

## The quality of loans and their impact on the added market value

### An analytical study of a sample of Iraqi private banks listed in the Iraqi Stock Exchange for the period(2020-2005)

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#### Abstract

The research aims to test the contribution of the quality of loans and its impact on the added market value through financial indicators (the ratio of the loan losses allowance to the total loans, the ratio of bank liquidity, bank capital and reserves to the total assets), while the added market value was measured by the equation (total market value For the bank - invested capital), the research sample consisted of ten commercial banks listed in the Iraq Stock Exchange through their annual reports published in the Iraq Stock Exchange, and these banks are (Baghdad, Iraqi Commercial, Investment, Sumer, Middle East, United, Iraqi National , Credit, Business Bay, Mosul for Development and Investment) for the time period 2005-2020, and using the statistical program Smart PLS, and the research reached a set of conclusions, including the presence of a significant effect of the quality of loans in the added market value of the bank.

**Keywords:** - loan quality, added market value.

#### 1- Introduction

Loans are generally considered important banking assets, as bank loans play a prominent role at the bank level as they are considered one of the largest and most profitable assets, their quality is one of the most important determinants of business stability and success, and commercial banks have to face many risks, because they provide short and medium term credit And long-term, but liquidity must also be ensured at all times. And that the added market value, which has become one of the most common tools for managers to measure the financial performance of banks, and therefore the market value added (MVA)) has a decisive

role in creating value and financial performance, and for So, the research was divided into five parts, the first was devoted to the research methodology, the second was the theoretical aspect represented by the quality of loans and the added market value, and the third was the applied aspect of the research, and the research concluded with the fourth part, which was devoted to conclusions and recommendations.

## **2- The scientific methodology of the research**

### **2-1 Research Problem :—**

Bank loans are the main resource on which the banking business relies to attract revenues and achieve profitability, and it represents the most important and largest aspect of banking uses. Therefore, banks must pay attention and focus on loans in particular, because the inability to pay the value of the loan with the interest accrued from it upon maturity by the borrowers exposes the bank to problems Several financial and thus affects the market value of the bank. The problem can be formulated with the following questions: -

1. Do banks have an added market value during the study period?
2. Is there a clear impact of loan quality on the added market value?
3. What are the most important indicators that affect the quality of loans?

### **2-2 The importance of research :--**

The importance of the research lies in defining and finding scientific and practical foundations in assessing the quality of loans and maintaining the financial position of banks. Increasing the quality of loans leads to an increase in the return on bank loans and reducing the costs of failure, but at the same time it will be achieved at a cost that requires the attention of banks to manage it, as well as the study of quality indicators. The loan through the availability of liquidity and bank capital, and the statement of the importance of added market value as an important indicator of banking performance and value creation for shareholders.

### **2-3 Research objectives:**

The main objective of the research is to highlight the importance of loan quality and its impact on the added market value. Measurement and analysis of the added market value

1. Measuring the impact of loan quality on the added market value
2. Studying and analyzing loan quality indicators

## 2-4 Research hypothesis

1. The first main hypothesis: - The research sample commercial banks suffer from a decrease in the added market value.
2. The second main hypothesis: - There is no significant effect of the quality of loans on the added market value.

## 2- 5 Research community and sample

The research community was represented by accreditation and access to all Iraqi commercial banks listed in the Iraq Stock Exchange, and the research sample was selected, which included ten banks: (Baghdad, Iraqi Commercial, Investment, Sumer, Middle East, United, Iraqi National, Credit, Commercial Gulf, Mosul for Development and investment) for the period 2005-2020.

## 3- The theoretical aspect

### 3-1 Quality of loans

Loans are generally less liquid bank assets than other current assets due to the difficulty of converting them into cash until the maturity date (Mishkin, 2007: 223). Bank loans play a prominent role at the bank level as they are considered one of the largest and most profitable assets and have a significant role. The importance of the sustainability of the bank and the achievement of its objectives (Mishkin, 2010:229). The analysis of loan applications highlights the personality of the individual, his reputation in the market, and the long-term relationship between the borrower and the lending bank as decisive factors for the decision to analyze the quality of the loan, as international banking practices indicate that this basic factor can have a greater impact on the bank in rating and granting cash credit (Gavalas & Syriopoulos , 2014:12). There is a set of basic assumptions that banks adopt to influence the banking decision-making process with regard to focusing on loan defaults, which are as follows (Kopecky & Vanhooose, 2006: 2236) (Makri, 2014: 193-194):

- a) Banks optimally choose between two levels of exposure to loan defaults
- b) A level of exposure to a loan default requires loan monitoring by the bank.
- c) Loan monitoring is expensive, and monitoring costs are not uniform across banks.
- d) Banks have (additive) quadratic resource costs associated with balance sheet adjustments.
- e) The amount of property rights is predetermined and identical in all banks.

Loans are the most risky part of a bank, so their quality is one of the most important determinants of business stability and success. Although there is no universally accepted definition of non-performing loans, the most widely used definitions are those of the International Monetary Fund, the Basel Committee on Banking Supervision, and the Institute international finance. According to the Basel Committee definition of non-performing loans as all loans that are not collected within 90 days from the due date, taking into account that one of the basic activities of all banks is to grant loans, therefore, several methods have been developed to manage these risks (Zunic Etal.,2021: 5-6). As credit risk is considered as the risk of default in the loan portfolio, the most important type of risk borne by the banking sector. Claims on non-financial customers (companies and households, excluding the general government sector), which are the main source of credit risk, are represented. More than 45% of the assets of the banking sector. The credit risks to which banks are exposed, the high credit losses, and the diminishing capital resources of banks can affect the performance of the financial sector. This, in turn, will have a negative impact on the position of households and firms (Głogowski, 2008:6).

In recent years, interest in non-performing loans and their indicators has increased significantly, since many studies have been conducted on non-performing loans and default rate. Because it affects the quality of loan portfolios and the fragility of banks in general. Examining the factors affecting financial vulnerability is contentious, as many of the banking crises during the 1990s were caused by the uncontrolled increase in non-performing loans. Many researchers consider unpaid loans to be a “financial pollution” that has harmful effects on economic development and social welfare, yet the indicator is still in the spotlight for both regulators and banks, as it has been linked to bank failures and financial crises

(Makri, 2014:193-194). Modern economic literature emphasizes the importance of the link between the business cycle and bank loan losses. This link is particularly important for the analysis of financial and banking stability. By measuring non-performing loans to total bank loans (Makri & Papadatos, 2016:124), as the loan quality literature indicates in two ways, there are two basic groups of factors that affect changes in the level of non-performing loans. (Kil, 2016:23) (Belaid, 2014:1-2) (Makri & Papadatos, 2016:116) (Chaibi, 2016:86):--

1. Related to external factors, which include general macroeconomic conditions and economic growth that may have a potential impact on the ability of borrowers to repay loans
2. Bank determinants (caused by the work of banks)

### 3-2 Quality of loans indicators

The quality of loans is one of the main and important issues because it measures the efficiency and effectiveness of the banking administration in monitoring and controlling credit risks. As it has a clear impact on the type of credit rating granted (Ogboru, 2019:39).and Historical evidence indicates that most bank failures are directly related to poor management of credit risk (Mileris, 2012:497). As a guarantee and the subsequent contraction of credit as banks become more risk-averse (Louzis Etal., 2010:10), the assessment of asset quality aims to assess the condition of bank assets and the adequacy of credit risk management. This aspect shows the quality of the assets in relation to the credit risks faced by the banks due to the provision of credit and the investment of the funds of the banks in different portfolios. Each investment of the Bank's funds in productive assets is assessed for quality by determining the level of recovery, ie whether it is current, substandard, special mention, doubtful or loss. Therefore, differences in the level of collection are necessary to determine the minimum provision for gaining written-off assets that the bank must provide to cover the risks of potential losses (Sovana, et al., 2021:40), and in order to assess credit risk, several loan quality indicators were used on Wide range in the literature. The most common are loan loss provisions (LLP), loan loss reserves (LLR), loan losses, and non-performing loan ratio (NPL). low growth. This excessive risk taking by banks may be due to opportunistic asset management or not checking the credit history

of borrowers and lending on an unsecured basis (Jin et al., 2018:9) (Berger & Udell, 1990:22). Loan losses were used as an indicator. The main problem of non-performing loans (Makri & Papadatos, 2016:118), and the quality of bank loans themselves is embodied through the ratios of non-performing loans in the total volume of loans (Filip, 2015:216), and can be explained as follows (Makri & Papadatos, 2016:124):

#### a) The ratio of loan losses allowance to total loans

The ratio used to measure loan quality has two criteria for loan quality: the ratio of non-performing loans to total loans and the ratio of non-performing loans to total loans (Filip, 2015:216). These procedures are procedures for possible loan default. Since the discount is the loan amount that the bank determines is unlikely to be repaid, it is calculated as a loss. Non-performing loans are defined as loans that are 90 days or more past due or have a non-due status. Banks usually have sufficient reserves to protect expected losses in the loan portfolio (Setiawan & Muchtar, 2021:154), and they can be measured according to the following equation (Filip, 2015:216) (Setiawan & Muchtar, 2021:157) (Makri & Papadatos, 2016:124)

$$\text{Loans Loss Reserves to Total Loans} \dots\dots\dots (1)$$

#### b) Bank liquidity

Liquidity is defined as the bank's ability to fulfill its obligations and finance any increase in assets without incurring unacceptable losses, as the ability to finance all contractual liabilities on the maturity date of liquidity, including loan and investment commitments, deposit withdrawals and liabilities maturity has been clarified (Nguyen & Vo, 2021:701) And the quality of bank lending has an impact on liquidity management, as banks that have a higher rate of non-performing loans need to own more liquid assets as a barrier against the shortfall in expected cash flows from borrowers (Almarzoqi et al., 2015:22) according to the definition of the Basel Committee on Banking Supervision (1997), liquidity risk arises from the bank's inability to absorb decreases in liabilities or finance increases in assets. When a bank has insufficient liquidity, it cannot obtain sufficient funds, either by increasing

liabilities or by transferring assets immediately, at a reasonable cost, which affects profitability. In addition, liquidity risks can be divided into financing liquidity risks and market liquidity risks. (Shen et al., 2018:3), and bank liquidity can be extracted from total loans to total assets, and the equation can be written as follows (Makri & Papadatos, 2016:124): -

**Bank Liquidity: Total Loans to Total Assets.....(2)**

**c) Bank capital and reserves to total assets**

Bank capital to assets is the ratio of the bank's capital and reserves to total assets. Capital and reserves include funds contributed by owners, and retained earnings, as assets consist of cash, negotiable securities, investments, fixed assets, and other assets (Dewi & Suhartono, 2021:115). Higher capital requirements of banks are met to ensure that they are able to cover solvency risks. Moreover, banks are exposed to liquidity risks, by mismatching long-term assets with short-term assets and liabilities. (Yusgiantoro et al., 2019: 2), and the equation can be written as follows (Makri & Papadatos, 2016: 124):-

**Bank Capital and Reserves to Total Assets.....(3)**

### 3-3 Added market value

The added market value is the most common tool for managers in measuring the financial performance of banks, as these metrics serve as guidelines for the profitable strategy of investment decisions, as MVA has gained increasing importance in influencing investment, dividend and financing decisions as well as the total cost of capital, and therefore MVA has a crucial role in value creation and financial performance (Kumar & Subramanyam, 2017:16). It is described as a standard for measuring bank performance and shareholder value creation (Laksana & Mayasari, 2019:2). It is expressed as the difference between the market value of the bank and the value of the invested capital over a period of time (Akgun et al., 2018:107). The added market value is the market value of property rights minus the book value of property rights. It is also called invested capital (Sichigea & Vasilescu, 2015:489-490) (Thenmozhi, 2000:1), and is measured as the price to book value (Satwiko & Agosto, 2021). 17-18), and it includes both equity and external capital, which has been increased by its equivalent (Kaczmarek, 2018:377) and MVA is a measure of external

performance, which is considered the best indicator of shareholder value creation, positive MVA indicates that The value and investment created by the management is greater than the capital provided by the investors, and vice versa (Akgun et al., 2018:106). If the bank has a purpose to multiply the wealth of the shareholders, then the added value used to evaluate the bank's performance must have a direct relationship to the return it achieves. A shareholder in the bank (Sahara, 2018: 302). If the market value added (MVA) is positive ( $MVA > 0$ ), it can be said that the management managed to increase shareholder wealth and if the market value added (MVA) is negative ( $MVA < 0$ ) it indicates a decrease in shareholder capital value (Daengs et al. (2017:8) (Udiyana et al.,2022:18). The added market value is measured through the equation as follows (Kumar & Subramanyam, 2017: 17) (Akgun et al., 2018: 108):

$$MVA = \text{Market Value (total no of shares * market share price)} - \text{Book value of Equity} \dots\dots(4)$$

$$MVA = \text{Market value added} = \text{Market Value of Shares} - \text{Book Value of Shareholders' Equity} \dots\dots(5)$$

If the total market value of a company is more than the amount of capital invested in it, the bank has been able to create shareholder value. But if the market value is less than the invested capital, the value of the shareholders decreases, and it can be measured by the following equation (Nakhaei, 2016:434), (Thenmozhi, 2000:1) (Ahmad et al., 2019:226)

$$MVA = \text{Market Value Added} = \text{Company's total Market Value} - \text{Capital Invested} \dots(6)$$

Market value added = total market capitalization of the company - invested capital

## 4- Practical side of the research

### 4-1 Loan quality indicators

#### a) The ratio of loan losses provision to total loans

This ratio measures the provision for loan losses to the total loans. The equation can be written as follows:

$$\text{Loans Loss Reserves to Total Loans} \dots\dots\dots(1)$$

It can be seen from Table (1) that there is a discrepancy in the ratio of the loan loss allowance to the total loans of the commercial banks, the research sample, and we note the following:



The lowest ratio of the loan loss provision indicator to the total loans in Iraqi private banks for the research sample was in the year 2007 for the share of the credit bank, if it amounted to 0.88%. The bank accepted the borrowers in that year. The highest ratios were for the share of the Commercial Bank of Iraq, which amounted to (2332.98%) in 2010, which indicates that the higher the ratio of the allowance for doubtful loans (debts) to total loans, this is evidence of the inability of banks to collect their debts from others. Therefore, it must be Banks seek to maintain survival within a low level of non-performing loans due to its direct impact on profitability and value creation for shareholders in the research sample banks,

The highest arithmetic mean for the ratio of the loan loss provision to the total loans in the Iraqi private banks for the research sample was the share of the Commercial Bank of Iraq as it amounted to (324.10%), followed by the United Bank with a rate of (68.97%) and then the Credit Bank as its rate amounted to (28.65%), and it was the lowest A percentage of the National Bank of Iraq by (12.13%).

The highest annual average of the banks in the research sample was in the year (2010), when it reached (240.83%). %), which is an indication of banks' awareness of investing loan funds, collecting their value from borrowers, and benefiting from them in investments that raise the added market value of those banks.

**Table(1) Analysis of the ratio of the loan losses provision to the total loans of the research sample banks**

year	Baghdad bank	Trade bank of Iraq	Middle east bank	Investment bank	United bank	National Iraqi bank	Credit bank	Sumer commercial bank	Gulf commercial bank	Musel bank	mean
2005	3.97%	16.11%	12.93%	3.44%	13.92%	9.52%	5.43%	31.09%	5.66%	3.88%	10.60%
2006	16.96%	41.71%	18.32%	19.12%	142.69%	14.39%	1.19%	67.40%	16.80%	4.58%	34.32%
2007	19.90%	100.22%	50.28%	21.78%	200.74%	24.39%	0.88%	52.83%	27.16%	7.22%	50.54%
2008	30.72%	153.22%	60.38%	97.58%	517.01%	18.10%	3.27%	64.40%	48.50%	8.69%	100.19%
2009	18.04%	204.66%	14.03%	50.26%	8.48%	10.41%	1.41%	14.01%	26.15%	3.16%	35.06%
2010	8.38%	2332.98%	6.32%	9.75%	6.48%	6.96%	1.20%	9.38%	22.54%	4.31%	240.83%
2011	11.67%	1029.16%	5.04%	2.82%	7.34%	7.66%	1.64%	5.85%	11.77%	6.07%	108.90%
2012	12.39%	397.11%	5.44%	1.67%	9.85%	6.16%	2.23%	3.13%	4.44%	3.41%	44.58%
2013	8.17%	231.25%	5.26%	1.28%	8.76%	6.52%	6.68%	3.01%	3.54%	6.06%	28.05%
2014	7.50%	139.36%	5.71%	2.93%	11.79%	11.59%	13.45%	3.51%	4.43%	5.68%	20.60%

2015	12.73%	115.86%	7.18%	2.98%	18.04%	12.85%	240.96%	3.61%	5.39%	5.98%	42.56%
2016	15.53%	105.64%	8.25%	2.94%	21.45%	14.70%	5.64%	3.94%	4.87%	10.70%	19.37%
2017	22.02%	94.50%	14.15%	2.56%	18.99%	20.18%	43.37%	4.19%	8.42%	9.26%	23.76%
2018	18.66%	79.29%	14.85%	2.15%	21.10%	14.69%	43.88%	2.56%	10.03%	28.44%	23.56%
2019	20.68%	87.11%	15.11%	2.07%	28.52%	10.45%	43.88%	2.35%	11.89%	30.72%	25.28%
2020	30.26%	57.36%	18.44%	2.19%	68.42%	5.56%	43.17%	3.34%	13.54%	60.47%	30.28%
mean	16.10%	324.10%	16.35%	14.09%	68.97%	12.13%	28.65%	17.16%	14.07%	12.41%	52.40%
MAX	30.72%	2332.98%	60.38%	97.58%	517.01%	24.39%	240.96%	67.40%	48.50%	60.47%	2332.98%
MIN	3.97%	16.11%	5.04%	1.28%	6.48%	5.56%	0.88%	2.35%	3.54%	3.16%	0.88%
S.D	0.077	5.877	0.160	0.257	1.316	0.054	0.594	0.233	0.120	0.153	1.795

Preparing researchers based on Excel Depending on the annual reports of the financial statements published for the commercial banks, the research sample, which are listed on the Iraq Stock Exchange for the period from 2005-2020

#### b) Bank liquidity ratio (total loans to total assets)

This ratio measures bank liquidity by comparing total loans with total assets, and the increase in this indicator contributes positively to the profitability of banks, in return negatively affecting the liquidity of banks. The equation can be written as follows:

#### Bank Liquidity: Total Loans to Total Assets.....(2)

Table (2) shows that there is a discrepancy in the ratio of loans to assets of the commercial banks, the research sample, and we note the following:

The highest ratio of the loans to assets index in the Iraqi private banks, the research sample, was for the share of the United Bank in the year (2014), when it reached 71.97%. The percentage of the bank's share of credit in 2015 reached (0.01%), which indicates a decrease in total bank loans, which affects the increase in bank liquidity, and in return investments decrease.

The highest arithmetic mean for the ratio of total loans to total assets was for the share of the United Bank, which amounted to (39.41%), and it was the lowest percentage for the share of the Credit Bank by (2.67%).

The highest annual average of the banks in the research sample was in the year (2014), when it reached (26.44%). Increasing the demands of depositors for their bank deposits when needed, while in the year (2008) the lowest annual average for banks in the research sample was (6.06%), which is an indicator of the weakness of banks' awareness of the growth of

loans and thus the provision of bank liquidity, which contributed to the decline in the wealth of shareholders and thus the decrease in the added market value of those banks.

**Table (2) Analysis of the ratio of total loans to total assets of the research sample banks**

year	Baghdad bank	Trade bank of Iraq	Middle east bank	Investment bank	United bank	National Iraqi bank	Credit bank	Sumer commercial bank	Gulf commercial bank	Musel bank	mean
2005	19.82%	13.96%	7.85%	35.55%	5.66%	5.40%	12.91%	7.53%	16.90%	17.74%	14.33%
2006	13.07%	15.29%	6.68%	27.25%	7.52%	15.99%	6.44%	4.56%	11.04%	22.10%	13.00%
2007	14.48%	10.92%	4.16%	20.02%	4.66%	13.67%	5.25%	8.02%	5.24%	13.39%	9.98%
2008	8.39%	4.95%	2.72%	7.99%	1.33%	13.36%	1.49%	7.42%	5.26%	7.69%	6.06%
2009	9.68%	3.20%	11.44%	9.62%	24.91%	17.44%	3.21%	27.34%	9.79%	29.43%	14.60%
2010	18.81%	0.18%	24.54%	29.06%	50.51%	33.14%	2.31%	28.24%	11.06%	29.83%	22.77%
2011	16.64%	0.34%	28.27%	32.50%	42.70%	26.56%	2.26%	23.98%	18.03%	31.92%	22.32%
2012	10.55%	0.79%	23.39%	45.54%	54.36%	20.01%	1.32%	21.48%	38.72%	39.57%	25.57%
2013	11.80%	1.18%	25.63%	43.42%	71.24%	21.30%	0.41%	27.66%	29.66%	27.35%	25.96%
2014	12.40%	1.59%	26.73%	22.27%	71.97%	26.87%	0.20%	30.07%	24.86%	47.44%	26.44%
2015	15.21%	2.19%	21.52%	19.17%	55.78%	34.35%	0.01%	28.31%	32.01%	42.93%	25.15%
2016	13.54%	2.34%	19.24%	17.89%	51.66%	21.54%	0.57%	28.28%	35.85%	42.02%	23.29%
2017	12.62%	2.34%	15.15%	20.69%	63.35%	22.25%	1.75%	24.31%	33.86%	42.37%	23.87%
2018	14.54%	2.69%	13.45%	23.24%	66.14%	14.61%	1.62%	19.28%	29.65%	27.09%	21.23%
2019	13.21%	2.54%	16.19%	27.65%	41.74%	26.70%	1.55%	21.93%	26.34%	27.97%	20.58%
2020	9.98%	3.06%	15.27%	24.29%	17.00%	35.53%	1.42%	13.82%	24.86%	22.45%	16.77%
mean	13.42%	4.22%	16.39%	25.39%	39.41%	21.80%	2.67%	20.14%	22.07%	29.46%	19.50%
MAX	19.82%	15.29%	28.27%	45.54%	71.97%	35.53%	12.91%	30.07%	38.72%	47.44%	71.97%
MIN	8.39%	0.18%	2.72%	7.99%	1.33%	5.40%	0.01%	4.56%	5.24%	7.69%	0.01%
S.D	0.032	0.048	0.083	0.104	0.254	0.084	0.032	0.089	0.111	0.113	0.064

Preparing researchers based on Excel Depending on the annual reports of the financial statements published for the commercial banks, the research sample, which are listed on the Iraq Stock Exchange for the period from 2005-2020

### c) Bank capital and reserves to total assets

Banking capital is one of the most important determinants of the quality of loans, and the higher this ratio is, the higher the wealth of the shareholders. Thus, maximizing the added market value of the banks, the research sample, and the equation can be written as follows:

#### **Bank Capital and Reserves to Total Assets.....(3)**

We see through Table (3) that there is a discrepancy in the capital growth of the commercial banks, the research sample, and we note the following:

The highest growth of capital and reserves in banks, the research sample, was the share of the Sumer Commercial Bank in the year (2020), when it reached 77.65%. The lowest growth of capital and reserves in 2005 was for the Middle East Bank, which amounted to (5.96%).

It was the highest arithmetic mean. We note that the highest arithmetic mean for the capital index to total assets was the share of the Sumer Commercial Bank, as it amounted to (64.43%), and it was the lowest percentage of the share of the Bank of Baghdad by (16.99%).

We note that the highest arithmetic mean was for the year (2019), when it reached (50.31%), followed by 50.30% in 2015, and this indicates the policy adopted by banks to increase their capital and ownership rights in those years, which contributed to increasing the wealth of shareholders, which affected the The increase in the added market value of the banks, the research sample, while the lowest arithmetic mean of the share of the year (2008), which amounted to (27.19%), which is an indication of the weak ability of banks to attract shareholders due to financial conditions and crises that affected the banking sector, which led to a decrease in equity capital and thus Low market value added banks research sample

**Table (3) bank capital and reserves to the total assets of the research sample banks**

year	Baghdad bank	Trade bank of Iraq	Middle east bank	Investment bank	United bank	National Iraqi bank	Credit bank	Sumer commercial bank	Gulf commercial bank	Musel bank	mean <sup>1</sup>
2005	17.12%	40.21%	5.96%	18.73%	26.14%	40.00%	12.42%	63.67%	24.22%	25.91%	27.44%
2006	17.10%	38.23%	10.69%	18.59%	34.86%	60.01%	9.03%	57.17%	28.19%	24.88%	29.87%
2007	16.58%	30.06%	9.56%	23.83%	28.41%	53.03%	17.41%	54.92%	17.18%	24.45%	27.54%
2008	13.64%	32.08%	8.88%	25.00%	37.90%	39.83%	23.47%	63.28%	12.75%	15.06%	27.19%
2009	11.74%	38.93%	11.58%	30.36%	22.86%	54.45%	29.08%	58.68%	20.14%	26.02%	30.38%
2010	11.01%	41.11%	13.08%	32.51%	29.65%	48.19%	21.40%	62.83%	21.88%	29.39%	31.11%
2011	13.68%	52.31%	18.02%	32.86%	31.62%	55.80%	30.85%	62.94%	31.45%	30.59%	36.01%
2012	14.10%	45.20%	20.11%	30.85%	36.77%	41.81%	27.47%	58.39%	28.20%	43.76%	34.67%
2013	14.78%	56.32%	23.63%	30.91%	41.09%	28.64%	30.95%	62.90%	33.13%	40.14%	36.25%
2014	14.92%	61.45%	44.45%	45.88%	49.66%	41.73%	44.45%	61.53%	38.17%	75.04%	47.73%
2015	16.98%	64.52%	40.26%	50.68%	54.49%	48.20%	47.01%	70.54%	38.50%	71.85%	50.30%
2016	21.60%	62.12%	38.19%	44.30%	60.96%	45.17%	52.33%	73.36%	37.85%	63.50%	49.94%
2017	24.09%	57.38%	33.07%	45.44%	57.27%	43.30%	56.44%	66.15%	50.17%	63.67%	49.70%
2018	23.27%	59.81%	30.77%	42.90%	58.91%	49.04%	53.69%	63.06%	52.82%	63.75%	49.80%
2019	22.89%	59.12%	37.34%	49.19%	50.22%	40.41%	51.14%	73.78%	54.92%	64.12%	50.31%
2020	18.40%	43.73%	37.93%	46.42%	43.43%	28.46%	50.70%	77.65%	59.14%	66.19%	47.21%
Mean	16.99%	48.91%	23.97%	35.53%	41.52%	44.88%	34.86%	64.43%	34.29%	45.52%	39.09%

MAX	24.09%	64.52%	44.45%	50.68%	60.96%	60.01%	56.44%	77.65%	59.14%	75.04%	77.65%
MIN	11.01%	30.06%	5.96%	18.59%	22.86%	28.46%	9.03%	54.92%	12.75%	15.06%	5.96%
S.D	0.041	0.114	0.133	0.109	0.124	0.088	0.159	0.064	0.141	0.207	0.047

Preparing researchers based on Excel Depending on the annual reports of the financial statements published for the commercial banks, the research sample, which are listed on the Iraq Stock Exchange for the period from 2005-2020

## 4-2 Added market value

To find out if the market value added (MVA) is positive ( $MVA > 0$ ), then it can be said that the management managed to increase shareholder wealth. But if the market value added (MVA) is negative ( $MVA < 0$ ), this indicates a decrease in the value of the shareholder's capital. The equation can be written as follows:

$$MVA = \text{Market Value Added} = \text{Company's total Market Value} - \text{Capital Invested} .(6)$$

Table (4) The added market value of commercial banks, the research sample

Year	Baghdad bank	Trade bank of Iraq	Middle east bank	Investment bank	United bank	National Iraqi bank	Credit bank	Sumer commercial	Gulf commercial	Musel bank	mean
2005	287,356,376,313	140,568,407,290	71,273,283,934	71,005,643,505	89,214,612,000	72,596,044,639	440,187,679,026	19,756,965,687	63,281,444,062	46,321,720,566	130,156,217,702
2006	50,856,667,565	17,245,804,724	33,709,906,592	12,874,383,000	91,916,745,000	756,865,299	231,007,717,144	4,982,384,573	11,334,157,920	19,542,789,924	47,422,742,174
2007	99,137,670,751	18,644,500,408	52,285,646,896	4,245,741,000	91,832,872,000	(857,483,000)	104,064,038,738	(1,433,136,701)	12,687,872,799	(470,468,863)	38,013,725,403
2008	72,519,829,448	8,040,278,737	62,874,501,911	(1,402,787,000)	77,501,909,309	(6,361,968,000)	108,279,087,797	(20,481,478,360)	5,633,278,248	(5,754,890,232)	30,084,776,186
2009	113,588,989,378	5,671,904,094	114,436,852,480	26,001,460,000	(87,501,684,000)	(5,193,805,000)	178,826,323,355	(7,002,952,741)	46,033,815,395	23,654,372,442	40,851,527,540
2010	90,466,945,000	(9,602,697,523)	47,436,729,723	(17,776,228,000)	90,360,170,000	(8,547,845,000)	111,238,353,699	(11,509,443,108)	6,139,023,263	(11,211,702,636)	28,699,330,542
2011	287,285,305,000	(6,634,915,586)	120,582,056,644	(8,518,778,000)	304,308,900,000	(16,429,360,000)	209,231,580,000	(14,877,619,000)	(41,706,868,388)	(14,197,829,768)	81,904,247,090
2012	39,214,301,000	(14,396,727,876)	103,531,308,558	(1,938,418,000)	196,974,709,000	(64,924,013,000)	62,349,590,000	(23,609,746,000)	(13,785,464,868)	(44,883,253,289)	23,853,228,553
2013	126,048,419,000	(56,981,196,993)	124,682,803,675	(20,903,581,000)	66,790,451,000	(35,284,766,763)	167,327,983,000	7,582,410,000	23,974,133,652	(78,977,525,785)	32,425,912,979
2014	152,498,419,000	(117,959,567,036)	(63,239,230,229)	(16,397,264,000)	(49,218,906,859)	(23,430,378,526)	(24,805,294,000)	10,852,203,000	(24,963,255,335)	(109,498,934,796)	(26,616,208,788)
2015	80,355,848,000	(170,751,070,280)	(53,428,344,742)	(94,681,756,000)	(152,399,032,612)	(100,490,981,839)	(151,482,979,000)	1,232,732,000	(119,991,054,310)	(194,209,933,211)	(95,584,657,199)

2016	(23,503,465,000)	(160,440,382,000)	(55,739,821,000)	(124,324,156,000)	(172,059,539,329)	(168,577,919,000)	(116,474,822,000)	(20,769,355,000)	(141,518,556,654)	(119,823,910,377)	(110,323,192,636)
2017	(185,740,099,000)	(167,546,543,000)	(71,388,000,000)	(157,292,897,000)	1,768,928,776,389	(154,301,644,000)	(142,533,221,000)	(17,701,491,000)	(159,880,014,074)	(185,352,453,973)	52,719,241,334
2018	(156,138,616,000)	(164,677,803,000)	(124,083,000,000)	(193,559,869,981)	(221,846,365,890)	(157,926,001,000)	(209,200,665,000)	(193,968,400,000)	(211,993,100,315)	(172,616,246,221)	(180,601,006,741)
2019	(150,940,571,000)	(153,762,195,000)	(129,328,000,000)	(174,841,250,731)	(228,853,200,284)	(86,988,957,000)	(180,966,723,000)	(109,947,106,000)	(220,844,698,474)	(173,686,700,859)	(161,015,940,235)
2020	(1,123,941,033,000)	(194,024,831,000)	(130,807,000,000)	(192,355,482,661)	(131,493,387,000)	(59,440,479,000)	(190,511,490,000)	(130,824,281,000)	(224,218,665,105)	(181,998,746,059)	(255,961,539,483)
mean	(15,058,438,347)	(64,162,939,628)	6,424,980,903	(55,616,577,554)	108,403,564,295	(50,962,668,199)	37,283,572,422	(31,732,394,603)	(61,863,622,012)	(75,197,732,071)	(20,248,225,479)
MAX	287,356,376,313	140,568,407,290	124,682,803,675	71,005,643,505	1,768,928,776,389	72,596,044,639	440,187,679,026	19,756,965,687	63,281,444,062	46,321,720,566	1,768,928,776,389
MIN	(1,123,941,033,000)	(194,024,831,000)	(130,807,000,000)	(193,559,869,981)	(228,853,200,284)	(168,577,919,000)	(209,200,665,000)	(193,968,400,000)	(224,218,665,105)	(194,209,933,211)	(1,123,941,033,000)
S.D	325,866,569,919	97,813,473,641	94,050,732,078	86,297,244,981	468,881,891,339	67,578,488,777	189,334,309,458	59,684,979,504	100,780,507,561	86,691,923,745	135,343,874,607

Preparing researchers based on Excel Depending on the annual reports of the financial statements published for the commercial banks, the research sample, which are listed on the Iraq Stock Exchange for the period from 2005-2020

We note the following: -

The highest indicator of the added market value of commercial banks was the research sample for The United Bank and it was in the year (2017) when it reached 1,768,928,776,389, which indicates that the financial position of the bank is good and depends heavily on its investments on shareholders' capital in order to expand the scope of the bank's work and create wealth for them, and the high of this indicator indicates performance Positive for the bank because it was able to create value for shareholders. The lowest added market value was the share of the Bank of Baghdad in 2020, when it reached ((1,123,941,033,000)-). Shareholders' money and its heavy dependence on the growth of deposits, which negatively affected the bank's performance in that year.

The highest arithmetic mean of the market value-added index was for the share of the United Bank, as it amounted to (108,403,564,295), which indicates the efficiency of the bank in employing its funds and maximizing the added market value, and the lowest arithmetic mean for the market value-added index was for the share of Mosul Bank by (75,197,732,071)-).

The highest arithmetic mean was for the year (2005), when it reached (130,156,217,702), while the lowest arithmetic mean was for the year share (2020), when it reached ((255,961,539,483)-), which is an indication of the decrease in the volume of ownership of the commercial banks, the research sample in that year

It is clear from the foregoing that the commercial banks, the research sample, suffer from a weakness in the added market value, and thus the failure to reject the first main hypothesis, which states (the commercial banks, the research sample, suffer from a weakness in the market value).

### 4-3 Hypothesis testing

This topic presents the most important findings of the researchers by analyzing the overall effect between the research variables, that is, between the independent variable, the quality of loans, which is expressed by indicators (Bank Capital and Reserves right to total assets X1, loan losses allowance to total loans X2, total loans to total assets X3) and the variable Follower (market value added, Y), through the use of the Smart PLS statistical program. It will be explained as follows:-

The second main hypothesis: There is no significant effect of loan quality on the added market value. Three sub-hypotheses branch out from this hypothesis.

a) The first sub-hypothesis: There is no significant effect of Bank Capital and Reserves on the total assets in the added market value .

Through Table (5) and Figure (1), we notice that there is a significant direct effect of the property right on the total assets in the added market value, as the total effect reached (0.838) at a significant level (0.004), as the calculated T reached (2.913), and the strength of the effect of the property right reached to Total assets in market value added, expressed as F2 (0.626). Therefore, the decision is to reject the null hypothesis, that is, there is a significant effect of the ownership right on the total assets in the added market value.

b) The second sub-hypothesis: - There is no significant effect of the provision for loan losses to the total loans in the added market value.

Through table (5) and figure (1), we notice that there is no significant effect of the loan loss provision to the total loans in the added market value, as the total effect reached (-0.061) at



a significant level (0.828), and the calculated T reached (0.200), and the strength of the effect reached Allowance for loan losses to total loans at market value added, expressed as F2 (0.005). Therefore, the decision is not to reject the null hypothesis, that is, there is no significant effect of the loan loss allowance to the total loans in the market value added.

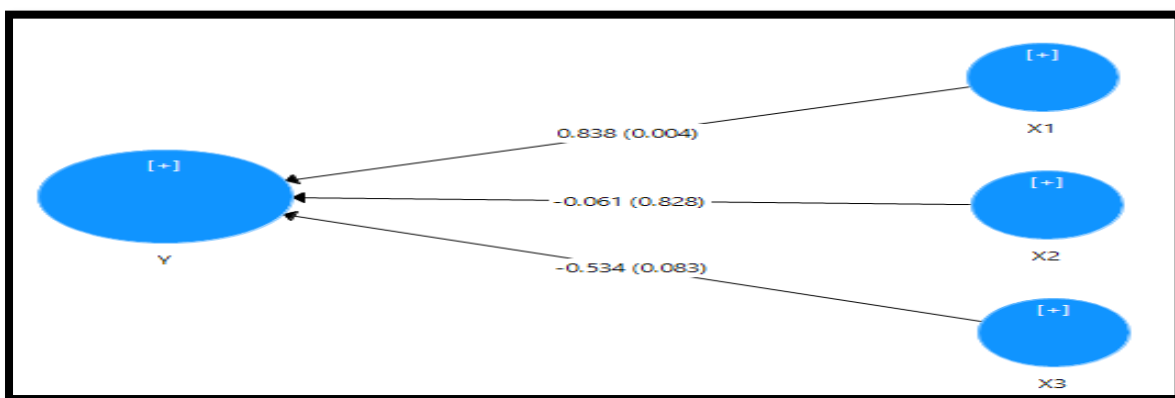
- c) The third sub-hypothesis: - There is no significant effect of loans on the total assets in the added market value.

Through Table (5) and Figure (1), we note that there is a significant negative effect of loans on total assets in the added market value, as the total effect reached (-0.534) at a significant level (0.083), and the calculated T reached (1.769), and the strength of the impact of loans reached to Total assets in market value added, expressed as F2 (0.269). Therefore, the decision is to reject the null hypothesis, that is, there is a significant effect of loans on the total assets in the added market value.

**Table (5) The direct impact of loan quality on the added market value**

F <sup>2</sup>	P values	Calculated T	Overall effect	Dependent variable	independent variable
0.626	0.004	2.913	0.838	Y	X1
0.005	0.828	0.200	-0.061	Y	X2
0.269	0.083	1.769	-0.534	Y	X3

Source: Prepared by researchers based on Smart PLS 3 software



**Figure (1) The direct impact of loan quality on the added market value**

Source: Prepared by researchers based on Smart PLS 3 software

Through table (6) and figure (2), it is clear that there is no significant effect on the quality of loans on the added market value. The total effect of the quality of loans on the added market

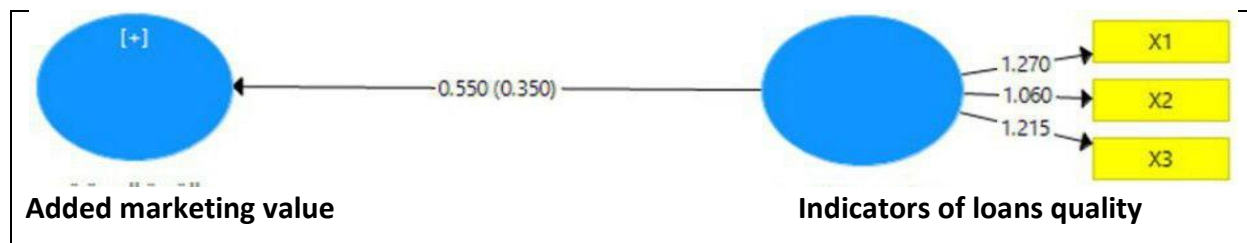


value was (0.550) at a significant level (0.350). The calculated T was (0.936), and the strength of the impact of loan quality on the added market value, expressed as F2, was (0.433). Therefore, the decision is not to reject the null hypothesis, that is, there is no significant effect of the quality of the loans to the total loans in the added market value.

**Table (6) The overall effect of loan quality on the added market value**

F <sup>2</sup>	P values	Calculated T	Overall effect	Dependent variable	independent variable
0.433	0.350	0.936	0.550	Y	X

Source: Prepared by researchers based on Smart PLS 3 software



**Figure (2) The overall effect of loan quality on the added market value**

Source: Prepared by researchers based on Smart PLS 3 software

## 5- Conclusions and recommendations

### 5-1 Conclusions

1. Through the statistical analysis, the results showed that there is a significant effect of the quality of loans on the added market value.
2. The fluctuation of the ratio of loans to total assets in the research sample banks, which indicates the inability of banks to reduce the risk of threat and limit exposure to liquidity risks in the near future
3. Through financial analysis, we find that there are some banks that depend heavily on the loans granted, which affects their ability to recover the loan value at the time of maturity and exposes them to the risks of bad debts and the inability to collect their amounts.

4. We conclude that banks have weak management in employing loan funds, collecting their value from borrowers, taking adequate guarantees to prevent defaults, and benefiting from them in investments that raise the added market value of those banks.

## 5-2 Recommendations

1. Bank managers must follow up on the growth of bank loans granted to borrowers by reviewing and evaluating the financial position of borrowers while taking sufficient guarantees, which indicates a decline in banking liquidity and exposes banks to bank liquidity risks.
2. The need for banks to follow a balanced policy in increasing their capital and the right of ownership because it contributed to increasing the wealth of shareholders, which affected the increase in the added market value of the research sample banks
3. The need to work to raise the ability of the banks, the research sample, to attract shareholders, and to adapt the financial conditions and crises that affected the banking sector, to avoid a decrease in the share capital, and thus affect the decrease in the added market value of the banks, the research sample.

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