

THE IMPACT OF THE QUALITY OF ELECTRONIC SERVICES IN ENHANCING THE EFFICIENCY OF BANKING PERFORMANCE IN IRAQ, A CASE STUDY OF THE BANK OF BAGHDAD FOR THE PERIOD (2008-2020)

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Abstract

This study aims to identify the impact of electronic services in enhancing the efficiency of banking performance in Iraq in the research sample (Bank of Baghdad), in addition to knowing the difference in evaluating each of the electronic services represented by its indicators (ATM, Visa Card, MasterCard), as well as The banking performance represented in its indicators that it adopted (liquidity indicators, which include the cash balance ratio, employment ratio, legal liquidity ratio, and profitability indicators, which include, the rate of return on total assets, the rate of return on equity, the ratio of net interest margin) through the use of optimization resources and access to the highest return at the lowest risk and at the lowest cost

Research Objective

1. Clarify the impact and effectiveness of electronic services on the banking system
2. Determining the infrastructure elements necessary to develop the work of electronic services in Iraq

Introduction

The world is experiencing a wave of changes and scientific discoveries in the field of informatics that hastened the change of administrative methods and traditional structures with the invention of electronic computers and the Internet, which generated a society based on digital technology. There is a clear reflection on all political, economic and social fields, which complicates these sectors, the most important of which are electronic commerce and electronic banking services, Development Banks are racing to find better service customers and customer loyalty to the bank is the most important element, so they must find the best way to attract customers, electronic banking services provide great convenience, whether it is through the Internet or other electronic delivery methods, it brings benefits to customers in terms of ease of transaction and cost because Electronic finance has become one of the most important technological changes in the financial industry. Significant changes have taken place in the financial banking services industry. Great progress has been made in information and communication technology, innovation in banking and commercial work, and technology has improved products and services, starting with the multifunctionality of ATMs and electronic money transfers. to remote banking services. The Internet plays a vital role in providing services through new distribution channels. In the age of the Internet, researchers and practitioners in the financial and banking industries have shown that banks need to expand service delivery

channels and embrace electronic banking services.

Research Importance

The importance of the research is highlighted by knowing and measuring the impact of the quality of electronic services and technological progress in enhancing and raising the level of Iraqi economic activity through the electronic services it provides to raise the efficiency of banking financial performance.

Research problem

1. What is the electronic service that is most closely linked and influential with the financial performance indicators of the banking system?
2. Are the banking services provided by the bank compatible with the reality of economic life and the technological development of the banking industry?

Research Hypothesis

1. There is a positive impact of the quality of electronic banking services in enhancing the efficiency of banking performance.
2. There is a statistical relationship between the indicators of electronic services and the indicators of banking performance

Research scope

1. The spatial boundaries of Iraq (Bank of Baghdad)
2. Time Limits (2008-2020)

Theoretical aspect

A theoretical review of the relationship between the quality of electronic services and the efficiency of banking performance

The modern technological revolution has put banks in general to develop their services by using information systems and networks and storing information for use when needed easily, as digital communication networks enable the beneficiary to have direct access to various information sources with the ability to browse their contents at the same time and search for them easily, by contacting data banks. Connected to direct search around the world, which allows direct access to digital markets and electronic banks and the completion of all transactions without moving from one place, which reduces time, effort and cost. Leads to tangible results (1), that the adoption of the banking management philosophy of quality management and its application helps to raise the level of banking performance through the successful implementation of quality management and is represented in raising the quality of service provided in the bank to satisfy its customers and achieve profitability for them, and that the use of quality management contributes to reducing costs And providing the service significantly as a result of the few errors and the low probability of re-application The service is second to the customer, and through banking performance, quality is emphasized and

managed, which in turn leads to increasing the market share and achieving the best service performance by maintaining its status and increasing customer gain. Focusing on the best services and reducing costs directs the path towards improving banking performance. The tangibility of the service makes controlling its quality more difficult than controlling the quality of the commodity. In the service, skill, professional craftsmanship and efficiency are sold and marketed, and all of these are intangible when presented to the customer, affected by lack of training, fatigue, worker boredom and his inability to understand the customer's needs

And since the service cannot be replaced or repaired (1), and all of this certainly does not mean that there is nothing that can be done in the field of service quality in general and the quality of electronic services in particular, as it depends primarily on the technological elements in providing them.

Paying attention to the quality of electronic banking services achieves many benefits for banks, the most important of which is enhancing customer loyalty through achieving satisfaction, which leads to attracting new customers to the side of existing customers, which increases the quality of electronic banking services. D from the global banking business, and saves costs as a result of obtaining the right things and business at the right time, and on the other hand increasing the possibility of providing additional benefits for financial services resulting from increasing sales opportunities, merging and unifying comprehensive banks and knowledge related to banking services and their management and ways to improve their quality through globalization And enabling employees to identify customers' needs and provide appropriate services that meet these needs. The distinguished quality of banking services enhances the reputation of the bank, reduces costs, and enhances customer loyalty, which leads to an increase in market share, profitability and liquidity in banking business.

The analytical aspect

First // Analysis of the electronic services of the Bank of Baghdad for the period (2008-2020)

A brief history of the Bank of Baghdad

In response to the requirements of the national economy and a contribution to raising the rates of economic growth in Iraq and activating the fields of trade, investment and savings, the Bank of Baghdad was established with its 36 branches, and it is one of the important and private commercial banks in Iraq. The bank was established as a joint stock company with a nominal capital of (100) million Iraqi dinars under Certificate of Incorporation on 18-2-1992, and it is the first Iraqi private bank that allowed the amendment of the Central Bank of Iraq Law No. (12 of 1991) to establish it. 25) The bank amended its founding contract by practicing comprehensive banking, and this modification took place on 25-9-1998, based on the decision of the General Assembly.

Munir Al-Janabi, Mamdouh Al-Janabi, Electronic Banks, Dar Al-Fikr Al-Jamii, Alexandria, first edition, 2005, p. 19.

Receiving incoming foreign remittances in foreign currency and issuing remittances abroad in

accordance with Central Bank controls and money laundering instructions, in addition to other routine operations such as (opening current accounts, savings accounts, fixed deposits, giving loans and advances) and in (2008) introduced the service of issuing ATM cards (Electronic services), including the Visa Card service, which contains a magnetic strip that helps to accept the card in the market, and the holder can shop online (1). And the Automated Teller Machine Service (ATM Machines) and the Online Bank Service (Internet Bank), which provides banking services to customers via the Internet, as well as the (Qi-Card) service, which began in 2013, where it pays salaries to employees and retirees The state

The services provided by the bank

The great expansion of electronic services, linking branches with the Banks system, and providing service to customers through the operations of opposite branches allowed the bank to provide a variety of banking services, fast and accurate, as the bank provides the following services (2)

Automated teller machine (ATM) service The automated teller service is one of the services that distinguishes the Bank of Baghdad and is available in most of the bank's branches in addition to marketing centers and other facilities, as there are (45) ATMs spread in Baghdad and the Iraqi governorates. (51) outlets in (2019), bringing the number of ATMs in (2020) to (68) outlets, which in turn provide distinguished services to the bank's customers and to customers affiliated to other banks, where this service supports (Visa, Visa Electron, Plus, Master Card Maestro, Cirrus) and through it the customer can find out (account statement, balance request, cash withdrawal). Through the above table, we notice a discrepancy in the number of ATMs, which is constantly rising, as a result of the services it provides and the completion of work quickly, as the number of ATMs has reached The automated teller machine in (2008) (12) ATMs and it rose to (19) machines in (2009) and the rate of (2%) as a result of the spread of banking awareness among customers and their awareness of the importance of these devices in terms of completing banking operations as soon as possible as well as reducing costs that the customer bears compared to his going To the same bank (3) as it continued to rise from (9%) and (10%) to (11%), (11%) and (13%) respectively during the years (2016), (2017) and (2018). And (2019) and (2020) the expansion of the spread of devices increased from (73) thousand to (80), (89), (92) to (109) thousand devices, and through these figures, the extent of expansion and development of banking awareness among customers, and the rate reached The compound annual growth significant percentage (20.18) to indicate the trend of this percentage towards increase in recent years.

Visa Card (B: Issued by the international Visa company, and this card is a renewable card, and its holder can pay all obligations of the card during the grace period (3), and the Visa card is the most widespread ever, and the number of its holder in the millions, it deals with millions of establishments, shops and ATMs The Visa card, provided by the Bank of Baghdad, allows its holder to access his bank account 24 hours a day and anywhere in the world.

1. Khaled Mamdouh Ibrahim, The Art of Criminal Investigation in Electronic Crimes, Dar al-Fikr al-Jamii, Alexandria, 1, 2009, p. 263.

2. Hug, Z, & Martin, Workorce Cultural Factors in TQM/CQI Implementation in Hospital, Health Care Management Review, 2000, vol.23, p103

Annual Economic Reports of the Bank of Baghdad, 2017, 2020 p. 11, p. 13

Master Card (C)

This card comes in second place after the Visa Card in terms of its prevalence, and it also deals with millions of establishments and shops, and this card is also renewable, like the Visa Card. From table No. (2) we notice a discrepancy between the height And the decline in both cards, as the number of cards distributed to Visa Card during the year (2008) amounted to (42) thousand cards, with a percentage of (4%) while the number of cards distributed to MasterCard reached (16) thousand cards with a percentage of importance (2%), but during the recent years From the research period, we notice a return to the increase in the number of cards distributed to both types, as the Visa Cards increased from (83) thousand to (90), (97) thousand cards, respectively, compared to the increase in the number of MasterCard cards from (103) thousand to (106), (110) thousand cards during the years (2017), (2018) and (2019), respectively, as a result of the accuracy and speed that the customer obtains in exchange for using this type of cards, and also as a result of the continuous work to develop good electronic services that help these services improve performance and quality for customers, and reduce liquidity risks, market and operational risks and credit risks, which are among the most important The risks that the counterparty may be exposed to in its financial transactions in fulfilling its obligations in addition to the fact that the reason could be the increase in the cash cost in Iraq in response to the increase in public spending and the overall supply. The result was an increase in the number of MasterCard cards, as for the compound annual growth rate It reached a significant statistic for Visa Card (7.22) and for Master Card (17.42) to indicate the trend of increasing this percentage during recent years.

Second // Analysis of the performance of the banking system for the period (2008-2020)

Banking developments of the bank

The Bank of Baghdad has evolved from a local bank to a global bank all the time, and it continues to grow, and with its good performance, through the turmoil in the financial and global markets, and the local instability affecting the Iraqi economy, and a large part of the success of trade has been achieved through industrial reinforcements and this work. Effective strategic communication, building Iraq by taking advantage of the opportunities available in joint projects, and building infrastructure. Information technology and automation are among the technological means adopted by the Bank of Baghdad. Among these measures are as follows: Providing liquidity in order to support the liquidity of the Iraqi banking system, by redefining the mandatory reserve ratios, and the mandatory reserve ratio on commercial bank deposits is (15%), which is imposed on total deposits that may be in dinars or dollars as it was decided The release of a percentage (5%) of it to banks facing the problem of liquidity, for the two reasons:

- A. For the purpose of countering the withdrawals of its customers

B. To increase the liquidity of the Bank of Baghdad and transfer small and medium enterprises

Analysis of liquidity indicators: Liquidity is one of the criteria for banking supervision (Basel, 1, 2, ---) as well as the Central Bank of Iraq and it is important for the operational operations of the bank, but it has become necessary to develop comprehensive and defensive contemporary strategies to help the bank in continuing operations with ease and efficiency (1), and the most important ratios of liquidity to assess the banking performance to analyze the liquidity of the bank are as follows:

Cash Balance Ratio

This ratio expresses the relationship between the amounts that the bank keeps in the fund and with the Central Bank, customer deposits and any other liabilities owed by the bank. The high volume of liquidity at the bank means lower profitability, as banks try to increase the liquidity ratio to increase their ability to face customers' withdrawals and also in order to avoid investment risks and wait for a better opportunity to achieve profit on the one hand and increase the bank's ability to invest on the other hand, while a decrease in this leads to a decrease in the cash balance in the fund and an increase in liquid obligations. The Central Bank has set the standard ratio for this indicator (30%). It is calculated according to the following equation:

(Cash Assets)/(Just as Deposits Total) = Cash Balance Ratio

Abdullah Shaheen, Electronic payment systems and their risks and means of controlling them, 2010, Al-Azhar University Journal, Human Sciences Series, Gaza, Vol. 12, No. (1), p. 519.

Through table (3), we notice a discrepancy in the ratios between rise and fall from one year to another, as in (2008) the percentage amounted to the cash balance (29%), and in (2009) and (2010). It increased from (42%) to (54%). We note an increase in the percentage of cash balance with the Bank of Baghdad. The reason for this is due to the large volume of cash assets in the bank in a year, especially after the Central Bank's decision to increase banks' capital to (250) billion dinars instead. From (50) billion dinars, as well as the Central Bank's decision to amend the legal reserve ratio by (5%) to be deposited with the Central Bank, and (10%) to be deposited with the same bank, which increased the percentage of the cash balance, in addition to entering the electronic service quality indicators working to reduce Costs and an increase in the speed in completing customer transactions (1), but in the years (2018) and (2019), the percentage increased from (66%) to (76%), and thus the year (2019) recorded the highest percentage during the past years because the amounts of assets were higher than Deposits and that the increase in this percentage gives an indication to the depositors of their increased confidence in the bank, in return for the increase in this percentage gives a clear picture of the high degree of risk in the national economy. Therefore, the bank maintains high liquidity in anticipation of the risk on the rise in the liquidity index, which means a decrease in profitability, and in the year (2020) the ratio returned to Decrease to (60%) as a result of the spread of Corona disease and curfew prevention, which led to lower cash in the treasury.

Employment ratio

This ratio indicates the extent to which the bank uses deposits to meet the needs of customers and institutions in terms of loans and advances, where the increase in this ratio indicates the increase in the percentage of loans and advances granted by the bank out of the total deposits it owns, and this matter enhances the ability of the bank to achieve a goal Profitability, but the excessive granting of loans and advances will negatively affect the bank's liquidity and thus its ability to cope with the daily withdrawals of deposits, either its decrease will affect the decrease in loans and advances compared to the volume of deposits or the increase of both together, but the increase in deposits is greater than the increase in loans and advances (2), as the standard percentage for this indicator (40%) was determined by the Central Bank, and it can be calculated according to the following equation:

$$\text{(Advances and loans total)/(Ruled in and what deposits total)} = \text{Employment ratio}$$

Through table No. (4), we notice a discrepancy in these percentages between the rise and fall from one year to the next. In (2008) it started with a low (6%) percentage, which indicates the low profitability of the bank and its fear of investment, in addition to that, low loans and high The total deposits amounted to (706,215) with a difference of (660,639) million dinars, and the ratio rose to (17%) and a rate of change of (64.70) in (2010), which is the same percentage during (2016) and (2018), which recorded its highest level during a period of time. The increase in this percentage is due to the increase in loans and advances granted by the bank to customers in exchange for a decrease in total deposits and the like, as well as the development in the means of payment that facilitated reducing costs, increasing speed, reducing time and effort for customers, and through the foregoing, we find that the employment rate has fluctuated During the research period, if it ranged between (06%) as a minimum during the year (2008) and (17%) as a maximum during the years (2010), (2016) and (2018), as a result of the policy pursued by the bank in achieving economic reforms through Suspending the granting of credit facilities at a certain time and launching them at another time, as well as defaulting on the collection of many credits. For loans due to the weakness of the required guarantees, which in turn leads to a decrease in the amount of grants in several years, especially during (2004), (2008) and (2009), respectively. The compound annual growth rate was a statistically significant ratio of (6.65)

1. Shurooq Hadi Abd Ali, The digital transformation of banking operations as a tool for developing the strategic financial performance of the Bank of Baghdad as a model, research submitted to Al-Mustansiriya University, College of Administration and Economics, No. 126, December, 2020, p. 6.
2. Hassan Jamil Al-Budairi, Banks, Accounting and Administrative Introduction, Al-Warraq for Publishing and Distribution, Amman, 2013, pg. 46

Legal Liquidity Ratio This ratio expresses the relationship between the liquid amounts that the bank keeps in the treasury or the central bank in addition to the different types of the most liquid investments to the total deposits and the like other obligations incurred by the bank by virtue of the nature of its currency (1) where the ratio was determined The standard for this indicator

is (15%) by the Central Bank, and that the increase in this percentage is a guarantee for depositors and the bank's distance from the possibility of the phenomenon of financial hardship. Therefore, this percentage is considered one of the most objective and used liquidity ratios in the field of evaluating the efficiency of liquidity management. As for its low, it may expose the commercial bank to question By the Central Bank and to the possibility of losing the confidence of depositors in it and withdrawing their deposits and then being exposed to financial hardship, and it is calculated according to the following formula

Legal Liquidity Ratio (*) = (cash and quasi-cash assets total)/(its equivalent in what deposits total(

Through Table No. (5), we notice that there is a discrepancy in this percentage between the increase and decrease from one year to the next, as the percentage in (2008) reached (60%), and in (2009) the percentage decreased from (60%) to (57%) respectively, as a result of the crisis that swept the world, which led to a decline in total assets. Assets and total deposits together, then gradually began to rise during (2018) and (2019), where the percentage increased from (77%) to (87%), where we note that (2019) is the highest percentage during the research period and the reason is due to an increase in the amounts of Total assets and a decrease in total deposits, then this percentage decreased during the year (2020) to (72%) with a rate of change of -17.24

Analysis of profitability indicators (bank return)

There are three types of performance efficiency indicators that are important to both the owner and the investor together: the rate of return on total assets, the rate of return on equity, the percentage of net interest margin in the Bank of Baghdad for the period (2008-2020), where profitability is a final indicator for all banking operations and activities bank performance

A- The rate of return on total assets

This indicator measures the rate of return on the money invested in the assets after paying the taxes incurred on it. It is an indicator that reflects the management's efficiency in operating the assets. The increase in this indicator indicates the efficiency of the bank's operations and the management's use of offensive investment and credit policies that contribute to generating profits, but in the case of its low It refers to a rise in operating expenses or the use of defensive investment and credit policies that reduce profit generation, as the standard ratio for this indicator (6%) was set by the Central Bank, and it is calculated according to the following formula:

The rate of return on total assets = (taxes after net profit) / (total assets)

Table (6) shows that there is a discrepancy in this percentage between rise and fall from one year to another, as the years (2008) and (2009) witnessed a low percentage, respectively, with a rate of change from (-40%) to (-60%) as a result of the crisis. The financial statements witnessed during these two years, which negatively affected the net profits in (2018), in (2019)

the ratio increased with a change rate of (100%) to reach (0.006) due to the increase in profit at a rate of change (1.72%) due to this The increase in the rate of change of profit at a rate greater than the change in total assets and thus led to an increase in the percentage, and in the year (2020) the percentage decreased from (0.02) with a change rate of (233.33) despite the increase in net

1. Reda Sahib Abu Hamad, d. Faeq Mashal Qaddouri, Banking Administration, Dar Al-Sadiq Foundation for Culture, Iraq, Babylon, 2005, p. 239
2. Abdul Salam Lafta Saeed, Analysis of Bank Deposits a Proposed Model, Journal of Baghdad College of Economic Sciences, No. 11, 2006, p. 10

Profit after taxes, but the change in total assets was greater than last year, as a result of the health conditions that Iraq witnessed as a result of the spread of Corona disease, which negatively affected the rate of return on total assets, as well as the decrease in the bank's net profit due to the economic and political conditions that Iraq is exposed to. .

B- Rate of return on equity

This rate refers to the amount achieved by the shareholders on their money invested in the capital of the bank. If the value of the index is high, this indicates the efficiency of investment and operating decisions in the bank. The bank tries to maintain this ratio at its fixed rates and takes into account what the Central Bank decides, which supports raising it to provide protection For depositors' money, the standard ratio for this indicator (4%) has been set by the Central Bank (1), and the rate of return is calculated according to the following formula (2:(

Return on equity = (taxes after net profit) / (equity)

Table (7) shows a discrepancy in the ratios during the period between rise and fall from one year to another, as it reached in (2008) a low rate of return (22%), as a result of the rise in property rights against a rise in net profit, and for each rate less than It negatively affected profits with a rate of change (-11) in (2008), and the decline in the percentage continued during (2009) and (2010), as it decreased from (14%) in (2009) to (11%) in (2010). This is due to a significant increase in property rights, which rose from (109,169) million dinars to (118,788) million dinars, compared to a decrease in net profit before tax

C - net interest margin ratio

This ratio measures the percentage of the net return from the interests achieved by the operating assets, and an increase in this ratio means the increase in the ability of the assets to generate an interest margin for the bank (3). There is no standard ratio for this indicator issued by the Central Bank because it is a private bank, and it is calculated according to the formula the following:

(debit interest - credit interest)/(for yield generating assets) = interest margin net ratio

Table (8) shows that there is a discrepancy in this ratio between rise and fall from one year to

another. In (2008) the ratio reached (22%) due to the increase in interest during this year despite the increase in total assets, but this did not prevent the interest from rising (4) The percentage decreased to (9%) due to the decrease in interest compared to a decrease in total assets, but the decrease in interest was greater, and in the years (2010) and (2011) it became (8%) and (11%), respectively, the percentage increased and that Due to the increase in credit interests from (33.107) million dinars in (2010) to (48,229) million dinars in (2011) despite the increase in total assets, but the increase in interest was greater and the percentage increased in (2016) to (7%) This is due to the increase in interest against a significant decrease in the return on assets, with a rate of change of (39.55%) (5). In the recent years (2017), (2018), (2019) and (2020), we note the decrease in interest to (4%) and the stability of the ratio during The last three years, where it became (2%), which represents the lowest percentage recorded during the research period, due to the decrease in interest in return for an increase in the return on assets from (243.337) million dinars in (2017) to (369) 509) million dinars in (2020.)

1. Amin El-Sayed Ahmed Lotfy, Accounting and Financial Analysis in Hotels, University House, Egypt, Alexandria, 2007, p. 98.
2. Gitman, Lawrence J, Principles of managerial finance, 12th Ed person-2009, p68
3. Mahmoud Abdel Salam Omar, Basel Committee between Old and New Directives, Journal of Banking and Financial Studies, Volume 4, Issue 1, January 1996, 2009, p. 17.
4. Central Bank of Iraq, Department of Banking Control, Department of Commercial Banks
5. Mosfa Hamoudi Karim Al-Khafaji, Liquidity Management and Risks in Commercial Banks and its Impact on Returns, Master's Thesis in Banking and Finance, College of Administration and Economics, University of Babylon, 2021, p. 77.

The third axis // the standard analytical aspect

Model Variables

Table (1) Standard Model Variables

Type	Code	variable
independent	X1	ATM
independent	X2	Visa Card
independent	X3	Master Card
Follow	Y1	Cash Balance Ratio
Follow	Y2	Legal Liquidity Ratio
Follow	Y3	Employment rate
Follow	Y4	Return on total assets
Follow	Y5	Return on Equity Ratio
Follow	Y6	net interest margin ratio

Source: From the researcher's work

Stability of time series The researcher relied on the standard aspect on the quarterly data for the

variables under study due to the lack of data on some variables except for a short period of time due to the novelty of these variables that appeared after the year (2008) such as the ATM, the number of Visa cards and the number of MasterCard cards. In order to avoid the standard problems that accompany the small sample size, it was converted into quarterly data and (Eviews12) program was used to process the data and estimate the models.

In the beginning, we must test the stability of the model variables in the time series and find out whether the variables are stable or not. This is done by applying the unit root test of (Extended Dickey Fuller) (ADF). After conducting the test, we obtained the results shown in Table (11) that the stability test. For your expanded Fuller, there is a distortion of the data at the level and we notice more stability with the constant and with the constant and direction and without a constant and direction, which shows the statistical results that were obtained as a result of applying the (ADF) test at the level (level) and the first difference (1st difference) and the second difference (2st difference) and the critical value at a significant level (1%, 5%, 10%), where (Y1) stabilized at the second difference and at a significant level (1%), while (Y2) stabilized at the level and at a significant level (1%), as well as (Y3) Stabilized at the level, with a significant level (5%), and (Y4) at the second difference, with a significant level (1%), and (Y5) with the first difference, and with a significant (5%), and (Y6) at the level, At a level of significance (10%) and stabilized (X1) in the second difference, and at a level of significance (1%), (X2) stabilized at the first difference, and at a significant level (5%), and (X3) stabilized at the second difference, with a significant level of (1%)

VAR Form Test Results

The (VAR) model will be estimated to show the relationship between the variables in the case of the study, as this model depends on detecting the causal relationship and making sure that there is a negative feedback between the dependent variable and the independent variables through statistical tests, and since the data adopted by the researcher is quarterly, (HQ) is the standard. Most accurate relied

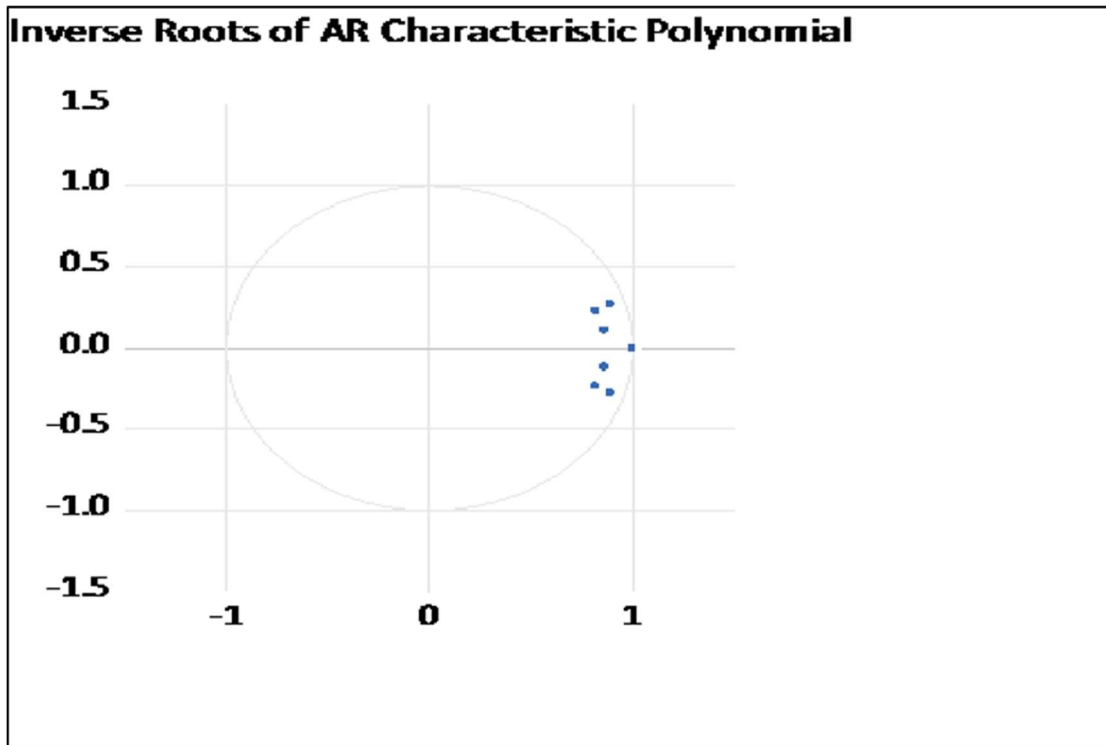
Through table (24), we note that there is a relationship between the independent variables and the dependent variables, as it appears that the first model, which represents (X1), the number of ATMs is statistically efficient according to the standards (R², F, T), where we find that the changes in the number of ATMs. The ATM (R²) ratio (99%) is explained by the independent variables, in addition to the significant level of (889.0283) which increases the confidence of the model and is the best equation representing the model, and as the number of ATMs is associated with one slow period and this was confirmed by the optimal deceleration test, It is noted that the number of ATMs is linked with some dependent variables in a direct relationship, and this is consistent with the economic logic, but it is insignificant, which represents the percentage of return on total assets, the percentage of return on equity, and the percentage of net interest margin in one slowdown period. As for the rest of the variables, they are linked with a direct relationship. After the second slowdown period, thus proving the validity of the economic theory, as for the model of the number of visa cards that is statistically efficient according to the standards (R², F, T), where we find that the changes in the number of visa

cards explain (R2) (97%) by the independent variables, Beside Significance level (127.2694), which increases the confidence of the model as a whole, as the number of Visa Cards is associated with two slow periods, and this was confirmed by the optimization test. But it is insignificant, and this is consistent with economic logic, and it is linked to a second slowdown period with other dependent variables, which include the employment rate, the return on total assets, the return on equity, and the net interest margin ratio. As for the MasterCard number model, it is statistically efficient according to the standards (R2, F,T), where we find that the changes in the number of MasterCard cards explain (R2) (99%) by the independent variables, in addition to the level of significance (330.5247), which increases the confidence of the model as a whole, and the number of MasterCard cards is related to two slow periods and this What was confirmed by the optimization test, and it is noted that the number of Visa Cards is linked with some dependent variables in a positive relationship to one slowdown period, which includes the cash balance ratio and the legal liquidity ratio and this is consistent with economic logic, and is linked to two slowdown periods With all dependent variables, a significant but insignificant percentage.

To test the results of the stability of the model as a whole

Through the form of Figure (1) it shows the stability of the dependent and independent variables, which means that all points are located within the matrix of the circle are located in the straight line of the performance efficiency, which greatly affects the electronic banking services of the Bank of Baghdad, which indicates that the model is stable as a whole

Figure (1) Stability of the model as a whole



Source: From the researcher’s work based on the outputs of the statistical program (EViews12)

Conclusions

1. It is clear that the total number of ATMs has taken an upward trend in recent years, and these figures show the extent of expansion and the development of banking awareness among customers, as the compound annual growth rate reached a significant percentage (20.18) to indicate the trend of this percentage towards increase during recent years.
2. It is clear that the number of electronic cards that include (Visa Card, Master Card) has taken an upward trend during the last years of the research period, as a result of the continuous work on developing electronic services that reduce the risk factor as well as credit risk, which is one of the most important risks to which the party is exposed. The counterparty in his financial transactions and the fulfillment of his obligations
3. It is clear that the cash balance ratio was high, as a result of the standard ratio of (30%) imposed by the Central Bank on commercial banks, which increases the confidence of depositors as a result of the low degree of risk
4. The employment rate reached a maximum during the years (2010, 2016 and 2018) as a result of the policy followed by the bank to achieve economic reforms by stopping the granting of credit facilities at a certain time and launching them at another time
5. The legal liquidity ratio was high, and it is the ratio imposed by the Central Bank on commercial banks and which it maintains with the Central Bank
6. The return on total assets reached a minimum during the years (2015, 2018) as a minimum, as a result of the growth and contraction of net profit after taxes, as well as total assets due to unstable economic conditions and politics.
7. The return on equity reached a maximum level in (2011) at 15%, as a result of the growth of the profits after taxes, as well as the property rights.
8. The net interest margin ratio during the years (2018, 2019 and 2020) reached the lowest, as a result of a difference between the components of the assets generating returns from investing commercial papers, investments and total loans and advances.
9. By testing the stability of the time series according to the (ADF) test, it was found that some variables remained at the level (0), while some of the variables were stable at the first difference (1), and others settled at the second difference (2), and therefore the (VAR) model can be used.
10. The results showed through the (VAR) model that there is a relationship between the dependent variables and the independent variables, but it is in a small percentage
11. By testing the stability of the model as a whole, we find that the series is stable because all points are located inside the matrix circle

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