The effect of interest rate and inflation on bank deposits in the Kingdom of Saudi Arabia from 1995 to 2018

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Abstract:

This study aimed to analyze some factors affecting the size of credit deposits in Saudi banks, and to answer the questions of the study, we relied on the theoretical framework on the literature and previous relevant studies, we presented a standard study using the ARDL model; this study concluded that there is a long-run balance relationship between the credit deposits interest rate and the inflation rate, also there is an equitable balance between inflation rates and bank deposits, and There is long term inverse relationship between the interest rate and bank deposits, This means that if interest rates rise, the size of bank deposits will decrease, in addition to a correlation between inflation rates and bank deposits, if the inflation rate increases, the size of bank deposits also increases, and this reflects the effective role of bank deposits in increasing economic and investment activity in the Saudi Arabia's economy.

Keywords: Credit deposits, Interest rate, Inflation, Saudi banks

JEL Classification Codes: E43, E44, E42

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1. INTRODUCTION

Recent years have witnessed increased interest in the topic of increasing the effectiveness of economic activity in several aspects, and the banking system and its development are among the most important economic development factors among economies in general, and the Kingdom of Saudi Arabia is among the countries interested in the development process through its new economic vision, as this was reflected in the period The recent increase in the total deposits consisting of current and regular deposits and deposits with the Saudi Arabian Monetary Agency, and bank deposits and their relationship to economic variables are a new and important topic, therefore this study analyzed the factors affecting the Credit bank deposits and focus on deposits because of their effective role in increasing the effectiveness of economic activity.

Research problem:

Did the interest rates and inflation rates affect the Saudi bank deposits during 1995-2018?

Sub-questions:

- Did the interest rates affect the deposits granted by Saudi banks during the study period?
- Did inflation rates affect deposits granted by banks operating in the Kingdom of Saudi Arabia during the study period?
- Did the interest rates and inflation rates affect the total deposits granted by banks operating in the Kingdom of Saudi Arabia during 1995-2018?

Study hypotheses:

This study is based on a major hypothesis that states the following:

- Interest rates affected deposits in the Kingdom of Saudi Arabia during the study period.
- Inflation rates affected deposits in the Kingdom of Saudi Arabia during the study period.
- Interest rates and inflation rates affected the total deposits granted by banks operating in the Kingdom of Saudi Arabia during 1995-2018.

Objectives of the study:

This study aims to:

- Review the theoretical side related to the subject of interest rate, inflation and credit deposits.
- Measuring the impact of interest rate and inflation on credit deposits in the Kingdom of Saudi Arabia during the study period.
- Make recommendations regarding the development of deposits and their relationship to interest rates and inflation rates.

The importance of studying:

The importance of this study is:

- Analyzing the effect of interest rate and inflation on deposits in the Kingdom of Saudi Arabia, and its role in the success of economic policies.
- Quantitatively describes of the impact that deposits can have on economic development in Saudi Arabia, which is what the authorities in charge of developing and implementing monetary policies are looking for.
- The lack of studies that give sufficient attention to analyzing the effect of interest rates and inflation on deposits and measuring its impact on development in the Kingdom of Saudi Arabia (as seen by the researchers).

Study variables:

The variables of this study are:

- The dependent variable in this study: bank deposits in Kingdom of Saudi Arabia.
- The two independent variables in this study: Interest rates and inflation rates.

The limits of the study:

The possibility of generalizing the results of this study limits the following factors:

- Spatial limits: This study is concerned with the effect of interest rate and inflation on the volume of credit deposits in the Kingdom of Saudi Arabia.

- Time limits: This study focused on analyzing the variables of the study for the specified time period from 1995 to 2018.

Previous studies:

The researchers reviewed a number of previous studies within the subject of the study, and the most important of them are:

- A study by (**Boguslauskas etl, 2012**), aimed at developing a model for assessing credit risk by relying on the performance indicators of banks and taking the opinions of some credit employees and clients as well as some researchers in this field, and the study reached the necessity of developing a model for assessing credit risk.
- A study by (**Al-Sheikhly, 2012**), aimed to find the most important factors determining the bank credit decision in Jordanian commercial banks and reached a role and the impact of analyzing the customer's financial position and personal characteristics and the style of credit policy of the lender bank. Finance and seeking adequate guarantees from clients.
- A study by (**Al-Dughaim et al, 2006**) aimed at analyzing the process of granting credit and studies of credit requests in the Syrian bank, and concluded that there are difficulties in industrial banks in terms of the size of large debts due to the lack of rationalization and control of lending.
- A study by (**Omar, 2004**) aimed at analyzing the effect of banking risks on bank credit in Jordanian banks. The study found that there is a disparity in the impact of banking risks on bank credit, in addition to the decrease in capital risks leading to increased credit.
- A study by (**Ingrewa, et al, 2006**) aimed to explain the concept of credit, its foundations and criteria, the basic elements of credit analysis and the importance of analyzing the financial statements of the borrowing student in verifying the integrity of his financial position and his ability to pay his obligations after obtaining credit.

The addition provided by the current study on previous studies:

The volume of credit deposits granted by banks was not addressed by a researcher before, as most of the previous studies concerned the effect

and risks of bank credit analysis in some Arab and Islamic countries, but with regard to the volume of credit deposits and their impact on interest rates And rates of inflation we did not find writings in it before, and therefore the current study is distinguished from its predecessors, and its results can serve Saudi banks and the Saudi Arabian Monetary Agency and those responsible for planning banking and financial policies in the Kingdom.

2. Literature framework

2.1 Inflation rates:

Inflation measured by consumer price index (CPI) is defined as the change in the prices of a basket of goods and services that are typically purchased by specific groups of households. Inflation is measured in terms of the annual growth rate and in index, 2015 base year with a breakdown for food, energy and total excluding food and energy. Inflation measures the erosion of living standards. A consumer price index is estimated as a series of summary measures of the period-to-period proportional change in the prices of a fixed set of consumer goods and services of constant quantity and characteristics, acquired, used or paid for by the reference population. Each summary measure is constructed as a weighted average of a large number of elementary aggregate indices. Each of the elementary aggregate indices is estimated using a sample of prices for a defined set of goods and services obtained in, or by residents of, a specific region from a given set of outlets or other sources of consumption goods and services.[1]

Inflation, consumer prices (annual %) Inflation as measured by the consumer price index reflects the annual percentage change in the cost to the average consumer of acquiring a basket of goods and services that may be fixed or changed at specified intervals, such as yearly. The Laspeyres formula is generally used.[2]

Inflation is the rate of increase in prices over a given period of time. Inflation is typically a broad measure, such as the overall increase in prices or the increase in the cost of living in a country. But it can also be more narrowly calculated for certain goods, such as food, or for services, such as

[1] - https://data.oecd.org/price/inflation-cpi.htm
[2] https://datacatalog.worldbank.org/inflation-consumer-prices-annual-0

a haircut, for example. Whatever the context, inflation represents how much more expensive the relevant set of goods and/or services has become over a certain period, most commonly a year.[3]

Inflation is a quantitative measure of the rate at which the average price level of a basket of selected goods and services in an economy increases over a period of time. It is the constant rise in the general level of prices where a unit of currency buys less than it did in prior periods. Often expressed as a percentage, inflation indicates a decrease in the purchasing power of a nation's currency.[4]

The inflation rate is the percentage increase or decrease in prices during a specified period, usually a month or a year. The percentage tells you how quickly prices rose during the period. For example, if the inflation rate for a gallon of gas is 2% per year, then gas prices will be 2% higher next year.[5]

Inflation, as mentioned, is the rate a price rises, and essentially how much the dollar is worth at a given moment with regards to purchasing. The idea behind inflation being a force for good in the economy is that a manageable enough rate can spur economic growth without devaluing the currency so much that it becomes nearly worthless.[6]

Inflation as continued rise in how much goods and services cost in an economy. Any inflation means that the currency is worth less as each unit will be able to buy fewer of these goods and services.[7]

[3] Ceyda Oner, What Is Inflation?, BACK TO BASICS, Finance & Development, March 2010, p45.
https://www.imf.org/external/pubs/ft/fandd/2010/03/pdf/basics.pdf

[4] -James Chen , Aug 7, 2019 , Inflation , https://www.investopedia.com/terms/i/inflation.asp

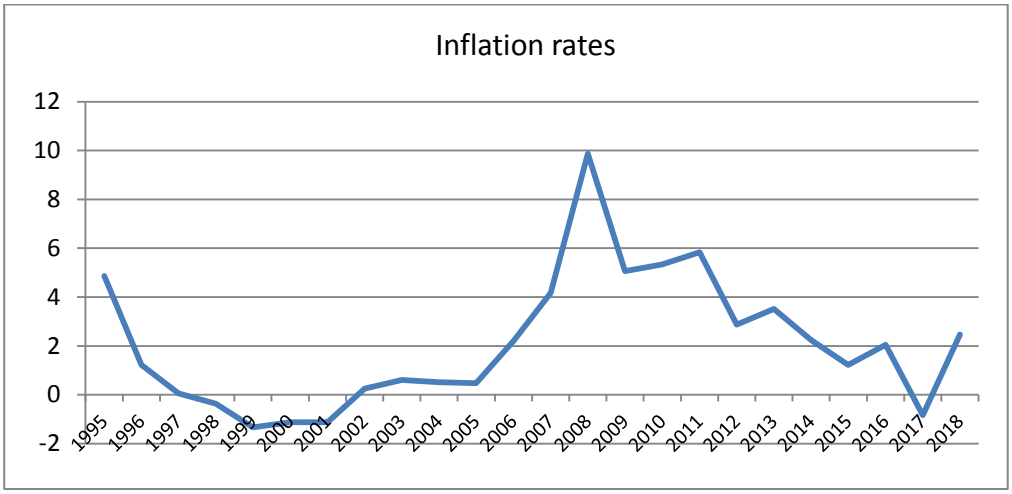
5 -Kimberly Amadeo, Inflation, How It's Measured and Managed Why Inflation Is as "Violent as a Mugger" , January 29, 2020 ,
https://www.thebalance.com/what-is-inflation-how-it-s-measured-and-managed-3306170

6 - Steve Fiorillo, What Is Inflation in Economics? Definition, Causes & Examples, Aug 29, 2018, https://www.thestreet.com/personal-finance/education/what-is-inflation-14695699

7 - George Arnett, Inflation: what does it mean for you?, Tue 19 Aug 2014 13.34 BST Last modified on Thu 7 Mar 2019,
https://www.theguardian.com/news/datablog/2014/aug/19/inflation-what-does-it-mean-for-you

Inflation rates in Saudi Arabia:

Fig.1. Inflation rates in Saudi Arabia



Source: Saudi Arabian Monetary Authority, http://www.sama.gov.sa

2.2 Interest rate

Real interest rate is the lending interest rate adjusted for inflation as measured by the GDP deflator. The terms and conditions attached to lending rates differ by country, however, limiting their comparability. 8

The interest rate is the amount a lender charges for the use of assets expressed as a percentage of the principal. The interest rate is typically noted on an annual basis known as the annual percentage rate (APR). The assets borrowed could include cash, consumer goods, or large assets such as a vehicle or building..9

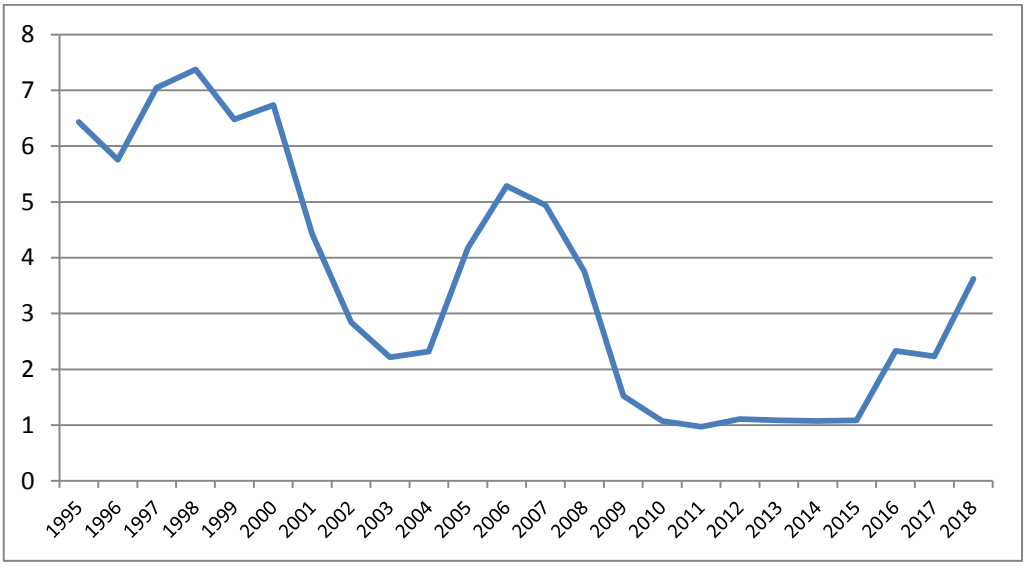
An interest rate is the percentage of principal charged by the lender for the use of its money. The principal is the amount of money lent. As a result, banks pay you an interest rate on deposits. They are borrowing that money from you. Anyone can lend money and charge interest, but it's

8 - https://datacatalog.worldbank.org/search?query=%20real-interest-rate-1
9 Caroline Banton Interest Rate, May 28, 2019.
https://www.investopedia.com/terms/i/interestrate.asp

usually banks. They use the deposits from savings or checking accounts to fund loans. They pay interest rates to encourage people to make deposits. Banks charge borrowers a little higher interest rate than they pay depositors so they can profit. At the same time, banks compete with each other for both depositors and borrowers. The resulting competition keeps interest rates from all banks in a narrow range of each other.10

An interest rate is defined as the proportion of an amount loaned which a lender charges as interest to the borrower, normally expressed as an annual percentage. It is bank pays its savers for keeping money in an account.11

Fig.2. Interest rate in Saudi Arabia:



Source: Saudi Arabian Monetary Authority, http://www.sama.gov.sa

2.3 Bank deposits:

– Short-term credit deposits: it is a credit with a maturity of no more than one year, and represents the largest side of commercial bank loans, and is considered the best type of employment with them, and it is granted for the purpose of financing ongoing activities of clients,

[10] - Kimberly Amadeo , Interest Rates and How They Work Examples of How Interest Rates Work, December 13, 2019,
https://www.thebalance.com/what-are-interest-rates-and-how-do-they-work-3305855

[11] - https://www.bankrate.com/glossary/i/interest-rate/

or in other words, quick-turnover working capital operations such as purchase financing Raw materials or cash This type of credit is characterized by low interest rates due to it is short-term.

- Medium-term credit deposits: it ranges between one and five years and is granted for the purpose of financing investment activities, as it determines a payment program related to the current and expected cash flows that are shown by economic studies of the borrower's project or the real needs of work. A distinction can be made between two types of medium-term loans: what is It is subject to re-discount with another financial institution or the Central Bank, and what is not refundable (**Abdel-Moaty, 1999**).
- Credit deposits: they are loans with a term of more than five years and up to ten or twenty years, granted to finance activities and operations of a capital nature, such as building factories and setting up new projects. These loans are usually provided by specialized banks such as real estate banks that grant loans that may reach twenty years, to finance construction, land reclamation and establishment of irrigation and drainage projects, and we will focus in our study on credit deposits due to its significant impact in increasing rates of economic development.
- The emergence and development of the banking system in the Kingdom of Saudi Arabia: The banking system is the newly established kingdom, where it coincided with the establishment of the Saudi Arabian Monetary Agency in October 1952, oil production and demand for it have contributed to the increase in revenues and expenses significantly, and given the recovery of the economy due to this increase, the demand for financial services has increased significantly and the banking system has also focused on developing some banking systems and regulations to widen Banking, such as the Banking Control System, which gave the Monetary Authority the power to exercise broad control (SAMA, 2014).

3. METHODOLOGY AND RESULTS:

3.1 Time Series Data Stability Test:

The unit root test aims to examine the properties of the time series of all economic and social variables, to ensure its range, and to determine the rank of the integration of each variable separately. To test the silence of the time series of the model variables under study, we will use the Dickey and Fuller (ADF) test. This test is based on Test the following hypothesis (Obben, 1998):

H_0: The unit root in the chain, meaning that the time series is unstable.

H_1: There is no unit root in the chain which means that the time series is stable.

This test for the original time series is performed first at the level, if it does not stabilize at the level, we take the first and then the second differences, and we continue like this until it stabilizes, then we reject the null hypothesis that the unit root problem exists If the calculated absolute value of the ADF test is greater than the absolute values of the critical value at the significance level of 0.05, and if the probability value is less than 0.05 (Gujarati, 2003).

The ADF test for the regression equation is done in three formulas (fixed border or fixed limit and direction or without fixed limit and direction, as shown in the following table:

Table 01: Stability tests using ADF test at 5% level of significance

variable	The model	The original series Level		1st difference		2nd difference	
		ADF	t-Statistic	ADF	t-Statistic	ADF	t-Statistic
BC	III/None	1.317924	-1.957204	-1.624219	-1.957204	-5.438880	-1.958088
	II/trend and intercept	-2.362477	-3.632896	-2.776471	-3.632896	-4.754752	-3.658446
	I/ intercept	0.149430	-3.004861	-2.780564	-3.004861	-5.301240	-3.012363
IR	III/None	-1.996568	-1.960171	-3.046253	-1.957204		
	II/trend and intercept	-2.714342	-3.644963	-4.482897	-3.673616		
	I/ intercept	-1.826814	3.004861	-3.931136	-3.029970		
INF	III/None	-1.148034	-1.959071	-8.204544	-1.957204		
	II/trend and	-1.741074	-3.658446	-8.126330	-3.632896		

	intercept						
	I/ intercept	-2.053341	-3.020686	-8.023821	-3.004861		

Source: Prepared by researchers based on EViews.10 .

After testing by using EViews.10 program, we found that the time series of credit deposits are inherently unstable, unstable in the first difference and stable in the second difference.

the time series of interest rates (IR) and the inflation rates (INF) are inherently unstable

because the ADF test statistic was insignificant, in this case we enter the difference of the one degree, After treating the original chains using the first-order difference method, we found that the first difference chains (DIR and DINF) are stables due to its stability condition, which is that the absolute values of the test statistics are greater than the critical values corresponding to them in the three models of extended Dickey Fuller test, this proves that the credit deposits, and series of interest rates and inflation rates are integrated from the first degree, which means that they have the same degree of integration, so there is a long-run relationship.

3.2 Test Bound

In this case there are two hypotheses:

- The null hypothesis H_0 which indicates that there is no long-run relationship going from the explained variable to the dependent variable if the calculated F is less than I1Bound.
- The hypothesis of variant H_1 indicates a long-run relationship going from the interpreted variable to the dependent variable if the calculated F is greater than I_1Bound and we compare the calculated F-statistic with I_1Bound.

Table 02: Test Bound results.

ARDL Bounds Test
Date: 12/23/19 Time: 22:54
Sample: 1998 2018
Included observations: 21
Null Hypothesis: No long-run relationships exist

Test Statistic	Value	k
F-statistic	7.819911	2

Critical Value Bounds

Significance	I0 Bound	I1 Bound
10%	3.17	4.14
5%	3.79	4.85
2.5%	4.41	5.52
1%	5.15	6.36

Test Equation:
Dependent Variable: D(BC)
Method: Least Squares
Date: 12/23/19 Time: 22:54
Sample: 1998 2018
Included observations: 21

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(IR)	-15.15752	11.44765	-1.324072	0.2083
D(IR(-1))	23.43975	10.66937	2.196921	0.0468
D(IR(-2))	26.04801	11.56357	2.252592	0.0422
D(INF)	6.580246	4.774750	1.378134	0.1914
C	248.6230	63.05784	3.942777	0.0017
IR(-1)	-36.15840	9.822851	-3.681050	0.0028
INF	3.951990	4.086899	0.966990	0.3512
BC(-1)	-0.109426	0.039222	-2.789884	0.0153

R-squared	0.699442	Mean dependent var	60.79410
Adjusted R-squared	0.537602	S.D. dependent var	53.39427
S.E. of regression	36.30801	Akaike info criterion	10.30429
Sum squared resid	17137.53	Schwarz criterion	10.70220
Log likelihood	-100.1950	Hannan-Quinn criter.	10.39064
F-statistic	4.321832	Durbin-Watson stat	1.895965
Prob(F-statistic)	0.011138		

Source: Prepared by researchers based on EViews.10 .

Through the table 02, we note that the computed is greater than the F-statistic= 7.819911is greater than F Bound =4.85 at the level of significance

5% in this case we reject the null hypothesis H_0 and accept the alternative hypothesis H_1, it mean there is a long-run relationship going from the explained variable (interest rates (IR) and the inflation rates (INF)) to the variable (credit deposits) at the 5% significance level.

3.3 Common integration slope according to ARDL model:

We test co-integration to investigate a balanced relationship in the long run between variables, and the nature of the relationship of balance in the long run considering that the relationship between them is complementary, for co-integration to be present there must be one integral vector between the variables in the ARDL test. Autoregressive Distributed Lag Model, ARDL appeared as the best alternative because it does not require that the estimated variables have the same integral rank, since co-integration is tested using ARDL.

Joint integration testing using ARDL is done through the "Bound Test" method developed by Pesaran and Shin in 2001 where Autoregressive Model, AR (p) and Distributed Lag Models were combined, In this methodology, the time series is a function of slowing down its values and the values of the current explanatory variables by one or more period (Pesaran, Smith, & Shin, 2001), the ARDL method differs from other traditional methods used to test joint integration with multiple advantages (Narayan, 2005), these differences are as follows(Narayan, 2005):

This method can be applied if the variables under study are integrated from the rank I(0) or integrated from the rank of one true I(1) or integrated from different degrees, which means that it can be applied when the degree of integration is unknown or not uniform for all study variables;

Also, the results of the study in practice are efficient in the event that the sample size (number of observations) is small unlike most traditional joint integration tests that require that the sample size be large in order for the results to be more efficient

That its use helps to estimate the components of (long and short term relationships) Together at the same time in one equation instead of two

separate equations as shown in the following table:

Table 03: ARDL Model Estimation Results

Dependent Variable: BC
Method: ARDL
Date: 12/23/19 Time: 23:04
Sample (adjusted): 1999 2018
Included observations: 20 after adjustments
Maximum dependent lags: 4 (Automatic selection)
Model selection method: Akaike info criterion (AIC)
Dynamic regressors (4 lags, automatic): IR INF
Fixed regressors: C
Number of models evalulated: 100
Selected Model: ARDL(4, 4, 4)

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
BC(-1)	0.899445	0.256849	3.501838	0.0173
BC(-2)	-0.637051	0.452195	-1.408797	0.2179
BC(-3)	0.996056	0.492749	2.021425	0.0992
BC(-4)	-0.535794	0.297457	-1.801249	0.1315
IR	-11.00276	10.22857	-1.075689	0.3312
IR(-1)	-19.12876	13.42743	-1.424604	0.2136
IR(-2)	21.46695	13.06345	1.643284	0.1612
IR(-3)	-25.88295	12.42898	-2.082467	0.0918
IR(-4)	-27.25271	12.15587	-2.241937	0.0750
INF	1.445021	6.976226	0.207135	0.8441
INF(-1)	-7.990698	4.647448	-1.719373	0.1462
INF(-2)	1.809423	7.528384	0.240347	0.8196
INF(-3)	-1.960118	5.381543	-0.364230	0.7306
INF(-4)	13.57392	5.452830	2.489334	0.0552
C	437.8748	96.80346	4.523339	0.0063

R-squared	0.999238	Mean dependent var	746.0490
Adjusted R-squared	0.997103	S.D. dependent var	459.1652
S.E. of regression	24.71597	Akaike info criterion	9.366482
Sum squared resid	3054.395	Schwarz criterion	10.11328
Log likelihood	-78.66482	Hannan-Quinn criter.	9.512265
F-statistic	468.0336	Durbin-Watson stat	2.655848
Prob(F-statistic)	0.000001		

*Note: p-values and any subsequent tests do not account for model selection.

Source: Prepared by researchers based on **EViews.10 .**

The results of the statistical tests for the regression equation in the table indicate that the quality of the (F-statistic) parameter at the significance level is less than 05%.

3.4 Error correction model:

Now we estimate the error correction factor using ARDL Cointegrating And Long Run Form.

The results are shown in the following table:

Table 04: Results of estimating the error correction factor methodology.

ARDL Cointegrating And Long Run Form
Dependent Variable: BC
Selected Model: ARDL(4, 4, 4)
Date: 12/23/19 Time: 23:06
Sample: 1995 2018
Included observations: 20

Cointegrating Form

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(BC(-1))	0.176789	0.247551	0.714149	0.5071
D(BC(-2))	-0.460262	0.281739	-1.633648	0.1633
D(BC(-3))	0.535794	0.297457	1.801249	0.1315
D(IR)	-11.002761	10.228571	-1.075689	0.3312
D(IR(-1))	-21.466951	13.063445	-1.643284	0.1612
D(IR(-2))	25.882948	12.428983	2.082467	0.0918
D(IR(-3))	27.252709	12.155874	2.241937	0.0750
D(INF)	1.445021	6.976226	0.207135	0.8441
D(INF)	-1.809423	7.528384	-0.240347	0.8196
D(INF)	1.960118	5.381543	0.364230	0.7306
D(INF)	-13.573918	5.452830	-2.489334	0.0552
CointEq(-1)	-0.277344	0.058580	-4.734416	0.0052

Cointeq = BC - (-222.8290*IR + 24.7979*INF + 1578.8161)

Long Run Coefficients

Variable	Coefficient	Std. Error	t-Statistic	Prob.
IR	-222.828975	38.161981	-5.839031	0.0021
INF	24.797907	19.022984	1.303576	0.2492
C	1578.816130	222.189492	7.105719	0.0009

Source: Prepared by researchers using EViews 10.

In this test, two conditions must be satisfied that the value of CointEq (-1) is negative and significant, from the results of Table, we notice that CointEq (-

1) = -0.277344 with a negative and significant value because prob = 0.0052 is less than 0.05, it means that The two conditions are met.

The long-run common integration equation is written as follows:

BC=1578.81-222.82IR+24.79 INF.....02

- Interest rates (IR) is negative and it is consistent with previous studies, which means that if the interest rates increased, the size of credit deposits decrease in Saudi Arabia, this reflects the correctness of the hypothesis, So there is a counter-balance relationship between Interest rates and credit deposits.
- Inflation (INF) is positive, which means that if the inflation increased in Saudi Arabia, the size of credit deposits increase, So there is a balance relationship between inflation and credit deposits.

3.5 Auto correlation between errors by using the Lagrange multiplier (LM) test

Table 05: Results of estimating the auto-correlation between errors using (LM Test).

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	1.997176	Prob. F(2,3)	0.2809
Obs*R-squared	11.42165	Prob. Chi-Square(2)	0.0033

. **Source**: Prepared by researchers using EViews.10

Since Prob.F(2,3*)* =0.2809 greater than 5%, we accept the null hypothesis and reject the alternative hypothesis, i.e. there is no serial self-correlation between the errors, so the errors are independent between them.

3.6 Heterogeneity of error variance by using Breusch-Pagan-Godfrey test:

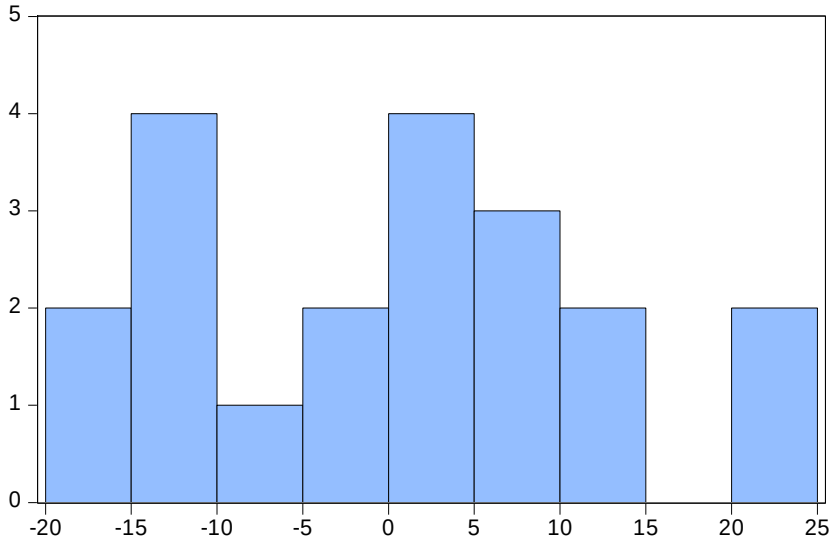
Table 06: Results of estimating the heterogeneity test for error variations

Heteroskedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	1.840652	Prob. F(14,5)	0.2592
Obs*R-squared	16.74999	Prob. Chi-Square(14)	0.2697
Scaled explained SS	0.570706	Prob. Chi-Square(14)	1.0000

. Source: Prepared by researchers using EViews.10

From the above table it is clear that the probability of testing for heterogeneity of error variations F Prob (14,5) = 0.2592 is greater than 5%, therefore, we reject the alternative hypothesis H1, and we accept the null hypothesis H0, this means that there is no problem of heterogeneity in the estimated model, that is, that the

residues have a homogeneous contrast and the differences between its variations are not significant.



Series: Residuals	
Sample 1999 2018	
Observations 20	
Mean	1.28e-13
Median	1.983109
Maximum	23.15198
Minimum	-18.77753
Std. Dev.	12.67902
Skewness	0.146607
Kurtosis	2.090305
Jarque-Bera	0.761266
Probability	0.683429

. **Source**: Prepared by researchers using EViews.10

From Figure we notice that the probability value of the Jarque-Bera statistic (Prob = 0.683429) is greater than 05%, so the rest follows the normal distribution.

And since the rest of the estimated model are similar (have the same variance and are independent between them) and follow the normal distribution, we can accept this model in explaining the effect of interest rate and inflation on bank deposits in Saudi Arabia, this means that the estimated model in our study is valid for explanation, after its performance In both two tests, the statistical tests (first degree tests) and the standard tests for the rest (second degree tests).

4. CONCLUSION

Through this research paper, we studied the effect of interest rate and inflation rates on bank deposits in the Kingdom of Saudi Arabia during the period 1995-2018, by using an empirical study through the auto regressive distributed lag model (ARDL) and using historical data for the three

variables from 1995 to 2018, we reached the following results:

- Bank deposits have an important role to stimulate economic activity in the Kingdom of Saudi Arabia.
- Bank deposits in Saudi Arabia are affected by both interest rate and inflation rates.
- The existence of a long-term balance relationship between the interest rate, inflation and bank deposits, which means that the interest rate and inflation rates have a long-term impact on bank deposits in Saudi Arabia, meaning that in the long run, bank deposits are directly affected by changes in the interest rate and inflation rates.