

# The Effect of Using Solvency Indicators in Reducing Banking Risks: An Applied Study in the Central Bank of Iraq

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The research aimed to study financial safety indicators to assess the performance of the central bank in order to reveal the performance of the central bank and avoid any early shortcomings and to show positive sides in its performance, and try to strengthen it, and overcome weaknesses that it suffers from, and then to reach a sound banking sector that maintains the rights of depositors and the investors, the importance of the research was exemplified by the fact that the banking sector has an important role in economic and social life, given that it is the main element in strengthening confidence in the state policy and its care for economic interests, and the problem of research has centered through the increase in financial crises that afflict financial institutions locally and globally, and this, in turn, was reflected in the customers' unreliability in those institutions that exposed them to serious risks represented by withdrawing deposits and not opening accounts or dealing with banking institutions. The research reached a set of results, the most important of which was revealed through the liquid assets index that private banks despite its high liquidity, but it is less efficient in facing its financial obligations compared to government banks, and through an analysis of the financing gap index, it is noted that there is an expansion between 2016 and 2017 due to the lack of loans and advances compared to the demand for them, due to the banks imposing high interest rates, and that the high gap This means that the risks related to confidence in the banking system are low.

**Key words:** *Banking risk, financial safety indicators, central bank, liquid assets index, financing gap index..*

## **Introduction**

The analysis of financial safety indicators is a recent one, and many researchers and academics rely on an understanding of the financial situation through the ability of central banks to formulate fiscal and monetary policies and effective oversight of the banking sector and financial institutions to achieve their contractual obligations without obstacles. Therefore, in 2005, the preparation of financial financial indicators began soundness indicators In the context of a micro prudential analysis, which combines financial and economic indicators, which will draw the attention of policymakers of potential challenges in the financial sector, as financial systems have become more intertwined than Increase the risk of financial contagion, and the financial system has become more complicated by increasing financial instruments, diversification of activities and transmission of risks, and although these general trends have led to enhancing economic efficiency and increasing the ability of financial systems to exercise their role in accordance with the theory of financial mediation, they have changed from The nature of financial risks and created waves of financial instability. Therefore, financial safety indicators are considered as a enduring and continuous tool to guide, warn and warn decision-makers and policymakers of the bank's potential subjection to a crisis, and inform them of the possibility of occurring early before the event to take the necessary policies or preventive measures from crises.

## **Methodology**

### ***First - The Research Problem***

The financial crises that afflict financial institutions locally and globally have increased recently, which in turn has reflected on the customers 'unreliability in those institutions that exposed them to serious risks of withdrawing deposits and not opening accounts or dealing with banking institutions. Therefore, the research issue can be worked out through the following questions:

- 1- What are the financial safety indicators and how can they be used?
- 2- How important are these indicators in attaining banking safety in light of the increased risk?
- 3- How committed is the CBI to these indicators?

### ***Second - The Importance of Research***

The banking district has an important role in the economic and social life, given that it is the main component in strengthening conviction in the state policy and its care for economic appealing, and it is worth noting that whenever the banking reality is sound whenever it indicates the recovery of the economy, forming a maintaining factor to attract expenditure

and business, so it is necessary that Financial indicators are adopted and strive to reduce the risks of banking work to keep the probity of their financial positions, to reach a sound banking sector, preserves the rights of depositors and investors, and ensures the proper execution of the state's monetary policy appropriately, and investment financing Long and short-term investments to contribute productively to the development and wealth of the national economy.

### ***Third - The Research Goal***

This research aims to study the financial safety indicators to assess the performance of the central bank in order to reveal the execution of the central bank and avoid any early shortcomings and to show the positive features in its execution, and try to strengthen it, and overcome the weaknesses that it suffers from, and then to reach a sound banking sector that maintains the rights Depositors and investors, and guarantees the safety and health of implementing the state's financial and monetary policy in an appropriate manner to contribute effectively to the development of the national economy.

### ***Fourth: The Research Hypothesis***

The research seeks to establish the following main hypothesis:  
(Financial adequacy indicators serve to direct and warn decision-makers and policymakers that banks may be exposed to a future financial crisis.)

### ***Fifth - Research Methodology***

It was adopted in carrying out the research on the analytical method, and the applied side was used to search the data obtained from the Central Bank of Iraq.

### ***Sixth: Research Limits***

A- Cognitive limits of the research variables: The research variables included two main variables:

Financial safety indicators: These are indicators that should be analyzed and measured in the central bank, as they are among the main objectives of the bank's work.

Banking Business Risks: which the bank must study, analyze and judge according to Al Salam financial indicators.

B- Spatial boundaries: The spatial boundaries were concentrated for research at the Central Bank of Iraq in Baghdad.

C- Time limits: The time limits were for the research for the years 2018-2019, and the Central Bank data were approved for the years 2016-2017.

### ***Intellectual Propositions of Financial Safety Indicators and the Risks of Banking Work***

There are several indicators of financial safety used to measure the integrity of the banking performance, where these indicators are taken to evaluate the performance of banks and then classify them and discover financial imbalances in their performance before an early date so as not to be exposed to stormy financial problems leading to their collapse, as well as to avoid the risks of banking work, and through the current topic Emphasis will be placed on the indicators that were used in the applied aspect of the research, as follows:

#### ***First: The Capital Adequacy Ratio Index***

The capital acceptability index is one of the most major indicators for determining the bank's solvency along with its ability to withstand potential losses or bankruptcies. The more capital is raised, the less the reactions to financial difficulties and the level of solvency are. and vice versa, that the Basel Committee developed the Basel Standard. 1) According to the current standard (Basel III) in order to keep pace with the new phase in which the world not only has an increased financial risk but also an operational risk and credit risks as well as market and management risks, since the standard (III ) is based on the use of advanced methods that measure both credit and market and operational risks to determine the capital leverage required for the bank. (Al-Janabi, 2016: 32)

- Formula for calculating capital adequacy according to Basel III =  $(\text{retained earnings} + \text{reserve} + \text{legal reserve} + \text{other reserves} + \text{bank shares} + \text{subscribed capital} + \text{emission obligations} + \text{value adjustments}) / ((\text{according to risk weighted assets} + \text{weighted assets}) \text{ according to external risk) budget} * 100.$
- Formula for calculating capital adequacy according to Basel 1 =  $(\text{unlimited profit} + \text{mandatory reserve} + \text{legal reserve} + \text{other reserves} + \text{bank shares} + \text{subscribed capital} + \text{emission obligations}) / (\text{risk-weighted assets in the budget} + \text{weighted assets from the budget}) * 100$
- Capital adequacy calculation formula according to Basel 1 =  $(\text{unallocated profits} + \text{mandatory reserve} + \text{statutory reserve} + \text{other reserves} + \text{bank shares} + \text{subscribed capital} + \text{issuance bonuses}) / (\text{weighted assets with risks within the budget} + \text{weighted assets off-budget risk}) * 100.$

## ***Second: Liquidity Index***

Many studies, studies and customary financial and banking publications have shown that the measurement of fluidity levels in banks is done on a static scale called fluidity fractions, the content of which is the separation of advantage, which is easily converted into cash and 1 Loss and other illiquid, slowly moving (assets) items such as liabilities and rights are transferable. The asset is divided into changeable and other stable items because chargeable liabilities, unlike stable liabilities, have to be withdrawn and exchanged. Therefore, the management of the bank faces a difficult task, the amount of which is to determine the level acceptable for it and in certain proportions (Al-Jameel, 2011: 306).

(Basel III) has introduced a new liquidity regulation framework that focuses on elevated-quality capital (ordinary shares). The new liquidity standard consists of a Liquidity Coverage Index (LCR), which obliges banks to clench a sufficient amount of high-quality fluid assets so that they are exposed to stressful situations for at least a period of time (30) days from the Net Stable Financing Ratio (NSFR), a structural monitoring tool to measure liquidity levels. (Kevin and Selim, 2014: 212)

### **Liquidity Ratios According To NSFR and LCR Standards**

#### ***a. Liquidity Coverage Ratio***

In sequence to monitor the banks 'liquidity and to ensure that the bank maintains a sufficient level of complete liquidity (it is immediately converted into cash) into cash to fulfill its obligations during (30) under a scenario of stressful situations, it is calculated according to the following formula: (Ephilip & Dilruba, 2009: 96

Liquidity coverage ratio = ( The value of liquid assets is high quality /Net foreign cash flows (30) days)\*100

#### ***b. Net Stable Funding Ratio***

In order to control banks by maintaining a sufficient level of liquidity, stable financing available (money available for the bank and that is either self (property rights) or external (deposits) and required stable financing (investments, insurance)) must be included, and this ratio must not be less than (100) %) Permanently, and is calculated according to the following formula: (Kazim, 2016: 81):

Stable Funding Ratio Standard = Total Stable Funding / Total Stable Funding Required  $\geq$  100

### ***Third: Asset Quality Indicators***

The quality and quality of the assets constitute the cornerstone of the level of credibility of the capital rates, since most of the risks of financial insolvency in banking institutions are often caused by the quality of the assets or the difficulties of converting them into liquidity when needed, and the quality of the assets is measured through the following ratios: (Sheikh, 2007: 31)

- 1- Non-performing loans ratio / total mortgage
- 2- The fraction of non-performing mortgage / total assets
- 3- The fraction of non-performing mortgage/ capital

### ***Fourth: Revenue and Profit Indicators***

The low rates of these indicators can indicate problems in the profitability of financial institutions. On the contrary, the high rise in these ratios may reflect an investment policy in high-risk financial portfolios. Revenue and profitability can be measured through the following ratios:

- 1- payback on mortgage ratio
- 2- The fraction of return on the rights of owners

## **Second: Banking Business Risks**

### ***The Concept of Banking Risk***

As we know, banks are one of the most vulnerable financial institutions due to their activity, as we have found that most bank funds are bank commitments to others. Regardless of whether it is a depositor or a lender, the bank must commit itself to its performance and pay if necessary or on certain dates. The bank's management is required to assess and investigate the types of risks your money may be exposed to with precision in order to preserve it and ensure the proper functioning of its business. without exposing the funds to risk, covering those risks and trying to limit and mitigate their consequences . Economic thinking is generally abundant, and the commercial banking literature in particular contains studies and research results that approximate risk concepts in general and that diversify as stated by intellectual trends and the areas of research and writing dealt with by researchers and writers, including studies that include describe the risk as a measure of the uncertainty about the expected future return (return). The investment is measured based on the time horizon standard and its percentage of the standard. (Li and Zou, 2014: 139).

Risk is described as dealing with the likelihood of a decline in the expected return on one of the assets, and we find in this concept that it addresses the question of the probability of fluctuating returns (Faraj, 2013: 166). In realizing the loss, it is considered to be more risky than the assets where the loss is least likely. Equity is one of the most risky financial assets due to the sharp fluctuations in returns. (Chong, 2004: 199)

Risk is one of the most important things banks need to consider when making financial decisions, as there are three cases: (Badran, 2009: 292-291).

A- Certainty: A case in which a decision leads to a known outcome, which means that the decision maker knows the outcome on which his decision ends, and this case is called a complete knowledge of the future.

B - Risk: A state in which decision making leads to one of several possible outcomes and the decision maker knows the possibilities of each of these outcomes and this case is considered to be partial knowledge of the future.

C- Uncertainty: A situation in which decision making leads to a number of possible outcomes, but the probabilities of each occurrence are unknown and an assessment of the possibilities in this case is meaningless. This case is described in complete ignorance of the future.

### ***Types of Banking Risks***

Bank risk is divided into three types: (Chong, 2004: 212).

A- Systematic peril: This peril is caused by market factors caused over several years that systematically affect all companies operating on the market, such as: B. War, inflation, international events, political events and others. Systemic risk is referred to as fluctuations in returns resulting from general external financial market variables, and is also referred to as market risk and non-diversification risk, which in turn is divided into commercial and financial risk.

B- Unsystematic Peril: It is the peril that affects an asset or a small group of assets. Since this peril is special compared to the asset, it is called a specific asset peril and is generated by the factors of an installation and is unique without any other. Other facilities are referred to as multiple names, e.g. B. Diversification risk, avoidable risk, non-market risk and residual risk (Al-Shammari, 2006: 46).

C- total peril: defined as the quantity of the variance of the return or the quantity of the systemic and irregular risks.

### ***The Second Topic: The Framework for Research***

The Iraqi central bank was interested in complying with the rules and instructions of the committees, particularly the Basel Committee (Banking Supervision Committee). By letter from the Central Bank, which was distributed to all banks on November 13, 2008 under number 9/2/420, the banks operating in the Iraqi banking district, with the exception of branches of foreign banks, are represented by a capital adequacy index of at least 10% and this index the ratio between the capital base (numerator) and the weighted assets with specific weights to compensate for the credit danger, market danger and operational danger (denominator of the index), since this index is extracted by dividing the rule of banking capitalism into groups. With the elements that are first in the capital adequacy.

**Table 1:** Capital and liquid assets, the amount of credit, deposits, and the size of loans granted to government and private banks

	the details	2016	2017
1	Capital for government banks	100 billion dinars	96 billion dinars
2	The capital for private banks	235 billion dinars	250 billion dinars
3	The assets of the Iraqi banking system	220.5 trillion dinars	156.4 trillion dinars
4	Liquid assets of the Iraqi banking system	142.6 trillion dinars	102.4 trillion dinars
5	Deposits with the banking system	53.8 trillion dinars	58.4 trillion dinars
6	Cash credit	29.8 trillion dinars	30.8 trillion dinars
7	Deposit growth	37.9 trillion dinars	67 trillion dinars
8	Non-performing loans	3.3 trillion dinars	4.3 trillion dinars

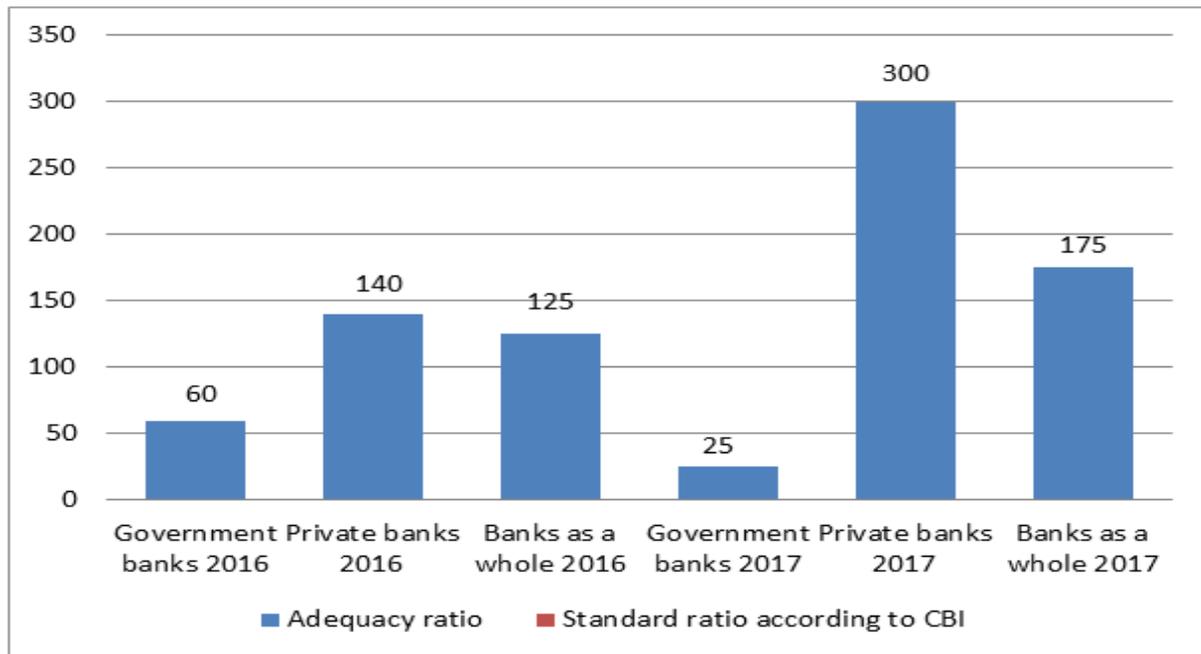
**Source:** Preparing researchers using data from the Central Bank of Iraq, Department of Statistics

### ***First: The Capital Adequacy Index for the Central Bank and Subsidiary Banks***

The capital adequacy fraction for the banking structure as a whole increased to (181%) in 2017, which is a very high rate that reflects the ability and efficiency of the banking system to confront the risks and unexpected problems that it may be exposed to, and by comparing that percentage to its counterpart in 2016 of (128%) It is clear that they increased by (41.4%), and banks maintained this high level of solvency as a result of the capital components, which are mostly from the first tranche of capital that As for the capital adequacy ratio for government banks according to the Basel II standard, it reached (38%) for the year 2017, a decrease of (-

39.7%) from the percentage in 2016, which was recorded (63%), as shown in Figure (1), This is due to the fact that despite the decrease in assets, assets weighted by risks inside and outside the budget have increased, and banks' capital has increased, and this calculated ratio reflects the adequacy and serious financial ability of government banks that help them to face potential risks.

**Figure 1.** capital adequacy ratios for banks affiliated with the Central Bank of Iraq for the year 2017



And the capital adequacy ratio for private banks according to the Basel 11 criterion recorded a significant increase, as the ratio reached (323%) in (2017), which is very high, due to the large number of private banks compared to government banks as it was opened (6 (Private banks in the year (2017) and last, their capital adequacy ratios are very high compared to the old operating banks, as their capital is high compared to the assets, so their adequacy ratio increases. consists of basic capital.

A gap is observed in the middle of the ratio of the main adequacy ratio with government and private banks in favor of the latter, and this difference reflects that the total capital of private banks is high compared to government banks, due to two factors, the first is that the number of private banks is more than government banks, as the number of the first (62) A bank while government banks do not exceed (7) banks until 2017, the second factor is the increase in the private bank's capital to respond to the directives of the central bank to increase the capital and a minimum of (250) billion dinars, and the shares of private sector banks' assets also widen the gap But by less than the height of the head Money for the sector itself, and this

high percentage reflects the ability of private sector banks to cope with the The proportions were as follows:

The ratio	2017
LCR	80%
NSFR	100%

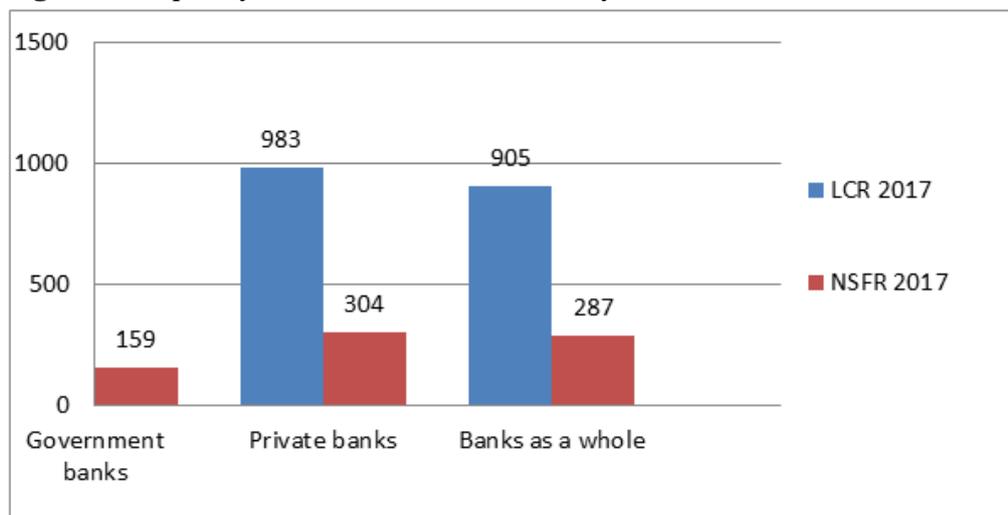
### ***Liquidity Coverage Ratio (LCR)***

This percentage (80%) for the year 2017 should be done gradually until it reaches (100%) and it must not be less than this percentage, as shown in Table (1), in order for the bank to be able to ensure that its liabilities and liquidity needs are met For a period of (30) days, which prevents financial insolvency problems from occurring in the short term.

### **The Ratio of Stable Funding Available NSFR**

This ratio reflects the bank's ability to provide the necessary liquidity to meet its obligations in the medium term. The Basel Committee set this percentage by not less than (100%), which represents the bank's funding sources (liabilities) relative to the uses of these sources (assets). Banks have achieved a high percentage of government banks at (159%), while their private counterparts have reached (304%), which is high compared to the percentage determined by the Basel III committee, and this means that banks have available financing equal to the required funding That is, the banks are able to finance the assets side according to what the sources of funds provide on the liabilities side.

**Figure 2.** Liquidity ratio NSFR - LCR for the year 2017

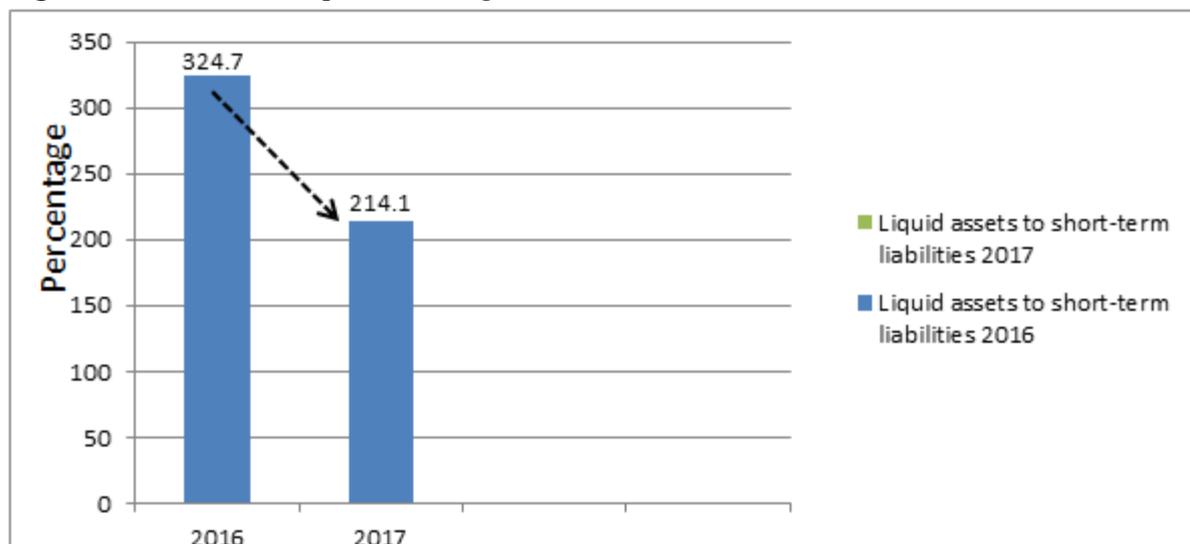


### Liquid Advantage / Short-Term Liabilities

By analyzing this indicator for the central bank and its subsidiary banks, the fraction of the liquid advantage index to the short-term liabilities of the banking system as a whole decreased to (214.1%) in 2017 compared to (324.7%) for the year 2016, and this decrease does not represent a threat to financial strength. High in spite of its low and this percentage represents a great financial strength for all (government) banks

The private)) in maintaining high liquidity to confront depositors' withdrawals and to provide loans and reflect positively on financial stability, as it guarantees the ability of banks to fulfill their obligations of deposits, as well as ensuring their ability to provide loans to others, while at the same time avoiding them resorting to central banks to request liquidity.

**Figure 3.** The ratio of liquid advantage to short-term liabilities



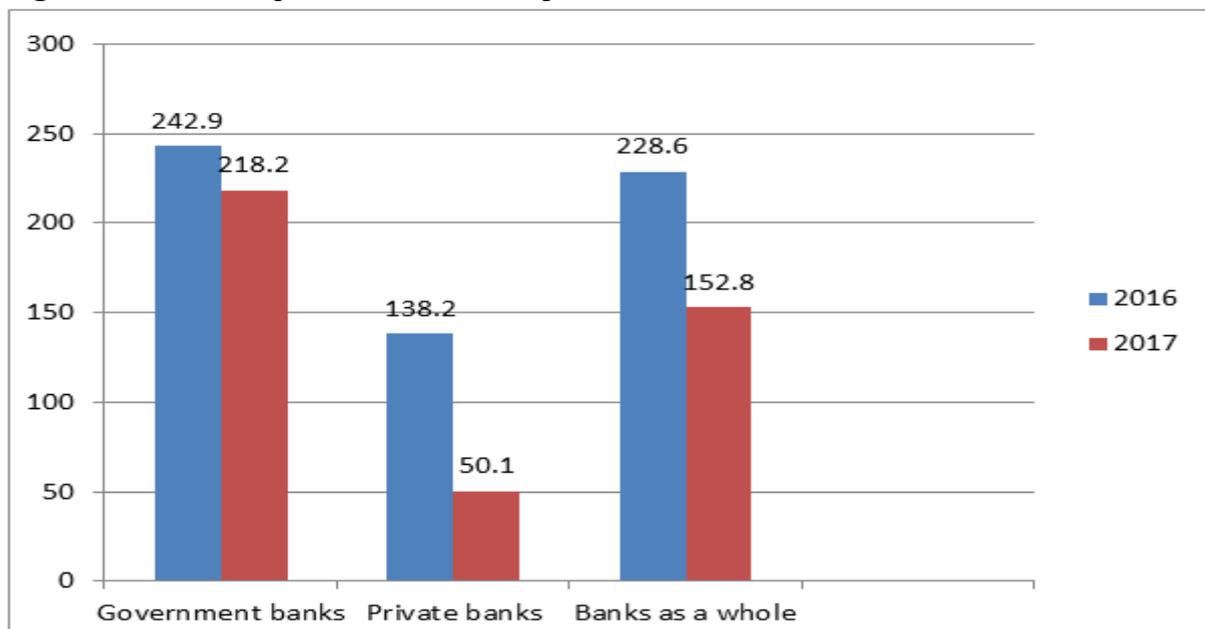
### Liquid Advantage / Total Accumulation

This indicator expresses the amount of liquid assets held by the bank including (cash with the central bank as well as cash in the fund and other liquid balances), and the extent of its investment in granting loans.

Of all kinds, and the banking system as a whole recorded a high rate of (152.8%) in 2017, but it is low than 2016 and it reached (228.6%), meaning that the banking system is not likely to It is exposed to liquidity danger in the short term, and with regard to government banks, this ratio reached (218.2%) in 2017, that this high percentage shows the ability of government banks to fulfill their financial obligations in their time frame, but it reflects negatively on the return and profitability, as the liquidity goal will conflict With the goal of profitability,

because this liquid money is not used in investments that can generate si As for private banks, they recorded (50.1%) in 2017, it is clear that private banks, despite their high liquidity, are less efficient in facing their financial obligations compared to government banks, as well as government bank expansions at the local and international levels, which may lead to Maintaining these balances to strengthen the confidence of depositors in it and support its banking work, but private banks are the best in not maintaining a high percentage of the cash balance from the aforementioned percentage, which reflects a clear trend towards employing loanable funds.

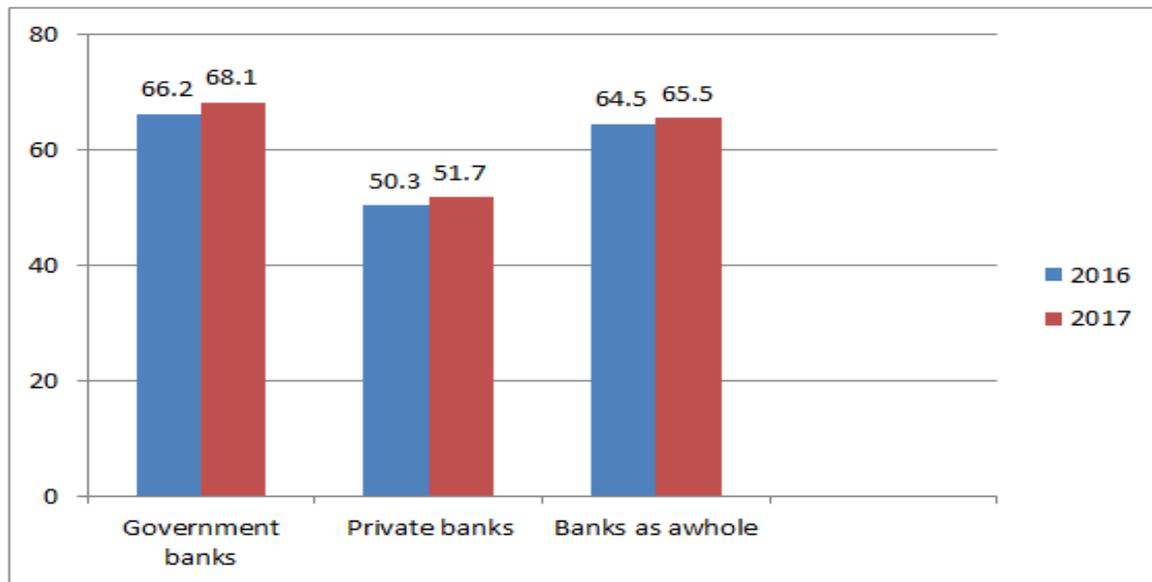
**Figure 4.** Ratio of liquid assets to total deposits



### Liquid Advantage / Total Advantage

This fraction illustrates the present to which the bank maintains liquid advantage to counter depositors' withdrawals and measures them relative to the total assets of the bank. The fraction of liquid assets to the total assets of the banking system as a whole increased to (65.5%) in 2017, which is high, and this reflects the precautionary trend of the banking system in light of The country has a high level of risk, but at the same time it is considered a low percentage compared to the previous two indicators, and despite the significant decrease in total assets, it decreased from (220.5) trillion dinars in 2016 to (156.4) trillion dinars in 2017, except The ratio of liquid assets to total mojo Many data have not changed for the year 2016 because liquid assets are down from other (142.6 (trillion dinars in 2016 to (102.4) trillion dinars in 2017. On the level of government banks, this percentage increased to (68.1%) in 2017 after it registered (66.2%) during 2016, also increased to (51.7%) with private banks in 2017, compared to 2016 (50.3%) Figure 4 illustrates this.

**Figure 5. The ratio of liquid assets to total assets**



### Cash Credit / Deposits

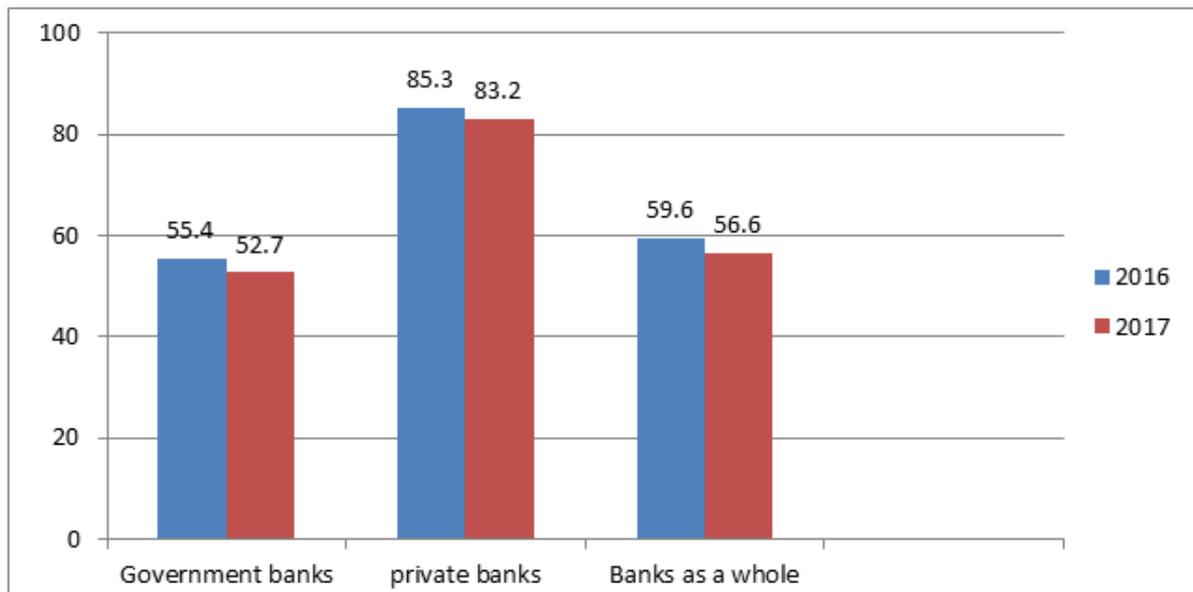
The Central Bank of Iraq has set the ratio of cash credit to deposits at a rate that does not exceed (70%), the ratio of cash credit to deposits with the banking system as a whole decreased to (56.6%) in 2017 and is within the standard ratio set by the Central Bank of Iraq, which reflects the ability of Banks to use the funds available to them that come from deposits to meet the demand for loans and advances, which is low from 2016, which is (59.5%) due to the increase in the volume of deposits, and the same percentage with government banks reached (52.7%) in 2017, down by (4.8%) from one year 2016 (55.4%), as a result of the increase in deposits to (58.4) trillion dinars in 2017 b After it recorded in 2016 (53.8) trillion dinars, an increase of (8.5%), in contrast to the increase in the volume of cash credit by (3.2%), as it recorded in 2017 (30.8) trillion dinars, compared to (29.8) trillion dinars in 2016, it is noted that The rate of increase in deposits is greater than the rate of increase in cash credit, and this indicates that government banks maintain redundant liquidity that is employable without prejudice to the above-mentioned benchmark and not assume additional risks.

As for the level of private banks, the ratio reached (83.2%) in 2017, which is low than in 2016 and amounted to (85.3%). Own.

Government banks maintain more liquidity than planned and employ low deposits, that what encourages commercial banks to this behavior is to give them low interest rates on deposits against loans and this is embodied in the rate of credit and debit interest rates (SPread) with

the Iraqi commercial banking system, as it reached ( 7.5% (in 2017, up from 2016, which recorded 7.3%), while the standard and benchmark interest rate is (3%).

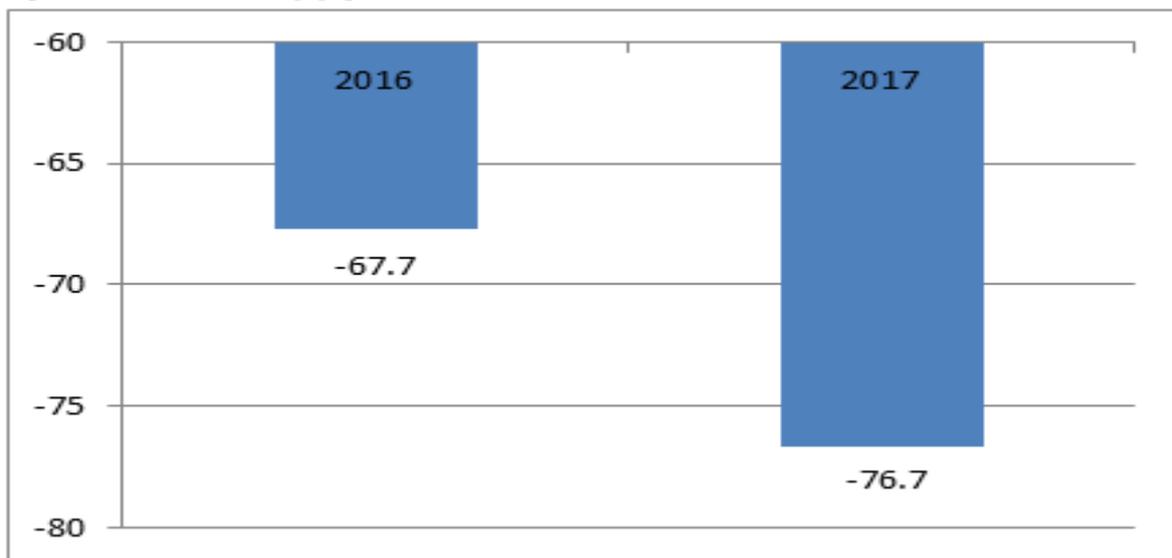
**Figure 6.** Cash credit to deposits



### Financing Gap (Credit Gap)

The credit gap means the difference between cash credit and deposits to cash credit, and this gap widened in 2017 by (13.2%) compared to 2016 as the gap in 2017 reached (-67.7%) to cash credit, due to Deposits growth rate increased by more than cash credit growth rate, as deposits growth in 2017 reached (7.4%) at a value of (67) trillion dinars for the year 2016, while loan growth rate reached (1.8%) with a value of (37.9) (trillion dinars in In 2017, up from 2016 (37.2) trillion dinars, this led to the widening of the gap, that an increase between 2016 and 2017 is due to the lack of loans and advances compared to the year Because of the banks 'imposing high interest rates as well as imposing unavailable credit terms, the gap is covered by much more than their value of deposits, which requires banks to monitor their liquidity and lending levels and create balanced growth between loan demand and attract new deposits, i.e. rational management Assets and liabilities In conclusion, the risk that the banking system may be exposed to is low. The height of the gap means that the risks related to confidence in the banking system are low.

**Figure 6.** The financing gap



## **Second: Asset Quality Indicators**

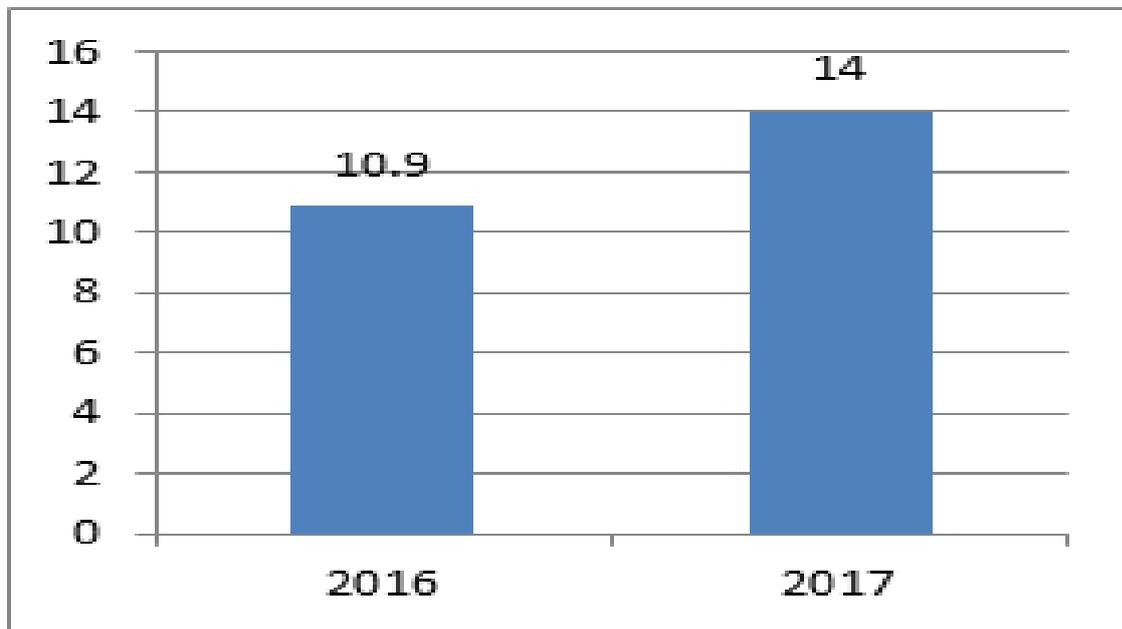
The quality and quality of the assets constitute the cornerstone of the level of credibility of the capital rates, since most of the risks of financial insolvency in banking institutions often result from the quality of the assets or the difficulties of converting them into liquidity when needed and the quality of the assets is measured by the following ratios:

### ***Percentage of Non-Performing Mortgage / Total Mortgage***

Non-performing mortgage at Iraqi banks registered a rise in 2017 compared to 2016, and government banks have borne the brunt of non-performing loans compared to private banks, which poses risks to the banking system, which indicates that it may affect in one way or another the financial stability index In Iraq, the total non-working loans with Iraqi government and private banks increased to (4.3) trillion dinars in 2017, up by (30.3%) (from 2016 and amounting to (3.3) trillion dinars), and non-working loans for 2017 were distributed by (3.1) A trillion dinars for government banks and (1.1) trillion dinars for private banks This indicates that government banks are more exposed to the risk of non-payment than private banks, given that government banks grant loans that exceed those granted by private banks.

On the other hand, the ratio of non-performing loans to total loans with the banking system as a whole in 2017 reached (14%) high by (28.4%) compared to 2016, which is a very high percentage compared to the standard ratio set by the Central Bank of Iraq by (2-5) %, As shown in Figure (7).

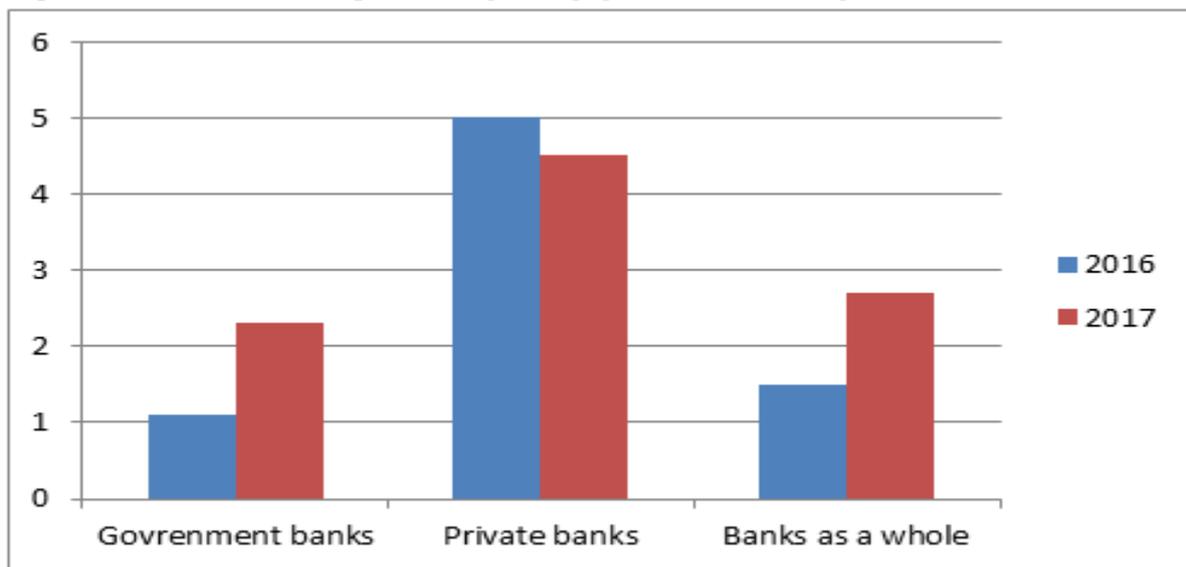
**Figure 7.** The ratio of non-performing loans to total loans to the banking system



***Percentage of Non-Performing Mortgage / Total Advantage***

The percentage of non-performing mortgage (doubtful debts) increased to the total advantage of the banking system as a whole during 2017, as the ratio reached (2.77%) compared to (1.51%) in 2016, with an increase of (83.4%), this high percentage reflects the magnitude The assets of the banking system, despite their decline in 2017, but they are high and reached in 2017 (156) trillion dinars, reflecting a good and sound adapter for banks operating in Iraq in terms of the size of assets during 2017, but as for government banks, they rose to (2.4 %) Due to the decrease in assets by (-33.6%), while the percentage of private banks decreased to (4.5%) in 2017, as indicated in the suspicion For Figure (8).

**Figure 8.** The ratio of non-performing mortgage to total advantage

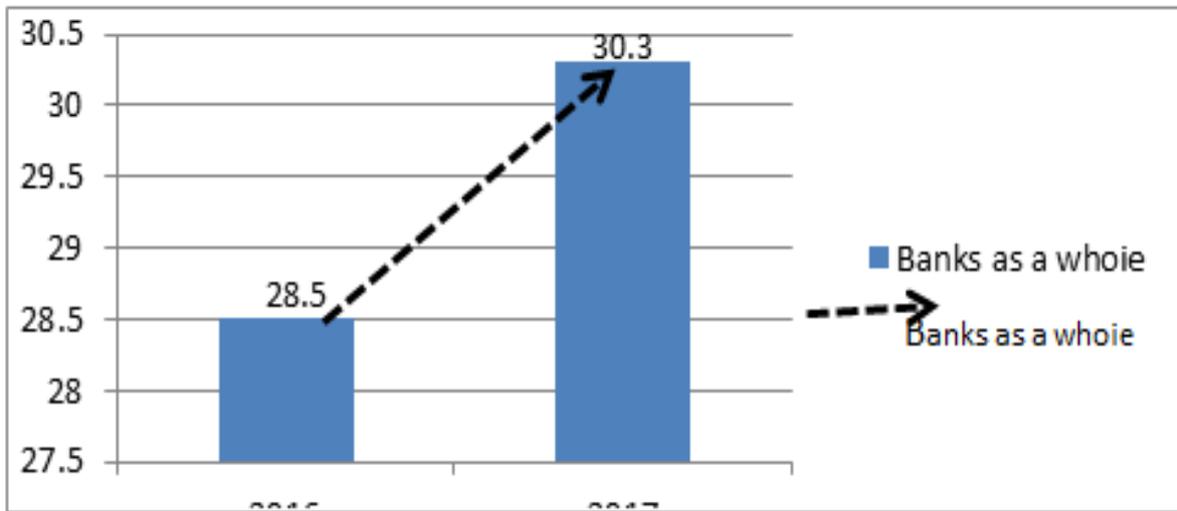


### *The Fraction of Non-Performing Loans / Capital*

The high fraction of non-performing mortgage to capital gives a clear indication of the size of the risks in banking institutions and consequently affects the financial stability index in Iraq, which is evident in government banks, albeit at a slight rate, despite the large size of their loans and the small size of their capital, but exacerbated That percentage in the budgets of government banks has given evidence of the existence of financial risks in an unquestionable manner, which requires the regulatory authorities to give this matter a high degree of importance to avoid any potential failure in the future.

The fraction of non-performing mortgage to capital expanded in 2017 to (30.3%) compared to the same percentage in 2016 of (28.5%) in relation to total banks, as a consequence of the rise of bad debts, especially with government banks, as shown in Figure (9).

**Figure 9.** The fraction of non-performing mortgage to capital

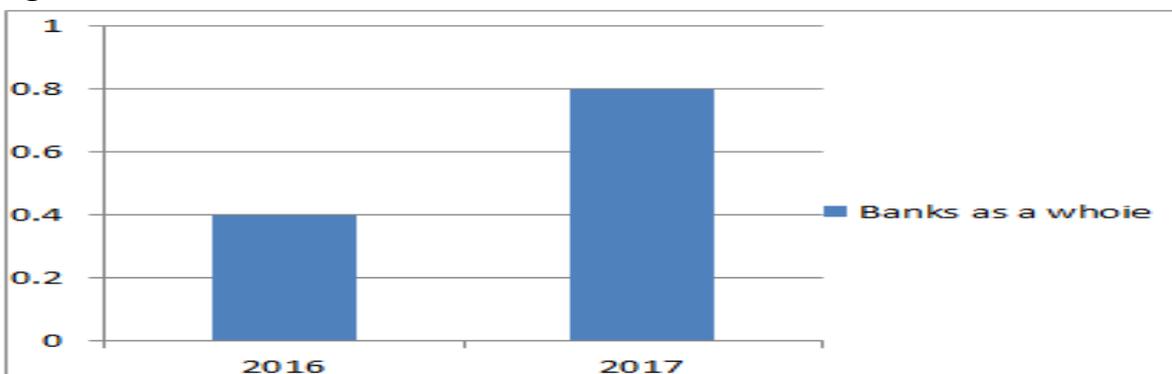


### **Third: Revenue and Profit Indicators**

#### ***Return on Assets Ratio***

The rate of return on advantage increased to (0.8%) at the end of 2017 compared to its percentage at the end of 2016 of (0.4%) for banks as a whole, due to the improvement in the profitability of banking institutions as a result of the increase in their investments and financial investments during 2017, and the relative improvement in political conditions and events. The security that the country is witnessing, in addition to what was produced by the state's general budget resulting from the rise in oil prices and the resulting effects and many repercussions that were reflected in one way or another on the results of the work of all economic sectors, especially financial and banking institutions, both of which led to the increase of its gains and its annual profits as shown in Figure (10).

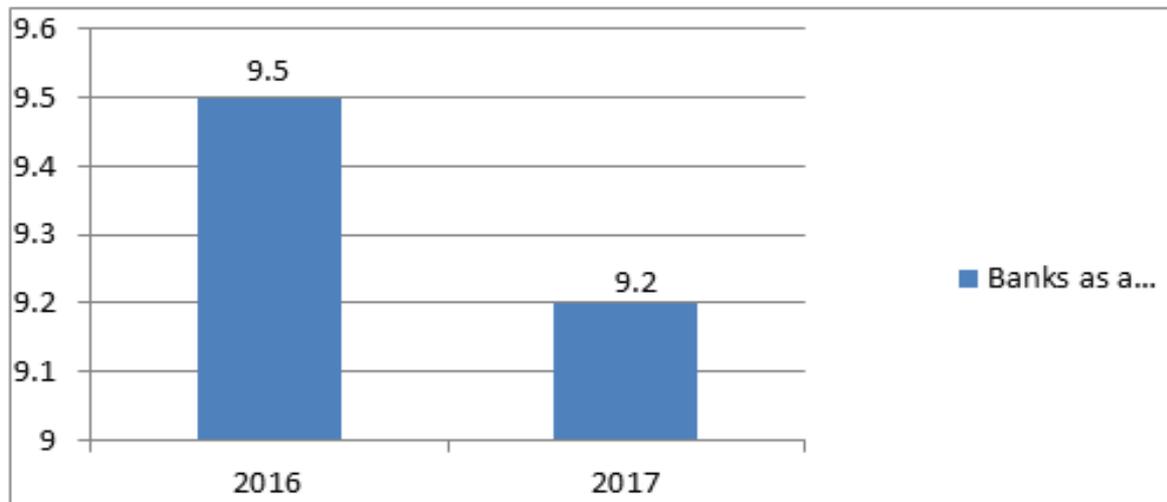
**Figure 10.** The ratio of return on assets



### ***Return on Justice of Owners***

The charge of return on owners' rights decreased at the end of 2017 to (9.2%) for government and private banks, after it reached the end of 2016 (9.5%). Profits from each unit of the owners' rights, as shown in Figure (11).

**Figure 11.** Percentage of return on owners' rights



### **The Four Topics: Conclusions and Recommendations**

#### ***First: The conclusions***

1. There is a gap between the ratio of capital acceptability with government banks and private banks in favor of the latter, due to two factors. The first is that the number of private banks is more than government banks, and the second factor is the high capital of the private bank in response to the directives of the central bank to increase the capital and a minimum (250) One billion dinars.
2. The banks achieved a high ratio of NSFR to governmental banks at a rate of 159%. As for their private counterparts, the proportion reached a rate of (304%), which is high compared to the percentage determined by the Basel III Committee, which means that banks have financing Equally available is the required financing, that is, the banks are able to finance the asset side according to what the funds provide on the liabilities side.
3. It was revealed through the liquid assets index that private banks, despite their high liquidity, are less efficient in facing their financial obligations compared to government banks.
4. By analyzing the financing gap index, it is noted that there is a widening between 2016 and 2017 due to the shortage of loans and advances compared to demand for them, due to the banks imposing high interest rates, and that the high gap means that the risks related to confidence in the banking structure are low.

5. The index of the ratio of non-performing mortgage indicated that there is an increase for this indicator in Iraqi governmental and private banks, and this indicates that government banks are more revealed to the danger of non-payment compared to private banks, given that government banks grant loans that exceed those granted by private banks.
6. From the analysis of the return on advantage index, the rate of return on advantage increased for banks as a whole, due to the improvement in the profitability of banking institutions as a result of the increase in their investments and financial investments during 2017, and the relative improvement in the political conditions and security events taking place in the country.

### **Second: Recommendations**

1. The need for financial safety indicators to be adopted by banks and to be expanded and developed gradually so that periodic reports on the bank's condition can be submitted to meet the potential for crises before they occur.
2. Continue to qualify supervisory cadres by subjecting them to training courses related to the reality of their work, especially with regard to the financial safety indicators that have been studied and that have proven that they can give an accurate predictive picture of the situation of banks.
3. The necessity of working to push the banking system to achieve levels of financial solvency that exceed the limits of the requirements of the Basel III Committee, in addition to improving the awareness and quality of assets.
4. The need for banks to seek to take advantage of their cash flow, as the liquidity goal is to increase profitability, and that not investing in them will conflict with the goal of profitability, because this liquid money is not used in investments that can bring significant financial returns to the bank.
5. Attention should be paid to the lack of loans and advances compared to the demand for them, because banks impose high interest rates as well as imposing unavailable credit conditions, which requires banks to monitor levels of liquidity and lending with them and create a balanced growth between demand for loans and attract new deposits, i.e. rational management The assets and liabilities have a reduced risk for the banking system.



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