



NEO-Banks in Iraq: Success Factors and Reality

Sura Naufel Bahjat and Zainab Hameed Gatea

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Sura Naufel Bahjet
Ministry of Finance
Accounting Department
Baghdad, Iraq
Suranaufel2016@gmail.com

Zainab Hameed Gatea
Ministry of Higher Education
Middle Technical University
Institute of Administration/ Al-Rusaffa
Baghdad, Iraq
Zainab1968@mtu.edu.iq

Abstract—Rapid historical growth in Iraq after 2003 caused many economic and political components to undergo radical change. In terms of its effects on the economy and the banking sector in particular, the political system changes in Iraq after 2003 were a significant factor. This was even though the sector had experienced several changes in the years leading up to the change, including monetary and financial policies and the Central Bank's independence, which had contributed to the expansion of the banking sector. These events and shifts led to the adoption of numerous technologies and modern techniques, especially in the banking sector; nowadays, Iraq is adopting and shifting the banking services into digital ones, also called (NEO-Banks). Hence, this study aims to research the primary services provided by the neo-banks and the factors leading to their successful adoption. This study researched the effect of Economic factors, Age factors, and Trust. The study results show a significant impact of the independent variables on the successful adoption of neo-banks.

Keywords—Digital banks, Economic Factors, Trust, Banking system, Iraq.

I. INTRODUCTION

The Central Bank of Iraq is trying to keep pace with technology and progress in the Iraqi banking sector. It is receiving excellent government attention to restructure it again according to a new reform vision pursued by the Iraqi government. Today, the monetary policy of the Central Bank of Iraq has taken an unconventional curve in the mechanism of opening banks. The Central Bank of Iraq revealed the instructions and controls for digital banks at the end of last March, which provides the public with options other than traditional banks, which contributes to increasing electronic payments and enhancing financial inclusion in Iraq.

Online banks, also known as digital banks or neo-banks, are financial institutions that operate entirely and exclusively over the Internet. Unlike traditional banks, digital banks usually do not have physical branches in cities but rather rely on providing services through websites and mobile phone applications. Phone applications can provide the banking services that citizens, merchants, and institutions need [16][13].

II. RESEARCH PROBLEM

The success and expansion of this type of bank are linked to the state of the economic environment and the nature of society, as these banks often rely on non-cash electronic operations that operate in an advanced banking system and a society that tends to use cards instead of cash in its transactions.

The factors that lead to the success and expansion of the role of financial inclusion are the citizen's confidence in the institutions and tools available to them, as well as seeing their interest in using them, especially since digital banks are natural banks, just like traditional banks, but they operate through applications and do not have face-to-face interactions. The young generation has become knowledgeable in using

financial technology for withdrawal, transfer, etc., unlike the older generations, who may have issues using digital currency.

From here arises the research problem of investigating the extent to which the economic environment affects the success of digital banks. Knowing the extent of Iraqi society's acceptance and trust in digital banks, should we study the effect of age on the success of launching digital banks?

III. THE IMPORTANCE OF RESEARCH

The research's importance stems from helping Iraqi legislators and the Central Bank of Iraq understand the most important obstacles and strengths that Iraqi society possesses related to Iraqi digital banks and the possibility of their application and success.

The research's importance also stems from helping researchers in the field of digital banking by increasing digital content related to the subject.

IV. RESEARCH HYPOTHESIS

1. Economic factors affect the application of digital banks.
2. This study assumes that the trust factor in the level of interest and the extent of the success of digital banks can directly affect the application and success of adopting digital banks in Iraq.
3. The age factor directly affects the success of any adoption of digital development, including digital banks.

V. CHARACTERISTICS OF DIGITAL BANKS

Various methods were utilized to accomplish the goals of this study; however, the analytical method and the historical approach were the most crucial. The analytical method seeks to establish a general situation and then apply the findings to a specific case, particularly to elucidate the ideas brought up by the topic.

VI. RESEARCH METHODOLOGY

The most important characteristics or features that characterize digital banks are [22],[3],[1],[8]:

- a) Ease of access: Customers can access their accounts and conduct banking transactions at any time, from anywhere via the Internet
- b) Saving time and effort: Not having to visit traditional bank branches saves a lot of time and effort for customers
- c) Security and protection: The digital bank provides high-security measures to ensure customers' financial data safety and protection.
- d) Forming a financial budget: The digital bank allows customers to easily track their expenses and manage

their financial budget through available reporting and analysis tools.

- e) Advanced banking services available: Besides essential services such as transfers and payments, digital banks can provide advanced services such as investment, insurance, and loans.
- f) Innovative user experience: The digital bank cares about the user experience and provides innovative and easy-to-use user interfaces to improve the customer experience
- g) Lower costs: Banking fees are often lower compared to traditional banks.
- h) Advanced technology: Using the latest technologies such as mobile applications, two-factor verification, and digital signatures.

VII. BASIC REQUIREMENTS FOR LICENSING DIGITAL BANKS

The conditions and requirements for establishing digital banks vary from one country to another, and this is subject to regulations. In some countries, financial and monetary legislation is determined by central banks or the Ministry of the Treasury. Therefore, reviewing local regulations and laws is important to become familiar with the establishment requirements. Digital bank in a country, but in general it includes some basic conditions such as [11],[13],[19]:

1. Legal basis:
 - a) Banking license
 - b) Compliance with laws
 - c) Data protection
 - d) Combating money laundering and terrorist financing
2. Technical basis:
 - a) Strong infrastructure
 - b) Data security
 - c) Network security
 - d) Financial technology
3. Financial basis:
 - a) Sufficient capital
 - b) Strong financial record
 - c) Sufficient liquidity
 - d) Independent audit
4. Operational basis:
 - a) Experienced team
 - b) A comprehensive business plan
 - c) Strong infrastructure
 - d) Solid operations.

VIII. IRAQI REALITY

Despite the relative newness of electronic payment systems in Iraq, the existence of a system structure of payments in Iraq is supervised by the Central Bank of Iraq and the laws and instructions that regulate. The electronic payment process will be the basis for supporting and enhancing the

work of digital banks in Iraq. The high use of digital technology will necessitate the modernization of competition policies and the application of uniform standards to enhance competition and confront the many digital monopolies that may arise. There is also a need to review educational curricula according to the needs and emerging trends in the digital economy, the economy, the labor market and society, with a focus on science, technology, engineering, arts, mathematics and a range of emerging digital skills, and to provide schools and other educational institutions with technology equipment. And developing a practical legal, institutional and regulatory framework and policy agenda to support the development of digital innovation, entrepreneurship and research and development [10],[7],[18].

The factors that lead to the success and expansion of the role of financial inclusion are the citizens' confidence in the institutions and tools available to them and their vision of their interest in using them. The Central Bank has also become at the forefront of global central banks in using various financial technologies that provide speed and accuracy, revealing at the same time that the bank has received many requests to establish digital banks. The concerned departments are working on granting them a license to carry out their work per the controls and instructions issued by the bank. Issuing controls for licensing digital banks by the Central Bank of Iraq means that the map of the banking sector will change during the coming period. These digital banks will provide additional value in addition to traditional banks. They will work to increase digital services and provide them at lower fees, as these banks work to digitize all banking services and transform them into Digital transactions over the Internet [17], [4].

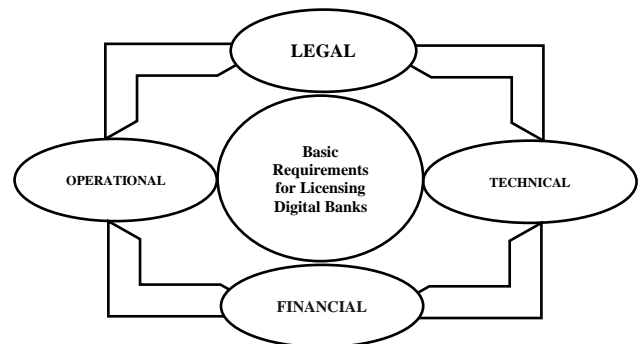


Figure (1) Basic requirements for

IX. IRAQI PAYMENTS SYSTEM

The Iraqi payments system consists of the following systems [5],[20],[7],[21]:

A. System Settlement Grosse Time Real (RTGS)

This system began operating in 2006, linking the Central Bank of Iraq with the main branches of banks and the Ministry of Finance to exchange high-value payment orders within Iraq. The effectiveness of this system provides a replacement for the manual execution of operations. It thus ends the risks arising from conducting a comprehensive settlement of payment values between banks and the bank. The Iraqi Central Bank owns the system and is responsible for installing its programs on website participants.

B. House Clearing Automated Check System (C-ACH)

The real-time gross settlement system receives the final net settlement after the participating banks and their branches automatically exchange payment orders. Electronic instruments encoded with magnetic ink are also handled via the public administration system. The original instrument is kept at the branch where it is deposited, and a copy of the instrument and its information is sent to the participant system through the branch system.

C. Clearing Bank Inter System (IBCS)

Government banks, separate from a more extensive banking system, use this system as an internal clearing exchange. It lets the bank's upper management monitor transactions efficiently and precisely, keeping track of every transaction that goes through this system.

D. Depository Securities Central System (CSD)

When it comes to securities, Iraq uses the Central Custody System. The Iraqi Ministry of Finance and Central Bank also manage the government securities issued under this system. The Central Bank can exert control over liquidity through this system. It oversees the public auction process for government securities, known as the primary market. The system also maintains the primary registry, also called the master registry. It processes interest payments and debt repayments. Lastly, it settles transactions involving government securities, which are concluded in the secondary market, an interbank market.

X. RESEARCH POPULATION AND SAMPLE

The study population consists of professional accountants working for the Ministry of Finance. A simple random sample of 364 participants was taken. The sample size was obtained using the table provided by [15], as shown in Figure 2 below.

It was shown that a sample size of 169 is necessary to reflect a study population of 300 to 400 individuals accurately. Considering the likelihood of not retrieving all distributed questionnaires, 171 out of 190 questionnaires were recovered and approved for research and analysis, representing 90% of those distributed.

Required Sample Size ¹									
Population Size	Confidence = 95%				Confidence = 99%				
	Margin of Error				Margin of Error				
	5.0%	3.5%	2.5%	1.0%	5.0%	3.5%	2.5%	1.0%	
10	10	10	10	10	10	10	10	10	10
20	19	20	20	20	19	20	20	20	20
30	28	29	29	30	29	29	30	30	30
50	44	47	48	50	47	48	49	50	50
75	63	69	72	74	67	71	73	75	75
100	80	89	94	99	87	93	96	99	99
150	108	126	137	148	122	135	142	149	149
200	132	160	177	196	154	174	186	198	198
250	152	190	215	244	182	211	229	246	246
300	169	217	251	291	207	246	270	295	295
400	196	265	318	384	250	309	348	391	391
500	217	306	377	475	285	365	421	485	485

Fig. 2. (15) DETERMINING SAMPLE

A questionnaire was created to gather primary data from the study sample, which was informed by the theoretical framework and prior studies pertinent to the research issue. The questionnaire comprises two sections: The first pertains to the demographic attributes of the research participants,

specifically gender, academic qualifications, and years of experience. The second section contains the questionnaire items organized into three dimensions: economic factors' impact, trust's effect, and age's influence. A five-point Likert scale was used to answer the questions in the second part of the questionnaire, from strongly agree to disagree strongly.

XII. DATA COLLECTION TOOL

This work used version No. 23 of the "Statistical Package for the Social Sciences, or SPSS" for data analysis and hypothesis testing. This research made use of the following statistical methods (2) recommended:

1. Orthogonal reliability Using the reliability coefficient "Cronbach Alpha," we can see how well the assertions comprising the study's scales hold together internally.
2. The determination coefficient R2 represents the proportion of variance in the dependent variable that one or more independent variables can explain.

XIII. ANALYSIS OF THE CHARACTERISTICS OF THE STUDY SAMPLE

Analysis of the first questionnaire section findings Table No. 2 shows that 22.2% of the study sample is from management and economics, while the remaining 77.8% are from accounting and finance. Additionally, it should be mentioned that at least 51.9% of them have a master's degree. This certifies their competence in the scientific community. The remaining people, constituting 33% of the total, earned bachelor's degrees. Lastly, 16% of the sample possessed a Ph.D. qualification.

This study's results are more convincing because the sample has been working for a long time; 38% of the participants had 4 to 6 years of experience, and 20% of the PhDs had more than 6 years of experience, so these people know what they are doing. Based on the information provided, it is evident that the research sample had the requisite knowledge and abilities to comprehend and respond to the questionnaire.

TABLE 2 CHARACTERISTICS OF THE STUDY SAMPLE

No.	Question	Redundancy	Percentage	
1	Education	Bachelor	56	%33
2		MSC	87	%51
3		PHD	27	%16
1	Experience	1-3 years	72	%42
2		4-6 years	65	%38
3		More than 6 years	34	%20
1	Age	25 -30 years	37	%22
2		30 - 35 years	59	%34
3		Above 35 years	75	%44

XIV. VALIDITY AND REALITY

A committee of university professors from accounting, business administration, and information systems departments, as well as a few banking professionals and digital technology specialists, were asked to review the

questionnaire to ensure its authenticity. A few paragraphs were cut, and others had their phrasing changed in response to the arbitrators' suggestions. We used the Cronbach Alpha technique to extract the reliability coefficient for the whole questionnaire and each variable in all its dimensions. This allowed us to verify that the tool was stable. A total reliability coefficient value of almost 95% showed the questionnaire's good internal consistency.

TABLE 3 DATA RESULTS FOR THE CRONBACH ALPHA TEST

	“Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted	Cronbach's Alpha
DB A1	60.40	84.442	.729	.726	.890	0.892
DB A2	60.35	86.323	.670	.756	.893	
DB A3	60.41	87.055	.640	.749	.894	
DB A4	60.65	85.194	.740	.709	.890	
EF1	59.95	88.963	.509	.727	.898	0.899
EF2	60.10	88.890	.498	.721	.898	
EF3	60.20	92.184	.359	.511	.902	
EF4	60.09	88.779	.543	.605	.897”	
AG 1	60.41	84.643	.649	.797	.893	0.893
AG 2	60.40	86.513	.608	.772	.894	
AG 3	60.09	86.850	.702	.762	.892	
AG 4	59.96	87.940	.650	.700	.894	
TR1	60.19	85.671	.545	.625	.897	0.899
TR2	60.35	86.133	.503	.639	.899	
TR3	60.30	88.589	.410	.393	.902	
TR4	60.26	87.828	.510	.583	.898	

According to [14], any Cronbach Alpha results ranging from (0.81 to 0.9) are considered good, whereas results ranging from (0.91-1.00) are considered excellent, as shown in Table no. 4 below

TABLE 4 CRONBACH ALPHA RESULTS INTERPRETATION

Alpha Cronbach Value	Interpretation
0.91-1.00	Excellent
0.81-0.90	Good
0.71-0.80	Good and Acceptable
0.61-0.70	Acceptable
0.01-0.60	Non acceptable

B. Determination Coefficient (R2)

The (R2) is considered one of the main tests in any model evaluation. According to [12], “The value of R2 ranges from zero to one; a higher value of R2 means that the model has

XV. DESCRIPTIVE STATISTICS FOR RESEARCH VARIABLES

A. Cronbach Alpha

As shown in Table 3, the independent variables Economic Factors (EF), Age (AG), and Trust (TR) show high “Cronbach Alpha results ranging from (0.893 to 0.899)”; the dependent variable shows Cronbach Alpha results of 0.892.

more predictive power”. Moreover, [9] summed the R2 values to four groups: “values exceeding 0.67 are considered high, and the second group contains moderate values ranging from 0.33 to 0.67. Values ranging from 0.19 to 0.33 are thought to be weak. Lastly, a lesser amount than 0.19 is an unacceptable value”. The study results are shown in table no. 5 below.

TABLE 5 OUTER MODEL TEST RESULTS USING R2

Model	R	R Square	Adjusted R Square	“Std. Error of the Estimate”
1	.732 ^a	.536	.501	.650

XVI. RESULTS AND DISCUSSION

The study's findings demonstrate a strong connection among the variables, indicating a significant influence on the successful adoption of digital banking in Iraq. A robust economy is fundamental to the establishment and sustenance of society. No society can endure without a sufficiently efficient economy to provide at least fundamental necessities, and every economy has a purpose: to address the evolving demands of individuals as their living circumstances change. Consequently, the economy is one of the elements of society. Society provides the framework in which the economy functions. Therefore, we are in a phase of transformation and transition that requires concerted efforts between all parties of society to create an attractive environment for the localization of the most significant amount of the economy and the involvement of the largest number of citizens in jobs and businesses, so that the wheel of the local economy moves, the economic circles move, and liquidity circulates in the country. The benefit is widespread for all, and we enjoy economic and social security that leads to prosperity and development: the country and its citizens.

To thrive in the future, all industries must undergo digital transformation. The banking sector has been at the forefront of this significant trend in the financial services sector, providing innovative solutions and making them easily accessible through digital transformation and the adoption of modern technologies. This trend has permeated all areas of the sector's operations. With the ability to do a wide range of banking transactions directly through smartphone apps, modern digital banking services ensure that all customers' needs are met. This helps achieve the goal of digital trust, which is based on offering comprehensive services with total reliability to improve customer experiences. Financial institutions are firmly committed to protecting their client's privacy and personal information as part of their mission to earn their confidence. One of the cornerstones of digital transformation, proper digital solutions help establish a solid foundation of digital trust, which is essential for this goal. A proper understanding of customer requirements is essential to

building digital trust, as it is the way to strengthen relationships with them and gain their trust by maintaining the security and privacy of their data. This trust reflects the organization's ability to provide an effective and comprehensive platform for all the services customers need based on reliable digital procedures capable of identifying suspicious transactions and avoiding all risks.

Our world has altered drastically due to technology. Digital spaces host work, education, entertainment, socializing, and more. Can we get all the advantages of this technology as we age? First, we must remove the myth that older generations are not tech-savvy since many are becoming so. We must encourage accessible digital technology and digital skills for older persons to promote healthy ageing and full integration into the digital economy. End-user advocates are essential to adopting accessibility. Digital accessibility and universal design may make ICTs critical to developing inclusive and accessible digital environments and communities for all ages. Health services are the most sophisticated resource for older individuals, while leisure and entertainment are behind. ICTs may let people buy things online, pay taxes, securely execute financial transactions from home, and acquire new skills via e-learning platforms. Electronic health and wellness apps help elders stay healthy and independent. Thanks to technology, seniors can stay in touch with family and friends and overcome social isolation and loneliness. Therefore, we must raise awareness in Iraqi society regarding the security of the digital financial system and boost consumers' trust in digital banks to strengthen the system's implementation.

XVII. RESEARCH LIMITS

1. Objective Limits: The research only considers the perspectives of accountants working for the Ministry of Finance.
2. Spatial Limits: The spatial limits of the study are represented by one department and do not taking into account the branches affiliated with the ministry, including banks and the Tax Department
3. Temporal Limits: The field study was conducted during two months in the year 2024

REFERENCES

- [1] M. Afaneh, "The Effect of Disclosure and Transparency Criteria In Saudi Banks on The Financial Ratios Indicators", *Journal of Economics and Administrative Sciences*, 25(116), 2019, 290-303, doi: <http://dx.doi.org/10.33095/jeas.v25i116.1798>.
- [2] A. Afthanorhan, A. Nazim, S. Ahmad, "A parametric approach using z-test for comparing 2 means to multi-group analysis in partial least square structural equation modeling (PLS-SEM)", *British Journal of Applied Science & Technology*, 6(2), 2015, pp. 194-201, DOI: 10.9734/BJAST/2015/14380.
- [3] Z. Ahmed, "Public Relations and Competitive Advantages in Banks", Dar AlHamid Publishing and Distribution, Amman, 2016.
- [4] N. Al-Kaabi, I Al-Saadi, "The role of the central bank of Iraq in confronting economic crime", *Edelweiss Applied Science and Technology*, 8(3), 2024, pp. 374-386, doi: <https://doi.org/10.55214/25768484.v8i3.1663>.
- [5] K. Al-Rubaie, N. Al-hafid, "The Role Of Electronic-Payment Service Providers In The Development Of E-Banking In Iraq-An Applied Research In Central Bank Of Iraq", *International Journal of Research in Social Sciences and Humanities*, 2020, doi: <http://dx.doi.org/10.37648/ijrssh.v10i01.042>.
- [6] A. Al- Khafaji, S. Elshahookie, W. Al- Haidari, "The impact on the current developments of the Central Bank of Iraq on activating bank credit for the private commercial banking sector", *Journal of Accounting and Financial Studies (JAFS)*, 19, 2024, pp. 28-16.
- [7] A. Al-shakrchy, "Issues of electronic banking services: The case of commercial bank of Iraq", *Journal of Accounting and Financial Studies (JAFS)*, 19, 2024, pp 1-15, doi: <http://dx.doi.org/10.34093/1pqqjyr29>.
- [8] W. Chin, "Commentary: Issues and opinion on structural equation modeling", *Management Information Systems Research Center, University of Minnesota*, Vol. 22, No. 1, 1998, pp. vii-xvi .
- [9] F. Eidan, " The Banking Sector in Iraq after 2003 between the Problems of Reality and Reform Efforts", *World Economics and Finance Bulletin*, 13, 2022, pp. 59-70.
- [10] U. Gasser, O. Gassmann, T. Hens, L. Leifer, T. Puschmann, L. Zhao, "Digital banking 2025", *Research platform Alexandria*, 2017.
- [11] J. Hair, M. Sarstedt, "Advanced issues in partial least squares structural equation modeling", *SAGE Publications*, 2017.
- [12] N. Hamid, I. Alwan, "Banking Activity In Iraq Reality And Future", *Russian Law Journal*, 11(7S), 2023, pp. 426-435, doi: <http://dx.doi.org/10.52783/rlj.v11i7s.1233>.
- [13] M. Konting, N. Kamaruddin, N. Man, "Quality Assurance in Higher Education Institutions: Exit Survey among Universiti Putra Malaysia Graduating Students", *International Education Studies*, 2(1), 2009, pp. 25-31, doi: <https://doi.org/10.5539/ies.v2n1p25>.
- [14] R. Krejcie, D. Morgan, "Determining sample size for research activities", *Educational Psychol Meas*, 1970, pp. 607-610, doi: <https://doi.org/10.1177/001316447003000308>.
- [15] A. Mutlag, H. Salman, "Measuring the impact of e-banking services in the banking reform process in Iraq Comparative study during the period 2012-2017", *Opción: Revista de Ciencias Humanas y Sociales*, (21), 2019, pp. 963-988.
- [16] M. Rahi, S. Faraj, "The Impact of Financial Crisis in Iraq on Iraqi Banking Performance: Analytical Study", *Webology*, 19(1), 2022, pp. 2397-2413, DOI: 10.14704/WEB/V19I1/WEB19162.
- [17] M. Rashid, " Easuring the impact of the window of selling foreign currency in selected indicators of financial stability in Iraq for the period (2004-2016)," *Iraqi Journal of Economic and Administrative Sciences*, Faculty of Administration and Economics, No. 57, 2018.
- [18] D. Roy, "Licensing Digital Banks and Proposing a Regulatory Regime for them in India", *Vinimaya*, 44(4), 2024.
- [19] M. Talib, K. AL-Bakri, "The Impact of Digital Banking on Banking Competition: A Case Study of a Sample of Iraqi Commercial Banks", *International Journal of Religion*, 5(10), 2024, pp.551-562, doi: <https://doi.org/10.61707/et4kqz80>.
- [20] K. Uchupalanan, "Competition and IT-based innovation in banking services", *International Journal of Innovation Management*, 4(04), K. 2000, pp.455-489, doi: <https://doi.org/10.1142/S1363919600000238>.
- [21] S.O.K. Al-Amir, "The impact of the digital transformation of Iraqi commercial banks on accounting disclosure in light of cybersecurity risks," *Al Kut Journal of Economics and Administrative Sciences*, 14(45), 2022.