

Development Finance and Financial Stability in Iraq: A Dynamic Analysis of Asset Quality and Lagged Effects (2015–2024)

Asst. Prof. Dr. Maha Kareem Ali

University of Muthanna
meha_krim@mu.edu.iq

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Corresponding Author: Dr. Maha Kareem Ali

Abstract: The study examines the relationship between development finance and financial stability in Iraq over the period 2015–2024 using an analytical, empirical, and structural approach that integrates both theoretical foundations and practical evidence. The research relies on time-series data obtained from the Central Bank of Iraq, focusing on indicators of development financing and banking sector stability. The results indicate that development finance in Iraq has generally been sufficient, particularly following the expansion of targeted lending and investment programs. However, financial flows exhibit noticeable volatility across the study period, reflecting changes in monetary policy, economic conditions, and institutional performance. The analysis shows that the impact of development financing on financial stability is not immediate, but rather appears with a lag due to the long-term nature of funded projects. Findings also suggest that variations in financial stability are closely associated with changes in asset quality within the banking system. Improvements in indicators are largely driven by liquidity injections rather than deep structural reforms. Overall, the study concludes that liquidity constraints, rather than structural constraints, are the main drivers of observed fluctuations. Accordingly, it recommends a more flexible policy framework supported by strong regulatory oversight to enhance the effectiveness of development finance and ensure sustainable financial stability in Iraq.

Keywords: development projects, financial stability, asset quality, bad loans, and ways that effects spread.

1. Introduction:

Development finance is an important aspect of monetary policy. The economy grows and develops with support from such financing mechanisms. It is especially common in countries where a few sectors are particularly important for economic activity. The Central Bank of Iraq is making tremendous efforts to implement large financing programmes across various economic sectors under current conditions. As a result, the amount of credit being provided has increased substantially. Still, concerns remain regarding the stability of the financial system. Banks, especially public-sector banks, face challenges related to asset quality and credit risk management. Therefore, it is essential to understand how monetary expansion and financial stability are interlinked, as well as the impact of such expansionary policies and their lagged effects on the banking system.

Research Problem

The research examines the relationship between development finance and financial stability in Iraq, with a focus on the period 2015–2024. These financing interventions do not generate immediate effects, as their impact is dynamic and unfolds over time. Therefore, it is necessary to analyse the nature of this relationship, with particular attention to asset quality as a key

transmission channel through which development finance affects financial stability. This raises the central research question:

To what extent does development finance influence financial stability in Iraq over time, and how does asset quality mediate this relationship?

Research Objectives:

- The paper topic covers financing of the economy and stability of development in Iraq from 2015 up to 2024. See financing of development changes stability of the economy over time. Evidence the right kind of assets case might help. Establish a connection between a development financing and financial stability.
- Examine the sustainability as well as structure of financial stability attained in Iraq.

Importance of the Research:

This study is important because it investigates the experience of the Central Bank of Iraq during a critical period (2015-2024). The additional value generated when people gain insights from forecasts is an analytical look at the sectors most likely to get finance (housing) and those still having trouble getting finance or awareness (green energy). This helps in revising credit policy.

Hypotheses:

Based on the research problem, the following hypotheses are formulated for empirical testing: The relationship between development finance and financial stability in Iraq is dynamic and interdependent. Accordingly, the study proposes the following sub-hypotheses:

- Development finance has a lagged (delayed) effect on financial stability in Iraq.
- Asset quality acts as a transmission channel through which development finance influences financial stability.
- Financial stability in Iraq is primarily short-term and liquidity-driven rather than structurally sustained in the long term.

Methodology of the Study

. The study utilises a descriptive–analytical framework supported by quantitative methods, employing time-series data on development finance, financial stability, and asset quality over the period 2015–2024. The data are obtained from the Central Bank of Iraq and relevant financial stability reports. Structural analysis is used to examine the transmission channels of influence and to assess the dynamic interactions among the study variables. Furthermore, econometric techniques are applied, including unit root tests (ADF and Phillips–Perron), the Autoregressive Distributed Lag (ARDL) approach, the Error Correction Model (ECM), and bounds testing for cointegration, in order to capture both short-run and long-run relationships as well as lagged effects between the variables.

Section One: The Conceptual Framework of Financial Stability Determinants in Relation to Asset Quality and Development Initiatives

1- Concept of Financial Stability:

This helps lower the chances of problems that stop people from getting financial services, which in turn makes it more likely that people will put their resources into investment opportunities. In other words, it is the financial system's ability to keep providing financial services and acting as a middleman to take advantage of investment possibilities (Institute for Economic Studies, 2025, p.

3). The European Central Bank also said that financial stability is a financial system, including financial intermediaries, markets, and market infrastructure, that can handle and deal with financial disruptions. This makes it less likely that there will be problems that stop financial intermediation from happening, which could make it much harder to put savings into profitable investment opportunities. So, financial stability is the ability of the financial system to handle economic shocks and keep doing its important jobs, like making payment arrangements. (Arab Monetary Fund, 2015, p. 3)

2- Stability of Subsystems and Economic Growth

The financial system and its subsystems (institutions, infrastructure and markets) should be stable in order to withstand shocks and limit the impact of the crises (Institute of Banking Studies, 2025, p. 4). In other words, stability of the financial system means financial safety. Ensuring the seamless working of Payments, Credit Checks and Risk and Savings Management is critical. It helps the economy experience constant growth. Stakeholder protection is equally important as trust. People and businesses are those systems that can depend upon other systems. Banks and financial institutions must be regulated, monitored and supervised. Otherwise, they will fail. It protects the customer from loss of money and it encourages the investor to invest in the market. When the economy is stable, further lending can be possible for clients. Credit plays a crucial role in trading and market activities. All in all, this leads to numerous possibilities for economic advancement; the provision of important services should not cease: payment systems, credit checks, and risk and savings management. As such, the situation bolsters steady economic growth. Building trust and protection for stakeholders is important. A working system fosters trust among people and companies. Orderly functioning of the banks and financial institutions requires a regulatory architecture along with on-going vigil. By preventing clients from losing their funds, this encourages investors to put in their money in the market as the likelihood of disruption reduces. Another benefit is stimulating trade and credit. A static economy facilitates easier access to financing for businesses. Credit facilitates trade and business operations that create numerous opportunities for long-lasting economic development.

3. This refers to the direct and indirect advantages offered by development.

It ensures monetary stability and a stable general price level. Also, increase in output is indicated by increase in employment and wellbeing. A more stable state can deal with disasters better, and make investments much closer to a larger spread. The measure will indirectly lead people to feel safer, to feel better mentally, to develop human capital, and to be more productive. As a result, resources will be allocated efficiently and all people will have, equal access credit so that each person gets equal access and the economy is equitable.

3.1 The Aggregate Financial Stability Index

The Aggregate Financial Stability Index serves as a signal of financial stability. The purpose of this complex statistical device is to take on a huge volume of technical economic and financial data and express them in one number that is easy to understand. The hint used by the Central Bank of Iraq helps people in charge at foreseeing risks ahead of time. The VOC is indicator to assess the strength and vulnerabilities of an economy. How serious is the probe? It also serves as an early warning system. The indicator gives a single number (usually between 0 and 1) which shows how close or far away a situation is from a crisis. One number compared to many statistics (Arab Monetary Fund, 2023, p. 8).

3.2 Development of the Index by the Central Bank of Iraq

The Central Bank of Iraq has enhanced the index from a pure description to a real precautionary tool for cases that go beyond the normal case of banks. It also looks into the interaction between the financial cycle and the capital market. It was ensured that the results were correct and the data was not tampered by using the best of the statistical methods like Rabi Mishra technique. The summation of indicators was not without a reason; each sub-indicator was taken as a square. Final index (FSI) provides a complete picture of the national economy as it assigns different weights to different parts.

3.3 Structural and Liquidity Stability

Recent studies suggest that the distinction can be made between structural stability (returned to resource usage) and liquidity-generated stability (result from monetary growth). It is essential to understand the dissimilarities between these two for rentier economies understanding. The index gives you a standard value usually between 0 and 1, telling you how far you are from being in a crisis zone. Instead of using numerical codes often linked with indices, we focus on the gist. The Central Bank of Iraq has graduated the index from being descriptive with conditions to being precautionary as stated in a paper issued by Arab Monetary Fund, (2023, p. 8). Housing policies and strategies also influence the financial cycle and the capital market. The current study used Rabi Mishra a Static approach using all possibilities to cross validate the data and not to violate any policy. Rabi Mishra proved to be a powerful tool. Each sub-indicator was raised to the power of itself, which is not accidental. The final index (FSI) values different parts differently thereby reflecting a complete picture of the national economy. Recent literature identifies two types of financial stability: structural stability, which depends on an effective management of resources, and liquidity-driven stability, which occurs when expansion of the monetary drives such stability. It is critical for understanding rentier economies. In these economies, sufficient liquidity can achieve temporary stability even if the underlying strength of the financial system remains unchanged. It is necessary to adopt a qualitative technique with no numerical and monetary connotation to prove the financial viability of these conditions.

4. The second criterion is that asset quality influences financial stability.

The concept and its significance: The dependability of capital ratios hinges on the dependability of asset quality indicators. The characteristics of the bank's assets and difficulties in liquidating them increase possibilities of bank problems. Using the institution's lending and borrowing ratios to measure the quality of the portfolio (Al-Ameed, 2017, p. 7). It assesses the likelihood of the borrower repaying the bank. The ratio of Non-Performing Loans (NPLs) to total loans is often examined by analysts. The trusted messengers must deliver their message to the decision-makers and regulators urgently, conveying that the financial system is on the verge of collapse, and necessary actions can avert that with speed and dispatch. The quality of a bank's assets is crucial for examining its performance. The revenue-generating activities are most important part of bank operations. Owning valuable assets helps in creation of money and increasing capital, liquidity and profitability. In determining the financial position of a bank, quality of assets must also be considered. Banks mostly fail because the asset they carry are not enough. One of the major duties of banks is to preserve the quality of their assets (Al-Lami & Abbas, 2024, p. 80). When banks accumulate a high amount of non-performing loans (NPLs), they face a financial crisis and

instability. The banking sector is important to the economy since it lends deposits and contributes funds with the use of money.

The financial condition of a bank is greatly influenced by the quality of its loans i.e. assets. The main objective for monitoring loan quality is to find out the extent of non-performing loans as loans are riskier than any other type of investment. The quality of banks' assets has a considerable impact on banking industry financial soundness. The closure of many banks is due to the poor quality of their assets and excessive defaults on bank loans. The banking system is strengthened when there is a low rate of loans in default and when there are borrowers with a high credit rating. Such a strong banking system is able to absorb any shocks (Bin & Salah, 2019, p. 6).

Section Two: The Impact of Fundraising Methods on Asset Values and Economic Stability

1- There are some major point of views on the link between development funding and financial stability. The liquidity channel, asset quality channel, and expectations channel are the three most important channels. This connection is not direct, as is clear from the routes. They contribute to our assessment of the effect size and its direction. To help the long-term stability of the banking sector, we need structures in place for sustainable finance. There are various channels - summation.

2- The lender's asset quality will get better because of financing green and sustainability projects with this funding. We will prioritize projects that have substantial economic and social potential. As a result of government guarantees, low-interest loans, grace periods, etc., such initiatives are less likely to fail. Enhanced asset quality and NPL ratio on the balance sheet is reduced (Cui 2018)

3- Ways to diversify your portfolio , Sustainable financing is making it possible for banks to offer more loans. Loans for small and medium-sized enterprises (SMEs), renewable energy installations, environmental innovations, and so on. The shift lowers the possibility of credit concentration risks within sectors that are typically volatile in nature. As such, it strengthens the balance sheet against any structural shocks. According to Bolton et al. (2019), this enhances financial stability which is a major component of the overall effort.

4- Sustainable finance rules help promote the clean image of the financial sector, easing concerns of investors and depositors. People still have faith in the bank, which is why deposits keep on going up. The bank benefits from this, as it increases its funds and overall stability. Organisations focusing on sustainability create a safety-valve effect, which enhances trust in the system. When loans are cheaper, it helps the financial system withstand external shocks without incurring a loss. It also helps banks profit while ensuring they are held accountable for growth (Fatmi et. al, 2018).

Section Requirement: Development Finance (Concepts and Instruments)

The Initial Concept: The Definition of Development Finance

Through development financing, a financial institution like a bank finances different programs to help big business industries, decrease unemployment and speed up the economic development of the country. Various programs offer loans to individuals at low or no interest rate. The main goal of this scheme is to provide investors and property loan to small and medium enterprises (SME) and to enhance the business financial stability for sustainable development. The term development finance implies a change in bank management's philosophy whereby investment decision making will no longer be based solely on financial returns; a consideration of environmental social governance will also be made (Shawqi, 2022: 15). Various countries, various people have various views on it. The World Bank says using money to stimulate economic growth and reduce

environmental damage while addressing social equity issues. As per the UNEP FI, it is a mechanism for financing sustainable development and the low-carbon economy transition in the United Nations. (International Finance Corporation, 2017: 19).

Second: You can apply development financing in order to restructure a rentier economy

The Correlation Between Development Finance and Financial Stability, Using environmental, social and governance (ESG) principles helps people achieve financial stability through sustainable finance. Through sustainable finance, one can design an investment scheme using the ESG norms. This will resolve governance issues that have created global crises in the past and help alleviate social risk that may result in credit overextension and destabilise the economy. Financing of this kind reduces climate risks, including physical risks (such as disasters) and transitional risks (such as a decline in the value of fossil fuel assets). It stops the sudden fall in the prices of assets that can create systemic risk. The relationship between development finance and financial stability is complex and winding, not straight by any means. The translation of assistive and aircraft loans plans were huge failures. It operates across multiple channels where institutions and time intersect. In turn implies we need to go from simple cause and effect models to theories about the behaviour of the financial system. Sustainable finance utilizes innovative tools including green bonds and digital finance to mobilize funds towards safer and more efficient economic activities with a view to improving corporate performance, lowering risk and assuring the stability of the banking and financial system against evolving economic and environmental challenges (Najat & Nasima, 2023, p. 106). By implementing initiatives such as the 5 trillion project and the 1 trillion project, the Central Bank of Iraq has taken specific measures to improve the solvency and reduce the credit risk through guarantees or facilities. Providing liquidity is not all that sustainable finance entails. It also serves as an investor in real projects that stimulate economic growth and help generate sustainable wealth..

Third: Sustainable Development Financing Mechanisms Used In The Projects.

There is a variety of initiatives with diverse objectives aimed at achieving some economic and social goals over time.

- Green bonds are debt securities whose proceeds are used to raise funds for qualifying new and existing for projects for renewable energy like solar or wind or sustainable forestry or sustainable aviation fuel or other modern-day environmental sustainability initiatives or related projects making energy use efficient like e-mobility or carbon capture either directly or indirectly.
- Social Bonds help raise money to support the housing of people at risk; other projects may include education and healthcare. So, these contribute to curtail the harmful effect on Society.
- Innovative funding refers to an approach that combines traditional with other types of funding, particularly those offered by governments and/or international organisations to mitigate the risks of investments (Anjaa, 2023: 102).

The sophisticated financing mechanisms deployed by advanced economies for sustainable financing differ from those used in Iraq as the former are based on development projects taken by central bank. The Central Bank of Iraq has devised a range of financing mechanisms for the housing sector, energy and other various projects to help improve economic and social development, as well as access to finance at a low cost..

Fourth Requirement: Getting money for development from the Central Bank of Iraq:

The Central Bank of Iraq has utilised a number of different techniques to make sure that new types of funding help the country close the growing gap in sustainable development finance while dealing with rising debt and the crises created by energy shocks. The Central Bank of Iraq came up with a number of new ideas to bring in private investment, encourage reforms, and make the country's finances more stable. These ideas were meant to boost the Iraqi economy through the private sector, support certain economic activity, and strengthen the banking system. The most important of these efforts were:-1 The 1 Trillion Project: In 2015, the Board of Directors of the Central Bank of Iraq approved the start of a funding initiative worth (1) trillion Iraqi dinars. The goal was to boost economic activity and encourage new ideas. The goal of this endeavour was to get private banks to make it easier for small and medium-sized businesses (SMEs) to get soft loans, which would create new job opportunities. Twenty-four banks took part in this effort, following rules set by the right authorities. Table 1 shows the financial allocations, which show how important the banking industry is to sustainable development (Al-Humaidawi & Al-Khafaji, 2025, p. 241). By the end of 2021, this project had received a lot more money, totalling 4 trillion Iraqi dinars. The developmental features were expanded, with loans featuring a low interest rate of 1% set by the Central Bank, aimed at alleviating the financial burden on beneficiaries and ensuring project sustainability. The Central Bank persistently revised the directives and regulations pertaining to this initiative to ensure its conformity with the changing requirements of the national economy, as part of its continuous endeavors to foster economic growth and mitigate unemployment rates (Central Bank of Iraq, Annual Economic Report, 2024, p. 63), as illustrated in Figure 1.

**PERCENTAGE OF PROJECT CONTRIBUTION IN THE IQD
(4) TRILLION INITIATIVE FOR THE YEAR 2024**

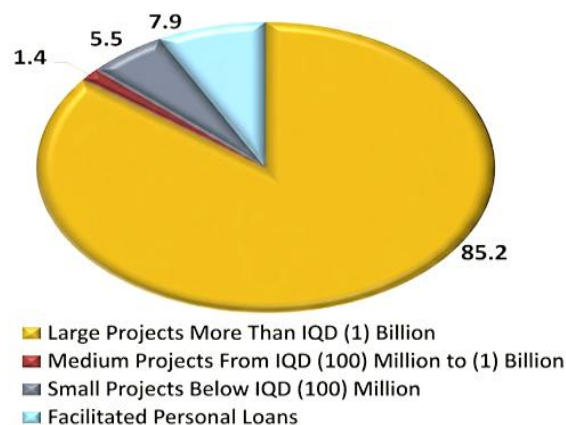


Figure (1) Relative distribution of project contributions to the (4) trillion dinar initiative for 2024

Source: Central Bank of Iraq, Annual Economic Report, 2024, page 63

The 5 Trillion Initiative aimed at funding projects in agriculture, industry, construction of housing complexes and projects meant to transform the infrastructure of the Iraqi economy. The initiative is clearly aimed at enhancing Iraq's performance in different sectoral areas of productivity. An official policy of the Central Bank of Iraq stipulates funding for large strategic projects that would greatly enhance the development process, meet local market demand and create jobs. Accordingly,

the bank will fund projects valued at MKD 5 trillion. Banks offered loans to investors at lower interest rates and without any extra fee so that businesses could continue to run smoothly. Objective is to stimulate agricultural, industrial and real estate sector production to support the economy. The most significant positive impact of the National Housing Bank helps to resolve the housing crisis by providing financing for the setting-up of residential complexes and units. That make communities more cohesive and improves the conduct of life. In 2020 Annual Financial Stability Report, Real Estate Bank made the biggest project with 10.7% share. The Agricultural Bank's share was 0.5% and that of the Industrial Bank was 4.7% (Central Bank of Iraq, Annual Economic Report, 2024, p. 64).

**The Proportion of Amounts Granted and Allocated
For the Year 2024 Initiative, 5 Trillion**

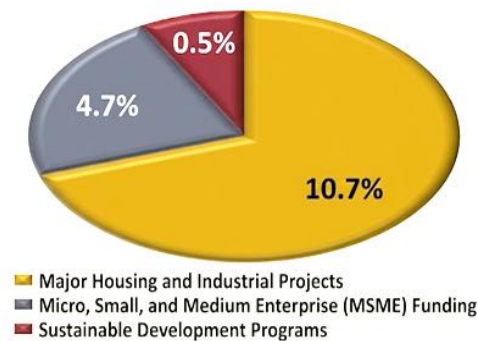


Figure (2) Proportion of cash awarded and designated for the 5 trillion Iraqi dinar program in 2024
Source: Central Bank of Iraq, Annual Economic Report, 2024, p. 64

Renewable Energy Initiative: The Central Bank designated one trillion dinars for this endeavour. In 2024, the total funds allotted for the acquisition of renewable energy power generating systems for residential, commercial, agricultural, and investment projects amounted to 233 million dinars, constituting 10.3% of the whole budgeted sum. The low percentage results from insufficient public understanding regarding the significance of this energy type, necessitating the introduction of incentive mechanisms to promote public adoption. Annual Economic Report, 2024, page 64

-4Health Loan Initiative (15 million dinars): In alignment with the Central Bank's mandate to assist vulnerable populations in Iraqi society and address urgent humanitarian needs within its development initiative, the bank has allocated health loans of up to 15 million dinars each to cancer patients and individuals suffering from severe and critical illnesses, as identified by the pertinent authorities and with minimal prospects for recovery. The total funds allocated for this program in 2022 amounted to 120 million dinars. (Annual Economic Report, 2022, p. 62 .)

-5The Soft Loan Initiative (15 million dinars interest-free): In response to the achievements of the Central Bank of Iraq's initiative for small, medium, and large enterprises in facilitating project support and addressing the demand for soft personal loans for government employees, the Board

of Directors approved Resolution No. (9) of 2021. This resolution permits employees with salaries deposited in banks to access soft personal loans up to (15) million dinars interest-free, accompanied by a one-time administrative fee of (4%), allocated as (2%) for the Central Bank and (2%) for the respective bank. The repayment period is capped at (5) years without the need for a guarantor. In 2022, the total amount of soft loans disbursed reached (156) billion dinars. Annual Economic Report, 2022, page 61

Section six: Practical and Structural Examination of the Correlation between Development Finance and Financial Stability Iraq (2015–2024)

Initial Requirement: Temporal Examination of the Development Finance and Financial Stability Trajectory

Data analysis for the period 2015–2024 shows that development spending in Iraq has not followed a steady path. Instead, it has been quite unstable because of changes in monetary policy, economic shocks, and the fact that Iraq is a rentier economy. From 2015 to 2017, financing flows were limited and showed a cautious approach to credit growth. This was a basic stage for financing operations. Annual Variation** Financial Stability Index Growth Rate (%) Development Financing Billion Dinars Year .

Table (1): Trend Analysis of Development Finance and Financial Stability (2015–2024)

year	Development Financing (Billion Dinars per Year)	Growth Rate %	Financial Stability Index (%)*	Annual Change**
2015	18.565	—	0.341	—
2016	30.000	61.6%	0.314	-0.027
2017	53.423	78.0%	0.363	+0.049
2018	1669.265	3023%	0.440	+0.077
2019	1900.654	13.8%	0.410	-0.030
2020	2417.000	27.2%	0.586	+0.176
2021	2609.000	7.9%	0.656	+0.070
2022	2061.145	-21.0%	0.462	-0.194
2023	3168.707	53.7%	0.521	+0.059
2024	1007.783	-68.2%	0.504	-0.017
sum	12.935.542			

Source: Prepared by the researcher based on financial and banking soundness indicators extracted from the Central Bank of Iraq (CBI) official reports.

But 2018 was a turning point since financing went up a lot because of the Central Bank programs. Because of this, the amount of credit given to other parts of the economy, especially housing, went up a lot. On the other hand, the Financial Stability Index didn't expand as quickly as this one did. Instead, it showed a progressive pattern, which means that the effect took longer to spread.

Table (1) shows that development financing was rather unstable. Even though there was an unprecedented rise in 2018, financial stability did not respond right away and did not reach its peak until 2021. This means that the effect will take longer to happen. The large drop in 2022 also shows how fragile financial stability is and how much it depends on the flow of funds.

The second necessity is to look at the link between development funding and asset quality (NPL). Asset quality is an important middle ground that shows how well the banking sector can handle the credit risks that come with expanding lending.

Table (2): The link between development finance and the quality of banking assets

Relationship Direction	Non-performing Loans(%)	Funding Size (billion)	Year
—	7.1	18.565	2015
feeble ejection	7.2	30.000	2016
Exclusion	11.4	53.423	2017
Forceful ejection	12.6	1669.265	2018
Revert	9.9	1900.654	2019
Revert	8.93	2417.000	2020
Revert	8.81	2609.000	2021
Revert	7.19	2061.145	2022
Revert	6.26	3168.707	2023
feeble ejection	7.14	1007.783	2024

The source derives from the researcher's analysis utilising data from the Central Bank, Financial Stability Reports, and Economic Reports .(2024-2015)

Table (2) reveals that the beginning of credit expansion was linked to high default rates, which shows that the regulatory framework was weak. The following enhancement in asset quality may not signify structural improvements; instead, it pertains to the characteristics of collateralised mortgage loans, which mitigate perceived risks without tackling their fundamental causes .

Third Requirement: Examining the Effect of Development Finance on Financial Stability (Lag Analysis)

Development funding has an indirect effect on financial stability since it works through many different avenues.

Table (3): Looking at the Dynamics of Divergent Impact (Lag Analysis)

the time relationship	financial stability indicator	Financing status	year
First phase of impact	0.440	Extremely high	2018
The last phase of impact	0.410	High	2019
Beginning of the overall effect	0.586	High	2020
Stabilisation of the peak	0.656	Optimal financing	2021
Turning around bad effects	0.462	Insufficient funds	2022

The results show that development financing has a slow effect that takes place over a number of years, not right away. This is because of the nature of the industries that are getting money, especially the housing sector, which takes a long time to turn funds into real economic outcomes .

Fourth Requirement: Evaluating the Quality of Financial Stability in Iraq

This analysis seeks to ascertain the characteristics of the attained stability and if it is structurally sustainable or merely contingent and associated with liquidity.

Table (4): Categorisation and Assessment of Financial Stability Quality

structural traits	Amount of stability	Stage
Weak plans and funding	Low	2015–2017
Credit growth that isn't stable	Medium	2018–2019
Stability that comes from cash flow	High	2020–2021
A sudden drop and a weak structure	Low	2022
Stability that is fragile and depends on money	Medium	2023–2024

Source: Work of the Researcher

It is observed that Iraq's financial stability has mostly been transient and based on liquidity, not on long-term structural changes. This is made clear by the quick drop in 2022, which shows that the financial system still depends substantially on direct monetary assistance. The Central Bank of Iraq has been very important in shaping the relationship between development finance and financial stability. It has done this by injecting liquidity and designing targeted financing instruments, which have made the relationship between the two variables more policy-driven than market-driven.

Fifth Requirement: A Detailed Economic Examination of the Relationship Between Development Finance and Financial Stability in Iraq

This requirement aims to provide a comprehensive economic analysis of the findings by The financial stability of Iraq is influenced by readiness funding using existing financing data with resulting indicators.

The findings indicate that return from development spending is not quick or direct. What makes this take so long? There are times when years roll by without anything happening. The types of businesses that financing is aimed at is the reason for this, such as the housing market with its long investment cycle whereby financing takes a long time to create any substantial economic impact. The consequences of development finance do not happen in one moment, they happen over time. To begin with, we should determine what financial stability means in Iraq.

An examination of data from 2015-2024 indicates that Iraq's financial stability is very fragile and highly volatile, mainly on account of liquidity and financing activities.

There were alterations in stability levels throughout the period.

From 2015 to 2017 there was no stability due to scarcity of financing processes.

The credit growth was consistently stable in 2018 and 2019.

There will be more coordination since there won't be much money.

A significant decrease in 2022 shows key problems.

The years 2023 and 2024 can be stable on the back of financing. Iraq does not derive its financial viability from anything productive or in the market, the difference reveals. On the other hand, it relies on short-term monetary intervention, making it more dependent and less sustainable..

Second: Assessing the Principal Hypothesis

The findings from the quantitative analysis substantiate the acceptance of the primary hypothesis which posits that development funds and financial stability in Iraq have a dynamic relationship. There's a delay here and it takes time for this to happen. This link is indirect.

This relationship does not seem to result from a structure of efficient market equilibrium. Government measures are rather influential, especially that Central Bank of Iraq controlling liquidity and credit. It creates the impression of a linkage that is more of an institution than one caused by the market..

Third: The Long-Term Effects of Development Finance

Findings indicate that aid offered in the previous period affects the current outcome. The effects of a liquidity boost are not visible right away, but only after a period of time. Infrastructure development is delayed due to several reasons. The primary issue is that the rules and institutions are not working well. In addition, it leads to delayed commencement of projects. At last, money is poorly directed and distributed.

We can affirm the sub-hypothesis regarding the lag effect.

According to this, the delay is not a function of the economy. Rather the means of conveying policy effects are broken..

Fourth: Asset Quality as a Means of Impact Transmission

This means that how development funds affect financial stability most importantly hinges on the quality of the assets they create. With the increase in financing, particularly in the real estate business, so has improved several asset quality parameters in banking system. This adjustment is not evidence that credit management functions. It truly concerns the situation that includes.

Greater dependence on physical guards.

A loan that has already been made is less risky. Investing in less-risk territory accepted The sub-hypothesis which assumes the asset quality as the intervening variable is therefore proved. This proves that this is a formal change and not a real one concerning the efficiency of the financial system..

Fifth: An Examination of the Structural Dynamics of the Relationship

A structural characteristic framework explains the relation of development funding with financial stability in Iraq. This framework explains the objective of this link and the challenges preventing it from functioning. This information is the most important.

- The economy's prominence of rentierism.
- The negligible contribution of the private sector to the economy.
- There are scarce bases which are really useful.
- The primary focus of capital investment is the real estate market.
- They are incapable of providing loans. Because of these characteristics, financing did not result in an enhancement of the productive structure. In the banking sector, risk mitigation strategies play

a crucial role in reducing the complexity of economic activities. Consequently, the effect on Economic Growth has been limited, while on short-term financial stability it had a greater impact. The sixth conclusion is general; From the previous analysis, we can make the following important conclusions, namely.

The relationship between development finance and financial stability is intricate and ever-evolving.

- As development funding, the plant is a homegrown crop.

The asset quality acts as a channel, but it does not do much.

Sufficient funds to spend are a crucial aspect of Iraq's economy stability.

The financial system, overall, has a major flaw. It is obvious that development assistance is largely used for liquidity control and short term stability in Iraq. Its long-term impact does not influence development at the structural level.

Table 5 : Results of the stability (stationarity) test of variables at level I(0) and the first difference I(1) using the ADF test

UNIT ROOT TEST RESULTS TABLE (ADF)				
Null Hypothesis: the variable has a unit root				
	At Level			
		Y	X1	X2
With Constant	t-Statistic	-1.613	-1.685	-1.405
	Prob.	0.457	0.422	0.558
		n0	n0	n0
With Constant & Trend	t-Statistic	-1.855	-1.159	-7.003
	Prob.	0.638	0.890	0.000
		n0	n0	***
Without Constant & Trend	t-Statistic	0.177	-0.704	-1.403
	Prob.	0.726	0.399	0.143
		n0	n0	n0
	At First Difference			
		d(Y)	d(X1)	d(X2)
With Constant	t-Statistic	-4.069	-3.838	-4.667
	Prob.	0.006	0.011	0.003
		***	**	***
With Constant & Trend	t-Statistic	-4.006	-4.227	-3.331
	Prob.	0.028	0.020	0.099
		**	**	*
Without Constant & Trend	t-Statistic	-4.123	-4.123	-4.474
	Prob.	0.000	0.000	0.000

		***	***	***
a: (*)Significant at the 10%; (**)Significant at the 5%; (***) Significant at the 1% and (no) Not Significant				

Source: EViews 13 output

Table 6 : Results of the stability (stationarity) test of variables at level I(0) and the first difference I(1) using the PP test

UNIT ROOT TEST RESULTS TABLE (PP)				
Null Hypothesis: the variable has a unit root				
	At Level			
		Y	X1	X2
With Constant	t-Statistic	-1.590	-1.607	-1.565
	Prob.	0.468	0.460	0.480
		n0	n0	n0
With Constant & Trend	t-Statistic	-1.971	-0.925	-1.867
	Prob.	0.579	0.931	0.631
		n0	n0	n0
Without Constant & Trend	t-Statistic	0.378	-0.636	-0.321
	Prob.	0.783	0.428	0.556
		n0	n0	n0
	At First Difference			
		d(Y)	d(X1)	d(X2)
With Constant	t-Statistic	-4.175	-4.036	-4.000
	Prob.	0.005	0.007	0.007
		***	***	***
With Constant & Trend	t-Statistic	-4.434	-6.118	-4.135
	Prob.	0.013	0.001	0.022
		**	***	**
Without Constant & Trend	t-Statistic	-4.139	-4.138	-4.123
	Prob.	0.000	0.000	0.000
		***	***	***
a: (*)Significant at the 10%; (**)Significant at the 5%; (***) Significant at the 1% and (no) Not Significant				

Source: EViews 13 output

The Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) unit root test results (Table 5 and Table 6) indicate that the dependent variable (Y) and the independent variable (X_1) are non-stationary at their original levels I(0), as their associated p-values exceed the 5% significance level across most specifications, confirming the presence of a unit root. Conversely, the variable X_2 exhibits stationarity at its original level under the ADF specification when accounting for both a constant and a trend, becoming highly significant at the 1% level ($p = 0.000$). Upon taking the first difference, all research variables (Y, X_1, and X_2) become statistically stationary, with p-values

dropping significantly below the 1% and 5% thresholds. This mixture of I(0) and I(1) integration orders confirms that the variables are not mono-integrated, which invalidates the application of the Johansen cointegration technique and provides the empirical justification for adopting the Autoregressive Distributed Lag (ARDL) Bounds Testing approach

Table 7 Estimating the relationship between variables using ARDL

Dependent Variable: Y				
Method: ARDL				
Date: 04/15/26 Time: 19:49				
Sample: 2015S2 2024S2				
Included observations: 19				
Dependent lags: 2 (Automatic)				
Automatic-lag linear regressors (1 max. lags): X1 X2				
Deterministics: Restricted constant and no trend (Case 2)				
Model selection method: Akaike info criterion (AIC)				
Number of models evaluated: 8				
Selected model: ARDL(1,0,1)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.*
Y(-1)	0.4949	0.1678	2.9494	0.0106
X1	0.0001	0.0000	3.0827	0.0081
X2	0.0182	0.0115	1.5826	0.1358
X2(-1)	-0.0164	0.0113	-1.4562	0.1674
C	0.1425	0.0975	1.4623	0.1657
R-squared	0.7886	Mean dependent var		0.4659
Adjusted R-squared	0.7282	S.D. dependent var		0.1056
S.E. of regression	0.0550	Akaike info criterion		-2.7403
Sum squared resid	0.0424	Schwarz criterion		-2.4917
Log likelihood	31.0327	Hannan-Quinn criter.		-2.6982
F-statistic	13.0533	Durbin-Watson stat		1.9346
Prob(F-statistic)	0.0001			
*Note: p-values and any subsequent test results do not account for model selection.				

Source: EViews 13 output

Based on the estimated ARDL(1, 0, 1) model presented in Table 7, the overall diagnostic statistics indicate high explanatory power and robustness. The adjusted R-squared values show that approximately 72.82% of the variations in the dependent variable (Y) are explained by the independent variables (X₁ and X₂). Moreover, the F-statistic (13.053) is highly significant (p = 0.0001), confirming the overall validity of the model layout at the 1% significance level.

Regarding the short-term dynamics of the independent variables:

- Variable (X₁): Exhibits a coefficient of 0.0001 with a highly significant p-value (0.0081). From an empirical perspective, although this relationship is highly verified and statistically

significant at the 1% level, its economic impact remains marginal or weak, suggesting that massive structural changes in X_1 are required to induce a substantial direct shift in Y .

- Variable (X_2): Shows a contemporary coefficient of 0.0182 and a lagged coefficient ($X_2(-1)$) of -0.0164. However, both coefficients are statistically insignificant in the short run, as their p-values (0.1358 and 0.1674, respectively) exceed the standard 5% significance threshold.

Finally, the first lag of the dependent variable ($Y(-1)$) displays a positive coefficient of 0.4949 and is statistically significant at the 5% level ($p = 0.0106$), which highlights the dynamic nature of the model and demonstrates that the current state of financial stability is strongly influenced by its historical path.

Table 8 Error Correction Term

Dependent Variable: D(Y)				
Method: ARDL				
Date: 04/15/26 Time: 19:49				
Sample: 2015S2 2024S2				
Included observations: 19				
Dependent lags: 2 (Automatic)				
Automatic-lag linear regressors (1 max. lags): X1 X2				
Deterministics: Restricted constant and no trend (Case 2)				
Model selection method: Akaike info criterion (AIC)				
Number of models evaluated: 8				
Selected model: ARDL(1,0,1)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
COINTEQ*	-0.5051	0.1284	-3.9349	0.0011
D(X2)	0.0182	0.0090	2.0340	0.0579
R-squared	0.5058	Mean dependent var		0.0086
Adjusted R-squared	0.4767	S.D. dependent var		0.0691
S.E. of regression	0.0500	Akaike info criterion		-3.0561
Sum squared resid	0.0424	Schwarz criterion		-2.9567
Log likelihood	31.0327	Hannan-Quinn criter.		-3.0392
F-statistic	17.3985	Durbin-Watson stat		1.9346
Prob(F-statistic)	0.0006			
* p-values are incompatible with t-Bounds distribution.				

Source: EViews 13 output

T-Bounds Based on the results table of the Error Correction Model (ECM) for the selected ARDL model, here is the detailed analysis of the results and their statistical and economic implications:

1. Error Correction Factor (COINTEQ) : This is the most important coefficient in these estimates, denoted by: Value: The coefficient value is (-0.5051)The sign came out negative, which is the theoretically expected and necessary result.

Significance: The absolute value of the t-Statistic is (- 3.934), which is a very high value indicating a very high statistical significance (less than 1%). Interpretation: The negative and

significant sign confirms the existence of a long-run equilibrium relationship extending from the independent variables to the dependent variable. Adjustment speed: The value (0.50) means that only 50% of the imbalance in (Y) from its long-term equilibrium path is corrected in each time unit (year). This speed is considered very slow, meaning that returning to equilibrium after a shock takes a long time.

Table Long-term equation or joint integration between independent variables and dependent Table 9 variables, as follows:

Variable *	Coefficient	Std. Error	t-Statistic	Prob.
X1	0.0001	0.0000	3.5499	0.0027
X2(-1)	0.0036	0.0139	0.2588	0.7991
C	0.2822	0.1361	2.0726	0.0547
Note: * Coefficients derived from the CEC regression.				

Source: EViews 13 output

The estimates of the cointegration equation parameters and long-term correlation show that development funding has a statistically significant positive effect on the dependent variable. This is shown by a coefficient of 0.0001 and a significance level of 0.0027, which is below the threshold of 0.05. This means that this variable is very important for keeping the long-term equilibrium connection stable. In contrast, the data showed that non-performing loans were not statistically significant in the long run, since the high probability value of 0.7991 is not significant. This means that non-performing loans that are slowing down don't really explain anything in this scenario. Consequently, the principal determinant of the long-term connection in this model is development funding, whereas the constant value persists at a marginal significance level of around 5%, indicating a negligible impact of the other factors omitted from the model.

Table 10 Bounds Test Results

Null hypothesis: No levels relationship	
Number of cointegrating variables: 2	
Trend type: Rest. constant (Case 2)	
Sample size: 19	
Test Statistic	Value
F-statistic	3.18771

	10%		5%		1%	
Sample Size	I(0)	I(1)	I(0)	I(1)	I(0)	I(1)
30	2.915	3.695	3.538	4.428	5.155	6.265
Asymptotic	2.63	3.35	3.1	3.87	4.13	5
* I(0) and I(1) are respectively the stationary and non-stationary bounds.						

The results of the ARDL Bounds Test for co-integration are presented in Table 10. Given the small sample size of the study (N = 19), the critical value bounds for a sample size of 30 (Narayan, 2005) and the asymptotic values (Pesaran et al., 2001) are provided as the closest benchmarks. The

computed F-statistic is 3.187. When compared against the asymptotic critical values at the 10% significance level, the F-statistic falls between the lower bound $I(0) = 2.63$ and the upper bound $I(1) = 3.35$, rendering the F-bounds test inconclusive.

To resolve this ambiguity and address the constraints of the small sample size, we rely on the t-bounds testing approach via the error correction mechanism (ECM). As established by Kremers et al. (1992) and Banerjee et al. (1998), a highly significant and negative error correction coefficient serves as a direct and definitive proof of a long-run equilibrium relationship. Referring back to the short-run dynamics (Table 8), the error correction term (COINTEQ = -0.5051) is negative, less than one, and highly significant at the 1% level ($p = 0.0011$). This robust empirical evidence successfully rejects the null hypothesis of no levels relationship, confirming the existence of a stable, long-run cointegration relationship among the research variables (Y, X_1, and X_2) despite the small sample size limitation.

Table 11 Results of the Breusch-Pagan-Godfrey

Heteroskedasticity Test: Breusch-Pagan-Godfrey			
Null hypothesis: Homoskedasticity			
F-statistic	0.7319	Prob. F(4,14)	0.5851
Obs*R-squared	3.2860	Prob. Chi-Square(4)	0.5112
Scaled explained SS	2.1845	Prob. Chi-Square(4)	0.7019

To ensure the reliability of the estimated ARDL model parameters, a series of diagnostic tests were conducted. The Breusch-Pagan-Godfrey test was utilized to check for heteroskedasticity. The results indicate an F-statistic of 0.7319 ($p = 0.5851$) and an Observed R-squared of 3.2860 ($p = 0.5112$). Since the empirical p-values significantly exceed the standard 5% significance threshold, we fail to reject the null hypothesis of homoskedasticity. This confirms that the variance of the error terms is constant over time, demonstrating the methodological soundness and efficiency of the estimated model.

Table 12 Results of the test for detecting Breusch-Godfrey Serial Correlation LM Test:

Null hypothesis: No serial correlation at up to 2 lags			
F-statistic	0.00329168328	Prob. F(2,12)	0.9967146280
Obs*R-squared	0.01041794829	Prob. Chi-Square(2)	0.9948045690

The Breusch-Godfrey Serial Correlation LM test was applied to check for remaining autocorrelation within the residuals up to two lags. As presented in Table 12, the F-statistic is 0.0032 ($p = 0.9967$) and the Observed R-squared statistic is 0.0104 with an associated chi-square probability of 0.9948. These results strictly warrant the acceptance of the null hypothesis of no

serial correlation, indicating that the stochastic error terms at different time intervals are mutually independent and do not bias the standard errors."

The Breusch-Godfrey test results show that your model does not have serial correlation at a lag of 2. This is because the probability value (Prob. Chi-Square) of 0.996 is higher than the usual significance level of 0.01. This necessitates the acceptance of the null hypothesis, which asserts that the model lacks autocorrelation, signifying that random errors occurring at different time intervals are independent and do not affect the accuracy of the calculations.

Jarque-Bera test for normal distribution of residuals

As we can see from Figure (3), the residuals are normally distributed in the model, and the Jarque-Bera ratio is (0.669), which indicates acceptance of the null hypothesis that the residuals of the estimated model follow a normal distribution because the probability value is greater than (0.715). This confirms the acceptance of the null hypothesis that random errors are normally distributed, which is a good indicator for the estimated model.

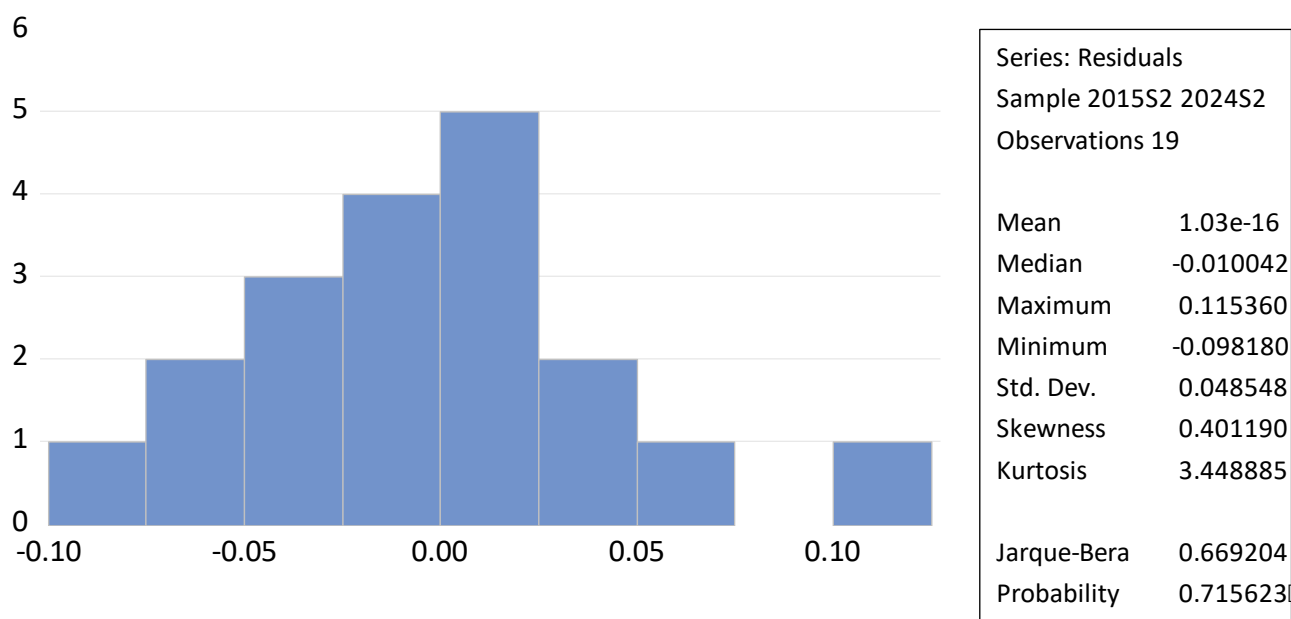
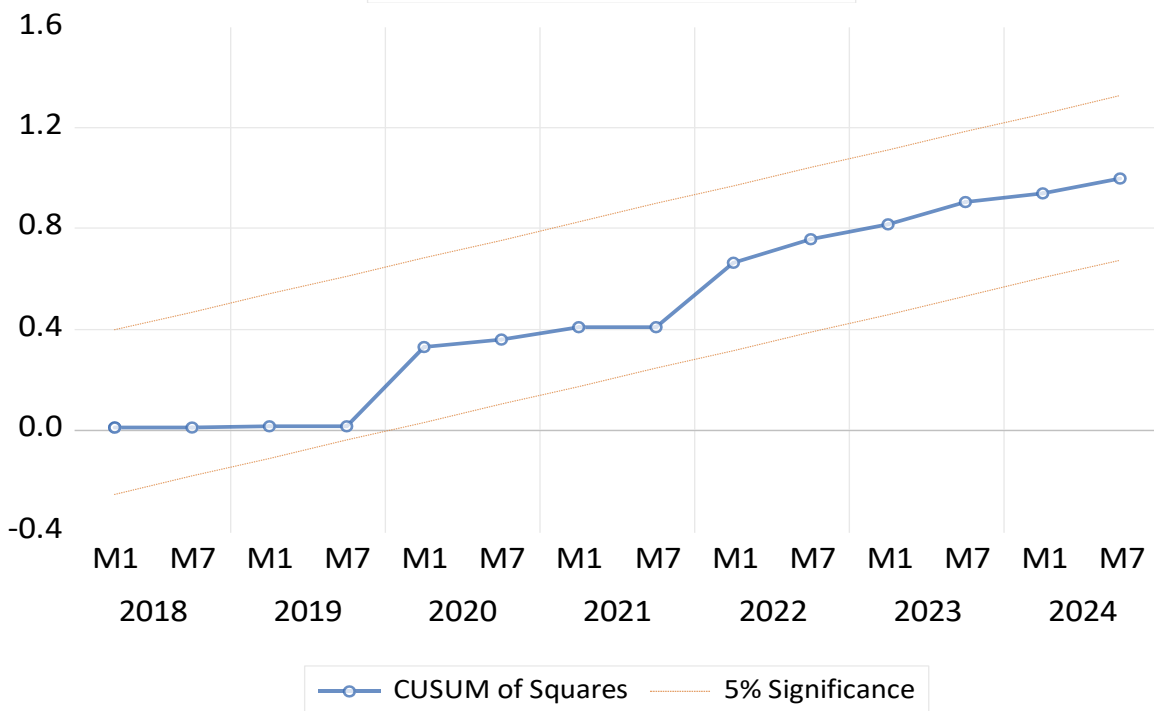
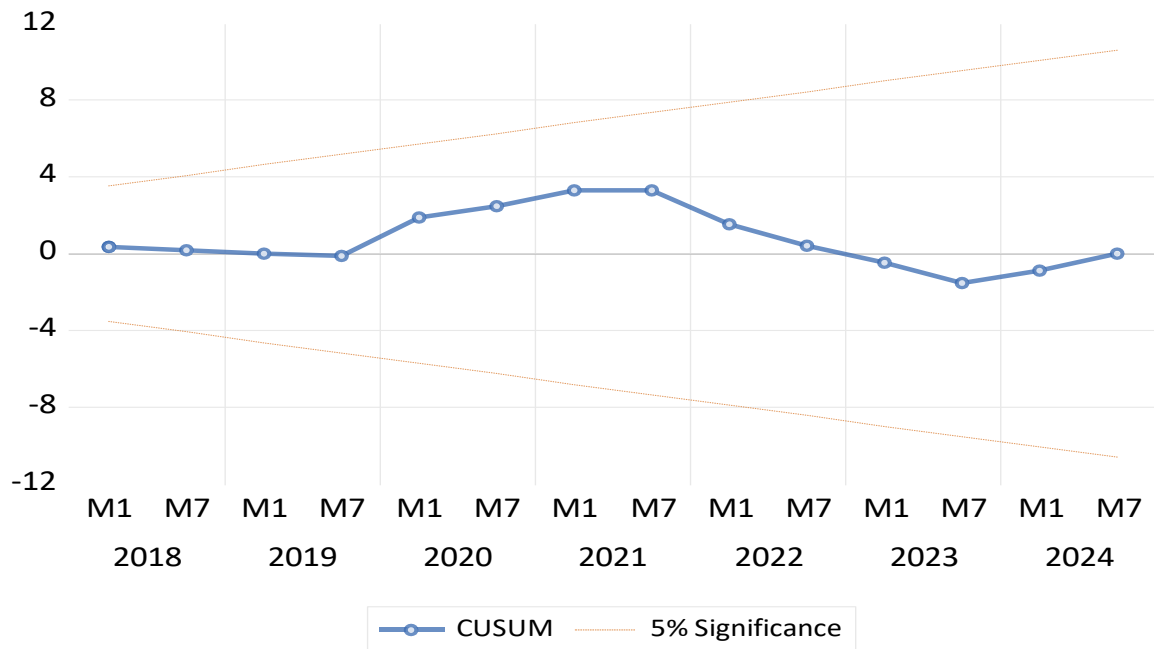


Figure (3): Jarque-Bera Test for Normality of Residuals

CUSUM and CUSUMSQ cumulative sum tests for residuals and residual squares

Furthermore, the normality of the error terms was verified using the Jarque-Bera test. As illustrated in Figure 3, the Jarque-Bera statistic is 0.669 with a high probability value of 0.715. Because this p-value is greater than the 5% level, the null hypothesis is accepted, confirming that the residuals are normally distributed, which satisfies a crucial assumption for asymptotic inference in time-series models.



Form (1) Test cumulative sum and cumulative sum square of residuals

Source: Outputs from Eviews13 software.

Finally, the structural and parameter stability of the short-run and long-run coefficients was evaluated using the Cumulative Sum (CUSUM) and Cumulative Sum of Squares (CUSUMSQ) tests. As displayed in Form 1, the plots of both statistics remain strictly within the 5% critical boundaries. This provides empirical validation that the estimated parameters are dynamically stable and structurally consistent over the investigated sample period, confirming that the model is highly reliable for policy analysis and statistical inference .

Conclusions

The study does not show that development finance is a direct and immediate cause of financial stability in Iraq, rather it is dynamic and asynchronous. Funding is taking time to transmit its impact as the effects of funding are seen after a while. The huge increase in development spending especially since 2018 did not deliver economic stability. In the coming years, this increasing effect can be seen in the economy. This shows that the effect of financing does depend on the nature of the industry being financed. Moreover, the extent to which the impact will spread to other sectors is also important.

As an indicator of how good the asset is, the non-performing loan ratio is one main channel from development finance to financial stability. At first, the rise in credit caused the non-performing loans ratio to go up, but this improved later on because of the nature of guarantee.

Though the quality of the assets is different from the previous year, it does not imply that credit is being given to a better method. In fact, it has much more to do with the fact that more dollars going to secured real estate loans. Such measures only create an illusionary risk management as they do not mend the conditions.

Results indicate that the price stability in Iraq was caused during that period by liquidity problems i.e. extra financing and allowing more money instead of having everlasting production or structural foundations.

The study also illustrates that the fluctuation of development funds impacts the Iraqi financial systems just like the previous ones. The funding cuts have an immediate impact on financial stability indicators indicating the structure of the economy is fragile.

The central Bank of Iraq contributed significantly to clarifying the relationship between financing and stability in the implementation of targeting financing policies. The impact here is not market-oriented but policy-oriented.

Recommendations

1-It is essential to pay attention to the distribution of the enhanced development finance which needs to be steered towards productive, value-added sectors and does not get over-emphasis on real estate loans.

- 2- .Formulate regulations and enforcement procedures for issuing credit to minimize the amount of repayment failures. It can be surely beneficial to monitor the credit decision-making process during credit growth. Credit-worthiness system/structure establishment.
- 3- .To reduce the risk of loans concentration and to enhance better economic stability in the long run, development funding sources need to be diversified.
- 4-Make sure your financing strategies are unlikely to become short-term measures of your policies' success. When taking steps to address the financing problems, be sure that your actions are consistent and do not conflict with longer-term results.
- 5-Strengthen the ability of central banks to manage the desire for increased liquidity with the necessity to stabilize economies using macroprudential measures aimed at reducing systemic risks.
- 6 -Develop improved measures for asset quality and financial system stability that accurately reflect the condition of the banking system rather than those simply related to collateral. Simply revealing symptoms of a problem, such measures cannot be seen as sources of a problem.
- 7- In other words, it is necessary to gradually work on enhancing the financial system structural strength through productivity support and real investment growth. The goal is to achieve economic stability on a sustainable long-term basis.

References

1. Al-Ameed, A. A. H. (2017). *Macro-prudential Indicators and the Potential for Early Crisis Prediction: An Empirical Study - The Case of Iraq*. General Directorate of Statistics and Research, Central Bank of Iraq.
2. Al-Humaidawi, H. K., & Al-Khafaji, Z. H. (2025). The Role of the Development Initiatives of the Central Bank of Iraq in Achieving Economic Development. *Warith Scientific Journal*, 7(236).
3. Al-Lami, H. K. N., & Abbas, S. H. (2024). Asset Quality and Its Impact on Banking Performance in the Gulf Commercial Bank as a Model. *Journal of Management and Economics*, 49(146).
4. Al-Sayed, A. A. J. (2023). Sustainable Finance for University Education: Mechanisms and Options. *Journal of the Faculty of Education, Port Said University*, (31).
5. Anjat, Z., & Muhammad bin Ahmed Wahran (2023). The Role of Sustainable Finance in Attaining Financial Stability. *Journal of Development and Foresight for Research and Studies*, 8(1).
6. Arab Monetary Fund (2015). *The Interconnected Relationship Between Financial Stability and Financial Inclusion*. Secretariat of the Council of Governors of Arab Central Banks and Monetary Institutions.
7. Arab Monetary Fund (2023). *Sustainable Finance Portal*. Retrieved from <https://www.amf.org.ae/ar/financial-sector/sustainable-finance>

8. Bin Mahmoud, A. D. M., & Salah, A. (2019). The impact of asset management efficiency and quality on the profitability of Libyan commercial banks (2012-2017). *Scientific Journal for Commercial and Environmental Studies*, 10(2), 531–560.
9. Bolton, P., Despres, M., Pereira da Silva, L. A., Samama, F., & Svartzman, R. (2020). *The Green Swan: Central banking and financial stability in the age of climate change*. Basel, Switzerland: Bank for International Settlements.
10. Central Bank of Iraq (2015-2024). *Financial Stability Reports*.
11. Central Bank of Iraq (2017-2024). *Annual Economic Reports*.
12. Central Bank of Iraq (2020). *The Role of the Central Bank of Iraq in Attaining Sustainable Growth*. Department of Statistics and Research.
13. Cui, J., Jo, H., & Na, H. (2018). Does Corporate Social Responsibility Affect Adherence to Christian Values? Evidence from Corporate Misconduct. *Journal of Business Ethics*, 149(3), 747-775.
14. Economy (2015). *Final Report: Best Practices in Sustainable Finance*. Strandberg Consulting, BC, Canada.
15. Fatemi, A., Glaum, M., & Kaiser, S. (2018). ESG performance and firm value: The moderating role of disclosure. *Global Finance Journal*, 38.
16. Gujarati, D. N., & Porter, D. C. (2022). *Basic Econometrics*. (Latest Edition).
17. Institute of Banking Studies (2025). The Role of Financial Stability and Its Impact on Economic Activity. *Insights*, 16(6).
18. International Finance Corporation (IFC) (2017). *Annual Report*. Washington, D.C.
19. International Monetary Fund (IMF) (2023). *Iraq: 2023 Article IV Consultation-Staff Report*. IMF Country Report No. 23/208.
20. Iraqi Ministry of Planning (2025). *Central Statistical Organization Reports*.
21. Najat, Z., & Nasima, Z. (2023). The Role of Sustainable Finance in Achieving Financial Stability. *Journal of Research and Studies, Development and Foresight Journal*, 8(1).
22. Obaid, R. Y. (2020). *Methodology for Calculating the Financial Stability Index for Arab Countries*. Arab Monetary Fund.
23. Tirca, D. M., Apetri, A. N., & Aceleanu, M. (2019). Sustainability in Finance & Economics. In M. Ziolo & B. Serge (Eds.), *Financing Sustainable Development*.