

The Impact of Financial Inclusion on Liquidity Quality in Iraq Case Study for Khaleej Commercial Bank For the period (2016-2021)

Nada Hasan Jasim

Researcher, Al-Iraqia University - College of Administration and Economics Department of Banking and Financial Sciences

Dr. Aysar Y. FAHAD

Prof, Al-Iraqia University-College of Administration and Economics Department of Banking and Financial Sciences, researcher

Abstract: The research aims to identify the impact of financial inclusion on the liquidity quality of the Khaleeji Commercial Bank and to know the type of relationship between the research variables, whether they are inverse or direct, and on the basis of that, the liquidity indicators of the bank were analyzed to for a duration from (2016-2021), and then access the indicators of financial inclusion, analyze them, and know its reality in Iraq. And measurement The effect of financial inclusion on liquidity quality using the tablet data model, by estimating the general model and the fixed effects model, and then comparing between them. Ma.

Andreach bprodning To a set of conclusions, the most prominent of which was the presence that the indicator of the bank's deposits ratio to the total private sector deposits has a positive impact on the quality of liquidity, and the banking prevalence index, which is one of the indicators of financial inclusion in Khaleej Commercial Bank, is still weak due to the weak spread of its branches and the weak public dealings with it. Which reflected negatively on the banking prevalence and liquidity quality index.

Keywords: Impact of Financial Inclusion, Commercial Bank.

B recommendedprodning With a set of recommendations, the most prominent of which was the maximum use of indicators of financial inclusion in following up the monitoring process, progress, expansion and depth in the provision of financial services, as well as diagnosing defects and weaknesses in the functioning of the banking sector (governmental and private), which is at the same time a database for the work of the banking sector to take appropriate measures to avoid widening The confidence gap in the banking sector.

The first topic: research methodology

Research problem

Constribte Promote financial inclusion Liquidity for the banking system in Iraq, which is reflected In one way or another, the reality of the banking sector and the services provided for individuals Hence, the research problem arises, which is as follows:

➤ To what extent does financial inclusion contribute to enhancing the quality of banking liquidity?

Research hypothesis

The research starts from a hypothesis: There is an effect of financial inclusion in Quality Bank liquidity through its indicators.

Research Importance

The importance of research comes from the status of excellence that it has in the financial and banking arena in the world, in order to increase its importance in achieving development and progress and boom the economy, as it leads to a prominent role in all strata of society, especially those with limited income, and owners of small and medium enterprises.

Research Aims

The research aims to find out the impact of financial inclusion in banking liquidity in the Gulf Commercial Bank, by studying the reality of financial inclusion in Iraq and identifying the most important obstacles that limit the increase in its rates.

The second topic: the conceptual framework of financial inclusion and banking liquidity

First: financial inclusion

1. The concept of financial inclusion

Financial inclusion is defined as providing access to all financial services that meet the needs of every member of society easily, easily, and at reasonable prices through official channels that are responsible and sustainable (Al-Tayeb, 5: 2020). It is defined as the availability and use of financial services for all segments of society, especially those with limited incomes. And the poor (the marginalized and disadvantaged segments) through official channels and innovation and development of more appropriate financial services at appropriate costs to avoid resorting to these groups to expensive informal means and channels that do not have the slightest level of oversight and supervision. (Anani and Fariz, 2016: 2) The World Bank defines financial inclusion as the ratio of people or institutions that use financial services to the total number of individuals and institutions in society (2014: 14, World Bank). The World Bank also defines financial inclusion as the possibility of accessing useful financial products and services at affordable prices that meet their needs in terms of transactions (payments, deposits, credit, insurance) by presenting them to them in a responsible and sustainable manner.

2. The importance of financial inclusion

Financial inclusion has been gaining increasing importance in recent years in various countries developing. Especially poor ones (Khalil, 2015: 44) So the importance of financial inclusion can be stated with the following:

- A. **Achieving the goals of economic development:** As it contributes to financial inclusion in reducing economic and social inequalities and providing microfinance services and microcredit. It helped many individuals to find job opportunities outside the government framework, and financial inclusion reduces the cost of financial services via using plastic cards and electronic transfers (Al-Duraie, 2018: 13).
- B. **Enhance the stability of the financial system :** Increasing the population's use of financial services contributes to achieving the stability of the financial system via reducing the risks of cyclical fluctuations. The large increase in the number of young savers by increasing the level of financial inclusion would increase the size, stability and diversity of the deposit base, This reduces banks' reliance on non-credit financing which is more volatile (Ozili, 2018: 7).

- C. Financial system automation:** that expand AndSpread of financial services and increase their use ratesneed tomore ofAutomate itThese services, includingIt helps to attractMore technology users in the field of electronics and communications, especially in terms of payments bring benefitsGreat as it can be doneMore quickly and at a lower cost, And help toCreate an opportunity for more people to enterfor the systemfinancial (World Bank, 2011: 2).
- D. The ability of individuals to integrate and contribute to building their societies:** Improving the ability of individuals to use financial services in the financial systemenhances theTheir ability to start their own business, as well as improve their ability to manage their financial risks,that are associated with financial changes (Institute for Banking Studies, 2016: 2).
- E. Promotes competition among financial institutions:** whereFinancial institutions and banks operate,To diversify its products and services and pay attention to their quality,With the aim of attracting the largest number of customers and transactions and legalizing some unofficial channels (Bin Qida and Bouafia, 2018: 94).
- F. Reducing money laundering and terrorist financing:** The greater the use of formal financial services, the moreThe ability toAnti-money laundering (a direct relationship) and this indicates the unification of the goalanyAttracting financially excluded individuals in dealing with official financial and banking institutions (FATF/OECD, 2013: 15).

3. goals of financial inclusion :for financial inclusionGoalscan be identifiedIn the following:

- A.** Enhancing the use and access of all segments of society to financial services by uniting all the efforts of the parties involved in promoting financial inclusion,To introduce citizens to the importance of financial services and how to obtain, use and benefit from them to improve their conditions (Hamdan and Abu Diya, 2018: 180) (Al-Obaidi, 2018: 49)
- B.** It is a tool to reduce corruption and close gaps and leaks in the settlement of government payments such as salaries through direct transfer to the bank accounts of beneficiaries (Hassan, 2018: 28) and with whatFinancial quality and integrity and protection of the rights of users of financial services by preparing a set of policies, procedures and instructionsAndIntroducing customers to their rights, duties, and obligations (Al-Sabouni, 2015: 20).)
- C.** Reducing and addressing the rate of unemployment, poverty, achieving equal opportunities, and reducing the disparity in income and wealth (Abu Jamea and Abu Dayyah, 2016: 13) toAchieving sustainable development by supporting and financing development projects such as small, medium and micro enterprises (Iskandar, 2020: 104)
- D.** Reducing the gap in financial awareness and education among the different segments of society in the best ways through the cooperation of all participating parties with an optimal strategy to enhance financial inclusion (Al-Shammari, 29: 2017).

4. Dimensions of financial inclusion and its measurement indicators

Dimensions and indicators of financial inclusion can be used to help set goalsand strategiesnational Occasionfor financial inclusion and monitoring progress towards achieving itSo we will get to know herandIn detail:

A. Access to financial servicesaccess to financial services

This dimension helps us measure the size of the banking population,Those who deal with the banking sectorIt means the ability to use the provided financial services and products Abundance from institutions official, It reflects the depth of communication of financial services and productswith individualswithin a comprehensive financial systemAndShould beThis is amazingFinancial services are readily available to

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users and the availability of services can be indicated by the number of access points offering financial services such as suckingashelf ,AndOutlets branches, grating machinesaautomated p, Andbank agents (2018:9,Gameto),The recent banking developmentseThrough the mobile phone and the use of financial services via the InternetI openednew channelsTo submit afinancial services, viatechnology thatadoptedexceed accessfor services (2014:10camara,)

B. Use of financial servicesusage of financial services

is useactualFor financial products and services for example, favor campaignspromotionalWhich aims to increase the number of accountsespeciallyif it wasT thatAccounts are rarely used or never used, and determining the extent to which financial services are used requires data collectionand statisticsabout the regularityand continuing Use of financial servicesover a certain period of time, Divide this indicator intogroups:(67:2011, Kunt & Klapper)

➤ The first group of indications for use

focusedthe groupThe firstOn the ownership and use of accounts in official financial institutions and if the possessionOfficial accountFor individualsIt is considereda pointtheEntry into the Russian financial sectorMj,It facilitates thistheaccountatwage transfer process,and transfers,and government payments,and encourage official saving,and open access to credit.

➤ The second group of indications for use:

Group focusedthe secondon the behavior of individuals towardstheir savingsWhich allows them to facilitate the process of consumption and investmentto help them outLearning by doing business, mitigating uncertainty and reducing riskto which they may be exposedSavings accounts are the most objectiveAnd safer for people.

➤ The third group of indications for use:

focusedthe groupThirdOn the credit side,And the extent to which adults or small and medium companies need toloansshort term, which it providesfinancial institutionsofficial rather than resorting to unofficial sources,It is obtained easily and without complication,BReliance on a credit card,

C. quality of financial servicesthe quality of the products and the service delivery):

shefinancial services capacityAndproducts to meetneeds and desires customers with high quality,The process of developing indicators to measure dimensionsQuality of servicesIt is a challenge in and of itself, due to the fact that it is after qualityMAnd for financial is not Clear and direct, as it is hereKMAny factors affect the quality and quality of financial services such as(service cost,consciousnessthe customereffectiveness of the compensation mechanism, AndConsumer protection services,and financial guarantees,transparent competition in the market,AndAlso, intangible factors such as consumer confidence)(4: 2013,Alliance, for financial inclusion).

Second: banking liquidity

1. Conceptdegree of liquidity:Liquidity position

PrepareLiquidity in the bank is one of the most important indicators that customers rely on when comparing between banksdrains, where it represents Liquidity is the most important means of protecting the bank from risksnonHis ability to face commitments that characterize Pay immediately, and the advantage of thedrainsThis property without other institutions because they can not postpone the disbursementsK drawee, or defer the payment of a deposit due, and it cannot ask debtors to pay what they owe. Loans and financing did notTIn addition, it is difficult to predict the volume and timing of funds movement from And to the bank, which is a great difficulty in front oftheadministration Liquidity can be defined in general termsBthat it(The ability to convert assets into cash quickly and without realization

Loss)The liquidity in the bank can be definedBthat it(The bank's ability to meet depositors' withdrawals And meet the needs of financiers in a timely manner and without having to sell securities at great losses or borrow with high interest). Liquidity in any bank is determined by the following factors:

- A. The size and sources of liquid fundsor semi-liquidAvailable to meet the bank's daily obligations.
- B. Mada mwaMatching the maturity dates of assets and liabilities.
- C. The volatility of deposits and demand for loans.
- D. quantitativeHMoney billsretainedAnd it affectedinportfolio return.
- E. The extent of reliance on interbank lending to meet liquidity needs.
- F. thebittersuitthat he is going througheconomics fFor exampleIf it is deflation, it is preferable to maintain a high degree of liquidity For fear of not being able to pay customersfor obligationthey. (Bu Raqba, 2009: 9)

2. Indicators of the degree of liquidity in the Iraqi banking sector

ond assessment of bank liquidity we must take bconsiderationConsider the current level of liquidity and the future need forHaDue to financing needs,As well as the level of liquidity management at the bank compared to the size and degree of complexityits operationsand volumeand typeRisksto which it is exposed. (Shaheen2005:21-31) Andcan measurelevelliquidity according toseveral The most important proportions (Aof liquid assets to short-term liabilities , liquid assets to total deposits,liquid assets to total assets,Cash credit to deposit(Central Bank of Iraq, Financial Stability Report, 2016: 61) The following is a review of these indicators in the Iraqi banking system during the study period:

A. Liquid assets / short-term liabilities :reached rateliquid assets to short-term liabilities (current and current deposits) to the banking systemIraqiin general in 2016 (324.7%) and in 2017 (214.1%) and in 2018 (102.2%) and in2019 (96.06%)And in 2020(82.70%)And in 2021 (92.15%), despite the decline in this percentageHowever, this does not represent a threat to financial stabilityfor the banking system (Central Bank of Iraq, Financial Stability Reports, 2016-2021: 68).

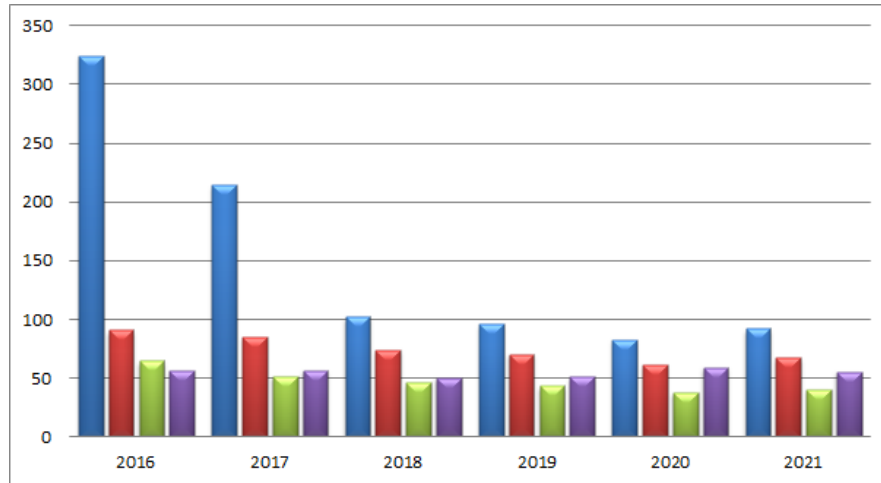
B. Liquid Assets / Total Deposits:One of the important indicators used to measure banking liquidity is the liquid assets ratioto the totalDeposits (Abdul Rahim, 2008:256) beingHa contains assets that generate profit (investments), meaning thataachieve a goaljLiquidity and profitability of the bank at the same time. This percentage indicates the extent of the bank's ability to face depositors' withdrawals.(Berto, 2009:58)whatExpress an amountshouldThe bank maintains it from liquid assets that include (cash at the Central Bank As well as cash on hand and other liquid balancesZ) and the extent of its investment in granting thecreditof various kinds,The banking system has registeredIraqiIn general, the ratios reachedin 2016 (90.6%)(In 2017 (85.42%), in 2018 (73.73%) and in 2019(%70.10)And in 2020(%61.73)in 2021 (67.41%)that isHfromexcludedTo be exposed to liquidity risks in the short term, however, maintaining this high percentage negatively affects the return and profitability of banks, as the liquidity goal conflicts with the profitability goal.AndIt's not hiringsurplusLiquid money in investments can be generatedReturning (Central Bank of Iraq, Financial Stability Reports, 2016-2021: 32-69).

C. For liquid assets/total assets :This ratio shows the extent to which the bank maintains fully liquid assets to meet depositors' withdrawals relative to the total assets of the banking system in general.She wasThe ratioin 2016 (64.5%) In 2017 (51.5%), in 2018 (46.1%) and in 2019(43.25%)Andin 2020 (37.86%)And in 2021 (40.61%)Although it is low, it is a high percentage, and this reflects the hedging trendjto the banking system.

D. Cash Credit/Deposit

The ratio of cash credit to deposits with the banking system was recorded In general, 2016 to reach (59.5%) and in 2017 (56.6%) in a year 2018 (50%) and in 2019 (51.20%) And in general 2020 (58.72%) and in 2021 (55.1%) and that This ratio falls Within the standard percentage specified by the Central Bank of Iraq, which should not exceed (7%) (0), and Figure (1) shows the liquidity of the Iraqi banking system during the study period.

Figure (1) Liquidity ratios of the Iraqi banking system from 2016 to 2021



Source // Prepared by the researcher based on
(Central Bank of Iraq, Financial Stability Reports, 2016-2021: 33-70)

The third topic: analysis of the effect between financial inclusion and liquidity quality

First: an overview of Al Khaleej Commercial Bank

Khaleeji Commercial Bank was established as a private joint stock company, according to the numbered certificate of incorporation (M / Sh / 7002) in (10/20/1999) And issued by the Companies Registration Department, in accordance with Companies Law No. (21) of 1997, as amended, with a capital of (600) million dinars. It was paid in full and the bank commenced its business in the main branch on (4/1/2000) After obtaining a license to practice banking issued by the Central Bank of Iraq, and numbered (P. 115/3/9/1) in (2000/2/7) In accordance with the provisions of the Central Bank Law No. (64) for the year 1976 prevailing at that time, for the bank to practice comprehensive banking business, and the articles of incorporation were amended by increasing its capital until it reached (300) billion Iraqi dinars on (2014/11/7) (Gulf Bank Annual Report 2021: 21)

1- Access level index for financial services

A. Prevalence and Density Banking Index

Table (1) Banking Prevalence and Density Index for Khaleeji Commercial Bank

Banking Spread	Banking Density	Number of Branches	Population (Thousands of People)	The Year
0.07	1,446,765	25	36,169,123	2016
0.05	1,856,976	20	37,139,519	2017
0.05	1,815,437	21	38,124,182	2018
0.05	2,059,363	19	39,127,900	2019
0.04	2,230,565	18	40,150,174	2020
0.04	2,288,369	18	41,190,658	2021

Second: - Reviewing the financial inclusion data of Khaleej Commercial Bank

Prepared by the researcher based on the annual reports of the Khaleeji Commercial Bank (2016-2021) and the data of the Ministry of Planning and the Central Statistical Organization.

Through table (1) above, it was shown that the number of bank branches in 2021 was (18) branches, which means that (2,288,369) A person of the population gets a branch, and the banking prevalence rate is 0.04 in 2021, while in 2016 it was 0.07, and this is due to the decrease in the number of bank branches spread in Iraq, which requires the bank to study the reason for the decrease in the number of its branches.

B. Prevalence of electronic payment services index (ATM,POS,POC) per 100,000 inhabitants and per 1,000 km

Table (2) Index of prevalence of electronic payment services for Khaleej Commercial Bank

The number of electronic payment devices for every 1000 km	The number of electronic payment devices per 100,000 people	number of devices	the year
0.004	0.005	2	2016
0.02	0.02	9	2017
0.03	0.03	13	2018
0.03	0.03	14	2019
0.09	0.1	39	2020
0.1	0.1	56	2021

Prepared by the researcher based on the annual reports of Khaleeji Commercial Bank (2016-2021)

Table (2) above shows that the number of electronic payment devices is on the rise, reaching 2 devices in 2016 to reach 56 devices, various among(ATM, POS, POC)Dividing the number of devices by 100,000 people, we get 0.1. The same applies to the number of devices per 1,000 km. This is a positive year, but it is still not at the level required to enhance inclusion.

2- Banking services usage index

A. IndicatorUse theMobile services

B. banking depth index

- The ratio of bank deposits to the total private sector deposits
- The ratio of the credit granted to the bank to the total credit of the private sector

Table (3) Indicator of using banking services for Al Khaleej Commercial Bank

The ratio of the credit granted by the bank to the total credit of the private sector	The ratio of bank deposits to the total private sector deposits	Number of services per 100,000 adults	The number of mobile services	the year
0.004	0.02	-	-	2016
0.003	0.01	-	-	2017
0.002	0.008	0.02	4	2018
0.002	0.006	0.05	13	2019
0.001	0.005	0.08	20	2020
0.001	0.004	0.1	29	2021

Prepared by the researcher based on the annual reports of Khaleeji Commercial Bank (2016-2021)

from the table(3)The above shows that there were no services provided via mobile phone in 2016 and 2017, and that the number of services providedUntil 2021 (29) services, which is a numberVery little compared to the level of technological developmentAnd that the ratio of bank deposits to total private sector deposits was 0.02 in 2016, to decrease to 0.004 in 2021. Likewise, the ratio of credit granted to total credit granted by the private sector in 2016 amounted to 0.04, while in 2021 it decreased to 0.001, which indicates a decrease in the level of deposits and credit granted by the bank.

1- Review of the liquidity quality of the Khaleeji Commercial Bank

Table (4) Liquidity quality indicators for Khaleej Commercial Bank

Cash credit/deposits	Liquid assets/total assets	Liquid Assets / Total Deposits	Liquid assets / short-term liabilities	the year
0.7	0.4	0.7	0.7	2016
0.8	0.4	0.9	0.8	2017
0.7	0.3	0.9	0.8	2018
0.7	0.5	1.3	1.2	2019
0.7	0.4	1.3	1.3	2020
0.5	0.5	1.3	1.3	2021

Prepared by the researcher based on the annual reports of Khaleeji Commercial Bank (2016-2021)

It is clear schedule(4)Above is liquidity quality through indicatorse four shows usThe ratio of liquid assets to short-term liabilities is on the rise, soIt reached 0.7 in 2016 to reach 1.3 in 2021. The same applies to total liquid assets to total deposits., soIt reached 0.7 in 2016, reaching 1.3 in 2021, and the liquid assets index to total assets reached 0.4 in 2016, reaching 0.5 in 2021, which is a high percentage.,However, with a slight increase during the study period, as for the cash credit to deposits index, it recorded a decrease, reaching 0.7 in 2016, to decrease to 0.5 in 2021.

Third: Test hypotheses of influence between study variables

Schedule (5)Symbols and semantics of variables

Code	Variants	Indication
x2	banking spread	Independent variables / financial inclusion
x3	The number of electronic payment devices per 100,000 people	
x4	The number of electronic payment devices for every 1000 km	
x5	The ratio of bank deposits to the total private sector deposits	
x6	The ratio of the credit granted to the bank to the total credit of the private sector	
y1	Liquidity quality	variable affiliate

Fourthly:Estimating the effect of financial inclusion on the quality of moneyjOr using tablet data

1. The results of estimating the general model

Table Shows (6) results of estimating the general modelfor a traceFinancial inclusion on the quality of the spool inbankResearch sample and asCome:

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Schedule (6) results of estimating the general model for a trace Financial inclusion depends on the quality of liquidity

Dependent Variable: Y2
Method: Panel EGLS (Period SUR)
Date: 07/06/23 Time: 14:01
Sample: 2016 2021
Periods included: 6
Cross-sections included: 6
Total panel (balanced) observations: 36
Linear estimation after one-step weighting matrix
White diagonal standard errors & covariance (d.f. corrected)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.031543	0.057972	52.29337	0.0000
X2	-25.06499	2.267960	-11.05178	0.0000
X3	-9.082028	1.017025	-8.929993	0.0000
X4	10.18910	1.154807	8.823207	0.0000
X5	20.15064	4.689415	4.297048	0.0002
X6	-362.9494	28.62917	-12.67761	0.0000
Weighted Statistics				
R-squared	0.965255	Mean dependent var	-1.388314	
Adjusted R-squared	0.959464	S.D. dependent var	11.44635	
S.E. of regression	0.983037	Sum squared resid	28.99088	
F-statistic	166.6856	Durbin-Watson stat	2.014362	
Prob(F-statistic)	0.000000			
Unweighted Statistics				
R-squared	0.562550	Mean dependent var	1.441667	
Sum squared resid	13.10055	Durbin-Watson stat	0.966823	

Source: From the researcher's work based on the outputs of the program Reviews version 13

From the results of the table we find the following:

1. Increasing the banking spread by one leads to a decrease in the quality of the bankjWala in bankThe research sample has an amount of (25.0), and this negative effect is statistically significant at a level less than (0.01).
2. Increasing the number of electronic payment devices per 100,000 people by one leads to a decrease in the quality of the paymentjWala in the research sample bank by (9.0), and this reverse effect is statistically significant at a level less than (0.01).
3. Increasing the number of electronic payment devices per 1000 km by one leads to the quality of the carjWala in the research sample bank by (10.1), and this direct effect is statistically significant at a level less than (0.01).
4. Increasing the ratio of bank deposits to total private sector deposits by one leads to a decrease in the quality of the assetjWala in the research sample bank by (20.1), and this direct effect is statistically significant at a level less than (0.01).
5. Increasing the ratio of credit granted to the bank to the total credit of the private sector by one leads to a decrease in the quality of the creditjWala in the research sample banks by (362.9), and this reverse effect is statistically significant at a level less than (0.01).
6. The corrected coefficient of determination shows that the independent variables explained 95% of the changes that occurred in the dependent variable (Quality of SjWala) as this the influence morale according to the testF and at a significant level less than (0.01)

Second: the results of estimating the fixed effects model

Table Shows (7) Results of estimation of the fixed effects model for a trace Financial inclusion on the quality of SjWala In the research sample bank and as Come:

Schedule (7) Results of estimation of the fixed effects model for a trace Financial inclusion on the quality of SjWala

Dependent Variable: Y2
Method: Panel Least Squares
Date: 07/06/23 Time: 14:02
Sample: 2016 2021
Periods included: 6
Cross-sections included: 6
Total panel (balanced) observations: 36
White diagonal standard errors & covariance (d.f. corrected)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.690727	0.453496	5.933302	0.0000
X2	-28.56651	10.32848	-2.765801	0.0105
X3	-8.884678	4.299930	-2.066238	0.0493
X4	18.11264	6.797040	2.664784	0.0133
X5	25.89689	26.19099	0.988771	0.3322
X6	-354.2933	74.94855	-4.727154	0.0001

Effects Specification

Period fixed (dummy variables)			
R-squared	0.635696	Mean dependent var	1.441667
Adjusted R-squared	0.489974	S.D. dependent var	0.925010
S.E. of regression	0.660606	Akaike info criterion	2.255150
Sum squared resid	10.91001	Schwarz criterion	2.739003
Log likelihood	-29.59269	Hannan-Quinn criter.	2.424027
F-statistic	4.362393	Durbin-Watson stat	0.994105
Prob(F-statistic)	0.001339		

Source: From the researcher's work based on the outputs of the program Reviews version 13

From the results of the table we find the following:

- Increasing the banking spread by one leads to a decrease in the quality of the bankjWala In the research sample bank by (28.5), and this reverse effect is statistically significant at a level less than (0.05).
- Increasing the number of electronic payment devices per 100,000 people by one leads to a decrease in the quality of the paymentjWalain the research sample bank by (8.8), and this reverse effect is statistically significant at a level less than (0.05).
- Increasing the number of electronic payment devices per 1000 km by one leads to the quality of the carjWalain the research sample bank by (18.1), and this direct effect is statistically significant at a level less than (0.05).
- Increasing the ratio of bank deposits to the total private sector deposits by one leads to an increase in the quality of the bankjWala In the research sample bank by (25.8), and this direct effect is statistically insignificant at a level greater than (0.05).
- Increasing the ratio of credit granted to the bank to the total credit of the private sector by one leads to a decrease in the quality of the creditjWala In the research sample bank by (354.2), and this reverse effect is statistically significant at a level less than (0.01).
- The corrected coefficient of determination shows that the independent variables explained 48% of the changes in the dependent variable (Quality of SjWala) as this the influence morale according to the test F and at a significant level less than (0.01)

Second: the comparison between the general model and the fixed or random effects model

Schedule (8) a testF The comparison between the general model and the fixed or random effects model

Redundant Fixed Effects Tests
Equation: Untitled
Test period fixed effects

Effects Test	Statistic	d.f.	Prob.
Period F	0.737476	(5,25)	0.6025
Period Chi-square	4.952932	5	0.4217

Source: From the researcher's work based on the outputs of the programReviews version 13

According to test resultsF For comparison, he should adopt the results of the general model, which is preferredBecause hea testF is not significant at a greater level (0.05).

Conclusions

1. Financial inclusion is an important necessity to achieve banking stability, as there is a large percentage of individuals who do not deal with banks or do not have bank accounts, and if they do, they are simple and limited..
2. Financial inclusion contributes to advancing economic and social development through positive communication between customers and banks in a balanced relationship that yields fruits for all parties and in a way that helps launch productive financial and economic dynamics..
3. The novelty of creating a comprehensive database on the work of the banking sector and a slow time until the base is completed, which means a previous absence of supervision and evaluation of the level of achievement and progress of the work of the Iraqi banking sector, and care in making organizational changes that precede the development of the strategy in implementing banking reform programs.
4. In general, the indicator of banking prevalence, which is one of the indicators of financial inclusion in the Iraqi banks, the research sample, is still weak because of the weak prevalenceThis is amazingBanks and poor public dealings with it, whichreflected negatively onbanking prevalence indexAndLiquidity quality.
5. that increaseThe number of electronic payment devicesper 100,000 inhabitants adversely affectliquidity quality index,The reason for this is due toThe spread of electronic payment devicesjIncrease bank profitsa result toIncreasing commissions for conducting cash operations,It also leads tomorefixed assets andCustomer deposits and receivables disbursement operationsWhat causesLow liquidity ratiosThis is amazingsinksAnd the increase in the required capital as a result of the increase in the number of electronic payment devices.
6. The results showed that the indicator of the ratio of bank deposits to the total private sector depositsimpactPositive on the quality of liquidity, and this is compatible with the logic of financial and economic analysis, which means that inclusion contributes to supportliquidity for banksown.
7. In general, the results showed that there is a negative impact of the indicator of the ratio of credit granted to the bank to the total credit of the private sector on IndicatorLiquidity quality It can be explained that the credit granted to the private sector is limited due to the reluctance of some individuals to borrow from private banks for religious reasons, as well as because of the risks that the banking sector suffers from, the lack of credit inquiry companies, and the high interest rates..

Recommendations

1. Providing effective technology infrastructure that is consistent with the requirements of financial inclusion, along with providing a solid database that is characterized by accuracy and clarity in its indicators data, in cooperation with the concerned authorities and communication companies, and urging the expansion of the Internet to all regions in Iraq, as it is the direct means to use mobile services. And a means of disseminating financial culture, promoting banking services, and strengthening and documenting the relationship and confidence in the banking sector
2. Adoption of the banking sector awareness and media strategy to reset the confidence of individuals and institutions in it, in a way that leads to attracting hoarded funds and employing them within the economic activity, and involving them in the economic cycle to achieve economic and financial growth and stability at a measured pace..
3. Gradually expanding the implementation of work requirements with financial inclusion in a manner consistent with the potential performance, morale, efficiency and effectiveness by all institutions in a manner aimed at restoring confidence in it in general and in the Iraqi banking sector in particular..
4. Making the most of financial inclusion indicators in following up the process of monitoring, progress, expansion and depth in the provision of financial services, as well as diagnosing defects and weaknesses in the functioning of the banking sector (governmental and private), which is at the same time a database for the work of the banking sector to take appropriate measures to avoid widening the confidence gap in the banking sector.
5. Work to reopen the branches that were closed again because of their great impact in enhancing financial inclusion by raising the index of access to financial services and delivering financial services to the largest number of financially excluded society groups or those who live far from the city center.
6. Addressing the bank's repeated losses and finding out the main reason that led to their occurrence and entering into profitable and more serious investments, since the bank's repeated losses would weaken customers' confidence in it and their reluctance to deal and use its services.
7. Expanding the activity and business of banks in granting credit, entering into profitable investments, using liquid assets, and raising the rate of cash credit and transgression, since its percentage is low, and this indicates not entering into more serious investments and relying on entering the currency auction to achieve profits whose profits are high and its risks few.

Source list

1. Abu Jameh, Nasim Hassan and Abu Dayyah, Majed Mahmoud, The Role of Financial Inclusion in Stimulating the Palestinian Economy, Al-Hikma Journal of Economic Studies, Issue 7, 2016.
2. Iskandar, Zahraa Jarallah Hamo, The Role of Financial Technology in Enhancing the Effectiveness of Financial Inclusion, Journal of Management and Economics, Volume: 9, Issue 33, 2020.
3. Berto, Fadia Jassim Makki, Evaluation of Banking Investments and Their Risks Using Financial Ratios by Application to a Sample of Iraqi Banks, Unpublished Master's Thesis in Accounting, University of Baghdad, 2009.
4. Ben Qida, Marwan and Bouafia, Rashid, Reality and Prospects for Enhancing Financial Inclusion in the Arab Countries, Journal of Economics and Human Development, Volume 9, Issue 1, 2018.
5. Central Bank of Iraq, reports annual H for financial stability For the years 2016-2021.

6. Bo Raqba, Shawqi, methodCAMELS in Evaluating the Performance of Islamic Banks, King Abdulaziz University, Jeddah, Saudi Arabia, 2009.
7. Gulf Bank Annual Report,for the years 2016-2021
8. Hamdan, Bader Shehdeh and Abu Dayyeh, Majed, The Social and Professional Impact on Economic Development in Palestine, Journal of Economy and Finance (JEF), Volume 4, Number 2, 2018.
9. Khalil, Ahmed Fouad, Mechanisms of Financial Inclusion towards Access to Financial Services, Journal of Banking and Financial Studies, twenty-third year, third issue, a periodical magazine issued by the Arab Academy for Banking and Financial Sciences, Banking and Financial Research Center, 2015.
10. Al-Duraie, Saud Aziz Daish, The Role of Stability and Inclusion in Achieving Sustainable Economic Development, Master Thesis, College of Administration and Economics, Wasit University, 2018.
11. Saadane, Asia and Mahajibeh, Nassira, The Reality of Financial Inclusion in the Maghreb - A Comparative Study, Algeria, Tunisia, Morocco, Studies and Research, Arab Journal of Humanities and Social Sciences, Volume 10, Number 3, 2018.
12. Shaheen Ali Abdullah, The Impact of Applying the American Banking Rating System (CAMELS) to Support the Effectiveness of the Inspection System for Commercial Banks: A Case Study on Bank of Palestine Limited, Journal of Commercial Studies and Research, Issue 1, 2005.
13. Al-Shammari, Ihsan Sadiq Rashid, The Impact of Adopting the Financial Inclusion Strategy in Enhancing the Competitive Advantage of Banks, Master Thesis submitted to the Council of the Faculty of Economics and Business Administration, Islamic University of Lebanon, 2017.
14. Al-Tayeb, Hanan, Financial Inclusion, a series of introductory booklets, Arab Monetary Fund, Abu Dhabi, United Arab Emirates, Issue 1, 2020.
15. Abdel Rahim, Atef Ibrahim Taha, Banking Organization and Management: A Descriptive Analytical Approach, University House, Alexandria, 2008.
16. Al-Obeidi, Zina Sami Mohieddin Yahya, Financial Inclusion and its Effectiveness in Mobilizing Liquidity for the Banking Sector in Iraq for the Period (2004-2016), Master Thesis, College of Administration and Economics, Iraqi University, 2018.
17. Anani, Jawad and Fariz, Ziyad, the importance of financial inclusion for young people in achieving social stability, Al-Ghad Al-Urduni, October 19, 2016.
18. Institute of Banking Studies, Financial and Banking Highlights, Awareness Bulletin, Eighth Series, Issue 7, Kuwait, 2016.
19. Alliance for financial inclusion,AFI,Measuring financial inclusion: a core group of financial indicators,Malaysia: AFI,2013.
20. Camara,Noelia & Tuesta. David. Measuring Financial Inclusion: A Multidimensional Index. Working Paper. N° 14/26 Madrid,September 2014.
21. FATF/OECD,Anti-money laundering and terrorist financing measures and financial inclusion,2013.
22. Gameto Susana (Financial inclusion in Africa),Master's in Finance,Católica Lisbon School of Business and Economics,2018.
23. Kunt Asli Demirguc & Klapper Leora World Bank "Measuring Financial Inclusion Explaining Variation Across and Within Countries. Working paper 2011.

24. Ozili, Peterson Kitakogelo (2018), Impact of digital finance on financial inclusion and stability, Munich Personal Repec Archive (MPRA), University of Essex, Online at <https://www.cgap.org/blog/10-useful-data-sources-measuring-financial-inclusion>. (Accessed January 13, 2021).
25. World Bank (2014), Digital finance: Empowering the poor via new technologies, April 10, Available, at: <http://www.worldbank.org/en/news/feature/2014/04/10/digital-finance-empowering-poor-new-technologies>, Accessed January 25, 2021.
26. World Bank FATF Guidance Anti-money laundering and terrorist financing measures and Financial Inclusion France 2011.