Indian Journal of Economics and Business
Vol. 20 No. 3 (December, 2021)

http://www.ashwinanokha.com/IJEB.php

Impact of Real Exchange Rate and Real Interest Rate on Islamic Bank' Performance: An Empirical Study

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Received: 07th August 2021
Revised: 06st September 2021
Accepted: 25th October 2021

Abstract: The advent of Islamic finance has created a significant change in the global financial setup with the introduction of the Islamic banking system. The objective of this study is to estimate the effects of the real exchange rate and real interest rate on the Performance of Islamic Banks (return to assets, return to equity, and return for share). This study applied Multiple linear regression to comprehensively analyze the correlation between variables by using annual panel data for (International Islamic Arab Bank, Jordanian Islamic Bank, and Safwa Bank) the period 2005-2019. The results of the study showed that Islamic Bank's Performance responded negatively to real interest rates and real exchange rates in the models. the reason for the inverse relationship in the study findings is that a rise in real exchange rates will increase imports, and decrease exports which in turn leads to a decrease in domestic investment, a decrease in deposits and facilities in Islamic banks, and thus a decrease in the return to assets, return to equity and return on share. the increase within the real interest rate would be followed by a rise in the rate of return on investment deposits, decreasing the profit margin in Islamic banks, and decreasing the return on assets, return on equity, and return on share.

Keywords: Real Exchange Rate, Real Interest Rate, Islamic Bank, Performance.

1. Introduction

Monetary theory confirms that money is the immediate substitute for assets and that an increase in the money supply will lead to an increase in the actual return and an increase in employment in the short term and so on until the economy reaches the full employment level and then any increase in the money supply

will lead to higher wages and inflation, in the long run. Keynes emphasized that the expansion of the money supply would reduce the interest rate and not affect the general level of prices, thus lowering the national income level of the state and increasing employment rates in the short term and the long term there would be a full-employment level, and thus a rise in the money supply would lead to higher prices, interest, and wages (Friedman, 1995).

Purchasing power parity (PPP) is an economic theory that allows the comparison of the purchasing power of various world currencies to one another. it is a theoretical exchange rate that allows you to buy the same amount of goods and services in every country. The International Fisher Effect (IFE) is an economic theory stating that the expected disparity between the exchange rate of two currencies is approximately equal to the difference between their countries' nominal interest rates. The hypothesis specifically states that a spot exchange rate is expected to change equally in the opposite direction of the interest rate differential; thus, the currency of the country with the higher nominal interest rate is expected to depreciate against the currency of the country with the lower nominal rate of interest, as higher nominal interest rates reflect an expectation of inflation. one of the most important economic policies of the state is the monetary policy, which controls the money supply through several tools, including the interest rate. It plays an important role in adjusting and settling savings and domestic and foreign investment operations that bring in foreign capital, and for countries that suffer from a deficit, according to macroeconomic policies, the practice in the field of development increases the internal and external indebtedness. Therefore, international financial organizations pressure these countries to scale back the exchange rates as a primary solution to reduce the debt and thus increase exports and reduce imports, thus improving the balance of trade and the balance of payments. related to current accounts and balance of payments, the terms of trade are the ratio of export prices to import prices. A country's terms of trade improve if its export prices rise at a greater rate than its imports prices. This results in higher revenue, which causes a higher demand for the country's currency and an increase in its currency's value. This results in an appreciation of the exchange rate. Understanding the empirical relationship between the exchange rates, interest rates, and stock prices is important and useful to policymakers, professional investors, and academics. Although scholars and practitioners have studied the subject extensively, few empirical studies are available in the context of Islamic banking (Viswanathan & Menon, 2005).

The main and important pillar for the stability of any state's economy is its local currency, and there is a strong mutual causal relationship between the strength of the economy and the exchange rate of the local currency against other currencies, as well as that the exchange rate mechanism is one of the most important international economic and financial indicators. Changes in market inflation cause changes in currency exchange rates. a country with a lower inflation rate than another's will see an appreciation in the value of its currency. the prices of goods and services increase at a slower rate where inflation is low. a country with a consistently lower inflation rate exhibits a rising currency value while a country with higher inflation typically sees depreciation in its currency and is usually accompanied by higher interest rates. Changes in interest rate affect currency value and dollar exchange rate. Forex rates, interest rates, and inflation are all correlated. Increases in interest rates cause a country's currency to appreciate because higher interest rates provide higher rates to lenders, thereby attracting more foreign capital, which causes a rise in exchange rates. A country's current account reflects a balance of trade and earnings on foreign investment. It consists of a total number of transactions including its exports, imports, debt, etc. A deficit in the current account

due to spending more of its currency on importing products than it's earning through the sale of exports causes depreciation. Balance of payments fluctuates the exchange rate of its domestic currency.

The banking sector, including Islamic banks, has an important role in the economic development of any country, and these banks affect and are affected by economic indicators that must be taken into account to avoid the risks that result from these indicators and negatively affect the performance of Islamic banks. The state controls these indicators through fiscal policy and monetary policy. The banking sector, including Islamic banks, indicates the extent of the development of the economic situation in the country through the provision of banking services (credits, guarantees, and bills of lading) and e-commerce and financing operations (speculation, musharakah, murabahah, leasing ending with ownership and other financing operations) that activate all economic sectors. Whether for domestic production or export, the performance of Islamic banks must be evaluated and the extent to which they are affected by the fluctuations of some economic indicators such as the exchange rate, interest rate, and inflation.

The exchange rates in the foreign currency market are witnessing an active rise and fall in light of the stabilization of the exchange rate of the jordanian dinar by sale and purchase, which may lead to an impact on the actual value of the dinar if the exchange rate floats and thus greatly affect the financial performance of banks listed on the Amman stock exchange, including Islamic banks. When looking at the interest in commercial banks at first glance, it says there is no relationship between it and Islamic banking, but for Islamic banks to compete with commercial banks and attract the largest possible number of customers, interest rates must be taken into account in determining their profits, and until the impact of inflation is neutralized. The impact of real exchange rates and real interest rates on the financial performance of the Jordanian Islamic banks must be measured using important financial indicators and thus the study problem can be formulated with the following main question: what is the impact of real exchange rate fluctuations and real interest rates on the financial performance of Islamic banks?

The study will be conducted on the International Islamic Arab Bank, Jordanian Islamic Bank, and Safwa Bank in Jordan. Time limits: The study will analyze information for the amount from 2005 to 2019.

In light of the foregoing, the current study seeks to measure the impact of fluctuations in the real interest rate and the real exchange rate on the financial performance represented by the return to assets, return to equity and return for a share in Islamic banks.

2. Literature Review

Some economic indicators and financial ratios have gained increasing importance and are used by researchers in their statistical analyses, and that these indicators are mathematical relationships and appear in the form of percentages easy to measure the relationship between two items of the financial statements to provide clear and accurate information to economic researchers (Verma & Jackson, 2008). To deal with some economic indicators, banking interest, and exchange operations, this study referred to the data and methods of treatment and the results of the most important studies that dealt with interest rates and

exchange rates and their impact on financial performance through a set of financial ratios, represented by the return to assets, return to equity and return for a share.

2.1. Exchange Rates

It is a ratio resulting from a mathematical operation between two currency units of two countries of different currencies, and there are two types of exchange rates (i) fixed exchange rates, where the rate of exchange between two or more countries does not vary or varies only within narrow limits (ii) Flexible or free exchange rate system, which is a system where the value of 1 currency in terms of another is free to fluctuate and establish its equilibrium level in the exchange market through the forces of demand and supply. To calculate the real exchange rates(X_1) the following formulas are used (Verma, 2016):

Nominal exchange rate = the number of units of U.S.D /number of units of JD.

While the real exchange rate (X_1) Compares the relative price of two countries, consumption baskets. For example, you may want to know what one Jordanian dinar can buy in the dollar United States or what one dollar can buy in Jordan. In this case, you are interested in (X_1). The following equation reflects this concept (Verma, 2016):

Real exchange rate(X_1) = (nominal exchange rate) * (CPIJD / CPIUS)

Here, X_1, CPIJD and CPIUS denote the real exchange rate, J. consumption basket price index, and U.S. consumption basket price index, respectively.

2.2. Islamic Sharia Rule for Dealing with Exchange Rates

Many prophetic hadith indicate the legitimacy of the exchange contract, including what the two sheiks narrated on the authority of Yahya bin Ishaq from the authority of Abd al-Rahman bin Abi Bakra, from his father, who said: "The Messenger of God, may God's prayers and peace be upon him, forbade silver for silver and gold for gold then Hand in hand except for the same, and otherwise, he ordered us to buy Silver with gold as we like, He said, so I heard" (Al-Nisaburi, 1991).

2.3. Exchange Rate and Performance

Nguyen & Do (2020) examined the effects of inward every presence of foreign investment, import, and real exchange rate shocks on export performance in Vietnam. The results demonstrated that a higher value of import significantly accelerates export performance in the short run, but insignificantly generates in the long run. When the volume of registered foreign investment goes up, the export performance will predominantly decrease in the both short run and long run. Historically, countries worldwide are more likely to evaluate their currencies to support export performance. According to the study, the exchange rate volatility has an effect on the external trade the long run but no effect in the short run. Finally, Vietnam's export performance converges on its long-run equilibrium by roughly 6.3% with the speed adjustment via a combination of imports, every presence of foreign investment, and real exchange rate fluctuations:

Keshtgar et al. (2020) examined the impact of exchange rate volatility as a determinant of banks' performance. In recent years, the exchange rate has been volatile in the Iranian economy and have an adverse effect on banks' performance. This study, investigated the issue for the period 2007-2017 for 14 Iranian banks. To evaluate banks' performance, they used two criteria, namely liquidity, and profitability. Estimation of the econometric model using panel data by random effects indicated that exchange rate volatility has a negative and statistically significant effect on banks' capital return ratio. Exchange rate volatility is also a determinant in increasing the ratio of lending to total bank deposits, as it increases the financial gap and creates the credit risk that the gap entails.

Chauque & Rayappan (2018) showed a negative impact of the exchange rate on the performance of the Malaysian market by conducting a causal test and a multiple regression test for the monthly data for the period 2007-2016.

Manyok (2016) studied the relationship between the speed of exchange variability on the financial performance of commercial banks in South Sudan from 2006 to 2015 using semi-annual data. The study discovered that there is a weak negative relationship between exchange rate variability and financial performance.

Ba'amara (2013) concluded there is a positive relationship between revenues resulting from fluctuations in the rate of exchange in Algeria and therefore the net of banks by using the descriptive and analytical approach for the theoretical side, statistical methods, and regression analysis of the data for the period 2002-2011 for the applied side.

Kipchirchir (2011) studied the relationship between fluctuation in the exchange rates and the financial performance of multinational companies in Kenya. He concluded that there was a positive relationship between the exchange rate fluctuations and the financial performance of multinational corporations. Mbithi (2009) aimed to find out the effect of fluctuations in exchange rates on the financial performance of 46 companies listed on the Nairobi stock exchange during the period (2002-2012). The researcher used the descriptive method on the theoretical side and the multiple regression analysis on the practical side and the study concluded that there is a statistically significant negative impact of exchange rate fluctuations on the financial performance.

2.4. Bank Interest Rates

Bank Interest Rates An interest rate is the amount of interest due per period, as a proportion of the amount lent, deposited, or borrowed. The total interest on an amount lent or borrowed depends on the principal sum, the interest rate, the compounding frequency, and the length of time over which it is lent deposited, or borrowed. There are two main types of interest, namely interest paid for deposits and interest received from loans and facilities, and each type in which the percentage differs based on the size of the money as well as on the terms and maturities of these funds. The greater the size or duration of deposits or both, the interest increases, and the more loans or facilities increase, the interest decreases, and when the loan or facilities period increases, the interest rate increases. The fluctuation in inflation is one of the most important factors that affect interest rates up and down, for example, interest rates rose as a result of high

inflation rates in South American countries Within the range of (10% -20%) compared to countries where inflation rates have decreased.

The above can be expressed in the following mathematical form (Omar & Mahmoud, 2008):

Nominal interest rate = risk-free interest rate + inflation rate + default risk + liquidity risk + credit risk.

Real interest rate(X_2) = nominal interest rate - the rate of inflation.

2.5. Islamic Sharia Rule for Dealing with Bank Interest Rates

Islamic Sharia Rule for dealing with Bank Interest Rates Usury in debt, i.e. an exchange of goods whether of the same kinds or not for a delayed repayment with an increase, is prohibited by Sharia according to the verses of the Quran and the Hadith. This includes interest charging on loans in today's banking transactions. Every loan containing a provision for a rise above the capital is forbidden under Sharia. Islamic banking is a banking system in accordance with the Sharia. In Islam, money has no intrinsic value – money, therefore, cannot be sold at a profit and is permitted to be used as per Sharia only. The Islamic law or Sharia prohibits paying any fee for renting of money (called Riba) for specific periods. Islamic Banks work on the principles of interest-free banking. Riba or interest under shariah means anything in "excess" – the investor should not make an "undue" profit from the hard work of the other. But it is permitted to follow a system of reasonable profit and return from investment where the investor takes a risk that is well calculated (Al-Kasani, 1982).

2.6. Interest Rate and Performance

Chance and Lane (1980) used a two-indicator model (interest rate and market factors) under the idea of continuous variables. Many studies criticized the assumption of continuous variation that this study relied on and showed that the effect of interest rates on the returns of banking stocks varies over time. Jaradat (2012) tested the hypotheses by using an unrestricted self-regression model to test both the analysis of the components of variance, the test of the reaction response function on the Amman Financial market for the period 1980-2011, The study found a negative relationship between interest rates and stock returns. Weersainghe&Perera (2013) confirmed the existence of the negative relationship between the interest rate and return to assets, by using the tactic of multiple linear regression analysis based on the E-Views program to study the quarterly data for the period 2001-2011 of commercial banks in Sri Lanka.

Rashid & Khalid (2017) examined the effects of inflation and real interest rate uncertainty on the performance and solvency of banks in Pakistan. Annual data covering the period 2008-2015 for a sample of 25 banks were used, and the Generalized Least Square (GLS) estimator is applied to overcome the problem of heteroscedasticity. The results indicated that inflation rate and interest rate have a statistically insignificant effect on the financial performance of both conventional and Islamic banks in Pakistan. Ajlouni (2018) identified the main factors that affect interest rate returns to the future. The study used the Johansen test of covalent integration on sample data for the period (1990-2015), results showed that money supply and the business cycle adversely affect the real rate of interest, while capital flows positively affect the real interest rate.

2.7. Exchange Rate, Interest Rate, and Performance

The study examined the evaluation of some economic indicators and the extent of their impact on the financial performance of commercial and Islamic banks in many previous studies on different countries, and the results of these studies differed or similar in different countries as follows:

Tamtelahitu & Mubin (2020) aimed to know the response of banks in Indonesia, Malaysia, and Thailand to the change in exchange rates and interest rates. The study used the famous structural regression model (VAR) on monthly time series data. The results indicated that Indonesia is more affected by interest rates rather than fluctuations in the US currency, and Malaysia is the most vulnerable to external factors. Whereas, non-performing loans in Thailand are heavily influenced by domestic factors. The study showed that the official US interest rate is not always the dominant factor affecting the health of domestic banks in ASEAN-3.

Suhadak & Suciany (2020) showed that rate of exchange and inflation has positive and insignificant influence on the composite stock price index, the interest rate has a negative and significant influence towards composite stock price index, exchange rate does not influence interest rate, inflation has a positive and significant influence towards interest rate, the exchange rate has negative and significantly influence inflation and interest rate has a positive and significant influence towards inflation.

Qing & Kusairi (2019) studied the effect of the money supply, exchange rate, interest spread and stock market in the short and long run and volatility issue. The study employed monthly data, from January 1997 to August 2018. Method analysis is the Autoregressive distributed lag (ARDL) and GARCH model. The findings stated that the money supply, real effective exchange rate, interest spread, had a long-run effect on the performance of the stock market. Money supply and the real effective exchange rate had a positive effect on the stock market performance in the short run. Conversely, the interest spread showed a negative influent on the stock market performance in the short run. The volatility indicated a high persistence between the money supply, real effective exchange rate, interest spread, and stock market (KLCI).

Basabeh & Abdelkader (2019) measured the effect of macroeconomic variables on the performance of the Malaysian Islamic stock market, by using the Co-integration test and Error Correction Model (ECM). The results of this study showed that there's a big effect of these variables on the Islamic Index in the long run and the existence of a long-run equilibrium relationship. Also, there is a long-run causality relation. The exchange rate, inflation, budget deficit and government debt (interest rate and m3) have negative (positive) effects on the Islamic Index.

Khan et al. (2018) dealt with the effect of the exchange rate, interest rate, and inflation on the return on share for 15 companies listed on the Pakistan stock exchange using multiple regression tests to analyze the monthly data for the period 2008-2012. The results of the study indicated an inverse relationship between the interest rate and the exchange rate with a return on share.

Ndlovu et al. (2018) employed co-integration tests, a vector error correction model, a variance decomposition, and an impulse response function to understand the relationship of the variables. In the long run, interest rates, money supply, and inflation have a positive relationship with the share price while the exchange rate has a negative effect on the stock prices. Unidirectional causality was found running from

exchange rates and interest rates to the share price and also the interest rates and the exchange rates have a causality to the money supply. The variance decomposition established that shocks to the share price account for the majority of the changes in itself for all periods during the short-run and long-run while also cementing results of the causality shocks within the stock price and exchange rate shocks have an impact on changes in themselves, also the impulse response function further confirmed causal relationships between the variables and the stock price.

Cliff & Willy (2014) determined the effects of the macroeconomic environment on the financial performance of firms listed in the manufacturing and allied market segment of the Nairobi stock exchange. The findings of the research indicate that there is evidence that foreign exchange, interest rate, and inflation rate have significant effects on the performance of the firms in the construction and manufacturing sector.

Kasman et al. (2011) investigated the effects of interest rate and foreign exchange rate changes on Turkish banks' stock returns using the OLS and GARCH estimation models. The results suggested that interest rate and exchange rate changes have a negative and significant impact on the conditional bank stock return. Also, bank stock return sensitivities are found to be stronger for market return than interest rates and exchange rates, implying that market return plays an important role in determining the dynamics of conditional return of bank stocks. The results further indicate that interest rate and exchange rate volatility are the major determinants of conditional bank stock return volatility.

This study examines the relationship between real exchange rates and real interest rates with the performance of Islamic banks (listed on the Amman Stock Exchange) represented by a return to assets, return to equity and return on a share by using multiple regression test to analyze the annual data of Islamic banks (International Islamic Arab Bank, Jordanian Islamic Bank, and Safwa Bank) during the period 2005-2019. The most important thing that distinguishes this study from other previous studies is that it examines the character of the relationship between real exchange rates and real interest rates with the performance of Islamic banks, which have not been addressed before at the level of the real values of the variables or the level of Islamic banks in the studies.

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3. Methodology

This study depends on the descriptive approach on the theoretical side, and the statistical and standard approach on the applied side using some statistical tools, quantification, and estimation of multiple linear

regression equations, depending on the E Views program and Excel in analyzing the data of the study variables.

3.1.Data and Variables

Data and Variables The study population consists of three Jordanian Islamic banks listed on the Amman stock exchange. The study population was International Islamic Arab Bank, Jordanian Islamic Bank, and Safwa Bank during the amount (2005-2019). The data on real exchange rate and real interest rate variables was retrieved from the central bank of Jordan website (http://statisticaldb.cbj.gov.jo/Browser/index) whereas the data on net income, Shareholders Equity, Total Assets, and No. Of Subscribed Shares were from Securities Depository Center (SDC) of Jordan website(www.sdc.com.jo). As for the variables which we used in our estimation model, the dependent variables were:

Return to assets (Y_1): It represents one of the performance indicators, and return to assets can be expressed in the following mathematical formula (Khrawish, 2011):

Return to assets (Y_1) = (Summation net income after tax for banks / total assets for banks).

Return to Equity (Y_2): It refers to one of the financial performance indicators, on property rights through the following mathematical formula (Ongore& Kusa, 2013):

Return on Equity (Y_2) = (Summation net income after tax for banks / total equity for banks).

Return for share (Y_3): it is considered one of the financial performance indicators, and it measures in the following mathematical formula (Al-Sharif, 2020):

Return for share (Y_3) = (Summation net income after tax for banks /number of shares for banks).

3.2. Research Method

Research Method To test the validity of the models that were adopted in the study we use multiple linear regression test, which explains the explanatory ability of the models used. Multiple linear regression method is one of the methods in which the relationship between variables, especially the economic ones, is studied, Accordingly, the formula for every of the study models can be written as follows:

$Y_1 = B_0 + B_1 X_1 + B_2 X_2 + U$ -- 1

$Y_2 = B_0 + B_1 X_1 + B_2 X_2 + U$ -- 2

$Y_3 = B_0 + B_1 X_1 + B_2 X_2 + U$ -- 3

4. Findings and Discussions

To analyze data on real exchange rates, real bank interest rates, and financial market performance indicators (return to assets, return to equity and return for share), the data was entered into the (SPSS) program to perform the following tests:

4.1. Descriptive Statistics

It is noticed within the first table that the arithmetic means of the dependent variables (return to assets, return to equity and return for share) are 1.37, 11.037, and 0.196 respectively, and the arithmetic means of the independent variables (the real exchange rate and the real interest rate) are 0.672 and 8.663 respectively. When checking the values of the quality deviation of the info of the independent and dependent variables, we find that the data has a normal distribution. Table 1 denotes the values of the dependent variables converging.

Table 1: Descriptive Statistics of Variables

Variables	*Mean*	*SD*	*Min*	*Max*
Y_1	1.370066667	0.5169890785	0.076481454	2.170088291
Y_2	11.037088888	1.7684829454	6.607447147	13.942535400
Y_3	0.196355556	0.0367617382	0.105394706	0.259716779
X_1	0.672133333	0.0369611121		
X_2	8.663133333	0.4081601343		

Source: Author's findings

4.2. Correlations Matrix

Table 2 shows Pearson's correlation coefficient between the variables for the first, second, and third models respectively, and the largest value of the correlation coefficient is 0.588, which is a small lesser than the permissible 0.8, which means there is no correlation between the variables of the study models.

Table 2: Correlation Matrix for Model 1, 2 with Variable Control

Variables	Y_1	Y_2	Y_3	X_1	X_2
Y_1	1				
Y_2		1			
Y_3			1		
X_1	-0.320	-0.308	-0.213	1	
X_2	-0.227	-0.337	-0.376	-0.588	1

Source: Author's findings

4.3. Discussion

The results of the multicollinearity test and the multiple regression test indicate that there are no multiple linear correlations between the independent variables because the VIP value of independent variables equal (1.53) is bigger than (1) and less than (10) (Drury, 2008).

Table 3 shows the value of (D. W = 1.287) and the value of (F = 3.449) are calculated in the acceptance area of the model compared with the Durban Watson values and the tabular p-value in general. When referring to the details in the table, the calculated minimum value of (t = 2.229)) (ignoring the positive/negative sign) is greater than its tabular value, which indicates the significance of the independent variables statistically. Of the independent variables, the real interest rate has the largest value of statistical significance which is (0.046), which is less than (0.05), and this indicates that the regression equation has a significant statistical function. From Table 3, the coefficient of determination (R^2) 0.365, which means that the independent variable (real exchange rates and real interest rates) in the model explained 36.5% of the changes that occur in the return on assets, while 63.5% of the changes in the return on assets are due to other factors that are included in the random error due to its inability to measure. The model is appropriate based on the value of (F = 3.449), which is greater than the value of (P) tabular. Thus, this becomes the first model:

$Y_1 = 23.666 - 16.036X_1 - 1.33X_2$ ~~~~~~~~~~~~~~~~~~~~~~~~~~1

Table 3: The Results of Examining the Effect of Real Exchange and the Real Interest Rate on the Performance (Return to Assets)

Variables	*Coefficient*	*t-Statistic*	*R^2*	*Sig*	*F*	*D.W*
Constant	23.666	2.765	0.365	0.017	3.449	1.287
X1	-16.036	-2.435		0.031		
X2	-1.330	-2.229		0.046		

The effect is statistically significant at ($\alpha \leq 0.05$)

Table 4 shows the value of (D. W = 1.614) and the value of (F = 6.122) are calculated in the acceptance area of the model compared with the Durban Watson values and the tabular p-value in general. When referring to the details in the table, the calculated minimum value of (t = 3.081))(ignoring the positive/negative sign) is greater than its tabular value, which indicates the importance of the independent variables statistically. Of the independent variables, the real interest rate has the largest value of statistical significance which is (0.01) less than 0.05, and this indicates that the regression equation has a significant statistical function. From Table 4, the coefficient of determination (R2) is (0.505), which means that the explanatory strength of the model is good and that the independent variables (the real exchange rate and the real interest rate) were able to explain 50.5% of the changes that occurred in the financial performance (return to equity), while 49.5% of the changes in the return to equity are due to other factors that are included in the random error

due to its inability to measure. The model is appropriate based on the value of (P = 6.122), which is greater than the worth of (P) tabular. Thus, it becomes the second model:

$Y_2 = 87.903 - 52.110\, X_1 - 4.830\, X_2$ --2

Table 4: The Results of Testing the Impact of Real Exchange and the Real Interest Rate on the Performance (Return to Equity)

Variables	*Coefficient*	*t-Statistic*	*R^2*	*Sig*	*F*	*D.W*
Constant	87.903	4.000	0.505	0.002	6.122	1.614
X_1	-52.110	-3.081		0.010		
X_2	-4.830	-3.154		0.008		

The effect is statistically significant at ($\alpha \leq 0.05$)

Table 5 shows the value of (D. W = 1.139) and the value of (F = 4.519) are calculated in the acceptance area of the model compared with the Durban Watson values and the tabular p-value in general. When referring to the details in the table, the calculated minimum value of (t = 2.462) (ignoring the positive/negative sign) is greater than its tabular value, which indicates the significance of the independent variables statistically. Of the independent variables, the real interest rate has the largest value of statistical significance which is (0.030) less than 0.05, and this indicates that the regression equation has a significant statistical function. From Table 5, the coefficient of determination (R2) is (0.430), which means that the explanatory strength of the model is good, meaning that the independent variables (the real exchange rate and real interest rate) were able to explain 43% of the changes that occur in financial performance (return for share) while returning 57% of the changes in earnings per share to other factors included in the random error due to their inability to measure. The model is appropriate based on the value of (P = 4.519), which is greater than the value of (P) tabular. Thus, it becomes the third model:

$Y_3=1.786 -1.008\, X_1 -0.105\, X_2$--3

Table 5: The Results of Testing the Impact of Real Exchange and the Real Interest Rate on the Performance (Return forShare)

Variables	*Coefficient*	*t-Statistic*	*R^2*	*Sig*	*F*	*D.W*
Constant	1.786	3.360	0.430	0.006	4.519	1.139
X_1	-1.008	-2.462		0.030		
X_2	-0.105	-2.843		0.015		

The effect is statistically significant at ($\alpha \leq$ 0.05

5. Conclusion

The correlation matrix and the multiple linear regression model shown in Table 3 accept the alternative hypothesis (rejecting the null hypothesis) that there is a statistically significant effect at ($\alpha \leq 0.05$) for real exchange rate fluctuations and real interest rate fluctuations on return to assets in Jordanian Islamic banks. This result is in agreement with the study by Mbithi (2009) but differed from the results of Cliff & Willy (2014), who concluded that there is a positive relationship between macroeconomic variables (exchange rates, interest rates, and the rate of inflation). The researcher attributes the reason for the difference in the environment and nature of the society and the sample of the study, and the level of economic and political conditions differing from Jordan.

The results of the correlation matrix and the multiple linear regression model shown in Table No. 4, accept the alternative hypothesis (rejecting the null hypothesis) that there is a statistically significant effect at ($\alpha \leq 0.05$) for fluctuations in exchange rates and real interest rates on return to equity in Jordanian Islamic banks. This result is in agreement with the results of each of the study by Khan et al. (2018), who indicated an inverse relationship between the management of the exchange rate and the interest rate and the performance of companies, and the study by Keshtgar et al. (2020), who indicated the existence of a negative relationship between the exchange rate and the performance of banks. However, this result differed from the results of the study by Cliff & Willy (2014) and Qing &Kusairi (2019) who showed the positive effect of prices on the exchange rate and agreed with a negative impact of interest rates on the financial performance of the stock market.

The results of the matrix and the multiple linear regression model shown in Table. 5, accept the alternative hypothesis (rejecting the null hypothesis) that there is a statistically significant effect at ($\alpha \leq 0.05$) for fluctuations in real exchange rates and real interest rates on earnings per share in Jordanian Islamic banks. This result is in agreement with the results of the study by Khan et al. (2018) but differed from the study of Belghitara et al. (2016), who found a positive relationship between changes in the price of the pound sterling and the return for a share of joint-stock companies in Britain, and the study by Basabeh & Abdelkader (2019) who found a positive relationship between the interest rate and the return for Islamic shares. Also, the result differed from the study by Suhadak & Suciany (2020) who found a positive impact of exchange rates and agreed with it in the presence of a negative impact of interest rates on the return for a share.

The researcher attributes the reason for the difference in the results of the studies to the difference in the environment and nature of society, the sample of the study, the difference in the level of economic and political conditions from one country to another, the different study periods, and the small size of Islamic banks in Jordan compared with the joint-stock companies in India and Britain. The inverse relationship between real exchange rates and real interest rates on the one hand, and the financial performance of Islamic banks on the other, as measured by return on assets, return on equity, and return for share, is because a rise in real exchange rates would increase imports at the expense of domestic production, resulting in a decrease in domestic investment, and consequently a decrease in domestic investment, and thus a decrease in deposits and facilities. Based on the above results, the researcher proposes to the government to reduce the real exchange rates and real interest rates or to keep them in a stable state that increases the efficiency of financial performance in Islamic banks through a real decrease and not an increase in the rate of inflation.

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