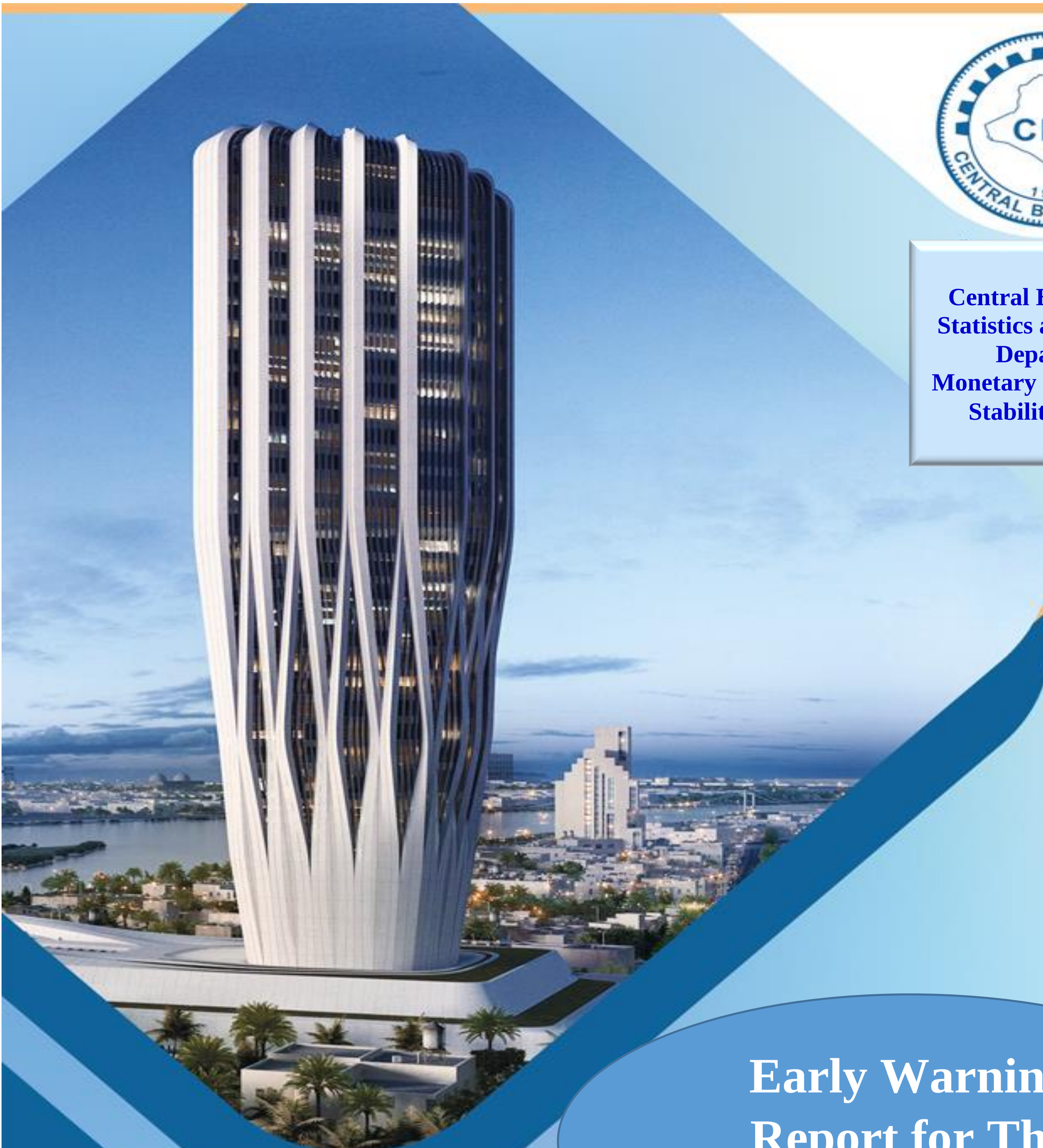
Central Bank of Iraq
Statistics and Research Department
Monetary and Financial Stability Division



Early Warning Report for The Banking Sector

Number Twenty-Two

Q4 2022

Statistics and Research Department

Monetary and Financial Stability Division

Early Warning Section

Early Warning Report for the Banking Sector

(Q4 2022)

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Early warning: is an index that gives a clear picture of the reality and magnitude of the potential risks that may occur to the financial sector and economy in general. Thus, it enables decision-makers to take necessary measures and formulate policies in a timely manner to avoid financial crisis.

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Contents	Page No.

LIST OF FIGURES	Page No.

Introduction:

The Report of Early Warning Indicators is an important report for the banking sector as it includes indicators that give a clear picture of banking sector operation, by assessing the performance of key indicators of the banking sector and providing solutions to relevant entities to develop fenders to address the imbalances. Indicators used in this report identify areas that need improvement of the banking sector and assess the impact of government policies and legislations on the banking sector's operations.

The Foreign Exchange Market Pressure Index showed a rise above the minimum standard limit of (4.2%) to reach (5.4%) during Q4 2022; it is close to the maximum standard limit of (6.65%). The ratio of foreign reserves to broad money supply (M2) has risen to (83.6%), which is higher than the identified minimum standard ratio of (50%). The duration of foreign reserves coverage to total imports also increased to (27) months during this quarter owing to a substantial increase of foreign reserves volume against a decrease of the country's total imports.

Banks` performance indicators show that the ratio of total cash credit to total deposits had reached (47%); not exceeding the standard ratio identified by the central bank of (75%), while money multiplier ratio fell to (1.16%). Currency in circulation to current deposits ratio show a decline of (127.7%) at the end of this quarter. As for the return on assets and property rights indices, they also increased by (1.1%) and (11.9%), respectively.

From the macroeconomic indicators perspective which affect the Iraqi banking system, it is noticed that Iraq’s consumer price index (CPI) increased during Dec. 2022 to reach (118.5%) with a change of (0.3%) compared to Nov. 2022 as it represented the monthly inflation rate. When comparing general index of Iraq annually, it reached (117.0%) in 2022 against (111.5%) in 2021; with an increase of (5.0%) the latter represents an annual inflation. As for Public Budget of the State, it has achieved a surplus of more than IQD (44.7) trillion; the surplus to GDP reached (50.9%). As for internal public debt instruments, treasury bills decreased by (0.3%), meaning that the public sector crowding out private sector to get credit access has declined. In addition, the difference of GDP growth rate at current prices in Iraq during Q4 2022 declined by (-2.4%) with a decrease of IQD (10.8) trillion compared with Q3 2022.

Chapter One: Currency Value Stability Indicators

Analysis of the currency value stability of the financial system includes monitoring the development of many indicators that tend to show an unusual behavior during prior crisis periods when the indicator exceeds the value of a certain limit. It is interpreted as a warning "signal" that the currency crisis may occur within the next 24 months. The most prominent indicators with the best results to know the fluctuations of domestic currency value are foreign exchange market pressure index (EMPI), foreign reserves adequacy indicators as well as the measurement of change rates of interest rates. These indicators are chosen because they are compatible with the nature of the Iraqi economy.

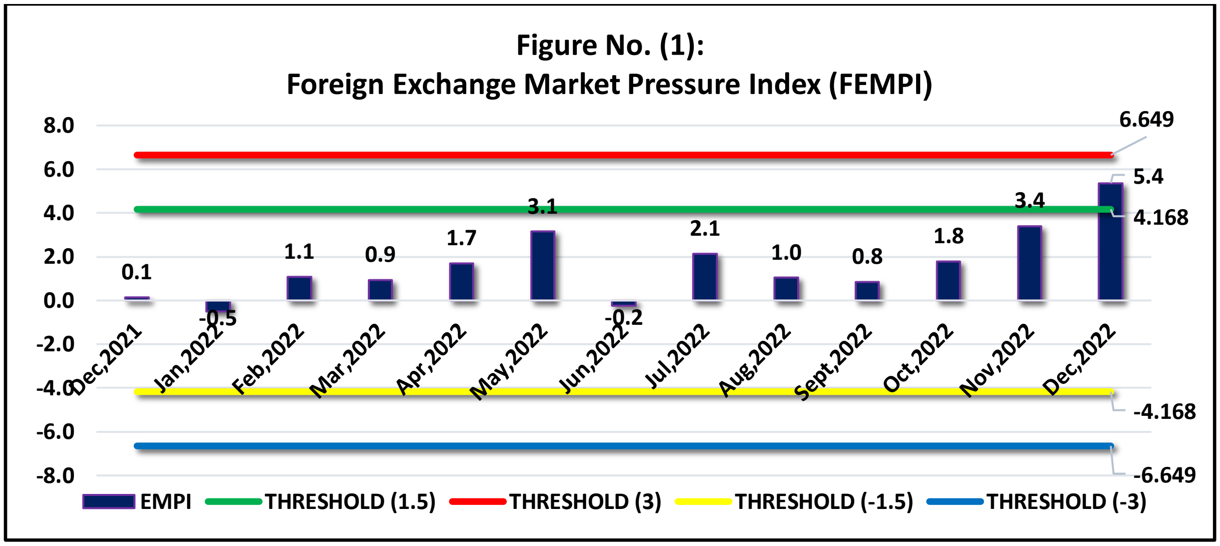
<u>First: Foreign Exchange Market Pressure Index (FEMPI)</u> [1]

This index indicates the demand and supply level for foreign currencies in the domestic market and is generally calculated by comparing the foreign currency rate by the domestic currency in the domestic market. When the demand for the foreign currency exceed its supply, foreign exchange rate increases in the domestic market. This index is used to measure the strength of the domestic currency giving a clear picture to decision makers regarding decisions that will be taken to stabilize domestic currency value.

Through figure No. (1): it is noticed that the foreign exchange market pressure index rose during Dec. 2022 to reach (5.4%) exceeding the minimum limit of the index (4.2%) and very close to the maximum limit of (6.65%) against (0.1%) on Dec. 2021. It came as a result of IQD depreciation against USD in the black market from (1479) dinar per (1) dollar during Dec. 2021 to (1530) dinar per (1) dollar for the same month of 2022. Data of foreign currency selling & buying window indicate a decrease of sold FX amounts during Q4 2022, the matter that created additional pressures on market exchange rate as well as the role of expectations and speculations that added additional pressures to market exchange rate. However, this decrease of sold FX amounts was reflected positively on net foreign assets with CBI that increased by (51.1%) during Q4 2022 compared to Q4 of the previous year.

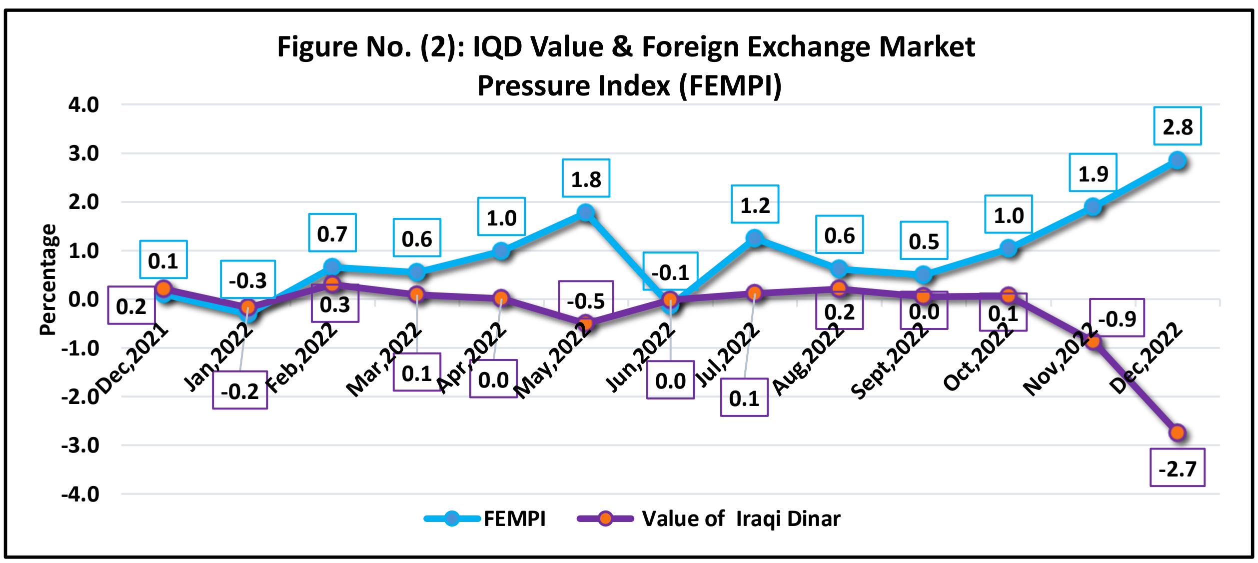
[1] For more information:

• Central Bank of Iraq (CBI)/ Early Warning Report 2020, Issue No. 14.



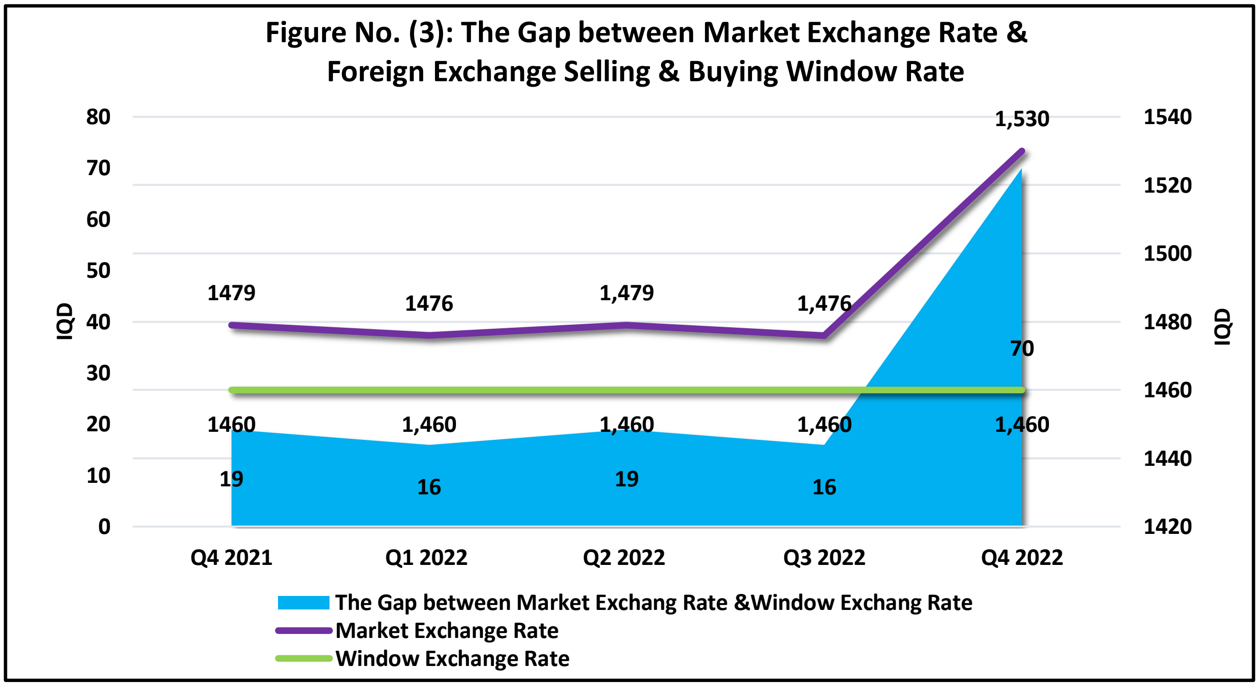
Source: CBI/ Estimates of Monetary & Financial Stability Division 2022.

Figure No. (2) illustrates the inverse relationship between FEMPI and domestic currency value. It is noted that there is a devaluation in the black market of the Iraqi dinar during Dec. 2022 to reach (-2.7%) compared to Nov. as it reached (-0.9%), offset by a rise of FEMPI value to reach (5.4%) against (3.4%) during the same period. This was the result of the decline of CBI foreign exchange sales and high demand for foreign currency, which adversely affected the value of the Iraqi dinar.



Source: CBI/ Estimates of Monetary & Financial Stability Division 2022.

Figure No. (3) shows that the gap between the market exchange rate and the window exchange rate of the IQD increased to IQD 70 during Q4 2022 against IQD 19 during the same quarter of the previous year. The high difference between the two rates is an evidence of the imbalance between the volume of demand & supply for foreign currency.



Source: CBI/ Statistical Website.

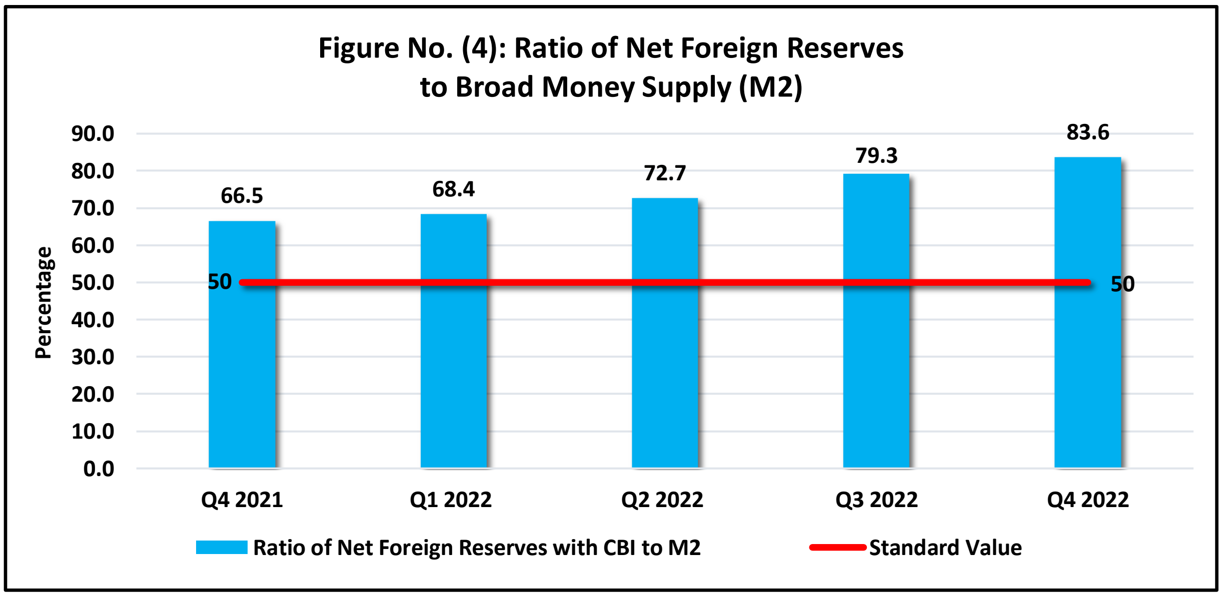
Second: Indicators of Foreign Reserves Adequacy

Actual adequacy of foreign reserves can vary from one country to another, as it depends on economic, political and social factors of the concerned country. There may be countries that need more foreign reserves, especially if they heavily rely on imports because of the defect of their domestic production system or a deficit of the balance of payments. Therefore, foreign reserves must serve as a guarantee to the State's financial needs in the event of sudden financial crises; they are usually used to support the national currency value in the event of depreciation. Especially in countries that try to maintain the stability of their domestic currency's exchange rate, financing basic imports such as food, fuel and raw materials, transfer funds abroad for debt settlement and other international commitments. There are several indicators to measure foreign reserves adequacy including**:**

1- Ratio of Foreign Reserves to Broad Money Supply (M2)

This ratio is considered an important indicator of the strength of national economy and its ability to withstand various economic challenges. If the ratio is high, it means that the country is able to face economic risks in a better way, while low ratio indicates the vulnerability and inability of the economy to withstand economic challenges.

It is noted through figure No. (4) that net foreign reserves to broad money supply (M2) ratio is very high during Q4 2022 as it reached (83.6%) compared to the same quarter of the previous year amounted (66.5%), which is higher than the standard ratio of (50%). It came as a result of net foreign reserves growth by (51.1%), which is higher than the growth of broad money supply(M2) of (20%) during the same period, reflecting the fact that high net foreign reserves with CBI is capable to face the country's economic risks, maintain the monetary stability and stabilize the overall price level.

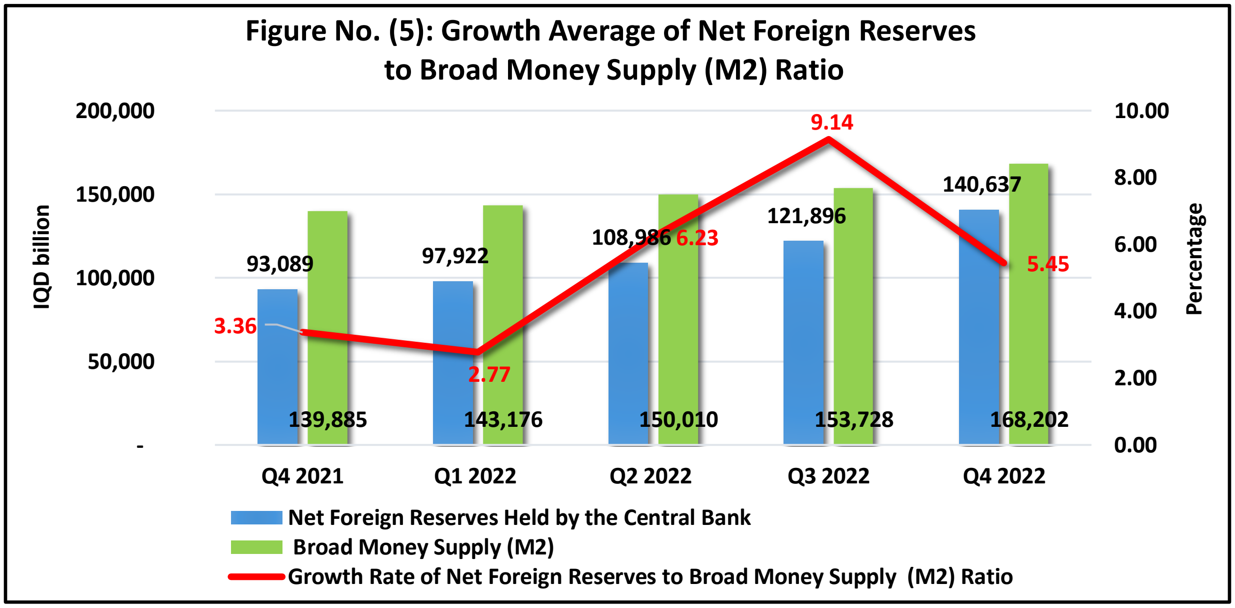


Source: CBI/ Statistical Website.

2- Growth Average of Net Foreign Reserves to Broad Money Supply (M2) Ratio

It is an indicator that measures the change of foreign reserves ratio held by the CBI to (M2) within a specified period, it is commonly used as an indicator of countries' economic strength and the stability of their financial system. Growth of net foreign reserve to (M2) ratio has risen to reach (5.45%) during Q4 2022 against (3.36%) on the same quarter of the previous year, as shown in figure No. (5). This increase is attributed to the increase of net foreign reserves from IQD (93) trillion during Q4

2021 to IQD (140) trillion during the same quarter of 2022 as net foreign exchange reserves increased by (50%), while M2 increased by (20%) - meaning that the increase of net foreign reserves is greater than that of (M2).

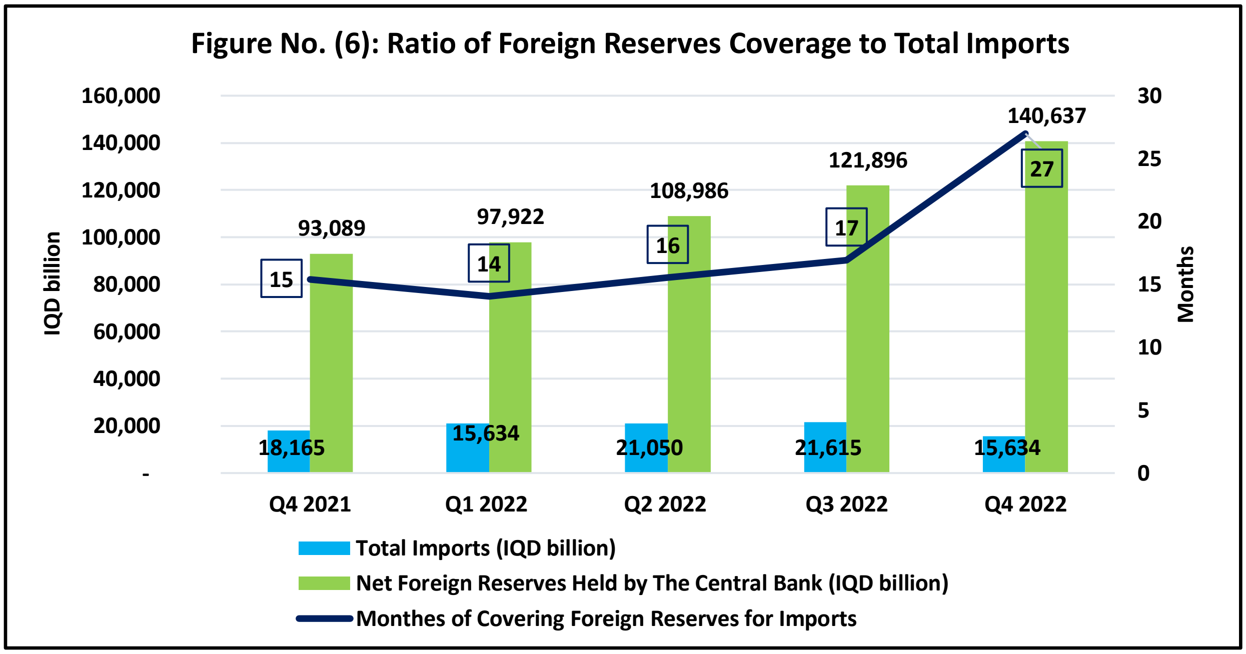


Source: CBI/ Statistical Website.

3 - Indicator of Foreign Reserves Coverage to Total Imports [1]

The indicator of foreign reserves coverage to imports is considered one of the main indicators used to assess the health of the country's economy and the stability of its financial system. International financial institutions such as International Monetary Fund (IMF) & World Bank are usually interested in monitoring this indicator to intervene and direct the necessary financial support in case of need. In some countries, the minimum limit of this indicator was between four or five months; this limit varies from a certain state to another depending on their economic status. As for Iraq's case, the minimum acceptable limit was 6 months. Figure No. (6), showed that the period of coverage of foreign reserves to total income has increased to (27) months during Q4 2022 against (15) months during the same quarter of the previous year. This increase is due to the increase of net foreign reserves and corresponding decrease of imports from IQD (18) trillion to IQD (15) trillion during the same period.

[1] See: CBI/ Early Warning Report 2021, Issue No. 18.



Source: CBI/ Statistical Website

Third: Change of Interest Rate Averages

Interest rate Average is considered one of the most important factors affecting national and global economies. When banks raise deposit interest rates, it makes deposits more attractive to savers, which may lead to slow economic growth and rising unemployment rates, and sometimes-inflating rate. When banks decrease interest rates on loans, they motivate borrowers to invest and, by turn, will lead to increase economic growth and reduce unemployment rates. Yet, sometimes it can lead to increase inflation.

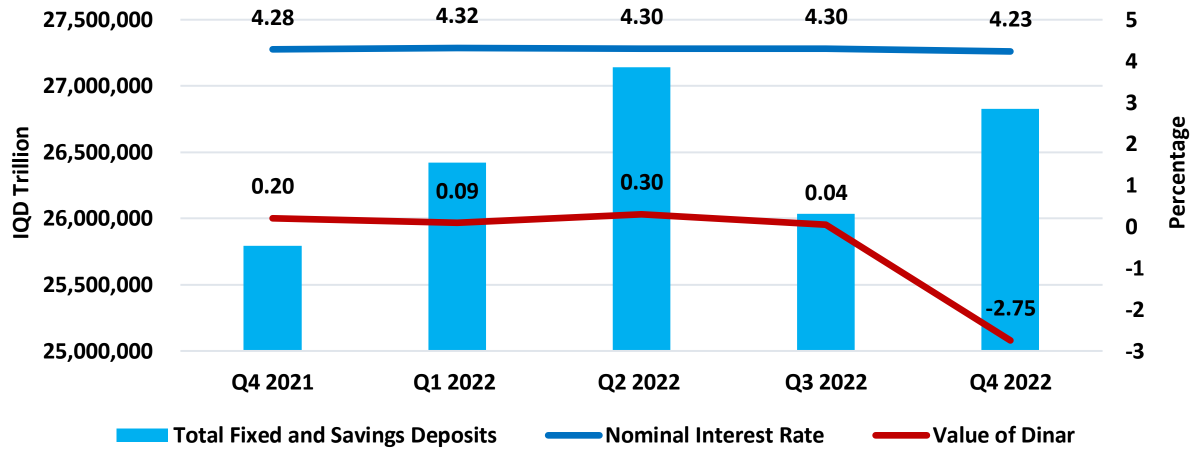
1- Short-Term Interest Rates on Deposits [1]

Interest rate is considered one of the variables of a significant impact on domestic currency value, though its value is determined by other factors such as inflation rate, exchange rates and domestic production volume. This indicator shows the impact of short-term interest rate on deposits volume and domestic currency value. Figure No. (7) Showed that the short-term interest rate decreased from (4.28%) during Q4 2021 to (4.23%) during Q4 2022, while total deposits increased to IQD (26.03) trillion for Q4 2022 against IQD (25.8) trillion for Q4 2021. Also, the same figure shows that there has been a devaluation of the Iraqi dinar due to the devaluating domestic

[1] Interest rates on deposits covered six months, one-year, and savings deposits

currency exchange rate as a major reason and that the interest rate has a weak impact on domestic currency value.

Figure No. (7): Average of Nominal Interest Rate, IQD Value, and Total Fixed & Saving Deposits

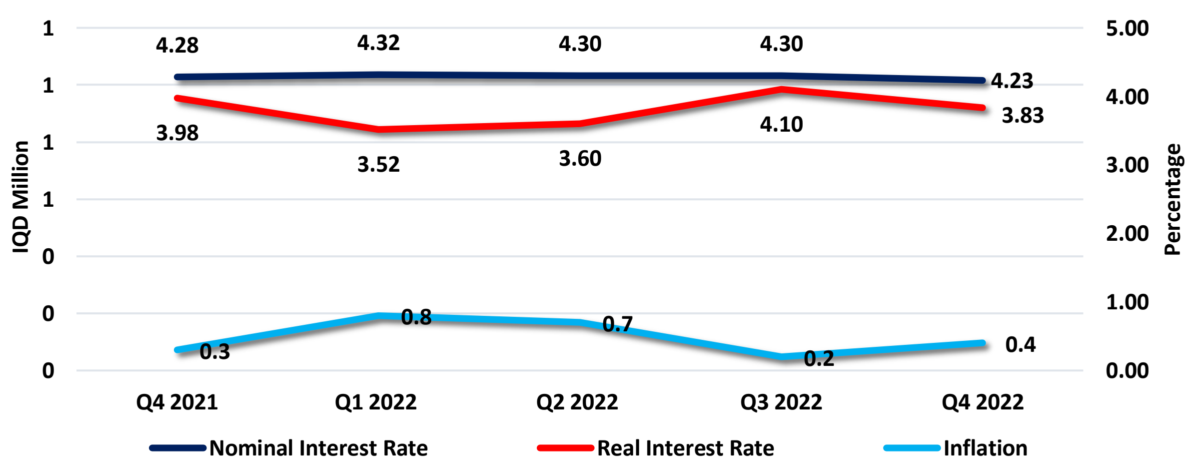


Source: CBI/ Statistical Website.

2- Real Interest Rate

The real interest rate reflects the difference between nominal interest rate and inflation rate. Figure No. (8) shows that the real interest rate declined to (3.83%) for Q4 2022, compared to the same quarter of 2021 that reached (3.98%), despite the constant inflation rate of (0.3%) during the same period.

Figure No. (8): Real Interest Rate and Average of Nominal Interest Rate & Inflation Rate



Source: CBI/ Statistical Website.

Table No. (1): Indicators of Currency Value Stability

Indicator	Indicator Value During Q4 2021	Indicator Value During Q4 2022	Change Rate%	Impact on Financial Stability	Indicator Direction
Market Exchange Rate (IQD)	1,479	1,530	3.44	Acceptable	↑
Official Exchange Rate (IQD)	1,460	1,460	0.0	Fixed	↔
Foreign Exchange Market Pressure Index (%)	0.1	5.4	5300	Acceptable	↑
Domestic Currency Value (%)	0.2	-2.7	-1450	Acceptable	↓
Gap between Market Exchange Rate & Window Rate (IQD)	19	70	268.4	Acceptable	↑
Net Foreign Reserves with CBI (IQD billion)	93,089	140,637	51.1	Positive	↑
Ratio of Foreign Reserves to (M2) (%)	66.5	83.6	25.7	Positive	↑
Growth Average of Foreign Reserves to (M2) Ratio (%)	3.36	5.45	62.2	Positive	↑
Coverage of Foreign Reserves to Imports (months)	15	27	80	Positive	↑
Nominal Interest Rate on Deposits (%)	4.28	4.23	-1.2	Acceptable	↓
Total Fixed & Saving Deposits (IQD billion)	25,795	26,828	4	Positive	↑
Real Interest Rate (%)	4.0	3.8	-5	Acceptable	↓

Chapter Two: Indicators of Banks Performance in Iraq

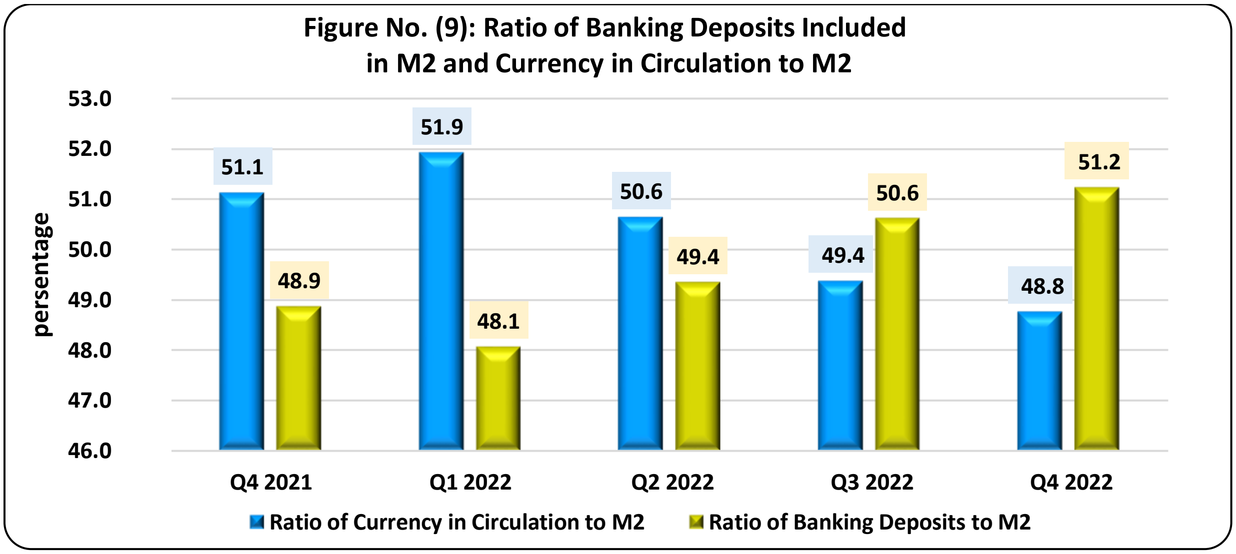
This chapter shows analysis and measurement of some performance indicators of the banking sector to give a view about its ability to meet the financial obligations. They are ratio of total CBI loans to total liabilities of the banking sector, ratio of banks` deposits to broad money supply (M2) and a cash credit to total deposits ratio. In addition to the money multiplier ratio, as well as measurement of investment and profitability indicators of operating Banks in Iraq. Also, compare ratio of total non-performing loans to total cash credit and total assets & liabilities. Then review the sectoral distribution of credit and non-performing loans, as well as other indicators.

1- Central Bank Loans/ Total Liabilities of Banks

This indicator reflects banking sector fragility, volume of non-performing loans and shortage of liquidity that some banks may suffer. The larger amount of loans extended by the CBI to banks indicates the growth of non-performance of banks and increased expected risks on the banking sector and economy as a whole. The amended CBI Law No. (56) of 2004/ Article (30) has identified the legal terms to help non-performing banks as a lender of last resort. According to these terms, CBI considers that it is necessary for each bank to have adequate liquidity to face its depositors' withdrawals to maintain the banking system from collapse. In exceptional cases, banks resorted to the CBI to enhance their liquidity on strict terms; this enhancement is important to maintain the stability of the financial system. It is noted that CBI did not provide loans to banks during Q4 2022, as none of the banks required urgent liquidity or exceptional withdrawals.

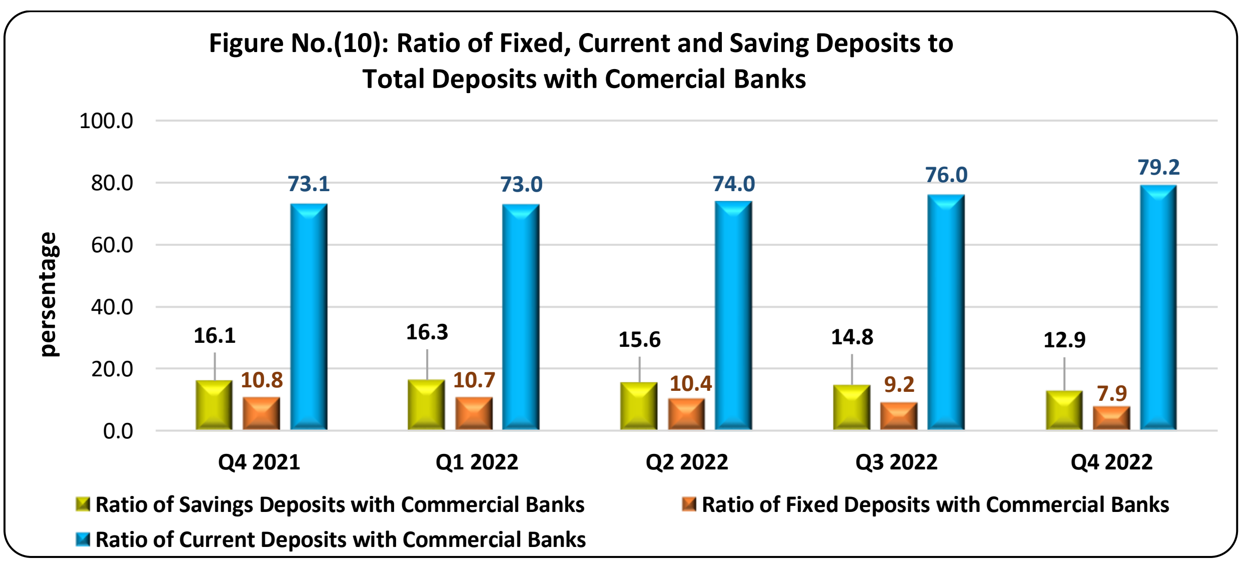
2- Bank Deposits and Currency in Circulation to Broad Money Supply (M2)

Bank deposits reflect the financial solvency of banks. Its increased ratio is related to the diversification of banking services available to the public in order to attract a greater number of depositors. Moreover, the volume of deposits with banks reflects their operation, activity and the prevalence of their banking services provided to customers. This indicator is measured by dividing banking deposits to broad money supply (M2). Figure No. (9) shows a rise of this ratio from (48.9%) to (51.2%) for the period (Q4 2021- Q4 2022). In turn, indicator of currency in circulation to M2 ratio fell from (51.1%) during Q4 2021 to (48.8%) for the same quarter of 2022; this is considered a positive indicator referring to a rise of depositors' confidence of banks and then increase banking deposits.



Source: CBI/ Statistical Website.

By referring to types of deposits with commercial banks, it is noted that current deposits have captured the largest proportion of total deposits with banks, as it raised from (73.1%) during the Q4 2021 to (79.2%) during the same quarter of 2022. Also fixed deposits decline from (10.8%) during Q4 2021 to (7.9%) for the same quarter of 2022. Followed by the decline of saving deposits from (16.1%) during Q4 2021 to (12.9%) for the same quarter of 2022. This is attributed to increased current financial movements of transactions, figure No. (10) clarifies the case.

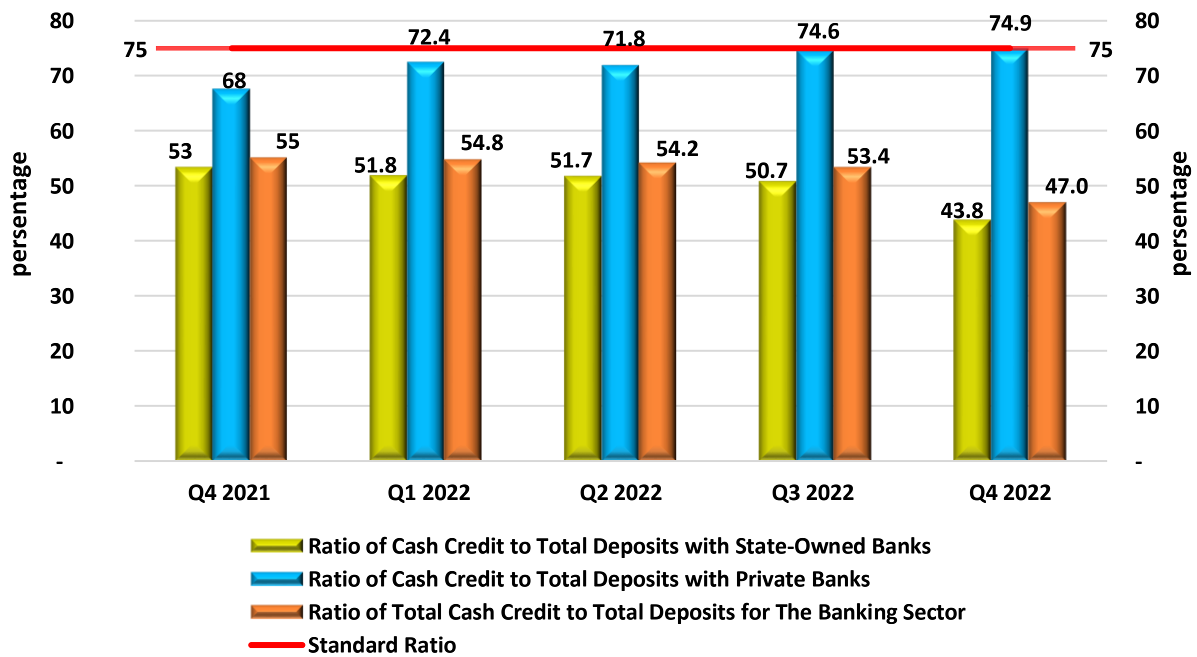


Source: CBI/ Statistical Website.

3- Total Cash Credit/ Total Deposits

This indicator is used to measure liquidity with operating banks by dividing total cash credit to total deposits, which is considered the basic source of banking activities. The decline of this ratio reflects the decline of extended cash credit compared to deposits and vice versa in case of rising. The standard ratio has been identified at (75%), as the rise of this indicator at a ratio higher than the standard value indicates that banks put pressure on their financial resources to extend cash credit. For example, the rise of the indicator higher than the identified standard ratio, reduces the security ratio of banking deposits. Therefore, it must remain at a balanced ratio, which is determined by the CBI by (75%) in order to maintain adequate liquidity with operating banks to face sudden withdrawal transactions by customers and continue banking activity. Figure No. (11) shows the decrease of total cash credit to total deposits ratio of the banking sector from (55.1%) during Q4 2021 compared to the same quarter of 2022 by (47.0%) due to the rise of total deposits at a higher percentage than the volume of the extended cash credit.

Figure No.(11): Ratio of Cash Credit to Total Deposits with State-Owned & Private Banks and Banking Sector as a whole

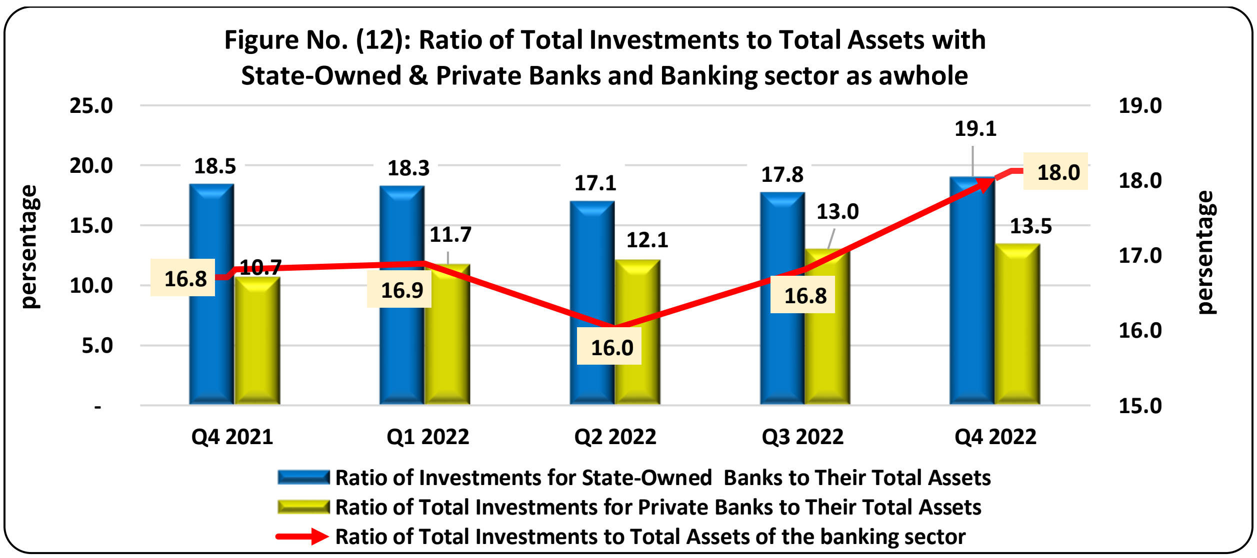


Source: CBI/ Statistics & Research Dept. /Financial and Monetary Statistics Division, Statistical Website.

It is also noted that the rise of this indicator in private banks from (67.6%) during Q4 2021 to (74.9%) for the same quarter of 2022 is considred a critical ratio and very close to the limit approved by CBI compared to state-owned banks as the ratio has been low for the previous years. The ratio has decreased from (53.3%) during Q4 2021 to (43.8%) for the same quarter of 2022, which is within the limits approved by CBI. However, this increase is due to credit extended to private banks through CBI initiative; as such credit is not included in deposit standard with them.

4- Investments of Operating Banks

This indicator is consiederd an important indicator as it shows the volume of actual investments within balance sheets of banks and highlights the importance of investments` contribution in achieved bank`s returns and increased profits, particularly if these investments boost economic sectors and are reflected in a positive way on real sector. The bank's capital and its available deposits within assets side of the bank's balance sheet have financed investments. Therefore, they are measured to total assets in order to know its volume with the bank. Figure No.(12) shows the rise of investments volume to total assets with commercial banks from (16.8%) during Q4 2021 to (18.0%) during the same quarter of 2022.



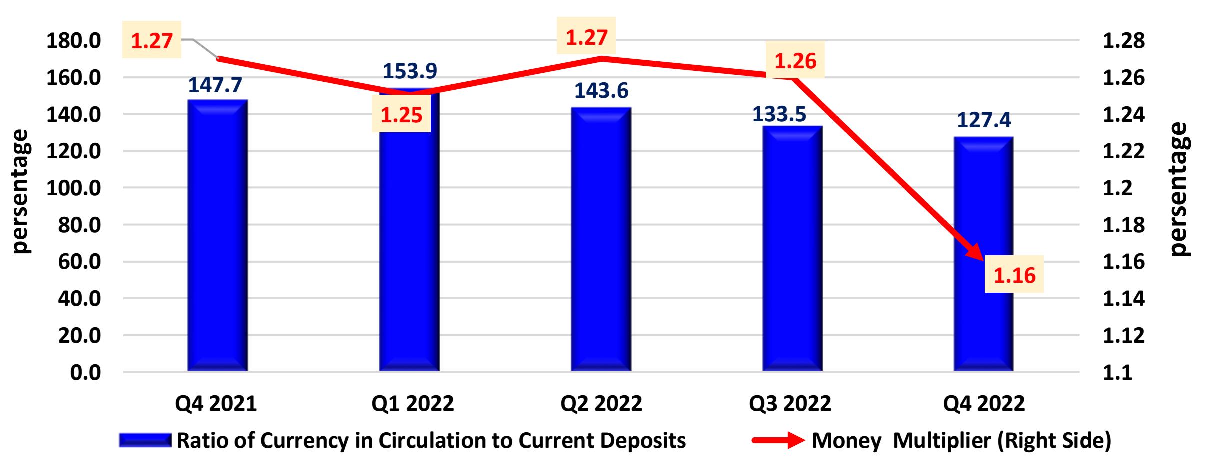
Source: CBI/ Financial and Monetary Statistics Division.

The ratio of investments to assets volume with state-owned banks is greater than its counterpart with private banks. It has increased from (18.5%) during Q4 2021 to (19.1%) during the same quarter of 2022, as well as investments with private banks to their total assets have risen from (10.7%) during Q4 2021 to (13.5%) during the same quarter of 2022. It is worth mentioning that investments volume with state-owned banks to total investments with operating banks constitute (86.1%), while investments of private banks constitute (13.9%), as state-owned banks are characterized by public trust owing to the huge banking activity provided by these banks and their network branches spread across Iraqi governorates.

5- Money Multiplier

The money multiplier is defined as the banks' desire and capacity to convert deposits into credit; it thus represents banking activity within the real sector. On one hand, it represents public's desire to go towards banks because of the services they provide to win public`s confidence. On the other hand, it represents banks` willingness to extend credit to the public and reap the benefits. Therefore, it is measured by dividing (broad money supply M2/ monetary base M0). Figure No. (13) shows a decrease of money multiplier ratio from (1.27%) during Q4 2021 to (1.16%) for the same quarter of 2022 owing to an increase of surplus reserves with commercial banks to reach (83.6%). However, this increase occurred at the expense of reducing extended credit, followed by a decrease of currency in circulation to current deposits ratio during Q4 2021 from (147.7%) to (127.4%) for the same quarter of 2022.

Figure No. (13): Ratio of Currency in Circulation to Current Deposits and Money Multiplier

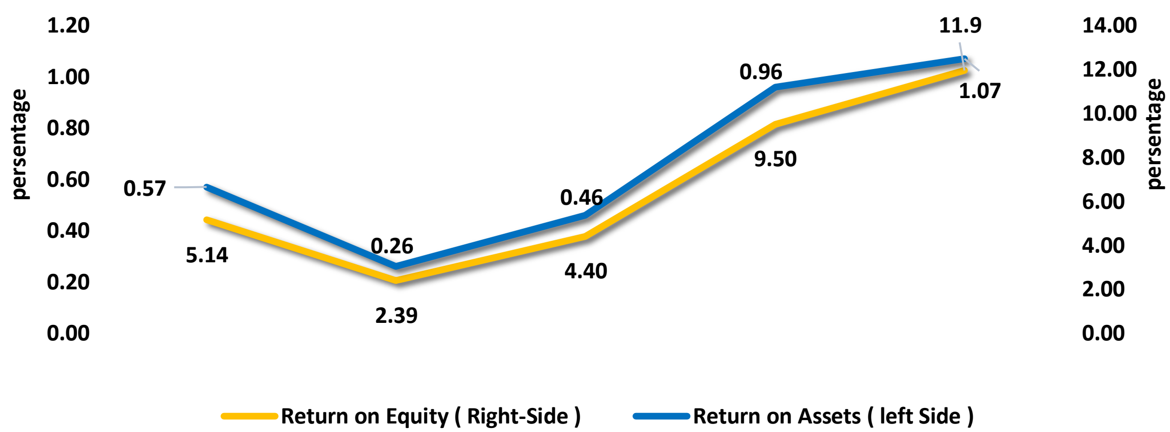


Source: Estimates of Monetary and Financial Stability Division.

6- Profitability of Banks

This indicator shows the profits or losses that banks may experience. It measures two aspects: the ratio of return on equity - which assesses how shareholders use bank funds and their ability to make profits, while the other side is the ratio of return on assets - which reflects bank's operational ability and effectiveness in using its assets to achieve profits. Figure No. (14) shows the high ratio of return on equity for the banking sector from (5.1%) during Q4 2021 to (11.9%) for the same quarter of 2022. Also the rised ratio of return on assets from (0.6%) during Q4 2021 to (1.1%) for the same quarter of 2022. It indicates that banks are exploiting the surplus part of their resources to achieve profits widely.

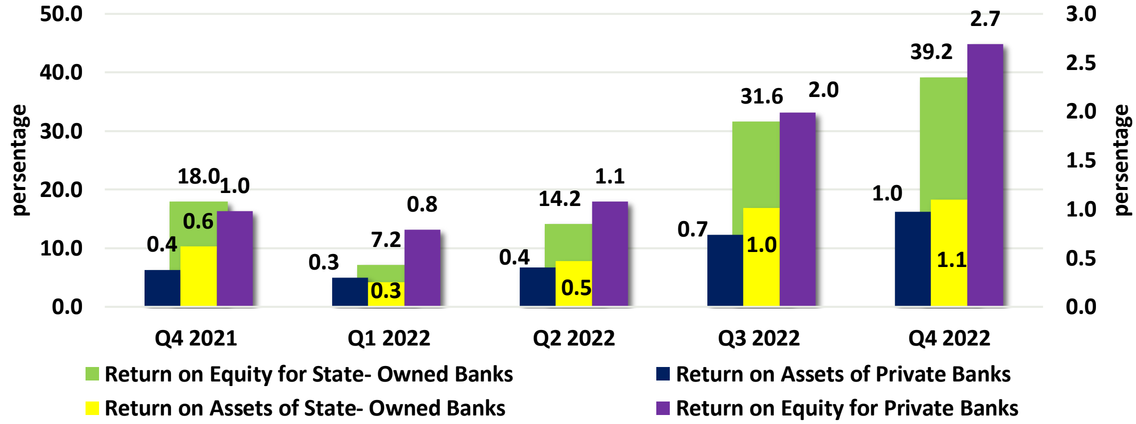
Figure No.(14): Indicator of Return on Equity and Indicator of Return on Assets for the Banking Sector



Source: Statistics & Research Dept.

As for the ratio of return on equity and assets with state-owned banks, the ratio of return on equity has increased from (18.0%) during Q4 2021 to (39.2%) for the same quarter of 2022. Followed by increased return on assets from (0.6%) to (1.1%) for the same period. The ratio of return on equity and total assets of private banks also increased as return on equity increased from (0.98%) during Q4 2021 to (2.7%) during the same quarter of 2022. The ratio of return on assets increased from (0.4%) to (0.97%) during the same period. This shows that state-owned and private banks have the ability to use their resources and assets for profit, as shown in figure No. (15).

Figure No. (15): Indicator of Return on Equity and Indicator of Return on Assets for State- Owned & Private Banks

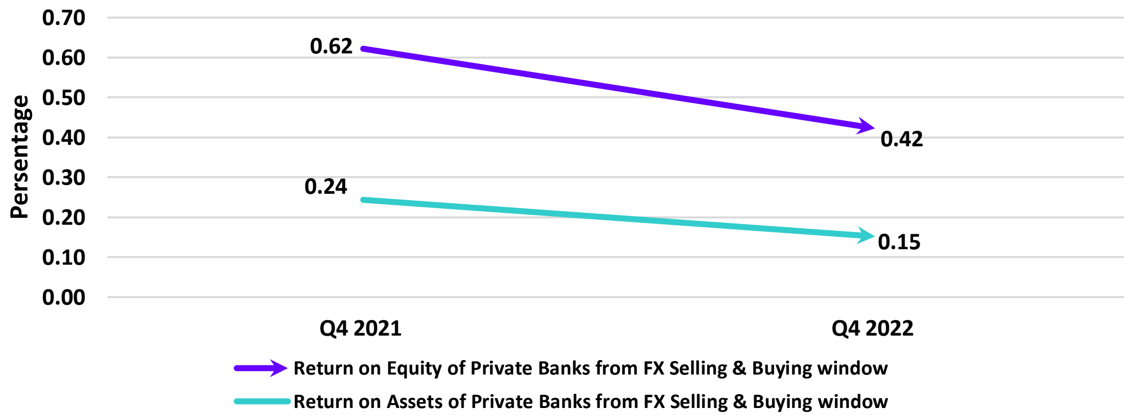


Source: Statistics & Research Dept.

7- Profitability of Private Banks through Foreign Currency Selling & Buying Window

This indicator shows private banks' profitability through non-interest source of income (FX window). Figure No. (16) shows a decrease of the added ratio to return on equity of private banks` purchases through FX window to reach (0.42%) during Q4 2022 against (0.62%) during the same quarter for the previous year. As well as the decrease of the added ratio of the return on assets during the same period from (0.24%) to (0.15%). The decline of banks' profitability was the result of a decrease in private banks' share of FX, while private banks' profitability growth through FX window during Q4 2022 recorded (-32.3%) - which is low compared to the same quarter for the previous year that amounted (4.0%).

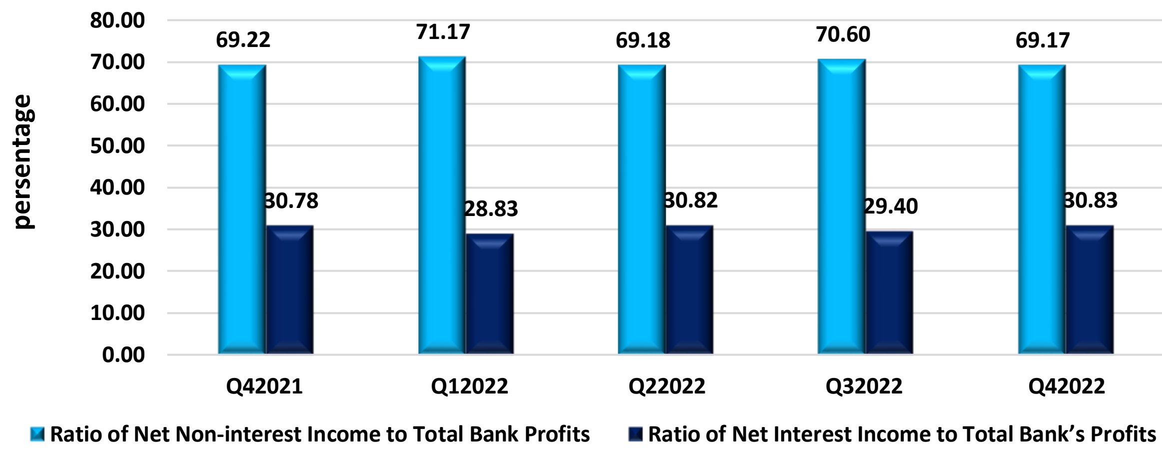
Figure No. (16): Indicator of Return on Equity & Indicator of Return on Assets of Private Banks Through FX Selling & Buying window



Source: CBI/ Estimates of Monetary and Financial Stability Division.

Regarding private banks` profits resulting from bank activities such as interest obtained from extending credit, it is noted that these profits constitute a small ratio of banks' total profits reaching (30.83%) during Q4 2022. It reflects the fact that private banks' activity is mostly on areas other than extending credit. Figure No. (17) shows that the ratio of net non-interest income with private banks constitute (69.17%) of total banks` income during Q4 2022. Private Banks need to increase their activity within the real sector represented by the process of extending loans, attracting deposits and increasing their financial services. It is worth mentioning that this process is different for state-owned banks, as most of which do not enter the foreign exchange selling & buying window or have a very limited access. Net interest income with state-owned banks to total interest income of all banks amounted (70%) during Q4 2022.

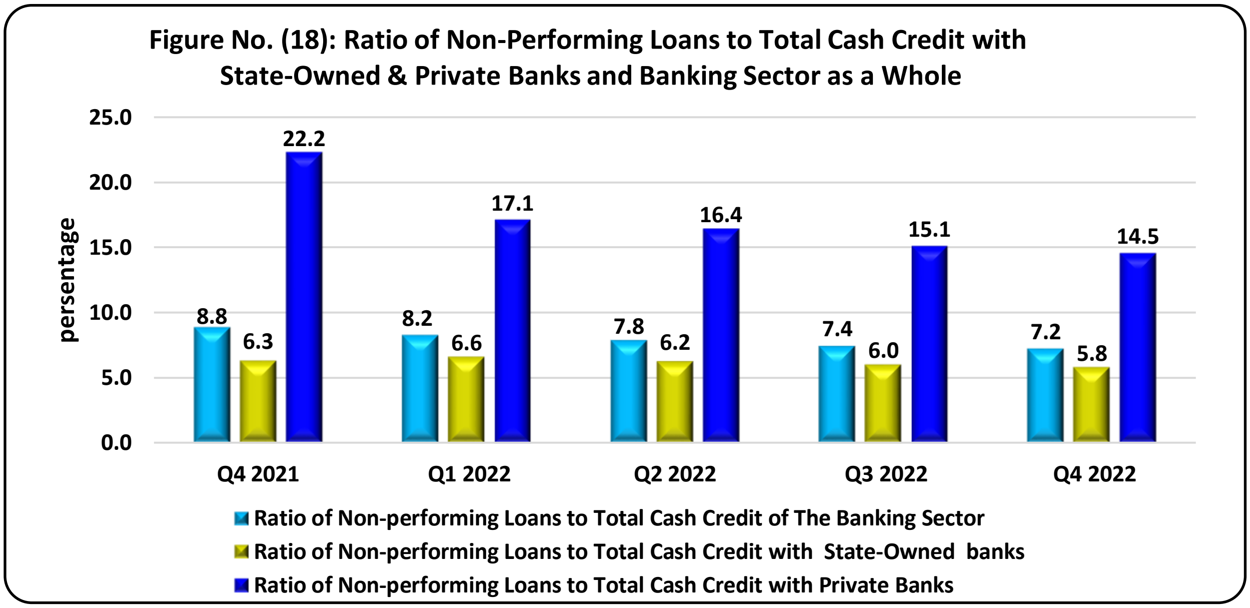
Figure No. (17): Net Interest and Non-interes Income with Private Banks to Total Banks` Profits



Source: CBI/ Statistics & Research Dept.

8- Non-Performing Loans/ Total Cash Credit

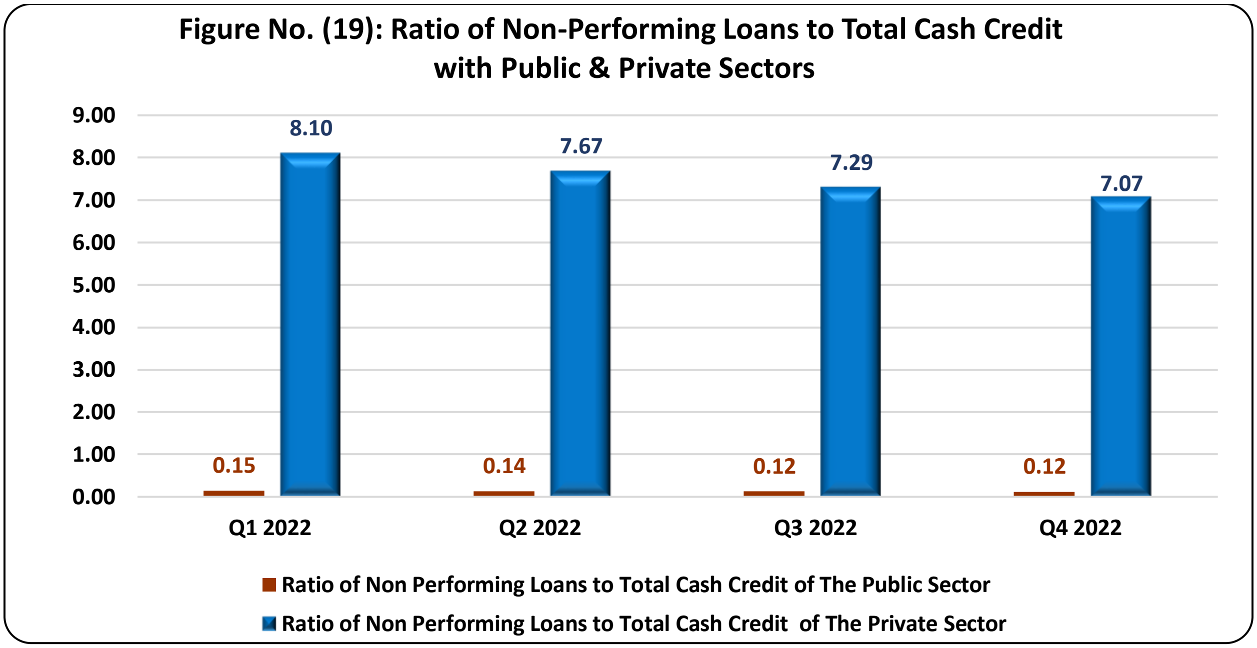
This indicator is measured by dividing non-performing loans to total cash credit; this ratio is used as an indicative value by the monetary authority. Since high ratio indicates the existence of non-performing loans, which indicates the potential of a financial failure both at the level of an individual bank and at the level of the banking sector. Then when it gets higher, the matter that lead decision-maker to impose higher ceilings to cover non-performing loans. If this indicator is declined, the banking system is secure from failure. Figure No. (18) shows low ratio of non-performing loans to total cash credit with operating Banks from (8.8%) during Q4 2021 to (7.2%) of the same quarter of 2022 with declined growth ratio of non-performing loans to (-6.7%) of the banking sector - which is a good indicator of banking system soundness.



Source: CBI/ Statistics & Research Dept.

It is noted that the ratio of non-performing loans to total cash credit with state-owned banks declined from (6.3%) during Q4 2021 to (5.8%) of the same quarter of 2022. This ratio is higher with private banks because state-owned banks have a high rate of extended credit compared to the volume of their non-performing loans by (83.7%) during 2022. The same is true with private banks whose ratio of non-performing loans to total cash credit decreased from (22.2%) during Q4 2021 to (14.5%) of the same quarter of 2022, as shown in the above figure.

As for the distribution between public and private sectors of non-performing loans to total cash credit, figure No. (19) shows a declined ratio with the private sector from (8.67%) during Q4 2021 to (7.07%) of the same quarter of 2022. Also a declined ratio of the public sector from (0.15%) to (0.12%) during the same period. Therefore, it is noted that the ratio of non-performing loans to total non-performing loans with the private sector is higher than its counterpart with the public sector by (98.4%) and (1.6%), respectively, for the same period. As the private sector is the leader of the country's economic activity, then the volume of its risks is subject to several economic, political and social factors, while the public sector represents the public and central government institutions and is less risky.

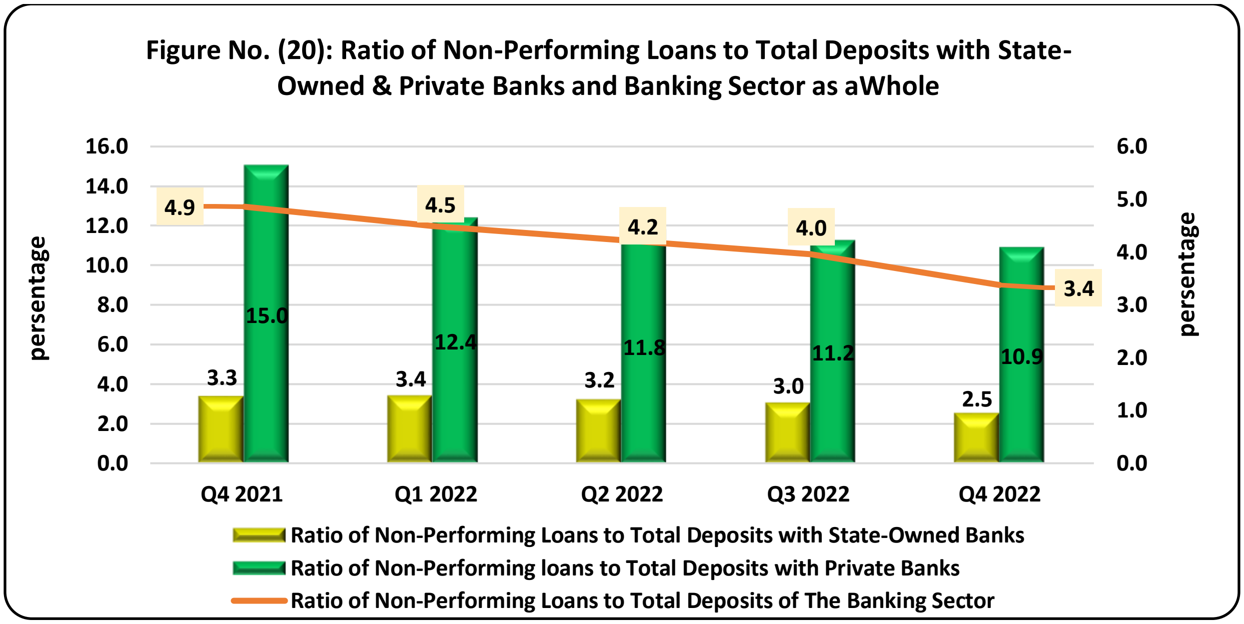


Source: CBI/ Statistics & Research Dept.

9- Non-Performing Loans/ Total Deposits

This indicator is measured by dividing non-performing loans to total deposits with banks. Figure No. (20) shows a decrease of non-performing loans to total deposits ratio of the banking sector from (4.9%) during Q4 2021 to (3.4%) for the same quarter of 2022 - which is a good indicator for the banks that reflects banks` ability to address non-performance issue.

The ratio of non-performing loans to total deposits of private banks decreased from (15.0%) to (10.9%) - which is a good indicator as it is still high when compared with its counterpart of state-owned banks due to large deposits volume with state-owned banks in which the ratio decreased from (3.3%) to (2.5%) for the period (Q4 2021- Q4 2022).

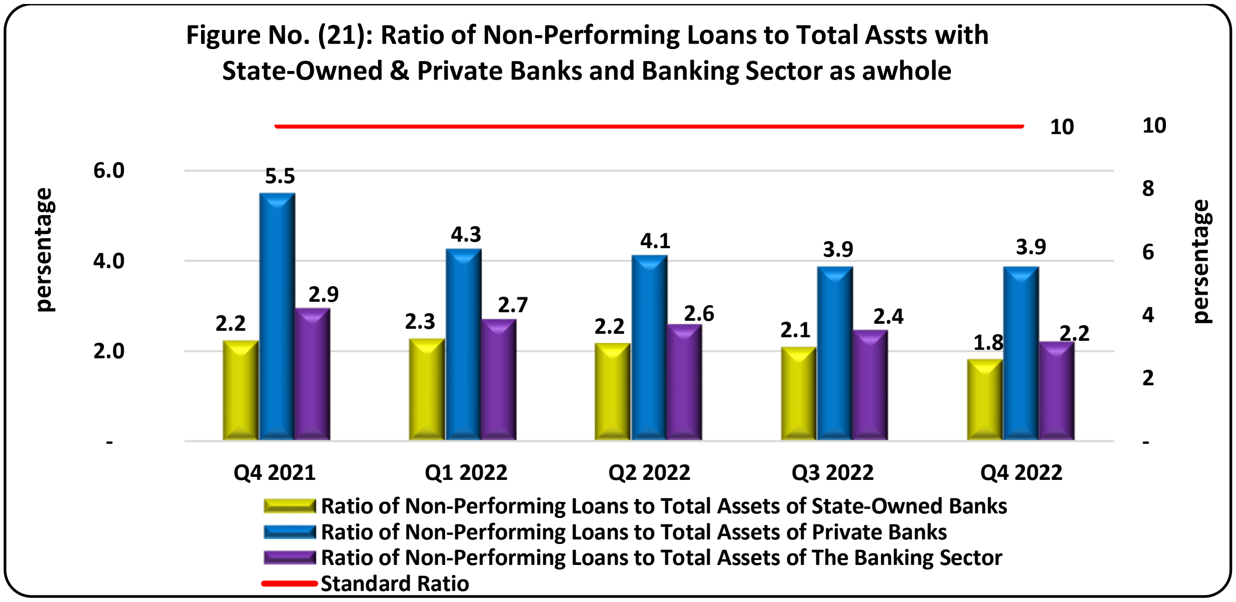


Source: CBI/ Statistics & Research Dept.

10- Non-Performing Loans/ Total Assets

This indicator is measured by dividing non-performing loans to total assets with banks. The standard value of this ratio is (10%)[1]. Figure No. (21) shows the ratio of non-performing loans to total assets with operating banks in Iraq. It is noted that the ratio declined from (2.9%) during Q4 2021 to (2.2%) for the same quarter of 2022. Thus, the ratio of non-performing loans to total assets did not exceed the standard ratio - which is a good indicator that refers to the quality of assets with the banking sector.

[1] For more information, see: CBI/ Early Warning Report 2020, Issue No. 13.



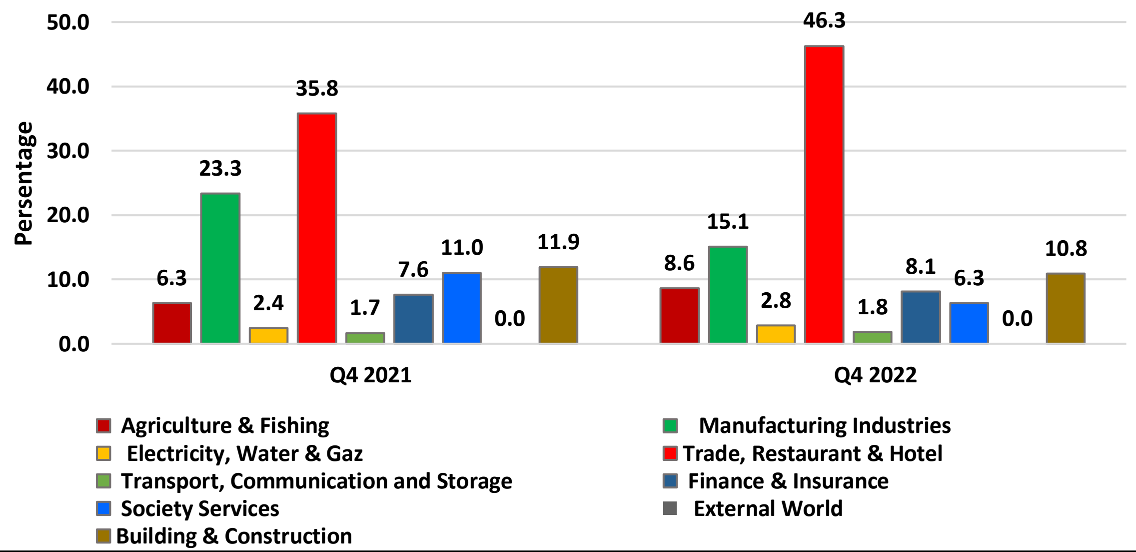
Source: CBI/ Statistics & Research Dept.

As for the ratio of non-performing loans to total assets of private banks, it has declined from (5.5%) during Q4 2021 to (3.9%) for the same quarter of 2022. In addition, it declined in state-owned banks from (2.2%) to (1.8%) for the same period, as shown in the last figure. Still the ratio of non-performing loans to total assets with private and state-owned banks did not exceed the standards ratio identified by the CBI of (10%). This ratio is higher in private banks than in its counterpart of state-owned banks; it is a ratio that does not cause concerns regarding financial stability because state-owned banks obsessed the largest part of banking sector`s total assets.

11- Sectoral Distribution of Non-Performing Loans

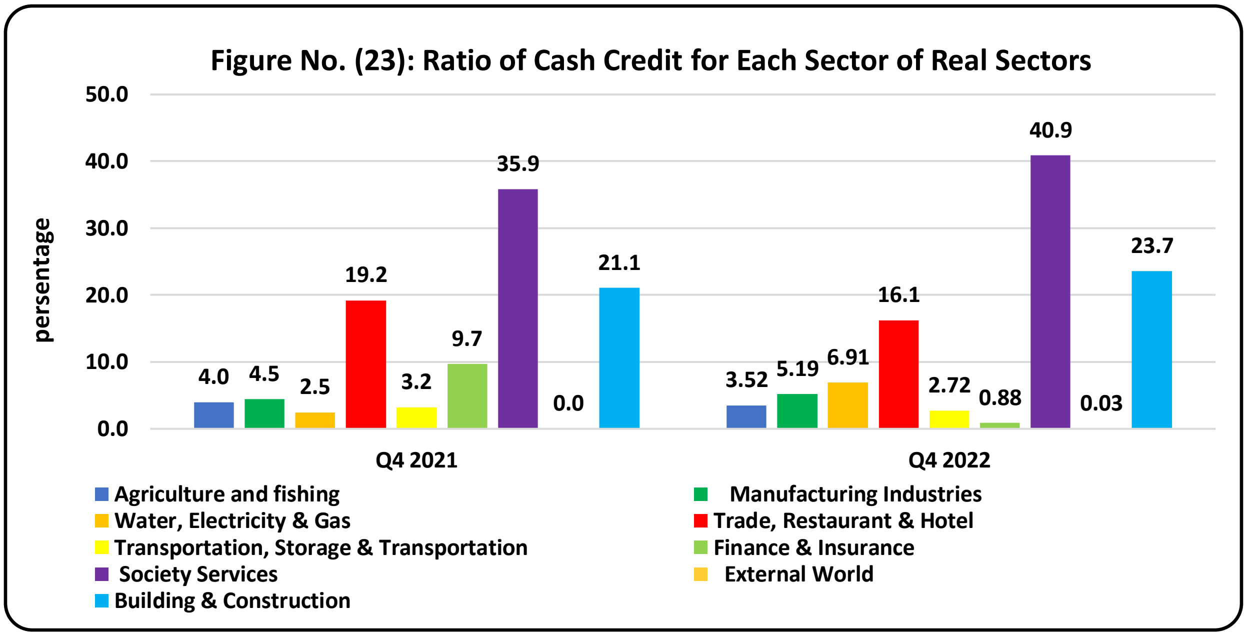
This indicator shows the ratio of non-performing loans distributed by economic sectors. Figure No. (22) shows high percentage of non-performing loans in (trade, restaurants & hotels) sector by (46.3%) during Q4 2022 against (35.8%) during the same quarter of 2021. Followed by a low percentage in manufacturing industries sector from (23.3%) to (15.1%) during the same period. As well as its decline in (building & construction) sector from (11.9%) during Q4 2021 to (10.8%) for the same quarter of 2022. Therefore, banks must be more careful and cautious when extending credit within these two sectors to avoid 0 non-performance of its activity and ensure the soundness of depositors' funds. It is also necessary to set policies that enable these sectors to recover from high ratio of non-performing loans problem resulting in low amount of extended cash credit and negative impact on the continuity of their activity.

Figure No. (22): Ratio of Non-Performing Loans for Each Sector of Real Sectors



Source: CBI/ Statistics & Research Dept.

In turn, it is noted through figure No. (23) the decline of cash credit ratio from (19.2%) to (16.1%) during Q4 (2021-2022) in (trade, restaurant & hotel) sector due to the high volume of non-performing loans. While the ratio of cash credit in (society services) sector rose from (35.9%) during Q4 2021 to (40.9%) for the same quarter of 2022, with a low non-performance rate, despite its acquisition of the largest part of extended cash credit volume. Followed by high percentage of cash credit in (building & construction) sector from (21.1%) during Q4 2021 to (23.7%) for the same quarter of 2022.



Source: CBI/ Statistics & Research Dept.

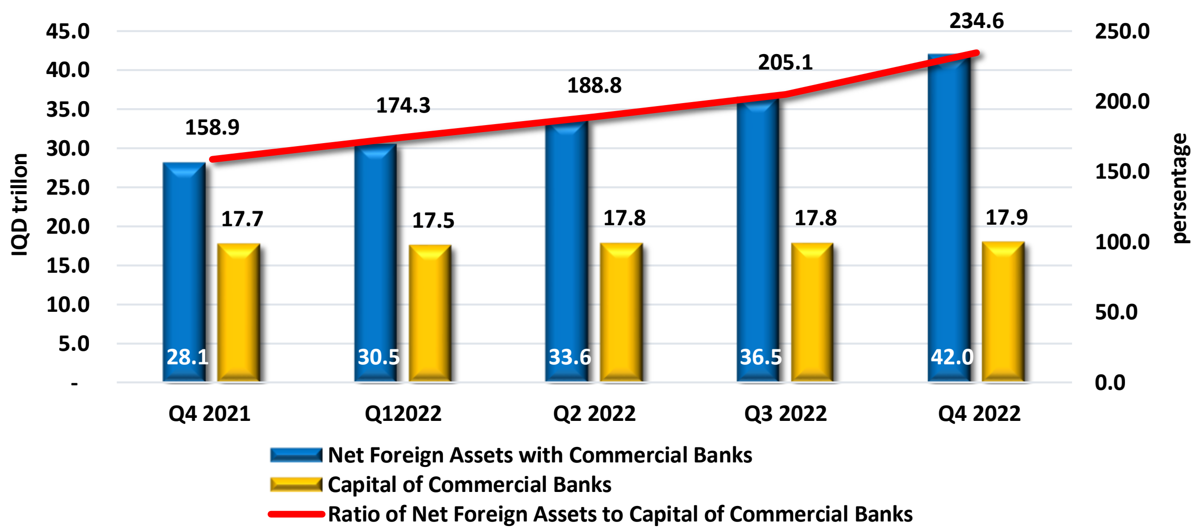
12-Net Foreign Assets/ Capital of Banks

This indicator is measured by dividing of net foreign assets of the banks to their capital. Figure No. (24) shows this ratio that displays amount of foreign currency kept with banks, noting that banking sector's foreign currency is denominated in domestic currency at the window exchange rate. Banks keep foreign currencies to meet needs of its customers whether for travel or foreign trade. Also it is considered cash reserves held as part of their reserves to maintain domestic currency stability and meet market needs or hedge against monetary risks such as exchange rate instability. It is noted that net foreign assets with commercial banks rose from (158.9%) during Q4 2021 to (235.6%) during the same quarter of 2022. It is worth mentioning that the source of foreign assets with banking sector is of an internal source[1].

On the other hand, CBI maintains an adequate ratio of foreign assets in parallel to broad money supply (M2). The ratio of foreign reserves to broad money supply (M2) reached (83.3%) during Q4 2022 and the ratio of foreign assets to banks' capital is controlled by monetary authority in Iraq.

[1] It means that Iraqi banks do not borrow from abroad in foreign currency and re-lend in domestic currency.

Figure No. (24): Ratio of Net Foreign Assets to Total Capital With Operating Banks

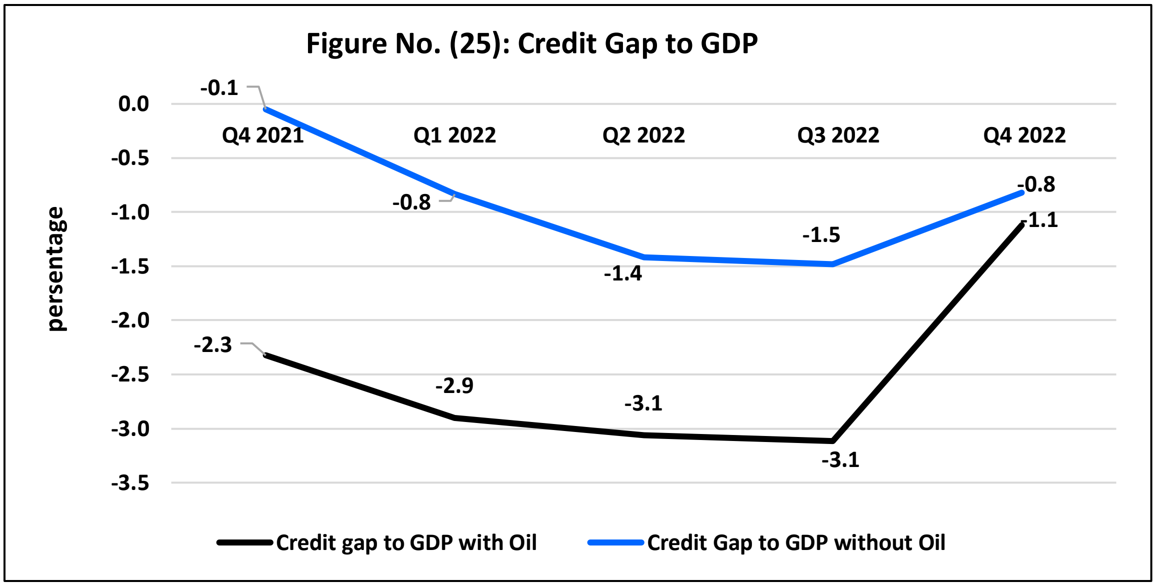


Source: CBI/ Statistical Website.

13- Credit Gap of GDP[1]

Credit gap of GDP is defined as the ratio of extended cash credit provided to the private sector to GDP minus the HP-Filter of credit ratio (provided to the private sector) to GDP. The standard value of this indicator range between (2% - 10%). Buffers of capital reserves are placed when the gap reaches (10%) or more to counter the growth of cash credit. If this ratio exceeded the maximum limit, that refer to the existence of excessive credit from banks - which indicates the potential of an increase in non-performing loans in the event of a failure by any economic sector within the private sector. Figure No. (25) shows the credit gap to GDP with and without oil; reaching (-0.8%) during Q4 2022 compared to Q4 2021 when the gap reached (-0.1%) in case of adopting data of GDP with oil. As for the gap when adopting data without oil, it reached (-1.1%) during Q4 2022 compared to the same quarter of 2021 during which it reached (-2.3%). It is less than the standard ratio, which explains that the directed credit to private sector by banks is very weak and they should increase it.

2-For more information on the method of calculating Gap of GDP, see CBI/ Early Warning Report Q1 2020.



Source: CBI/ Estimates of Monetary and Financial Stability Division.

Table No. (2): Indicators of Banking Sector Performance

Indicator	Index Value During Q4 2021	Index Value During Q4 2022	Change Rate (%)	Impact on Financial Stability	Indicator Direction
Central Bank Loans/Total Banks' Liabilities (%)	0	0	0	Fixed	↔
Deposits Included in Broad Money Supply to M2 (%)	48.9	51.2	4.7	Positive	↑
Ratio of Currency in Circulation to M2 (%)	51.1	48.8	-4.5	Positive	↓
Total Cash Credit to Total Deposits (%)	55.1	47.0	-14.7	Acceptable	↓
Money Multiplier (%)	1.27	1.16	-8.7	Acceptable	↓
Ratio of Currency in Circulation to Current Deposits (%)	147.7	127.4	-13.7	Positive	↓
Return on Equity (%)	5.1	11.95	134..3	Positive	↑
Return on Assets (%)	0.6	1.1	83.3	Positive	↑
Return on Equity through Foreign Currency Selling & Buying Window to Private Banks (%)	0.62	0.42	-32.2	Positive	↓
Return on Assets through Foreign Currency Selling& Buying Window to Private Banks (%)	0.24	0.15	-37.5	Positive	↑
Ratio of Net Interest Income to Total Profits of Private Banks (%)	30.78	30.83	0.16	Positive	↑
Ratio of Net Non-Interest Income to Total Profits of Private Banks (%)	69.22	69.17	-0.07	Acceptable	↓
Return on Equity of Private Banks (%)	0.98	2.69	174.5	Positive	↑
Return on Assets of Private Banks (%)	0.38	0.97	155.3	Positive	↑
Non-Performing Loans to Total Cash Credit (%)	8.8	7.2	-18.2	Positive	↓
Non-Performing Loans to Total Deposits (%)	4.9	3.4	-30.5	Positive	↑
Non-Performing Loans to Total Assets (%)	2.93	2.19	-25.3	Positive	↓
Net Foreign Assets to Banks' Capital (%)	158.9	235.6	48.3	Positive	↑
Credit-to-GDP Gap with Oil (%)	-0.1	-0.8	700	Positive	↓
Credit to GDP Gap without Oil (%)	-2.3	-1.1	-52.1	Positive	↓

Chapter Three: Indicators of Macroeconomic Performance

Indicators of macroeconomic performance include many variables that are used to assess the economy's health and growth. The "Early Warning Report" analyzes some of these indicators through inflation rate indicator and surplus or deficit ratio of the general budget to (GDP). Also calculating the implicit price deflator, in addition to measuring (GDP-Gap) as the following:

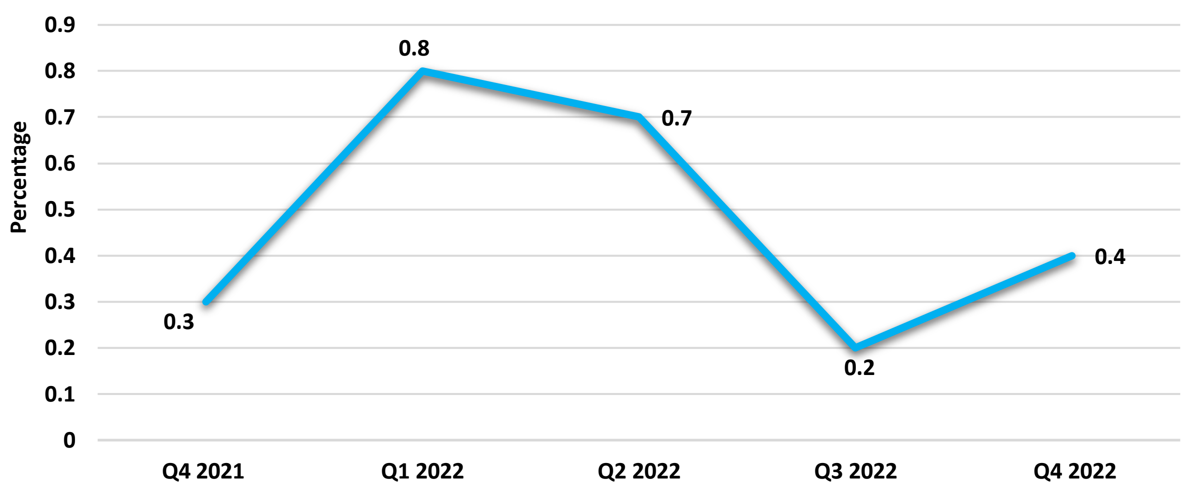
First: Inflation Rate

Inflation rate refers to a change of prices level of a basket of goods and services within the economy during a specific period; it is usually calculated by comparing prices level during a specific period (such as a month or a year) with the prices level of the same period of the previous year. Inflation rates vary from one country to another. Governments and financial institutions use inflation rates as an important economic indicator to measure the general level of prices and its reflection on banking indicators, including real interest rates.

Figure No. (26) shows that the prices of consumer basket in Iraq recorded an increase during Dec. 2022 to reach (118.5%) compared to Nov. of the same year to record (118.1%); it recorded an increase of (0.3%). This increase represents the monthly inflation rate. When comparing the general price index in Iraq on an annual basis, it is noted that it had increased and reached (117.0%) in Dec. 2022 against (111.5%) for the same month of 2021, with an increase of (5.0%) representing the annual inflation rate[1].

[1]- Source: CBI/ Key Financial Data.

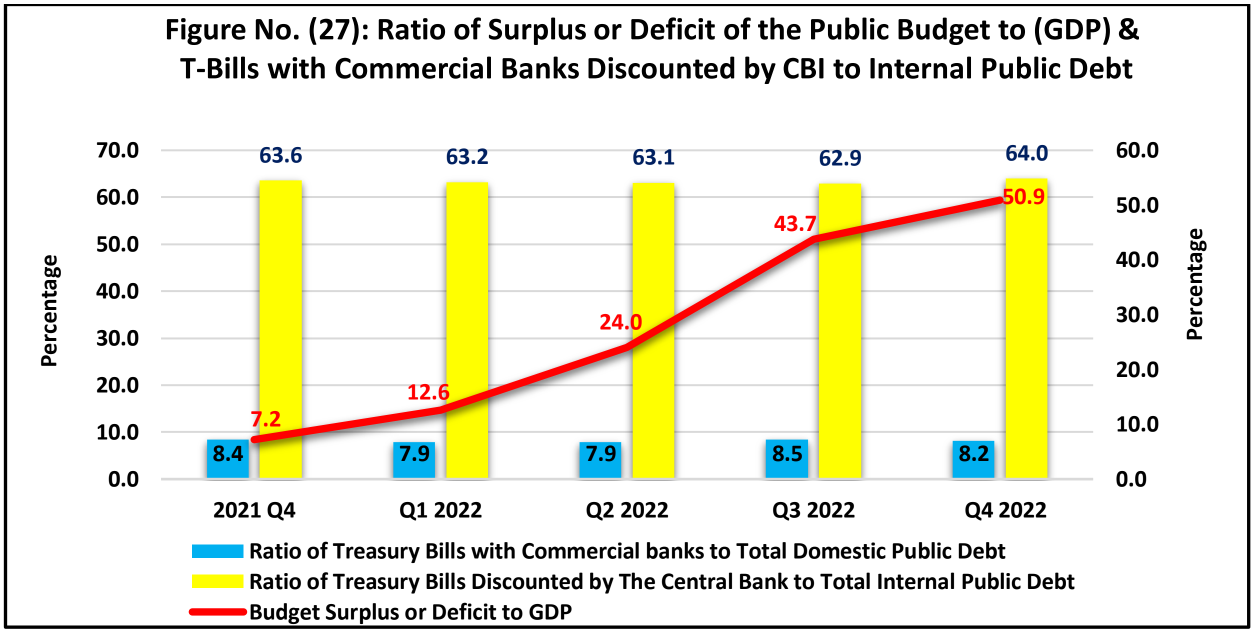
Figure No. (26): Average Change of Inflation



Source: CBI/ key Financial Data.

Second: Ratio of Surplus or Deficit of the Public Budget to (GDP)

This indicator is used to measure the soundness of the government budget, whether in surplus or deficit relative to the volume of economy. Thus, it is of importance in determining spending strategies by assessing the ability to finance and set spending priorities. Also, determine fiscal policies to improve government budget status and economy in general, in addition to the possibility of assessing the ability to borrow and determine the best ways to manage public debt and reduce the volume of revenues, public expenditures and the difference between them. As this ratio reflects total revenues that the government earns from taxes, fees and other revenues against total expenditures that the government undertakes. When there is a surplus in the general budget, it means that government revenues are greater than its expenditures, meaning that the need for public debt decreases and vice versa. When there is a deficit in the public budget, this can lead to an increase in the volume of public debt to compensate for the increased expenditures. Then the difference between revenues minus expenditures is considered relative to gross domestic product (GDP). Figure No. (27) shows that the state's public budget achieved a surplus of (50.9%) to GDP during Q4 2022, as total surplus of the budget amounted to more than IQD (44.7) trillion. Treasury bills with commercial banks to total internal public debt decreased from (8.4%) during Q4 2021 to (8.2%) during the same quarter of 2022. While internal public debt increased by (4.3%) because of the increase in the percentage of Treasury bills discounted by CBI to internal public debt by (64.0%) during Q4 2022 compared to Q4 of the previous year by (63.6%).

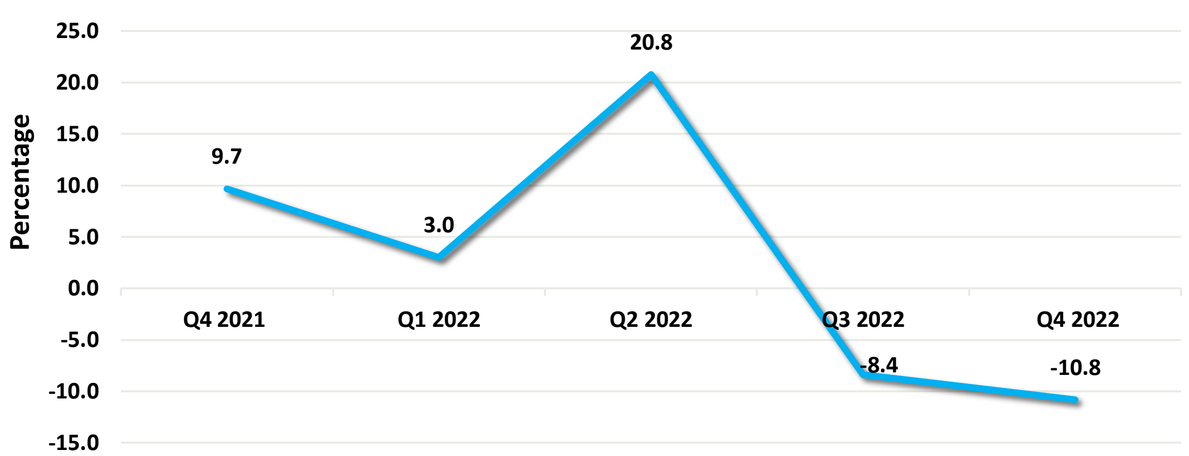


Source: CBI/ Statistical Website.

Third: Change Rate of Gross Domestic Product (GDP)

The change rate can be used to measure the economic activity volume of a country on the long term, as the relative growth rate reflects the volume of economy and its growth extent. Figure No. (28) shows that GDP at current prices recorded a decline during Q4 2022 by (-10.8%) with an amount of IQD (87.9) trillion against IQD (98.5) trillion during Q3 of the same year. This decline was because of the decline of oil prices that are reflected on the growth rate of (GDP) since oil sector constitutes the largest part of (GDP).

Figure No. (28): Growth Rate of GDP



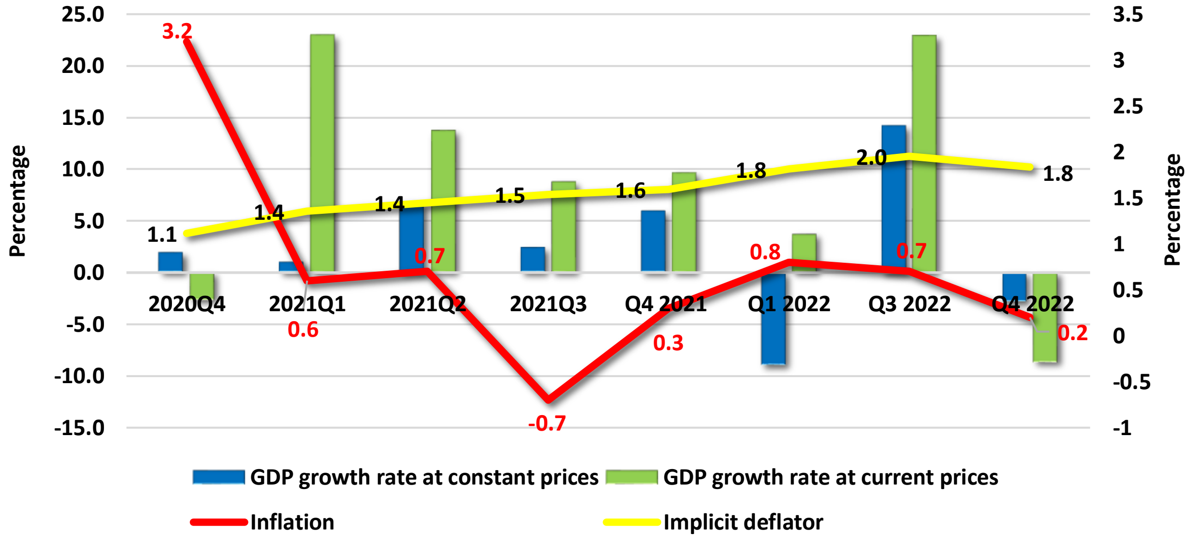
Source: CBI/ Statistics and Research Dept.

Forth: Implicit Price Deflator

The implicit price deflator can be measured by calculating the changes in all goods and services produced in an economy during the base year (that is - at constant prices) to those changes of the prices of all goods and services at current prices[1]. The importance of this indicator emerges from the fact that it analyze the impact of inflation on the economy and measures the real division of income and GDP. Figure No. (29) shows the stability of the value of implicit price deflator (IPD) amounted (1.6%) during Q4 2022 compared to the same quarter of 2021 due to stability of the general inflation rate at (0.3%) during the same period. The gap between the implicit deflator and inflation rate amounted (1.2%) during Q4 2022. The value of the implicit deflator is always higher than the value of inflation rate because it is not linked to a basket of goods and services, but it rather includes all pricing effects of the internal and external economy.

[1] For more information on IPD, see CBI/Early Warning Report – Issue No. 19.

Figure No. (29): Implicit Price Deflator and inflation Rate

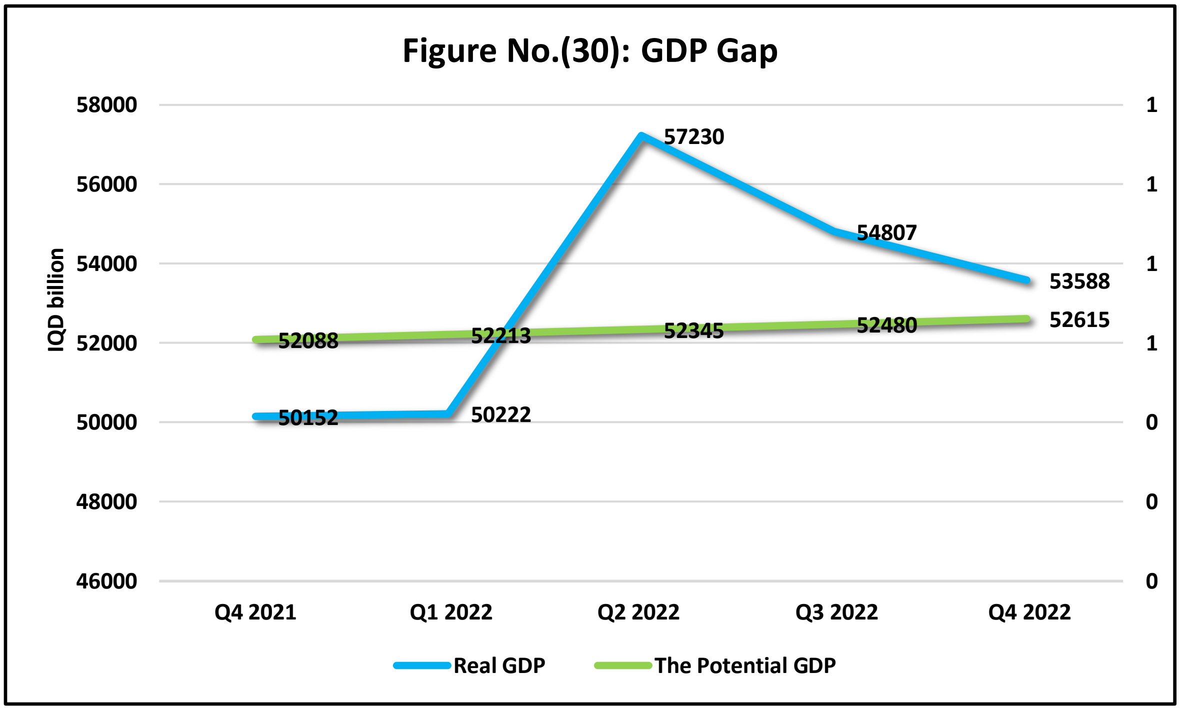


Source: -Ministry of Planning/ Central Statistical Organization (CSO) - Consumer Price Index Report for 2021 & 2022.
- CBI/ Statistical Website.

Fifth: Gross Domestic Product (GDP) Gap

The GDP gap is usually measured as a percentage of difference between the real GDP and the potential GDP[1] . When real GDP is less than the total potential GDP, it is considered as a sign of production gap and that there is a potential to increase production and employ more human resource and other resources. On the same context when the real GDP is higher than the total potential GDP, it indicates an increase of production and it could lead to a rise of inflation rate if the increase in real GDP is due to the increase in demand. Figure No. (30) shows that GDP gap during Q4 2022 was positive with an amount of IQD (10) billion, meaning that real GDP is higher than the potential one. Thus, production within the economy is higher than the available capacities so it is reflected, in turn, on real GDP increase compared to the same quarter of 2021, during which GDP gap was negative.

(1) For more information on measurement of GDP gap, see CBI/Early Warning Report 2021. Issue No. 18.



Source: - CBI/ Statistics & Research Dept. / Estimates of Financial and Monetary Stability Division.
- Ministry of Planning/ Central Statistical Organization Data for 2021-2022.

Table No. (3): Macroeconomic Performance Indicators

Indicator	Indicator Value During Q4 2021	Indicator Value During Q4 2022	Change Rate %	Impact on Financial Stability	Indicator Direction
Monthly Inflation Rate (%)	0.3	0.3	0	fixed	
Surplus or Deficit of the Public Budget to GDP (%)	7.2	50.9	606.9	Positive	
Ratio of T- bills to Internal Public Debt with Commercial Banks (%)	8.4	8.2	-2.3	Positive	
Ratio of T- Bills Discounted by CBI to Total Internal Public Debt (%)	63.6	64.0	0.6	Acceptable	
Change Ratio of GDP (%)	9.7	-12.7	-230.9	Acceptable	
Implicit Price Deflator to GDP (%)	1.6	1.6	0	Fixed	
Real GDP (IQD billion)	54,284	53,588	-1.2	Acceptable	
Current GDP (IQD billion)	86,452	87,886	1.6	Positive	
GDP Gap (IQD billion)	-1936	973	150.2	Positive	

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