Retail Payment Techniques and Their Impact on the Volume of Bank Deposits

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Abstract. The aim of the research is to demonstrate retail payment techniques using various electronic payment cards issued by banks. The research sample is in the Iraqi banking environment and to analyze the extent of its contribution to enhancing the volume of bank deposits, and then to know the relative importance of the volume of deposits between banks, the research sample. The research started from the problem of whether the volume of bank deposits is the most affected by the adoption of retail payment techniques by the banks of the research sample, and does their adoption really lead to enhancing the volume of deposits in banks? This research was applied in some commercial banks operating in Iraq, as the temporal limits extended for a period of (15) chapters over a period of nearly four years, and the research used a set of statistical analyzes and tests using the statistical financial programs SPSSv.23 and EXCEL, and the research reached a set of results, the most important of which showed The results showed that 75% of the banks, the research sample, demonstrated the existence of an impact relationship between retail payment techniques and the path of the volume of their deposits, which means the importance of the electronic payment service for the bank's customers. In banks if they feel the ease of withdrawing their money and using it in their daily expenses.

Keywords. Retail payment, bank deposits, credit cards, Private banks

1. Introduction

Today, banks operate according to the latest technological developments available to provide time and convenience to increase the customer base, starting with the salary settlement project and linking it with personal loans. However, the problem in that is embodied in whether the volume of bank deposits is the most affected by the adoption of retail payment research techniques, and does its adoption really lead to strengthening How big are the banks? Deposits in banks are considered one of the most important financial resources in the bank, which greatly affects the volume of activity and then profits. Because banking awareness in Iraq is still at a level that does not meet ambition, the Central Bank of Iraq has built an electronic system for retail payment as a means to increase banking transactions with customers in order to Increase their deposits. From here, the importance of the research appeared in showing the impact of retail payment techniques on the volume of bank deposits. Current study aims to explaining
retail payment techniques in the Iraqi banking environment and analyzing its short-term financing sources, besides measuring the contribution of adopting retail payment technologies in enhancing the volume of bank deposits. Moreover, statement of the relative importance of the growth of the volume of deposits during the research period. In addition, measuring the effect of retail payment techniques on the sources of the volume of bank deposits of the research sample banks.

To test the research model, the following hypothesis was adopted: There is no statistically significant effect of retail payment techniques on the volume of bank deposits of the research sample banks. Based on what was stated in the literature related to the variables of the study and with reference to the research problem and its objectives, a hypothetical model was built that embodies the nature of the relationship between these variables and the directions of their influence where retail payment techniques (an independent variable that included various bank electronic payment cards issued by banks as a research sample) meanwhile the volume of bank deposits of banks (the approved variable)

2. Theoretical framework

2.1. the concept of retail payment techniques

Defined as "a set of operations and technologies that transfer unitary value from one entity or person to another. Payment is usually made for the provision of goods or services or to fulfill a legal obligation. Payment is in various currencies using several methods such as cash, checks, electronic payments and cards" (Fundamentals of Global Payment systems and practices, 2018). As for modern payment systems, it is defined as “payment services that use information and communication technology, including encryption and communication networks (S.moertini & others, 2011).

He defined it (Khosravani, 2008) as the mechanism that regulates retail payments belonging to persons or institutions among themselves or for the benefit of other parties.

2.2. the importance of retail payment systems

1. Payment systems allow the completion of operations in a safe and timely manner, and many payment systems are used by companies to buy or sell goods and services, while individuals benefit from them to receive their salaries and purchase goods, while the government relies on them to receive taxes and pay interest. (BFIS) 2003:38).

2. Improving the ability to follow up and monitor the movement of funds to reduce the levels of financial crimes related to money laundering and terrorist financing.

3. These regulations contribute to the promotion of internal trade and the growth of internal consumption and thus contribute to moving the economic cycle in each country (Arab Monetary Fund, 2015)

4. The government transition from the traditional bureaucratic path to the technological path (Kuwait Ministry of Communications, Technology and Information, 2014) (Prabu et al., 2021).

2.3. The benefits of using segmentation techniques

The importance of non-cash payments has increased with the spread of the Corona virus in the recent period, as governments have encouraged some other countries to use non-cash payments and that the use of electronic payment technologies requires the following: (Raphael, 2020) (Moses, 2007) (Al-Roumi, 2004)
1. That electronic payment methods be accepted in all countries of the world, as general and broad acceptance of any system offered for electronic money is necessary to ensure its continuity and survival.

2. The availability of devices that manage such operations that take place remotely and that would provide confidence to customers by this means, so this role is originally linked to banks and others.

3. Electronic payment requires the availability of a legislative environment, whether in the Electronic Exchanges Law, the Trade Law, or the Exchange Law, which approves and regulates the provisions of electronic payment (Al-Raamadan & Hasan, 2022).

2.4. Challenges facing retail payment system

There are a number of challenges facing retail payment technologies, the most important of which are:

1. Digital Security: There are many hacking incidents of e-mail accounts, databases, and banking details on the global level. Cybersecurity constitutes the main challenge for the public, institutions, and the government. Mobile banking malware is a sophisticated virus that infects banks' mobile apps to steal password details and even hinder two-factor authentication by presenting victims with a fake login screen when they access their legitimate banking app.

2. Transition and coexistence: Cash is still common in many developing countries, mostly due to lack of trust, apparent financial illiteracy, face-to-face social and cultural factors, and slow and non-existent Internet connections.

3. Impact: With payments increasingly spread among various stakeholders globally, in the long term national and regional public authorities may not be able to supervise, supervise or regulate remote service providers in their jurisdictions. They may find themselves in dependency situations that challenge their mandate. In the future, the authorities may face more issues in which they have to find a new balance between competition, efficiency, and control over dominant stakeholders. (Ahamad et al., 2022)

2.5. Types of retail payment techniques

Mobile phone wallet: Mobile phones constituted one of the most important tools of the current era that enabled countries to achieve significant development socially and economically. Mobile applications have been employed in all areas of life and have made a significant contribution to the gross national product, especially after the spread of smart phones (Donald & Remy, 2012). It is defined as “a payment platform that stores money as value in a digital account on a mobile device which can then be used for payments with or without the need to use credit cards.” (Musbau & Joseph, 2018).

A-NFC: It is one of the most popular emerging technologies because it is often installed on payment cards and is not used by smart phones. It is a short-range wireless communication technology that allows data to be transferred between two devices without the need for physical contact between them. The connection is established automatically in less than one second, and thus the system allows making Fast and convenient payment process, and it is expected to be the fastest growing new technology for the Apple device.

B- QR: It is a relatively simpler technology that can be used to pay online as well as in stores in general. The QR code is displayed at the payment terminal or on the web page. The payer initiates the payment by reading the code with his mobile phone and then authorizes the transaction by entering the PIN on the same mobile terminal. (Innovative, 2012)
C- Text Messaging: An SMS-based application that acts as a transmitter and POS terminal and does not require a smartphone

D- Digital only: A wallet designed only for use via the Internet. It has limited application in the real physical world.

The mobile wallet can also be classified through the concept of a “vertical” wallet versus a “horizontal” wallet. The vertical “mobile wallet” was developed by a single service provider and is limited to services and is easier to manage and much cheaper. The “horizontal” wallet accommodates many mobile services. mobile phones developed by different service providers according to their needs (European payments council, 2014).

Electronic payment cards People all over the world rely more and more on electronic payments, especially by payment cards, which are defined as (electronic payments made using a plastic card at a point-of-sale terminal). It is not surprising that the use of cards varies greatly across countries (Morten & Umar, 2018: 69). Payment cards authorize their holder to pay for the sale by transferring the amount directly from the buyer’s account to the seller’s account (Dudin, 2006: 204). It is noted that this card depends on the customer’s actual balances with the bank in the form of a current account to meet the expected withdrawals of the card-holder customer. These cards are distinguished It saves time and effort for customers (Abdul Samie, 2005) and payment cards include several types, including /

A- Credit card: It is a plastic card that contains the name and identity of the owner on its surface, and there is a magnetic strip on the back that contains the identity and address of the owner. Computerized financial systems such as ATMs use this information to distinguish the identity of the card owner when withdrawing money. 2012) The credit card usually has annual fees and provides customers with a predetermined credit limit that they cannot spend beyond which interest begins to accumulate on these cards immediately after cash withdrawals are made. After a predetermined period in the case of goods and services, customers need to pay the minimum amount due On the Card (Parker & Swatman, 2002)

B- Renewable credit cards: It is a type of payment card that is used as a loyalty and credit tool at the same time, as it allows its holder to obtain goods and services for the bank issuing that card. The bill sent to the bank every month, but he is obligated to pay part of it only according to the agreement between him and the bank, and he has the choice in the rest between paying on the specified date or leaving him pending, and he is obligated to pay monthly interest on this delay in payment, and the interest is calculated on a daily basis on all amounts The rest (Abu Al-Ezz, 235).

Non-renewable credit card: This type of credit card is used as a tool for fulfillment and credit together, because the issuer of this card does not require a balance in the account of the card holder (Al-Harbi, 2006) as it grants him a certain ceiling that enables him to borrow for a period of time. Short, and in the event that the cardholder is late in paying, the bank recovers the amounts owed by him plus the delayed interest through the competent courts (Ali- Baghdadi, 2008).

Guaranteed Credit Cards: It is a card that provides the customer with a line of credit guaranteed by deposits. It is available to individuals who are not eligible to obtain a traditional credit card due to their lack of a known credit history or because they are included in a low credit bracket due to their previous financial problems. It is also used as a regular credit card such as the Visa Card. ) and (Master Card) (Al-Rawi, 2005)

E- The prepaid card: It is a card based on entering or fixing a specific amount in the card, and the amount is gradually reduced automatically whenever the card is spent or used.
Examples of this are the telephone calling card and the public boarding card. (Ali Shaheen, 2010).

F- Smart Card: It is a card the size of a credit card that carries an electronic chip or more, that is, it is a small-sized computer equipped with an accompanying memory where it is able to store, retrieve and process data and provides ease and ease, and reduces the chances of fraud and manipulation by including more and more accurate data. Specifically for the customer, and this card combines in one card all the roles played by credit cards, debit cards, and prepaid cards (Abdul Khaleq, 2010). This card has been used extensively and in large volumes by individuals and merchants. The card contains a stored cash value that decreases gradually at each purchase and increases by adding a value to it, and that value is loaded on that card through the automatic machine. (Ismail et al., 2013).

G- Debit cards: It is a plastic electronic card issued by banks linked to a current or savings account and is used in payments, purchases and cash withdrawals. The value of withdrawals or payments is deducted from the balance in the account, and there is nothing in this card called an interest rate or The annual profit percentage, because the amount that you withdraw or spend through the card is deducted from your balance (http://riyali.com).

As for the collection tools that deal with payment cards, they are cards - Automated Teller Machines (ATM): It is an electronic machine that allows bank customers to access their accounts with a magnetically encoded plastic card and code number. The work of the automatic teller machine is based on enabling customers to carry out many banking operations without the help of the cashier in the bank, such as withdrawing cash, depositing deposits, paying bills, obtaining an account statement from the bank and cash transfers, and there are two types of automatic teller machines. The first allows the customer to withdraw cash only and obtain a report of the account balance.

-Points of sale pos: It is a technology used by the consumer and allows electronic payment in return for obtaining goods and services. In fact, the POS system previously existed with the advent of the cash machine, but in the seventies due to the advent of technology it was converted into an electric machine (Whitteker, 2014). This technology uses electronic computers at the points of sale of shops and markets connected to the bank's electronic computer, where money transfers are made through this network, and through which the value of purchases for the customer is deducted from the balance of his account directly with the bank and added to the account of the commercial store with the same bank.

Sixth: Deposits: They are considered the most important sources of financing for banking establishments, as they rely on them to meet the largest percentage of the needs of economic establishments that suffer from a shortage of funds. As for the sources of these deposits, they are economic establishments and individuals who have surplus cash (Mahdi, 2008) and it is also known as an agreement whereby the customer pays an amount of money by one of the means of payment (cash, check, transfer, ATM card) and is based on This creates a deposit on demand or for a term to be determined by agreement between the two parties, and the bank is obligated to return this amount upon request or when the term comes, and it is also obligated to pay interest on this deposit (Sultan, 2005).

Among the reasons for accepting bank deposits over others in developing the financial resources of commercial banks are:

A- The cost of deposits is much less than the cost of capital and retained earnings, meaning that the cost of borrowing exceeds the cost of deposits because borrowers are usually exposed to greater risks. In other words, the cost of deposits is represented by the explicit and implicit interest rate paid by the bank to depositors, while the cost of capital and retained
earnings is represented by In the interest that would have been possible for investors to get if they invested their money in

B- Funds deposited against the issuance of bank guarantees.

C - Funds deposited in foreign currencies with local banks as a cover for open credits

d- Money deposited by one of the branches of a particular bank with another branch of the same bank (Abu Hamad, Qaduri, 2005)

Bank deposits are classified into several categories according to the time periods or according to the depositing entities

- According to the deadlines: It is divided into:
  - A- Demand current deposits: They represent funds deposited by individuals and organizations in commercial banks so that they can be withdrawn at any time according to orders issued by the depositor to the bank to be paid according to him or to another person designated by the depositor in the order issued by him to the bank (Al-Ali, 2002). These deposits constitute 95% of the total sources of funds in banks, and therefore banks depend on these deposits as a major and important source of obtaining funds, and they can be withdrawn at any time and therefore they are distinguished by their continuous movement of increase and decrease, and for depositors they are in the rule of cash as they can be used To pay off various obligations under checks, which requires the bank to maintain a high degree of liquidity to meet withdrawal requests on these deposits (Al-Shabib, 2012: 96) and the bank does not pay interest on these accounts, but the modern trend encourages giving simple interest, especially for large amounts, with the intention of attracting them (Petour and Jacob, 2017)

  - B- Term deposits: These are the deposits that the depositor does not have a request to return until after a certain period of deposit (al-Faqi, 2005). (Araj, 1994) and the interest for this deposit is higher than other deposits, and this is for several reasons, including (Al-Husseini & Al-Douri, 2008)

    - The length of the deposit bond period
    - It is not possible to withdraw any part of the linked deposit before its maturity date
    - The reliance of the bank on term deposits when granting loans and advances to its customers
    - The bank’s obligation to maintain an amount in the form of optional liquidity in return for its commitments from term deposits to be less than if they were current deposits.

  - C- Savings deposits: Savings deposits are represented by an agreement between banks and the customer according to which the customer deposits an amount of money with the bank in return for obtaining interest, provided that the customer has the right to withdraw from the deposit at any time he wants without prior notice (Hindi, Ibrahim, 2000).

    - D- Fixed deposits: These are the deposits that the depositor agrees with the bank to deposit in the bank for a specific period of time. (Al-Shabib, 2012)

3. **Methodology**

The period of sample was from 2017 to 2020 with actual observations The selection took place on a sample of local commercial banks that have data related to electronic payment cards, which number 4 banks (Ashur International Bank, the National Bank of Iraq, Baghdad Commercial Bank, and Khaleej Commercial Bank)
4. Results and Discussion

Simple linear regression analyzes were used for the purpose of testing the direct effect relationship between the independent variable (retail payment techniques that included various electronic payment cards issued by banks in the research sample) and the dependent variable (bank deposits). As well as using the coefficient of determination (R²) to explain the effect of the independent variable on the changes that occur in the dependent variable, as well as the standard coefficient of regression, Beta, which measures the response of the dependent variable when the independent variable changes by one standard degree. And the linear equation of simple linear regression, which was adopted within the SPSSV23 program, and the hypothesis states (there is no statistically significant effect of retail payment techniques on the volume of deposits of the research sample banks)

Table (1) shows the results of analyzing the effect of retail payment techniques "the explanatory variable" on the volume of deposits of banks, the research sample, the "response variable", using the simple linear regression method, and the results were as follows:

<table>
<thead>
<tr>
<th>Source / prepared by the researcher based on the outputs of Spss.23</th>
<th>Deposits</th>
<th>decision</th>
<th>R²</th>
<th>Significance level (F)</th>
<th>Calculated F-value</th>
<th>value of a significance level (t)</th>
<th>Beta (b)</th>
<th>the independent variable retail payment technologies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ashur International Bank</td>
<td>National Bank of Iraq</td>
<td>Baghdad Commercial</td>
<td>Khaleej Commercial</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reject the H0 hypothesis</td>
<td>0.578</td>
<td>0.00</td>
<td>17.809</td>
<td>82096233903</td>
<td>0.000</td>
<td>4.22</td>
<td>165.71</td>
<td>Ashur International</td>
</tr>
<tr>
<td>Reject the H0 hypothesis</td>
<td>0.263</td>
<td>0.05</td>
<td>4.639</td>
<td>2061541437.6</td>
<td>0.000</td>
<td>2.154</td>
<td>0.052</td>
<td>National Bank of Iraq</td>
</tr>
<tr>
<td>Reject the H0 hypothesis</td>
<td>0.441</td>
<td>0.00</td>
<td>10.246</td>
<td>1029461098</td>
<td>0.000</td>
<td>3.201</td>
<td>0.967</td>
<td>Baghdad Commercial</td>
</tr>
<tr>
<td>Accept the hypothesis of H0</td>
<td>0.148</td>
<td>0.15</td>
<td>2.265</td>
<td>28952541447</td>
<td>0.156</td>
<td>1.505</td>
<td>349.14</td>
<td>Khaleej Commercial</td>
</tr>
</tbody>
</table>

A. Ashur International Bank

The estimated regression equation (y1 = 82096233903 + 165.713x) explains only 57.8% of the relationship between the size of deposits (y) and retail payment techniques (X), which is a good reliable ratio. The nullity H0 B = { ( B1) / (B2 ) }= { 0/0 } and the significance level (F) = 0.001, which is less than the level of significance at (1%), and this calls for the rejection of the null hypothesis (H0) and the adoption of the hypothesis The alternative (H1), which states that "there is a statistically significant effect of retail payment techniques on the
volume of deposits of the research sample banks", achieved by the above estimated equation for the Ashur International Bank.

**B. The National Bank of Iraq**

The estimated regression equation \( y_1 = 206154143.7 + 0.052x \) explains only 26.3% of the relationship between the size of deposits \( y \) and retail payment techniques \( X \) of the National Bank, which is a good percentage that can be relied upon and this is supported by the possibility of error of the first and special kind By rejecting the null hypothesis \( H_0 \) \( \theta = \{ \frac{(B1)}{(B2)} \} = \{ 0/0 \} \) and the level of significance \( F = 0.05 \), which is equal to the level of significance at (5%), and this is what calls for rejecting the null hypothesis \( H_0 \) and adopting The alternative hypothesis \( H_1 \) that "there is a statistically significant effect of retail payment techniques on the volume of deposits of the research sample banks", achieved by the above estimated equation for the National Bank of Iraq.

**C. Baghdad Commercial Bank**

The estimated regression equation \( y_1 = 1029461098 + 0.967x \) explains only 44.1% of the relationship between the size of deposits \( y \) and retail payment techniques \( X \) for the Bank of Baghdad, which is a good reliable ratio, and this is supported by the possibility of error of the first and special kind By rejecting the null hypothesis \( H_0 \) \( \theta = \{ \frac{(B1)}{(B2)} \} = \{ 0/0 \} \) and the significance level \( F = 0.007 \), which is less than the level of significance at (1%), and this is what calls for the rejection of the null hypothesis \( H_0 \) And the adoption of the alternative hypothesis \( H_1 \), which states that "there is a statistically significant effect of retail payment techniques on the volume of deposits of the research sample banks", achieved by the above estimated equation for the Commercial Bank of Baghdad.

**D- Al Khaleej Commercial Bank**

The estimated regression equation \( y_1 = 28952541473 + 349.14x \) explains only 14.8% of the relationship between the size of deposits \( y \) and retail payment techniques \( X \) for Gulf Bank, which is a weak percentage that cannot be relied upon by supporting it with the possibility of rejecting the null hypothesis, which is is correct, which indicates that there is no relationship between the size of deposits \( y \) and retail payment techniques \( X \), and that the level of significance \( F = 0.156 \), which is higher than the level of significance at (5%), and this calls for accepting the null hypothesis \( H_0 \), which That is, "there is no statistically significant effect of retail payment techniques on the volume of deposits of the research sample banks", achieved by the above estimated equation for the Commercial Bank of Baghdad.

**5. Conclusions**

The most important conclusions that explain the results and the nature of the relationship between the variables to determine the opportunities and obstacles in the Iraqi banking sector, as the following conclusions were reached:

1. There is a clear and continuous growth of electronic payment cards in the National Bank of Iraq during the years 2017-2020, and this is in contrast to the Bank of Baghdad, as the percentage declined during the years of research, while the Assyrian Bank and the Commercial Gulf Bank maintained close ratios, which means that the National Bank of Iraq is The only one that takes the right steps to develop and promote retail payment services.

2. The Bank of Baghdad achieved the highest volume of deposits from the rest of the banks in the research sample, although it decreased significantly in the last year of the research.
years, as it was passed by the Gulf Bank, and the reason for that is due to the age of the Bank of Baghdad and the capacity of its customer base.

3. The results showed that 75% of the banks in the research sample demonstrated the existence of an impact relationship between retail payment techniques and the path of their deposit volume, which means the importance of the electronic payment service for the bank’s customers.

4. Retail payment techniques affect enhancing the volume of bank deposits in commercial banks, which means the importance of employing and strengthening these technologies to increase bank deposits.

6. Recommendations

After knowing the most important conclusions, it is necessary to give recommendations that enhance the strengths and address the obstacles after examining their causes, as the researcher proposes a number of recommendations, the most important of which are:

1. The need to push banks to gain depositors by enhancing the quality of retail payment services, providing the best electronic payment services to customers, and urging them to place the largest amount in a bank deposit.

2. Obliging banks to deploy automatic teller machines (ATMs) and POS devices to encourage citizens to keep cash in banks if they feel the ease of withdrawing their money and using it in their daily expenses, while continuing the project to settle employee salaries faster.

3. Urging the Banking Operations Division in the commercial banks, the research sample, to show more care in managing deposits, since the lack of them exposes the bank to risks and their increase diminishes the ability of the bank to enhance the volume of profits.

4. Providing an appropriate investment climate by improving the legislative environment and providing some advantages and tax exemptions for retail payment techniques as a means to fight bureaucracy, bribery and corruption.

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