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Analysis And Measurement Of The Impact Of Exchange Rate Changes And Their Repercussions On Local Investment In Iraq For The Period (2004-2022)

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Abstract: *The research is concerned with analyzing and measuring the impact of exchange rate changes and their repercussions on local investment in Iraq during the period (2004-2022), as the relationship between them is affected by global economic conditions such as high or low oil prices and demand for the exchange rate internationally, as the response of the investment sectors in Iraq to changes in the exchange rate varies, as the decline in the exchange rate encourages investment in the export sector and proves investments in the import-dependent sector, unlike its rise, which negatively affects the local economy The authorities are working to take some measures and procedures such as providing financial support and incentives to support projects and thus promote local investment, as well as the political and security fluctuations in Iraq that affect investor confidence and investment decisions and thus affect economic stability, and the relationship between local investment in Iraq and exchange rate changes is somewhat complicated as they are affected by each other, so the monetary authority and investors must understand this relationship and understand its strategies in a way that enhances and supports the investment climate in the Iraqi economy, Domestic investment and the exchange rate significantly affect the economic relations described in the ARDL model , so it is recommended to develop fiscal and monetary economic policies that support domestic investments and improve exchange rate stability to achieve more sustainable economic results.*

Keywords : *Exchange rate changes, Local investment*

Introduction

The subject of research on the relationship between exchange rate changes and local investment is one of the important topics that occupy the attention of many researchers and economic policymakers, especially in developing countries such as Iraq, which has gone through a transitional phase that has witnessed radical economic and social changes and transformations as a result of changing economic policies more profoundly, as the transition from a central economy to an economy dependent on the free market greatly affects the levels of investment of all kinds, especially local investment, the exchange rate in the Iraqi economy has been exposed to Major changes in the rise and fall during the period (2004-2022), which affected local investment in different directions, generating many challenges and opportunities for local investors, as the changes in the exchange rate of the Iraqi dinar against foreign currencies such as the US dollar led to large fluctuations in the market and thus directly affected investors' decisions, as the rise in the value of the local currency dinar affects investment demand, which leads to a rise in the prices of local products compared to imported products and vice versa when the value of The local currency causes an increase in the cost of import, which negatively affects the stability of the prices of goods and services, by analyzing the

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impact of one of the main variables of monetary policy represented by the exchange rate and its changes as one of the most important monetary variables of the monetary policy adopted by the Central Bank of Iraq and thus evaluating its effectiveness with the possibility of achieving exchange rate stability to create an attractive local environment for investment to support sustainable economic growth.

Importance of research

The importance of the research revolves around how exchange rate changes affect domestic investment, which contributes to supporting informed economic decisions and thus improving monetary policy to attract local investments to enhance economic stability and encourage sustainable investment.

Search problem

The exchange rate in Iraq is exposed to changes and fluctuations between high and low and by a decision of the monetary authority represented by the Central Bank due to the successive economic and political conditions since 2004 and the extent of the impact on the exchange rate of the local currency on the local investment environment in Iraq.

Research hypothesis

There is an integral relationship between the changes that occur in the exchange rate and local investment in Iraq as attractive factors for investments, as the decline in the exchange rate of the local currency against the foreign currency constitutes a positive impact on local investment in Iraq and in contrast to the rise in the exchange rate of the local currency against the foreign currency constitutes a negative impact on local investment in Iraq.

Research Objectives

1- Analysis of the impact of the exchange rate on domestic investment levels in Iraq.
2- Clarify the effectiveness of monetary policy in Iraq and its role in stabilizing the exchange rate and how it affects the local investment environment in Iraq.
3- Analyze economic and monetary data related to domestic investment rates and their relationship to exchange rate changes during the period (2004-2022), using the ARDL model to measure and analyze the relationship between them.

The first topic

The theoretical basis for exchange rate changes and local investment in Iraq

First: The exchange rate and its importance

1- Definition of the exchange rate

The exchange rate represents a ratio on the basis of which the exchange between two currencies foreign currency and local currency (1), and the exchange rate also represents a mirror reflecting the state's commercial position in front of the outside world through the relations between exports and imports The exchange rate is a tool linking two economies are the local economy and the external economy It represents the price of the currency paid Money is a means of exchange and a store of value and a tool for measurement and it represents a commodity like other commodities have a price and a special market by the exchange rate (2).

2- The importance of the exchange rate as an important means of linking at the local and international levels

The exchange rate is one of the important means linking the financial markets of financial assets locally and financial assets externally and the exchange rate also links the value of goods, services and financial assets in local markets and global markets, through which it plays an important role in directing investments in assets locally and abroad, as well as its basic task of allocating resources at the level of the local economy and the exchange rate also plays a standard role as a link between local and foreign prices, especially that local goods and services depend on the exchange rate for the purpose of Making comparisons and measurement between foreign and domestic prices and the exchange rate works to develop exports to different regions in an effort to abandon the industrial sectors and replace them with imports at a cheaper price than the local price and the exchange rate and geographical structure, as well as the role of the exchange rate represents foreign trade by goods and services and performs an internationally distributed function in the economy through trade exchanges by international prices for its close association with foreign trade (3).

3- Basic exchange rate types

- The present exchange rate represents the most important present price movement that takes place during the buying and selling operations present in the foreign exchange market, as these operations and price movements are permanent and continuous, as they represent a large and important proportion of the total international financial transactions (4).
- The real or nominal exchange rate, which is the relative exchange rate of the local currency denominated in foreign currency, as it reflects the accounts based on local currencies in

terms of their quantities, and this price represents the price of the currency at the present time without reflecting its purchasing power that it enjoys, as it is a price equivalent to the changes in foreign currencies, it is the price that represents the basket of foreign goods actually associated with local prices, as any decreases in real exchange rates are considered as a real increase in the value of the local currency, as this indicates The rise in the real exchange rate The decrease in the prices of local goods compared to the prices of foreign goods, as this price reflects the value of the real amount of the rise and fall of the exchange rate of the country concerned, reflecting its purchasing power (5).

- The effective exchange rate is a binary exchange rate between the local currency of a particular country against the foreign currencies of other countries, as this rate reflects the relative importance of trading partners, as the relative trade shares of foreign countries are used, and this rate is represented as a weighted arithmetic average (6).

Second: Exchange rate changes and their causes

1- Definition of exchange rate changes

It is a set of market risks faced by companies operating in the international field, it arises as a result of the sensitivity of these companies to a number of fluctuations in prices such as commodity prices, exchange rates and interest rates, as market forces play an important role in determining these factors (7) The changes to which the exchange rate is exposed are a source of additional risks or the risk is reduced depending on the size of fluctuations and trends (8) Exposure to exchange rate risk represents the sensitivity of the company's share price measured in local currency Trend change in Its value is (9).

2- Reasons leading to exchange rate changes

A- Export and import values

It is the status of the trade balance in terms of exports and imports, if there is a surplus in the trade balance, the demand for the currency rises, which means that the volume of exports is greater than the volume of imports, so the exchange rate increases for high demand, as well as many reasons summarized that the exchange rate of a particular currency is determined by the interaction of supply and demand, meaning that this currency is determined by the amount of supply and required (10).

B- Monetary policy government interventions

Government intervention occurs through the monetary authority represented by the Central Bank in the sale and purchase operations in line with the monetary policy followed in a special form and the economic policy in a general form by following the adaptation that is commensurate with the economic situation taking place, when the economy recovers and the

currency supply rises, the Central Bank withdraws currency by offering some financial instruments such as government bonds (11) Conversely, in the event of an economic downturn, the central bank works to buy financial instruments as a buyer in order to increase the money supply and thus revive the economy again (12).

C- Cases of total balance of payments balance

It is the case of the comprehensive situation of the balance of economic transactions between a particular country and other countries, when the balance of payments is in deficit, the value of the currency decreases due to the increase in supply, which reduces the exchange rate against the rest of the other currencies and the situation is reflected when a surplus in the balance, the demand for the currency increases and thus its value increases, so the exchange rate rises against the rest of the other currencies (13).

D- Occurrence of monetary inflation

The exchange rate depreciates against the rest of the other currencies, which leads to a loss of competitiveness as a result of inflation represented by the continuous rise in the general level of prices and vice versa (14).

E- The instability of the political, economic and security situation

The political, economic and security conditions and their instability led to a loss of confidence in the local currency and thus compensate for it in foreign currency, which leads to an increase in demand for it, so the exchange rate rises in exchange for the deterioration of the local currency and vice versa (15).

3- Main factors leading to exchange rate changes (16)

1- Increases in the foreign exchange rate depreciate the local currency against those currencies.
2- The decrease in the volume of cash flows received by the state due to the decline in exports or the decrease in their prices.
3- The occurrence of negative effects weakens the strength of the local economies of countries due to conflicts and disasters and thus the decline in the value of the local currency against other currencies.
4- The burden of external debt that weighs on the local economy, as well as the obligation to pay annual interest on it, forcing some countries to reschedule their debts with creditors in exchange for high interest, forcing the state to repay them instead of paying the original, which reflects negatively on the value of the local currency against foreign currencies.

Third: Exchange rate changes and their repercussions on local investment in Iraq

1- Definition of local investment

It is an investment managed by local investors who hold the nationality of the country hosting these investments and receive their profits [17] and also means that it is the employment of financial resources in various fields and activities available for investment within the borders of the country concerned [18] Local investment includes public sector investments and the private sector, whatever the nature of these investments [19] as their profits return to investors holding the nationality of the country on which these investments are established [20] Local investment is defined by the World Bank as changes that occur in the total capital formation consisting of the total total expenditures to increase fixed assets in the economy in addition to changes in inventory [21] The total investments involved under the umbrella of local investment are investments made by government agencies with the aim of achieving a set of economic, social, cultural and other goals, i.e. maximizing social returns that are financed from the state's general budget, which includes productive investments in commodity activities. And productive services such as agriculture, industry, trade and tourism, as well as private sector investments with investment decisions aimed at maximizing private return [22].

2- The relationship of exchange rate changes to domestic investment

Exchange rate changes affect domestic investment significantly, as these changes lead to changes in production and trade costs, and thus affect the profits and revenues of local companies producing productive goods and services through many trends represented by the impact of import costs, as exchange rate changes lead to increased uncertainty about the costs of importing foreign goods and services essential for investment, such as equipment and machinery, and this is what makes it difficult for local companies to plan to invest, as well as uncertainty regarding returns in local currency. On the exports of companies, which discourages investmentand also uncertainty regarding the purchasing power of the local currency, which makes it difficult for consumers to plan their expenditures, as this reduces the demand for local goods and services and thus the demand for local investment, as well as exchange rate changes reduce investors' confidence towards investing locally and not risking their money in an environment characterized by instability [23].

The second topic: thepractical and analytical side of the research

First, the changes in the exchange rate and the local investment environment in the Iraqi economy

1- Analysis of the relationship between exchange rate changes and local investment in Iraq

The monetary authority represented by the Central Bank of Iraq determined the exchange rate of the Iraqi dinar according to internationally followed mechanisms according to the floating system, which is close to fixed prices, since the Central Bank of Iraq is in control of determining the exchange rate and its changes through increasing or decreasing the money supply if free float cannot be applied to the reality of the Iraqi economy as it requires the presence of a group of participants when supply and demand in the foreign exchange market (24) As for the investment climate in the Iraqi economy, it is represented by a set of economic, political and social conditions prevailing through attracting or repelling investments as they directly or indirectly affect investment decisions significantly, the stability of their organization in legal and institutional terms, the development of their financial and monetary systems, their effectiveness, clarity and stability, their economic policies and procedures as a state, the nature of the market, its infrastructure, mechanisms, factors related to its productive capabilities, as well as its own resources, which represent an attractive environment for investment. The Iraqi economy is witnessing at the present time a trend to privatize a number of factories and companies owned by the state, especially electric power, as it is expected that privatization will extend to the oil sector and the metals, services and transportation sectors, so it requires focusing the Iraqi economy on creating an appropriate and attractive environment for investment at the local and external levels, as most foreign countries focus on encouraging investments by adopting a set of appropriate policies, laws and legislations, including providing a number of incentives and some exemptions to investors, including It helps to crystallize these trends and turn them into reality in the future (25), and there are a set of factors that make the environment of the Iraqi economy an attractive and encouraging environment for investment as its strategic geographical location distinct located between the three continents Asia, Europe and Africa, as well as its commercial location in the region as a large and open market for production, services and consumption, as well as Iraq represents a major port for export and through it access to the Red Sea through the port of um Qasr and other ports in neighboring countries as a port for the Arab Gulf countries (26).

Table 1

Exchange Rate Changes and Local Investment in Iraq for the Period (2004-2022)

Years (1)	Exchange Rate Changes in Iraq in the Official Market Dinar/USD (2)	Annual rate change rate % (3)	Local investment in Iraq (4)	Annual change rate of domestic investment % (5)
2004	1453	-	3682390560	-
2005	1469	1.101169993	11788961406	220.1442436
2006	1467	(0.136147039)	17831126733	51.25273651
2007	1255	(14.45126108)	7530404439	(57.76820752)
2008	1193	(4.940239044)	21263967927	182.3748459
2009	1170	(1.927912825)	1248985190	(94.12628351)
2010	1170	0	26558090154	2026.373504
2011	1170	0	27379586944	3.093207325
2012	1166	(0.341880342)	35033925947	27.95637136
2013	1166	0	50285093771	43.53256854
2014	1188	1.886792453	52112311461	3.633716382
2015	1190	0.168350168	45528386043	(12.63410744)
2016	1190	0	26112655858	(42.64532937)
2017	1190	0	32004040282	22.56141411
2018	1190	0	33439111789	4.484032311
2019	1190	0	51340132460	53.53318229
2020	1190	0	14951765430	(70.87704158)
2021	1450	21.8487395	16916110515	13.13788057
2022	1470	1.379310345	16916110315	(1.1823E-06)

Source: World Bank Reports and Bulletins Collection of Iraqi Economic Data for the Years (2004-2022)

https://data.albankaldawli.org/countary/IQ

- **The numbers in parentheses are negative, and (0) in column (3) means the exchange rate is fixed during the period mentioned in the table.**
- **Columns (3) and (5) were calculated by the researcher.**

The exchange rate is the number of units of local currency that are exchanged for one unit of foreign exchange or the number of units of foreign currency paid as a price for one unit of local currency [27] and through the price mechanism, the decline in the exchange rate increases exports and reduces imports due to the high elasticity of demand for both, when exports rise, imports of consumer goods decrease from their total volume, so the investment rate increases due to the decline in the price of foreign currency and the high price of imported goods and competition in favor of Local products as the decrease in the exchange rate gives advantages to exports from the supply side, the devaluation of the exchange rate is like one of the expansionary monetary measures that stimulate and encourage investment, production and exports as a result of the decrease in the real interest rate, the decline in real wages, and the decrease in the cost of capital, to generate the investment itself over time, and thus the prices of production elements and export prices rise to raise wages to stimulate production, so theinvestment rises from the demand side The procedure of reducing the exchange rate is tantamount to not destabilizing the exchange rate because its stability works to reduce the cost of waiting for investors to make an investment for a period of time to invest the liquid amounts in a real way not rentier and the cost of waiting is represented by the lost production due to the long waiting period for the stability of the exchange rate On the other hand, the investor plans to invest Depending on the price of products, if their price is higher in the foreign market than their counterparts in the local market, the investment process for export purposes and with the reduction of the exchange rate, all of this works to raise the marginal efficiency of investment and the price is one of the main determinants and thus increases the rate of investment and table (1) shows the noticeable variations of exchange rates and local investment in Iraq during the period studied (2004-2022), as it is clear that the exchange rate rose from (1453) in 2004 to (1469)) per dollar in 2005 with a gradual decline to (1467) in 2006 and (1255) in 2007 to reach a decrease to (1193) in 2008, local investment in Iraq has witnessed significant fluctuations that rose significantly in 2005 for more than (200%) Then theseoscillations decreased in 2006 and 2007 to reach (7530404439) at a very low rate of change equivalent to (57%)All this is due to the instability of the political, security, economic and social conditions during the period of reconstruction and initial construction after the US war in 2003, which reflected on the confidence of investors to restrict investment in light of the instability, so the monetary authorities followed a policy of fixing the exchange rate on (1170) per dollar during the period (2009-2011) as part of the strategy that was followed at that time by the monetary authority represented by the Central Bank of Iraq To support the stability of the local currency in Iraq and control inflationary pressures, the policy of applying the currency auction by the Central

Bank of Iraq during this period has contributed to the stability of the exchange rate and positively reflected on investments after the local investment was (1248985190) dinars in 2009 to reach 27379586944) dinars in 2011 and thus increase the levels of development relatively in the Iraqi economy. During the period (2012-2016), the exchange rate witnessed a remarkable stability after it was (1166) per dollar in 2012 and 2013 respectively, to rise to (1188) per dollar in 2014 with the sharp decline in oil prices at the global level, which led to reducing expenditures and limiting the government's ability to finance investment projects and the cost of military operations against ISIS, which negatively reflected on investment rates, while in 2015 and 2016 respectively.

The exchange rate rose to (1190) per dollar due to the rise in oil prices and Iraq benefited from these increases by increasing government revenues and financing some investment projects at the local level and then remained stable during the years 2017, 2018, 2019 respectively, which indicates stability and improvement in the value of the Iraqi dinar, which enhanced the improvement of the investment environment and investor confidence to carry out investments and their relative increases, as the increases during the mentioned period amounted to (14951765430) Article (50) of the Federal Budget Law was applied in 2015, which stipulated that the sold of foreign currency dollars inside the auction was limited to $ 75 million per day, in addition to the relative improvement in the security and political conditions and the recapture of areas that were under the control of ISIS, which reflects the relative improvement of the investment climate gradually. During the period from (2020-2022), the exchange rate witnessed significant changes, as the exchange rate was restructured due to the effects of the Corona pandemic, as the exchange rate rose from (1190) in 2020. to (1450) in 2021 to reach (1470) to the dollar in 2022, which means reducing the value of the local currency of the Iraqi dinar due to the global closure and the impact of oil-dependent economies on the repercussions of the Corona pandemic, so local investment did not grow due to being affected by the repercussions of Corona, which contributed to the decline in oil revenues, as the Central Bank resorted to changing the exchange rate policy by depreciating the dinar to reduce the financial deficit and enhance liquidity.

Second: Measuring and analyzing the impact of exchange rate changes on the local investment environment in Iraq for the period (2004-2022)

1- Results of the analysis of the impact of exchange rate changes on domestic investment in Iraq for the period (2004-2022)

The economic measurement of the causal model tests according to the self-regression approach for distributed slowdown periods was used and applied in this analysis, as the ARDL model

(Autoregressive Distributed Lag was estimated to measure the relationship between the variables to clarify the extent to which the exchange rate changes index contributes to attracting local investment in the Iraqi economy according to the standard program (EViews) for the time series included in the model, which is the dependent variable represented by local investment (DI).) and the independent variable represented by exchange rate changes (EXC) over multiple time periods, has been using one of the modern means of econometrics represented by the program (Eviews13) to obtain accurate and objective results, and the relationship between the two variables was represented by the linear function

$\mathrm{DI} = f(EXC)$

IDs represent local investment in Iraq, and ECX represents exchange rate changes in the official market, and the model can be expressed in linear relationship:

$\mathrm{DI} = \alpha 0 + \alpha 1 EXC + et$

The linear model was selected for its statistical indicators with the most accurate results, as Table (2) includes the results of the initial estimation, which include coefficients, standard errors, t-statistic, and p-values for all variables in the model.

Table (2)

Results of the preliminary estimation of the ARDL model to analyze the relationship between exchange rate changes and domestic investment

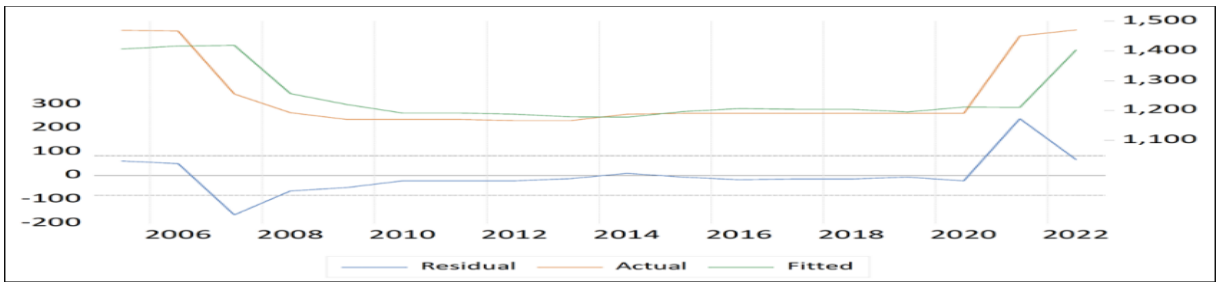
Variable	Coefficient	Std. Error	t-Statistic	Problem.*
X(-1)	0.994295	0.240821	4.12878	0.001676*
X(-2)	-0.45821	0.249624	-1.8356	0.093573
Y	-7.09E-10	1.49E-09	-0.47411	0.644694
Y(-1)	-2.64E-09	1.53E-09	-1.72123	0.113175
Y(-2)	2.51E-09	1.41E-09	1.784102	0.101982
C	598.6748	330.4827	1.811516	0.097424
R-squared	0.70019	Mean dependent var		1235.588
Adjusted R-squared	0.563913	S.D. dependent var		110.1102
S.E. of regression	72.71336	Akaike info criterion		11.68149
Sum squared resid	58159.56	Schwarz criterion		11.97557
Log likelihood	-93.2927	Hannan-Quinn criter.		11.71072
F-statistic	5.137983	Durbin-Watson stat		2.186591
Prob(F-statistic)	0.011274			

Source: Prepared by the researcher based on the outputs of the program Econometrics (Eviews13)

It is clear from the results of the model and the value of R-squared that the independent variable represented by exchange rate changes explains its percentage (70%), as it can be said that the model explains well changes in the dependent variable represented by domestic investment, and the rest of (30%) is represented by other variables outside the model, such as decisions related to monetary policy by the Central Bank, global economic conditions and oil price fluctuations, whileAdjusted R-squared The modified coefficient of determination represents a more accurate estimate of the model after taking into account a number of variables, as it indicates that (56.39%) of the change in domestic investment is explained through the entered variables, which shows that the model is reasonable but can be improved, while the p-value has reached (0.011274), which is less than (0.05), which indicates that the model in general is statistically significant, this means that there is a significant relationship between the variables, as well as the value of Durbin-Watson To measure the self-interference between errors, as this value reached (2.19), which is close to (2), means that there is no strong linear self-interference and indicates that the model does not suffer from self-interference problems between errors, that is, the model is suitable and reflects the relationship between the variables reasonably, as shown in Figure (1).

Figure 1

Trends in the relationship between the two variables - exchange rate changes and local investment in the Iraqi economy



Source: Prepared by the researcher based on Table (2) According to the outputs of Econometric Program (Eviews13)

2- Results of the criteria for selecting the optimal idle period for the slowing correction pattern (UECM)

The selection is made using three famous criteria:

ACAKI Standard (AIC): Measures the efficiency of a model by representing data while punishing excessive complexity.

Schwartz Standard (SC): Similar to the Akaki standard but with stronger punishment for more complex models. Lower values mean choosing the best model.

Hanan-Coin (H-Q) standard: It is also a similar standard that aims to determine the best model while taking into account the balance between complexity and estimation efficiency.

Table 3

Results of the criteria for selecting the optimal slowdown period for the UECM model

Lag	Akaike information Criterion (AIC)	Schwarz Criterion (SC)	Hannan-Quinn H-Q
0	15.39	16.63	17.36
1	14.27	13.04	15.83
2	11.38*	12.63*	11.58*

***: Refers to the slowdown period selected according to the three criteria used.**

Source: Prepared by the researcher based on the outputs of the program Econometrics (Eviews13).

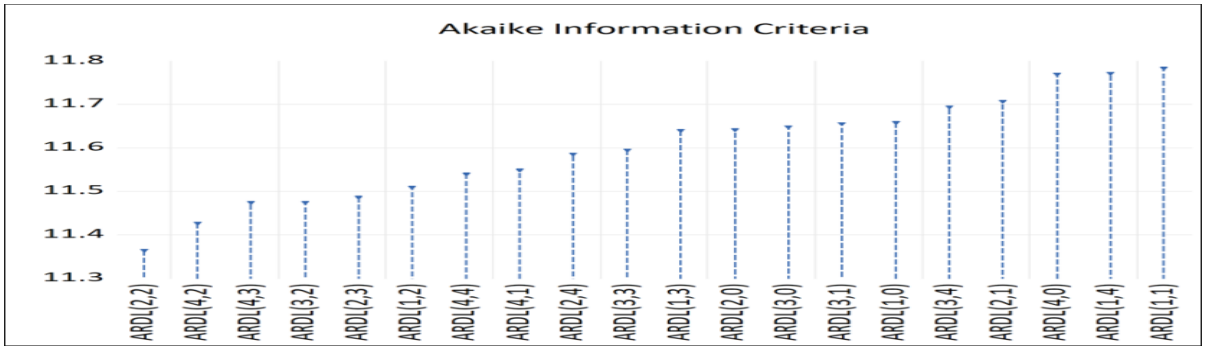
- Period 2 (Optimal Choice):
  - AIC = 11.38, SC = 12.63, H-Q = 11.58
  - Period 2 is the one that achieves the best values for the three criteria:
- The lowest value for AIC (11.38) which means that the model has the least deviation between the expected and actual values while reducing complexity.
- The lowest value for H-Q (11.58) indicating that there is no excessive complexity in the model.
- The lowest value for SC (12.63) which means that the model does not suffer from undue complexity.

Based on the values shown in Table (3), it is clear that the selection of period (2) as the best lag period is optimal for the slowing correction model (UECM).compared to the values of other periods based on the three criteria to obtain the best results from the model, so the rank of the ARDL model is of the second order. It is important to adopt period 2 based on the three criteria

to get the best results from the model, and the aim of these values is to determine how changes in the exchange rate and domestic investment affect different time periods, as well as to analyze the relationship between variables more accurately when taking sizing into account, and Figure (2) shows all slowdown periods and the optimal slowdown period for research variables according to the three criteria used.

Figure 2

Shows the slowdown periods of the search variables according to the three criteria used



Source: Prepared by the researcher based on the outputs of the econometric program (Eviews13).

3- ARDL model estimates between search variables with normal and standard parameters

Table 4 presents ARDL model estimates between the exchange rate (EXC) and domestic investment (DI) with normal coefficients as well as standardized coefficients and elasticity at averages. The aim of these values is to determine how changes in the exchange rate and domestic investment affect different time periods, as well as to analyze the relationship between variables more accurately when taking Limitation in mind, according to the following paragraphs:

A- Exchange rate (X) and delays:

- It shows that the exchange rate in previous periods (X(-1)) has a positive and strong impact on domestic investment, suggesting that changes in the exchange rate in the past significantly affect domestic investment in the future.
- The exchange rate in later periods (X(-2)) shows a weak and negative effect, which means that the effect decreases over time.

B- Domestic investment (Y) and its delays:

- The impact of domestic investment in the previous periods (Y(-1) and Y(-2)) on domestic investment in subsequent periods is very weak and insignificant.

- It seems that domestic investment in past periods does not have a strong impact on domestic investment in the future.

C- Elasticity :

- Flexibility is a measure of the sensitivity of domestic investment to changes in the exchange rate.
- From the results of elasticity, we can see that changes in the exchange rate in previous periods have a significant impact on domestic investment (at an elasticity value of 0.994248).
- The impact of domestic investment on itself in previous periods shows a weak effect, indicating that domestic investment is not significantly sensitive to changes in previous periods.

Table 4

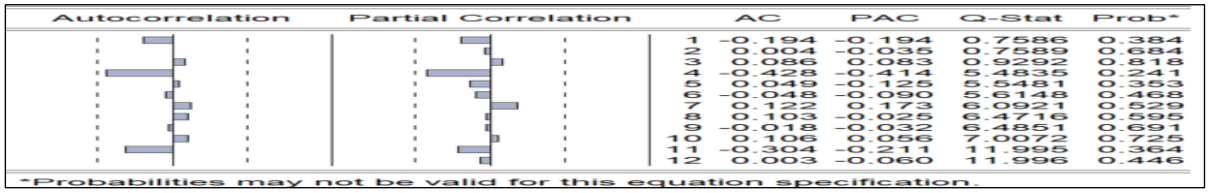
Results of the criteria for selecting the optimal idle period for the UECM model

Variable	Coefficient	Standardized Coefficient	Elasticity at Means
X(-1)	0.994295	0.993095	0.994248
X(-2)	-0.45821	-0.45919	-0.45825
Y	-7.09E-10	-0.09829	-0.01608
Y(-1)	-2.64E-09	-0.37255	-0.05919
Y(-2)	2.51E-09	0.37463	0.054749
C	598.6748		0.484526

Source: Prepared by the researcher based on the outputs of the econometric program (Eviews13).

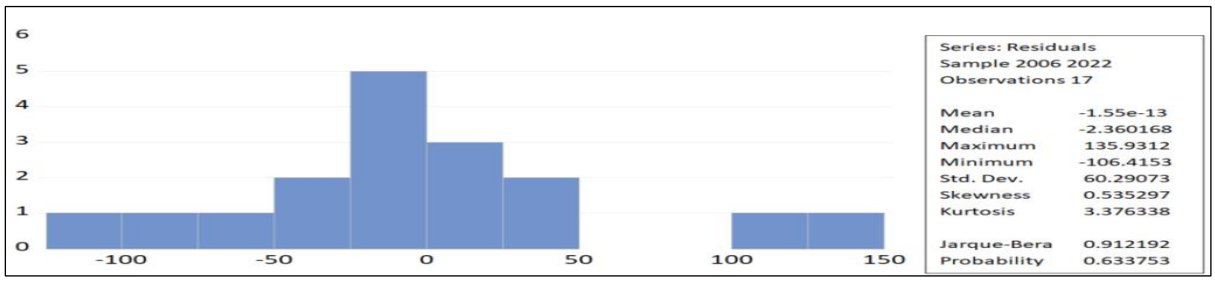
The graphs show ARDL model estimates of search variables with normal and standard parameters.

Figure 3



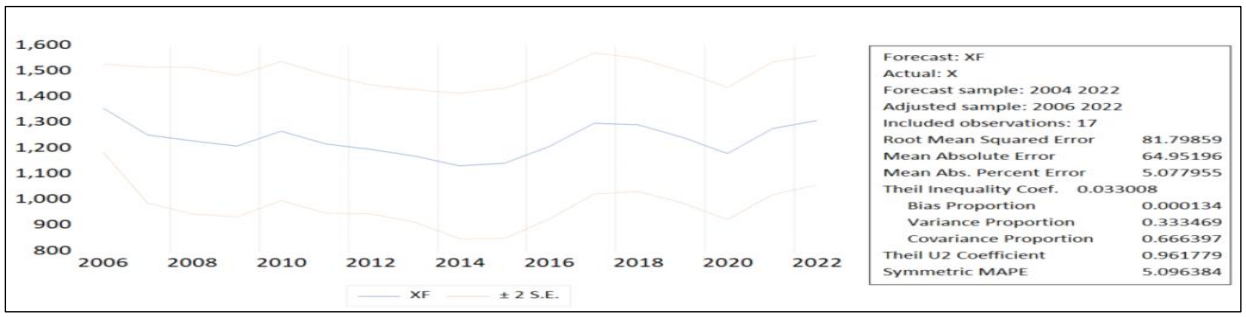
Source: Prepared by the researcher based on the outputs of the econometric program (Eviews13).

Figure 4



Source: Prepared by the researcher based on the outputs of the econometric program (Eviews13).

Figure 5



Source: Prepared by the researcher based on the outputs of the econometric program (Eviews13).

4. Results of Single Root Tests for Variants

Table 5 shows the results of single root tests for search variables using the Dicke-Fuller composite **test (**ADF) and the Phillips–Perron (PP) test for domestic investment, at the original level, the ADF statistic was 0.48, which is greater than the critical value, indicating that the string has a single root and is unstable at this level. However, when taking the first difference, the ADF statistic becomes -4.56, which is below the critical value, which shows that the chain becomes stable after taking the first difference. The PP test at the original level also shows a value of -2.48, which indicates instability, but after taking the first difference the value becomes -3.14**,** which proves stability, as for the exchange rate, at the original level, it was a statistic ADF 3.49, indicating the presence of a single root, and therefore the chain is unstable, and when the first difference was taken, the ADF statistic was -1.33, and it does not reach the required critical value, which means that the chain does not become stable even after taking the first difference. The PP test also supports the same result, as the series appears unstable at both the original levels and the first difference. Based on these results, it can be said

that domestic investment It becomes stable after taking the first difference, while the exchange rate does not show stability even after taking the first difference.

Table 5

Unit root tests for studied search variables

Variables	Dickie-Fuller Composite (ADF)		Philips-Peron (PP)	
	Original level	The first difference	Original Level	The first difference
Local Investment	0.48	-4.56	-2.48	-3.14
Exchange rate changes	3.49		-1.33	

Source: Prepared by the researcher based on the outputs of the econometric program (Eviews13).

5. Joint Integration Test Results Using ARDL Model Boundary Test

Table (6) presents the results of the cointegration test using the boundary test of the ARDL model, where the long-term relationship between the variables integrated into the model is examined, as it is clear that the critical values of the F-statistics test based on the number of variables (K) and the semantic level, as well as the F statistic obtained from the model analysis have been Determine the critical values of the minimum and maximum different levels (10%, 5%, 2.5%, 1%) according to thesignificance level and by statistical comparison F-statistics)) which is equal to 4.927)) to determine whether there is a co-integration relationship between variables, it exceeds the critical value at (5%) which is equal to 4.302) (at the minimum), suggesting that the relationship between the variables in the ARDL model is integrated in the long run, since F-statistics It also exceeds the critical values at 2.5% and 1%, it can be said that the result is statistically significant at multiple significant levels, which confirms the existence of a common complementarity between the variables as the results indicate that there is a long-term complementary relationship between the research variables in the ARDL model, according to the boundary test, which means that the variables in the model move synchronously in the long term.

Table 6

Results of the cointegration test for the ARDL model according to the boundary test

K	**Critical value**	**F-statisrtics**
1	12.149	4.927
Upper limit	**Bottom line**	**Significant**
3.034	2.384	10%
4.302	3.748	5%
4.954	3.485	2.5%
5.738	4.928	1%

Source: Prepared by the researcher based on the outputs of the econometric program (Eviews13).

Given that the F-statistics statistic is equal to 4.927, it exceeds the critical value at (5%) which is equal to 4.302 at the minimum), which indicates that the relationship between the variables in the ARDL model is integrated in the long term, and it appears that **F-statistics** also exceeds the critical values at 2.5% and 1%, it can be said that the result is statistically significant at Multiple semantic levels, which confirms the existence of a common integration between the variables so the result indicates that there is a long-term complementary relationship between the variables studied in the ARDL model, according to the boundary test, which means that the variables in themodel move synchronously in the long term.

6- **Estimates of short- and long-term parameters of the ARDL model**

Table 7 presents estimates of the short- and long-term parameters of the ARDL model, in which the relationship between different variables, such as domestic investment (DI) and exchange rate changes (EXC), is analyzed. The results presented include long-term estimates of transactions, t-statistics **,** standard errors**,** as well as probability values. of the different variables in the model, and reviews the results of the tests of the boundaries between exchange rate changes and domestic investment.

Table 7

Estimators of the short- and long-term parameters of the ARDL model

Long Run Coefficients				
Probability	**T-statistics**	**Std-Error**	**Coefficients**	**Variable**
0.004	4.95	0.14	0.84	**D(FDI) (-1)**

0.495	4.03	2039.81	33848.38	**D(EX)**
0.045	2.49	2930.42	-29494.02	**D(EX) (-1)**
0.016	3.92	0.0052	-0.0384	**CointEq(-1)**

Source: Prepared by the researcher based on the outputs of the econometric program (Eviews13).

- The long-term estimate of the Conte coefficient (-1) is 0.016, which shows that the time series is moving towards long-term equilibrium. This means that there is a corrective process that occurs when deviations from equilibrium occur in the long term.
- The t-statistic for this variable is 3.92, which is a large value that indicates that this coefficient is statistically significant. This means that the correction process towards long-term equilibrium is happening dramatically and effectively.
- The standard error of this variable is 0.0052, which indicates that the estimate is relatively accurate.

The results indicate that all the variables studied in the ARDL model positively affect the other variables in the model in the long run, and all estimates seem statistically significant as the t-values of all variables exceed the critical values, in the long term, and both domestic investment and the exchange rate play an important and influential role in determining the direction of changes in the model, based on these results, local investment and the exchange rate greatly affect economic relations. Described in the ARDL model It is therefore recommended to develop economic policies that support domestic investments and improve exchange rate stability to achieve more sustainable economic outcomes.

Conclusions and recommendations

First: Conclusions

1- The changes that occur at the exchange rate greatly affect local investment in Iraq and create challenges and risks for investors and thus affect the making of important investment decisions.

2- The values of local investment in Iraq and their variations from year to year during the studied research period are affected by several factors, including the rise or fall in oil prices globally, as well as the political situation and economic policies.

3- Based on the results of the border test in the ARDL model, there is a long-term complementary relationship between the research variables represented by exchange rate changes and local investment in Iraq, which means that the variables in themodel move simultaneously in the long term, as both local investment and exchange rate changes play a

major role in determining the direction of various changes in the model used to analyze and interpret the relationship between them.

Second: Recommendations

1- Work to develop economic policies that support domestic investments and improve exchange rate stability to achieve more sustainable economic outcomes.
2- Other economic factors that may affect the relationship between the exchange rate and domestic investment such as fiscal and monetary policies, global economic conditions and risks, or global financial indicators can be studied.
3- Work to follow cautious monetary policies by the monetary authority represented by the Central Bank of Iraq by controlling inflation and controlling exchange rate fluctuations, the money mass in circulation and foreign exchange, as well as working to diversify the economy and reduce dependence on the oil sector to enhance monetary stability and thus attract investments, especially local investment .

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