The Role Of Exchange Rate Fluctuations In Achieving Abnormal Returns
An analytical study of the banking sector in the Iraqi Stock Exchange

دور تقلبات اسعار الصرف في تحقيق العوائد غير العادية
دراسة تحليلة لقطاع المصارف في سوق العراق للاوراق المالية

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Abstract

The current research aims to study and analyze the correlation and impact between exchange rate fluctuations and abnormal returns in the banking sector listed on the Iraq Stock Exchange for the year 2022, 2023, where the fluctuation in exchange rates of the dollar against the dinar was measured on a monthly basis according to the market prices displayed in the statistical bulletin of the Central Bank of Iraq, as for the abnormal returns, they were measured by subtracting the actual return from the required return that was measured using the (CAPM) model, and using a simple correlation coefficient And the linear regression factor in order to measure correlation and regression, the researchers have found a statistically significant effect of exchange rate fluctuations in achieving abnormal returns, and the researcher recommends that the Central Bank of Iraq should take appropriate measures to reduce the smuggling of the US dollar currency to other countries in order to reduce demand for it and thus stabilize its prices, the Iraqi Stock Exchange should also have the necessary flexibility to allow a rapid response to changes in the results of the analysis of data and information flowing in order to equalize between market value For stocks and reality and not achieve abnormal returns.

Keywords: Abnormal returns, Iraqi Stock Exchange, The exchange rate fluctuations.

المستحلص

يهدف البحث الحالي الى دراسة وتحليل الارتباط والتأثير بين تقلبات أسعار الصرف والعوائد غير الاعتيادية في قطاع المصارف المدرج في سوق العراق للأوراق المالية لعام 2022، 2023، حيث تم قياس التقلب في أسعار الصرف الدولار مقابل الدينار بشكل شهري وفق أسعار السوق المعروضة في النشرة الإحصائية للبنك المركزي العراقي، اما العوائد الغير عادية فقد تم قياسها من خلال طرح العائد الفعلي من العائد المطلوب الذي تم قياسه باستخدام نموذج (CAPM)، واستخدم معامل الارتباط البسيط وعامل الانحدار الخطي من اجل قياس الارتباط والانحدار، وقد توصل الباحثان الى وجود ذو دلالة إحصائية لتقلبات أسعار الصرف في تحقيق عوائد غير اعتيادية، ويوصي الباحث بانه ينبغي على البنك المركزي العراقي اتخاذ الإجراءات المناسبة للحد من تهريب عملة الدولار الأمريكي للدول الأخرى من اجل تخفيض الطلب عليه وبالتالي استقرار أسعاره،

كما وينبغي على سوق العراق للأوراق المالية ان يتمتع بالمرونة اللازمة ليسمح باستجابة سريعة للتغيرات في نتائج تحليل البيانات والمعلومات المتدفقة من اجل التعادل بين القيمة السوقية والحقيقة وعدم تحقيق عوائد غير اعتيادية.

الكلمات المفتاحية: عوائد غير عادية، سوق الأوراق المالية العراقي، تقلبات سعر الصرف.

1. Introduction

Stock markets, like other markets, are affected by various factors and events from inside or outside the market, for every new information received by dealers in the market, whether this information is financial, economic, political or any other events, and as a result of not reaching all information at the same time to investors, abnormal returns arise, which is one of the issues that investors and financial analysts must take into account and refer to in order to conduct an initial examination or assessment of market movements, as it is a factor Major attracts the most investor interest in the market because of its direct impact on the size of investors income .

Therefore, many studies have been conducted on the factors that affect abnormal stock returns, in light of this, the current research attempts to shed light on the role of currency exchange rate fluctuations in achieving abnormal returns in the banking sector.

Based on the foregoing and in order to achieve the objectives of the research, the research has been divided into four sections, the first was devoted to the research methodology and the second section is the theoretical framework of the research, which includes currency exchange rate fluctuations and abnormal returns, while the third section has been devoted to the presentation and analysis of the practical side, while the last section was devoted to conclusions and recommendations.

2. Research Method
2.1 Problem

Abnormal returns are achieved due to the difference in the market value of shares from their real value because not all information is available to all investors in the same quantity and at the same time, as the investor's knowledge of the conditions of the financial markets through the study of historical price behavior, trading volumes, the economic environment and indicators of the national economy, including exchange rates, contributes to the accuracy of forecasts. If pessimism about the interpreted information dominates the market, prices do not reflect the true value of the stock (inflated). If the opposite happens regarding the interpreted information, the real value of the share is described as reduced, and thus an abnormal return is achieved. Through this, the following question can be raised: Do exchange rate fluctuations play a role in achieving abnormal returns in the banking sector listed on the Iraq Stock Exchange?

2.2 The importance of the research

The importance of the research lies in the importance of shedding light on important and vital economic variables, namely the currency exchange rate and abnormal returns, and the extent to which it is possible to achieve abnormal returns through exchange rate fluctuations in the banking sector listed on the Iraq Stock Exchange.

2.3 Objective

The research objectives are:
• Study and analyze exchange rate fluctuations on a monthly level for the years 2022 and 2023.
• Measure and analyze abnormal returns in the banking sector listed on the Iraq Stock Exchange for the year 2022.
• Measure the impact of currency exchange rate fluctuations on abnormal returns.

2.4 Hypothesis

The research is based on the following main hypothesis:
There is a statistically significant impact of exchange rate fluctuations on the abnormal returns of the banking sector listed on the Iraq Stock Exchange for the year 2022.
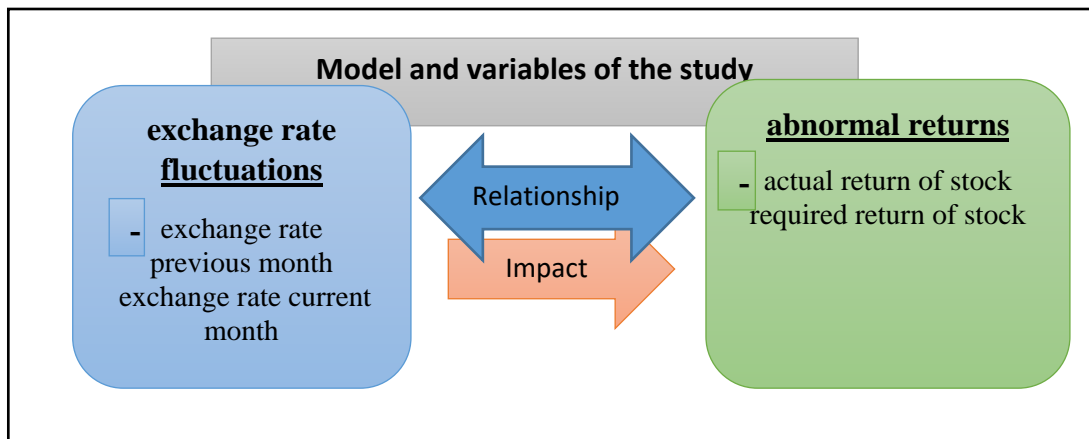
2.5 The research model

Figure (1-1) Model and variables of the study

2.6 Community and sample

The research community was represented in the banking sector listed on the Iraq Stock Exchange, which numbered (32) banks in the year 2022, while the research sample was represented in (9) banks that did not stop trading on a weekly basis (Commercial Bank, Bank of Baghdad, Investment Bank of Iraq, National Bank of Iraq, Sumer Commercial Bank, Mosul Investment Bank, Mansour Bank)

3. Literature Review
3.1 Currency exchange rates

The exchange rate is defined as the amount of national currency needed to obtain one unit of foreign currency, and the exchange rate can be understood as the rate of the local currency against the foreign currency (djaio & et a, 2023: 1125), and the exchange rate refers to the rate of one currency against another currency in the foreign exchange market. It is expressed as the price of one currency expressed in other currencies (Zhao, 2020:1).

Exchange rates are influenced by a variety of factors that are difficult to control and manage, including money demand and supply, productivity, stock flow, hedging activities, interest rate differentials, inflation, GDP growth, current account balances and economic policies across countries. K8 p. 19) While it affects the prices of basic goods or services, interest rates, balance of payments, and trade transactions (Setiawanta, et al., 2020: 354), the exchange rate is also a macroeconomic factor that can affect stock returns. The reason is that the depreciation of the national currency on foreign currencies will increase the amount of the national flag used to repay the external debt and will also increase the price of imported raw materials so this will affect the reduction of the company's share price and share returns (Syahri and Robiyanto, 2020: 353).

Understanding the exchange rate policy is an important issue in the country's economy in order to understand the mechanism of macroeconomic work, and it is possible to distinguish between two exchange rate systems, the first is the fixed exchange rate system, under which the monetary authority in the state determines a fixed exchange rate for the national currency against the foreign currency, and this relationship between the two currencies does not change with very specific limits, and thus the exchange rate is not determined by the supply and demand for the currency (Al-Nuaimi, 2021: 162), the second system is the floating exchange rate (free) is a policy that allows the foreign exchange market to determine the exchange rate without the intervention of the authorities, through the supply and demand for foreign currency, under this policy the exchange rate is volatile in the short term, but many countries choose this system because it helps to stop the huge speculation on the currency. In addition to adjusting the balance of payments by depreciating the local currency to prevent the balance of payments deficit, it also reduces the likelihood of experiencing a contraction of capital flows (Zhao,2020:3).

There are four types of exchange rates:

3.1.1 Nominal exchange rate

The nominal exchange rate is defined as a unit of the currency of the foreign country in terms of units of the currency of the local country and this definition can express a unit of the local country's currency that pays for a number of units of the foreign country's currency, and that the nominal exchange rate is determined according to the supply and demand in the exchange markets at a certain moment. Therefore, it can change according to the change of supply and demand, and represents units of local currency used to buy or exchange foreign currency divided into the official exchange rate, which is concerned with official current exchanges, and the parallel exchange rate, which is traded in parallel markets (Kerman, 2018:23).

3.1.2 Official exchange rate

It is defined as the rate set by the Central Bank, which is traded in the currency sales window, which is one of the direct and influential methods that can be used to intervene in the exchange market in order to maintain the stability of exchange rates and the general level of prices (Baldawi and Aziz, 2023: 109).

3.1.3 Real exchange rate

The real exchange rate is defined as the price of the number of units of foreign consumption necessary to buy a unit of domestic consumption, so it is expressed as the price of foreign currency in local currency units (Rebelo, & et ai, 2017: 1), the real exchange rate is considered as a tool that maintains the competitiveness of the state because of its role in the economy in the face of local inflation rates as it links the local market with the global market, in addition to benefiting dealers in making their decisions (Al-Shammari, Al-Wandawi, 2022:61).

3.1.4 Equilibrium exchange rate

It is the market equilibrium price, which is determined by the intersection of the demand curve in the market with the supply curve on foreign currency in the absence of official intervention, and is classified into three types that vary according to the time horizon, the first in the short term, which is closely related to the so-called current equilibrium exchange rate and is appropriate if the market has full knowledge of the facts and interacts rationally, while the second equilibrium is in the medium termIt is achieved if the economy is in a state of internal equilibrium and occurs when demand is at the level of potential supply and the economy is operating at full normal capacity, yet this equilibrium alone is not sufficient for this to be a correct equilibrium. So the rest of the world also needs to achieve internal equilibrium, which is equivalent to achieving external equilibrium, while the third horizon is long-term equilibrium. It is achieved when net wealth is fully equilibrium of inventory flow, so that changes in asset inventory (as a percentage of GDP) are zero (Driver, and Peter, 2013: 7–9).

3.2 Abnormal Returns

Investment means sacrificing the current amount of money in order to obtain uncertain future profits, where the investor sacrifices part or all of his money in the hope of increasing this money in the future, so the investment is characterized by the fact that it must generate returns and that these returns are uncertain and subject to fluctuations, (AL-Qudah & Laham, 2013: 136).One of these stock investments, whose returns represent the total profit or loss that occurred in the shares during a certain period as a result of any cash dividends (dividends) in addition to the change in the share price during the period (Zutter & Smart, 2019: 349), so the percentage of realized stock returns will be equal to the final price of the share minus the share price at the beginning of the period (in addition to any cash dividends such as dividends) divided by the share price at the beginning of the period and is summarized In the following equation: (Sheridan & etal,2021:226-227)

Rate of Return $= \frac{P1 - P0 + D}{P0}$

Whereas:

P1: share price at the end of the period

P0: share price at the beginning of the period

D: The dividend per share

As for the required return, it means the return required by the investor to compensate him for systemic risks that cannot be avoided by diversifying investments, which is the lowest level that the investor requires before starting to invest (Ali, 2021: 26) and the required return is calculated through several models, including the Capital Asset Valuation Model (CAPM), which assumes that the stock must provide a return equal to the risk-free rate in addition to the risk premium, measured by the beta value of the share, and therefore the beta value of the share It represents systematic risk that will provide valuable information that illustrates the variation of the share price that cannot be avoided through diversification (ZHANG, 2006, 36) and the required return is calculated in the CAPM model according to the following equation: (Ross, 2019: 444).

E(Ri)= Rf + [(Rm) – Rf]×β

Where:

E(Ri) : Required rate of return on the security.

Rf : Risk-free rate of return.

β: Beta of the security.

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While the abnormal return is the difference between the level of profit achieved (actual return) or the level of profit expected (required return) over a period, which is often used to evaluate the performance of securities (Thi Thuy & Le Van, 2021: 3), it can also be used as a basis for testing market efficiency, as abnormal returns usually occur when an event is announced, such as (mergers and acquisitions, dividend announcements, announcements of productive companies, lawsuits, increases in interest rates, etc. (Kusnandar & Bintari, 2020: 198)

The abnormal return is achieved through the information that reaches the market. If the information does not reach the market quickly, investors and insiders can obtain the abnormal return. It is known that the abnormal return is zero if the information reaches all investors at the same time. Therefore, the profit depends on the efficiency of the markets. In the presence of efficient markets, there are no abnormal returns (Jaber and Al-Shammari, 2017: 121).

The abnormal return is calculated after calculating the realized returns and the required returns, where the required returns are subtracted from the realized returns, as in the following equation (Syafitri & Suryani, 2021: 392):

RTNi.t = Ri.t – E [Ri.t]

Where:

: RTNi.t is the abnormal return of stock i in period t

: Ri.t is the actual return of stock i in period t

: E [Ri.t] is the required return of stock i in period t

4. Result And Discussion

This section includes measuring and analyzing the research variables represented by fluctuations in exchange rates and measuring the abnormal return of the banks in the research sample and then testing the hypothesis.

4.1 Analysis of fluctuations in exchange rates

Fluctuations in exchange rates represent the percentage change in the exchange rate of the US dollar for the previous month compared to the current month according to the current market prices and according to the statistical bulletin of the Central Bank of Iraq for the year 2023, 2022, which is represented in Table (1) below:

Table (1) Exchange rates of the dollar against the dinar for the year (2022, 2023)

Month	Exchange rate 2022	Exchange rate volatility %	Exchange rate 2023	Exchange rate volatility %
Jan	1479	0.369	1598	4.44
Feb	1475	-0.299	1526	-4.51
Mar	1473	-0.089	1558	2.10
April	1473	-0.010	1455	-6.61
May	1481	0.510	1455	0.00
June	1481	0.014	1471	1.10
July	1479	-0.118	1489	1.22
Aug	1476	-0.206	1519	2.01
Sep	1475	-0.043	1548	1.91
Oct	1475	-0.051	1597	3.17
Nov	1487	0.841	1603	0.38
Dec	1530	2.861	1548	-3.43

Source: Prepared by researchers based on the statistical bulletin of the Central Bank of Iraq .
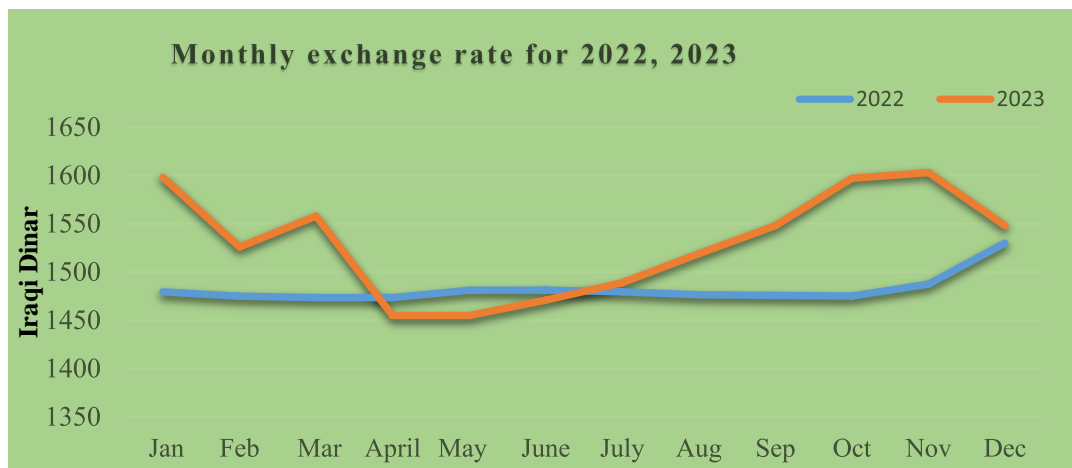

Figure (2) Monthly exchange rate fluctuations for the year (2022, 2023)

It is clear from Figure (1) of the exchange rate of the US dollar against the Iraqi dinar that the monthly average for the year 2022 is volatile during the year, as it is noted that there is an increase and decrease in the currency exchange rates, as the exchange rate for one dollar in January was (1479.49) dinars, followed by a decrease during the months (February, March and April) reaching an amount of (1473.619) dinars, then it rose again in May and June to reach (1481.347), and after that it decreased to November and December, where it recorded the highest exchange rate at (1530) dinars, which is (50) dinars higher per dollar than it was in January 2021. As for 2023, the exchange rates were also more volatile than in 2022, as it is noted that the highest exchange rate reached (1598) in January, while the lowest exchange rate reached (1455) in April and May.

4.2 Measuring and analyzing abnormal returns

Measuring abnormal returns requires extracting the actual returns of the banks in the research sample and then extracting the required returns and comparing them in order to extract the abnormal return.

4.2.1 Actual monthly returns

It represents the difference between the closing price of shares for the current month and the closing price for the previous month divided by the closing price for the previous month. It was extracted in Table (2) for banks listed on the Iraq Stock Exchange that did not stop trading during the period 2022, 2023.

Table (2) Actual stock returns of banks in the research sample for the year 2022

Year	Bank Name \ Month	Mansour Bank	Mosul Investment Bank	Gulf Bank	Sumer Commercial Bank	National Bank of Iraq	Iraqi Investment Bank	Middle East Bank	Commercial Bank	Market return
2022	Jan	0.000	0.000	0.000	0.053	0.260	0.000	-0.050	-0.016	0.031
	Feb	0.020	0.267	0.200	0.275	0.026	0.067	0.000	0.000	0.107
	Mar	-0.019	0.526	0.000	-0.294	-0.025	-0.094	-0.053	0.033	0.009
	April	-0.039	-0.138	-0.056	-0.222	-0.194	-0.034	0.000	-0.111	-0.099
	May	-0.061	-0.200	-0.059	-0.321	-0.192	0.000	0.000	-0.036	-0.109
	June	-0.065	0.150	-0.063	0.316	0.337	0.000	0.000	-0.019	0.082
	July	-0.023	0.043	0.000	0.000	-0.222	-0.036	-0.056	0.000	-0.037
	Aug	0.119	-0.042	0.000	-0.120	-0.095	0.074	-0.059	-0.057	-0.022
	Sep	0.085	0.000	0.200	0.000	0.137	0.034	0.063	0.020	0.067
	Oct	0.098	-0.174	-0.056	-0.045	-0.019	-0.067	-0.059	0.000	-0.040
	Nov	0.125	0.158	-0.059	-0.095	-0.028	0.000	-0.125	-0.020	-0.006
	Dec	-0.016	-0.045	0.000	0.000	0.068	0.000	0.000	0.000	0.001
2023	Jan	0.081	0.048	0.000	0.053	0.191	-0.107	0.000	0.040	0.038
	Feb	-0.045	0.000	0.000	0.000	-0.038	0.000	-0.071	-0.019	-0.022
	Mar	-0.047	-0.136	-0.063	-0.050	0.016	0.040	-0.077	-0.039	-0.045
	April	-0.082	0.053	0.000	-0.105	0.031	0.000	0.083	0.041	0.003
	May	0.036	0.000	0.000	-0.118	-0.167	-0.038	-0.154	-0.059	-0.062
	June	0.121	-0.050	-0.133	-0.067	0.136	0.000	-0.091	0.042	-0.005
	July	0.354	0.053	0.077	-0.071	0.080	0.160	0.100	0.140	0.111
	Aug	0.091	0.050	0.571	0.077	0.415	-0.241	0.182	0.316	0.183
	Sep	-0.010	0.000	-0.045	-0.071	0.262	1.136	-0.077	0.013	0.151
	Oct	0.042	-0.095	-0.143	-0.077	0.021	-0.277	-0.083	-0.158	-0.096
	Nov	0.283	0.105	0.000	0.250	-0.028	0.088	0.000	0.094	0.099
	Dec	0.102	-0.048	0.000	-0.133	0.017	0.162	0.091	0.029	0.027
Average		0.048	0.022	0.016	-0.032	0.041	0.036	-0.018	0.010	0.015

Source: Prepared by the researchers based on the monthly bulletins of the Iraq Stock Exchange.
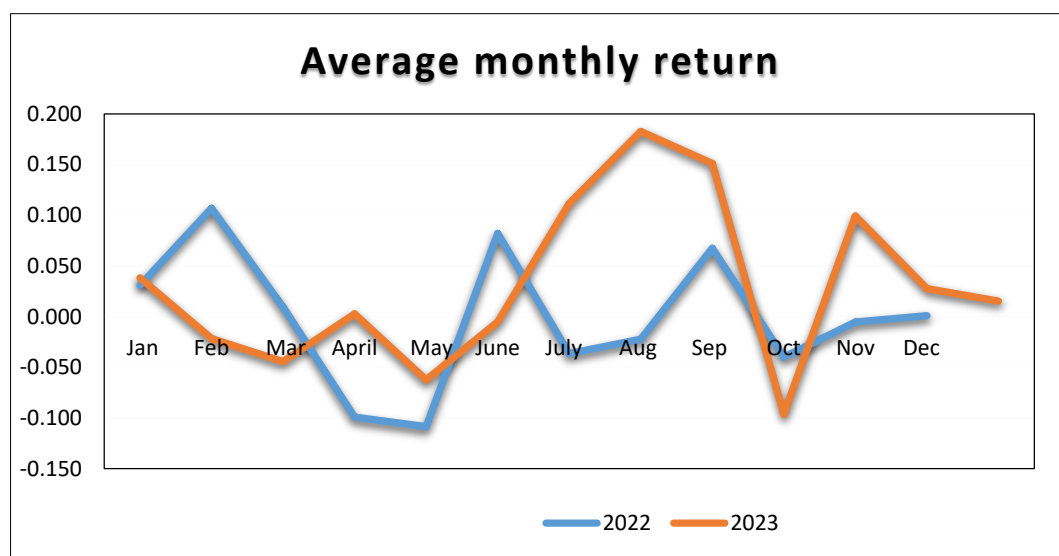

Figure (3) Average monthly actual stock returns in 2022, 2023

Figure (2) shows that the actual market returns for the year 2022 are volatile, as it is noted that the stock returns of the research sample companies increased during the month of February, then began to gradually decline in the following months to reach the peak of the decline in the month of May, then returned to fluctuations by decreasing and rising, and returned to stability in November and December. As for the year 2023, it was more volatile than the year 2022, as it is noted that the returns for the month of January were close to the returns for 2022, while their highest increase was in the month of August (0.183), while their lowest decrease was in the month of October by (-0.096).

4.2.2 Required Return

The required return is the minimum rate required by the investor to compensate for potential risks, and it is measured in our research through the Capital Asset Pricing Model (CAMP), which rewards the investor by adding the market risk premium to the risk-free return. Whereas the risk-free return represents the interest rate on treasury bonds issued by the Central Bank of Iraq, which is (6.5%, 7%) for the years 2023, 2022, respectively, while the risks are represented by the beta coefficient, which was extracted through the joint variance between the returns of the research sample banks' stocks and the market returns on a weekly basis, divided by the variance of market returns. Table (3) shows the required return for the research sample banks for the years 2022, 2023.

Table (3) Required return for banks in the research sample for the year 2022, 2023

Year	Bank Name / Month	Mansour Bank	Mosul Investment Bank	Gulf Bank	Sumer Commercial Bank	National Bank of Iraq	Iraqi Investment Bank	Middle East Bank	Commercial Bank	Average
2022	Jan	-0.011	0.065	0.065	0.065	-0.149	0.089	0.033	0.030	0.023
	Feb	0.065	0.275	0.096	0.052	-0.045	0.132	0.143	0.132	0.106
	Mar	0.039	-0.425	0.065	-0.122	0.131	0.073	0.092	0.106	-0.005
	April	-0.011	-0.417	0.203	-0.724	-0.106	0.030	0.065	0.042	-0.115
	May	-0.035	-0.435	-0.236	-0.358	-0.170	0.065	0.065	0.108	-0.124
	June	0.090	-0.228	-0.088	-0.375	-0.248	-0.089	0.046	0.002	-0.112
	July	0.018	-0.041	0.065	0.065	-0.146	-0.177	-0.047	-0.108	-0.046
	Aug	-0.054	0.008	-0.081	0.037	-0.004	-0.018	0.103	-0.062	-0.009
	Sep	0.073	0.065	0.065	0.068	0.068	0.068	0.059	0.070	0.067
	Oct	-0.081	0.132	-0.184	-0.033	-0.113	0.062	-0.323	0.100	-0.055
	Nov	-0.019	-0.136	-0.015	0.065	0.008	0.069	-0.017	0.003	-0.005
	Dec	-0.089	0.039	-0.111	0.004	-0.007	0.043	0.065	0.044	-0.001
2023	Jan	0.002	0.175	0.070	0.037	-0.143	0.033	0.070	0.059	0.038
	Feb	0.137	-0.101	-0.115	-0.108	-0.038	0.070	-0.037	0.016	-0.022
	Mar	0.009	-0.028	0.043	0.011	-0.044	-0.035	-0.257	-0.059	-0.045
	April	-0.587	0.133	0.067	0.067	0.049	0.070	0.168	0.057	0.003
	May	0.095	0.070	0.183	-0.356	-0.091	-0.062	-0.379	0.044	-0.062
	June	0.067	0.070	0.068	-0.513	0.060	0.071	0.068	0.070	-0.005
	July	0.076	0.067	0.068	0.066	0.071	0.074	0.068	0.071	0.070
	Aug	0.111	0.081	0.090	0.095	0.070	0.076	0.089	0.121	0.092
	Sep	0.018	0.113	0.007	0.065	0.199	0.084	0.064	0.048	0.075
	Oct	0.072	0.056	0.083	0.091	0.079	0.083	0.066	0.067	0.075
	Nov	0.071	0.068	0.070	0.212	0.071	0.067	0.070	0.070	0.087
	Dec	-0.104	0.104	0.020	-0.034	0.041	0.073	0.051	0.064	0.027

Source: Prepared by the researchers based on the weekly bulletin of the Iraq Stock Exchange and the financial reports of the Central Bank of Iraq.
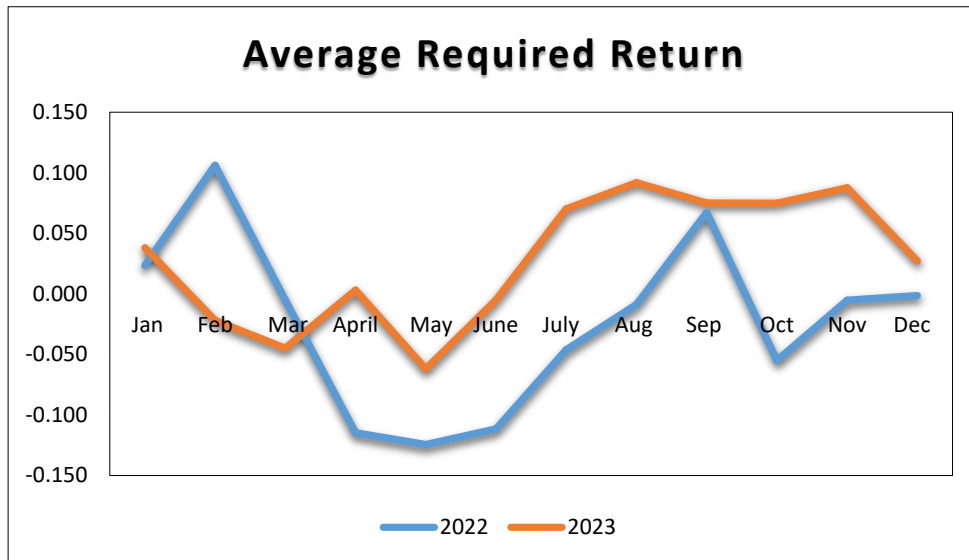
Figure (4) Required return for research sample companies for the year 2022, 2023

4.2.3 Abnormal return:

Table (4) represents the abnormal return, which is the difference between the actual return of the bank shares in the research sample extracted in Table (2) and the required return extracted in Table (3).

Table (3) The abnormal return of the banks in the research sample for the period 2022, 2023

| Year	Bank Name \ Month	Mansour Bank	Mosul Investment Bank	Gulf Bank	Sumer Commercial Bank	National Bank of Iraq	Iraqi Investment Bank	Middle East Bank	Commercial Bank	Average
2022	Jan	0.011	-0.065	-0.065	-0.012	0.409	-0.089	-0.083	-0.047	0.0074
	Feb	-0.045	-0.008	0.104	0.223	0.071	-0.065	-0.143	-0.132	0.0006
	Mar	-0.058	0.951	-0.065	-0.172	-0.156	-0.167	-0.144	-0.073	0.0145
	April	-0.028	0.279	-0.259	0.502	-0.087	-0.064	-0.065	-0.153	0.0155
	May	-0.026	0.235	0.177	0.036	-0.022	-0.065	-0.065	-0.144	0.0158
	June	-0.155	0.378	0.026	0.691	0.585	0.089	-0.046	-0.020	0.1935
	July	-0.041	0.084	-0.065	-0.065	-0.076	0.141	-0.008	0.108	0.0096
	Aug	0.173	-0.049	0.081	-0.157	-0.091	0.092	-0.162	0.005	-0.0135
	Sep	0.012	-0.065	0.135	-0.068	0.069	-0.034	0.003	-0.050	0.0003
	Oct	0.179	-0.306	0.128	-0.012	0.094	-0.129	0.264	-0.100	0.0150
	Nov	0.144	0.294	-0.043	-0.160	-0.036	-0.069	-0.108	-0.023	-0.0002
	Dec	0.073	-0.085	0.111	-0.004	0.075	-0.043	-0.065	-0.044	0.0023
2023	Jan	0.078	-0.128	-0.070	0.015	0.334	-0.140	-0.070	-0.019	0.00008
	Feb	-0.182	0.101	0.115	0.108	0.000	-0.070	-0.035	-0.035	0.00030
	Mar	-0.056	-0.109	-0.106	-0.061	0.060	0.075	0.181	0.020	0.00050
	April	0.505	-0.080	-0.067	-0.173	-0.018	-0.070	-0.085	-0.016	-0.00040
	May	-0.059	-0.070	-0.183	0.238	-0.075	0.024	0.225	-0.103	-0.00047
	June	0.054	-0.120	-0.201	0.447	0.077	-0.071	-0.159	-0.029	-0.00027
	July	0.278	-0.014	0.009	-0.137	0.009	0.086	0.032	0.069	0.04143
	Aug	-0.020	-0.031	0.482	-0.018	0.344	-0.317	0.093	0.195	0.09090
	Sep	-0.029	-0.113	-0.052	-0.136	0.063	1.052	-0.141	-0.035	0.07605
	Oct	-0.030	-0.151	-0.225	-0.168	-0.059	-0.360	-0.150	-0.225	-0.17109
	Nov	0.212	0.037	-0.070	0.038	-0.100	0.021	-0.070	0.024	0.01147
	Dec	0.206	-0.152	-0.020	-0.099	-0.025	0.089	0.040	-0.036	0.00047
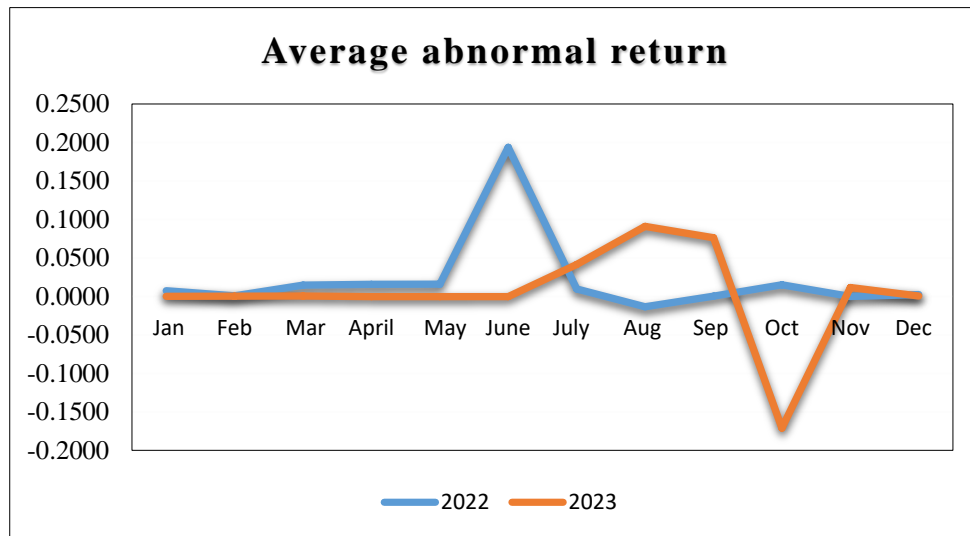
Figure (5) The abnormal return of the banks in the research sample for the year 2022, 2023

4.3 Testing the research hypothesis

After measuring and analyzing the research variables represented by exchange rate fluctuations as an independent variable and abnormal returns as a dependent variable, the research hypothesis will be tested by using Pearson's correlation coefficient and simple linear regression.

The research hypothesis stated that "there is a statistically significant effect of exchange rate fluctuations in achieving abnormal returns" and this hypothesis was tested statistically through the correlation and regression relationship between the independent variable and the dependent variable of the research, as in Table (5):

Table (5) Correlation and regression relationships for exchange rate fluctuations and abnormal returns for the research sample banks

Dependent variable	independent variable	Correlation coefficient R	Coefficient of explanation R^2	Calculated F-test value	F-test table value	marginal slope b	Calculated T-test value	T-test table value	Result
abnormal return	exchange rate fluctuations	0.064	0.4%	0.092	4.30	0.155-	-0.303	2.089	**significant**

Source: Prepared by the researchers using SPSS

Table (5) for the statistical analysis shows that the simple linear correlation coefficient reached (0.064), which indicates the existence of a direct relationship between exchange rate volatility and abnormal returns for the banks in the research sample. Thus, the more the volatility in exchange rates increases, the more abnormal returns increase and vice versa. The explanation coefficient reached (0.4%), as it was shown that the independent variable (exchange rate volatility) contributes 0.4% of the changes in abnormal returns, while the other variables contribute 96%, which is a percentage that reflects the importance of exchange rate volatility in abnormal returns. It is also evident that the value of the regression coefficient for exchange rate fluctuations is -0.155, which indicates that whenever the fluctuation in exchange rates increases by one dinar, the abnormal returns decrease by 0.155 and vice versa. Note that this effect is significant, as the calculated T-test value (-0.303) was greater than its tabular value of "2.089." Thus, we accept the relationship in the main hypothesis, which states that there is a statistically significant effect of exchange rate fluctuations in achieving abnormal returns in the banks of the research sample, and these results are confirmed by the (F) test, as the calculated F value was (0.092), which is greater than the tabular F value (4.30).

5.1 Conclusions

1. The exchange rate of the dollar against the Iraqi dinar in the market is higher than the official price issued by the Central Bank of Iraq during the years 2022 and 2023.
2. The instability of the exchange rates of the dollar against the dinar throughout the research period, as there was fluctuation in exchange rates.
3. Most of the monthly market returns were negative, which indicates that capital losses were incurred as a result of a decline in stock prices for the research sample banks during the years 2022 and 2023.
4. The analysis showed that the banks in the research sample achieved abnormal returns, as most of the banks in the research sample achieved abnormal losses, as the actual return appeared to be less than the required return.
5. There is a statistically significant effect of exchange rate fluctuations on achieving abnormal returns in the research sample banks.

5.2 Recommendations

1. The Central Bank of Iraq should take the necessary measures to increase the supply of the dollar through its approved outlets, which will lead to the return of exchange rates to their normal rates.
2. The Central Bank of Iraq should draw up a clear policy to achieve stability in exchange rates, ensuring that the market price approaches the price issued by the Central Bank.
3. The government should take appropriate measures to limit the smuggling of the US dollar to other countries in order to reduce demand for it and thus stabilize its prices.
4. The Iraqi Stock Exchange should have the necessary flexibility to allow for a quick response to changes in the results of data analysis and information flow in order to balance the market value with the reality and not achieve abnormal returns.

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