The extent of the reflection of electronic banking services on liquidity Analytical research of a sample of commercial banks listed in the Iraqi Stock Exchange

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Abstract: The current research aims mainly to show the extent of the reflection of electronic banking services on the liquidity of a sample of commercial banks listed in the Iraqi Stock Exchange, as one of the indicators of financial performance, and to achieve this purpose, (3) banks listed in the Iraqi Stock Exchange were selected for the period from (2015 - 2020) using a number of mathematical equations for measuring profitability and other statistical measures, and then the data on electronic banking services as well as the data represented in the financial statements for a number of years (the study period) were analyzed for each bank, using the statistical program (SPSS vr. 26). The study led to a set of conclusions, the most important of which are: -

There is a discrepancy in the type of relationship between the indicators of electronic banking services and the liquidity indicator of the study sample, which is reflected in the varying impact that some indicators of electronic banking services have on liquidity, and the reason for this is due to the varying levels of banks in providing electronic banking services and the extent of their use of modern technology. Electronic banking services have a positive role on banking liquidity, and through testing hypotheses and the correlation relationship and their analysis of the study variables for electronic banking services and liquidity for banks, the study sample shows the existence of a correlation with direct statistical significance between moderate and strong, and when electronic banking services increase by one unit, the liquidity increases dramatically. my expulsion.

The study also made recommendations, the most important of which were, that banks should pay attention to providing and promoting electronic banking services through the use of modern technology and increasing investment in them, similar to global and regional banks, in light of the increasing demand for electronic banking services by customers, the Iraqi private commercial banks in general and banks The study sample, in particular, increased the number of ATMs and points of sale to reach banking services to all members of society, especially in remote areas, in order to increase the geographical area served by them, and thus increase liquidity in banks.

Keywords - Electronic Banking Services (EBS)- Liquidity

1- INTRODUCTION

The world witnessed an expansion and development in the field of information technology and modern means of communication, and these modern technologies began to be linked and used in all fields and economic activities, and became one of the basic and main elements of development and progress in these activities.

The banking sector was one of the most important of these sectors that was affected by the development in the field of communications and modern information technology, which later formed an important factor that contributed to the development of banking work through innovation and the manufacture of services and electronic banking operations, and was a reason for the expansion of banking activities through the increase Preparing the clients of the bank.

Electronic banking is one of the broad terms used to describe the importance of modern banking products that require the use of modern digital devices and technology in all its forms consisting of automated teller machines (ATM), POS devices used in points of sale, POC devices, and many other devices and software used in Providing these services, as these services are becoming increasingly widespread in the banking sector due to the desire of customers for these services and the low cost of obtaining them compared to the traditional services provided by banks.

In Iraq, electronic banking services began to appear in the field of banking work since the beginning of the year 2004, but studies in this field confirm that Iraqi banks face great challenges and obstacles that stand in the way of customers' acceptance of these services.

Proceeding from this importance that the electronic banking services industry has enjoyed and the resulting development in the field of providing banking services and increasing the intensity of competition between banks, which in turn was reflected

on the financial performance of these banks through the positive impact of electronic banking services on liquidity in commercial banks as one of the indicators Financial performance important to measure the performance of banks.

2- The first topic (research methodology)

2.1 - the research problem

Through the development in information technology, modern digital communications and the Internet, which was reflected on the electronic banking services industry, the increase in the performance of banks and the unity of competition among them due to this development, the problem of the current research is represented by the following questions: -

A. Is there a significant effect of electronic banking services on liquidity?

B. What is the electronic banking service that has the most impact on the liquidity of the selected sample?

C. Does the level of liquidity vary according to the different dimensions of electronic banking services in the sample of the banks surveyed?

Second: Research objectives

The current research aims to: -

A. Briefing on the cognitive dimensions of the research variables and their sub-components, addressing some related financial concepts, and reviewing the most important cognitive ideas presented by researchers to build an intellectual framework for the research variables.

B. Getting to know the reality of electronic banking services and their indicators on the liquidity of the banks, the sample of the research.

C. Systematically classify and formulate indicators of electronic banking services and indicators of liquidity.

2.2 The importance of research

The importance of the current research lies in the light of the development of electronic banking services and work on their application in Iraqi banks to ensure that they keep pace with the development of modern digital information and communication systems, as electronic banking services have become a mainstay in future banking transactions and their impact on the financial performance of banks.

2.3 Research hypothesis:

The use of liquidity ratios and their indicators, and their impact on banking financial performance, reveals the strengths and weaknesses in the financial performance of banks, and in light of this, the following hypotheses were formulated:

A. The hypothesis of the correlation between the research variables.

- There is a significant correlation between electronic banking services and liquidity.

B. The hypothesis of the effect between the research variables.

- There is a significant effect of electronic banking services on liquidity.

2.4 Society and sample research

The study population consists of a number of Iraqi commercial banks listed in the Iraq Stock Exchange, namely (Bank of Baghdad - National Bank of Iraq - International Development Bank - Khaleeji Commercial Bank - Iraqi Middle East Investment Bank), which were selected based on the historical rooting of the bank and the extent of its activity, as well as on The size of the capital as well as its provision of electronic banking services approved in the study (automated teller machine, (ATM), P.OS points, P.OC points) and many other requirements. Table No. (1) includes the study sample commercial banks.

	study sample banks							
S	Bank name	website						
		Founded		branches				
1	Baghdad Bank	1998	250 billion dinars	32	www.bankofbaghdad.			
2	The National Bank of Iraq	1995	250 billion dinars	19	www.nbi.iq			
3	Commercial Bank of Iraq	1992	250 billion dinars	10	www.cbiq.com.iq			

Table (1)

2.5: Research limits

A. Spatial limits: The study was represented by a number of private commercial banks listed in the Iraq Stock Exchange.

B. The temporal limits of the study: The data on indicators of electronic banking services, and indicators of liquidity for some commercial banks listed in the Iraq Stock Exchange were adopted as the study sample for the period from (2015) to (2020).

3- Electronic banking services

The development in the field of digital information technology, communications and the Internet, has led to rapid changes in the banking sector, and the Internet has been adopted as a basis for banking transactions between countries of the world (Nasri, 2011, 148). These developments have also led banks to use the methods and means in the field of modern communications to provide new banking services that differ from traditional services, given that these services help banks reduce the costs of these services and at the same time strengthen the relationship between the bank's customers and the providers of these services and encourage them to use these services. Thus, improving the bank's performance and increasing the bank's profits. (Maduku, 2012: 176).

The concept of electronic banks later expanded to include electronic transfers, speaking banks, short message services (SMS) and other electronic banking services. (Yassin and Al-Jamil, 2014:32).

Second: - The concept of electronic banking services.

It is a set of modern digital technological processes and methods that have been introduced into the banking system for the purpose of facilitating the conduct of banking and economic operations between dealers and economists in general, and includes all financial information in order to reduce costs and increase bank profits. (Radwan, 1999: 10).

It was also defined as the bank providing new banking products and services directly to its customers through modern means of communication (Hamid, 2012:9).

It was defined as conducting banking operations in innovative and new ways and means through modern electronic means of communication, as it is traditional and new banking services, and access to these services is limited to subscribers in them exclusively according to conditions set by the bank that provides these services. (Al-Bahi, 2016).

3.1 - The importance of electronic banking services The importance of electronic banking services

Electronic banking services are currently of great importance and have a wide impact in the banking sector due to the important role they play in facilitating banking operations, reducing their industry and obtaining them by customers, and implementing banking operations through the Internet and modern means of communication at any time and around the clock (24 hours) (Badawi, 2003:194).

3.2- Benefits of electronic banking services: Benefits of electronic banking services

A. The low cost of the banking services industry, as well as the low cost of obtaining them by customers.

B. Ease of access, as banks can easily deliver their electronic services to their customers without the need to open new branches, which are the methods of modern means of communication.

C. Providing new and integrated banking services.

D. Maintaining the identity of customers as communicative parties.

F. The ability to encrypt customers' information immediately upon using the service's secret number or code.

G. The possibility of providing electronic services throughout the day and seven days a week without interruption. (calasir, 2008: 166).

3.3- Electronic banking requirements

The application of banking services requires many tools and means necessary to implement them. These requirements can be summarized as follows: -

A. Technical requirements: They are also called technical infrastructure requirements, and they include hardware, such as hardware and equipment needed to provide services, and soft tools, including a set of necessary programs and applications, as well as networks, which are of two types, wired and wireless, and also include the supporting components from spatial locations. Electrical connections, etc. (Al-Malik, 2007: 31).

B. Informational and cognitive requirements: The application of modern banking services requires the existence of advanced and modern information systems in order to contribute to increasing the effectiveness of performance in banks, and these are defined as "an integrated set of material and human elements that work together with the aim of facilitating the completion of administrative functions And strengthening the decision-making process by processing data and providing the information that managers need in planning and controlling the organization's operations" (Salam, 2006: 26).

C. Organizational and administrative requirements

The application of electronic banking services requires the presence of efficient technical and administrative cadres and has the ability to deal with technological systems and modern means of communication, as well as the ability to innovate (Yasin, 2005: 238).

D. Human requirements: These requirements pertain to individuals working in banks and depend on the presence of trained and qualified human resources who have the ability to deal with modern information and communication systems in order to enable the provision of electronic banking services. On this basis, the senior management in the bank should: It provides opportunities for workers to learn, innovate and keep pace with developments in modern technology. (Al-Alaq, 2005: 217).

F. Financial requirements: It is one of the most important requirements to provide electronic banking services, because these services require huge funds in order for the bank to ensure the continuity of its currency and achieve the goals (Al-Samiri, 2009: 89).

F. Legislative and legal requirements Laws have been enacted in order to regulate the environment in which we work, and the banking sector is an important part of this environment, and there must be laws and legislation that regulate and are compatible with the provision of electronic banking services. (Radwan, 2005: 4).

G. Security requirements With the increase in reliance on modern means and technology in the provision of services, the security risks associated with these services have increased, including those related to account penetration and electronic espionage, and this requires the providers of these services to reduce these risks by providing the necessary hardware and software that reduce these risks. (Al-Malik, 2007: 38).

3.4 - Electronic banking tools.

Providing electronic banking services requires many channels, tools or means, and these channels can be divided as follows: A. Distribution channels These channels are divided into traditional distribution channels and include the bank's branch buildings and offices, and electronic channels represented by modern tools and programs through which electronic services are provided (Al-Shamri and Al-Abdlat, 2008: 20-23). Among these channels are:-

- Automated teller machine (ATM), which is about machines spread in different places, placed on walls or independently and connected to the main computer in the bank through modern means of communication.

1) Home Banking, which can be used to provide electronic services through the customer's personal computer (P.C).

2) Electronic Points of Sale Services (P.O.S), which are in the form of small-sized machines placed in different places in the shops and malls. These devices can be used to shop from these places by passing the customer's card in those devices.

3) Digital TV is an electronic device that works via television in the home or workplace, via satellites with the bank's computer, and a secret number is assigned to the customer.

4) Phone Banking or also called the Customer Service Center (Call Center). Banks, in agreement with mobile telecommunication networks, open banking services that customers can benefit from through text messages (SMS) or make a call to a specific service center throughout the day.

5) Internet Banks: This tool is one of the most important tools used in providing electronic services, and the reason is due to the huge number of Internet users around the world, banks, and sometimes they are called virtual banks. (Al-Shammari and Al-Abdlat, 2008: 40-42).

6) Mobile Banking These services can be used through mobile devices, and the user of this service has his own password or passcode.

B. Electronic cards are a plastic card that is filled in advance with a certain balance of money and is considered a store of cash, used by ATM or (POS) devices to shop and buy goods from stores as well as used to settle payments. (Al-Ani, 2005: 98-99) Among the most important types of these cards are the following: -

1- A credit card is an electronic card that operates by means of an electronic chip that contains data relating to the customer. Key Card) (Haddad and Hathloul, 2005: 58).

2- Smart cards are a plastic card that contains a thin disk engraved in the middle of the card and contains customer data that is passed through its own devices. It was first discovered in 1986. (wonglim piyarat, 2013: p6).

3- Electronic Checks An electronic check is a tool that is in the form of a secured and encrypted text message that is only viewed by the account holder and the other person benefiting from the electronic instrument (Markusm2013: p5).

3.5- Electronic banking risks

There are several risks facing the provision of electronic banking services, including the following: - (Kaddoumi, 2008: 300). A. Liquidity risks arising from the granting of credit across borders and fears that some customers will not be able to pay.

B. The Internet is not completely secure and vulnerable to hacking, and this poses a risk to the bank's information and exposure to penetration by another party.

C. Risks may arise due to operating errors of the systems by the bank itself.

D. Legal risks resulting from non-compliance with electronic banking contracts and the property rights of databases and software used by banks.

F. Reputational risks that the bank may be exposed to due to the frequent interruption of electronic services.

eighth: - Challenges Facing Electronic Banking Services

Despite the increasing importance of electronic banking services, they face many obstacles, including the following: -

1. Technical challenges: These challenges relate to poor communications and poor Internet service, in addition to the weak efficiency of workers in providing these services and their sufficient awareness of modern technology means, as well as the lack of preparation of ATM and other devices.

2. Economic challenges: They are among the great challenges facing countries that suffer from continuous economic turmoil, especially those countries that are subject to international sanctions or are subject to economic loss.

3. Legal and Security Challenges: Electronic banking services need a high degree of security to maintain the confidentiality of bank and customer accounts and information from penetration operations, and therefore the political and security instability in a country is one of the challenges facing the provision of electronic banking services.

4. Challenges related to reputation and trust in the work of banks: These challenges arise in the event that there is a negative public opinion towards a bank resulting from the failure to provide these services in a satisfactory manner to customers, or there may be a clear violation by bank employees of the confidentiality of customer information and accounts.

5. Social and cultural challenges: These challenges are caused by the lack of technological awareness of the public in the field of electronic banking services, as some customers may prefer to use traditional banking services without electronic services. (Fahad, 2012:11).

4- The concept of liquidity:

Liquidity has many concepts as it is viewed from several angles. Liquidity in the absolute sense means money, or in the technical sense, it means the ability to convert an asset into cash quickly and without losses, as the process of keeping cash and liquid funds is necessary to meet the necessary and owed obligations. Or, in the abstract sense, liquidity means the ability to meet the obligations payable for performance, whether these obligations are contractual or contingent obligations. On this basis, liquidity is a relative concept that shows the relationship between cash and liquid assets that are quickly converted into cash without loss (Abdel Hamid, 2008:230).

As for bank liquidity, it expresses the extent of the bank's ability to meet its obligations and finance the increase in assets without the need to restrict unfair prices or resort to some high-cost sources of financing. (Al-Dhabawi and Al-Mousawi, 2017: 5).

Liquidity in Iraqi commercial banks is important because it works to harmonize short and medium-term financial reserves on the one hand, and the bank's asset investment policy on the other hand, and this process depends on the compatibility between the sources of funds and their use. (Imam and Khazali, 2017: 112).

Second: - The importance of bank liquidity: Bank liquidity has a great importance in banks more than other financial institutions such as insurance companies or specialized banks, and this importance comes as a result of two reasons. It is short term. (Al-Dulaimi, 1990: 203).

The importance of liquidity in commercial banks stems from the nature of their work, as these banks mainly finance themselves from external sources, the large part of which is public deposits that are subject to withdrawal by customers. The task is in the banking business. At the same time, banks must balance between liquidity and profitability, because maintaining excess liquidity is a freezing of funds and limits profitability. (Al-Shammari,2014:458)

Bank liquidity is one of the main and important factors in the banking sector, because banks, by the nature of their work, need to ensure that sufficient funds and assets that can be converted into cash are kept quickly in order to meet their obligations in front of withdrawal requests from customers, so the bank must be able to continuously To face the shortcomings in the expected or unexpected cash flows, and to address any shortage of liquidity as soon as possible before the depositors and other financial institutions realize it, otherwise this will lead to undermining the confidence of customers in the bank and the occurrence of many requests for withdrawal and thus the bank will be exposed to bankruptcy (Casu & Other, 2015:302).

4.1- Dimensions of liquidity:

There are three dimensions of liquidity: - (Abu Rahma, 2009: 18)

A. Time: It is the speed of converting the asset into cash without loss. This means that the high liquidity of the assets, the speed of their conversion into cash is high.

B. Cost: It means the cost incurred by the bank as a result of the process of converting the asset into cash.

C. Risk: It is the risk arising from the possibility of depreciation of the assets.

4.2- Measurement of Bank Liquidity:

Bank liquidity and other financial institutions can be measured by their ability to meet their short-term obligations when their due date occurs, and it reflects the financial suitability of the general financial position in the bank in the short term. Liquidity ratios express sending early signals to the bank about Cash flow problems and failure of activities in it. (Hindi,2010:412).

Among the most important financial indicators used in measuring bank liquidity are:

A- Current Ratio, where this ratio measures the bank's ability to meet its dues and obligations, and the high of this ratio means that the bank has a high possibility to pay its obligations and it is according to the following formula: - (Doss et al, 2007:115) **Current ratio** = $\frac{\text{assets Current}}{\text{assets Liabilities}} *100\%$

b- Quick Liquidity Ratio

This ratio measures the bank's ability to meet its short-term obligations through cash and short-term investments that can be converted into liquid cash easily and without losses or small losses, and it includes (cash - receivables - securities) and it can be measured according to the following formula: - (Lasher, 2008: 84).

Quick ratio = $\frac{Cash + Debit Securities}{assets Liabilities} *100\%$

C- Legal Reserve Ratio

The Central Bank requires banks to maintain a certain percentage of the value of deposits determined by the Central Bank, which is in the form of a credit cash balance with the Central Bank without interest. Measuring this percentage according to the following formula: - (Fahd, 2009: 60).

statutory reserve ratio= CBalances with the Central Bank *100%

D- Legal Liquidity Ratio: - This ratio measures the bank's ability to meet withdrawal requests by depositors from what it has of cash or quasi-cash balances. Therefore, following this ratio indicates the bank's ability to fulfill its financial obligations in the unusual times. Measure this ratio according to the formula: - (Bodie et al, 2007: 440).

 $Legal \ Liquidity \ Ratio = \frac{Cash \ Balances + Quasi \ Non-Cash \ Balances}{total \ deposits} *100\%$

E- Ratio of Cash to Total Assets:

This ratio measures liquid assets to total assets. A high ratio means that there are non-performing cash balances and therefore a lower final return for the bank. In contrast, a lower ratio than its rates means an increase in the bank's ability to potential risks such as the risk of sudden withdrawal of deposits and the risk of financing, this ratio can be calculated according to the formula The following: - (Al-Mousawi, 2011: 60).

Cash to Total Assets Ratio= $\frac{Cash + due to bank}{total assets} *100\%$

f- Ratio of Current Deposits to Time and Savings Deposits

This ratio measures the amount of cash reserves that the bank must keep from the current deposit account, which is one of the most types of other deposits subject to withdrawal and deposit at any time. The high of this ratio means that the bank needs liquid balances, and it is according to the following formula: (Al Shabib, 2012: 113).

Ratio of current deposits to savings and term deposits = $\frac{\text{total current deposits}}{\text{Total savings and time deposits}} *100\%$

j- cash rate

This rate measures the extent of the bank's ability to meet its obligations from the cash available in the fund and its balances in the central bank, and the bank must avoid the decrease and rise in this rate, and this rate is measured according to the following formula: - (Fahd, 2007: 37)

 $cash \ ratio = \frac{Cash + balances \ with \ the \ central \ bank + due \ to \ the \ bank}{total \ deposits} *100\%$

5- The practical side

After the required data has been collected from its own sources, whether related to the theoretical or analytical aspect (financial statements) and the financial equations that were based on the theoretical aspect, it is necessary to analyze the data collected in order to extract research results for the study sample banks listed in the Iraq Stock Exchange Financial for the period (2015) to (2020).

Therefore, in this topic, we will address the practical side of discussing and analyzing the financial and statistical aspects of the research variables represented by the independent variable electronic banking services, which consists of a group of subvariables (ATM, POS, POC) and showing this through research and analysis on the extent of their impact on the banks of the study sample, and the variable The subsidiary "liquidity" and analysis of these indicators and the extent of their impact on the banks of the study sample.

Through the use of a set of statistical methods and measures, the current research relied on the Mukaka scale, 2012: 6) to determine the strength of the correlation between the variables of the study, and to test the hypotheses of the effect between the studied variables through the use of a set of tests represented by the simple linear regression equation and the T test.) and the (F) test to test the significance and the coefficient of determination or interpretation (R2) according to a program using the statistical program (SPSS vr. 26).

5.1- General statistical description and nature test (data distribution)

First: Variable number of automated teller machines (ATMs)

In the table below, a statistician describes and test the nature of the variable data (ATM) for all the banks under study.

Table No. (2) shows the statistical description and the test of good conformity with the data of the ATM variable across all banks, the study sample

Bank name	Arithmetic mean	standard deviation	standard error	Test Statistic	p-value
Baghdad Bank	38.333	25.62	10.461	0.199	0.200

National Bank of Iraq	62	50.174	20	0.135	0.200
Commercial Bank of Iraq	15	6.532	2.667	0.187	0.200
General Average	38.444	27.442	11.0426		

From the results of the above table, we find that the value of the general arithmetic mean of the variable (ATM) amounted to (38,444), and its standard deviation (27,442) across all the banks under study. In that the Bank of Baghdad had the arithmetic mean value of the variable (ATM) equal to (38.333) and the value of its standard deviation equal to (25.62). When comparing, we note that the arithmetic mean of the (ATM) variable that belongs to the Bank of Baghdad is close to the general arithmetic mean of the (ATM) variable. This is a good indication that the Bank of Baghdad has good potential on the variable (ATM). But in the National Bank of Iraq, the mean value of the variable (ATM) was equal to (62) and the value of its standard deviation was equal to (50.174). When comparing, we note that the arithmetic mean of the (ATM) variable that belongs to the National Bank of Iraq has a good potential for the variable (ATM), compared with the rest of the banks. But in the Commercial Bank of Iraq, the mean value of the variable (ATM), compared with the rest of the banks. But in the Commercial Bank of Iraq, the mean value of the variable (ATM) was equal to (15) and the value of its standard deviation was equal to (6.532). When comparing, we note that the arithmetic mean of the (ATM) variable that belongs to the Commercial Bank of Iraq, its much general arithmetic mean of the (ATM) variable that belongs to the Commercial Bank of Iraq, the mean value of the variable (ATM) was equal to (15) and the value of its standard deviation was equal to (6.532). When comparing, we note that the arithmetic mean of the (ATM) variable that belongs to the Commercial Bank of Iraq is much less than the general arithmetic mean of the (ATM) variable. This is an indication that the TBI does not have a good possibility about the variable (ATM).

From the results presented in Table No. (2), we note that all the P-values of the variable (ATM) across all the banks under study are greater than 0.05. This means that the data distribution of the variable (ATM) follows or approaches the normal distribution. Therefore, our statistical decision regarding this test is to accept the null hypothesis "which states that the distribution of the sample data corresponds to the normal distribution and that the variable data (ATM) follow a normal distribution, meaning that it is drawn from a population whose data follow a normal distribution.

5.1- Variable number of POS devices

In the table below, a statistician describes and test the nature of variable data (POS) for all the banks under study.

Bank name	Arithmeti	standard	standard	Test Statistic	p-value
	c mean	deviation	error		_
Baghdad Bank	36.667	12.909	5.270	0.282	0.147
National Bank of Iraq	74	38.783	15	0.204	0.200
Commercial Bank of Iraq	24	13.934	5.687	0.281	0.148
General Average	44.889	21.875	8.652		

Table No. (3) shows the statistical description and the test of good fit for the data of the (POS) variable across all banks of the study sample.

Source: prepared by the researcher based on the electronic calculator outputs for the results of a program using the statistical program (SPSS vr. 26)

From the results of the above table, we find that the general arithmetic mean value of the (POS) variable was (44.889), and its standard deviation was (21.87533) across all the banks under study. In the Bank of Baghdad, the mean value of the variable (POS) was equal to (36.667) and the value of its standard deviation was equal to (12.909). When comparing, we note that the arithmetic mean of the (POS) variable that belongs to the Bank of Baghdad is much less than the general arithmetic mean of the (POS) variable. This is an indication that the Bank of Baghdad has a weak possibility in the (POS) variable. But in the National Bank of Iraq, the mean value of the variable (POS) was equal to (74) and the value of its standard deviation was equal to (38.783). When comparing, we note that the arithmetic mean of the (POS) variable that belongs to the (POS) variable that belongs to the National Bank of Iraq is much greater than the general arithmetic mean of the (POS) variable, compared with the rest of the banks. But in the Commercial Bank of Iraq, the mean value of the (POS) variable was equal to (24) and the value of its standard deviation was equal to (13.934). When comparing, we note that the arithmetic mean of the tableongs to the Commercial Bank of Iraq is much less than the general arithmetic mean of the (POS) variable that belongs to the Commercial Bank of Iraq, the mean value of the (POS) variable was equal to (24) and the value of its standard deviation was equal to (13.934). When comparing, we note that the arithmetic mean of the tableongs to the Commercial Bank of Iraq is much less than the general arithmetic mean of the (POS) variable that belongs to the Commercial Bank of Iraq is much less than the general arithmetic mean of the (POS) variable. This is an indication that the TBI has little possibility in the (POS) variable.

From the results presented in Table No. (3), we note that all P-values of the variable (POS) across all the banks under study are greater than 0.05. This means that the distribution of data for the variable (POS) follows or approaches the normal distribution. Therefore, our statistical decision regarding this test is to accept the null hypothesis "which states that the

distribution of the sample data corresponds to the normal distribution and that the data of the variable (POS) follow a normal distribution, that is, it is drawn from a population whose data follow a normal distribution.

5.2- Variable number of POC devices.

In the table below, a statistician describes and test the nature of variable data (POC) for all the banks under study.

Table No. (4) shows the statistical description and the test of good conformity for the data of the (POC) variable across all banks of the study sample.

Bank name	Arithmetic	standard	standard	Test Statistic	p-value
	mean	deviation	error		
Baghdad Bank	70.833	18.819	7.683	0.254	0.200
National Bank of Iraq	4000	1870.83	763	0.288	0.129
Commercial Bank of Iraq	375	103.68	42.328	0.262	0.200
General Average	1481.944	664.443	271.003		

Source: prepared by the researcher based on the electronic calculator outputs for the results of a program using the statistical program (SPSS vr. 26)

From the results of the above table, we find that the general arithmetic mean value of the (POC) variable was (1481.944), and its standard deviation was (664,443) across all the banks under study. In the Bank of Baghdad, the mean value of the variable (POC) was equal to (70.833) and the value of its standard deviation was equal to (18,819). When comparing, we note that the arithmetic mean of the (POC) variable that belongs to the Bank of Baghdad is much less than the general arithmetic mean of the (POC) variable. This is an indication that the Bank of Baghdad has a weak possibility in the (POC) variable. But in the National Bank of Iraq, the mean value of the variable (POC) was equal to (1870.83). When comparing, we note that the arithmetic mean of the (POC) variable that belongs to the the arithmetic mean of the reason for this is due to its possession of more cash payment devices compared to other banks in the study sample. This is an indication that the variable (POC). But in the Commercial Bank of Iraq, the mean value of its standard deviation was equal to (375) and the value of its standard deviation was equal to (103.68). When comparing, we note that the arithmetic mean of the (POC) variable. This is an indication that the TBI has little possibility in the POC variable. It is an indication that the TBI has little possibility in the POC).

From the results presented in Table (4), we note that all P-values of the variable (POC) across all the banks under study are greater than 0.05. This means that the distribution of data for the variable (POC) follows or approaches the normal distribution. Therefore, our statistical decision regarding this test is to accept the null hypothesis "which states that the distribution of the sample data corresponds to the normal distribution and that the data of the variable (POC) follows a normal distribution, that is, it is drawn from a population whose data follow a normal distribution.

5.3- the liquidity variable

In the table below, a statistician described and tested the nature of variable data (liquidity) for all the banks under study.

Table No. (5) shows the statistical description and the test of good fit for the data of the (liquidity) variable across all banks of the study sample.

Bank name	Arithmetic mean	standard	standard error	Test Statistic	p-value
		deviation			

Baghdad Bank	0.799	0.164	0.067	0.271	0.192
National Bank of Iraq	1.646	0.599	0.245	0.223	0.200
Commercial Bank of Iraq	2.915	2.258	0.922	0.264	0.210
General Average	1.786	1.007	0.411		

From the results of the above table, we find that the general mean value of the variable (liquidity) reached (1.786), and its standard deviation is (1.007) across all the banks under study. In the Bank of Baghdad, the mean value of the variable (liquidity) was equal to (0.799) and the value of its standard deviation was equal to (0.164). When comparing, we note that the arithmetic mean of the variable (liquidity), which belongs to the Bank of Baghdad, is much less than the general arithmetic mean of the variable (liquidity). This is an indication that the Bank of Baghdad has a rather good potential in the liquidity variable.

But in the National Bank of Iraq, the mean value of the variable (liquidity) was equal to (1.646) and the value of its standard deviation was equal to (0.599). When comparing, we note that the arithmetic mean of the variable (liquidity) that belongs to the National Bank of Iraq is greater than the general arithmetic mean of the variable (liquidity). This is an indication that the National Bank of Iraq has a good potential in the liquidity variable. But in the Commercial Bank of Iraq, the mean value of the variable (liquidity) was equal to (2.915) and the value of its standard deviation was equal to (2.258). When comparing, we note that the arithmetic mean of the variable (liquidity) that belongs to the Commercial Bank of Iraq is much greater than the general arithmetic mean of the variable (liquidity). This is an indication that the Commercial Bank of Iraq is much greater than the general arithmetic mean of the variable (liquidity). This is an indication that the Commercial Bank of Iraq has a high potential in the liquidity variable.

From the results presented in Table No. (5), we note that all the P-values of the variable (liquidity) across all the banks under study are greater than 0.05. This means that the distribution of data for the variable (liquidity) follows or approaches the normal distribution. Therefore, our statistical decision regarding this test is to accept the null hypothesis "which states that the distribution of the sample data corresponds to the normal distribution and that the data of the variable (liquidity) follows a normal distribution, meaning that it is drawn from a population whose data follow the normal distribution.

6- Testing and analyzing the correlation hypothesis

This topic is concerned with measuring the correlation between liquidity and as the dependent variable, and electronic banking services as the independent variable, by testing the hypothesis of the study which states that "there is a statistically significant correlation between liquidity and electronic banking services" and its sub-hypotheses using statistical analytical methods represented by the correlation coefficient. Pearson's simple then test the significance of the relationships using the (t) test. The current study will depend on the Mukaka scale, 2012: 6) to determine the strength of the correlation between the study variables, as shown in Table (28).

link strength	degree of association
very strong	1.0090
strong	. 9070
Moderate	.7050
low	.5030
very low	.3000

 Table (6) standard strength coefficient of correlation

Source: Mukaka. M.M. (2012)," Statistics Corner: A Guide to Appropriate Use of Correlation Coefficient in Medical Research" Malawi Medical Journal; vol.24, no3 -p. 69-6

1- Bank of Baghdad

The correlation relationship and its significance between the liquidity variable and the variable and banking financial services and their sub-variables (POS, ATM, POC) can be clarified. For the Bank of Baghdad as shown in the table below.

 Table (7) Pearson Correlation Matrix between liquidity and banking financial services of the Bank of Baghdad

dependent variable		Liquidity
	independent variable	
Number of ATM	correlation	.744***
	Sig. (2-tailed)	.000
	N	6
The number of point of sale devices POS	correlation	.645*
	Sig. (2-tailed)	.012
	N	6
number of devices P.O.C	correlation	.589**
	Sig. (2-tailed)	.000
	N	6
Electronic Banking Services	correlation	.579*
	Sig. (2-tailed)	.032
	Ν	6

(*) means significant at the significance level (0.05) (**) means significant at the significance level (0.01).

Through the results presented in the table above, we note that there is a moderate direct statistical correlation between liquidity and banking financial services, and the value of this correlation was estimated at (0.579) and at the level of significant significance (P<0.05). Which means rejecting the null hypothesis that states (there is no significant correlation between the liquidity variable and banking financial services of the Bank of Baghdad) and accepting the alternative hypothesis which states (there is a significant correlation between the liquidity variable and banking financial services of the Bank of Baghdad) and accepting the alternative hypothesis which states (there is a significant correlation between the liquidity variable and banking financial services of the Bank of Baghdad). 2- Al-Iraqi Al-Ahly Bank

The correlation relationship and its significance between the liquidity variable and the banking financial services variable and its sub-variables (POS, ATM, POC) can be clarified. For the Iraqi National Bank as shown in the table below.

Table (8) Pearson correlation matrix between liquidity and banking financial services of the Iraqi National Bank

dependent variable		Liquidity
	independent variable	
Number of ATM	correlation	.671*
	Sig. (2-tailed)	.034
-	Ν	6
The number of point of sale devices	correlation	.717*
POS	Sig. (2-tailed)	.003
	Ν	6
number of devices P.O.C	correlation	.762**
	Sig. (2-tailed)	.000
	Ν	6
Electronic Banking Services	correlation	.811**
	Sig. (2-tailed)	.000
	Ν	6

Source: prepared by the researcher based on the electronic calculator outputs for the results of a program using the statistical program (SPSS vr. 26)

(*) means significant at the significance level (0.05)

(**) means significant at the significance level (0.01).

Through the results presented in the table above, we note that there is a moderate direct statistical correlation between the liquidity variable and banking financial services, and the value of this correlation was estimated at (0.811) and at a significant

level of significance (P<0.01). Which means rejecting the null hypothesis which states (there is no significant correlation between the liquidity variable and the banking financial services of the Iraqi National Bank) and accepting the alternative hypothesis which states (there is a significant correlation between the liquidity variable and the banking financial services of the Iraqi National Bank).

3- Commercial Bank of Iraq

The correlation relationship and its significance between the banking financial services variable and its sub-variables (POS, ATM, POC) can be clarified. And the variable (profitability) of the Commercial Bank of Iraq as shown in the table below.

Table (9) Pearson Correlation Matrix between banking financial services and liquidity for the Commercial Bank of Iraq

dependent variable		Liquidity
	independent variable	
Number of ATM	correlation	.491*
	Sig. (2-tailed)	.040
	N	6
The number of point of sale	correlation	.518*
devices POS	Sig. (2-tailed)	.005
	N	6
number of devices P.O.C	correlation	.561*
	Sig. (2-tailed)	.034
	N	6
Electronic Banking Services	correlation	.781**
	Sig. (2-tailed)	.000
	N	6

Source: prepared by the researcher based on the electronic calculator outputs for the results of a program using the statistical program (SPSS vr. 26)

(*) means significant at the significance level (0.05)

(**) means significant at the significance level (0.01).

Through the results presented in the table above, we note that there is a strong direct statistical correlation between banking financial services and liquidity, and the value of this correlation was estimated at (0.781) and at a significant level of significance (P<0.01). Which means rejecting the null hypothesis (the sub-hypothesis) which states (there is no significant correlation between the variable banking financial services and liquidity of the Commercial Bank of Iraq) and accepting the alternative hypothesis (the sub-hypothesis) which states (there is a significant correlation between the variable banking financial services and liquidity of the Commercial Bank of Iraq) and accepting the alternative hypothesis (the sub-hypothesis) which states (there is a significant correlation between the variable banking financial services and liquidity of the Commercial Bank of Iraq) and accepting the alternative hypothesis (the sub-hypothesis) which states (there is a significant correlation between the variable banking financial services and liquidity of the Commercial Bank of Iraq) and accepting the alternative hypothesis (the sub-hypothesis) which states (there is a significant correlation between the variable banking financial services and liquidity of the Commercial Bank) Iraqi).

7- Testing the hypotheses of the effect between the studied variables

This study deals with the study of the influence relations between the study variables, represented by electronic banking services as an independent variable and liquidity as a dependent variable, which focuses on testing the main hypothesis, which states that (there is a significant statistically significant effect of the indicators of electronic banking services on liquidity, and the sub-hypotheses emanating from it. For the purpose of testing this Effect We have to use a set of tests, which are simple linear regression equation and test (T), test (F) to test the significance, and coefficient of determination or interpretation (R2) to find out the percentage of interpretation of the independent variable from the dependent variable.

1- Bank of Baghdad

7.1- The impact of electronic banking services on liquidity

Table (10) simple regression coefficients between electronic banking services on the variable (liquidity) of the Bank of Baghdad

dependent variable	Liquidity variable			(F)	Sig
				Calculated •	
independent variable	Values (β)	(T)	Sig		
		calculated		6.007	0.000
intercept	2.223	4.341	0.000		
Electronic Banking Services	1.311	6.241	0.000		
Corrected $R^2 = 0.329$ square $R^2 = 0.301$					

From the results listed in the table above, when electronic banking services are increased by one unit, the liquidity variable will be affected by the increase at a rate ($\beta = 1.311$), this means that there is a positive and statistically significant impact of the electronic banking services variable on the liquidity variable and this leads to the possibility of saying that the banking services variable Electronic will have a positive role in the liquidity variable, and this is evident through the value of the (t) test for the parameter Beta (B), which amounted to (6.241), which is evidence of the morale of electronic banking services below the significant elevel of 0.05. Through the results shown in the table above, we accept the hypothesis that says (there is a significant, statistically significant effect of the electronic banking services variable on the liquidity variable is appropriately Significant with the studied model, and this is evident from the calculated (F) value (6.007), which is a significant value below the 5% significance level. In addition, it is noted from the above table that the value of the coefficient of determination (R^2) was (0.329%) and the corrected coefficient of determination (30.1%), which shows that the interpretability of the regression model used is very high, which indicates that (30.1%) of the changes That occur in liquidity is due to the variable of electronic banking services.

2- Al-Ahly Bank of Iraq

The impact of electronic banking services on liquidity

Table (11) Simple regression coefficients between electronic banking services on the variable (liquidity) of the National Bank

dependent variable	Liquidity variable			(F)	Sig
				Calculated •	
independent variable	Values (β)	(T)	Sig		
		calculated		7.571	0.000
intercept	1.451	1.571	0.139		
Electronic Banking Services	1.678	5.812	0.000		
	Corrected R ² = 0.469		Square R ² =0.447		

of Iraq

Source: prepared by the researcher based on the electronic calculator outputs for the results of a program using the statistical program (SPSS vr. 26)

From the results listed in the table above, when electronic banking services are increased by one unit, the liquidity variable will be affected by the increase at a rate of ($\beta = 1.678$), this means that there is a positive and statistically significant effect of the electronic banking services variable on the liquidity variable and this leads to the possibility of saying that the banking services variable Electronic will have a positive role in the liquidity variable, and this is evident through the value of the (t) test for the parameter Beta (B), which amounted to (5.812), which is evidence of the morale of electronic banking services below the significance level of 0.05. Through the results shown in the table above, we accept the hypothesis that says (there is a significant, statistically significant effect of the electronic banking services variable on the liquidity variable on the one hand. On the other hand, we find that the model studied between

electronic banking services and the liquidity variable It is in great agreement with the studied model, and this is evident from the calculated (F) value (7.571), which is a significant value below the 5% significance level.

In addition, it is noted from the above table that the value of the coefficient of determination (R^2) is (0.469%) and the corrected coefficient of determination is (0.447%), which shows that the interpretability of the regression model used is somewhat acceptable, which indicates that (44.7%) of the The changes that occur in liquidity are due to the variable of electronic banking services.

3- Commercial Bank of Iraq

8- The effect of electronic banking services on the (liquidity) variable

For the purpose of testing the hypothesis of a statistically significant effect of electronic banking services on (liquidity), according to the results shown in the table below.

Table (12) simple regression coefficients between electronic banking services on the (liquidity) of the Commercial Bank of Iraq

dependent variable	Liquidity variable			(F)	Sig
			Calculated •		
	(β)	(T)	Sig		
independent variable	Values	calculated		9.377	0.000
intercept	1.658	1.571	0.139		
Electronic Banking Services	1.096	4.627	0.000		
	С	orrected $R^2 = 0.516$		Square R ² =0.482	

Source: prepared by the researcher based on the electronic calculator outputs for the results of a program using the statistical program (SPSS vr. 26)

From the results listed in the table above when electronic banking services are increased by one unit, the liquidity variable will be affected by the increase at a rate of ($\beta = 1.096$), this means that there is a positive and statistically significant effect of the electronic banking services variable on the liquidity variable and this leads to the possibility of saying that the banking services variable Electronic will have a positive role in the liquidity variable, and this is evident through the value of the (t) test for the parameter Beta (B), which amounted to (4.627), which is evidence of the morale of electronic banking services below the significance level of 0.05. Through the results shown in the table above, we accept the hypothesis that says (there is a significant, statistically significant effect of the electronic banking services variable on the liquidity variable It is in great agreement with the studied model, and this is evident from the calculated (F) value (9.377), which is a significant value below the 5% significance level. In addition, it is noted from the above table that the value of the coefficient of determination (R^2) was (51.6%) and the corrected coefficient of determination was (0.48.2%), which shows that the interpretability of the regression model used is somewhat acceptable, which indicates that (48.2%)) Of the changes that occur in liquidity is due to the variable of electronic banking services.

9- The conclusions:

9.1- Through the results of the previous analysis, it became clear that there is a discrepancy in the type of relationship between the indicators of electronic banking services and the liquidity variable of the study sample banks, which was reflected in the discrepancy in the impact left by some indicators of electronic banking services, and the reason for this is due to the varying levels of banks in providing services Electronic banking and the extent of its use of modern technology.

9.2 - The liquidity of the study sample banks increases steadily with the increase in the use of electronic banking services with its three variables, teller machines, automated teller machines (ATMs), point of sale devices (POS), and cash payment devices (POC).

9.3- The results of the description and analysis of the ATM variable showed that the National Bank of Iraq recorded the highest standard deviation rate and was the best in the level of that electronic service, as it exceeded the overall average rate of the total of the (3) banks of the study sample.

- 9.4- The statistical results showed the existence of a statistically significant correlation between the indicators of electronic banking services and the liquidity index of the study sample, for the banks of the study sample, and this was proven through the results of the analysis.
- 9.5- Through the results of testing the hypotheses of the correlation relationship and its analysis of the study variables for electronic banking services and the banking financial performance of the banks, the study sample shows that there is a direct statistically significant correlation between (moderate) to (strong) for the banks of the study sample between the variables of electronic banking financial services and liquidity and at the level of significant significance (P<0.01).

10- Recommendations: -

- 10.1- Banks should pay attention to providing and upgrading electronic banking services through the use of modern technology and increasing investment in them, similar to global and regional banks, in light of the increasing demand for electronic banking services by customers.
- 10.2- Develop appropriate strategies and policies by the management of banks to ensure that they provide electronic banking services to current and prospective customers at reasonable prices and work to increase the geographical area of the beneficiaries of these services to ensure the continuity of providing these services and thus improve their liquidity.
- 10.3- Increasing the qualification and training of employees on modern methods of electronic banking services in a way that makes them able to face the technical problems that represent the bulk of the problems of electronic banking.
- 10.4The private Iraqi commercial banks in general, and the sample banks of the study, should Especially increasing the number of ATMs and points of sale to reach banking services to all members of society, especially in remote areas, in order to increase the geographical area they serve.
- 10.5- Improving the spread of electronic banking services through the development of legislation, regulations, laws and regulatory frameworks that regulate the work of these services and provide legal protection for providers and users of those services from cases of penetration and manipulation that may occur as a result of its use as it is provided electronically and is vulnerable to cases of penetration.

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