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AN ANALYTICAL STUDY OF MONETARY AND PLEDGED CREDIT POLICIES OF IRAQI BANKS FOR THE PERIOD 2010 -2023

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Abstract :

Abstract: In Iraq, cash and pledged credits are crucial components of the financial system, playing a significant role in supporting various economic sectors and financing investments necessary for sustainable growth. This study employs a comprehensive analytical approach, utilizing financial and economic data from the Central Bank of Iraq to formulate recommendations for credit policies that enhance long-term financial and monetary stability. The research aims to guide monetary and banking policies towards a more effective use of credit instruments. It highlights the impact of credit policies on strengthening both the public and private sectors, offering a detailed analytical framework to identify opportunities and challenges associated with credits, pledges, and liquidity. The analysis indicates that credit policies explain approximately (83%) of the variance in monetary policy performance, reflecting their significant influence on Iraq's financial and monetary markets during the study period. Furthermore, bank credits account for about (87%) of the changes in private sector economic growth, emphasizing the critical role of banking credit in fostering private sector expansion. Overall, banking credit is shown to be a key driver of economic growth in both the public and private sectors in Iraq.

Keywords: Credit Policies, Monetary Sector, Monetary Credits, Pledged Credits, Commercial Banks, Monetary Policy Performance, Economic Growth and Banking System.

1. Introduction: The financial market is critical in driving economic growth, particularly within the private sector, by facilitating access to credit and capital. Credit policies and banking credits, such as cash credit, pledge credit, and mortgage credit, serve as vital instruments that influence market dynamics and economic expansion. These credit types provide businesses with the necessary funds to invest, expand, and innovate, stimulating overall economic activity. In many economies, including Iraq, the relationship between banking credits and private sector growth is complex and multifaceted. Various factors, such as monetary policies, financial regulations, and economic conditions, determine how credit can effectively contribute to market stability and growth. Understanding how different types of credits impact the financial market and the private sector's development is crucial for policymakers, financial institutions, and businesses seeking to create a more vibrant and sustainable economy. This study seeks to provide a comprehensive analysis of the impact of credit policies and banking credits on financial market performance and private sector growth. By examining the roles of cash credit, pledge credit, and mortgage credit, the study aims to uncover the specific mechanisms through which these credits influence market outcomes. Ultimately, the research aims to offer actionable insights and recommendations to enhance the effectiveness of credit policies, improve market performance, and foster sustainable growth in the private sector.

2. Research Problem: The effectiveness of monetary and pledged credit policies enacted by Iraqi banks has significant implications for the country's economic growth and financial stability. Despite the initiatives by the Central Bank of Iraq to enhance the role of the banking sector through various credit policies from 2010 to 2023, there remains a gap in understanding how these policies affect economic performance, liquidity, and market dynamics. This research aims to investigate the following key questions:

- What trends and changes have occurred in the monetary and pledged credit policies of Iraqi banks from 2010 to 2023?
- How do these credit policies influence the liquidity and stability of the financial system in Iraq?
- To what extent do monetary and pledged credits contribute to the economic growth of the private sector during this period?
- What challenges and limitations do Iraqi banks face in implementing effective credit policies?

This study seeks to provide a comprehensive analysis of the relationship between monetary and pledged credit policies and their effects on Iraq's economic landscape, thereby offering insights for policymakers to enhance banking practices and promote sustainable economic development.

3. Research Importance: This study is significant for several reasons, understanding Economic Impact By analyzing the monetary and pledged credit policies of Iraqi banks from 2010 to 2023, this research will shed light on their impact on economic growth and financial stability, providing essential insights into how banking practices influence broader economic outcomes. The findings will assist policymakers in identifying effective strategies and necessary adjustments to credit policies, ultimately leading to improved economic performance and enhanced financial stability in Iraq. By examining the challenges and limitations faced by Iraqi banks, the study will provide valuable recommendations for overcoming these obstacles, fostering a more robust banking environment conducive to growth. The results of this study will serve as a foundation for future research on banking policies and economic performance in Iraq and similar emerging markets, promoting ongoing academic inquiry into this vital area of study. Overall, this research aims to enhance the understanding of monetary and pledged credit policies and their implications for Iraq's economic landscape, ultimately supporting sustainable development and financial resilience.

4. Research Hypotheses:

- Hypothesis (H1): The types of banking credits specifically cash credit, pledge credit, and mortgage credit provided by the Central Bank significantly influence market dynamics and contribute to economic expansion, particularly within the private sector in Iraq.
- Hypothesis (H2): Cash and pledge credits provided by commercial banks have a substantial impact on economic growth in the private sector in Iraq.

5. Literature Review: These studies provide a comprehensive view of previous developments and findings, helping to identify gaps in the literature and guide future research efforts:

The study by Thaeab (2022) on the impact of credit policy on achieving justice and prosperity in Iraq (a normative study) addressed the economic and social distortions in the Iraqi economy, indicating that increasing national income can contribute to a more equitable distribution of income and improve overall welfare. Similarly, the study by Jaber et al. (2021) on the development of the volume of bank credit and its impact on some economic variables in Iraq for the period (2004-2018) reviewed the growth

of bank credit in Iraq over a long period, highlighting the government's inclination towards state banks and its impact on the effectiveness of cash credit in combating inflation and achieving economic stability. Al-Rufaye's (2020) study analyzed the impact of monetary policy trends on the components of the balance sheet of the Central Bank of Iraq for the period (2003-2017). It reviewed the trends in monetary policy after 2003 and their impact on the balance sheet of the Central Bank of Iraq, highlighting the effects of monetary policies on social justice, foreign direct investment, and other economic variables such as inflation and stability. The IMF study titled "Credit Policy and Economic Activity in Developing Countries" assessed the stability programs supported by the International Monetary Fund. It found that IMF-supported stability programs led to modest reductions in economic growth rates in developing countries during the period (1977-1979), using macroeconomic models to analyze the implications of these policies.

The study by Sarour (2023), titled "The Impact of Creditworthiness on Earnings Management Practices: An Applied Study on Egyptian Companies," measures the impact of creditworthiness on companies' tendency to use earnings management practices. It examines companies listed on the Egyptian Stock Exchange from (2013 to 2018) and recommends that credit institutions assess creditworthiness through dimensions of debt, liquidity, and profitability before granting credit.

The study by Faisal (2022), titled "Analyzing the Impact of Monetary Policy on Bank Credit: An Applied Study on the Iraqi Banking Sector Using the ARDL Model from (2005-2021)," analyzes the impact of monetary policy on bank credit in Iraq over an extended period from (2005 to 2021). It illustrates the long-term relationships between money supply, policy interest rate, inflation, bank deposits, and bank credit. The study by Mohammed et al. (2022), titled "Bank Deposits and Credits and Their Impact on the Operational Objectives of Monetary Policy: Iraq as a Model for the Period (2004-2020)," focuses on evaluating monetary policy tools such as the policy rate and exchange rate and their impact on the Iraqi economy. It highlights the ineffectiveness of these tools in achieving the monetary policy objectives during the mentioned period. The study by Samaida (2024), titled "The Impact of Monetary Policy on Economic Stability Indicators in Iraq: An Analytical Study for the Period (2005-2022)," analyzes how Iraqi monetary policy since 2003 has impacted economic stability indicators. It highlights the role of the Central Bank of Iraq in addressing economic challenges and emphasizes the importance of assessing creditworthiness and the impact of international and domestic policies on national economies.

The study by Konovalova (2022), titled "Evaluation of Credit Policy Implementation in Commercial Banks: Evidence from Latvia," focuses on evaluating the implementation of credit policies in commercial banks in Latvia. The study used surveys, quantitative data analysis, and system analysis to assess credit risk management systems and policy implementation in these banks. It highlights the importance of systematically evaluating credit risks and internal policy frameworks to mitigate risks and enhance lending efficiency in the commercial banking environment in Latvia. Rahman (2011), in the study titled "Policies and Performance of Agricultural (Rural) Credit in Bangladesh: What is the Impact on Agricultural Production," evaluates the performance of agricultural and rural credit programs in Bangladesh and their impact on agricultural production. The study identifies challenges and offers solutions to enhance credit policies and programs for rural development. It points to a positive relationship between agricultural credit and agricultural production and provides recommendations for policy improvements to promote sustainable rural development and agricultural credit. Sabri (2021) analyzed the role of monetary policy in activating the banking credit channel in Iraq in the study titled "The Role of Monetary Policy in Activating the Banking Credit Channel: A Case Study of Iraq." The study focuses on the role of monetary policy in supporting and enhancing banking credit in Iraq to stimulate economic growth and address unemployment, analyzing the impact of monetary policy on banking credit and the role of the central bank in supporting commercial banks since (2003). Al-Ali (2021), in the study titled "The Impact of Currency Auction on Direct Cash Credit Granted by Banks," focuses on the impact of the currency auction policy practiced by the Central Bank of Iraq on direct cash credit from commercial banks. The study employs descriptive and inferential statistics, data analysis using SPSS, and offers recommendations for adjustments in currency auction mechanisms for better management of foreign currency reserves and improved management of commercial banks' reserves in Iraq. Ali (2018) examined the impact of monetary policy on the volume of agricultural bank credit in Iraq during the period from (2000 to 2014). The study used regression analysis with SPSS to measure the impact of monetary policy factors such as exchange rates and interest rates on the volume of agricultural credit. Al-Janabi (2021) studied the impact of interest rates on the volume of cash and pledged credit in Iraq from (2004 to 2016).

The study used regression analysis and statistical significance tests to evaluate this impact, finding a weak and statistically insignificant relationship between interest rates and the volume of cash and pledged credit during the studied period. The study recommended activating the interest rate system

as a tool of monetary policy and improving coordination between commercial banks and the central bank. Mamman & Hashim (2013) investigated the impact of private sector credit on real sector activities in Nigeria using aggregate time series data from (1986-2010). The results of the ordinary least squares multiple regression estimates showed a statistically significant impact of private sector credit on the real sector in Nigeria. The study by Nwakanma & Omojefe (2014) confirmed the nature of the long-term relationship between private sector credit and economic growth in Nigeria during the period from (1981 to 2011), using autoregressive distributed lag (ARDL) and Granger causality methods. The results indicated a long-term relationship between economic growth and private sector credit in Nigeria, with no statistically significant causality in either direction.

Similarly, Hakwaashika (2018) conducted a study in Zambia on the relationship between the extension of private sector credit and economic growth using quarterly data from 2005 to 2017. The cointegration and error correction technique revealed a positive relationship between the expansion of private sector credit and economic growth.

Another empirical study by Effiong (2017) assessed the effectiveness of financial development and monetary policy in Africa using standard panel data techniques. The study revealed a statistically significant but weak relationship between financial development and the effectiveness of monetary policy in Africa. Asukwo (2020) conducted a study on commercial bank lending and agricultural sector growth in Nigeria, using multiple regression statistical techniques. The results revealed a significant positive relationship between loans and advances, liquidity ratio, bank assets, and interest rate on agricultural production in Nigeria. The study by Atyia & Dhahir (2023) on the role of credit granted to the private sector in addressing the problem of poverty in Iraq for the period (2004-2020), using government banks as a model, employed the ARDL model to examine the impact of private credit on poverty alleviation. The study showed a long-term equilibrium between government credit to the private sector and poverty levels in Iraq. The researchers recommended facilitating the granting of small and medium-sized loans and reducing cash loans for consumer purchases as measures to support productive projects and enhance economic development in Iraq. In another study, Osakwe (2019) evaluated monetary policy and banking sector credits in Nigeria. The analyzed data indicated a long-term relationship between monetary policy variables and banking credit in the country. The study showed that liquidity ratios and the monetary policy rate have a positive significance concerning banking sector credits in

Nigeria, while the cash reserve ratio and treasury bill rate have negative significance in the long-term concerning bank credits in Nigeria.

6. Methodology:

6.1. Research Objective: focuses on providing a detailed analysis of the impact of credit policies and banking credits on the financial market and the growth of the private sector. Specifically, the study aims to explore how various types of banking credits, such as cash credit, pledge credit, and mortgage credit, influence market dynamics, and contribute to economic expansion, particularly within the private sector. Through this, the study seeks to offer insights and recommendations for enhancing financial market performance and fostering sustainable private sector growth.

6.2. Data Collection Methods: Collected from various sources to ensure a comprehensive analysis by the Central Bank of Iraq on detailed information on credit policies, cash credits, and commitment credits. As well as academic databases such as PubMed, Scopus, Web of Science, and Google Scholar to supplement the financial and economic data with relevant literature. And (E-views) statistical software for data analysis.

6.3. Data Analysis Techniques: The analysis includes linear correlation techniques to measure the strength and direction of the relationship between credit policies, monetary policy performance and economic growth. T-test to determine the significance of correlation coefficients. Jarque-Bera test to see if the data follow a normal distribution, cointegration test to see if the long-run relationships between variables and their cointegration. Ordinary least squares regression to see if the relationships between variables are consistent and assess the model fit using R-squared, t-statistics and other measures. Simple regression analysis to see if the impact of credit policies and bank credit on stimulating monetary policy performance and economic growth is also included.

7. The Purpose, Types and Analysis of Credit Performance for Sectors:

7.1. Purpose of Credit: Credit policies set by financial institutions, including commercial and central banks, are designed to manage and direct the process of granting loans and credits to various economic sectors. These policies aim to balance stimulating economic growth with maintaining financial stability by regulating the volume and quality of credit. They establish criteria for customer eligibility based on factors such as income, credit history, and assets, and they determine interest rates, which impact the cost of borrowing. Additionally, these policies outline the type and value of collateral required, the repayment terms, and the permissible uses for loans, such as funding specific projects or business operations

(Mahmoud, 2012: 30; Saunders & Cornett, 2006: 260). Credit policies are crucial for achieving multiple economic and financial objectives. They support economic growth by providing essential financing for companies and individuals, enhancing investment and productivity. By setting strict lending criteria, they contribute to financial stability by reducing risks and default rates, thereby strengthening the financial system (Al-Najjar, 1997: 71). These policies also help regulate the financial market by avoiding excessive lending, which could lead to financial bubbles or shortages. Furthermore, they direct resources toward strategic sectors, such as emerging industries or small and medium enterprises (Hajela, 2009: 246). By controlling credit volume and interest rates, credit policies play a role in combating inflation and support monetary stability through coordination with broader monetary policies, thus enhancing confidence in the financial and banking system (Al-Husseini, 2000: 123).

7.2. Types of Credits: Credits provided by commercial banks vary to meet the different needs of individuals:

1.Cash credits: They include all types of loans granted by banks to customers where a specific amount of money is provided to be repaid with interest over a specific period of time. can be divided into (personal loans, corporate loans, commercial finance loans, and agricultural finance) (Al-Zaghebi, 2000: 80).

2.Pledged credits: They are financial obligations provided by the bank on behalf of its customers to ensure their implementation of certain contracts or commitments. Credits include letters of guarantee, documentary credits, pledges, and guarantees (Brealey, et al, 2018: 14). Credits are vital financial tools provided by commercial banks to meet the needs of individuals and companies, and these tools contribute to stimulating economic growth by providing the necessary financing for various activities and ensuring the implementation of financial and commercial obligations. (Abdul Salam, 2004: 41-63).

7.3. Analysis of the Performance of Cash Credit for Public Sectors: Studying how credit is distributed to various government institutions and its impact on the economic and financial performance of the state and public sectors is essential for financing investment projects like infrastructure (roads, bridges, airports), and covering budget deficits (Al-Zughbi, 2000:78). Infrastructure projects, especially in the public sectors, significantly benefit from cash credit. Additionally, the social impact of these projects, such as improved mobility and economic activity, along with electricity and energy projects like power plants, are critical areas of focus. Analyzing the performance of cash credit in Iraq highlights the importance of these loans in financing essential projects (Abdul Azawi, 2011:18).

7.4. Analysis of the Performance of Cash Credit for the Private Sectors: Analyzing cash credit in the private sector is crucial for assessing monetary policies and economic growth. It reviews how loans are used for new projects, business expansion, working capital, and equipment purchases. (Sithole, 2021, p. 47).

7.5. Analysis of the Performance of Cash Credit for Public Institutions: Evaluating the efficiency of loans for government institutions involves assessing their impact on the performance of agencies and state-owned companies across sectors like health, education, infrastructure, and transportation. Cash credit is allocated for new projects in critical areas, infrastructure development, covering operating costs, and purchasing necessary equipment (Al-Wadi, 2010: 135). This analysis shows the significance of these loans in supporting government projects and public services in Iraq. However, challenges such as management effectiveness, transparency, and sustainable financing remain. Practical recommendations are needed to improve monetary credit performance and promote financial stability and sustainable development (Al-Dulaimi, 1990:76).

8. Analysis and Impact of Cash Credit on Monetary and Economic Policies in Iraq:

In Iraq, the distribution of monetary credit is determined by central bank and government policies, which influence how credit is allocated across sectors. The financial system's structure, including bank size and liquidity, affects credit distribution, with larger banks having more capacity. Economic activity and political priorities also impact how credit is directed in both the private and public sectors (El Jabir, 2021: 138). The distribution of cash credit is also affected by economic and social factors such as economic growth rates, unemployment rates, and poverty, as these factors can affect the demand for credit and thus its distribution (Amidu & Hinson, 2006: 93-94). Innovations in financial technology such as electronic payment and digital finance can directly affect the distribution of cash credit by expanding access to financial services (Youssef 2012: 27). Therefore, the distribution of cash credit in Iraq is affected by several interrelated factors including monetary and fiscal policies, financial and monetary structure, foreign investments, economic and social factors, and financial technology. Changes in cash credit affect the flow of cash in the market and leads to increased job opportunities. (Al-Dulaimi, 1990: 77).

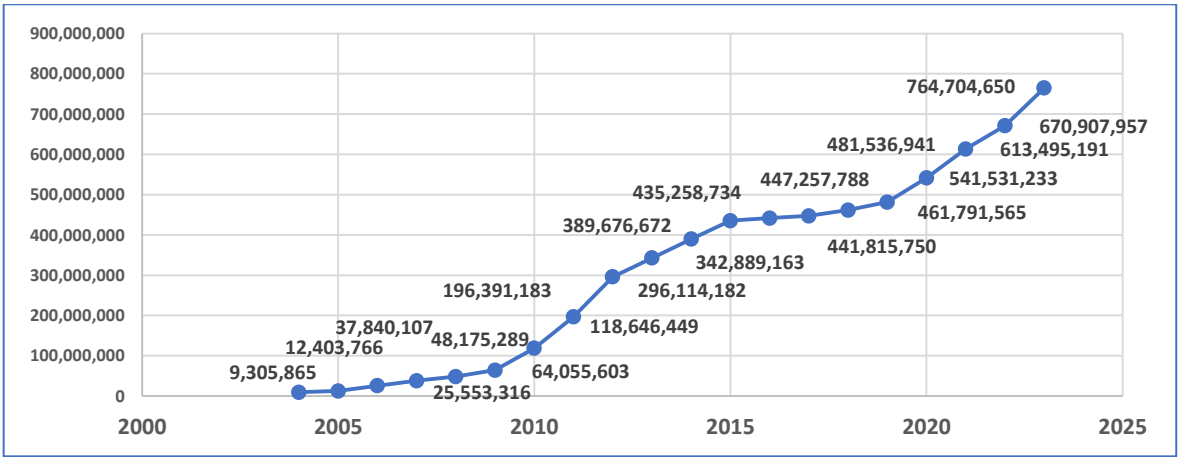
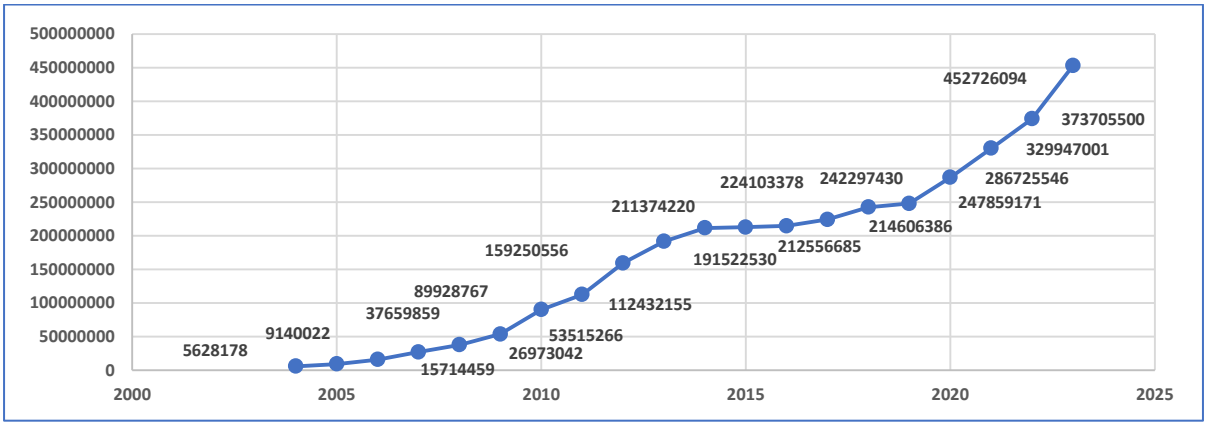


Figure 1. Total cash credit (IQD)

Source: Central Bank of Iraq https://cbiraq.org/SubCategoriesTable.aspx?SubCatID=98

Figure (1) highlights the general trends of the banking system and its impact on the economy, reflecting its response to challenges and opportunities in Iraq's changing economic environment. It shows the expansion in economic activity and investments across various economic sectors due to the availability of financing. Between (2004) and (2009), the total cash credit amounted to approximately (9.3) million Iraqi Dinars. The subsequent years saw a significant increase in cash credit, with a marked acceleration in the annual total of cash credit, indicating economic growth and increased demand for financing in the local market. From (2010) to (2013), the total cash credit rose to nearly (118.6) million Iraqi Dinars, reflecting economic recovery following the global financial crisis. This period experienced exceptional growth in cash credit, with significant annual increases. During (2014) to (2023), the total cash credit significantly increased, surpassing (389) million Iraqi Dinars in (2014) and continuing to rise in the following years. In (2020), there was a substantial jump in total cash credit to over (541) million Iraqi Dinars, reflecting the banking system's response to global and local economic and financial crises, such as the COVID-19 pandemic. In the period from (2021) to (2023), the total cash credit continued to rise strongly, supported by ongoing economic stimulus measures and enhanced liquidity in the banking system.

Figure 2. Cash Credit Provided to the Private Sector by Commercial Banks (IQD)



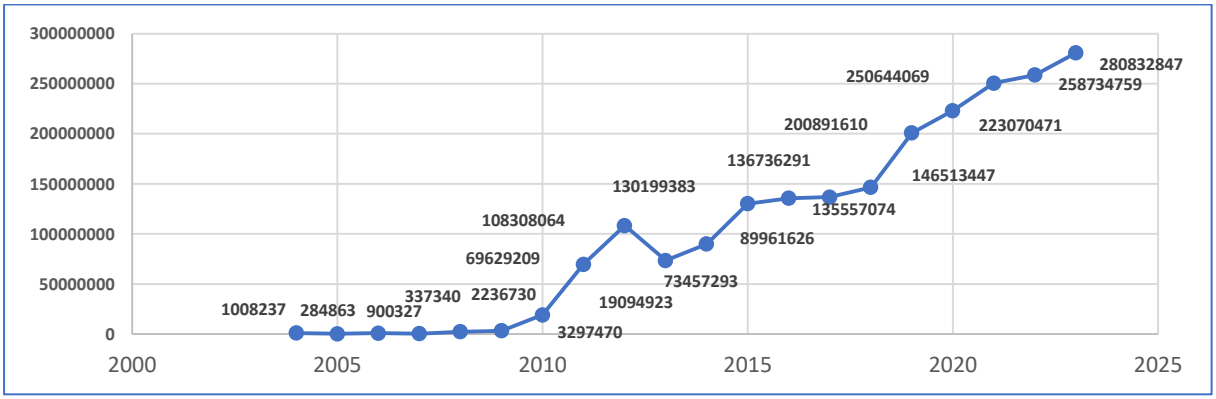
Source: Central Bank of Iraq https://cbiraq.org/SubCategoriesTable.aspx?SubCatID=98

Figure (2) shows the cash credit provided to the private sector by Iraqi commercial banks over several years. Starting from (2004), Iraq saw a notable increase in credit, growing from (5,628,178) million Iraqi Dinars to (37,659,859) million Iraqi Dinars by (2008), reflecting efforts to boost economic growth. From (2009) to (2011), credit rose significantly from (53,515,266) million Iraqi Dinars to (112,432,155) million Iraqi Dinars due to improved economic conditions and increased confidence in the private sector. Between (2012) and (2015), credit continued to grow from (159,250,556) million Iraqi Dinars to (212,556,685) million Iraqi Dinars, driven by ongoing investments despite political and economic challenges. From (2016) to (2019), credit increased from (214,606,386) million Iraqi Dinars to (247,859,171) million Iraqi Dinars, reflecting economic improvement and stability. The period from (2020) to (2023) saw a dramatic rise in credit from (286,725,546) million Iraqi Dinars to (452,726,094) million Iraqi Dinars due to the impact of the COVID-19 pandemic, which led to increased support for the private sector. Overall, the rise in credit over the years highlights economic growth and the response to various challenges, including oil price fluctuations and the pandemic, with significant increases indicating efforts to support the private sector during crises.

However, the impact of cash credit on economic policies in Iraq is significant, through financing economic growth by supporting investments in infrastructure, industries, and other services that enhance economic development in the country (Abdul Azawi, 2011:19). Additionally, cash credit influences other policies, such as foreign trade policies, tax policies, and social support policies, where financial policies can have reciprocal effects on cash credit and the economy as a whole. Challenges faced by cash credit

policies in Iraq include political instability, fluctuations in oil prices a primary income source for Iraq and weaknesses in the financial and monetary infrastructure (Abdulmajeed, 2023:86).

Figure 3. Cash Credit Extended to the Central Government by Commercial Banks (IQD)



Source: Central Bank of Iraq https://cbiraq.org/SubCategoriesTable.aspx?SubCatID=98

Figure (3) shows the cash credit provided to the central government by commercial banks in Iraq from (2004) to (2023). The data indicates a general upward trend with notable increases over the years. Post-2003: After (2003), the new government faced challenges in rebuilding, reflected in the gradual increase in credit from (1,008,237) million Iraqi dinars to (2,236,730) million dinars, showing growing dependence on bank financing.

(2009-2011): During this period, credit surged from (3,297,470) million dinars to (69,629,209) million dinars due to rising government spending on reconstruction and development amidst economic and political challenges.

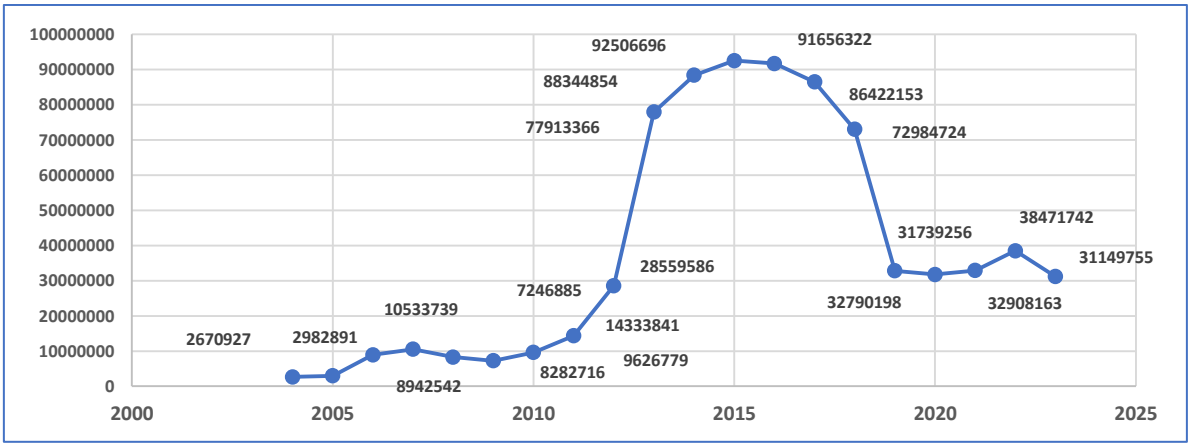
(2012-2015): Credit fluctuated due to varying financial needs, dropping to (73,457,293) million dinars in (2013) but rising again to (130,199,383) million dinars in subsequent years, reflecting changing economic and political conditions.

(2016-2019): Credit steadily increased from (135,557,074) million dinars to (200,891,610) million dinars, indicating ongoing financial needs despite persistent economic and political challenges.

(2020-2023): The credit amount rose significantly from (223,070,471) million dinars to (280,832,847) million dinars due to the COVID-19 pandemic, which necessitated additional funding to support the economy.

Overall, the increase in credit over the years reflects the government's growing reliance on bank financing to address economic and financial challenges, influenced by crises such as falling oil prices and the pandemic.

Figure 4. Cash credit provided to public institutions by commercial banks (IQD)



Source: Central Bank of Iraq https://cbiraq.org/SubCategoriesTable.aspx?SubCatID=98

Figure (4) depicts how commercial bank credit policies in Iraq were shaped by economic and political factors and their responses to various challenges.

(2004-2007): During this time, the new Iraqi government focused on rebuilding, resulting in an increase in credit to public institutions from (2,670,927) million Iraqi dinars to (10,533,739) million dinars. This rise reflects the government's support for public sector projects.

(2008-2011): The global financial crisis caused fluctuations in credit, but by (2011), credit surged to (14,333,841) million dinars as the government initiated large-scale development projects to stimulate the economy.

(2012-2015): Credit increased significantly from (28,559,586) million dinars to (92,506,696) million dinars, driven by continued investments in infrastructure and services despite ongoing security and economic challenges.

(2016-2018): With falling oil prices and rising economic challenges, credit levels experienced relative stability but with slight declines, dropping from (91,656,322) million dinars to (72,984,724) million dinars, reflecting strains on public sector financing.

(2019-2023): Significant reductions in credit occurred due to falling oil prices and the economic effects of the COVID-19 pandemic. By (2023), credit had declined to (31,149,755) million dinars, illustrating the difficulties in funding public projects during economic hardships.

Overall, the figure demonstrates the considerable fluctuations in credit to public institutions in response to domestic and international economic conditions, showing how credit policies adapted to support public sector financing during both growth periods and crises.

9. Analysis and Impact of Pledged Credits for Government and Private Sectors in Iraq:

In Iraq, loans finance infrastructure projects like roads, promote economic development, and improve public services. They also cover budget deficits, fund social programs, and support health and education. Additionally, these loans aid in repaying public debt, alleviate financial pressures, and enhance financial stability by increasing liquidity and addressing urgent cash needs. (Sithole, 2021: 47) **Figure 5.** Pledged credit provided to the private sector by commercial banks (IQD)

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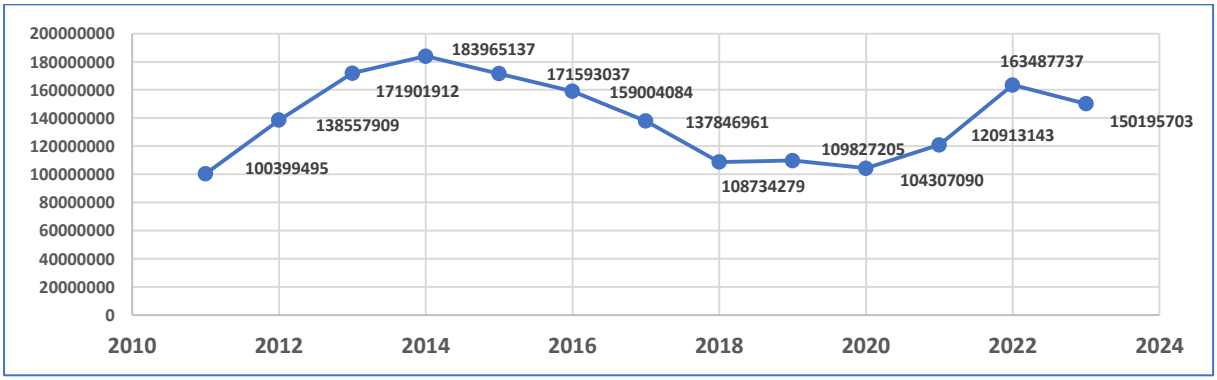


Source: Central Bank of Iraq https://cbiraq.org/SubCategoriesTable.aspx?SubCatID=98

Figure (5) illustrates the total pledged credit granted to the private sector in Iraq by commercial banks from (2011) to (2023), highlighting the interplay between the Iraqi economy and various circumstances over these years.

(2011-2014): Following the withdrawal of US forces in late (2011), Iraq experienced relative stability, reflected in an increase in private sector credit from (100,399,495) million Iraqi dinars to (183,965,137) million Iraqi dinars. Economic improvements and increased investments during this period contributed to the growth in credit.

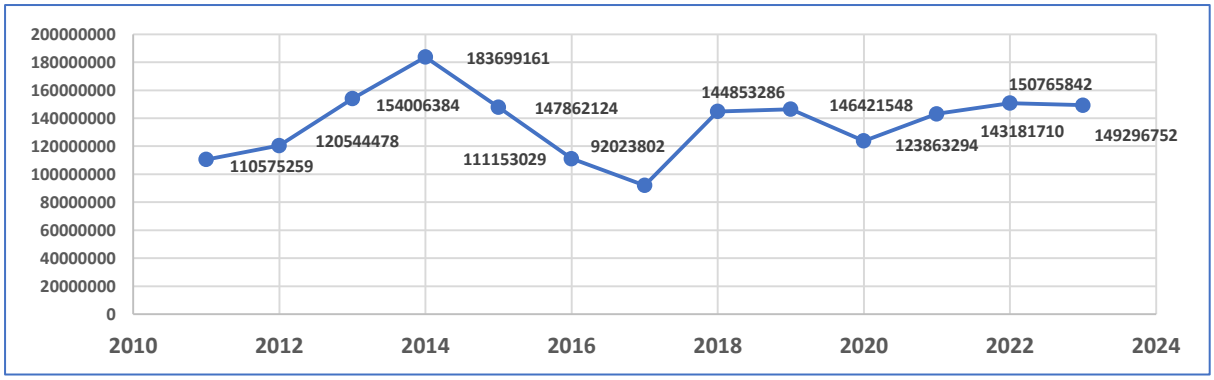
(2015-2017): Iraq faced significant challenges during this period, including a sharp decline in oil prices and conflicts with ISIS, which affected government revenues and investment confidence. As a result, private sector credit declined from (171,593,037) million Iraqi dinars to (137,846,961) million Iraqi dinars.

(2018-2020): The credit granted to the private sector decreased due to the economic impacts of the COVID-19 pandemic, with credit falling from (108,734,279) million Iraqi dinars to (104,307,090) million Iraqi dinars. Economic uncertainty and precautionary measures reduced economic activity and demand for loans.

(2021-2023): As the economy began recovering from the pandemic, credit to the private sector gradually increased, reaching (163,487,737) million Iraqi dinars, indicating a strong economic recovery. However, a slight decline to (150,195,703) million Iraqi dinars occurred, possibly due to a stabilization in economic activity following the rapid recovery phase.

The use of pledged credits can significantly influence monetary and economic policies. By increasing financial liquidity, pledged credits affect Central Bank decisions on monetary policy and price stability. Higher spending financed by these credits may boost the money supply and potentially lead to inflation if not matched by demand (Abdulmajeed, 2023: 86)

Figure 6. Pledged credit provided to public institutions by commercial banks (IQD)



Source: Central Bank of Iraq https://cbiraq.org/SubCategoriesTable.aspx?SubCatID=98

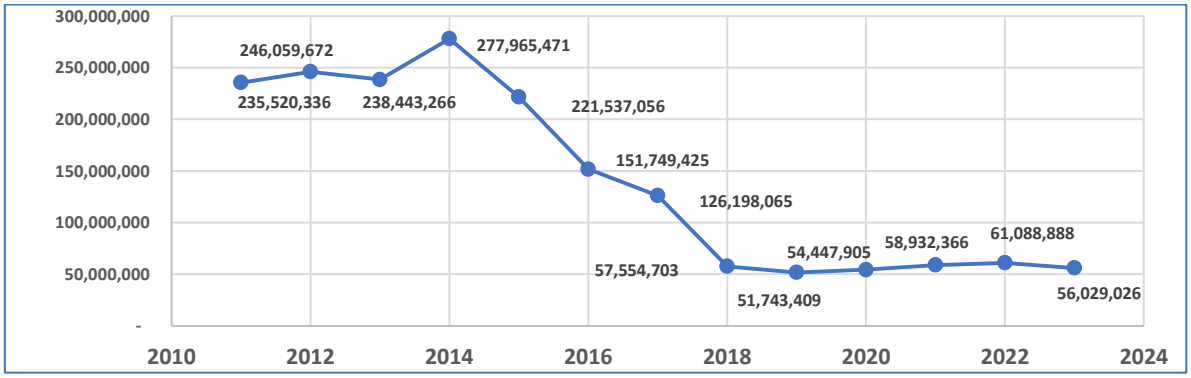
Figure (6) depicts the changes in pledged credit provided to public institutions by commercial banks in Iraq, reflecting the interaction with varying economic conditions over time.

(2011-2015): This period saw stable recovery and increasing credit, with amounts rising from (110,575,259) million Iraqi dinars in (2011) to (147,862,124) million dinars in (2015). These increases indicate economic recovery and growth in public investments.

(2016-2020): Credit values fluctuated and declined, starting at (111,153,029) million dinars in (2016), falling to (92,023,802) million dinars in (2017), rising again to (146,421,548) million dinars in (2019), and then decreasing in (2020). This decline reflects regional economic and financial challenges.

(2021-2023): The sector experienced stability and gradual recovery, with credit increasing to (143,181,710) million dinars in (2021) and reaching (149,296,752) million dinars in (2023). This suggests ongoing economic recovery and improvement in financial conditions.

Figure 7. Pledged credit provided to the central government by commercial banks (IQD)



Source: Central Bank of Iraq https://cbiraq.org/SubCategoriesTable.aspx?SubCatID=98

Figure (7) shows the main trends in financing the central government by commercial banks, which are affected by many changing economic and financial factors. These credits remain a vital part of government financing, and reflect the interaction of the local economy with global and local challenges and opportunities. The period (2011-2015) shows a financial recovery after the global economic crisis at that time, and commercial banks increased financing the central government by a total amount of (235,520,336) million Iraqi dinars in (2011), exceeded (246,059,672) million Iraqi dinars in (2012), and reached (238,443,266) million Iraqi dinars in (2013), reflecting the recovery of the economy and the improvement of financial conditions after the global economic crisis. During the period (2016-2017), the value of the pledged financing provided to the government decreased to (126,198,065) million Iraqi dinars as a result of the financial and economic pressures that affected the local and global economy during that period. The period (2018-2020) also witnessed a gradual improvement and increase in

financing. The period (2021-2023) witnessed stability and a moderate increase, and the value of the pledged credit provided to the central government by commercial banks continued to reach (61,088,888) million Iraqi dinars. This indicates the continuation of economic recovery and the strengthening of the financial stability of the central government, despite the global and local economic and financial challenges.

10. Study The Relationships Between Variables:

Through the use of linear correlation coefficients with research hypotheses, the statistical significance of the relationships between variables is determined. This process aims to achieve the study's objectives and make accurate decisions regarding the validity of the hypotheses:

- Hypothesis (H1): Impact of (types of banking credits, such as cash credit, pledge credit, and mortgage credit provided by the Central Bank) influence market dynamics, and contribute to economic expansion, particularly within the private sector in Iraq.
- Hypothesis (H2): Impact of (cash and pledge credits provided by commercial banks) on economic growth in the private sector in Iraq.

Based on the formulated hypotheses, the following variables have been identified to substitute into the equations where (Credit Policies (xt) represents the credit policies followed in Iraq. and monetary policy performance (yt) represents the level of stability of the financial market in Iraq. and Economic Performance of the Private Sector (yt) represents the economic growth in the private sector. and Cash and Commitment Credits (xt) represent the amount of credits provided by commercial banks (Granger, 1969: 424-430).

For model, Impact of Credit Policies on Monetary Policy Performance:

$$x_t = \sum_{i=1}^{n} a_i x_{(t-i)} + \sum_{j=1}^{m} b_j y_{(t-j)} + e_{1t}$$

For model, Impact of Banking Credits on Economic Growth in the Private Sector:

$$y_t = \sum_{i=1}^{n} c y_{(t-i)} + \sum_{j=1}^{m} d_j x_{(t-j)} + e_{2t}$$

By substituting the variables into the analysis models, the equations are as follows:

For model, Credit Policies on Monetary Policy Performance.

$$CP_t = \sum_{i=1}^{n} a_i CP_{(t-i)} + \sum_{j=1}^{m} b_j FMS_{(t-j)} + e_{1t}$$

CPt: Credit policies at time t.

CP(t–i): Lagged values of credit policies.

FMS(t–j): Lagged values of Monetary Policy Performance.

ai: Coefficients of lagged values of credit policies.

bj: Coefficients of lagged values of Monetary Policy Performance.

e1t: Error term at time t.

For model, Banking Credits on Economic Growth in the Private Sector:

$$BC_t = \sum_{i=1}^{n} cBC_{(t-i)} + \sum_{j=1}^{m} d_j EGPC_{(t-j)} + e_{2t}$$

BCt: Banking credits at time t.

BC(t–i): Lagged values of banking credits.

EGPC(t–j): Lagged values of economic growth in the private sector.

c: Coefficients of lagged values of banking credits.

dj: Coefficients of lagged values of economic growth in the private sector.

e2t: Error term at time t.

10.1. Descriptive Statistics (Jarque-Bera): This is a statistical test used to check whether a data set follows a normal distribution. The test is based on the probability value (P-value), where if it is less than (0.05), it indicates that the data does not follow a normal distribution but the opposite follows a normal distribution (Göksu& Ergün,2013:149).

Table 1. Descriptive Statistics

Variable	Jarque-Bera	Probability
Total cash credit	1.244394	0.536764
Cash credit to the private sector by commercial banks	0.066638	0.96723
Cash credit to the central government by commercial banks	2.441189	0.295055
Cash credit to public institutions by commercial banks	1.113049	0.573198
Pledged credit to the private sector by commercial banks	0.78747	0.674533
Pledged credit provided to the institutions by commercial banks	1.645248	0.439277
Pledged credit to the central government by commercial banks	1.571811	0.455707

Source: E-Views analysis results for Data of Central Bank of Iraq

Table (1) shows that all variables in the test follow a normal distribution, indicating a stable pattern in the distribution of cash credit among customers. Both total cash credit and credits to public institutions and the private sector follow a stable pattern. Cash credits and central government pledges are also stable and predictable. These results highlight the consistency of economic and financial policies in credit distribution, enhancing the financial system's ability to predict future trends and make informed decisions based on expected data.

10.2.Co-integration Test: In econometrics, the concept of stability of time series involves ensuring that time series data is integrated of the same degree. Joint integration theory focuses on whether a series can be integrated to the first degree, allowing for valid regression estimates (Engle & Granger, 1987: 263). To test for joint integration, compare the calculated probability value to critical values from tables. A value greater than the table value indicates the series is stationary and exhibits joint integration, making the regression valid. If less, the series lacks joint integration, suggesting the regression might be incorrect (Bresson, 1995: 419; Abdel Qader, 2004: 672).

Table 2. Joint Integration Test

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob
None *	0.78999	79.43208	70.81889	0.0514
At most 1	0.6478	42.80019	49.85613	0.1721
At most 2	0.55451	24.61945	31.79707	0.3021
At most 3	0.44523	11.33124	16.49471	0.2945
At most 4	0.05452	0.923651	4.841465	0.3991

Source: E-Views analysis results for Data of Central Bank of Iraq

Table (2) shows a long-term relationship between the variables, indicating that changes in one can influence the others over time.

At most 1: The (Trace statistic: 42.80019) is less than the (critical value: 49.85613), suggesting there may be one or no joint integration equation.

At most 2, 3, and 4: The (Trace statistic values) are lower than the (critical values), indicating no more than two or three joint integration equations. These variables, reflecting different forms of credit by commercial banks, highlight long-term interactions between the private sector and the central government. The joint integration suggests sustainable mutual effects among the variables, enhancing the understanding of long-run monetary and fiscal policy impacts on the economic system.

10.3. Estimating the Function Using (O.L.S): is widely used by economists to estimate relationships between variables. It aims to identify the number of relationships among variables and detect potential false regressions. The results of OLS analysis are crucial for formulating economic policies (Samprit and Jeffrey, 2013: 86). As follows in Table (1):

Table 3. Results of Estimating Search Functions

Dependent Variable: Total cash credit	Coefficient	Std. Error	t-Statistic	Prob.
Variable				
C	-4089.003	2.661182	-1794.174	0.000004
Cash credit to the private sector by commercial banks	-1.41E-08	1.15E-08	-1.225183	0.334501
Cash credit to the central government by commercial banks	8.12E-08	3.50E-08	0.395093	0.795200
Cash credit to public institutions by commercial banks	0.944521	1.77E-08	57788015	0.000002
Pledged credit to the private sector by commercial banks	0.965486	1.00E-08	90615110	0.000004
Pledged credit provided to the institutions by commercial banks	0.696589	1.08E-08	2.165632	0.039123
Pledged credit to the central government by commercial banks	0.765492	1.54E-08	65782591	0.000261
R-squared	0.863289	Mean dependent var		4.65E+08
Adjusted R-squared	0.845121	S.D. dependent var		1.71E+08
S.E. of regression	0.799876	Akaike info criterion		2.793758
Sum squared resid	3.523636	Schwarz criterion		2.627962
Log likelihood	-10.24943	Hannan-Quinn criter.		2.811233
F-statistic	7.84E+08	Durbin-Watson stat		2.843168
Prob(F-statistic)	0.000000			

Source: E-Views analysis results for Data of Central Bank of Iraq

The results presented in table (3), the statistical analysis presents a coefficient (-4089.003), with a standard error of (2.661182), a T-statistic of (-1794.174), and a probability of (0.000), indicates a highly significant and negative constant. This suggests that when no independent variables are present, the total cash credit would decrease by this amount. The high significance (p = 0.000) confirms its importance. The coefficient (-1.41E-08), with a standard error of (1.15E-08), a T-statistic of (-1.225183), and a probability of (0.3345), shows that cash credit to the private sector is not statistically significant. Since the p-value is greater than (0.05), this variable has no meaningful impact on total cash credit. The coefficient (8.12E-09), with a standard error of (3.50E-08), a T-statistic of (0.395093), and a probability of (0.7952), indicates that this credit also does not significantly influence total cash credit. The coefficient (0.944521), with a T-statistic of (57788015) and a probability of (0.000), reflects a highly significant and positive

effect on total cash credit. This suggests that cash credit to public institutions has a considerable positive impact. The coefficient (0.965486), with a T-statistic of (90615110) and a probability of (0.000), shows that pledged credit to the private sector is also highly significant and positively affects total cash credit. This confirms the importance of this type of credit in increasing total cash credit. The coefficient (0.696589), with a T-statistic of (2.165632) and a probability of (0.0391), indicates that pledged credit provided to institutions is statistically significant at the (0.05) level, showing a meaningful positive impact on total cash credit. The coefficient (0.765492), with a T-statistic of (65782591) and a probability of (0.000), demonstrates a significant and positive effect on total cash credit, indicating that this type of pledged credit is important for boosting the overall cash credit. The R-squared value (0.863289) indicates that about 86% of the variation in total cash credit is explained by the model, reflecting a good fit. However, the Adjusted R-squared value (0.845121) confirms that the model maintains a strong explanatory power, even after adjusting for the number of variables. The Durbin-Watson statistic value (2.843168) suggests there is no significant issue of autocorrelation between the residuals, meaning the model's assumptions hold well. The very high F-statistic value (7.84E+08) and a probability of (0.000) further confirm that the model as a whole is statistically significant and provides a robust explanation for the variations in total cash credit.

Overall, the results show that certain forms of credit, such as cash credit to public institutions and pledged credits, have a significant and positive impact on total cash credit, while other forms, particularly cash credit to the private sector and central government, do not show a meaningful influence.

10.4. Measuring the Impact Between Research Variables: The hypotheses were tested based on simple regression analysis (Regression liner Analysis), as well as using the coefficient of determination (R2) to explain the amount of influence of the independent variable on the changes that occur in the dependent variable. The regression equation was determined using the least squares method, and to accept the hypothesis or not, the significance of the simple linear regression model (Rosenthal, 2017: 2-4) was tested using the (F) test, to identify the significance of the model to determine the extent of the impact of the credit policies followed (X) and the extent of monetary policy performance (Y) and on the other hand the impact of bank credits (X) on economic growth in the private sector (Y) for Iraq during the period (2004-2023). Table (3) indicates the estimation of the simple linear regression model, to measure the impact.

Table 4A. Results of The Relationships

Independent variable (x) / Dependent variable (y)	Value (F)		Interpretation coefficient R2	Standardized Regression Coefficient (Beta)
Dependent variable (y)	Calculated	Schedule (%5)		
Credit Policies	7.765	5.443	0.831	
Monetary policy performance				-0.784

Source: E-Views analysis results for Data of Central Bank of Iraq

Table (4A) summarizes the relationship between credit policies and monetary policy performance in Iraq from (2004) to (2023), where the independent variable (credit policies) appeared with a value of (F: 7.765), indicating a statistically significant impact on monetary policy performance. The (R^2 value: 0.831) indicates that credit policies explain (83%) of the variance in monetary policy performance. As well as the beta coefficient, positive beta values indicate that increasing credit policies is associated with increasing stability. The calculated value appeared at (-0.784), indicating a negative relationship between credit policies and market stability. This indicates that increasing credit policies may lead to a decrease in monetary policy performance. A statistically significant relationship was found between credit policies and monetary policy performance in Iraq, as credit policies play a crucial role in determining this stability.

Table 4B. Results of The Relationships

Independent variable (x) / Dependent variable (y)	Value (F)		Interpretation coefficient R2	Standardized Regression Coefficient (Beta)
Dependent variable (y)	Calculated	Schedule(%5)		
Bank Credits	7.662	5.698	0.873	
Economic Growth in The Private Sector				-0.843

Source: E-Views analysis results for Data of Central Bank of Iraq

Table (4B) shows the results related to the impact of bank credits on economic growth in the Iraqi private sector from (2004) to (2023), where the independent variable (bank credits) appeared with a value of (F:7.662), indicating the existence of a statistically significant relationship between bank credits and economic growth in the private sector. The value of (R^2: 0.873), means that bank credits represent (87%) of the variance in economic growth within the private sector. The beta coefficient Positive beta values indicate that the increase in bank credits is associated with an increase in economic growth in the private sector. The dependent variable (economic growth in the private sector) also appeared with a calculated value of (-0.843), indicating a negative relationship between bank credits and economic growth. The study shows that while bank credits are necessary for private

sector growth, there is a negative relationship indicating that an increase in bank credits may not always translate into an increase in economic growth in the private sector.

8.Conclusions:

1. The significant increase in total cash credit between 2004 and 2023 highlights the importance of cash credit in supporting economic growth and investments in Iraq. It contributed to boosting economic activities and financing projects across various sectors, especially during economic crises such as the COVID-19 pandemic.
2. Loans provided to the private sector by commercial banks in Iraq have seen a notable rise, reflecting policies that support this sector despite economic and political challenges. This support has led to improved confidence and economic stability in Iraq, particularly after the drop in oil prices and security crises.
3. Data shows an increased reliance by the central government on financing from commercial banks, reflecting the economic and financial challenges faced by the Iraqi government, particularly during crises such as the decline in oil prices and the COVID-19 pandemic. Government financing significantly increased during these periods.
4. Pledged loans provided by commercial banks to both the public and private sectors play a crucial role in enhancing financial liquidity and monetary stability in Iraq. However, these loans can lead to an increase in the money supply, potentially contributing to inflation if not properly aligned with economic demand.
5. The analysis confirms that credit policies, including various forms of banking credit such as cash and pledged credit, significantly affect the performance of monetary policies and contribute to the stability of Iraq's financial market.
6. Cash credit to public institutions and pledged credits show a substantial positive impact on total cash credit, indicating their crucial role in enhancing liquidity and supporting economic activities in the public sector.
7. The results indicate that cash credit extended to the private sector does not have a statistically significant effect on total cash credit, suggesting that improvements are needed to enhance the effectiveness of credit distribution within the private sector.
8. The co-integration test highlights long-term interactions between banking credits and economic growth, reflecting sustained mutual effects between financial policies and private sector development in Iraq.
9. The high R-squared value (0.86) indicates that the regression model explains a substantial portion of the variation in total cash credit, affirming the robustness of the model in predicting the effects of credit policies on financial outcomes.

9. Recommendations:

1. Iraq should expand the use of financial technologies such as electronic payments and digital finance to facilitate access to financial services. This will enhance the distribution of cash credit and increase financing opportunities for individuals and businesses.
2. The government and commercial banks should work to diversify financing sources and reduce reliance solely on oil revenues to ensure the stability of the financial system amid fluctuations in oil prices.
3. Develop the financial and monetary infrastructure by improving monetary policies and increasing liquidity in the banking system to ensure a fair and sustainable distribution of cash credit across different sectors.
4. The private sector should receive additional support by expanding available credit lines, particularly during economic crises such as the COVID-19 pandemic, to ensure continued economic growth and investment in the country.
5. There is a need to increase the use of cash credit and mortgage credit provided by commercial banks to support the growth of the private sector in Iraq, as this type of credit has been shown to positively impact economic expansion.
6. Credit policies provided by the Central Bank should be monitored and improved, as they directly affect the stability and performance of the financial market. The results indicate a strong relationship between monetary policies and financial performance.
7. It is essential to apply linear regression models regularly to monitor the impact of credit on economic performance, in order to explore future market changes based on long-term relationships between variables.
8. It is recommended to increase focus on mortgaged loans to both the public and private sectors, as results have shown that these loans have a significant positive impact on total monetary credit and can thus be used as a tool to stimulate economic growth.

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