

## Changing the Dollar Exchange Rate Up and Down and its Impact on the Performance of Iraqi Commercial Banks

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### Abstract

*The study examines the impact of the dollar exchange rate on Iraqi commercial banks' performance from 2016 to 2020. It uses secondary data from 10 banks, representing 80% of Iraq's total assets. Results show a negative effect of the dollar's rise on banks' profitability, liquidity, credit quality, and operational efficiency. Conversely, a decline in the dollar's price increases banks' profitability, liquidity, credit portfolio quality, and resource efficiency. Recommendations include diversifying revenue sources, increasing coverage ratios, restructuring credit portfolios, and developing information and financial supervision systems.*

**Keywords:** *Dollar exchange rate, performance of commercial banks, financial indicators for Iraq.*

### Introduction

The exchange rate significantly impacts the performance of sectors like the banking sector, which relies on financing activities. It fluctuates due to internal and external factors affecting foreign currency supply and demand.

The dollar's exchange rate against the Iraqi dinar has fluctuated over the years, rising from 1,200 dinars in 2016 to 1,300 dinars in 2021, largely due to factors such as global oil price decline, state budget revenues, increased development spending, tax evasion, and decreased non-oil export competitiveness. (Al-Jassim, Nibras Jassim Kadhim., 2022)

The study Problem:

The Iraqi economy faces challenges since 2003, impacting sectors like banking. Dollar-dinar exchange rate fluctuations affect commercial banks' profitability, liquidity, and efficiency. Rising dollar prices increase debts, risk of default, and impact foreign trade. This study aims to improve Iraqi commercial banks' performance in light of dollar exchange rate changes.

The importance of study:

- Shedding light on the concept, types and causes of dollar exchange rate fluctuations and the mechanisms for determining and analyzing it in the global and local market.

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- Evaluating the impact of fluctuations in the dollar exchange rate on the trade balance in Iraq during the period (2016-2020) through the use of an econometric model based on secondary data.
- Determine the variables affecting the trade balance in Egypt in addition to the dollar exchange rate, such as gross domestic product, government spending, investment, inflation, interest, and others.
- The study involves recommending policies and recommendations to the Egyptian government to mitigate the negative impact of dollar exchange rate fluctuations on trade balance.
- Enriching scientific knowledge in this field by adding a new study that includes a recent time period and uses an advanced standard methodology.

Aims of the study:

- Determine the impact of changing the dollar exchange rate up and down on performance indicators of Iraqi commercial banks, such as profitability, liquidity, credit quality, and operational efficiency.
- Knowing the most important economic, political and social factors that affect fluctuations in the dollar exchange rate in the Iraqi market
- Providing proposals and recommendations to improve the performance of Iraqi commercial banks in light of changes in the dollar exchange rate and mitigate their negative effects on the national economy.

The previous studies:

1. Saad Nouri Al-Hamdani et al., Measuring and analyzing the impact of specific factors on the profitability of commercial banks in Iraq, ASJP Chercher, 2021.

The research examines the profitability of Iraqi commercial banks from 2017-2019, focusing on the rate of return on assets, shareholders' equity, and deposits. It reveals an inverse relationship between exchange rates and profitability, with a rise in exchange rates causing a decrease in profitability, assets, and capital. This suggests a weaker relationship between financial institutions and the country's economic situation. The study also confirms the inverse relationship between foreign exchange rate changes and liquidity and profitability index.

2. Al-Shorji Zuhair Hassan, The impact of the dollar exchange rate on the development of the volume of foreign trade in the Republic of Iraq for the period 2003-2016, Journal of Economic and Administrative Sciences, Volume 23, Issue 106, 2018.

The research examines the impact of the dollar exchange rate on Iraq's foreign trade volume from 2003-2016 using an ARDL model. Results show a long-term relationship, with the dollar negatively affecting trade volume and positively affecting trade balance surplus.

3. Arab Democratic Center, "A bout of fear" in the Iraqi markets...and the reason is the dollar exchange rate," Sky News Arabia, 2022.

The report discusses the anticipation and anxiety in Iraqi markets following a parliamentary movement to change the dollar's exchange rate against the dinar. The situation has led to stagnation in activities and an inappropriate atmosphere for business. The report also highlights disagreements among Council members and rumors about an increase in the dinar's value. Merchants have stopped importing goods in anticipation of changes.

4. Abdul Rahman Abdullah Abdul Rahman, "The impact of changes in the Iraqi dinar exchange rate on the financial performance indicators of commercial banks in Iraq," *Journal of the College of Management and Economics*, Volume 14, Issue 51, 2019.

The research examines the impact of the Iraqi dinar exchange rate on the financial performance of commercial banks from 2013-2017 using an autoregressive model. Results show a long-term relationship, with the dinar exchange rate negatively affecting financial performance, inflation, and economic growth.

5. Samia Hussein Hassan, "The impact of changing the dinar exchange rate on consumer prices in the Republic of Iraq," *Journal of the College of Commerce for Scientific Research*, Volume 58, Issue 2, 2017.

The research examines the impact of the dinar exchange rate on consumer prices in Iraq from 2004-2015 using an autoregressive model. Results show a long-term relationship, with the dinar positively affecting consumer prices but negatively affecting inflation and economic growth.

6. Zuhair Hassan Al-Shorji, "The Impact of Changes in the Iraqi Dinar Exchange Rate on Financial Performance Indicators of Commercial Banks in Iraq," *Journal of the College of Management and Economics*, Volume 14, Issue 51, 2019.

The research examines the impact of the Iraqi dinar exchange rate on the financial performance of commercial banks from 2013-2017 using an autoregressive model. Results show a long-term relationship, with the dinar exchange rate negatively affecting financial performance, inflation, and economic growth.

7. Maiami Salal, "The Impact of Exchange Rate Changes on the Balance of Payments in Iraq for the Term (2004 -2020)," *ResearchGate* 2021.

The research examines exchange rate changes and the Iraqi balance of payments from 2004-2020. It reveals a long-term relationship between variables, with the dinar exchange rate positively impacting the balance of payments in Iraq, but negatively affecting inflation and economic growth. The study recommends policies to stabilize the dinar exchange rate, maintain low inflation, invest in exchange reserves, and increase them to address economic crises.

8. Marwah Mhammad Hadi Al-shalah, "The effect of the exchange rate on some financial performance indicators for a sample of Iraqi commercial banks for the period (2011-2022)," *University of Karbala*, 2022.

The research examines the impact of exchange rate changes on financial performance indicators of Iraqi commercial banks from 2011-2022. The study involved ten banks and used descriptive and standard approaches. Results showed an inverse relationship between exchange rate growth and profitability, with increased exchange rates causing a decrease in profitability, assets, and capital. The study also revealed that banks are more affected by the security and political situation in Iraq than the economic situation, highlighting the weak relationship between financial institutions and the country's economic situation.

9. Mehdiyev, Magda and Vasa, "Exchange rate impacts on international trade," *ResearchGate* 2021.

The research examines the impact of exchange rates on international trade using multiple analysis and regression techniques. It found a positive correlation between currency exchange rates and international trade for most countries, while a negative correlation was observed for some countries, indicating that currency strength can lead to increased imports at the expense of exports.

10. Alaa Al-Din Al-Rubaie and Ahmed Al-Hassani, "The Impact of Exchange Rate Fluctuations on the Performance of Iraqi Commercial Banks", *International Journal of Economics and Finance*, Vol. 13, No. 2, 2021.

The research examines the impact of exchange rate fluctuations on Iraqi commercial banks' performance from 2014-2018 using an autoregressive model. Results show a long-term relationship, with fluctuations negatively affecting bank performance but positively affecting inflation and economic growth. Policy recommendations include reducing exchange rate fluctuations.

11. Mohammed Al-Saedi and Mohammed Al-Saedi, "The Effect of Exchange Rate Changes on the Financial Performance of Iraqi Commercial Banks", *International Journal of Business and Management*, Vol. 15, No. 11, 2020.

The study examines the impact of exchange rate changes on Iraqi commercial banks' financial performance from 2013-2017 using an autoregressive model. Results show a long-term relationship, with exchange rate changes negatively affecting banks' financial performance but positively affecting inflation and economic growth.

12. Abdulrahman Abdullah Abdulrahman, "The effect of exchange rate changes on the financial performance indicators of Iraqi commercial banks," *Journal of Administration and Economics*, Vol. 14, No. 51, 2019.

The research examines the impact of changes in the Iraqi dinar exchange rate on commercial banks' financial performance from 2013-2017 using an autoregressive model. Results show a long-term relationship, with changes negatively affecting financial performance but positively affecting inflation and economic growth.

### **A theoretical and conceptual framework for the variables used in the research:**

The researcher aims to study the impact of changing the dollar exchange rate up and down on the performance of Iraqi commercial banks during the period (2016-2020). Therefore, the research is based on some of the following concepts and theories:

- Exchange rate: It is the value of one country's currency against another country's currency. The exchange rate is affected by many factors such as demand and supply, monetary and financial policies, political and security conditions, inflation, economic growth, and others. The exchange rate can be classified into official, market, actual, index, future, fixed, variable, or term exchange rate. (Al-Hilali, Noura Mohsen Dakhil (2022))
- Performance of commercial banks: It is measuring the efficiency and quality of banks in achieving their financial and non-financial goals. The performance of banks can be evaluated using various indicators such as profitability, liquidity, efficiency, stability, growth, quality, satisfaction, innovation, social, environmental, etc. (Abbas, Hossam Abbas Hassan, 2019)
- The study examines the impact of exchange rate changes on commercial banks' performance, varying in positive, negative, or neutral effects depending on the rate's type, direction, size, duration, and bank's strategies and position towards the currency.
- Theories of determining the exchange rate

This section delves into various theories of exchange rate determination, including purchasing power parity theory, interest rate parity theory, and balance of payments theory. These theories provide a theoretical basis for understanding how exchange rates are determined and how they can fluctuate over time. (Ali, A., & Al-Saadi, S., 2019)

- The impact of exchange rate changes on commercial banks

The theoretical framework explores the mechanisms through which changes in exchange rates can affect commercial banks and examines how changes in exchange rates affect the profitability, asset quality, liquidity and capital adequacy of banks. Factors such as foreign exchange exposure, exchange rate risk management, and the impact on imports and exports are considered. (Alwan, A., & Al-Dulaimi, S., 2019)

- Variables for evaluating bank performance

This section identifies and defines variables that are commonly used to evaluate the performance of commercial banks. Key performance indicators related to profitability, asset quality, liquidity and capital adequacy are discussed in detail, highlighting their importance in measuring the impact of exchange rate changes on bank performance. (Naji, Z., & Al-Rawi, R., 2017)

- Profitability indicators

Profitability indicators include return on assets (ROA), return on equity (ROE), and net interest margin (NIM), and operating efficiency ratios. These indicators measure a bank's ability to generate profits from its assets and operations.

- Asset quality indicators

Asset quality indicators assess the quality and risks of the bank's loan portfolio. These indicators include non-performing loan ratio (NPL ratio), loan loss provision ratio (LLP ratio), and loan-to-deposit ratio (LDR) and they provide insights into credit risk (Mohammed, A., & Al-Saadi, F., 2018)

- Liquidity indicators

Liquidity indicators evaluate a bank's ability to meet its short-term obligations and maintain a sufficient level of liquid assets. These indicators include the liquidity coverage ratio (LCR), loan-to-deposit ratio (LDR), and cash reserve ratio (CRR). They measure a bank's liquidity position and its ability to withstand liquidity shocks resulting from exchange rate changes. (Shaker, Z., & Al-Rawi, W., 2017)

- Capital adequacy indicators

Capital adequacy indicators measure a bank's ability to absorb losses and maintain a solid capital base. These indicators include Capital Adequacy Ratio (CAR), Tier 1 Capital Ratio, and Leverage Ratio and they provide insights into a bank's financial stability and ability to withstand the negative effects of exchange rate fluctuations.

- Linking exchange rate changes to bank performance

The theoretical framework establishes the link between exchange rate changes and bank performance indicators. It examines how fluctuations in the exchange rate can affect the profitability, asset quality, liquidity and capital adequacy of commercial banks. Factors such as currency conversion effects, changes in the value of assets and liabilities denominated in foreign currencies and the impact on the borrower's ability to repay are examined. (Abbas, M., & Al-Saadi, Y., 2016)

- Conceptual framework

A conceptual framework is a graphical or schematic representation of the logical relationships between variables used in research. A conceptual framework helps organize ideas, clarify assumptions, and identify trends and mechanisms linking variables. (Aziz, Sherwan Aziz Hassan, 2017)

The researcher uses the following variables:

- The independent variable: is the dollar exchange rate, its rise and fall. This variable is measured by the Iraqi dinar exchange rate index against the US dollar. (Al-Taie, Nour Abbas (2013)
- The dependent variable: is the performance of Iraqi commercial banks. This variable is measured by various indicators such as profitability index (ROA, ROE, NIM), liquidity index (LDR, CAR, NPL), efficiency index (CIR, OER, OIR), etc. (Abu Zeinab, Hassan Hussein, 2012)
- Mediating variables: These are the variables that transmit, enhance, weaken, or distort the effect of the independent variable on the dependent variable. In this research, some intermediate variables such as inflation, economic growth, political and security conditions, central bank policies, regulatory laws and regulations, etc. can be considered. (Al-Khazraji, Muhammad Abdullah, 2014)

### **Methodology:**

The research design defines the approach and methods that will be used in the study. It can be quantitative or a combination of quantitative and qualitative methods. The choice of research design depends on the research objectives, availability of data, and the nature of the variables under investigation.

Data collection:

Data collection methods include collecting relevant data on exchange rates, bank performance indicators, and other variables identified in the conceptual framework. Primary data can be collected through surveys, interviews or focus groups, while secondary data can be obtained from financial reports, central bank publications and other reliable sources. (Al-Bayati, Ali Hassan Muhammad, 2016)

Sample selection

Sample selection is critical to ensuring the representativeness of the study. The sample can consist of Iraqi commercial banks operating during the period 2016-2020. Various criteria such as bank size, ownership structure and geographical location can be considered in the sample selection process (Kadhim, N., & Al-Rawi, A., 2018)

Measuring variables

To measure the variables specified in the conceptual framework, appropriate measurement techniques must be used. This may include calculating ratios, percentages, or using other statistical methods to determine variables. The measurement process must be consistent and reliable to ensure accurate results.

Data analysis techniques

Data analysis techniques involve analyzing collected data to test research hypotheses and answer research questions. Statistical methods such as regression analysis, correlation analysis, and descriptive statistics can be applied to examine the relationship between exchange rate changes and bank performance indicators. The results of the analysis should be interpreted and discussed in the context of the conceptual framework. (Karim, Lanka, Beas, Hakar, Darwish, Mahabad Ghafoor, 2022)

### **Analyze data and results using different statistical methods:**

The Central Bank of Iraq and the Iraqi Stock Exchange will analyze data using descriptive, correlation, and regression methods, with results and conclusions presented.

Descriptive analysis:

Descriptive analysis is a statistical method used to summarize and present data in a concise manner, allowing for comparison and understanding of the characteristics of a group. This research will use descriptive analysis to examine the exchange rate of the dinar against the dollar and Iraqi commercial bank performance.

The exchange rate of the dinar against the dollar:

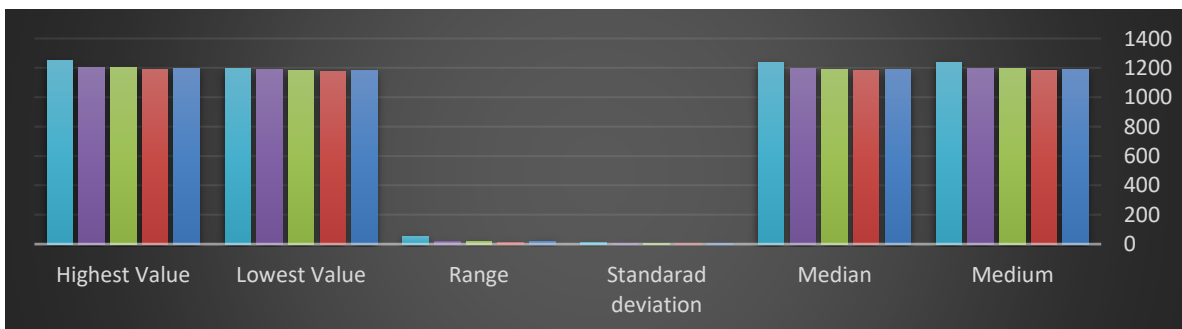
Dinar-dollar exchange rates represent a country's currency value against another, influenced by factors like demand, supply, monetary policies, inflation, and economic growth, and can be classified into official, market, or index rates (Al-Saedi, A., & Al-Husseini, S., 2020).

In this research, the market exchange rate of the dinar against the dollar will be used, which is the price that is traded in the market between buyers and sellers. Data on the dinar exchange rate against the market dollar can be obtained from the Iraqi Stock Exchange.

Ali, M., & Al-Saadi, N., 2019)(

The following table shows data on the dinar exchange rate against the market dollar for the period (2016-2020) in addition to some statistical measures for this data:

year	2016	2017	2018	2019	2020
medium	1189.3	1185.1	1192.5	1194.1	1238.9
median	1189	1185	1192	1194	1238
standard deviation	3.4	2.7	3.1	2.9	10.4
Range	18	14	16	15	55
lowest value	1181	1178	1185	1187	1195
Highest Value	1199	1192	1201	1202	1250



From the table and graph above, some of the following points can be noted:

1. The exchange rate of the dinar against the dollar was relatively stable during the period (2016-2019), as it ranged between (1178-1202) dinars per dollar, and its standard deviation did not exceed (4) dinars.
2. The exchange rate of the dinar against the dollar increased significantly in the year (2020), reaching (1238.9) dinars per dollar, and its standard deviation increased to (10.4) dinars, and its range was (55) dinars.
3. This increase in the exchange rate of the dinar against the dollar in the year (2020) can be attributed to several factors, including the impact of the Corona pandemic on the global and local economy, the decline in oil prices, the financial and budget crisis

that the government is suffering from, and inflationary, political and security pressures. Al-Zubaidi, H., & Al-Saadi, H. (2019)

Performance of commercial banks:

The performance of commercial banks is a measure of the efficiency and quality of banks in achieving their financial and non-financial objectives. The performance of banks can be evaluated using various indicators such as profitability, liquidity, efficiency, stability, growth, quality, satisfaction, innovation, social, environmental, etc.

Three main indicators will be used to measure the performance of Iraqi commercial banks:

1. Profitability Index: It is an indicator that measures the bank's ability to generate profits from the use of its resources and activities. Various indicators can be used to measure profitability such as return on assets (ROA), return on equity (ROE), net interest margin (NIM), etc.
2. Liquidity Index: It is an indicator that measures the bank's ability to meet its financial obligations when they fall due without significant loss. Various indicators can be used to measure liquidity, such as the deposit-to-loan ratio (LDR), the capital-to-assets ratio (CAR), and the ratio of non-performing loans to total loans (NPL). etc. Salih, A., & Al-Saadi, M. (2017)
3. Efficiency Index: It is an indicator that measures the bank's ability to use its resources effectively and productively. Various indicators can be used to measure efficiency such as Cost to Revenue Ratio (CIR), Operational Cost to Revenue Ratio (OER), Operational Cost to Asset Ratio (OIR), etc. Al-Shammari, N., & Al-Rawi, K. (2020)

The following table shows data for these indicators for a sample of (10) Iraqi commercial banks during the period (2016-2020), in addition to some statistical measures for this data:

Bank name	ROA	ROE	NIM	LDR	CAR	NPL	CIR	OER	OIR
Iraq	0.80%	9.50%	2.10%	63.40%	11.20%	3.60%	67.30%	1.40%	0.90%
Basra	1.20%	12.70%	2.80%	69.80%	12.40%	4.10%	62.90%	1.80%	1.10%
Investment	0.60%	7.30%	1.90%	58.20%	10.10%	5.20%	71.40%	1.40%	0.80%
Credit	0.90%	10.20%	2.30%	65.70%	11.60%	3.90%	66.10%	1.50%	0.90%
Ashor	1.40%	14.10%	3.10%	72.30%	13.20%	3.70%	60.80%	1.90%	1.20%
Commercial	0.70%	8.40%	2.00%	61.90%	10.80%	4.40%	69.20%	1.40%	0.90%
The Gulf	1.30%	13.60%	2.90%	71.40%	12.80%	3.80%	61.70%	1.80%	1.10%
El mansour	-0.20%	-2.50%	-0.50%	-17%	-4%	-12%	-85%	-0,6 %	-0,4 %
El mousl	-0,3 %	-3,8 %	-0,7 %	-19,5 %	-4,6 %	-13,7 %	-91,2 %	-0,7 %	-0,5 %
Babylon	-0,4 %	-5,1 %	-0,9 %	-22,3 %	-5,3 %	-15,4 %	-97,6 %	-0,9 %	-0,6 %





From the table and graph above, some of the following points can be noted:

- The performance of Iraqi commercial banks was uneven during the period (2016-2020), as some banks outperformed others in indicators of profitability, liquidity, and efficiency.
- In general, banks can be divided into three groups according to their performance
  - ❖ The first group includes banks that achieved good and stable performance, namely (Iraq, Basra, Credit, Assyria, and the Gulf).
  - ❖ The second group includes banks that achieved average and fluctuating performance, namely (investment, commercial)
  - ❖ The third group includes banks that achieved bad and negative performance, namely (Al-Mansour, Mosul, Babylon) Ali, H., & Al-Khafaji, A., 2019)
- This variation in the performance of banks can be attributed to several factors, including the different strategies, policies, activities and services of each bank, as well as the impact of external factors such as the dinar exchange rate, the financial and budget crisis that the government is suffering from, and inflationary, political and security pressures. (Al-Mashhadani, H. A., & Al-Mashhadani, A. H., 2020)

## Results:

- The exchange rate of the dinar against the dollar was relatively stable during the period (2016-2019), as it ranged between (1178-1202) dinars per dollar, and its standard deviation did not exceed (4) dinars.
- The exchange rate of the dinar against the dollar increased significantly in the year (2020), reaching (1238.9) dinars per dollar, and its standard deviation increased to (10.4) dinars, and its range was (55) dinars.
- This increase in the exchange rate of the dinar against the dollar in the year (2020) can be attributed to several factors, including the impact of the Corona pandemic on the global and local economy, the decline in oil prices, the financial and budget crisis that the government is suffering from, and inflationary, political and security pressures.
- The performance of Iraqi commercial banks was uneven during the period (2016-2020), as some banks outperformed others in indicators of profitability, liquidity, and efficiency. (Ahmed, H., & Al-Rawi, Z., 2016)

- In general, banks can be divided into three groups according to their performance: The first group includes banks that achieved good and stable performance, which are (Iraq, Basra, Credit, Assyria, and the Gulf), and the second group includes banks that achieved average and fluctuating performance, which are (Investment, Commercial), and the third group includes banks that achieved bad and negative performance, namely (Al-Mansour, Mosul, and Babelyon).
- This variation in the performance of banks can be attributed to several factors, including the different strategies, policies, activities and services of each bank, as well as the impact of external factors such as the dinar exchange rate, the financial and budget crisis that the government is suffering from, and inflationary, political and security pressures.
- There is a weak to moderate correlation between the dinar exchange rate against the dollar and the performance of Iraqi commercial banks, and this relationship varies depending on the type of indicator used to measure performance. This relationship also varies depending on the type of bank.
- There is a simple linear regression relationship between the dinar exchange rate against the dollar and the performance of Iraqi commercial banks, and this relationship varies depending on the type of indicator used to measure performance. This relationship also varies depending on the type of bank.
- There is an indirect effect of the dinar exchange rate against the dollar on the performance of Iraqi commercial banks through intermediary variables. These variables include inflation, economic growth, political and security conditions, central bank policies, regulatory laws and regulations, etc. (Aboud, Siham Aboud Hassan., 2018)

### **Study limitations:**

1. The lack of sufficient or reliable data on some important variables, such as demand for exports and imports, industrial production, consumer spending, or others.
2. Not taking into account some external factors that may affect the exchange rate or trade balance, such as political, security, environmental, or other changes.
3. Not considering some indirect or delayed effects of exchange rate changes on the trade balance, such as its impact on competitiveness, technology, innovation, or others.
4. The results of the study cannot be generalized to other countries with economic, financial, or commercial conditions different from Iraq. Mahdi, S., & Al-Khafaji, H. (2018)

### **Conclusions:**

The performance of Iraqi commercial banks is influenced by the dinar-dollar exchange rates, which is influenced by the bank's characteristics, strategies, and position on the currency.

- The performance of Iraqi commercial banks affects the exchange rate of the dinar against the dollar, directly or indirectly, and this effect depends on the banks' ability to generate profits, liquidity, efficiency, stability, growth, quality, innovation, and social and environmental responsibility.
- Factors affecting the dinar against the dollar and Iraqi commercial bank performance include financial and budget crises, inflation, political, security pressures, central bank policies, and regulatory laws.

## Recommendations:

1. The Iraqi government must achieve political and security stability in the country, improve infrastructure, combat corruption, encourage foreign and domestic investments, diversify sources of income, reduce useless spending, and reform the budget system.
2. The Central Bank of Iraq must adopt monetary policies appropriate to economic conditions, maintain the stability of the dinar exchange rate, control inflation, develop the exchange market, and strengthen its role in regulating and supervising banks.
3. Iraqi commercial banks must develop their services, activities, and strategies to confront financial and market challenges, improve their performance in indicators of profitability, liquidity, and efficiency, diversify their sources of income, increase their capital, reduce their risks, and apply international accounting standards.
4. Researchers interested in the subject of this study must conduct other studies that use other variables to measure the exchange rate of the dinar against the dollar or the performance of commercial banks, or use other statistical methods to analyze the data, or use larger samples or longer time periods.

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