

# Early Warning Report for Iraq's Banking Sector

**The third Quarter  
2022**

**Twenty-one  
Edition**

**Early Warning Report for the Banking Sector**  
**(The third Quarter – 2022)**

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**Early warning:** It is an indicator that gives a clear picture of the reality and extent of potential risks that the financial sector in particular and the economy in general may be exposed to, and thus enables decision makers to take the necessary measures and formulate policies in a timely manner to avoid a financial crisis.

You can quote from the report according to the following format: Central Bank of Iraq, Early Warning Report for the third quarter of 2022, Issue 21, Baghdad, 2022.

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Introduction

The Early Warning Indicators Report is one of the most important direct controls on the financial sector, through the indicators it contains that are capable of predicting imminent and potential crises in general but not achieved, as well as measuring potential deviations that may affect the banking sector and the variables affecting it.

The first Chapter of the Early Warning Report included analysis of currency value stabilization indicators by Exchange Market Pressure Index (EMPI), which saw stability within the upper and lower normative limits. during the third quarter of 2022 The stability of this indicator was the result of the success of the Central Bank's policies, which worked to maintain the stability of the value of the Iraqi dinar against the dollar, while the ratio of foreign reserves to broad money supply (M2) increased to (78.9%) in the third quarter of 2022 compared to the same quarter of the previous year, which was (64.4%), which is greater than the benchmark ratio (50%).The period of coverage of foreign reserves to imports increased to (17) months during the third quarter of 2022 compared to the same quarter of the previous year, which amounted to (14) months, owing to the substantial increase in the volume of foreign reserves as a result of rising oil prices globally, reflected in the country's volume of financial imports.

The second chapter includes the analysis of bank performance indicators. The ratio of total cash credit to total deposits (53.4%) in third quarter of 2022 not exceeding the central bank's standard ratio (75%), and the money multiplier ratio in the third quarter of 2022 fell to (1.26%) while it was (1.30%) for the same quarter of 2021. There was a decrease in the currency ratio in circulation to current deposits, reaching in the third quarter of 2022 (133.5%) after being (148.3%) in the same quarter of 2021. The asset return and equity return indices, were decrease in the proportion of asset return and an increase in the return on equity, with return on assets in the third quarter of 2022 falling to (0.86%). while it was (0.96%) for the same quarter in 2021. The return on equity increased from (1.76%) in the third quarter of 2021 to (9.5%) for the same quarter of 2022.

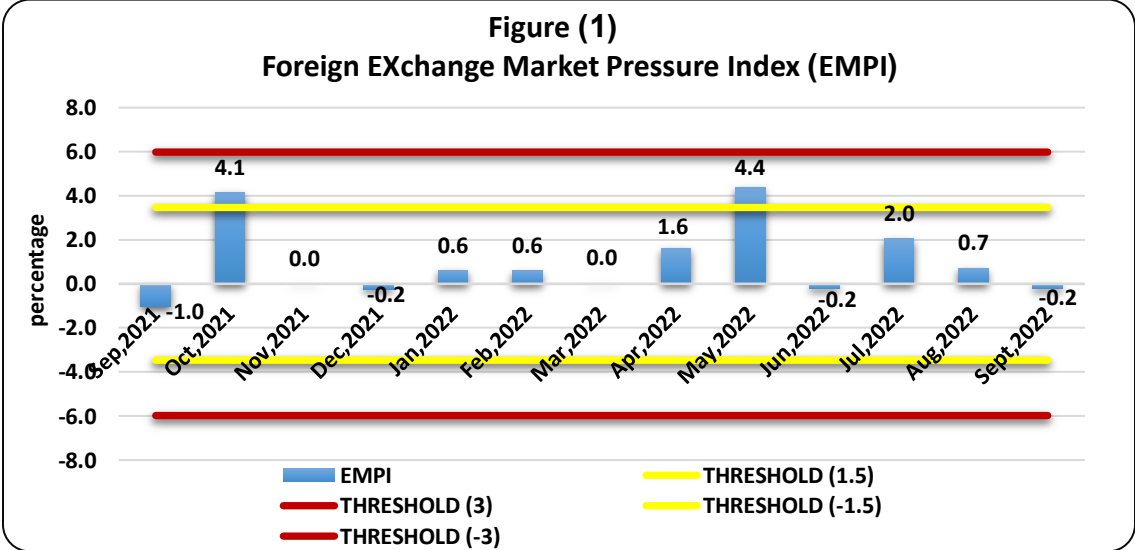
Commercial banks' treasury bills to total public debt declined from (8.7%), during the third quarter of 2021 to (8.5%) during the same quarter of 2022.The public sector's crowding out of access to credit fell sharply, and the GDP growth rate at current prices in Iraq during the third quarter of 2022 fell by (8.5%). GDP at current prices amounted to (100) trillion dinars compared to the second quarter of 2022 of (110) trillion dinars.

## Chapter I Analysis of Currency Value Stabilization index

Maintaining the value of the national currency is one of the Central Bank of Iraq's main objectives. In order to achieve and maintain that goal, it is necessary to follow up on indicators of the stability of the value of the Iraqi dinar. This chapter shows the measurement of fluctuations in the value of the domestic currency through several indicators, most notably the foreign exchange market pressure index and the foreign reserves adequacy index (M2) and foreign reserves coverage to imports, as well as the rate of change in interest rates, were selected to match the nature of Iraq's economy.

### 1- Foreign Exchange Market Pressure Index (EMPI)<sup>1</sup>

This indicator measures the pressures on the national currency, gives decision makers the ability to know the effects of the decision taken on the national currency, and contains benchmarking values to which currency pressure is compared to these values, as figure (1) notes the index's appreciation (1.0-), for the month of September 2021 to (0.2 -) for the same month of 2022 but within the upper and lower normative limits that is within the capacity of the CBI to defend the value of the national currency.

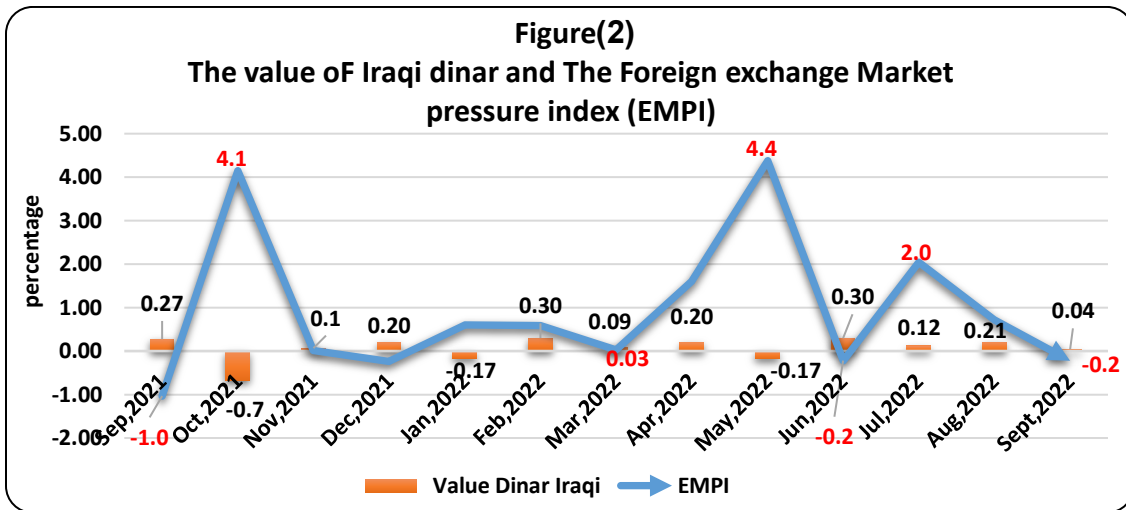


Source: Central Bank of Iraq, Monetary and Financial Stability Department Estimates 2022.

<sup>1</sup> For more information:  
 • Central Bank of Iraq, Early Warning Report 2020, No. 14, p. 3

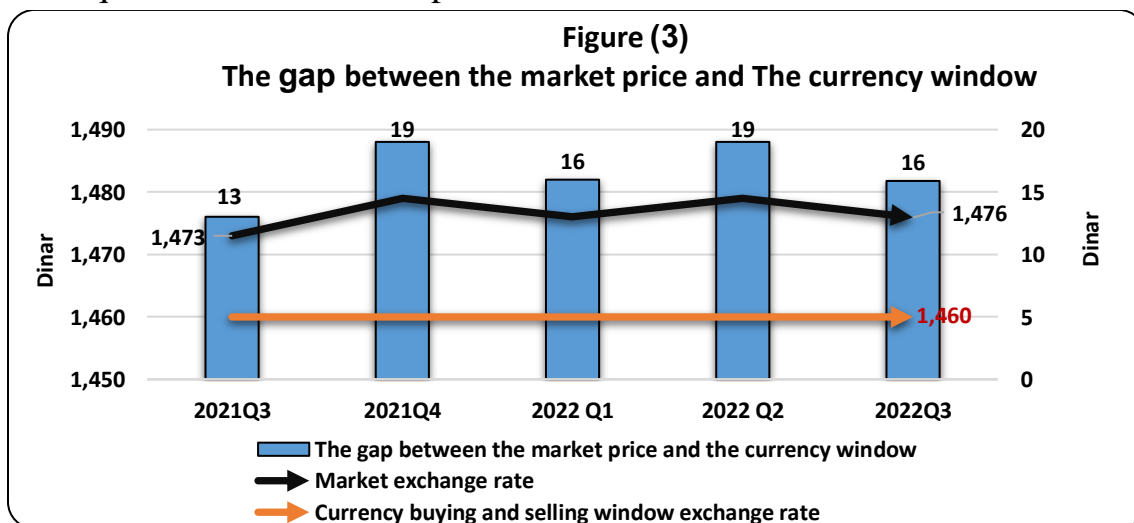


While figure (2) illustrates the relationship between the foreign exchange market pressure index and the Iraqi dinar value index, the value of the dinar against the dollar fell from (0.27%). in the ninth month of 2021 to (0.04) during the same month of 2022 as the value of EMPI rises from (1.0-) to (0.2 -) during the same period which shows the amount of pressure the Central Bank has been subjected to maintain the value of the currency through the sterilization of the currency within the market, which maintained stability in the national currency change rate during the third quarter of 2022.



Source: Central Bank of Iraq, Monetary and Financial Stability Department Estimates 2022

We note from figure (3) that the gap between the market exchange rate and the official exchange rate of the Iraqi dinar increased from (13) dinars in the third quarter of 2021 to (16) dinars for the same quarter of 2022, which represents the depreciation of the Iraqi dinar over the same period.



Source: Central Bank of Iraq, Statistical and Economic Website.

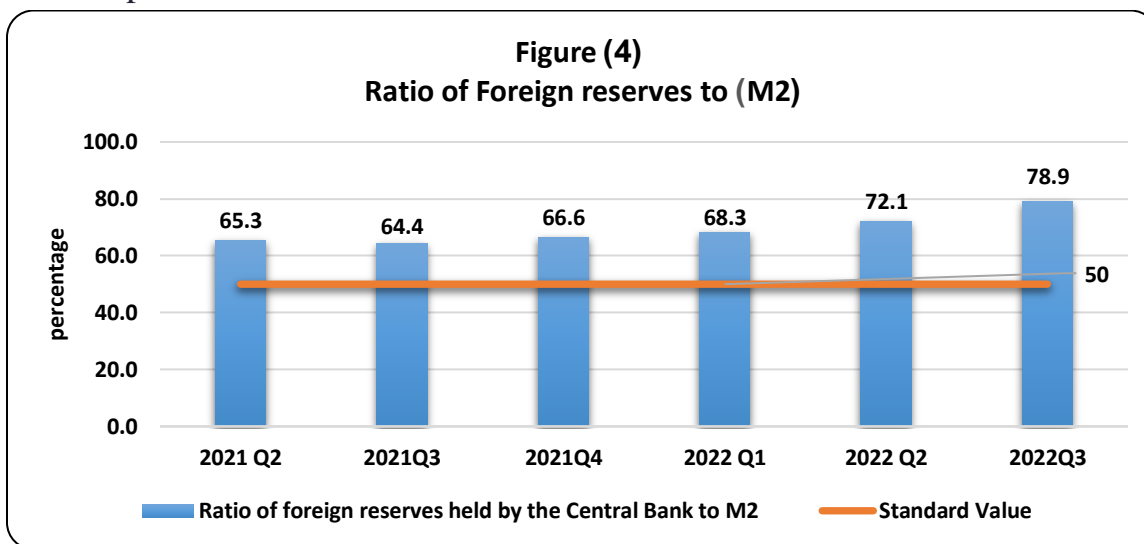


## 2- Adequacy of foreign reserves

Foreign reserves are one of the most important fenders that keeps the country's currency in a safe position to be fortified by unexpected emergency shocks. Foreign reserves are therefore a means of supporting confidence in the value of the national currency and reducing the risk of capital flight foreign currency obtained through the sale of foreign currency by the Ministry of Finance to the Central Bank of Iraq and in exchange for the acquisition of Iraqi dinars to finance public expenditures of the State. There are several indicators to measure the adequacy of foreign reserves, including:

### A- Ratio of foreign reserves to broad money supply (M2)

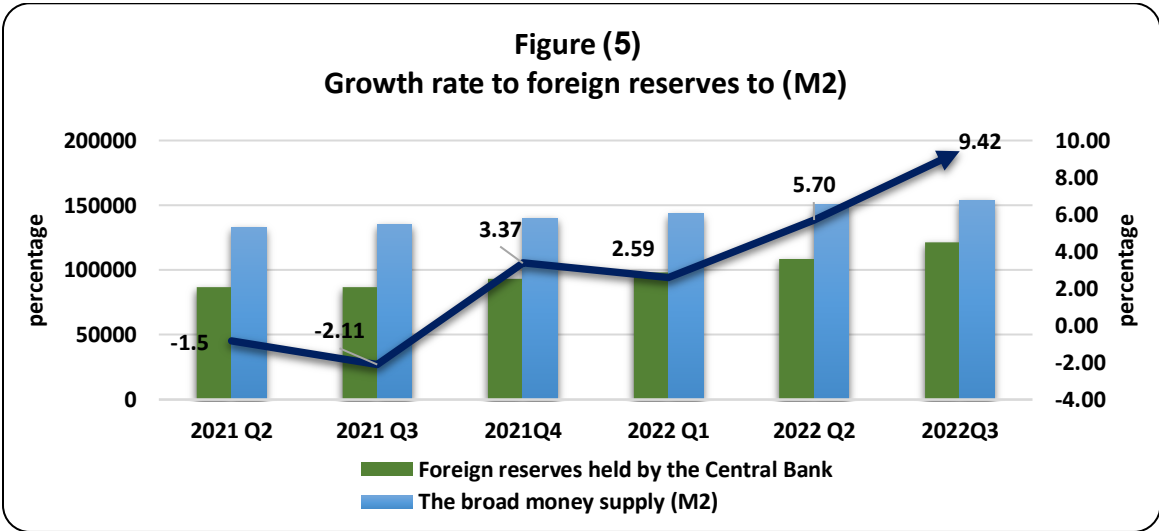
This indicator reflects the Central Bank of Iraq's trends in maintaining foreign reserves that increase its ability to maintain the stability of the value of the national currency and confront the speculation that may occur in the foreign currency, and to maintain the stability of the overall level of prices, and also measures the potential demand on foreign assets from domestic sources and hence the degree of pressure on the financial situation and the value of the national currency. Figure (4) notes the high proportion of foreign reserves to broad money supply (M2) to (78.9%) for the third quarter of 2022 compared to the same quarter of the previous year which amounted to (64.4%), higher than the benchmark (50%), as a result of the CBI's high foreign reserves growth rate (39.5%) an increase of (34.3) trillion dinars for the same period, which means that the foreign reserve volume of the CBI is within the safety limits to cope with emergency pressures, maintain monetary stability and stabilize the overall price level.



Source: Central Bank of Iraq, Statistical and Economic Website.

**B- Growth rate of the ratio of foreign reserves to broad money supply (M2)**

Foreign reserve growth to broad money supply (M2) increased during the third quarter of 2022 to (9.42%) after what it was (1.5-%) in the same chapter for the previous year as shown in the figure (5). Because of higher foreign reserve volume by greater growth than the broad money supply (M2), the broad money supply (M2) recorded a rise of up to (13.78%) in the third quarter of 2022 compared to the same quarter the previous year, while the foreign reserve recorded a growth rate of (39.5%) over the same period.

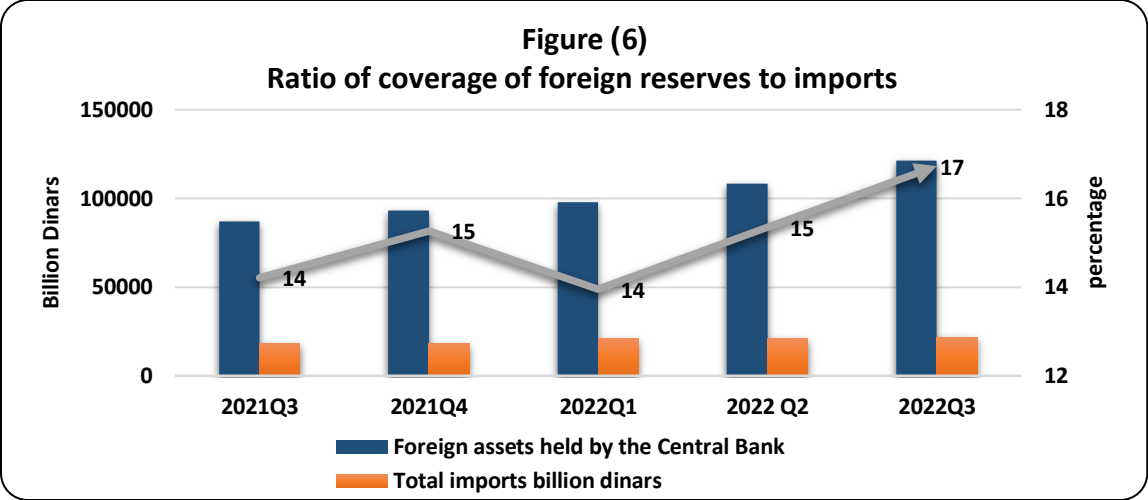


Source: Central Bank of Iraq, Statistical and Economic Website.

**C- Indicator of coverage of foreign reserves to imports**

This indicator measures the ratio of foreign reserves to imports assuming that there are no foreign exchange earnings or additions during this period and this ratio may vary from State to State depending on their economic status, In some countries, it has been estimated that the amount of foreign reserves' income coverage will be between 4 or 5 months. In the case of Iraq, it has been estimated for a period of 6 months<sup>1</sup>. Figure (6) shows the high duration of coverage of foreign reserves to imports to (17) months for the third quarter in 2022 compared to the third quarter of the previous year, which amounted to (14) months, as a result of the high volume of foreign reserves.

<sup>1</sup> See Central Bank of Iraq 2021, Early Warning Report, No. 18, p. 6.



Source: Central Bank of Iraq, Statistical and Economic Website.

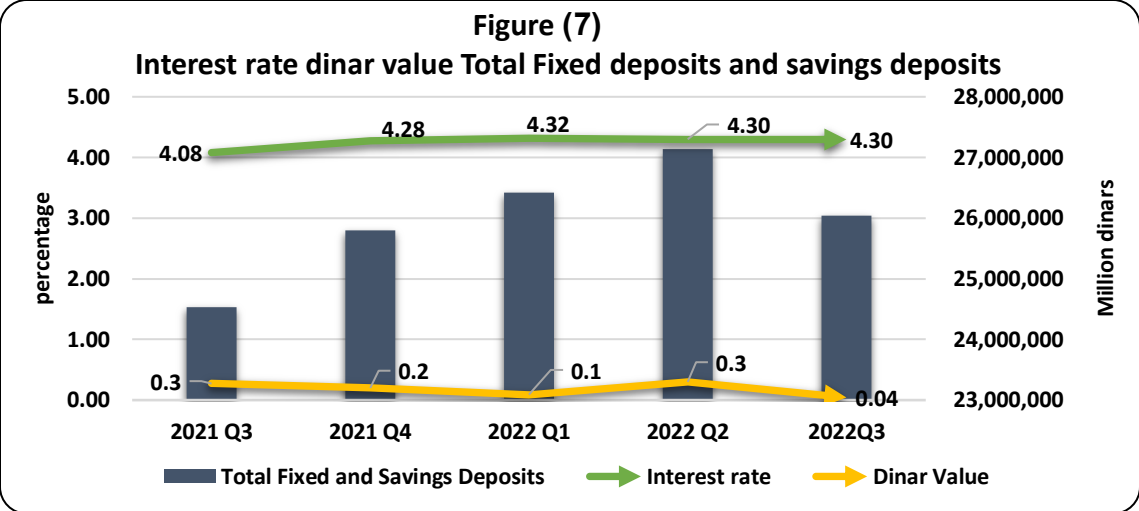
**1- Change in interest rates**

Interest rates are defined as the cost to the end beneficiary of obtaining funds and are considered an indicator of economic activity. This indicator measures changes in interest rates and their impact on the value of the currency, total long-term deposits and the rate of inflation, and is also one of the variables that has a significant impact on the change in the value of the national currency.

**A- Short-term interest rates on deposits<sup>1</sup>**

This indicator shows the impact of the short-term interest rate on the volume of deposits and on the value of the national currency, as it is noted from figure (7) that there is a rise in the short-term interest rate from (4.08%) for the third quarter of 2021 to (4.30%) in the third quarter of 2022, the increase in total long-term deposits was noted to (26.03) trillion dinars for the third quarter of 2022 compared to the third quarter, which amounted to (24.5) trillion dinars from 2021. As well as the same figure shows that there is a change in the value of the Iraqi dinar by (0.04%) for the third quarter of 2022 compared with the same chapter (0.3%) for 2021, as a result of changes. in the domestic economy and not because of changing interest rates, the disruption of interest rates in Iraq's financial system is a result of reduced banking activity within the real economy.

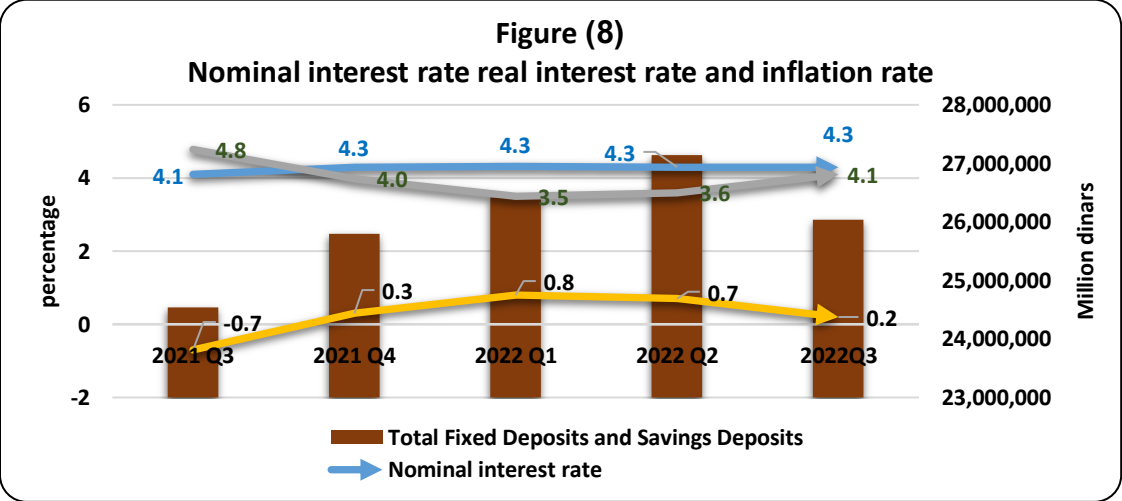
<sup>1</sup> Interest rates on deposits included six months, one-year deposits and savings deposits.



Source: Central Bank of Iraq, Statistical and Economic Website.

**B- Real interest rate**

The real interest rate reflects the difference between the nominal interest rate and the inflation rate. Figure (8) shows the decrease in the real interest rate from (4.8%) for the third quarter of the previous year to (4.1%) for the same quarter in 2022, with Iraq's monthly inflation rate rising by (0.2%).



Source: Central Bank of Iraq, Statistical and Economic Website.  
- Central Bureau of Statistics, Consumer Price Index for September 2022.



## Chapter II

### Analysis of banks' performance indicators

This chapter analyses and measures indicators of the performance of the banking sector in order to determine the extent to which it is able to meet its financial obligations through several indicators, including the ratio of total central bank loans to total banking sector liabilities. and the ratio of bank deposits to M2 and the ratio of cash credit to deposits, In addition to the money multiplier ratio as well as measuring the investment and profitability index of banks operating in Iraq as well as the ratio of total non-performing loans to total cash credit and total assets, the credit gap of GDP.

#### 1- Central Bank Loans/Total Bank Liabilities

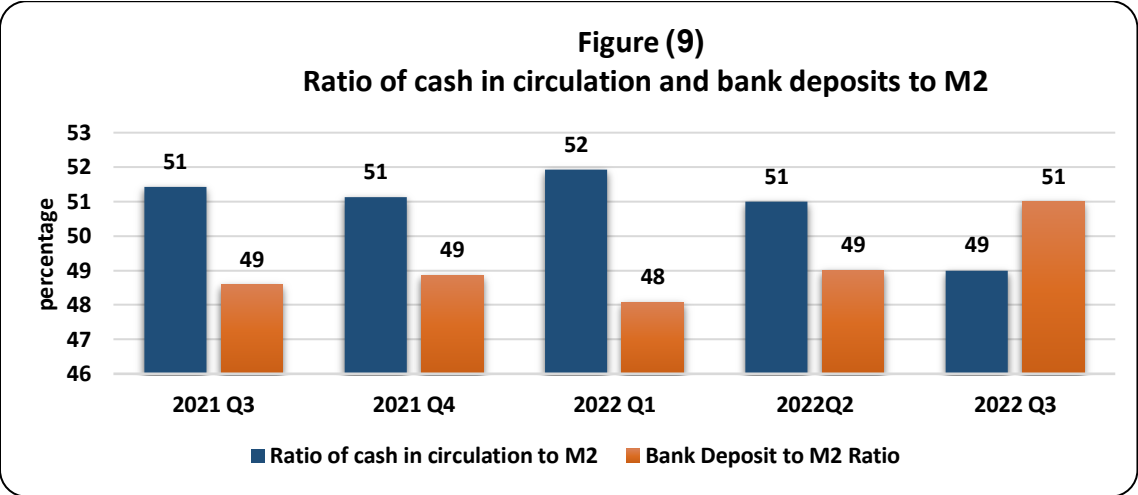
The Central Bank of Iraq Act No. 56 of 2004, in accordance with article, permits (30) lends to banks in financial crisis under exceptional circumstances under legal conditions, such as the central bank's view that the bank is full, that the guarantees it provides are appropriate and that the demand for aid is based on its need to improve liquidity, or if such support is necessary to maintain the stability of the financial system.

The high proportion of this indicator reflects the fragility of the banking sector, the expansion of those banks' distress and the increased risks to the banking system and its reputation as it reflects a liquidity crisis that reflects the degree of distress experienced by the banking sector. It is noted that the Central Bank of Iraq did not provide loans to banks operating during the third quarter of 2022, which does not mean that there are no distressed banks. But for the failure of banks with stumbling applications for loans as they did not meet the requirements for loans granted by the Central Bank because there were requirements for such banks to proceed with the grant process.

#### 2- Bank Deposits/M2

Expresses the amount of financial solvency enjoyed by the bank, which can be obtained by diversifying the services provided to the public in order to attract more depositors to the bank and thus this indicator represents the public's desire to turn to banks as a result of their need for them or to obtain special offers that attract the public to them, on the one hand, Moreover, the bank's deposit volume is an indicator of activity and spread. It is measured by dividing bank deposits by broad

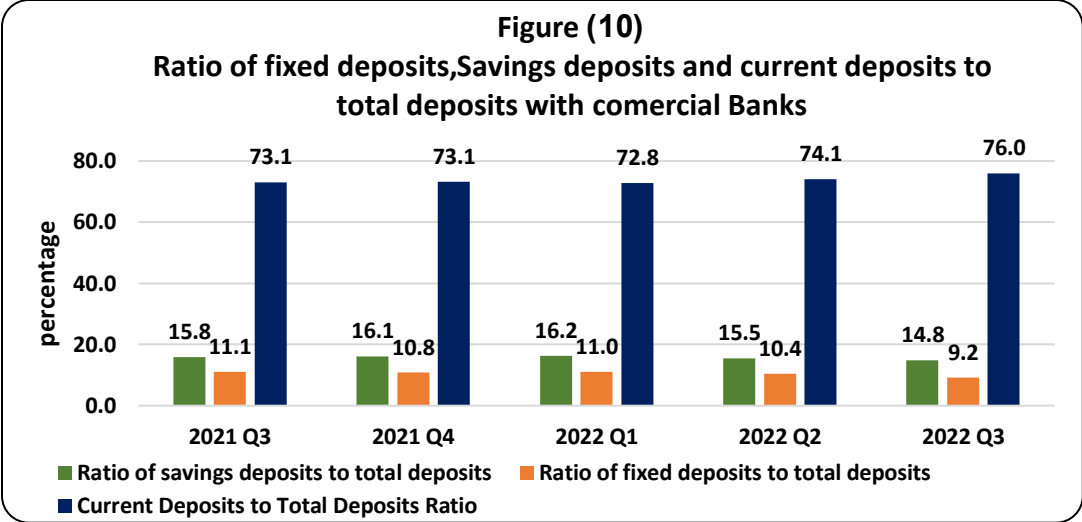
money supply (M2), Figure (9) shows that the ratio of bank deposits to M2 increased during the third quarter of 2022 to (51%) after being (49%) for the same quarter of 2021, the index of cash ratio in circulation fell to (M2) from (51%) in the third quarter of 2021 to (49%) for the same quarter of 2022, this is a positive indicator for the banking system.



Source: Central Bank of Iraq, Statistical and Economic Website.

By reference to the types of deposits with commercial banks, current deposits accounted for the largest proportion of banks' total deposits, rising to (76%) during the third quarter of 2022 (73.1%) during the same quarter of 2021, while fixed deposits fell to (9.2%) in the third quarter of 2022 (11.1%) of the same quarter for 2021, savings deposits also fell to (14.8%) during the third quarter of 2022 after what was (15.8%) for the same quarter of 2021, this is due to the high needs of depositors for urgent transactions in the completion of their business and the figure (10) shows this.

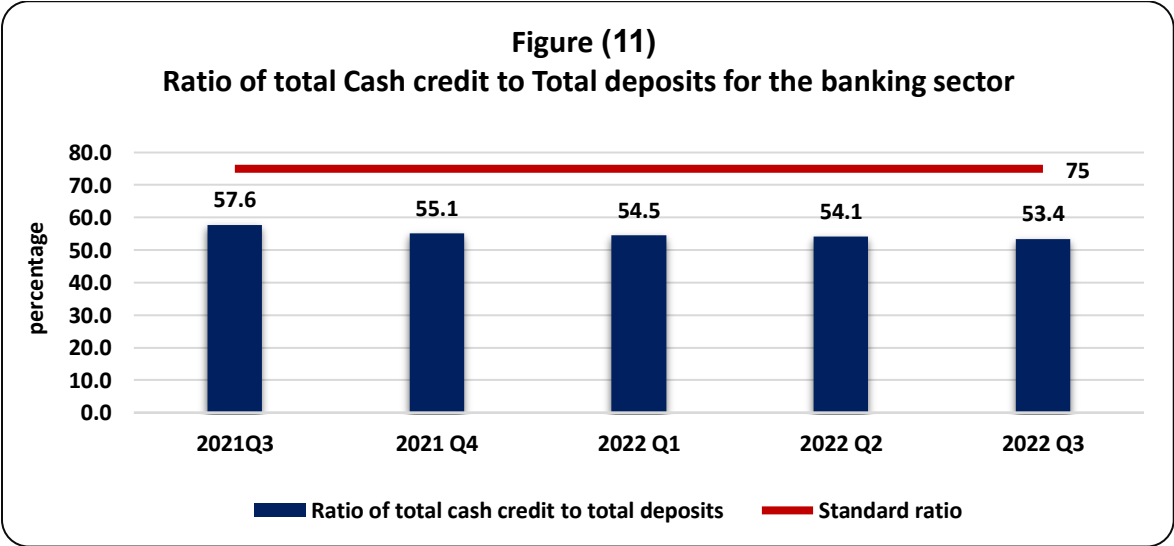




Source: Central Bank of Iraq, Statistical and Economic Website.

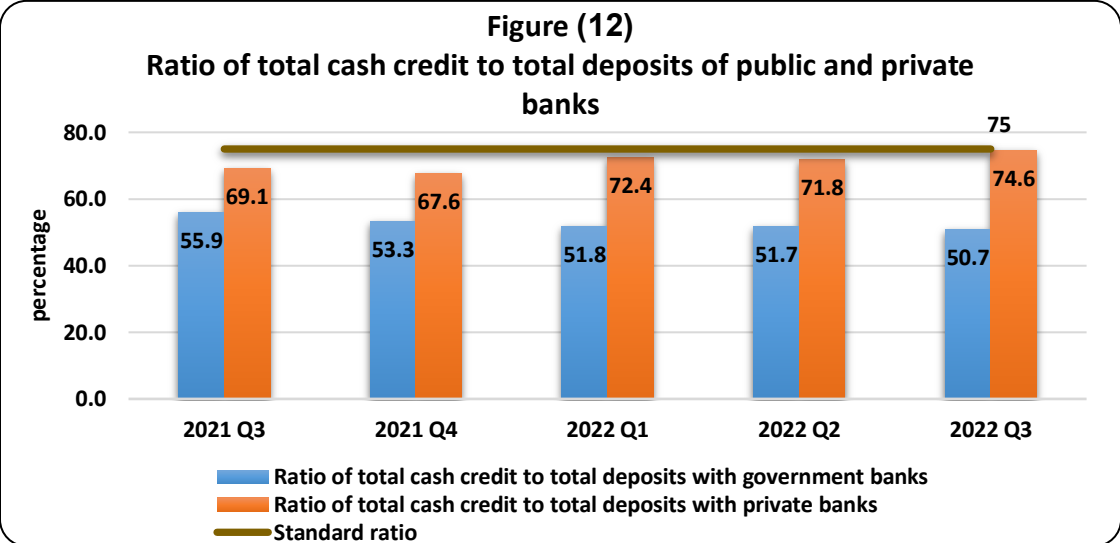
**3- Total Cash Credit/Total Deposits**

The Central Bank of Iraq set this ratio at (75%) to maintain sufficient liquidity at banks to meet customers' withdrawals and conduct the Bank's financial activities. This percentage is measured by the division of total cash credit into total deposits at active banks, which reflects the long-term liquidity situation of the banking sector and the figure (11) indicates that the ratio of total cash credit to total deposits decreased to (53.4%) in the third quarter 2022 compared to the same quarter in the year 2021, which was (57.6%). due to the high volume of bank deposits. It shows that this percentage has not exceeded the standard percentage set by the Central Bank (75%).



Source: Central Bank of Iraq, Statistical and Economic Website.

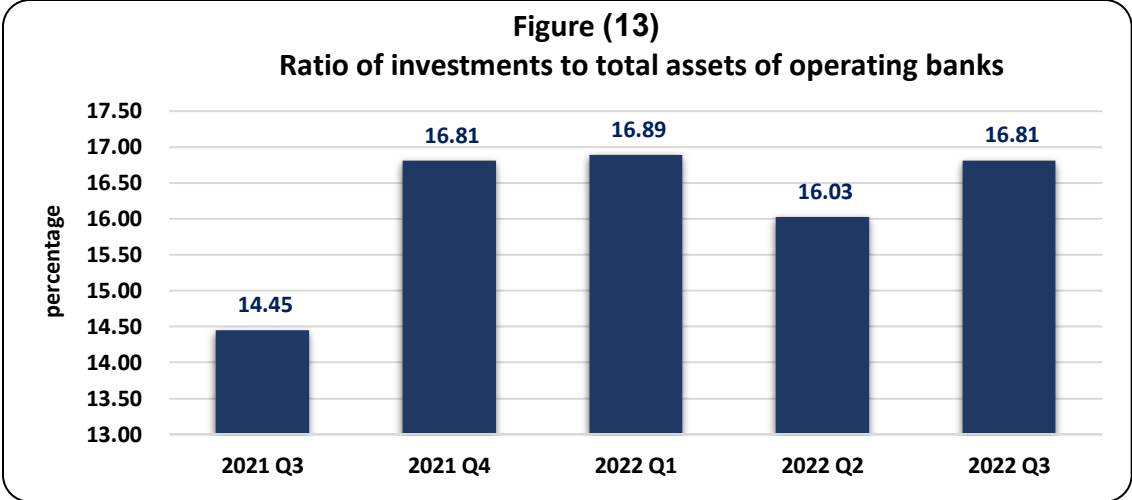
When returning to private banks and public banks individually, it is clear that private banks have increased this proportion but within the limits approved by the Central Bank, Figure (12) shows that this percentage reached (74.6%) in the third quarter of 2022 with private banks after it was (69.1%) for the same quarter of 2021, while with regard to public banks, it did not exceed the specified percentage as well, as this percentage reached (50.7%) in the third quarter of 2022.



Source: Central Bank of Iraq, Monetary and Financial Stability Department.

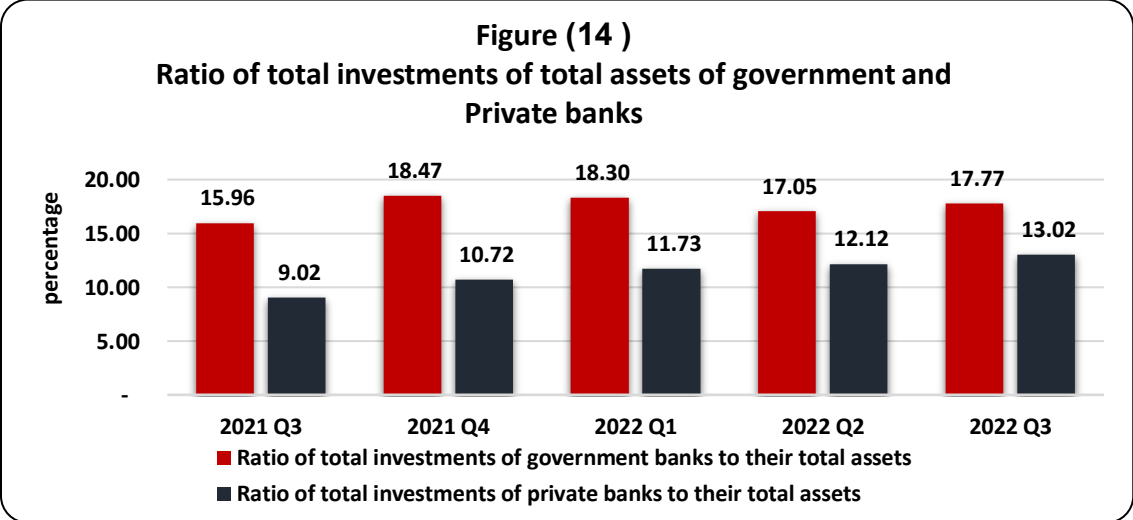
**4- Investments of operating banks**

This indicator is an important indicator as it shows the size of actual investments within banks' balance sheet and highlights the importance of investments in the return they provide to the bank and increase profits, especially if these investments stimulate economic sectors and are positively reflected within the real sector. The investments are financed by the bank's capital and deposits and are on the asset side of the bank's balance sheet. It is therefore measured against the total asset for the purpose of knowing the bank's size and figure (13) shows that the volume of investments to commercial banks' total assets increased from (14.45%) during the third quarter of 2021 to (16.81%) during the same quarter of 2022.



Source: Central Bank of Iraq, Monetary and Financial Stability Department.

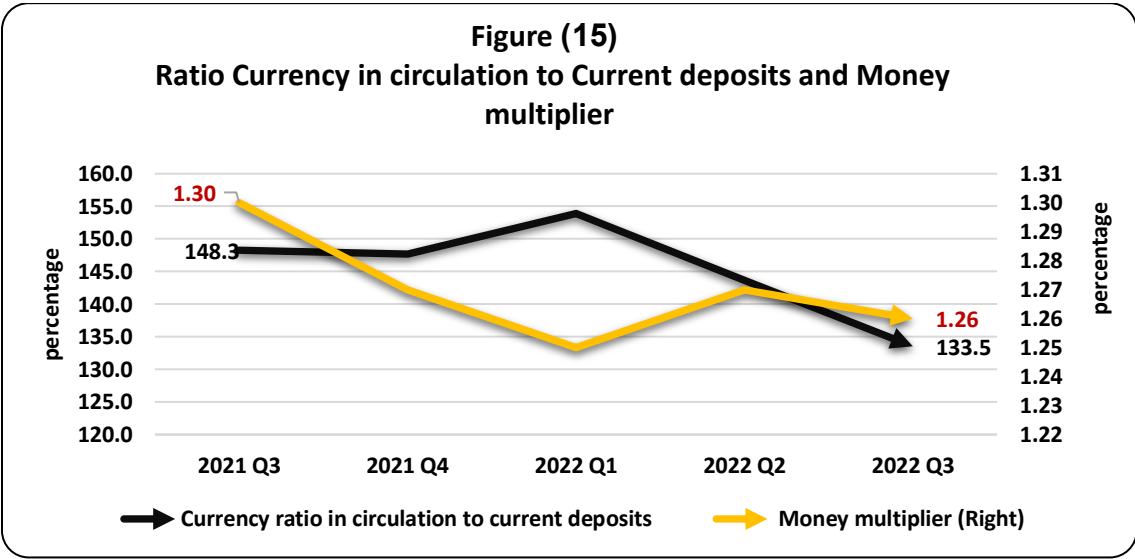
In return to banks' classification in terms of ownership, the ratio of investments to the volume of assets of government banks is greater than that of private banks, figure (14) show that the volume of investments to government banks' assets has increased from (15.96%) during the third quarter of 2021 to (17.77%) during the same quarter of 2022, and investments in private banks to their total assets increased from (9.02%) during the third quarter of 2021 to (13.2%) during the same quarter of 2022. It is worth mentioning that the volume of investments in government banks constitutes (84.41%) to total investments in operating banks while private banks (15.58%).



Source: Central Bank of Iraq, Monetary and Financial Stability Department.

**5- Money multiplier**

The money multiplier is defined as the desire and ability of banks to convert deposits into credit, and thus represents the banking activity within the real sector. On the one hand, it represents the public's desire to go towards the bank as a result of the services provided by that bank and through which it gains public trust, and on the other hand the bank's desire to grant credit to the public and the benefits derived. Figure (15) shows the money multiplier ratio showing a decrease in the money multiplier ratio in the third quarter of 2022 to (1.26%) after it was (1.30%) for the same quarter of 2021, There was a decrease in the currency ratio in circulation to current deposits, reaching in the third quarter of 2022 (133.5%) from (148.3%) in the same quarter of 2021, while surplus reserves grew during the third quarter of 2022 (40.3%) compared to the same quarter of the previous year, this shows why banks' willingness to grant credit is low.

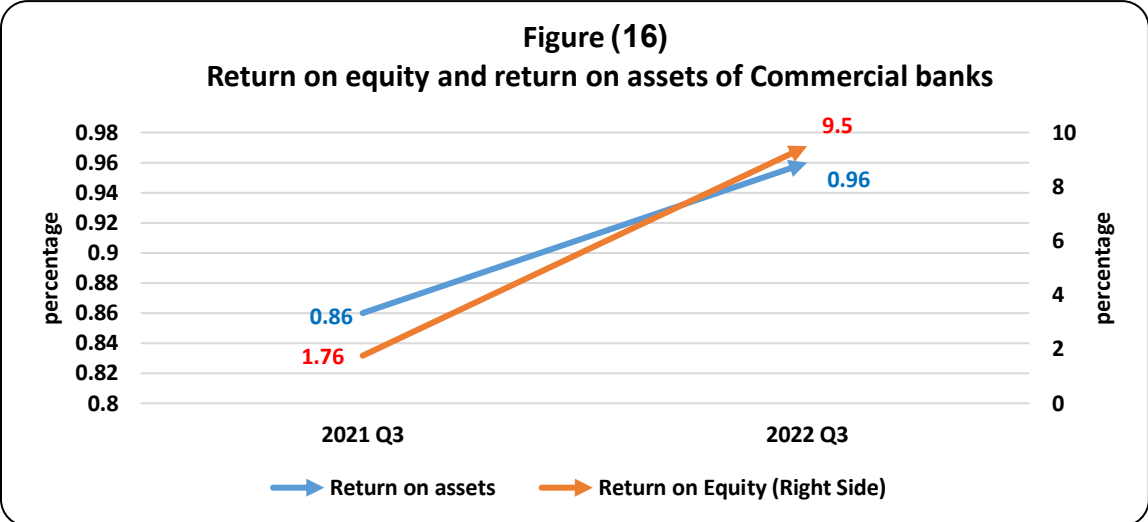


Source: Central Bank of Iraq, Monetary and Financial Stability Department estimates.

**6- Profitability of banks**

This indicator shows the profits or loss to which banks are exposed, and the figure (16) Shows the return on property rights and the return on assets of banks operating within the banking system, as there is an increase in the ratio of return on assets and return on property rights, as the return on assets increased in the third quarter of 2022 to (0.96%) up from (0.86%) for the same quarter of 2021. The return on equity also saw a rise from (1.76%) in the third quarter of 2021 to (9.5%) for the

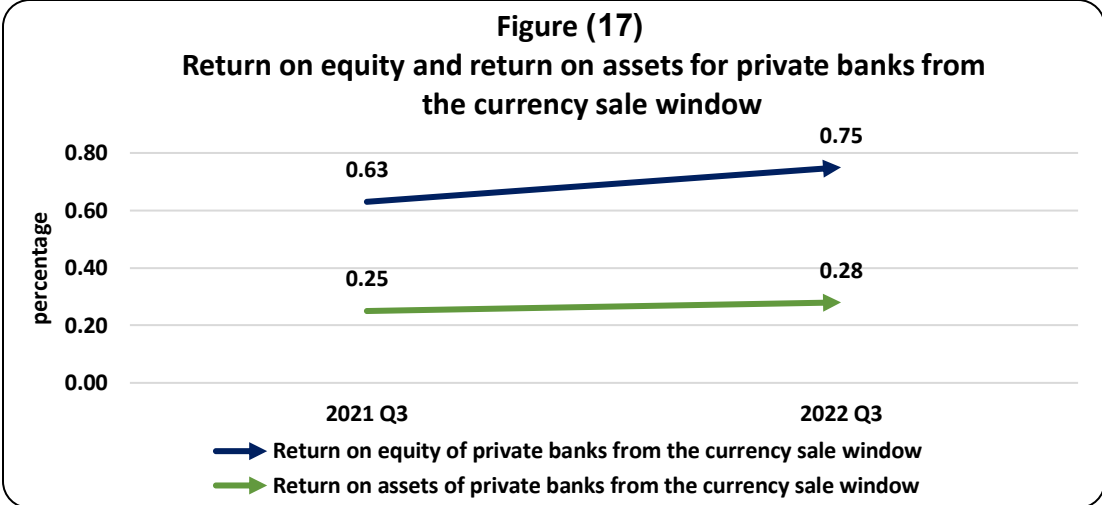
same quarter of 2022. This shows that banks exploit the excess portion of their resources to generate profits widely.



Source: Central Bank of Iraq, Department of Statistics and Research.

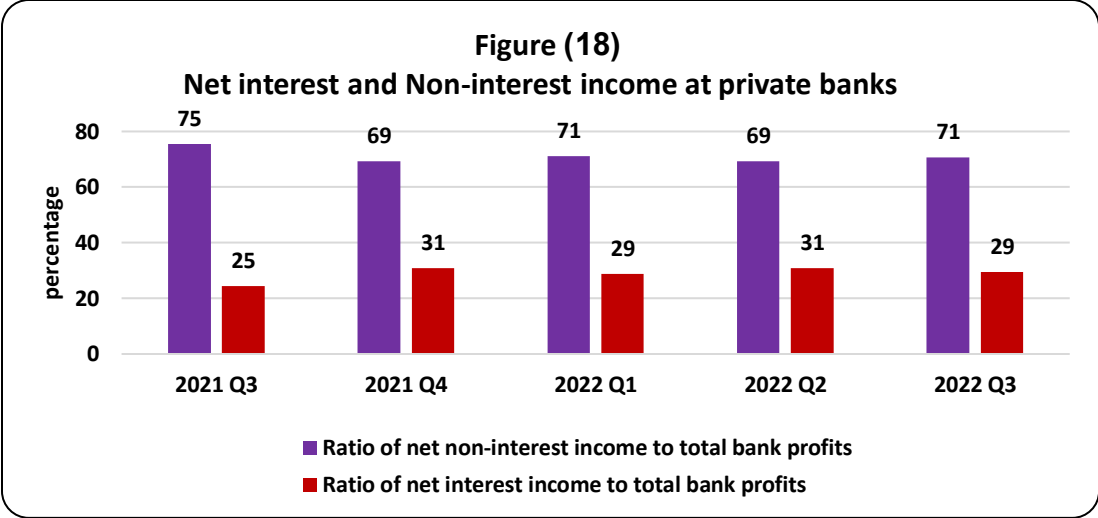
**7- Profitability of private banks from the window of sale of foreign currency**

This indicator shows the profitability of private banks from the foreign currency sale window, and Figure (17) shows that the return on equity from private banks' purchases from the currency sale window increased from (0.63%) in the third quarter of 2021 to (0.75%) during the same quarter of 2022, and the return on assets increased from (0.25%) for the third quarter of 2021 to (0.28%) for the third quarter in 2022, thus the growth rate of private banks' profits from the foreign currency sale window to (19.4%) as a result of increasing the share of private banks in foreign currency during the period (2022Q3-2021Q3).



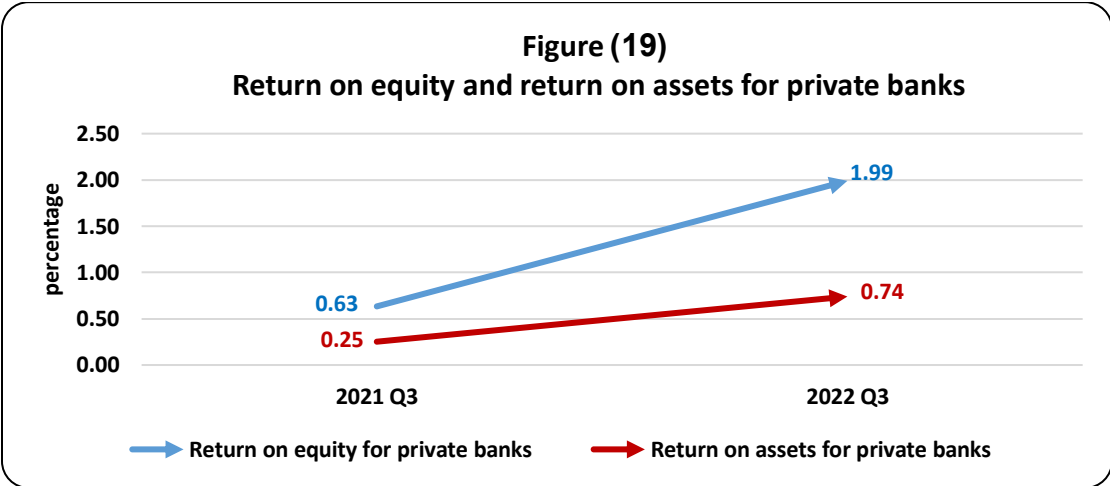
Source: Central Bank of Iraq, Monetary and Financial Stability Department Estimates 2022.

When returning to the profits of private banks derived from bank activities of interest derived from credit grants, these profits are a small proportion of the banks' total profits as they reach (29%) in the third quarter of 2022, reflecting the fact that private banks work at most in other areas that are not included in the credit grant, and the figure (18) shows net interest income and net non-interest income of private banks, and shows that net non-interest income of private banks constitutes a ratio (71%) of banks' gross income in the third quarter of 2022. Thus, private banks must increase their activity within the real sector of granting loans, attracting deposits and increasing their financial services. It should be noted that this is different from government banks, most of which do not enter the foreign exchange window or have a very limited entry. The ratio of net interest income of government banks to total net interest income of banks as a whole (81%) during the third quarter 2022.



Source: Central Bank of Iraq, Department of Statistics and Research.

Returning to the return on equity and asset return at private banks both increased during the period (2021Q3 -2022Q3). The return on equity increased from (0.63%) during the third quarter of 2021 to (1.99%) during the same quarter of 2022, as did the return on assets from (0.25%) to (0.74%) during the same period as shown in figure (19).

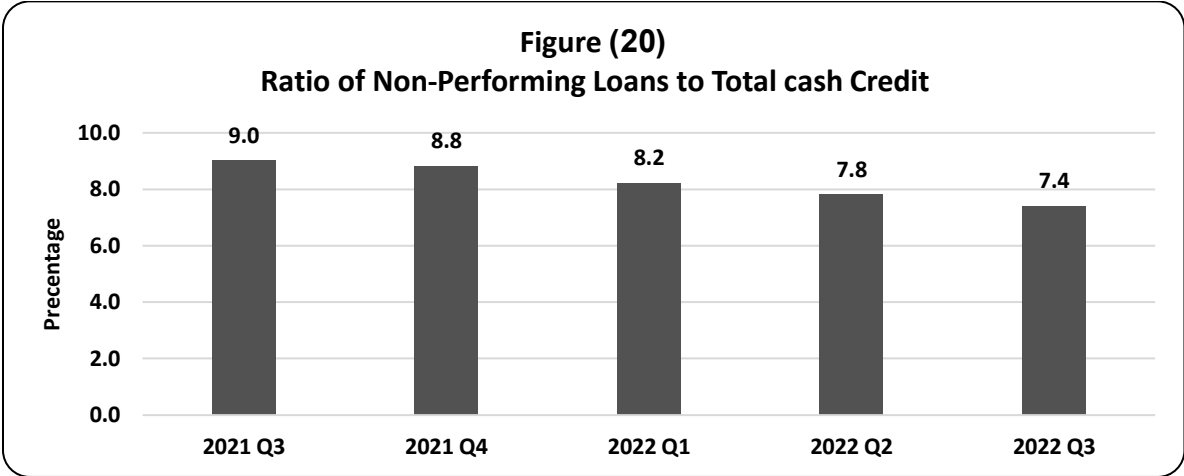


Source: Central Bank of Iraq, Department of Statistics and Research.

**8- Non-performing loans/total cash credit**

This indicator measures by the division of non-performing loans over total cash credit. Figure (20) shows that the ratio of non-performing loans to total cash credit in the third quarter of 2022 decreased to (7.4%) from (9.0%) for the same quarter in 2021, a decrease in the growth of non-performing loans.





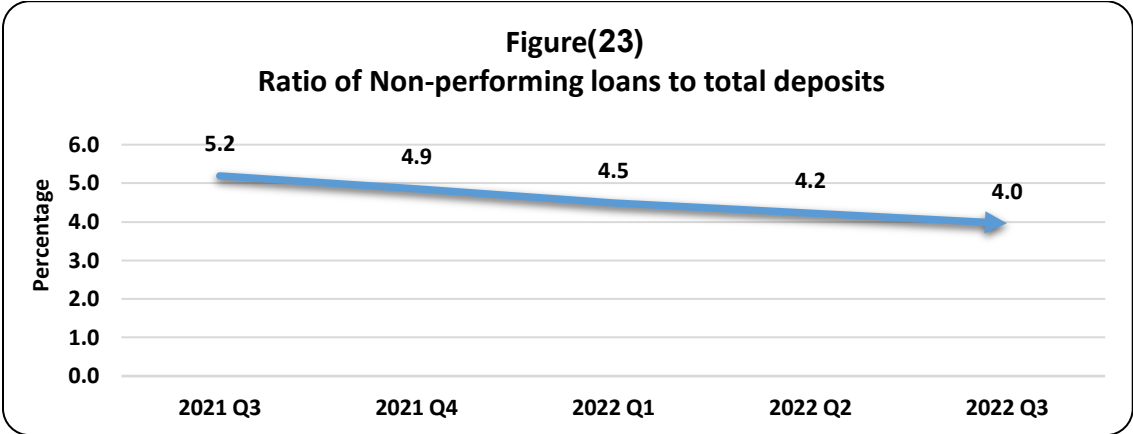
Source: Central Bank of Iraq, Department of Statistics and Research.

By reverting to the banking classification in terms of ownership, the ratio of non-performing loans to the total cash credit of private banks is more than that of public banks, and the figure (21) indicates that the ratio of non-performing loans to total private banks' cash credit has decreased to reach this ratio (15.07%) in the third quarter of 2022, up from (23.90%) for the same quarter of 2021 and the ratio of non-performing loans allocated to private banks (39.5%) to the total allocation of banks, the banks have to increase the allocation to cover non-performing loans. For public banks, there is a decrease in this percentage from (6.22%) In the third quarter 2021 to (5.99%) during the same quarter in 2022, the allocation of non-performing loans to public banks, has reached (60.5%). Here, we note that public banks are more prudent than private banks with respect to the defaulter's loan coverage as a result of the increase in the percentage of cash credit granted by public banks to total credit which reached (84.3%) during the third quarter of 2022.



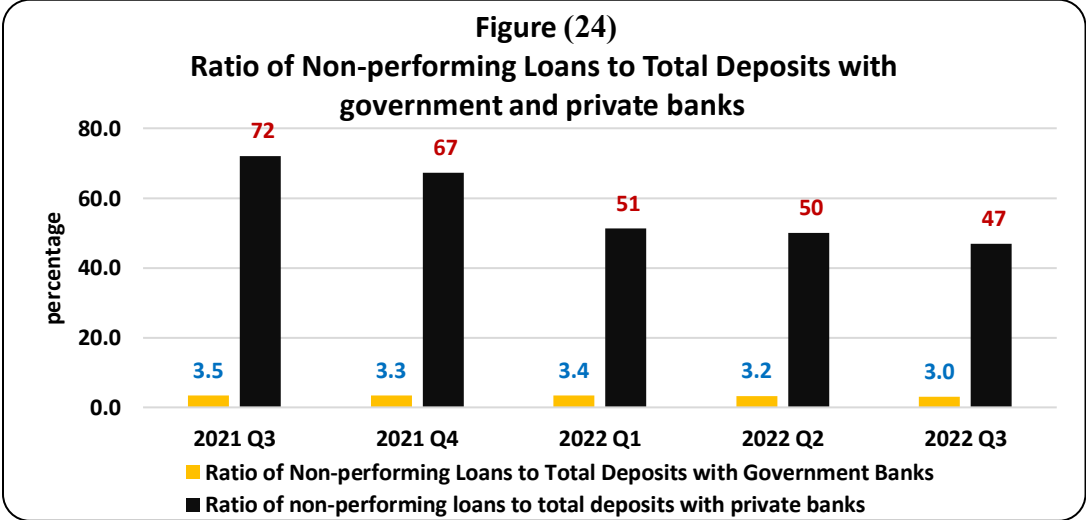
**9- Non-performing loans/total deposits**

Measured by dividing non-performing loans by total bank deposits. Figure (23) shows that the ratio of non-performing loans to total deposits decreased from (5.2%) in the third quarter of 2021 to (4.0%) for the same quarter of 2022, which is positive for the banking system, enabling it to grant more credit and attract deposits.



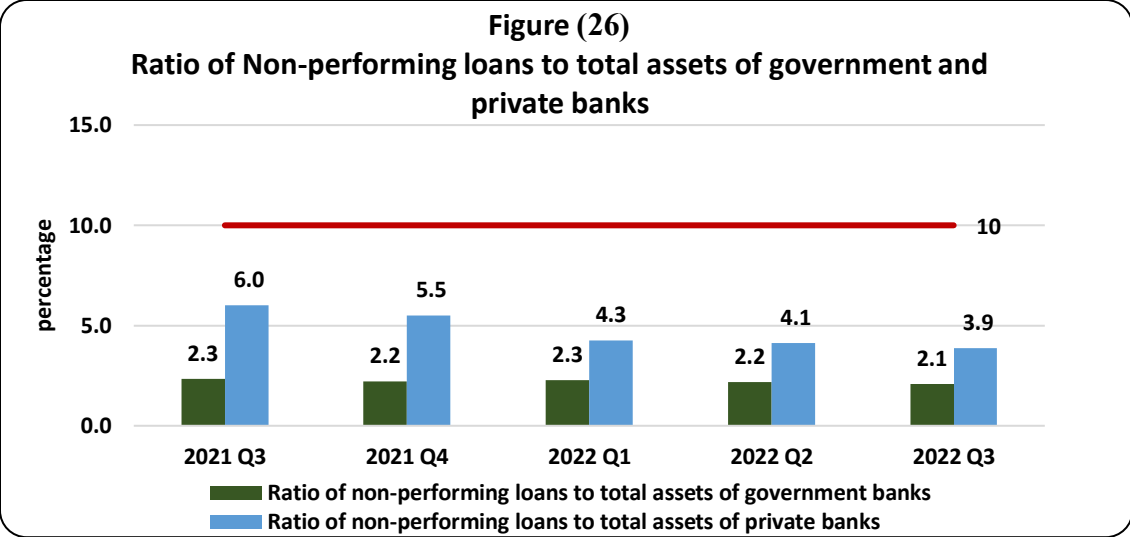
Source: Central Bank of Iraq, Department of Statistics and Research.

There is an increase in this ratio for private banks despite the decrease in their ratio to total deposits, and Figure (24) shows that the ratio of non-performing loans to total deposits with private banks is high compared to public banks, as it reached in the third quarter of 2022 (47%) after it was (72%) for the same quarter in 2021, meaning that there is a decrease in the volume of non-performing loans at private banks, while this percentage reached (3%) among government banks during the third quarter of 2022.



Source: Central Bank of Iraq, Department of Statistics and Research.

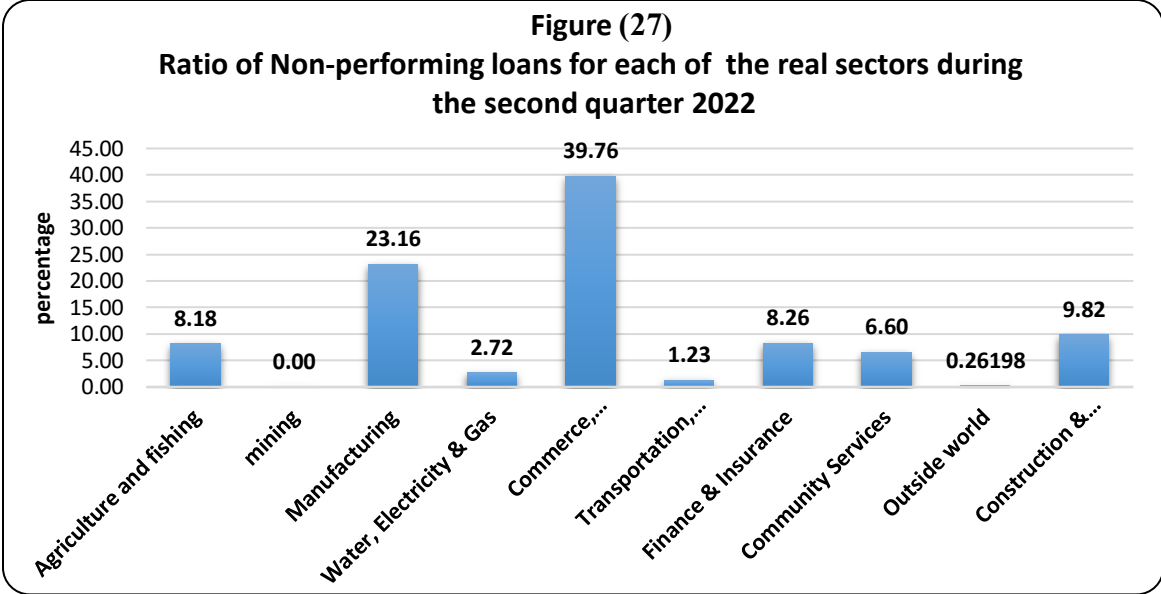




Source: Central Bank of Iraq, Department of Statistics and Research.

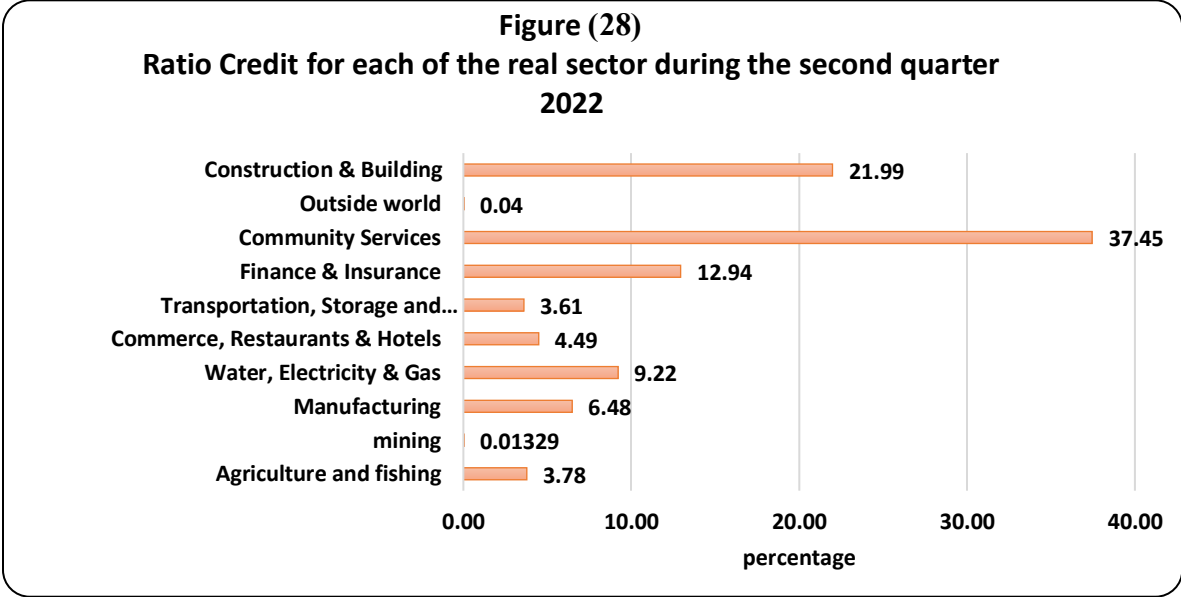
### 11- Sectoral distribution of non-performing loans

This indicator shows the sectoral distribution of non-performing loans by economic sectors, and figure (27) shows that the trade, restaurants and hotels sector occupied the largest percentage of non-performing loans, reaching (39.76%) during the second quarter of 2022, followed by the manufacturing sector by (23.16%) during the same period, so banks had to be more cautious and cautious when granting credit within these two sectors, to avoid the faltering of their activity and ensure the safety of depositors' funds, and also the need to develop policies that enable these sectors to recover and return to The right growth path after the negative effects of the Corona pandemic gradually subside.



Source: Central Bank of Iraq, Department of Statistics and Research.

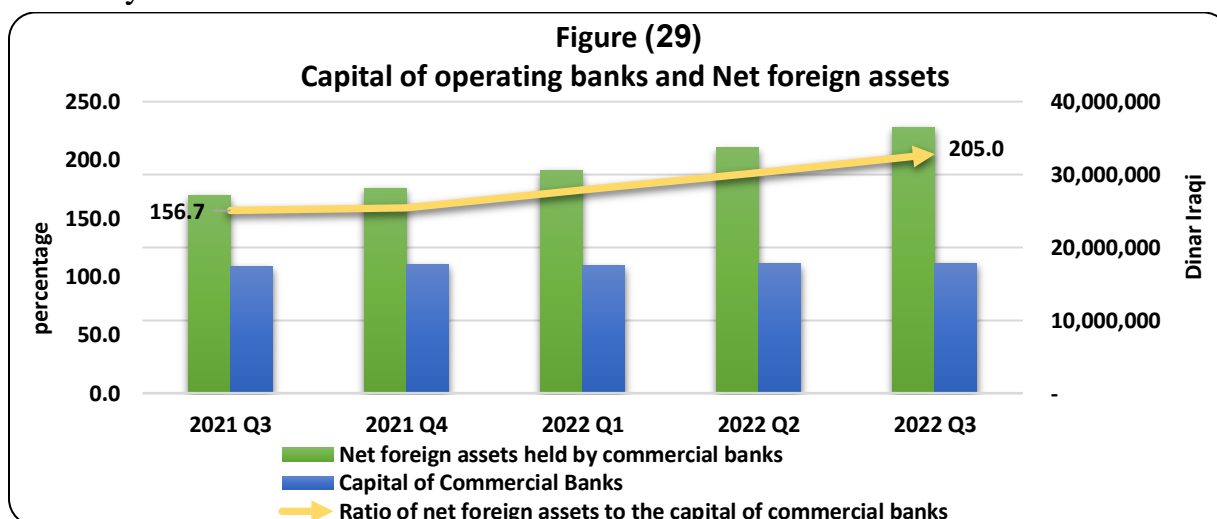
It is worth noting that the trade and restaurants sector does not have the largest percentage of credit granted within the real sector, although it has the largest percentage in the volume of non-performing loans, and that the community services sector has the largest percentage of cash credit granted to real sectors by (37.45%), followed by the construction sector by (21.99%), as shown in Figure (28).



Source: Central Bank of Iraq, Department of Statistics and Research.

## 12- Net foreign assets of banks/Operating Capital of Banks'

This indicator is measured by the division of the net foreign assets of the operating banks' capital and figure (29) This ratio, which shows the retention of foreign currency in commercial banks in the event of severe fluctuations in the national currency, shows that the ratio of net foreign assets in commercial banks has increased from (156.7%) during the third quarter of 2021 to (205%) during the same quarter of 2022, it is worth mentioning that the source of foreign assets in the banking sector is an internal source<sup>1</sup>, and that the central bank maintains sufficient proportions of foreign assets parallel to the broad money supply , as the ratio of foreign reserves to the broad money supply (78.9%) in the third quarter of 2022, and the ratio of foreign assets to bank capital is controlled by Iraq's monetary authority.



Source: Central Bank of Iraq, Statistical and Economic Website.

## 13- credit gap to GDP<sup>2</sup>

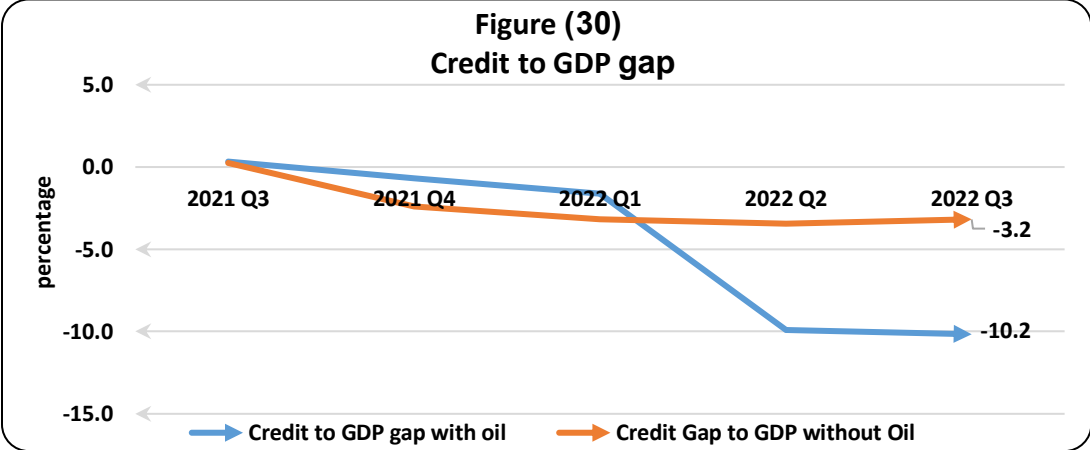
The credit gap for output is defined by the ratio of credit provided to the private sector to GDP minus the overall trend of credit ratio (directed at the private sector) to GDP, with the benchmark value of this index ranging from (2% - 10%) As the estimated ratio approaches the ceiling, capital bumpers must be put in place to cope with this growth in credit. If this ratio exceeds the threshold, this indicates excessive credit from banks, and figure (30) explains that this gap has stabilized at negative

<sup>1</sup> This means that Iraqi banks do not borrow from abroad in foreign currency and re-lend in local currency.

<sup>2</sup> For more information on the way the output gap is calculated, see Central Bank of Iraq, Iraq's Early Warning Report No. 18, chap. I, 2020, pp. 23-24.



value both with and without oil, reaching (3.2-%). If GDP data are adopted without oil, they have reached (10.2-%). If data are approved with oil, which means that credit from banks to the private sector can be increased.



Source: Central Bank of Iraq, Monetary and Financial Stability Department estimates.

**Table (2)**  
**Indicators for Analyzing the Performance of Banks**

<b>Indicator Name</b>	<b>Indicator value during the second quarter 2021</b>	<b>Indicator value during the second quarter 2022</b>	<b>Rate of Change (%)</b>	<b>Impact on monetary stability</b>
<b>Central Bank Loans/Total Bank Liabilities (%)</b>	0	0	0	fixed
<b>Bank Deposits to M<sub>2</sub> (%)</b>	49	51	4.0	Positive
<b>Cash in circulation to M<sub>2</sub> (%)</b>	51	49	-3.9	Positive
<b>Total Cash Credit to Total Deposits (%)</b>	59.9	57.6	-3.8	Acceptable
<b>Money Multiplier (%)</b>	1.30	1.26	-3.0	Acceptable
<b>Ratio of currency in circulation to current deposits (%)</b>	148.3	133.5	-9.9	Positive
<b>Return on Equity (%)</b>	1.76	9.5	439.7	Positive
<b>Return on Assets (%)</b>	0.86	0.96	11.6	Positive
<b>Return on equity from the window of selling foreign currency to private banks (%)</b>	0.63	0.75	19	Positive
<b>Return on assets from the foreign currency sale window to private banks (%)</b>	0.25	0.28	12	Positive
<b>Ratio of net interest income to total profits of private banks (%)</b>	25	29	16	Positive
<b>Ratio of net non-interest income to total profits of private banks (%)</b>	75	71	-5.3	Acceptable
<b>Return on equity of private banks (%)</b>	0.63	1.99	215.8	Positive
<b>Return on Asset Equity of Private Banks (%)</b>	0.25	0.74	196	Positive
<b>Non-performing Loans to Total Cash Credit (%)</b>	9.0	7.4	-17.7	Positive
<b>Non-performing Loans to Total Deposits (%)</b>	5.2	4.0	-23	Positive
<b>Non-performing Loans to Total Assets (%)</b>	3.13	2.44	-22	Positive
<b>Net Foreign Assets to Banks' Capital (%)</b>	156.7	205.0	30.8	Positive
<b>Credit-to-GDP gap with oil (%)</b>	0.3	-10.2	-3500	Positive
<b>Credit to GDP gap without oil (%)</b>	0.2	-3.2	-1700	Positive

**Chapter III**

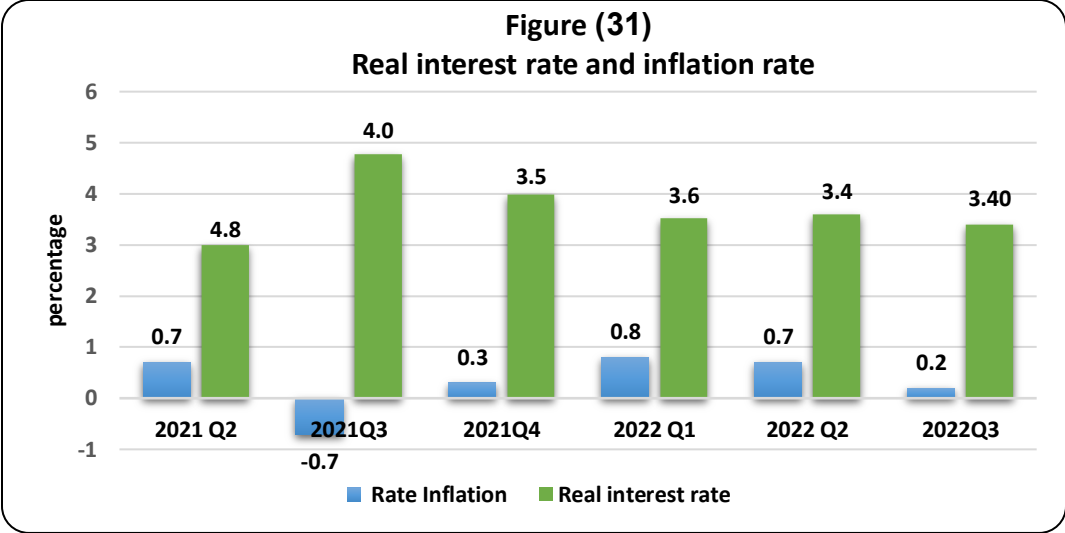
**Analysis of macroeconomic performance indicators**

Macroeconomic variables are one of the most important influential variables in the economy, so the Early Warning Report analyzed and predicted the most important macroeconomic indicators through the inflation rate index real interest rate, the ratio index of surplus or deficit in the general budget to GDP as well as the calculation of the implicit reduction of GDP, which shows the limits of production possibilities within the Iraqi economy in addition to measuring the GDP gap (GDP-gap), as follows:

**1-inflation rate**

Inflation is a quantitative measure of rising or falling prices within the economy during a given period. The decline or rise in the purchasing power of the national currency is linked to the conditions experienced by the Iraqi economy according to supply and demand factors. This is reflected in financial and banking indicators, including real interest rates, figure (31) Inflation rate and real interest rate, Consumer prices in Iraq increased during the month of 2022 to reach (118.3%) compared to the same year, registered (118.1%), a change (0.2%), representing the monthly inflation rate, The section of Food and Non-alcoholic Beverages recorded a rise of (1.6%). Restaurant and Hotel section (0.2%), Education section (0.2%) and the clothing and footwear division recorded a decrease of (0.7%), and when comparing Iraq's general price index annually, it increased by as much as (118.3%) from 2022 to September (112.3%) in 2021, an increase of (5.3%), representing annual inflation<sup>1</sup>:

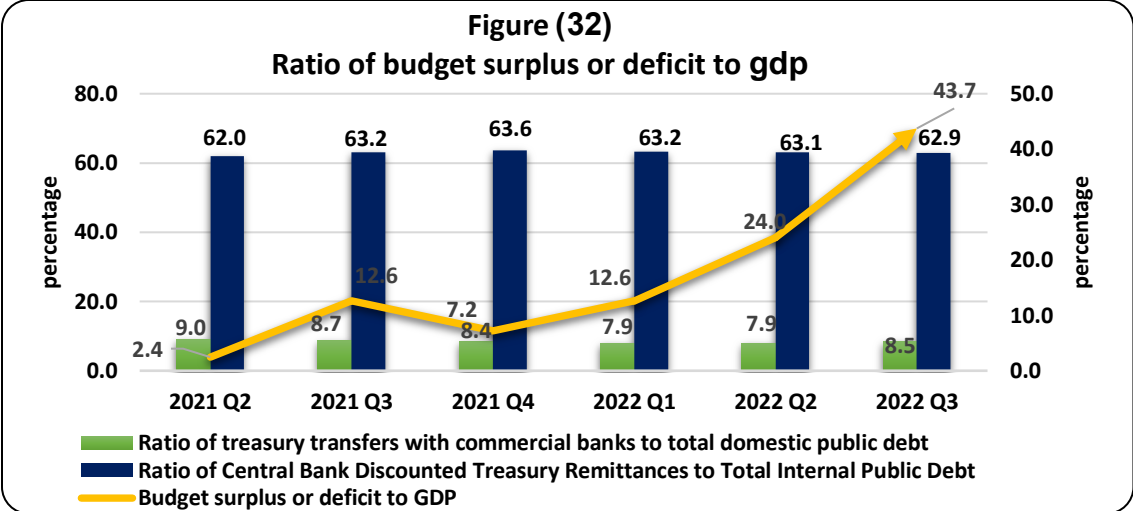
<sup>1</sup> Source: Ministry of Planning, Central Statistical Agency, Consumer Price Index Report, June 2022.



Source: Central Bank of Iraq, Statistical and Economic Website.  
 - Ministry of Planning, Central Bureau of Statistics, Consumer Price Index Report 2022.

**2- Ratio of surplus or deficit in the public budget to the gross domestic (GDP)**

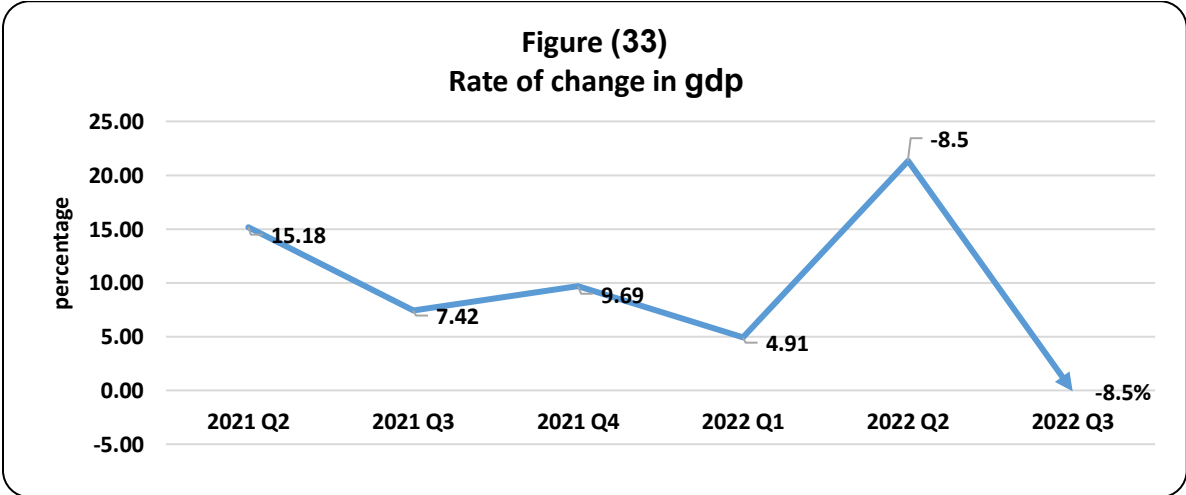
This indicator shows the percentage change that occurs in the general budget whether in the affirmative (Surplus) or negatively (deficit) and the consequence of this on the crowding out of the private sector's public sector in obtaining credit from the banking system, Figure (32) shows the State's general budget achieved a surplus of (43.7%) to GDP in the third quarter of 2022, with the total budget surplus being more than (44.043) trillion dinars, commercial banks' treasury bills to total domestic public debt decreased from (8.7%) for the third quarter of 2021 to (8.5%) in the same quarter of 2022 in the sense of a decline in the public sector's crowding out of access to credit, As well as the percentage of remittances deducted from the Central Bank to domestic public debt decreased by (62.9%) of the third quarter of 2022 compared to the third quarter of the previous year at (63.2%).



Source: Central Bank of Iraq, Statistical and Economic Website.

**3- Rate of change in Gross Domestic product (GDP)**

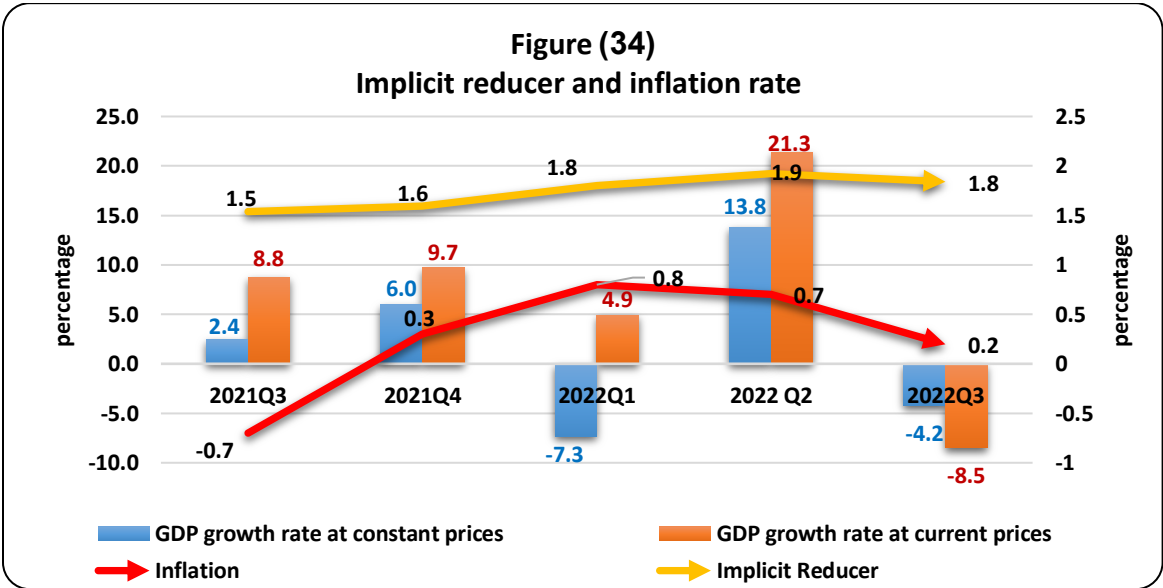
Gross domestic product (GDP) is the country's economic performance measure, reflecting economic activities during a certain period and reflecting the soundness or weakness of the domestic economy. The growth rate indicates the economy's ability to expand and reduce unemployment levels and hence increase income. At current prices in Iraq, GDP grew negatively during the third quarter of 2022 at a rate of (8.5-%) and an amount of (100) trillion dinars compared to the second quarter of the same year, which amounted to (110) trillion dinars as a result of the change in the volume of oil revenues as shown in figure (33).



Source: Central Bank of Iraq, Department of Statistics and Research.

**4- Implicit reduction of GDP**

Implicit reductions can be measured by dividing nominal GDP by real GDP<sup>1</sup>, the higher the value of the reduction, the higher the overall price level, the figure (34) shows the rise in the value of the implied reduction from (1.5%) for the third quarter in 2021 to (1.8%) for the same quarter of the current year, which explains that there is a rise in the overall price level, due to the high inflation rate from (0.7%) for the third quarter of the previous year to (0.2%) for the same quarter for 2022, as well as the decline in nominal GDP growth rate by (8.5%) for the third quarter of 2022 compared to the year prior to the same quarter by proportion (8.8%), and it should be noted that the value of the implied reduction is always higher than the value of the inflation rate, due to the adoption of a fixed basket of goods in the calculation of inflation, and that the gap between the implied reduction and the inflation rate is close to (1.6%) of the third quarter of 2022.

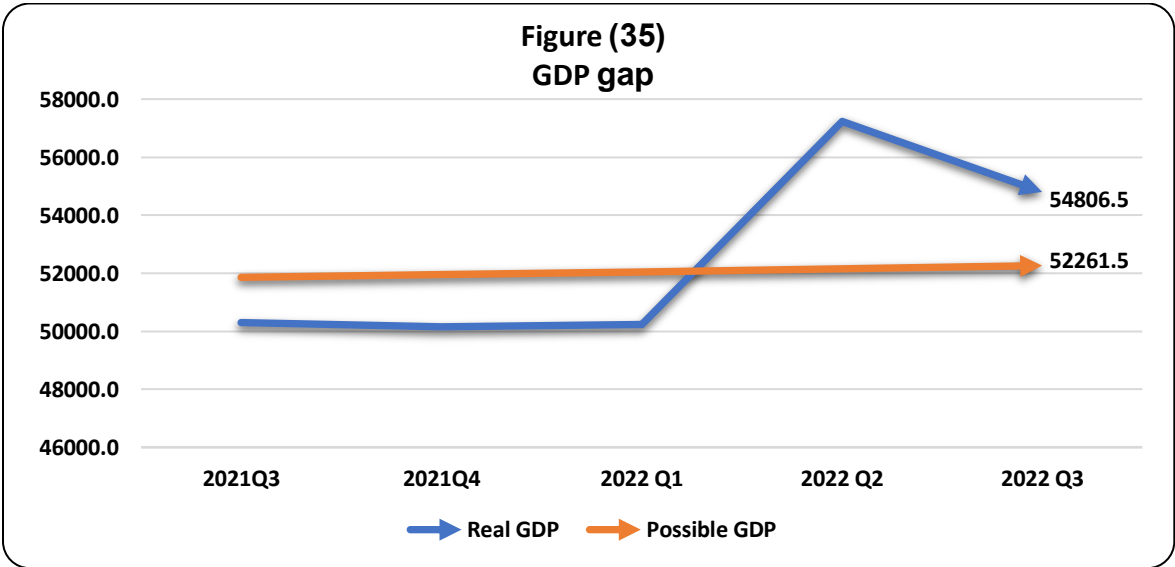


Source: Ministry of Planning, Central Bureau of Statistics, Consumer Price Index Report, 2021, 2022.  
 - Central Bank of Iraq, statistical and economic site.

<sup>1</sup> For more information, see Central Bank of Iraq, Early Warning Report, No. 19, p. 27.

### 5- GDP gap<sup>1</sup>

The gap reflects the difference between the level of real GDP and possible GDP<sup>2</sup>. When the output gap is positive, real GDP is higher than possible, that is, the economy is overstretched, and inflation is likely to be generated if the increase in real output is due to increased demand. If real GDP is less than possible, the output gap is negative. In other words, there may be a contraction, thus failing to create sufficient jobs for all those who want to work, and the form (35) shows the rise in the value of real GDP to (54) trillion dinars for the third quarter of 2022 compared to the third quarter, which reached (50) trillion dinars for 2021, while possible GDP was stable at (52) trillion dinars for 2022. The output gap was at the value of (2) trillion dinars for the same year's third quarter, meaning that production within the economy was higher than the potential available owing to the high value of real output.



Source: Central Bank of Iraq, Financial and Monetary Stability Department estimates according to Ministry of Planning data, Central Statistical Agency for 2021, 2022.

<sup>1</sup> This gap was measured by measuring real GDP time chains through the Hodrick-Prescott, HP filter.  
<sup>2</sup> For more on measuring the output gap see CBI 2021, Early Warning Report, No. 18, p. 30.

**Table (3)**  
**Indicators for Macroeconomic Performance Analysis**

Indicator Name	Indicator value during the second quarter 2021	Indicator value during the second quarter 2022	Rate of change %	Impact on financial stability
<b>Monthly inflation rate (%)</b>	<b>0.7-</b>	<b>0.2</b>	<b>128.5</b>	<b>Acceptable</b>
<b>Public budget surplus or deficit to GDP (%)</b>	<b>6.12</b>	<b>43.7</b>	<b>246.8</b>	<b>positive</b>
<b>Ratio of treasury bills with commercial banks to total Internal public debt (%)</b>	<b>8.7</b>	<b>8.5</b>	<b>2.29-</b>	<b>positive</b>
<b>Ratio of treasury Bills with Central Bank to Total Internal Public Debt (%)</b>	<b>63.2</b>	<b>62.9</b>	<b>0.47-</b>	<b>positive</b>
<b>Rate of change in GDP (%)</b>	<b>7.4</b>	<b>8.5-</b>	<b>214.8-</b>	<b>Acceptable</b>
<b>Implicit reducer of GDP (%)</b>	<b>1.5</b>	<b>1.8</b>	<b>20</b>	<b>Acceptable</b>
<b>Real GDP (billion Iraqi dinars)</b>	<b>50298.8</b>	<b>54806.5</b>	<b>8.96</b>	<b>positive</b>
<b>GDP gap (billion dinars)</b>	<b>-1557</b>	<b>2545.0</b>	<b>263.4</b>	<b>Acceptable</b>



