic determinants in Jordanian Islamic banks. Second, there is no statistically significant impact at the significance level ($\alpha \leq 0.05$) of institutional ownership on the macroeconomic in Jordanian Islamic banks. Third, there is a statistically significant impact at the significance level ($\alpha \leq 0.05$) of financial leverage on the macroeconomic in Jordanian Islamic banks. Fourth, there is a statistically significant impact at the significance level ($\alpha \leq 0.05$) of the bank size on the macroeconomic in Jordanian Islamic banks. Last, there is a statistically significant impact at the significance level ($\alpha \leq 0.05$) of profitability on the macroeconomic in Jordanian Islamic banks. The study recommended the following:

1. Banks are very keen on distributing profits appropriately in order to encourage investors to continue investing in the bank or investment by new investors.

2. Islamic banks tend to stimulate investment and enlarge the bank size because the greater the bank size, the more it will increase the level of the macroeconomic.
3. Estimating and balancing the volume of debts borne by banks, as this is reflected in the country's macroeconomic ratio.
4. Develop a plan through which the bank maintains its annual profit rate without the presence of internal and external influences.

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References

- [1] الامين، باشا وعبد الوهاب، زكريا، (1983). مبادئ الاقتصاد، عالم المعرفة، عمان، الاردن.
- [2] القرشي، عبدالله علي أحمد، (2020). محددات سياسة توزيع الأرباح في شركة يمن موبايل، مجلة الاندلس للعلوم التقنية، العدد. 30، 50-70.
- [3] Agrawal, A. & Knoeber, C. (1996). Firm Performance and Mechanisms to Control Agency Problems between Managers and Shareholders, *Journal of Financial and Quantitative Analysis*, 31, 377-397.
- [4] Brahmaiah, B. Srinivasan, P. & Sangeetha, R. (2018). Determinants of Corporate Dividend Policy in India: a Dynamic Panel Data Analysis, *Academy of Accounting and Financial Studies Journal*, 22(2), 1-13.
- [5] Gujarati, K. (2004). *Basic Econometrics*, Fourth Edition.
- [6] Khediri, K. & Ben-Khedhiri, H. (2011). Determinants of Bank Net Interest Margin in Tunisia: A Panel Data Model. *Applied Economics Letters*, 18(13), 1267-1271.
- [7] Kosmidou, K. (2008). The determinants of Banks Profits in Greece during the Period of EU financial Integration, *Managerial Finance*, 34(3), 146-159.
- [8] Laubach, T. (2003). New Evidence on the Interest Rate Effects of Budget Deficits and Debt, Board of Governors of the Federal Reserve System.
- [9] Samad, A. (2015). Determinants Bank Profitability: Empirical Evidence from Bangladesh Commercial Banks, *International Journal of Financial Research*, 6(3), 173-179.
- [10] Shleifer, A. & Vishny, R. (1986). Large Shareholders and Corporate Control. *Journal of Political Economy*, 94(3): 461-488.
- [11] Smith, C. (1996). The Determinants of Firms Hedging Policies, *Journal of Financial and Quantitative Analysis*, 20(4), 391-405.