



Measuring and Analyzing The Borrowing Power of The Iraqi Banking Sector for The Period 2003-2023

Hayder .H. Al-Bujabir *

AL-Muthanna University, Iraq

Email : hayder.aljabry@mu.edu.iq *

Abstract ,The research highlights one of the most important topics related to the Iraqi banking system to demonstrate its ability to supply and provide the national economy with financial resources and to know this ability and the possibility of carrying out one of the important functions entrusted to the banking system, because the breach of this function, whether excessive would lead to the phenomenon of inflation or shortage in this supply leads to the emergence of the phenomenon of depression, it must be the banking system professional in this function. For the purpose of knowing the lending capacity of the device, it is necessary to know the basic factors on which this ability depends, i.e. research into the sources of access to funds in order to raise this capacity or that this ability is restricted, in other words to know the most important factors on which the lending capacity of the Iraqi banking system depends, and there is no doubt that these resources if not used optimally will be greatly reflected on the real sector, in other words that the lending capacity of the banking system must be consistent with The absorptive capacity of the national economy

Keywords; banking system , greatly reflected , national economy

1. THE IRAQI BANKING SYSTEM A HISTORICAL VIEW

The banking system in Iraq consists of forty-nine banks as well as the Central Bank and is distributed according to ownership between (6) government banks (Rafidain, Al-Rasheed, Iraqi Bank for Trade, Agricultural Bank, Industrial Bank and Real Estate Bank) and (43) private banks, including (9) Islamic banks. Although the Investment Law No. 13 of 2006 has excluded investment in the banking sector from its provisions, investment in the Egyptian sector takes its legal framework based on the bank's laws. Central Bank No. 56 of 2004 and Banks No. 94 of 2004. (Iraq Investor Guide, 2013)

Importance Of Research

The Iraqi banking system is one of the important pillars in building the financial system, and it has the function of supplying economic units with funds, and therefore the excessive issuance or shortage of those funds will create a state of economic instability at the macro level.

The research problem

The research problem came to answer the following questions:

- 1- Providing economic units with the necessary funds would lead to the availability of those funds and thus achieve a state of balance between what is supplied of those funds and what is required of them.
- 2- Over-supply of funds to economic units will lead to the emergence of so-called inflation.

- 3- The scarcity and shortage of those funds will lead to the emergence of what is called economic contraction.

Research hypothesis

The research proceeds from the hypothesis: the existence of disrupted financial resources in the Iraqi banking system, which have not been used in granting credit, whether to the public or private sector.

2. RESEARCH OBJECTIVE

The research aims to shed light on the Iraqi banking system, which plays a fundamental and important role in supplying the national economy with financial resources, which is the artery of the national economy in stimulating aggregate demand and converting it into effective demand.

The first topic: the Iraqi banking system conceptual framework

It is a proven economic fact that the banking sector occupies a vital and fundamental position in the "economic and financial systems", and that banks as a whole form a circle within which various fields of economic activity interact, and thus the importance of their role in economic and social development becomes clear. The main function of banks is to provide the national economy with the funds necessary for its development by accumulating funds from their various sources of savings and then distributing them to the various areas of lending in accordance with certain principles, rules and assets, both in the field of raising funds and in the field of distributing these funds. Banks, which perform their main function of accepting various deposits from depositors, and providing various loans to borrowers, perform a lot of banking services for both parties. In addition, banks provide financial advice, advice and guidance to their customers in all the difficulties and problems facing their projects and contribute to the development of appropriate solutions to them in order to achieve the banks contribute to the economic and social development of the country (Sisi, 2011: 9)

1. The Nature of Banking Business

The bank is a language by breaking the opinion means the place where the exchange is made, which is the sale of (cash in cash) and some call it (bank) of European origin corresponding in English to (Bank) and in French (Banque) and in Italian (Banco), which means a safe fund to save money, and some limit the definition of a bank as an institution that accepts the receipt of money in the form of deposits from individuals who have a surplus and lends it in the form of loans and advances to individuals and the needy or as an establishment that accepts money As deposits and respects their depositors in withdrawing them, grants loans

and invests excess deposits, or it is the place where the supply of money meets the demand for it, meaning that banks work as vessels in which money and savings accumulate to be re-lent to those who can and want to benefit from them and benefit society from them by investing them. Therefore, it is referred to the definition of a bank as a financial institution that accepts deposits on the one hand and provides them as loans or invests them in other areas of investment on the other hand, provided that the diversity and expansion of banking business made the previous definition limited to two main acts of banking business or three, but not all, so modern banking legislation, including Iraqi legislation, adopted circular in this field (Saeed, 2017: 11),

2. Contemporary view of the objectives of the bank: -

Despite the conviction of a number of businessmen and capital owners with the aim of maximizing profits, it was subjected to a number of criticisms by a number of theorists in the field of management because of the ambiguity of this goal and ignoring many important variables and offering instead the goal of maximizing the wealth of shareholders, which is considered achieving reasonable profits as part of it and one of the most important reasons for turning to the goal of maximizing the wealth of owners: (Abboud, 2017: 25)

- Time timing of profits: The goal of maximizing profits ignores the timing of cash flows, that is, the expected cash returns from investment decisions according to the principle of the time value of money and its content that the value of a certain amount of money depends on the timing of obtaining it.
- Risks that accompany cash flows: It is known that some investments are riskier than others in the sense that they involve a greater possibility of not achieving the required returns or perhaps making losses.
- The goal of maximizing profits may hurt the bank in the long run, as the CFO may increase current profits by reducing training or reducing R&D expenses.
- The goal of maximizing the wealth of shareholders focuses on serving the community and the bank's social responsibility towards the community it works to serve and contributing to solving the problem and developing banking services to satisfy its different and changing needs.

The second topic: Analysis of the components of the lending capacity of the banking system in Iraq It can be said that the analysis of the components of the lending capacity of the banking system, reflects its ability to grant loans, as it depends directly on paid-up capital, loans received, whether from people or institutions, and deposits, the three elements constitute the most important main sources that give the banking system space to expand or retreat from

supplying the national economy with financial resources, the more these three sources or the more one of them, this means an increase in that ability and the possibility of granting loans, so it must be studied And the analysis of these three components by relying on the sober reports issued by the official authorities, to know the course of the time series for each of these three elements, in addition to that we have to know the size of the loans granted by the banking system during the series in question, and whether the credit granted, commensurate with the components of that ability, as well as through the standard model that will be addressed in the third section, we will know which of these three elements has the greatest impact on the size of the credit granted.

3. Paid-up capital (Essam Mohamed, Taiba Majed, 2014: 26)

Capital usually refers to what the owners of the project (the bank) contributed at the time of incorporation plus the annual changes that occur to it. Such contribution shall consist of allocations from the State if the bank is a public enterprise or for the value paid for the shares if it is a private enterprise. The nominal capital is what the bank is established in the light of and is established in its law and bylaws. As for the paid-up capital, it is represented by what the founders paid at the time of incorporation, and it is usually a percentage of the nominal capital and may be added It shall increase the annual profits of the bank until it is equal to the nominal capital. As for the capital owned, it is represented by what the owners of the bank have on a certain date, which usually consists of paid-up capital in addition to all withheld reserves and retained earnings. Finally, there is free capital, which means the capital of the bank, which can be used in its main operations of investment, credit or compensation for losses, and it consists of the owned capital minus net fixed assets:

Paid-up capital = percentage of nominal capital + transfers of annual retained earnings

Owned capital = paid-up capital + reserves + retained earnings

Free Float = Owned Capital - Net Fixed Assets

Observed through the following Table 1, which will be the focus of the research

Table (1) (Paid-up capital, loans received, total deposits, and loans paid) For the Iraqi banking system (million dinars)

Loans paid	Total Deposits	Loans Received	Paid-up capital	year
225,628.465	3,607,962.2	44,487.6	38,609.4	2003
475,217.923	21,011,432.0	915,7068.4	241,327.8	2004
632,157.681	17,143,243.5	8,884,278.8	658,231.7	2005
20,642,651.523	49,721,221.1	8,443,875.3	850,266.9	2006

31,399,287.664	61,102,992.4	10,272,396.3	1,215,824.9	2007
5,238,799.067	85,900,000	10,300,000	1,800,000	2008
5,603,287.214	78,700,000	8,100,000	1,900,000	2009
5,603,287.214	96,600,000	7,900,000	2,700,000	2010
13,299,813.316	84,600,000	9,200,000	2,800,000	2011
22,234,983.163	122,700,000	13,500,000	3,400,000	2012
9,601,546.194	109,200,000	1,500,000	7,300,000	2013
64,357,887.630	117,400,000	2,000,000	8,500,000	2014
35,816,420.835	111,300,000	210,500.000	10,200,000	2015
15,529,233.939	73,800,000	600,000	11,100,000	2016
28,536,339.137	99,900,000	2,200,000	12,700,000	2017
31,263,613.237	111,700,000	200,000	15,300,000	2018
96,048,266.382	130,857,977.5	2,695,609.7	16,452,404.8	2019
42,291,257.101	122,692,764	2,494,584	18,785,636	2020
42,291,257.101	104,359,254	5,300,807	15,263,354	2021

Source: Ministry of Planning, Central Organization for Statistics and Information Technology, Analytical Financial Indicators Reports for Banking and Insurance Activities for the Public and Private Sectors for the Years 2003-2021.

4. Loans paid for 2010 and 2021 were repeated for lack of access

The paid-up capital has been relatively stable for the period (2008-2021), despite the great importance of this resource over the rest of the resources, as it represents the first line of resistance and is concerned with facing the shocks that occur to the banking system, the highest amount of paid-up capital in 2003 amounted to 83,609.4 million dinars, then it took the year 2004 to increase to 241,327.8 million yenar with an annual change rate of 525% It is noticeable from Figure 1 that the paid-up capital of the Iraqi banking system is increasing, due to the importance of this source in that it represents the bank's ability to respond to shocks, which is a positive situation and comes in response to the directives of the Central Bank on the need to increase the paid-up capital of banks.

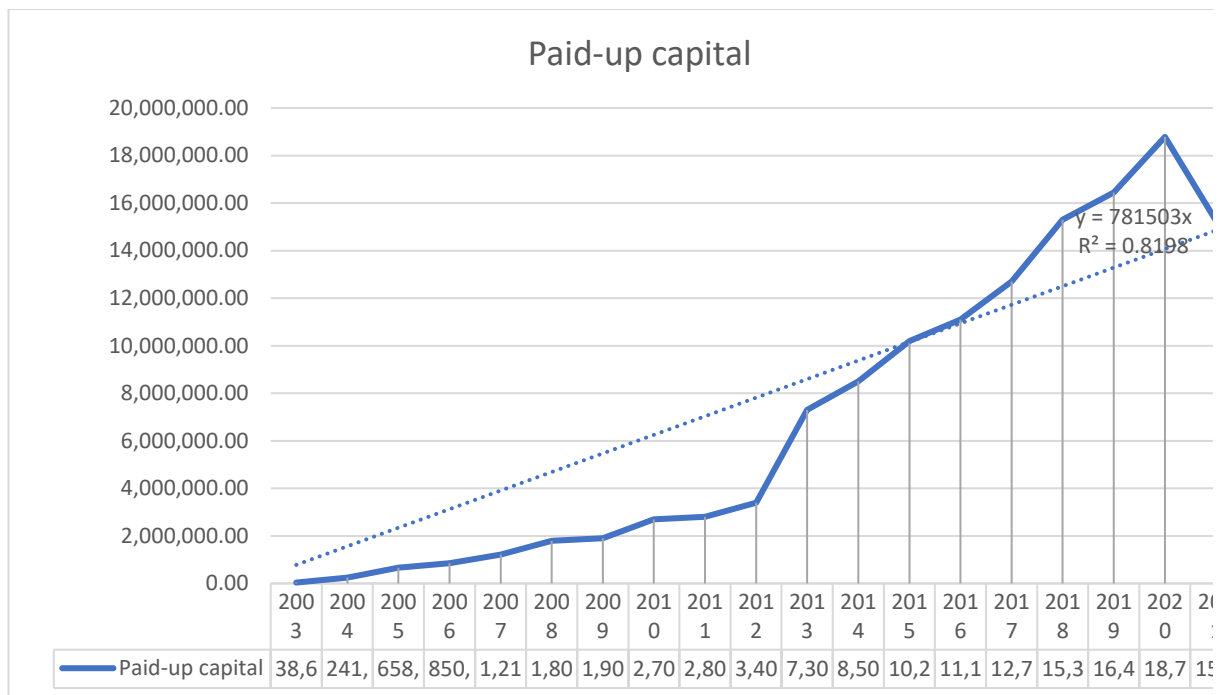


Figure 1 Paid-up capital of the Iraqi banking system, based on the reports of financial indicators for the years 2003-2021.

5. Loans Received

The loans received by the Iraqi banking system are one of the important sources of financial resources, as the banking system has the right through its banking components to borrow from financial institutions to meet its needs, and use those funds in resources, including granting credit or using those funds to buy stocks and bonds, i.e. entering the bank directly as an investor to invest those funds.

Through Table 1 and Figure 2, and after converting the data to the logato format for the purpose of simplifying the follow-up of the data path, we notice that the loans received took a horizontal shape, and that the general trend line indicates a decrease in this source, which means that this source has not developed, and that the highest year is 2012, reaching 13,500,000 million dinars. He points out that the banking system does not favor relying on this source as it represents an obligation that must be fulfilled.

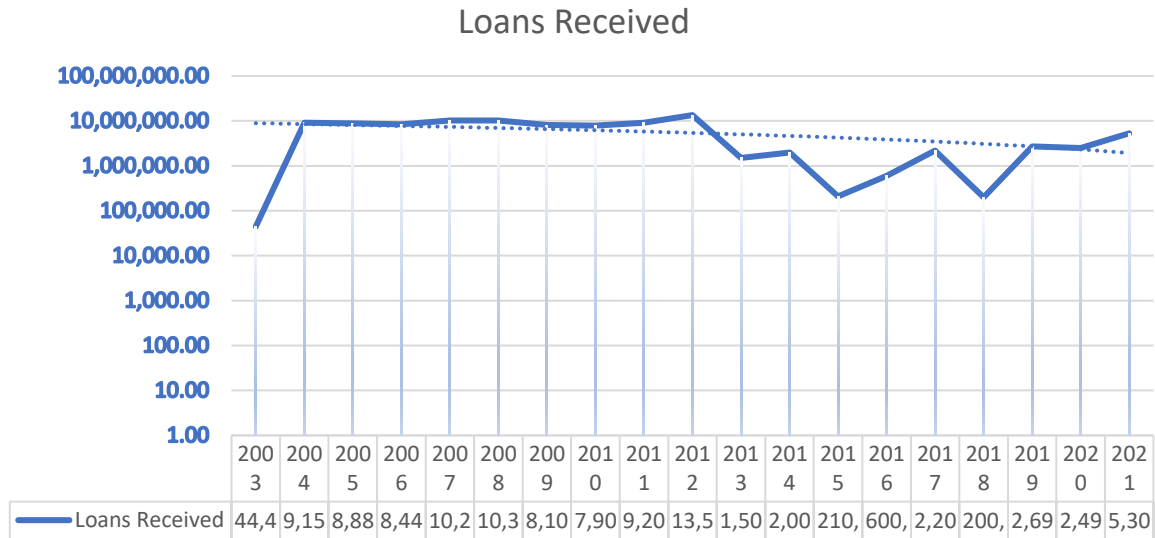


Figure 2 Loans received by the Iraqi banking system based on the reports of financial indicators for the years 2003-2021

6. Total Deposits:

Bank deposits are the amount of money credited to the books of a bank to the account of one of its customers. Deposits represent assets of the customer and liabilities of the bank and bank deposits arise from the payment of cash or cheque to the customer's account, or by transfer from one account to another. This includes the loan granted by the bank to its customer. Bank deposits are thus an acknowledgment of the bank's indebtedness on its books to its customers. Deposits do not necessarily represent liquid money in the possession of a bank. As bank deposits are used to settle debts between bank customers, they are considered money in the economic sense. Therefore, when banks create deposits, they give customers loans, they create money. (Heikal, Encyclopedia of Economic and Statistical Terms: 1980), we can see from Table 1 that the total deposits in 2003 were 3,607,962.2 million dinars a year later, which increased to 21,011,432.0 Million dinars with an annual rate of change of 482%, which means an increase in the public's demand to deposit their money with the banking system, then in a year the annual rate of change decreased to record 19%, and so we can see through the two figures, but the annual rate of change in 2005 witnessed a decline in the growth rate by 23% to reach the total deposits of 15672291.8 million dinars, after which these rates began to increase at times and decrease at other times, until they reached the highest growth rate in a year 2017, as it reached 35%, despite this fluctuation, it can be said that the total deposits during the research period tend to rise, as shown in Figure 3-A and through the general trend line of the figure below, but in Figure 3-B, which indicates the annual change rates of those deposits, it indicates that the general trend line is heading downward, which is not a good indicator if we

take into account that deposits have the largest share as a source of Sources of access to funds for the banking system.

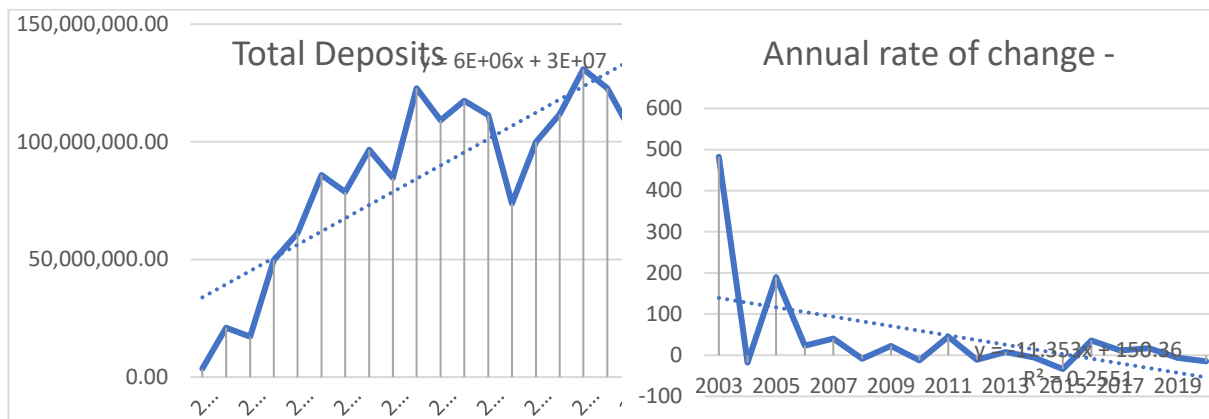


Figure 3-b shows the annual rate of change of the Iraqi banking system Figure 3-a shows the total deposits of the Iraqi banking system

7. Loans paid (credit)

The function of providing loans is the second most important function of the traditional functions in commercial banks, as the bank provides loans to all individuals, specifically businessmen and investors, and these loans take several forms that can be talked about some of them:

1.4 Overdraft In this type of loan, the depositor in the current account is allowed to love more than the value of his actual account with the bank and up to a certain predetermined ceiling, for example, if a trader wants to pay the value of (600,000) dinars to the account of a specific party and his current account is 300,000 dinars, it is possible to withdraw (600,000) With an instrument in order to meet his payments, but the bank will ask him for interest on the amount he withdrew above his account, which amounted to (300,000) dinars as a loan, and this type of loan is famous in business, but it is not enjoyed by all those dealing with the bank, as it requires good solvency for the depositor and certain guarantees such as the depositor's ownership of the property a piece of land.

2 – 4 Cash Credit

In this account, the bank grants a credit (loan) to the borrower with a certain insurance guarantee, but this loan is not given to him directly and is not withdrawn at the same time, but is placed for emergencies and for a certain ceiling that the borrower must not exceed the bank on the interest of the borrower on the original loan only and not the amount in the account as a whole and the borrower can withdraw by using the instruments only

3.4 Discounting Bills of Exchange This type of lending is the most popular among modern banks, where the bank discounts remittances to individuals wishing to obtain liquidity.

4.4 Callable Cash at Call

The bank sometimes provides loans for a very short period that does not exceed in most cases days for borrowers, who are often intermediaries or agents in the financial market and deal with stocks and bonds buying and selling, and these people get the loan after providing a guarantee in the form of a set of securities until the loan is returned and the bank can call the loan whenever it wants, and therefore this type of loan is called callable cash .

Third Theme: Paid Loans

The loans paid by the Iraqi banking system to the private sector is one of the most important areas of use of funds obtained through the sources that have been mentioned above, as these amounts contribute mainly to the increase in economic activity on the especially if the country suffers from idle resources, if these spent funds will contribute to creating a field for the revitalization of those resources as well as can be expressed as a financial resource that would create a stream of goods And services, can develop the gross domestic product, so these funds occupy great importance at the level of the national economy, if you add optimal employment, through Table 1 and Figure 4-a We note that the loans paid are in a state of continuous increase, which means that the bank exercises and its main guest in supplying the national economy with financial resources, but that increase can only be clear by referring to the annual rate of change of those resources as they reflect The true trajectory of these resources, if it is clear from Figure 4-b that the annual rates of change are declining as shown by the general trend line, which means that the future of these loans is in a state of permanent decline, which is an unhealthy indicator of the state of the national economy.

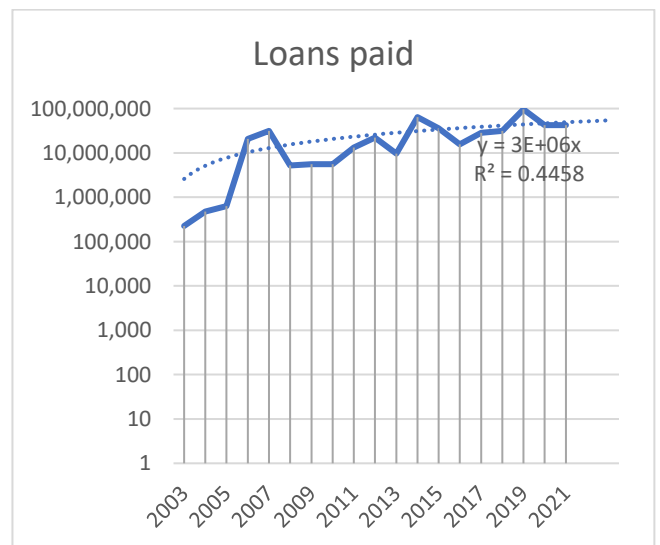
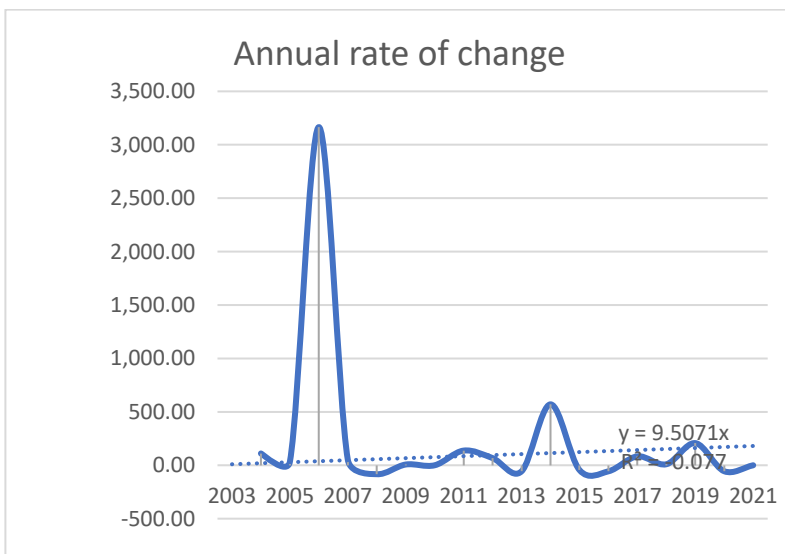


Figure 4-b represents the annual rate of change of loans paid by the Iraqi banking system for the period 2003-2021. Figure 4-a Path of loans paid by the Iraqi Central Agency for the period 2003-2021 based on financial indicators reports.

Fourth Theme: The relationship between the sources of obtaining funds and the areas of their use:

Talking about the sources of access to money by the Iraqi banking system and the area of use of those funds is the essence of the research, as it expresses the relationship between them and whether there is a gap between the two directions, and if you find that gap, what size and how it is going, is it going in an upward direction or it tends to decrease, the blue color in Figure 5 indicates the path of sources of access to money by the banking system, which are the three sources combined, which were talked about in the second section, and that The general trend line is taking an upward trend, which means that the forecast of this curve indicates increases in those sources, deposits ranked first for those sources, followed by loans received and finally paid-up capital, these sources began to decline after 2019 to 2021, which is an indication of the decline in access to those funds, although the year 2019 is the highest amount of money obtained, corresponding to a significant decrease in the volume of loans made by the banking system, As we note in Figure 5 that the loans paid also take to rise, which is commensurate with the increases in the sources of access to those funds, but it is noticeable that there is a gap between the total of these assets and the loans paid by the banking system, which indicates the existence of financial resources disabled represented by the vertical distance between the total resources and loans paid, as well as the figure indicates that this gap is increasing, especially after the year 2003, which means that these disabled resources will increase The more the time series continues.

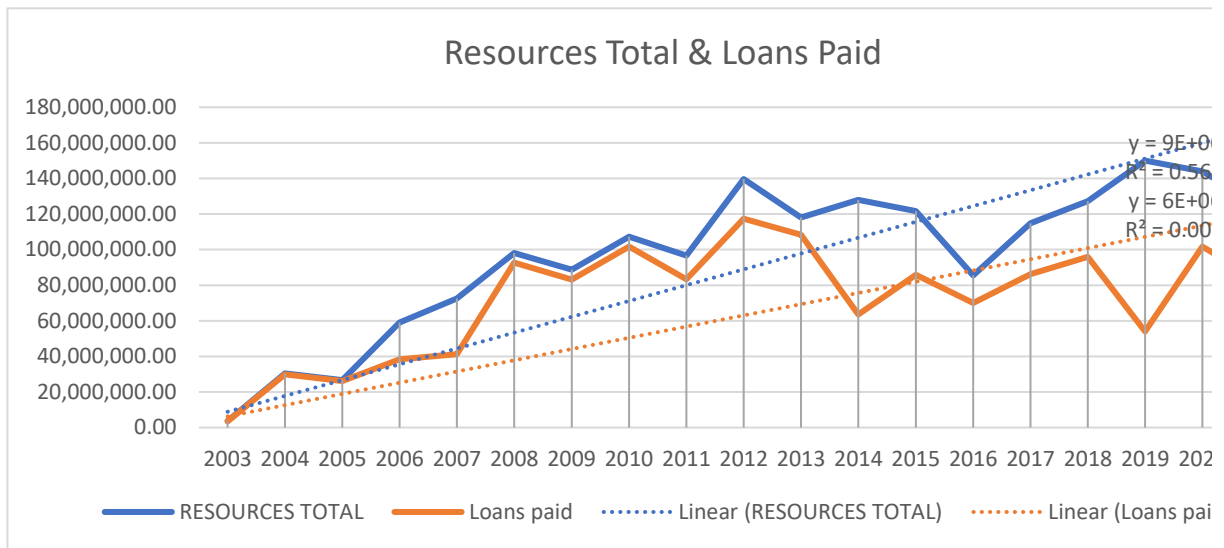


Figure 5 indicates the trajectory of sources of access to funds and loans paid by the banking system, based on the financial stability indicators for the years 2003-2021.

Through Figure 6, which shows the path of the difference between sources and loans depending on the difference between the total access to funds and paid loans, we found that there is an increasing line in the general direction indicating the increasing difference between them, which means disrupting financial resources and depriving the national economy of benefiting from those funds, the main reason for not freeing the banking system from expanding the granting of loans is due to the high rate of default in the payment of those debts, which means that The existence of sufficient reassurance for that expansion, which made the Central Bank adopt a strict credit policy in granting credit, which made it difficult to obtain loans by individuals or institutions, in addition to that, the banking system and through commercial banks invest that money directly, which makes it an investor in the purchase of some securities.

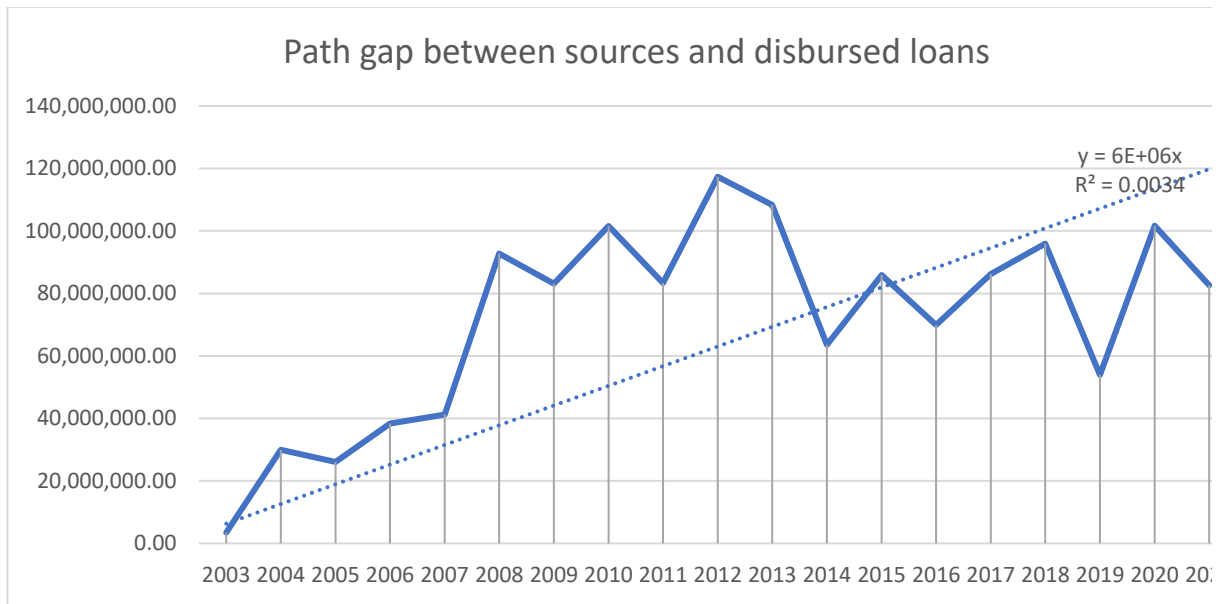


Figure 6 indicates the gap between sources of access to funds and loans paid for the period 2003-2021

The fifth topic: measuring the relationship between the sources of access to funds and the areas of their use using the method of joint integration.

1- Model Description

According to the theoretical framework that has been dealt with within the previous investigations, we found that the loans paid by the Iraqi banking system depend mainly on the sources of obtaining those funds, so the functional relationship can be drawn as follows:

$$LP=f(pc, lr, td) \text{ from period 2003-2021}$$

So the symbols indicate the following:

LP: Loans Paid

PC: Paid-up Capital

Lr: Loans Received

TD: Total Deposits

2- Model stability

By entering data in the Eviwes 12 program , we found the following:

Variable	Stability rank	Morale level
PC	1st difference	0.02
ÇáÑ	level	0.03
Ted, Ted.	1st difference	0.00
L	level	0.1

Through the above table, we found that the stability of the time series for each of the variables in the model as an indicator that two of them are stable at the level and two are stable at the first difference, this means that the method of joint integration between the variables can be performed.

3- Variable Integration Model

Dependent Variable: LP Method: ARDL Date: 12/24/24 Time: 01:50 Sample (adjusted): 2005S1 2021S2 Included observations: 34 after adjustments Maximum dependent lags: 4 (Automatic selection) Model selection method: Akaike info criterion (AIC) Dynamic regressors (4 lags, automatic): LR PC TD Fixed regressors: C Number of models evaluated: 500 Selected Model: ARDL(2, 4, 2, 3)					
Variable	Coefficient	Std. Error	t-Statistic	Pro	
LP(-1)	1.138367	0.161277	7.058477	0.0	
LP(-2)	-0.709470	0.147159	-4.821121	0.0	
LR	-1.789671	1.697256	-1.054449	0.3	
LR(-1)	3.370880	2.583067	1.304991	0.2	
LR(-2)	-6.566669	2.424145	-2.708860	0.0	
LR(-3)	5.456089	1.970053	2.769514	0.0	
LR(-4)	-2.272722	1.189070	-1.911343	0.0	
PC	-12.82300	4.418941	-2.901826	0.0	
PC(-1)	23.55514	8.658057	2.720603	0.0	
PC(-2)	-10.68596	5.564176	-1.920493	0.0	
TD	0.630615	0.271584	2.321990	0.0	
TD(-1)	-0.666332	0.357257	-1.865132	0.0	
TD(-2)	0.655279	0.360088	1.819774	0.0	
TD(-3)	-0.459738	0.233050	-1.972702	0.0	
C	8178789.	9378527.	0.872076	0.3	
R-squared	0.930545	Mean dependent var	27670		
Adjusted R-squared	0.879367	S.D. dependent var	24364		
S.E. of regression	8462403.	Akaike info criterion	35.04		
Sum squared resid	1.36E+15	Schwarz criterion	35.71		
Log likelihood	-580.6901	Hannan-Quinn criter.	35.27		
F-statistic	18.18263	Durbin-Watson stat	1.897		
Prob(F-statistic)	0.000000				

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

Through the above model, it is clear that the corrected determination coefficient is equal to 87%, which means that the variables explaining the model explain 87% and the rest is due to random variables, in addition to the significance of the estimated model (F-Statistic) with a slowness model of 2 4 2 3 respectively.

4- Wald Test

Case 2: Restricted Constant and No Trend				
Variable	Coefficient	Std. Error	t-Statistic	Prob
LR	-3.155463	2.546878	-1.238953	0.2
PC	0.080856	1.740137	0.046465	0.9
TD	0.279853	0.212830	1.314915	0.2
C	14321049	17054041	0.839745	0.4

EC = LP - (-3.1555*LR + 0.0809*PC + 0.2799*TD + 14321048.6581)

F-Bounds Test			
Null Hypothesis: No levels relations			
Test Statistic	Value	Signif.	I(0)
F-statistic	5.621724	10%	Asymptotic: n=1000
		5%	2.37
		2.5%	2.79
		1%	3.15
Actual Sample Size	34	10%	Finite Sample: n=35
		5%	2.618
		2.5%	3.164
		1%	4.428
		10%	Finite Sample: n=30
		5%	2.676
		2.5%	3.272
		1%	4.614

Through the outputs of Eviwes 12, we found that the value of Wald Test, which is one of the most important tests that indicate the existence of a common integration relationship between the variables, as the value F-Statistic is higher than the upper limit, which means that there is a common integration relationship between the variables in the model.

5- Stability of residues in the model

obs	Actual	Fitted	Residual	Residual Plot
2005S1	-188877...	441204....	-232997...	
2005S2	3153087...	-310109...	3463197...	
2006S1	167967...	203070...	-351024...	
2006S2	244885...	168480...	7640507...	
2007S1	333247...	261005...	7224256...	
2007S2	294738...	307649...	-129117...	
2008S1	8463299...	153390...	-687578...	
2008S2	2014299...	-471308...	2485607...	
2009S1	5557726...	6243769...	-686043...	
2009S2	5648848...	9707887...	-405903...	
2010S1	4641221...	110328...	-639161...	
2010S2	6565352...	108211...	-425583...	
2011S1	112208...	130044...	-178355...	
2011S2	153787...	168090...	-143025...	
2012S1	226972...	236931...	-995915...	
2012S2	217726...	174759...	4296703...	
2013S1	4336183...	-535724...	9693430...	
2013S2	148669...	170096...	-214275...	
2014S1	610810...	617564...	-675442...	
2014S2	676347...	682586...	-623911...	
2015S1	419200...	440727...	-215270...	
2015S2	297128...	238711...	5841639...	
2016S1	164392...	177249...	-128571...	
2016S2	146192...	9660484...	4958738...	
2017S1	265695...	188458...	7723714...	
2017S2	305031...	387168...	-821375...	
2018S1	228246...	387081...	-158835...	
2018S2	397026...	404090...	-706484...	
2019S1	946698...	742409...	204288...	
2019S2	974267...	100185...	-275917...	
2020S1	490108...	503107...	-129984...	
2020S2	355716...	350698...	501807...	
2021S1	355716...	444031...	-883155...	
2021S2	490108...	450850...	3925836...	

The results above indicate that the residues in the model are stable, which means another evidence of the existence of a co-integration relationship between the variables.

6- Error correction form

ARDL Error Correction Regression
 Dependent Variable: D(LP)
 Selected Model: ARDL(2, 4, 2, 3)
 Case 2: Restricted Constant and No Trend
 Date: 12/24/24 Time: 02:18
 Sample: 2003S1 2021S2
 Included observations: 34

ECM Regression Case 2: Restricted Constant and No Trend				
Variable	Coefficient	Std. Error	t-Statistic	Prob
D(LP(-1))	0.709470	0.121924	5.818957	0.0000
D(LR)	-1.789671	1.233108	-1.451349	0.1500
D(LR(-1))	3.383302	1.265309	2.673894	0.0100
D(LR(-2))	-3.183367	1.083785	-2.937269	0.0050
D(LR(-3))	2.272722	0.761624	2.984046	0.0050
D(PC)	-12.82300	2.992691	-4.284771	0.0000
D(PC(-1))	10.68596	3.386262	3.155681	0.0030
D(TD)	0.630615	0.168263	3.747787	0.0000
D(TD(-1))	-0.195541	0.165614	-1.180709	0.2400
D(TD(-2))	0.459738	0.183392	2.506862	0.0150
CointEq(-1)*	-0.571103	0.097906	-5.833200	0.0000
R-squared	0.873002	Mean dependent var	14260.00	

From the above results, it becomes clear that the estimated model is significant and has a negative sign.

7- Short-term equation

$$EC = LP - (-3.1555*LR + 0.0809*PC + 0.2799*TD + 14321048.6581)$$

8- No sequential autocorrelation problem

Date: 12/24/24 Time: 02:25
 Sample (adjusted): 2005S1 2021S2
 Q-statistic probabilities adjusted for 2 dynamic regressors

Autocorrelation	Partial Correlation	AC	PAC	Q-Stat	Pi	
		1	0.044	0.044	0.0705	0.0000
		2	-0.384	-0.387	5.7251	0.0000
		3	-0.107	-0.079	6.1797	0.0000
		4	-0.029	-0.201	6.2140	0.0000
		5	0.035	-0.041	6.2657	0.0000
		6	0.010	-0.109	6.2704	0.0000
		7	0.060	0.046	6.4362	0.0000
		8	-0.031	-0.095	6.4804	0.0000
		9	-0.046	-0.001	6.5836	0.0000
		10	-0.201	-0.307	8.6332	0.0000
		11	-0.129	-0.192	9.5245	0.0000
		12	0.245	-0.001	12.867	0.0000
		13	-0.058	-0.181	13.061	0.0000
		14	-0.040	-0.039	13.159	0.0000
		15	-0.042	-0.026	13.270	0.0000
		16	-0.018	-0.059	13.293	0.0000

*Probabilities may not be valid for this equation specification.

The above results indicate that there is no sequential autocorrelation between the residuals of the random variable.

9- No linear correlation between model variables

Breusch-Godfrey Serial Correlation LM Test:
Null hypothesis: No serial correlation at up to 2 lags

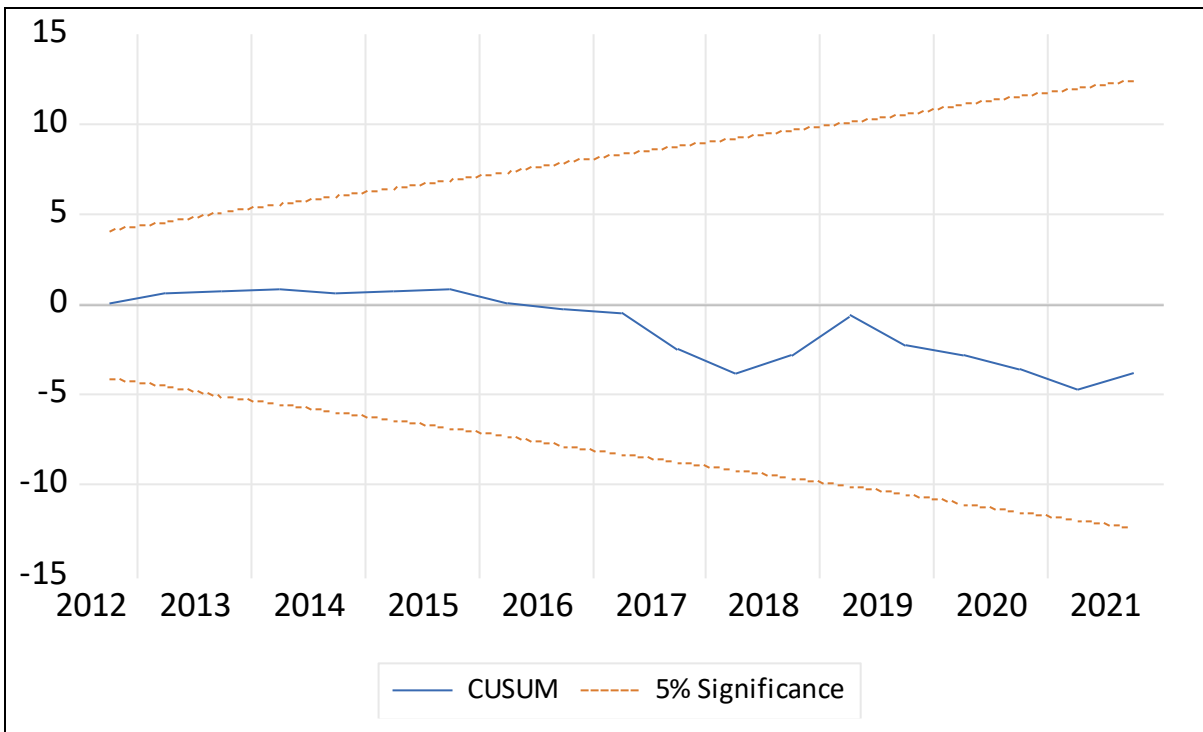
F-statistic	4.001894	Prob. F(2,17)	0.0377
Obs*R-squared	10.88350	Prob. Chi-Square(2)	0.0043

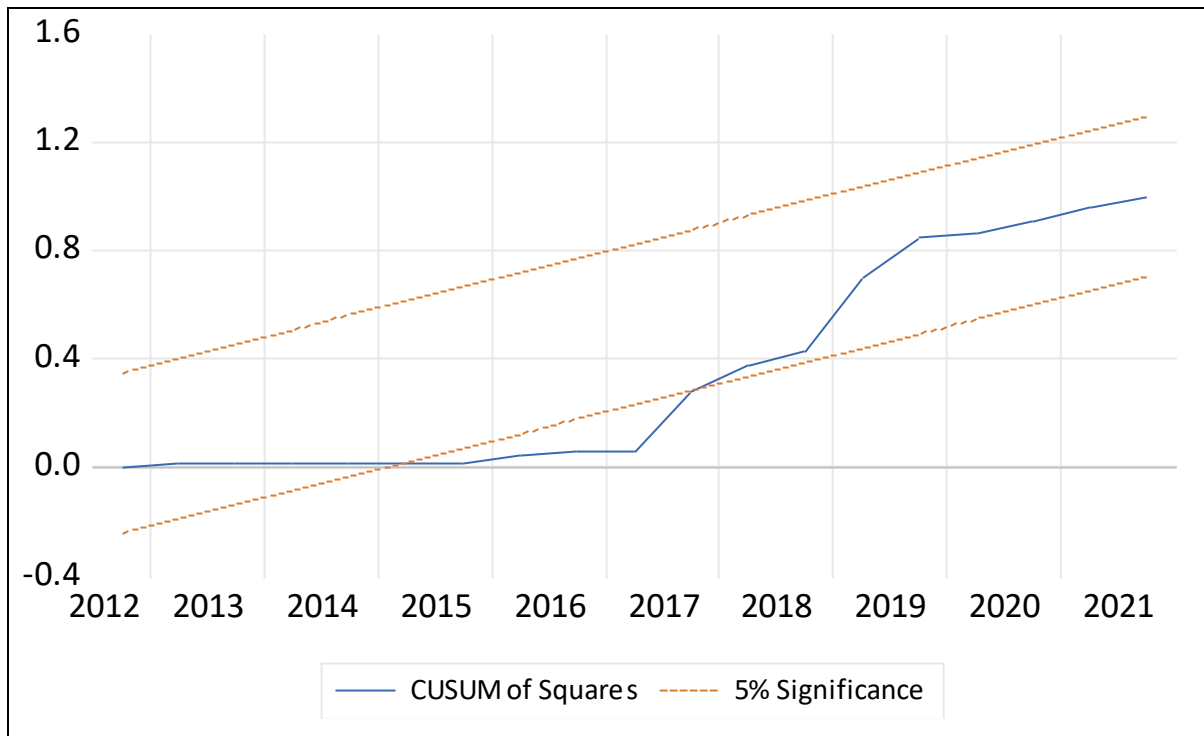
Test Equation:
Dependent Variable: RESID
Method: ARDL

10- Lack of Heteroskedasticity problem

Heteroskedasticity Test: Breusch-Pagan-Godfrey			
Null hypothesis: Homoskedasticity			
F-statistic	1.304923	Prob. F(14,19)	0.24
Obs*R-squared	16.66652	Prob. Chi-Square(14)	0.24
Scaled explained SS	10.50782	Prob. Chi-Square(14)	0.71
Test Equation: Dependent Variable: RESID^2 Method: Least Squares Date: 12/24/24 Time: 02:32 Sample: 2005S1 2021S2 Included observations: 34			

11-Stability of estimated features, the two figures below indicate the stability of estimated features at a significant level of 5%.





3. CONCLUSIONS

- 1- Deposits as a source of access to funds constituted the highest amount of the three sources.
- 2- Despite the relative importance of paid-up capital over other sources, it has not received attention from the banking system, as it ranked third among those sources.
- 3- The existence of untapped financial resources is evident through the difference between sources of supply and sources of use
- 4- The path of loans paid by the banking system is going downward.
- 5- The existence of a common integration relationship between variables in the model

Recommendations

- 1- Although deposits rank high as a source of funds, most of these deposits are demand deposits and therefore it is necessary to focus on other types such as savings deposits and term deposits.
- 2- Attention must be paid to paid-up capital, as it represents the first line of resistance to face the crises plaguing the banking sector.
- 3- The volume of loans paid must be increased in proportion to the total sources of access to funds, and the exploitation of idle funds.

- 4- It is necessary to increase the supply of financial resources to the national economy and grant loans to the private sector, as this leads to an increase in the contribution to the GDP.
- 5- Through the relationship of mutual integration and in order to supply the national economy with financial resources, attention must be paid to the sources of obtaining funds, for the purpose of achieving the above goal.

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