THE IMPACT OF FINANCIAL INCLUSION IN BANK DEPOSITS: A STUDY IN THE IRAQI BANKING SECTOR FOR THE PERIOD (2010-2021)

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Abstract: The research aims to find out the effect of financial inclusion on bank deposits for the Iraqi banking sector for the period 2010-2021, and the extent of the bank's ability to attract bank deposits through financial inclusion tools represented by (number of bank branches, number of ATMs, number of points of sale, number of credit cards), as financial inclusion is one of the modern banking products that helps the financial stability of the banking sector as it represents an attraction factor for individuals who are outside the banking system through the financial services it provides for financially marginalized individuals, such as insurance, and credit, and opening bank accounts, as well as helping financial stability for the banking sector through the stabilization of bank deposits, and the provision of sufficient liquidity that the bank can employ in credit operations and achieve a sufficient level of return, and achieve sustainable consumer development, and the research used the deductive method for the theoretical side and the analytical and standard method for the practical side as well as the use of the statistical program Eviews10) for the period 2010-2021. And the study reached a set of conclusions, the most important of which are: that there is a strong correlation with the existence of a meaningful effect of financial inclusion in bank deposits, as well as the growth of financial inclusion tools and their spread, but it does not rise to the level of ambition, nor does it harmonize with the size of the population density, and the study concluded with a set of recommendations, the most important of which was: the need to expand tools Financial inclusion and its dissemination at a wide level of the country, urging the government and private banks to switch to electronic banking, and to adopt modern banking technology in banking.

Keywords: financial inclusion, bank deposits, the Iraqi banking sector.

INTRODUCTION:
The world is witnessing accelerated technological development in the financial sectors, and the banking sector in particular, as technological progress has separated many modern banking industries, and has contributed to the transformation from traditional banks whose activity is limited to deposits and credit to electronic banks, which work to provide banking services remotely, and the modern technology that represented the tools of financial inclusion (ATM, and the POS, and credit cards) which the banking sector witnessed as one of the most important means that helped the banking sector in marketing its banking products, as the competition between banks, and the desire of customers to introduce new services, the rapid growth of electronic banking services, and the reduction of costs in the provision of financial services, constituted an attractive factor for individuals those who are outside the banking system, and their entry into the banking system, which has a positive effect on the financial stability of the banks, through the growth of bank deposits, by the small savers, and their direction towards credit and other banking operations, which help the banks to achieve the highest return on profit, and their banking competitiveness, as well as maintaining the bank's market share.
The first topic: research methodology

1: Research Methodology

1:1 The Importance Of Research:
The importance of the research lies in the need of the Iraqi banking sector to generalize and deliver financial services to the largest possible segment of the population, especially individuals who are outside the banking system, and include them in financial services, as the process of advancing the banking sector and attracting deposits and financial savings is one of the most important things that the central bank seeks to achieve the Iraqi

2:1 The Search Problem:
The research problem was in the standards and means of implementing financial inclusion, since most developing countries, including Iraq, have not reached the required level in the implementation of financial inclusion, due to the existence of many obstacles and challenges that prevent this, which led to the weakness of the financial services provided by the banking sector, and the most important of these The challenges (the laws and legislation, the number of bank branches, the population density, the decline of the electronic payment service represented by ATMs and the points of sale (POS), as well as the credit risks that the bank is exposed to, which is the borrowers' inability to pay, all of which affects the generalization of banking services and the lack of expansion in financial inclusion, and this problem can be raised through the main question: (Is there an effect of financial inclusion in cash credit for the period of 2010-2021)?

3:1 Research Hypothesis:
Based on the research problem, the main hypothesis was formulated through which the solutions and treatments for the research problem can be found, and this hypothesis is "There is no significant effect of financial inclusion in the bank deposits of the Iraqi banking sector for the period 2010-2021".

4:1 Research objectives:
1) Explain the concept of financial inclusion and what are its dimensions and indicators.
2) Explain the concept of bank deposits, their types, and how to attract deposits and savings by the banking sector.
3) View the amount of bank deposits deposited in the banking sector during the search period.

The Second Topic: The Theoretical Framework for Financial Inclusion And Bank Deposits

1. Financial inclusion
1.1 The Concept of Financial Inclusion:
The term financial inclusion appeared for the first time in the world in 1993 in the form of a study presented by Lishon and Tarif about financial services in the southeast of England, which touched on the effect of the closure of a bank and the inability of the residents of the region to actually access financial services, and the studies related to financial inclusion during the 1990s concluded and learn about the difficulties faced by some groups of society in accessing financial services (Abdallah and others, 15:2016).

And international attention turned towards financial inclusion after the global financial crisis at the end of 2007, as financial institutions sought to achieve financial inclusion through procedures and policies adopted by monetary authorities in many countries of the world, which aimed to facilitate the access of financial services to all sections of society (Sarour and Hijazi, 9: 2017).

The concept of financial inclusion is the removal of obstacles that hinder the access of financial services to individuals, and the creation of a system that works to produce financial services at a low, fair and convenient cost, and makes it easy to access and use by everyone and at all times (Akakpo, 2020:34), and financial inclusion can be defined as the state in which individuals are able to access financial services and banking products at an affordable and convenient cost while preserving the dignity of all individuals (Arun & Kamath, 2015:267), also known as access to and use of financial services through the official channels, and without any hindrance to the use of these services whether they are priced or non-priced (Fouejieu et al, 2020:2).
2.1 The importance of financial inclusion
The importance of financial inclusion is the means by which the vicious circle of poverty is broken, as it gives the weak sectors and financially excluded individuals a big boost, through financial inclusion tools, which can be used correctly by the banking sector (James, 2017:1), as financial inclusion achieves many benefits and for several parties of the beneficiaries, it allows the poor segment to save and invest in the banking sector, and help the banking sector and central banks to provide sufficient liquidity and control the systematic and non-systemic risks, as well as helping to limit the growth of informal credit channels, and eliminating the phenomenon of hoarding and blocking funds (Berkoh, 2019:14).

3.1 Dimensions of financial inclusion
presented by the Financial Inclusion Alliance (AFI(Association for Financial Inclusion Data) FIDWG), which established a set of standards and dimensions to measure financial inclusion, and this set focused on two basic dimensions: access to financial services, and the use of financial services (Tebinah, 9:2018), and realized the Global Partnership for Financial Inclusion (GPFI) that financial inclusion is the main element in fighting poverty, and achieving the goals of comprehensive economic growth, therefore the members of the World Association for Financial Inclusion agree (GPFI(on submitting a recommendation that includes three main dimensions of financial inclusion) AFI, 2013:4-5)

[1] Access to financial services: It represents the ability of individuals to access financial services, and focuses on a set of the most important criteria (the banking infrastructure and the number of bank branches, the number of access points, the number of ATMs, electronic cash accounts, the digital infrastructure) as well as the level of individual income, and the extent to which individuals know the quality of the service the introduction (Kelly, 2016:3).

[2] Use of financial services: This dimension represents the extent to which individuals use the financial services provided by the banking sector, and how they can interact with financial services, such as withdrawals and deposits (AFI, 2013:5).

[3] Quality of financial services: It is intended to provide financial products of high quality to meet the needs of individuals, and the governments, independent bodies and central banks must have an important supervisory role in establishing the regulatory frameworks and financial standards to stimulate banking institutions, and make the products offered simple in price and easy to use (Berkoh, 2019:18).

2-BANK DEPOSITS
1:2. The Concept of Bank Deposits
Bank deposits are one of the old functions of the banks, since ancient times the people who work in the exchange have kept the money that people give in the form of deposits, such as businessmen and merchants, as well as those who wish to deposit their money and preserve it from loss and theft, so the money changers put the money deposited with them in their treasury With the depositor's delivery, a credit note includes the amount of the deposit, and if the depositor wants to withdraw his deposit, he gives the banker the credit note and withdraws the deposit (Brigham & Houston, 2000:199), and the deposit is defined as the amounts available to the bank through customer deposits, and therefore represents a debt to the bank and rights to its owners (Abdel Baki, 42:2015). It is one of the oldest financial services provided by the bank, as the bank undertakes any direct withdrawal of deposits, whether from the depositor or the person authorized to withdraw, as the bank provides the safe custody of the deposit funds (Rose & Hudgins, 2008:388).

2:2. Types Of Bank Deposits
Bank deposits can be classified into several types and as follows:
1:2:2. Current deposits: and is represented by the funds deposited with the bank by the customer and they have the right to withdraw the amount at any time and without prior notice of withdrawal (Hindi, 47:2011), and is defined as the current accounts that allow the account holder to allow the daily settlements of purchases (goods and services) or the payment of the debt from during the checks, and the bank does not pay any interest on this account (Barbara Casu, at, 2006:30),
2:2:2. Savings deposits: It is one of the means of financing for the banking sector through the accumulation of savings for owners of limited income in return for interest or without it, according to the customer's desire, and the bank is required to grant the interest on the minimum deposit amount (Abdel Hamid, 74:2000). This type of service is offered in order to attract people with limited income to allow them to save their money to face emergency situations in the future and pay off their financial expenses (Rose & Hudgins, 2008:388).

3:2:2. The fixed deposits: They are investment deposits, the banker is obligated to pay the value of the deposit at a specific time agreed upon in advance to the owner of the deposit, and its value cannot be withdrawn by the customer before the due date of the deposit except in the case of breaking the deposit (Rahim et al., 44:2017), in return the depositor receives a specific interest and increases as the amount of the deposit increases and the duration of the deposit increases (Al-Janabi and Arslan, 127:2009), but if the deposit is withdrawn before the specified due date, the depositor will not receive the interest agreed by the bank (Hempel & Simonson, 1999:212).

3:2. The factors influencing the attraction of deposits: (Hamad, 27:2015) and (Abdul Sami, 144:2010)
1:3:2. The growth of banking awareness: In countries where banking awareness and banking culture are high, their banking systems tend towards growth and prosperity.
2:3:2. Political and economic stability: This leads to an increase in confidence in the banking system, and an increase in dealings with and demand for banks, since banks need a stable and safe environment to grow and prosper.
3:3:2. Providing new and innovative services to advertisers: The banks, as part of their strategy, will resort to slightly adjusting interest rates to be able to compete with the banks, or introduce new deposit systems such as deposit insurance, or linking interest on deposits to the bank's return.
4:3:2. Improving the quality of banking services: The bank is interested in improving the level of banking services, whether when opening a current or savings account, or when depositing and withdrawing from it, as the bank always seeks to promote its services.

3. The relationship between financial inclusion and bank deposits
Financial inclusion provides individuals with limited income the possibility of saving in the future, which works to strengthen financial stability, and also allows for the formation of high levels of bank deposits, which works to secure a more stable base for bank deposits during difficult times for commercial banks (Han & Melecky, 2013:12), and the expansion of the application of financial inclusion and the provision of financial services to individuals via the Internet enables individuals to manage their bank accounts and transfer from one account to another, as the provision of financial services commensurate with all the needs of individuals and the provision of effective communication channels between banks and individuals helps to increase the liquidity ratio of Banks and the promotion of bank deposits (Auwal Musa et al, 2015:67).

The Third Topic: The Practical Framework
1. Analysis of financial inclusion indicators and bank deposits for the Iraqi banking sector for the period (2010-2021)
1:1. Analysis of financial inclusion indicators for the Iraqi banking sector for the period (2010-2021)

<table>
<thead>
<tr>
<th>Table number (1)</th>
<th>Financial inclusion tools for the Iraqi banking sector for the period (2010-2021)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Credit cards per thousand adults</td>
<td>The diffusion rate ATM</td>
</tr>
<tr>
<td>------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>32.8</td>
<td>155</td>
</tr>
<tr>
<td>36.1</td>
<td>251</td>
</tr>
</tbody>
</table>
The researchers’ numbers are based on the data contained in the financial stability report of the Central Bank of Iraq and the statistical bulletins for the period 2010-2021.

Column (7) Bank density = total population/number of bank branches.
Column (8) ATM prevalence = number of ATMs/adult population*100000.
Column (9) number of points of sale per (100) thousand adults = number of points of sale/number of adult population*100000.
Column (10) credit cards per 100 thousand adults = number of credit cards/number of adult population*100000.

We note from table (1) the instruments of financial inclusion for the Iraqi banking sector for the period 2010-2021, as these numbers differed between a decrease and an increase during the research period, and this can be explained through the following:

- **The number of bank branches:** this indicator is measured by the number of banks spread throughout the country, and the global average for the number of bank branches per (100) thousand adults is (10) branches (World Bank, 692019), while in Iraq the average number of bank branches reached (41.2) thousand for each one branch, i.e. for every (100) thousand adult (2) branch.

- **Number of ATMs:** This indicator can be measured through ATMs per (100) thousand adults, as the number of ATMs per (100) thousand adults in the countries of the Middle East and North Africa reached (26.1), while the average percentage of ATM penetration in Iraq reached (3.3) per (100) thousand adults.

- **Number of points of sale:** and represents the points of sale spread throughout the country per (100) thousand adults, and the average point of sale in Iraq was (208) points of sale per (100) thousand adults.

- **Number of credit cards:** This indicator can be measured through the number of electronic cards (credit cards) given to adults per (100) thousand adults, as the average number of credit cards given by the Iraqi banking sector reached (93) credit cards per (100) thousand adults.

- Despite the increase in electronic payment services during the years of research, it did not reach the required level compared to the neighboring Arab countries and Figure (1) shows the spread of financial inclusion tools for the Iraqi banking sector:

Shows the number of bank branches and electronic payment tools for the Arab countries and Iraq for 2020

2:1. Analysis of bank deposits for the Iraqi banking sector for the period (2010-2021)

<table>
<thead>
<tr>
<th>growth rate</th>
<th>total deposits</th>
<th>Private sector deposits/ in millions</th>
<th>Government sector deposits/ in millions</th>
<th>the year</th>
</tr>
</thead>
<tbody>
<tr>
<td>17%</td>
<td>56,150,094</td>
<td>6,348,094</td>
<td>49,802,000</td>
<td>2011</td>
</tr>
<tr>
<td>10%</td>
<td>62,005,935</td>
<td>8,623,389</td>
<td>53,382,546</td>
<td>2012</td>
</tr>
<tr>
<td>11%</td>
<td>68,855,487</td>
<td>9,964,343</td>
<td>58,891,144</td>
<td>2013</td>
</tr>
<tr>
<td>7.5%</td>
<td>74,073,336</td>
<td>9,697,127</td>
<td>64,376,209</td>
<td>2014</td>
</tr>
<tr>
<td>-13%</td>
<td>64,344,061</td>
<td>9,113,215</td>
<td>55,230,846</td>
<td>2015</td>
</tr>
<tr>
<td>-3%</td>
<td>62,398,733</td>
<td>8,592,155</td>
<td>53,806,578</td>
<td>2016</td>
</tr>
<tr>
<td>7%</td>
<td>67,048,631</td>
<td>8,556,174</td>
<td>58,492,457</td>
<td>2017</td>
</tr>
<tr>
<td>14.6%</td>
<td>76,893,927</td>
<td>10,798,817</td>
<td>66,095,110</td>
<td>2018</td>
</tr>
<tr>
<td>6.7%</td>
<td>82,106,425</td>
<td>10,723,025</td>
<td>71,383,400</td>
<td>2019</td>
</tr>
<tr>
<td>3.4%</td>
<td>84,924,168</td>
<td>10,702,479</td>
<td>74,221,689</td>
<td>2020</td>
</tr>
<tr>
<td>13%</td>
<td>96,071,378</td>
<td>12,494,015</td>
<td>83,577,363</td>
<td>2021</td>
</tr>
</tbody>
</table>

The researchers’ numbers are based on the data contained in the financial stability report of the Central Bank of Iraq and the statistical bulletins for the period 2010-2021

It can be seen from table (2) the development of bank deposits for the Iraqi banking sector during the research period, so the total deposits in 2010 amounted to (47,947,232) million, and the deposits increased during the period 2010-2021 in order to stabilize the economic situation in general, despite the deterioration of the security situation during the years 2014-2016, and the closure of banks in some governorates of Iraq, but the deposits began to recover and return to their highest levels in 2021 to reach (96,071,378) million, as a result of the stability of the banking sector and the entry of a greater number of individuals into the banking system, and the localization of the salaries of state employees, which led to an increase in savings, and the growth of bank deposits in the Iraqi banking sector.
2. Measuring the effect of electronic banking on bank deposits for the period 2010-2021

1.2. The research model for the study:
The following standard form was adopted to conduct the standard analysis in the form that fits the requirements of the current research:

\[ Y_1 = c + \beta x_1 + \beta x_2 + \beta x_3 + \beta x_4 + \epsilon \]

Since:

- \( Y_1 = \) Bank deposits
- \( C = \) The constant limit
- \( X_1 = \) number of bank branches
- \( X_2 = \) number of ATMs
- \( X_3 = \) number of points of sale
- \( X_4 = \) credit card number

The random error limit is:

2:2. The relationship between the independent variables of financial inclusion and bank deposits

To test the relationship and effect between the independent variables represented by the instruments of financial inclusion (the number of bank branches, the number of ATMs, the number of points of sale, and the number of credit cards), with the dependent variable bank deposits, the multiple linear regression equation was estimated using the least squares method (OLS) and as follows:

**Table number (3)**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>-1640053.</td>
<td>32753004</td>
<td>-0.050073</td>
<td>0.9615</td>
</tr>
<tr>
<td>X1</td>
<td>63296.08</td>
<td>37475.71</td>
<td>1.688989</td>
<td>0.1351</td>
</tr>
<tr>
<td>X2</td>
<td>6212.848</td>
<td>20549.28</td>
<td>0.302339</td>
<td>0.7712</td>
</tr>
<tr>
<td>X3</td>
<td>-92.97729</td>
<td>224.4254</td>
<td>-0.414290</td>
<td>0.6911</td>
</tr>
<tr>
<td>X4</td>
<td>726.9835</td>
<td>455.6175</td>
<td>1.595601</td>
<td>0.1546</td>
</tr>
</tbody>
</table>

R-squared 0.848061 Mean dependent var 70234951
Adjusted R-squared 0.761239 SD dependent var 13329079
SE of regression 6513016. Akaike info criterion 34.51084
Sum squared resid 2.97E+14 Schwarz criterion 34.71288
Log likelihood 9.767776 Hannan-Quinn criterion 34.43604
F-statistic 726.9835 Durbin-Watson stat 1.509346
Prob(F-statistic) 0.005425

**Source:** from the researcher's data

Anrelying on the statistical program Eviews10 and it is observed from the table (3)EneAll independent variables were analyzed with the dependent variable (bank deposits). y An one, After performing the test using a program Evieviews A value was obtained D-W which was the amount (1.509346), and this confirms the absence of a self-correlation problem and the need to perform any statistical treatment, and it is observed from the table (3) that the simple Pearson correlation coefficient (R) which indicates the acceptance of the direction of the linear relationship between the variable\(At\)he independent and the dependent and representative variable\(in\) bank deposits during the study period reached (0.920902) and we also note a value (R-squared) which was equal to (0.848061) and (Adjusted R Square) which is the corrected coefficient of determination whose value was (0.761239) (that is, the regression model explains what its value is) 0.84% of the changes obtained in the dependent variable (bank deposits), and reached
the standard error of estimation (Std Error of the Estimate) (13329079) which measures the deviation of the true values from the estimated regression line, the smaller this indicator is, the smaller the random error, as was carried out test (F) which is used to test the significance of the entire regression assuming a significant relationship between the dependent variable and the independent variables where a value is compared (F) calculated resulting from this test with (F) the degree of freedom tabulation (d) to expand and (n-1) for the rank, at a certain level of morale and it is noted that the value (F) calculated at (9.767776) which is a moral value because it is a value P-Value which reached (0.0054) and it is less than 5%, and calculating the remainder which measures the deviation of the estimated relationship for the series data that was studied and whether it is normally distributed, we find the probability value corresponding to the test (Jarque-Bera) has reached (0.8729) which is greater than 5% and therefore we accept the null hypothesis which confirms ETHe remainder is normally distributed.

Figure (2)

Source: from the researcher's data Anrelying on the statistical program Eviews 10

2.2. Measuring the correlation between the independent variables and bank deposits

To explain the correlation between the independent variables represented by (the number of bank branches, and the number of ATMs ATM, and the number of points of sale POS, and the number of credit cards) with the dependent variable bank deposits which were measured through the following table:

Table (4)
The correlations between the independent variables and The dependent variable is bank deposits

<table>
<thead>
<tr>
<th></th>
<th>Y1</th>
<th>X1</th>
<th>X2</th>
<th>X3</th>
<th>X4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y1</td>
<td>1.00</td>
<td>0.082</td>
<td>0.869</td>
<td>0.738</td>
<td>0.883</td>
</tr>
<tr>
<td>X1</td>
<td>0.082</td>
<td>1.000</td>
<td>-0.119</td>
<td>0.002</td>
<td>-0.188</td>
</tr>
<tr>
<td>X2</td>
<td>0.869</td>
<td>-0.119</td>
<td>1.000</td>
<td>0.855</td>
<td>0.959</td>
</tr>
<tr>
<td>X3</td>
<td>0.738</td>
<td>0.002</td>
<td>0.855</td>
<td>1.000</td>
<td>0.820</td>
</tr>
<tr>
<td>X4</td>
<td>0.883</td>
<td>-0.188</td>
<td>0.959</td>
<td>0.820</td>
<td>1.000</td>
</tr>
</tbody>
</table>

Source: from the researcher's dataAnrelying on the statistical program Eviews 10
The table indicates (4) to the correlations between and independent variables (number of bank branches, number of credit cards, number of ATMs...) and the dependent variable (bank deposits) where we note that there was a correlation between bank deposits and the number of credit cards where the value of the correlation was 0.883 and in second place between bank deposits and the number of ATMs where its value was 0.869. What ASay there was a correlation between the bank deposits and the number of bank branches where she reached her stage (0.082).

CONCLUSIONS:

➢ During the standard analysis, the research reached the answer to the research problem with the existence of a direct relationship between the main variable of financial inclusion through its instruments represented by (the number of ATMs, the number of points of sale, and the number of credit cards), with the dependent variable of bank deposits, and the direct relationship was strong reached its value (0.920902), in addition to the existence of an effect between these variables, as a result of the introduction of ATMs in most banks operating in the Iraqi banking sector, and the spread of points of sale in different parts of the country, and the increase in the number of credit cards given to customers, as for the relationship between the number of bank branches and the bank deposits were weak as the value of the bond reached (0.12880).

➢ When analyzing the indicators of financial inclusion and comparing them with the neighboring countries, it was found that Iraq ranks behind in the application of financial inclusion standards, and the low level of financial banking services, which was represented by the number of bank branches spread throughout the country, and the spread of ATMs and points of sale throughout the country, and grants Electronic credit cards.

➢ The low level of financial inclusion in Iraq despite the efforts of the central bank and the Iraqi banking sector to expand financial inclusion, and the weak infrastructure of the banking sector, and the weak level of financial services.

➢ Weak awareness of banking and general awareness of banking culture among the public, especially in the outskirts of cities from villages and rural areas, and the weak role of banks in educating the community through their employees about the concept of financial inclusion.

Recommendations:

➢ Restoring the infrastructure of the banking sector and introducing the advanced and technological systems, and working on building the administrative staff, developing it and introducing it to financial inclusion through courses, seminars and conferences and how to deal with the individual. And persuading him to enter the banking sector.

➢ The need for the central bank to guide the banking sector in generalizing financial services to all individuals as they enter the banking system, by providing loans and credit facilities, especially to the owners of productive projects and the poor, at low prices and easy installments.

➢ To pay attention to financial education and financial literacy as much as possible, and to make the public aware of banking services through social media and social program platforms via the Internet, through the Central Bank of Iraq.

➢ The expansion in the provision of electronic banking services represented by ATM, and dealing with electronic money through the points of sale POS, oblige merchants and mall owners to do so and grant them spending facilities, as well as the activation of private sector spending by reducing the costs of banking financial services.

REFERENCES:


