


MEASURING AND ANALYZING THE IMPACT OF FINANCIAL CROWDING OUT ON THE IRAQI BANKING SECTOR FOR THE PERIOD FROM 2004 TO 2020

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ARTICLE INFO	ABSTRACT
<p>Article history:</p> <p>Received 31 January 2023</p> <p>Accepted 06 April 2023</p>	<p>Purpose: The objective of this study was to investigate the effect of financial crowding out on the banking sector, tested under the mediation of the two variables of banking sector indicators (total deposits ,Bank credit).</p>
<p>Keywords:</p> <p>Fiscal Policy; Financial Crowding; The Banking Sector.</p>	<p>Theoretical Framework: Although the studies conducted to clarify the effects of fiscal crowding-out were conducted in the context of public finances, there was a need to explore the effect of mediating interest rates as a result of increasing public debt to finance government spending.</p>
	<p>Design/Methodology/Approach: We used the methodologies of Ali Jaber and Hoda Abed (2003) to test the effect of financial policy variables to measure the size of the financial crowding out variable. Regarding the testing and validity of the hypothetical search model, path analysis was used within the structural equation modeling analysis. The study sample consists of 16 commercial and Islamic banks in the Iraqi banking sector, and it is inclusive of all the data of the banks listed in the Iraq Stock Exchange, for the possibility of generalizing the results fairly to the community.</p>
	<p>Findings: The results indicate that the variables of total taxes, public debt, and total public expenditures as indicators of the volume of financial competition have a direct impact on total bank deposits and credit. Such an effect is statistically significant. The results provide practical solutions to enhance competition in the funds available for lending to the banking sector by diversifying the various funding sources to preserve and sustain banking resources.</p>
	<p>Research, Practical and Social Implications: Future studies can look at other indicators of the size of financial competition and assess its impact on the various dimensions of the relationship between the financial policy methodology and banking sector facilities.</p>
	<p>Implications/Originality/Value: This study contributes to the literature related to fiscal policy by analyzing the results of the impact of government spending financing equations on total deposits and the volume of bank credit in Iraqi banks, and presents a practical and applied perception of the role played by the fiscal policy methodology in Iraq.</p>
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MEDIR E ANALISAR O IMPACTO DA CROWDING FINANCEIRA NO SETOR BANCÁRIO DO IRAQUE NO PERÍODO DE 2004 A 2020.

RESUMO

Objetivo: O objetivo deste estudo foi investigar o efeito do crowding out financeiro no setor bancário, testado sob a mediação de duas variáveis de indicadores do setor bancário (depósitos totais, Crédito bancário).

Referencial teórico: Embora os estudos realizados para esclarecer os efeitos do crowding-out fiscal tenham sido realizados no contexto das finanças públicas, houve a necessidade de explorar o efeito da mediação das taxas de juros como resultado do aumento da dívida pública para financiar os gastos do governo.

Desenho/Metodologia/Abordagem: Usamos as metodologias de Ali Jaber e Hoda Abed (2003) para testar o efeito das variáveis de política financeira para medir o tamanho da variável de exclusão financeira. Em relação ao teste e validade do modelo de busca hipotético, a análise de caminho foi usada dentro da análise de modelagem de equações estruturais. A amostra do estudo é composta por 16 bancos comerciais e islâmicos do setor bancário iraquiano, e inclui todos os dados dos bancos listados na Bolsa de Valores do Iraque, para a possibilidade de generalizar os resultados de forma justa para a comunidade.

Resultados: Os resultados indicam que as variáveis de impostos totais, dívida pública e gastos públicos totais como indicadores do volume de competição financeira têm impacto direto sobre o total de depósitos e crédito bancários. Tal efeito é estatisticamente significativo. Os resultados fornecem soluções práticas para aumentar a competição nos fundos disponíveis para empréstimos ao setor bancário, diversificando as várias fontes de financiamento para preservar e sustentar os recursos bancários.

Pesquisa, implicações práticas e sociais: Estudos futuros podem olhar para outros indicadores do tamanho da competição financeira e avaliar seu impacto nas várias dimensões da relação entre a metodologia de política financeira e as facilidades do setor bancário.

Implicações/Originalidade/Valor: Este estudo contribui para a literatura relacionada à política fiscal ao analisar os resultados do impacto das equações de financiamento dos gastos do governo sobre os depósitos totais e o volume de crédito bancário nos bancos iraquianos, e apresenta uma percepção prática e aplicada da papel desempenhado pela metodologia de política fiscal no Iraque.

Palavras-chave: Política Fiscal, Crowding Financeiro, Setor Bancário.

MEDICIÓN Y ANÁLISIS DEL IMPACTO DEL DESPLAZAMIENTO FINANCIERO EN EL SECTOR BANCARIO IRAQUÍ PARA EL PERÍODO DE 2004 A 2020.

RESUMEN

Propósito: El objetivo de este estudio fue investigar el efecto del desplazamiento financiero en el sector bancario, probado bajo la mediación de las dos variables de los indicadores del sector bancario (depósitos totales, crédito bancario).

Marco teórico: Si bien los estudios realizados para esclarecer los efectos del desplazamiento fiscal se realizaron en el contexto de las finanzas públicas, era necesario explorar el efecto de la mediación de las tasas de interés como resultado del aumento de la deuda pública para financiar el gasto público.

Diseño/Metodología/Enfoque: Usamos las metodologías de Ali Jaber y Hoda Abed (2003) para probar el efecto de las variables de política financiera para medir el tamaño de la variable de desplazamiento financiero. Con respecto a la prueba y validez del modelo de búsqueda hipotético, se utilizó el análisis de ruta dentro del análisis de modelado de ecuaciones estructurales. La muestra del estudio consta de 16 bancos comerciales e islámicos en el sector bancario iraquí, e incluye todos los datos de los bancos que cotizan en la Bolsa de Valores de Irak, por la posibilidad de generalizar los resultados de manera justa a la comunidad.

Hallazgos: Los resultados indican que las variables de impuestos totales, deuda pública y gasto público total como indicadores del volumen de competencia financiera tienen un impacto directo sobre los depósitos y créditos bancarios totales. Tal efecto es estadísticamente significativo. Los resultados brindan soluciones prácticas para mejorar la competencia en los fondos disponibles para prestar al sector bancario al diversificar las diversas fuentes de financiamiento para preservar y sostener los recursos bancarios.

Implicaciones de investigación, prácticas y sociales: los estudios futuros pueden analizar otros indicadores del tamaño de la competencia financiera y evaluar su impacto en las diversas dimensiones de la relación entre la metodología de la política financiera y las facilidades del sector bancario.

Implicaciones/Originalidad/Valor: Este estudio contribuye a la literatura relacionada con la política fiscal al analizar los resultados del impacto de las ecuaciones de financiamiento del gasto público en los depósitos totales y el volumen del crédito bancario en los bancos iraquíes, y presenta una percepción práctica y aplicada de la papel jugado por la metodología de la política fiscal en Irak.

Palabras clave: Política fiscal, Hacinamiento Financiero, Sector Bancario.

INTRODUCTION

The increase in public debt to finance government spending, lead to a decrease in the activity of the banking sector. As a result of the high interest rates associated with the growth of public debt demand and the increase in competition with the private sector over the funds available for lending, Which is reflected in its shadows on the increase in the public debt service, which puts financial pressures on public revenues to pay them along with their costs (Ahmed H, 1999). The issue becomes more acute when the largest part of the public debt is allocated to finance consumer expenditures, and the optimum utilization of public debt is not achieved, Therefore, the effects of financial crowding out are reflected in the expansion of capital formation losses for the banking sector. Because the government finances the fiscal deficit with debt, and affects capital formation in the economy by reducing private investment through an increase in the rate of interest (Ali, Salam Abdul Rahman, & Ali Abbas Obaid, 2022).

Crowding is defined as the economic effects of expansionary financial measures which affect the stimulus of the level of economic activity. Due to the increase in government borrowing to finance government spending Which is reflected in the increase in taxes or the issuance of debts. These measures are reflected in the performance of the banking sector due to competition for local liquidity and high interest rates (Atul A Dar & Sal AmirKhalkhali, 2002). It is defined as competition over the funds available for lending by the public sector. This competition contributes to raising interest rates, as high interest rates affect the ability of investors to invest because of high financing costs (Yazan Emnawer Al Haraisa, 2022) . That is, the increase in government borrowing increases to finance government spending lead to an equivalent decrease in consumption and investment due to higher interest rates. (Goodyear. R, Fabian. A, & Hay. J, 2011). Therefore, the concept of competition is related to the process of increasing government borrowing which will lead to higher interest rates, reducing the ability of the banking sector to make capital investments and grant loans. (Evans & Paul, 1987) .

The justification for choosing the study is the importance of the banking sector in revitalizing the economy, which represents the loop in which the various activities interact that reflects its shadow on achieving economic stability, and the success of economic policies in achieving its objectives, The context of the study is to address the following problem ,The ineffectiveness of fiscal policy in using its tools, public spending, public revenues and public

debt in influencing banking activity, crowding out the public sector with the private sector over the funds available for lending to finance consumer spending with the weak role of the private sector in economic activity, In order to achieve the following study objectives

The objectives of the study can be summarized in the following points:

- 1- Study of indicators of financial crowding out and the banking sector in Iraq for the period 2004-2020.
- 2- Analysis of joint movements in the time series of indicators of financial crowding out, total bank deposits and bank credit in Iraq for the period 2004-2020.
- 3- Measuring and analyzing the relationship between indicators of financial competition and the banking sector.

LITERATURE REVIEW

The crowding out is caused by the increase in the pursuit of an expansionary fiscal policy, Lead to higher interest rates ,This is because it is indirectly related to the nature of fiscal policy ,An expansionary fiscal policy uses financial resources that are no longer available for use by individuals and companies,If spending is financed by increasing revenue by taxesThis means that there will be a decrease in the amount of money that individuals and companies have to use for spending and investment ,The problem may be exacerbated if the government finances its spending through borrowingThe sheer volume of government borrowing increases the pressure on interest rates. (Hussein, 2022), As the private sector and the public sector compete for loans, this will make financing more expensive Which will have a negative impact on private economic growth if access to finance is too expensive, So individuals decide not to buy and companies decide not to invest (Timothy p & Sharp E, 2013). That increased government spending due to current expenditures or unproductive use of tax revenue in the economy creates a fiscal deficit, Many economists believe that fiscal deficits are the root cause of every disease in the economy because it leads to inefficient allocation of resources and can crowd out private investment (Agnello, Furceri, D, & Sousa R, 2011).

Many researches indicate that financial competition arises due to the high rate of inflation and taxes, low economic growth and the exclusion of investment and private consumption. (Chakraborty, 2007).

The method of financing the budget deficit affects interest rates, By borrowing from the central bank and the banking system, or by borrowing from the public and non-banking institutions By selling government securities such as Treasury bonds As a result, it contributes

to an increase in the demand for domestic liquidity (Atanassov, 2015), Hence, higher interest rates affect the cost of financing due to increases in interest rates ,The result of public borrowing and crowding out the banking sector directly on domestic financial resources (Kamaly. A & Samah.S, 2014) .

Exchange rate channel, By financing the fiscal deficit through the new monetary issuance, it will lead to an increase in the money supply, This increase in the money supply is not matched by flexibility in the production base of the country (Arshed Fouad Altameemi & Zaher Abdel Fattah Al-Slehat, 2022). It leads to an inflationary effect due to an increase in the volume of aggregate demand,And thus the depreciation of the local currency due to the increased demand for foreign products ,This is due to the rise in the prices of local products as a result of the increase in production costs and the reduction in borrowing from the Central Bank as a result of high interest rates (Alesina.A & .Perotti.R, 1995).

The decrease in the value of the currency leads to a decrease in the volume of incomes available for saving and consumption, and then a decrease in financial resources prepared for lending, which leads to an increase in the cost of financing as a result of an increase in interest rates to attract local savings, and consequently a rise in investment and production costs and prices (Gale & Peter R. Orszag, 2004). savings and investment channel, The increase in the fiscal deficit in the budget, It affects the expectations of individuals, i.e. an increase in the deficit means higher taxes in the future, and then an increase in savings,In the event that there is a surplus in the budget, interest rates decrease, and thus encourage individuals to invest and the volume of savings decreases. Because of the effects of government spending, ordinary consumers isolate part of their total consumption from the negative wealth effects resulting from higher levels of future taxes needed to finance fiscal expansion.An increase in government spending reduces the present value of after-tax income, which leads to lower consumption (Zadeh.M & Sadeghi.S, 2013).

MATERIAL AND METHODOLOGY

The current study adopted the descriptive and quantitative approach to describe the problem of the study through which is based on the inductive and deductive method. With the aim of analyzing indicators of financial crowding out and total deposits and bank credit in Iraq for the period 2004-2020,And the transformations and the consequences of its development during the study period,It was also relied on the standard analysis VAR to estimate the relationship between the variables of the study, The model parameters were estimated on the

data of the variables by 17 observations ranging between (2004-2021), and using the statistical program (Eviews12), to analyze the study variables, which include the dependent variables (EX, DP, TX) or the independent variables are (C, R).. whereas :

(C) Total bank deposits

(R) Total bank credit

(EX) public expenditure

(DP) Public Debt

(TX) Taxes

The current study aims to test the following hypotheses

- 1- H1: There is a correlation between financial competition and total deposits in the Iraqi banking sector.
- 2- H2: There is a correlation between financial competition and total bank credit.
- 3- H3: There is a statistically significant effect and correlation between financial competition and total bank deposits.
- 4- H4: There is a statistically significant effect and correlation between financial competition and total bank credit.

Test the study hypotheses

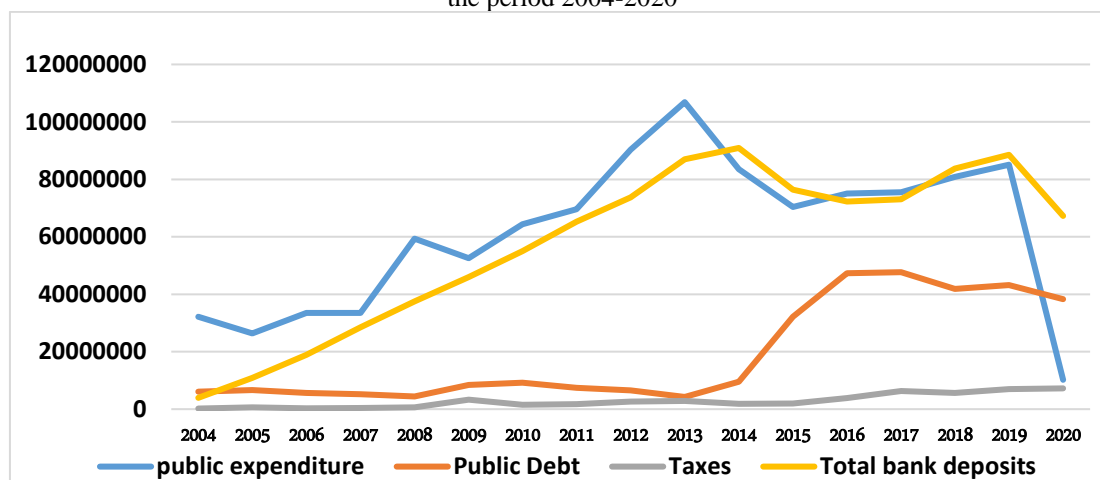
1- First hypothesis test H1:The following figure (1), which shows joint movements between the indicators of financial crowding out and the volume of deposits of the banking sector in Iraq for the period 2004-2020, the following becomes clear:

There is a direct relationship between the movement of public expenditures and total deposits, As the Iraqi economy depends on state intervention in economic and social life, with the weakness of the private sector, This led to an increase in employment in the public sector and a significant increase in the size of salaries, which was reflected in the increase in domestic savings, especially after the liberalization of interest rates.

Weak relationship between taxes and total deposits due to the lack of dependence on taxes greatly and the increase in tax evasion. There is an inverse relationship between public debt and total deposits because the government depends directly on public debt financing from government banks, which constitute 80% of the banking sector deposits. The decrease in the volume of public expenditures and total deposits in the period after 2013, as a result of the fragile security situation, the war on terrorism, the occupation of some oil wells and bank robbery led to a decrease in the volume of deposits, and then resorting to public debt to

compensate for the decrease in public revenues resulting from the sale of oil.

Figure (1) shows the relationship between indicators of financial crowding out and the banking sector in Iraq for the period 2004-2020



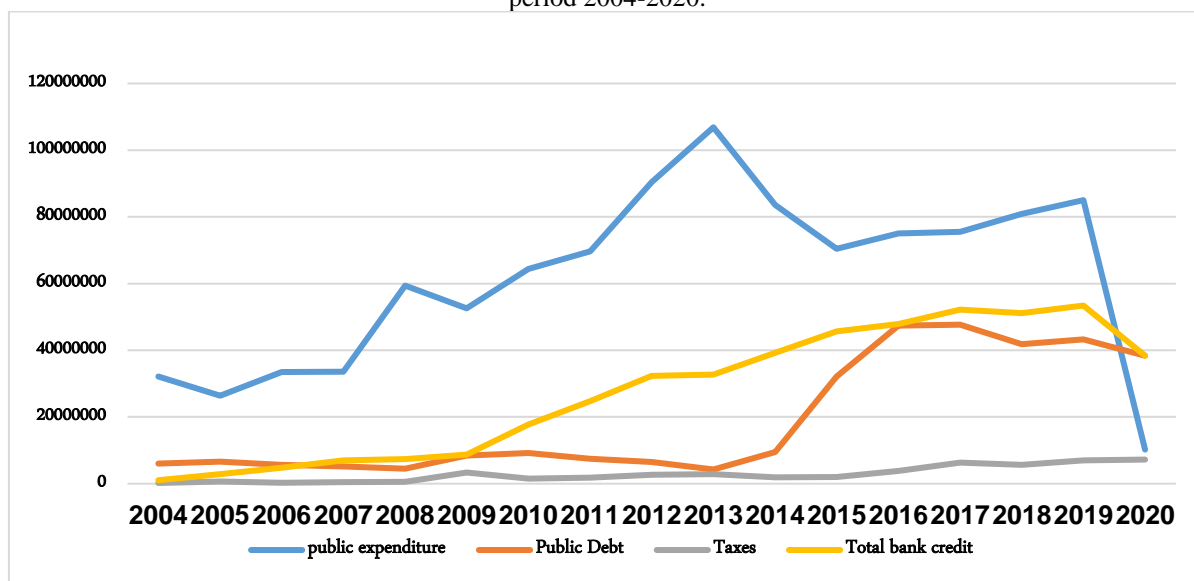
Source: Prepared by researchers based on data in Appendix (1).

2- Test the second hypothesis H2: The following figure (2), which shows the relationship between indicators of financial crowding out and total bank credit for the period 2004-2020, the following becomes clear, The increase in public expenditures leads to an increase in the total bank credit, and this positive relationship is due to the nature of the expansionary fiscal and monetary policy that was followed in Iraq and the trend towards increasing bank credit for the period from 2004-2013, especially since government banks constitute the largest part of the banking sector.

There is an inverse relationship between the movements of public debt and total bank credit, as a result of the government's increased competition over the funds available for lending in the banking sector.

The decline in public expenditures and bank credit after 2014 due to the drop in oil prices, as well as the war on terrorism and the increase in expenditures on the military side led to the stagnation of the economy, and the increase in public debt to cover the fiscal deficit due to the drop in oil prices.

Figure (2) shows the relationship between indicators of financial crowding out and bank credit in Iraq for the period 2004-2020.



Source: Prepared by researchers based on data in Appendix (1).

3- **Third hypothesis test H3:** The results of the estimation indicate the agreement of the parameters of the estimated model with the logic of economic theory and the significance of its statistical and standard tests, where the model explains (78%) of the changes that occur in the change of total bank deposits, and the (T) test shows the significance of the estimated parameters at the level of significance (5%). The calculated value of (F) expresses the overall significance of the model at the level of significance (5%), which confirms that the independent variables have a significant effect on the dependent variable. In light of the results of the estimation, it is noted that the estimated model is free of standard problems, as the (Durbin-Watson statistic) test confirms the absence of a problem of self-correlation between the successive values of the random variable at the level of significance (5%).

$$C = -20767 + 0.69813 (EX) + 5.935799(TX) + 0.008097(DP)$$

$$T : (-0.2433) \quad (5.4598) \quad (2.39906) \quad (0.02452)$$

$$R_2 : (0.78) \quad F : (20.84) \quad r : (0.82) \quad D.W (1.67)$$

4- **Fourth hypothesis test H4:** The results of the estimation indicate the agreement of the parameters of the estimated model with the logic of economic theory and the significance of its statistical and standard tests, as the model explains (89%) of the changes in the total bank credit change, and the (T) test shows the significance of the estimated parameters at the level

of significance (5%). The calculated value of (F) expresses the overall significance of the model at the level of significance (5%), which confirms that the independent variables have a significant effect on the dependent variable. In light of the results of the estimation, it is noted that the estimated model is free of standard problems, as the (Durbin-Watson statistic) test confirms the absence of a problem of self-correlation between the successive values of the random variable at the level of significance (1%).

$$C = -9876114 + 0.333803 (EX) + 1.620349 (TX) + 0.637643 (DP)$$

$$T : (-2.366275) \quad (5.394782) \quad (1.339170) \quad (3.949096)$$

$$R_2 : (0.89) \quad F : (45.017) \quad r : (0.91) \quad D.W(1.799)$$

RESULTS AND DISCUSSION

The absence of the financial depth of the banking sector in Iraq. Lack of clarity about the reflection of the effects of financial crowding out in the most prominent indicators of the banking sector (deposits, credit). The Iraqi economy's complete dependence on public debt from government banks in financing the public budget deficit, and the lack of dependence on the financial market, leads to the lack of the impact of crowding out on the banking sector. The dominance of government banks over banking activity, with the continued increase in government borrowing to finance the unexpected rise in public expenditures, serves as an indication that the impact of crowding out on the banking sector has not appeared.

CONCLUSION

What distinguishes the current study is the design of a periodic framework for crisis management that is commensurate with the Iraqi economic and financial conditions and addresses the new risks that may arise as a result of the increasing interdependence within the financial sector, the overlapping of fiscal and monetary policy, and the high level of dollarization. Implementing more effective economic policies that help boost economic growth through the participation of the private sector in economic activity.

Implementing more effective economic policies that help boost economic growth through the participation of the private sector in economic activity. He also developed a plan that encourages banking sector institutions to participate in a financial and administrative partnership with productive private sector companies to increase their administrative and

control efficiency and enhance their financial expertise instead of lending them at high interest, most of which are subject to financial hardship.

Hence, the public debt is supposed to be directed to the development of the country's infrastructure. Work to gradually reduce current expenditures, because current expenditures represent the main source of increasing government indebtedness, especially sovereign.

Therefore, the current study suggests conducting the following studies in the future.

- 1- To test the extent of the impact of financial crowding out on the performance of the stock market.
- 2- The effectiveness of the banking sector in economic growth.
- 3- The impact of fiscal and monetary policy on macroeconomic variables.
- 4- Financial engineering and transformations in financial policy indicators.

The current study is limited to The 16 commercial and Islamic banks in the Iraqi banking sector, and it is inclusive of all the data of the banks listed in the Iraq Stock Exchange, for the possibility of generalizing the results fairly to the community for the period of 2004 to 2020.

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SUPPLEMENTS

Indicators of financial policy and the banking sector in Iraq for the period from 2004 to 2020 Amounts (billion dinars)

Total bank credit	Total bank deposits	Taxes	Public debt	Expenditures	GDP at current prices	Year
1039542	3946668	209820	6061688	32117491	53235358.7	2004
2907431	10900090	647355	6593960	26375175	73533598.6	2005
4781980	18897338	307943	5645390	33487877	95587954.8	2006
6948710	28519558	440805	5193705	33545144	111455813.4	2007
7405327	37501909	581351	4455569	59403375	157026061.6	2008
8702620	45961330	3334809	8434049	52567025	131275592.6	2009
17735638	55008564	1532438	9180806	64351984	162064565.5	2010
24728651	65292123	1783593	7446859	69639523	217327107.4	2011
32365358	73676323	2633357	6547519	90374783	254225490.7	2012
32674466	87004404	2876856	4255549	106873027	271091777.5	2013
39195924	90932279	1885127	9520019	83556226	258900633.10	2014
45704775	76418631	2015010	32142805	70397515	191715791.8	2015
47870768	72276076	3861890	47362251	75055865	196924141.7	2016
52182944	73060348	6298272	47678796	75490115	225722375.5	2017
51122810	83793944	5687230	41822918	80873189	251064479.9	2018
53418176	88540964	6989207	43227122	85050465	266190571.3	2019
38423236	67291133	7229500	38331548	10211356	250559210.1	2020

Source:- (1) The Central Bank of Iraq, the General Directorate of Statistics, the annual report for the years (1991-2019).

(2) The Central Bank of Iraq. Financial stability report for the years (2015-2020)