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The Effect of Asset Quality, Management Efficiency and Market risk sensitivity on Tobin's Q Value / Analytical Research on A Sample of Private Banks Listed on The Iraq Stock Exchange

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Abstract: Banking sector has a significant impact on economic growth of country, and for the importance of this sector, it is necessary to evaluate its elements that contribute to progress of banking work from time to time, in order to measure situation related to funds of each bank, and to take necessary measures with full efficiency to achieve a financial economy while ensuring well-being Financial for its investors, owners and employees. Therefore, the research aims to know the effect of (investment to assets ratio on TQ), (loans to assets ratio on TQ), (expenses to assets ratio on TQ), (revenues to assets ratio on TQ) and (loans to assets ratio Deposits on TQ), and (Gap Ratio on TQ), as the research sample included eight private banks listed on the Iraq Stock Exchange. Quarterly data from 2011-2018 were used. Moreover, data were also collected from articles, papers, the World Wide Web (Internet) and specialized international journals. The results showed that there is a discrepancy in the impact of these ratios on the TQ of the banks of the research sample.
Keywords: Asset Quality, Management Efficiency, Market Risk Sensitivity, GAP ratio, Q Tobin's Value.

INTRODUCTION

Banking sector today faces great challenges and difficulties for several reasons, some of which may be due to the composition of the internal structure of the bank in the extent of flexibility and experience, which is supposed to reach the skill in taking appropriate measures at the appropriate times, with the level of creativity in finding modern means for the bank to distinguish its services marketing from other banks, as well as the size of its financial capabilities and the way it is used. On the other hand, some of these reasons stem from the bank's influence on the external economic environment surrounding it. When the bank owns good assets, this means ensuring that it generates more income for it, and that it possesses the

necessary administrative competence to enhance the performance and success of any bank, and that the inefficiency of the administrative capacity leads to wrong decisions and large losses, which increases the possibility of defaulting on any obligations on the bank. While measuring market risks contributes to providing data and information to management about the risks that may be exposed, as the description of exposure to risks can be compared with the capital resources of the financial institution to show its position in front of those risks. Comparing market risks with returns in different areas of financial operations is a distribution of resources that can allow to determine the positions and potentials of return for each unit of risk, on the basis of which those resources are directed.

METHODOLOGY

Research Problem

The problem of research lies in knowing the extent of the financial strength owned by the Iraqi private banks,research's sample, with regard to the ratios of asset quality, management efficiency, market risk sensitivity, and the impact of each of those on the value of those banks represented by Q Tobin's under of all crises and difficulties that the country has witnessed, whether on the global level or internal level, for the time period from 2011 to 2018, so the research problem can be formulated in the following questions:

1- Is there an effect of asset quality ratios indicators on the value of Q Tobin's and at the level of banks?

2- Is there an effect of management efficiency ratio indicators on the value of Q Tobin's and at the level of banks?

3- Is there an effect of market risk sensitivity indicators on the value of Q Tobin's and at the level of banks?

Research Importance

The importance of the research for the Iraqi private banks listed on the Iraqi Stock Exchange for the selected sample is highlighted in measuring the financial performance related to indicators of asset quality, management efficiency, and market risk sensitivity to determine their financial performance on a quarterly basis and thus assessing that performance to identify strengths and weaknesses, seeking to formulate correct policies And a healthy banking sector that supports the confidence of investors and depositors in it, in a way that achieves its support for the national economy.

Research Objectives

The research aims to achieve the following:-

1- Determining the impact of asset quality indicators through the ratio (investments/assets) and the ratio (loans/assets) on banks' Q Tobin's value.

2- Determining the impact of management efficiency indicators through the ratios of (expenses / assets), (revenues / assets), and (loans / deposits) on the Q Tobin's value of banks.

3- Determining the impact of market risk sensitivity indicators through the ratio of (risk sensitive assets / risk sensitive liabilities) on the banks' Q Tobin's value.

Research Hypothesis

1-There is no statistically significant effect of the investment-to-assets ratio indicator on the value of Q Tobin's.

2-There is no statistically significant effect of the loan-to-assets ratio indicator on the value of Q Tobin's

3-There is no statistically significant effect of the expense to assets ratio indicator on the value of Q Tobin's.

4-There is no statistically significant effect of the Revenue to Assets Ratio indicator on the value of Q Tobin's.

5-There is no statistically significant effect of the loan-to-deposit ratio indicator on the value of Q Tobin's.

6- There is no statistically significant effect of the gap ratio index on the value of Q Tobin's.

Research community: The research community represented the Iraqi private banks listed in the Iraqi Stock Exchange in the year 2011 (noting that during that period the number of private banks registered in the stock market was 21).

Research sample: The research sample was represented by 5 banks out of 21 banks, as shown in Table (1), for the possibility of obtaining the data in an integrated manner during that period, especially the quarterly data. Financial, while a number of other banks were excluded due to the inability to obtain the data required for the fourth chapter, in addition to the fact that some of them were under the custody of the Central Bank of Iraq.

Table (1) Iraqi Private Banks, research sample

	Bank name	Year of incorporation	Capital at incorporation	Current capital
1	Commercial Bank	1992	150 million	250 billion
2	Investment Bank of Iraq	1993	100 million	250 billion
3	Iraqi Credit Bank	1998	200 million	250 billion
4	Gulf Commercial Bank	1999	600 million	300 billion
5	Babel Bank	1999	500 million	250 billion
6	Mosul Bank for Development and Investment	2001	1 billion	252 billion
7	Al-Mansour Investment Bank	2005	55 billion	250 billion
8	Ashur International Bank	2005	25 billion	250 billion

Source: Bank reports for the research sample banks.

LITERATURE REVIEW

Asset quality

Assets are one of the pillars of the bank's stability, and its success depends on its quality and appropriate management (Ombaba, 2013). Asset quality refers to all risks associated with the various assets owned by the bank, as banks determine the size of their assets that may be exposed to financial risks, and estimate the amount of provisions to address potential losses that they must bear (Adeolu, 2014). Wasting high amounts of money, which affects the profitability that causes liquidity, in addition to weak capital, and consequently the low quality of assets, and this reflects negatively on TQ (Bebeji, 2013). This makes banks, by their nature, face a number of challenges in the internal and external business environment, and banks deal directly with risks that vary between credit risks, market risks, as well as interest rate risks, and their fear of default risks by setting strict procedures that some may be reluctant to deal with. In addition to its warnings of operational risks, and of course it is not hidden from the risks of dealing with the exchange rate. Therefore, the banks basically operate with three goals that they

lay down the same, namely; Profitability, asset growth, and customer service base (Lucky & Nwosi, 2015). Asset quality ratios were measured through the following metrics:

1- Investments/Assets: This ratio indicates the extent to which the bank's assets are utilized in investments. It is used as a tool to measure the percentage of total assets held for investments. The high ratio indicates the conservative policy of the bank to provide protection for its investments against non-performing loans (K.S. et al, 2018).

2- Loans/assets: This ratio is an indicator of the investment of funds in the bank. It measures the adequacy of investing and employing the funds available to the bank. The rise in this ratio indicates the good utilization of loans, but its rise significantly reflects the increase in loans that the bank must face in the event of non-payment. By the borrowers on their specified dates, and then its increase will negatively affect the level of the bank's liquidity (Sathyamoorthi. et al, 2017).

Management efficiency

Management has a speciality when adopting criteria to measure it, as it relies on two important principles, namely; Education and experience level. The personality of its employees and the extent to which they absorb the mixture of influences surrounding the bank and those within its authority, has a great impact on management's directions, so it is the most difficult to measure management because it is fundamentally far from the bank's financial performance, although its decisions directly affect the bank's performance. (Daud, 2013). Accordingly, management efficiency can be defined as: the ability of the board of directors to identify, measure and control the risks of the bank's activities and to ensure safe, sound and effective operation in accordance with the applicable laws according to the internal regulations of the bank.

The efficiency of management is an important reason for continuity in the labor market and in a diverse world of rapid technological development and global economic openness, which has created high competition in the global market (Şimşek et al, 2017), because efficiency in itself is one of the competitive priorities that all managers are looking for Those working in management, and therefore, the link between technological development and the required efficiency requires banks to change the traditional administrative method and search for modern methods of management, which ensure the bank's ability to face challenges and achieve the competitive advantage required in the labor market (Islam et al, 2017).

Therefore, administrative efficiency is necessary to enhance the performance and success of any bank, and the inefficiency of administrative capacity leads to wrong decisions and large losses, which increases the possibility of defaulting any obligations on the bank (Alzugaiby et al, 2019).

Management efficiency ratios were measured through the following metrics:

1- Revenues / Assets: It aims to measure the total revenue to the total assets, the higher the ratio, the more efficient the management (Silva, 2017).

2- Expenses/Revenues: It measures the ratio of total expenses to total realized revenues. The lower this ratio, the higher the realized profits (Al-Taie & Ali, 2019).

3- Loans/deposits: The loan-to-deposit ratio is used to calculate the bank's borrowing ability to cover the withdrawals made by its customers. The higher this ratio, the better performance of the bank's management (K.S et al, 2018).

Market risk sensitivity

Measuring the sensitivity of market risks helps managers to detect unknown and ambiguous changes in the development of expected monetary forecasts that lead to making the project something uncertain (Al-Amry, 2013), and the banking business is exposed to risks due to

economic market conditions that cannot be controlled or Overcoming them (Suresh and Paul, 2018), as this element refers to the bank's ability to recognize, monitor and manage market risks and highlight problems in order to give a signal to management to take the necessary actions, and market risk sensitivity is an extension of liquidity risk, and to know if The bank's position is safe or not (Gulzeb, 2011), and market risk is defined as the fluctuation in the fair value or future cash flows of a financial instrument due to changes in market prices and includes interest rate risk, foreign exchange risk, and other price risk (Grier, 2012). Management efficiency ratios were measured through the following scale:

GAP ratio: The gap ratio is measured by dividing the interest rate sensitive assets into the interest rate sensitive liabilities, as this ratio reflects the risks that the bank is willing to bear if it is able to predict future interest rate trends, especially in times of significant fluctuation in interest rates. If the bank has a GAP ratio greater than one, then the bank is sensitive to the assets that the assets must be invested in order to pay its obligations (Williamson, 2008), and if the interest rate decreases, the reinvestment of its assets at rates lower than the rate of payments based on liabilities is what The bank is exposed to a loss, unless interest rates rise, the bank will thrive under the sensitive asset portfolio, and vice versa if the GAP ratio is less than one true, this is an indication that the bank is sensitive to liabilities that mature earlier than the assets) (Boateng, 2019).

Some banks seek to reduce the interest rate risk, by maintaining the interest rate sensitivity ratio, with a value close to the correct one) (AL-Miklafi, 2004).

Tobin's Qvalue

The TQ scale is one of the metrics that has gained popularity in the fields of; Marketing, human and financial resources, and in the field of economics and finance (Vomberg.et.al, 2015). It is one of the tools used to determine TQ (Rosikah, 2018), as TQ represents a forward-looking measure that reflects investors' expectations regarding the bank's ability to generate future revenues, and it also includes the investor's assessment of both tangible and intangible assets (Lien & Li, 2013). It is an indication that every cash invested in it, the bank's net assets would achieve an attractive return for the investor, and it is the best prediction for correcting the market situation.

TQ can explain the majority of investment fluctuations and it can also be applied in analyzing the bank's financial condition (Sucuahi & Cambarihan, 2016). The higher the TQ value of one true, this value means that the market value is higher than the stated book value of the bank. In other words, the market sells the bank's assets higher than the declared book value. Yes, there are better opportunities for investment (Ali, 2014). In the event that TQ values fall below one, then this indicates that the value of the assets is higher than the market value of the bank. The market sells the bank's assets for less than the declared book value. The market value is less than the cost of its assets, i.e. the bank is undervalued (Ali etal, 2016).

ANALYSIS AND DISCUSSION

This section reviews the most important findings of the researchers from an analysis of the research variables with all its indicators to show their impact on TQ, for the banks listed in the Iraq Stock Exchange.It tries to arrive at what was assumed in the research methodology, and then demonstrate the impact of each of these indicators on the value of TQ at the level of the research sample banks.

1. Hypothesis testing for Investment Bankof Iraq

Table (2) shows the regression analysis between all indicators of asset quality, management efficiency, market risk sensitivity and the TQ value forInvestment Bankof Iraq:

Table (2) ANOVA variance analysis forInvestment Bank of Iraq

Financial indicators	R^2	F	Sig.
Investment to Assets Ratio (X11)	0.799	119.335	0.000
Loan to Assets Ratio (X12)	0.659	58.072	0.000
Expense to Assets Ratio (X13)	0.066	2.128	0.155
Revenue to Assets Ratio (X14)	0.237	9.303	0.005
Loan to deposit ratio (X15)	0.459	25.438	0.000
Gap ratio (X16)	0.253	10.135	0.003

Table (2) shows the following ANOVAvariance analysis for Investment Bankof Iraqas follows:

1- There is a strong influence of more than 60% for the two indicators (X11, X12) on the value of TQ, as their coefficient of determination reached R^2, respectively (0.799, 0.659).

2- There was an effect of around 50% of the indicator (X15) on TQ, as it reached R^2 on (0.459).

3- There is a weak effect below 40% for the two indicators (X14) and (X16) on TQ, as R^2 reached (0.237), (0.253) respectively.

4- There is no effect of the indicator (X13) on TQ and it is not statistically significant according to the **F** test because the calculated F value (2.128) is less than the tabular **F** value (4.171) at the level of significance of 0.05, which means accepting the third null hypothesis and rejecting the alternative hypothesis because there is no effectThis is an indicator of the TQ value of an Investment Bank of Iraq.

5- Statistical function according to the **F** test, as the calculated **F** value for all indicators except for the indicator (X13) is greater than the tabular **F** value (4.171) at a significant level of 0.05, which means that the hypotheses (first, second, fourth, fifth, sixth) are rejected.Accepting the alternative hypothesis that there is an effect of these indicators on the value of TQ.

Table (3) also shows the simple regression equations of Investment Bank of Iraqand the amount of change for each indicator of the value of TQ:

Table (3) simple regression equations for Investment Bankof Iraq

Simple regression equations	Amount of change
$Y = 0.955 - 5.896X11$	A change in one unit of X11 will cause change in Y by(-5.896)
$Y = 0.583 + 0.833X12$	A change in one unit of X12 will cause a change in Y by (0.833)
$Y = 0.759 + 2.319X14$	A change in one unit of X14 will cause a change in Y by (**2.319**)
$Y = 0.550 + 0.484X15$	A change in one unit of X15 will cause a change in Y by (**0.484**)
$Y = 0.573 + 0.412X16$	A change in one unit of X16 will cause a change in Y by (**0.412**)

2.Hypothesis testing for Ashur International Bank

Table (4) presents the regression analysis between all indicators of asset quality, management efficiency, market risk sensitivity and TQ value for Ashur International Bank:

Table (4) ANOVA variance analysis forAshur International Bank

Financial indicators	R^2	F	Sig.
Investment to Assets Ratio (X21)	0.173	6.277	0.018
Loan to Assets Ratio (X22)	0.824	140.655	0.000
Expense to Assets Ratio (X23)	0.001	0.024	0.877
Revenue to Assets Ratio (X24)	0.304	13.116	0.001
Loan to deposit ratio (X25)	0.662	58.655	0.000
Gap ratio (X26)	0.669	60.659	0.000

Table (4) shows the following ANOVAvariance analysis for AshurInternationalBankas follows:

1- It was found that there was a strong influence of more than 60% for the indicators (X26), (X25), (X22) on the value of TQ, as the coefficient of determination for them reached R^2, respectively (0.669), (0.662), (0.824).

2- There is a weak effect below 40% for the two indicators (X24) and (X21) on the value of TQ, as R^2, respectively, amounted to (0.304), (0.173).

3- There is no effect for the indicator (X23) with the value of TQ and not a statistical function according to the **F** test because the calculated **F** value (0.024) is less than the tabular **F** value (4.171) at the level of significance of 0.05, which means accepting the third null hypothesis and rejecting the alternative hypothesis because there is no effect for this Indicator of TQ value of Ashur InternationalBank.

4- Statistical function according to the **F** test, as the calculated **F** value for all indicators except for the indicator (X23), is greater than the tabular **F** value (4.171) at the level of significance of 0.05, which means rejecting the hypotheses (first, second, fourth, fifth, sixth), Accepting the alternative hypothesis that there is an effect of these indicators on the value of TQ.

Table (5) gives the equations of the simple regression of AshurInternationalBankand the amount of change for each indicator of the value of TQ:

Table (5) simple regression equations for AshurInternationalBank

Simple regression equations	Amount of change
$\mathbf{Y = 0.585 + 4.362\ X21}$	A change in one unit of X21 will cause change in Y by (**4.362**)
$\mathbf{Y = 0.511 + 1.195\ X22}$	A change in one unit of X22 will cause a change in Y by (**1.195**)
$\mathbf{Y = 0.573 - 2.732\ X24}$	A change in one unit of X24 will cause a change in Y by (**2.732**)
$\mathbf{Y = 0.536 + 0.300\ X25}$	A change in one unit of X25 will cause a change in Y by (**0.300**)
$\mathbf{Y = 0.520 + 0.292\ X26}$	A change in one unit of X26 will cause a change in Y by (**0.292**)

3. Hypothesis testing for Iraqi Credit Bank

Table (6) shows the regression analysis between all indicators of asset quality, management efficiency, market risk sensitivity, and the TQ value for Iraqi Credit Bank:

Table (6) ANOVA variance analysis forIraqi Credit Bank

Financial indicators	R^2	F	Sig.
Investment to Assets Ratio (X31)	0.054	1.707	0.201
Loan to Assets Ratio (X32)	0.530	33.796	0.000
Expense to Assets Ratio (X33)	0.390	19.197	0.000

Revenue to Assets Ratio (X34)	0.422	21.920	0.000
Loan to deposit ratio (X35)	0.541	35.324	0.000
Gap ratio (X36)	0.301	12.949	0.001

It is clear from Table (6) ANOVAvariance analysis forIraqi Credit Bank that :

1- There is an effect ranging around 50% for the indicators (X35), (X34), (X32) on the value of TQ, as R^2, respectively, amounted to (0.541), (0.422) ,(0.530).

2- There is a weak effect below 40% for the two indicators (X33 and (X36) with the value of TQ, as R^2 respectively amounted to (0.390), (0.301).

3- There is no effect of the indicator (X31 with TQ) and it is not statistically significant according to the F test because of the calculated **F** value (1.707) less than the tabular **F** value (4.171) at the 0.05 level of significance, which means accepting the null hypotheses (first) and rejecting the alternative hypotheses due to the lack of The existence of an effect of those indicators on the TQ of Iraqi Credit Bank.

4- Statistical function according to the **F** test, as the calculated **F** value for all indicators except for the X31 index is greater than the tabular **F** value (4.171) at a significance level of 0.05, which means rejecting the hypotheses (second, third, fourth, fifth, sixth), with acceptance Alternative hypotheses for an effect of these indicators on the TQ of Iraqi Credit Bank.

Table (7) also shows the simple regression equations of Iraqi Credit Bank and the amount of change for each indicator of the value of TQ:

Table (7) simple regression equations for Iraqi Credit Bank

Simple regression equations	Amount of change
$Y = 0.771 + 37.913X32$	A change in one unit of X32 will cause change in Y by (**37.913**)
$Y = 0.651 + 22.214X33$	A change in one unit of X33 will cause a change in Y by (**22.214**)
$Y = 0.623 + 13.922X34$	A change in one unit of X34 will cause a change in Y by (**13.922**)
$Y = 0.761 + 23.678X35$	A change in one unit of X35 will cause a change in Y by (**23.678**)
$Y = 1.484 - 0.306X36$	A change in one unit of X36 will cause a change in Y by (**−0.306**)

4. Hypothesis testing for Commercial Bank

Table (8) shows the regression analysis between all indicators of asset quality, management efficiency, market risk sensitivity and the TQ value forCommercial Bank:

Table (8) ANOVA variance analysis forCommercial Bank

Financial indicators	R^2	F	Sig.
Investment to Assets Ratio (X41)	0.034	1.069	0.309
Loan to Assets Ratio (X42)	0.339	15.412	0.000
Expense to Assets Ratio (X43)	0.000	0.005	0.946
Revenue to Assets Ratio (X44)	0.098	3.268	0.081

Loan to deposit ratio (X45)	0.490	28.857	0.000
Gap ratio (X46)	0.058	1.851	0.184

Table (8) shows the following ANOVAvariance analysis for Commercial Bank as follows:

1- There is an effect ranging around 50% for the indicator (X45) on TQ, as it reached R^2 (0.490).

2- There is a weak impact below 40% of the indicator (X42) on TQ, as it reached R^2(0.339).

3- There is no effect of the indicators (X41), (X43), (X46) on TQ and it is not statistically significant according to the F-test because of the calculated **F** value, respectively (1.069), (0.005), (1.851), which was less than the tabular **F** value (4.171). At the significance level of 0.05, which means accepting the null hypotheses (first, third, and sixth) and rejecting the alternative hypotheses because there is no effect of these indicators on the TQ of the Commercial Bank.

4- The indicator (X44) was statistically significant according to the **F** test, as the calculated **F** values amounted to (3.268) and were greater than the tabulated **F** value (2.881) at a significant level of 0.10, which means rejecting the fourth hypothesis and accepting the alternative hypothesis due to the presence of an effect of this indicator on the TQ of Commercial Bank.

5- Statistical function according to **F** test, as the calculated **F** value for all indicators except for the indicators (X41), (X43), (X46) is greater than the tabular **F** value (4.171) at the level of significance of 0.05, which means that the two hypotheses (second and fifth) are rejected. With the acceptance of the two alternative hypotheses that there is an effect of these indicators on the TQ of the Commercial Bank.

Table (9) also shows the simple regression equations of Commercial Bank and the amount of change for each indicator of the value of TQ:

Table (9) simple regression equations for Commercial Bank

Simple regression equations	Amount of change
$Y = 0.622 - 7.110\,X42$	A change in one unit of X42 will cause change in Y by (-7.110)
$Y = 0.684 + 2.339\,X44$	A change in one unit of X44 will cause a change in Y by (2.339)
$Y = 0.908 - 2.524\,X45$	A change in one unit of X45 will cause a change in Y by (-2.524)

5. Hypothesis testing for Gulf Commercial Bank

Table (10) shows the regression analysis between all indicators of asset quality, management efficiency, market risk sensitivity, and the TQ value forGulf Commercial Bank:

Table (10) ANOVA variance analysis forGulf Commercial Bank

Financial indicators	R^2	F	Sig.
Investment to Assets Ratio (X51)	0.037	1.149	0.292
Loan to Assets Ratio (X52)	0.110	3.702	0.064
Expense to Assets Ratio (X53)	0.089	2.941	0.097
Revenue to Assets Ratio (X54)	0.405	20.406	0.000

Loan to deposit ratio (X55)	0.101	3.370	0.076
Gap ratio (X56)	0.405	20.378	0.000

It is clear from Table (10) ANOVAvariance analysis forGulf Commercial Bankthat:

1- There was an effect of around 50% for the two indicators (X54 and (X56) with TQ, where R^2reached (0.405) and (0.405) respectively.

2- There is a weak effect below 40% for the indicators (X52), (X53), and (X55) with TQ, as the R^2respectively amounted to (0.110), (0.089), and (0.101).

3- There is no effect for the indicator (X51) with TQ and it is not statistically significant according to the **F** test because the calculated **F** value for that indicator amounted to (1.149) less than the tabular **F** value (4.171) at the significance level of 0.05, which means accepting the null hypothesis (first) and rejecting the alternative hypothesis This is because there is no effect for this index and TQ for Gulf Commercial Bank.

4- The indicators (X52), (X53) and (X55) were a statistical function according to the **F** test, as the calculated **F** value respectively amounted to (3.702), (2.941), (3.370) and it was greater than the tabular **F** value (2.881) at a significant level of 0.10 , which means rejecting the hypotheses (second, third, and fifth) and accepting the alternative hypotheses due to the presence of the effect of these indicators and the TQ of Gulf Commercial Bank.

5- Statistical function according to the **F** test, as the calculated **F** value for all indicators except (X51) is greater than the tabular **F** value (4.171) at a significance level of 0.05, which means rejecting the two hypotheses (fourth, sixth), while accepting the alternative hypotheses of the existence of an effect for these two indicators and TQ .

Table (11) also shows the simple regression equations of Gulf Commercial Bank and the amount of change for each indicator of the value of TQ:

Table (11) simple regression equations for Iraqi Credit Bank

Simple regression equations	Amount of change
$Y = 0.612 + 0.839\,X52$	A change in one unit of X52 will cause change in Y by (0.839)
$Y = 0.724 + 9.008\,X53$	A change in one unit of X53 will cause a change in Y by(9.008)
$Y = 0.636 + 8.209\,X54$	A change in one unit of X54 will cause a change in Y by (8.209)
$Y = 1.058 - 0.434\,X55$	A change in one unit of X55 will cause a change in Y by (-0.434)
$Y = 1.345 - 0.599\,X56$	A change in one unit of X56 will cause a change in Y by (-0.599)

6. Hypothesis testing for Al-Mansour Investment Bank

Table (12) shows the regression analysis between all indicators of asset quality, management efficiency, market risk sensitivity and the TQ value forAl-Mansour Investment Bank:

Table (12) ANOVA variance analysis forAl-Mansour Investment Bank

Financial indicators	R^2	F	Sig.
Investment to Assets Ratio (X61)	0.002	0.050	0.825
Loan to Assets Ratio (X62)	0.298	12.726	0.001
Expense to Assets Ratio (X63)	0.272	11.205	0.002
Revenue to Assets Ratio (X64)	0.244	9.671	0.004
Loan to deposit ratio (X65)	0.275	11.386	0.002
Gap ratio (X66)	0.157	5.567	0.025

Table (12) shows the following ANOVAvariance analysis for Al-Mansour Investment Bank:
1- There is a weak effect below 40% for the indicators (X62), (X63), (X64), (X65), (X66), with TQ, where R^2 respectively amounted to (0.298), (0.272,) (0.244), (70.275), (0.157).
2- There is no effect for the indicator (X61) with TQ and it is not a statistical function according to the **F** test because the calculated **F** value for those indicators amounted to (0,050, respectively) less than the tabular **F** value (4.171) at the level of significance of 0.05, which means accepting the null hypothesis (first) and rejecting The alternative hypotheses because there is no effect of these indicators and the TQ of Al-Mansour Investment Bank.
3- Statistical function according to the **F** test, as the calculated **F** value for all indicators except for the (X61) index is greater than the tabular F value (4.171) at the 0.05 level of significance, which means that the hypotheses (second, third, fourth, fifth, sixth) are accepted, while accepting the hypotheses Alternative to having an effect for these indicators and TQ.

Table (13) also shows the simple regression equations of Al-Mansour Investment Bankand the amount of change for each indicator of the value of TQ:

Table (13) simple regression equations for Al-Mansour Investment Bank

Simple regression equations	Amount of change
$Y = 0.885 + 0.857\ X62$	A change in one unit of X62 will cause change in Y by (**0.857**)
$Y = 0.947 + 10.146\ X63$	A change in one unit of X63 will cause a change in Y by(**10.146**)
$Y = 0.929 + 5.547\ X64$	A change in one unit of X64 will cause a change in Y by (**5.547**)
$Y = 0.936 + 0.242\ X65$	A change in one unit of X65 will cause a change in Y by (**0.242**)
$Y = 0.934 + 0.067\ X66$	A change in one unit of X66 will cause a change in Y by (**0.067**)

7. Hypothesis testing for Mosul Bank for Development and Investment

Table (14) shows the regression analysis between all indicators of asset quality, management efficiency, market risk sensitivity and the TQ value forMosul Bank for Development and Investment:

Table (14) ANOVA variance analysis forAl-Mansour Investment Bank

Financial indicators	R^2	F	Sig.
Investment to Assets Ratio (X71)	0.618	48.499	0.000
Loan to Assets Ratio (X72)	0.000	0.001	0.975
Expense to Assets Ratio (X73)	0.009	0.261	0.613
Revenue to Assets Ratio (X74)	0.025	0.783	0.383
Loan to deposit ratio (X75)	0.280	11.677	0.002
Gap ratio (X76)	0.260	10.554	0.003

Table (14) shows the following ANOVAvariance analysis for Mosul Bank for Development and Investment:
1- There is a strong influence of more than 60% of the indicator (X71) with TQ, as their coefficient of determination is R^2 (0.618).
2- There is a weak effect below 40% for the indicators (X75), (X76), with TQ, where R^2 reached (0.280), (0.260) respectively.

3- There is no effect for the indicators (X72), (X73), (X74), with TQ and it is not statistically significant according to the F-test because the calculated **F** value for those indicators respectively amounted to (0.001), (0.261), (0.783) less than the value of F). Tabular (4.171) at the level of significance 0.05, which means acceptance of the null hypotheses (second, third, fourth) and rejection of the alternative hypothesis due to the lack of influence of these indicators and TQ of Mosul Bank.

4- Statistical function according to the **F** test, as the calculated **F** value for all indicators except for the indicators (X72), (X73), (X74) is greater than the tabular F value (4.171) at a level of significance of 0.05, which means that the hypotheses (first, fifth, sixth) are rejected. , while accepting alternative hypotheses for an effect of these indicators and TQ.

Table (15) also shows the simple regression equations of Mosul Bank for Development and Investmentand the amount of change for each indicator of the value of TQ:

Table (15) simple regression equations for Mosul Bank for Development and Investment

Simple regression equations	Amount of change
$Y = 0.312 + 16.505\,X71$	A change in one unit of X71 will cause change in Y by (16.505)
$Y = 0.864 - 0.194\,X75$	A change in one unit of X75 will cause a change in Y by (-0.194)
$Y = 0.850 - 0.177\,X76$	A change in one unit of X76 will cause a change in Y by (-0.177)

8. Hypothesis testing for BabelBank

Table (16) shows the regression analysis between all indicators of asset quality, management efficiency, market risk sensitivity and the TQ value forBabel Bank:

Table (16) ANOVA variance analysis forBabel Bank

Financial indicators	R^2	F	Sig.
Investment to Assets Ratio (X81)	0.437	23.295	0.000
Loan to Assets Ratio (X82)	0.108	3.620	0.067
Expense to Assets Ratio (X83)	0.076	2.460	0.127
Revenue to Assets Ratio (X84)	0.110	3.706	0.064
Loan to deposit ratio (X85)	0.753	91.360	0.000
Gap ratio (X86)	0.750	90.047	0.000

Table (16) shows the following ANOVAvariance analysis for Babel Bank:

1- There is a strong effect of more than 60% for the indicators (X85), (X86) with TQ, as their coefficient of determination reached R^2, respectively (0.753) and (0.750).

2- An effect was found around 50% of the indicator (X81) with TQ, as it reached R^2, respectively (0.437).

3- There is a weak effect below 40% for the two indicators (X84) and (X82) with TQ, as R^2 reached (0.110) and (0.108), respectively.

4- There is no effect for the indicator (X83), with TQ and not a statistical function according to the **F** test because of the calculated F value for that indicator, which amounted to 2.460)) less than the tabular **F** value (4.171) at the level of significance of 0.05, which means acceptance of

the null hypotheses (third) and rejection The alternative hypothesis is that there is no effect of these indicators and TQ for Babel Bank.

5- The two indicators (X82) and (X84) are statistical function according to the **F** test, as the calculated **F** value amounted to (3.620), (3.706), which is greater than the tabular **F** value (2.881) at the level of significance of 0.10, which means rejecting the two sub-hypotheses (the second, and the fourth). And the acceptance of the two alternative hypotheses, because there is an effect of these two indicators and the TQ of the Bank of Babel.

6- Statistical function according to the **F** test, as the calculated **F** value for all indicators except (X83) is greater than the tabular F value (4.171) at a significance level of 0.05, which means rejecting the hypotheses (first, fifth, sixth), while accepting alternative hypotheses for the existence of an effect For these indicators and TQ.

Table (17) also shows the simple regression equations of Bank of Babeland the amount of change for each indicator of the value of TQ:

Table (17) simple regression equations for Bank of Babel

Simple regression equations	Amount of change
$\boldsymbol{Y = 0.472 + 16.157\ X81}$	**A change in one unit of X81 will cause change in Y by ($\boldsymbol{16.157}$ 7)**
$\boldsymbol{Y = 0.856 - 0.567\ X82}$	**A change in one unit of X82 will cause a change in Y by($\boldsymbol{-0.567}$)**
$\boldsymbol{Y = 0.541 + 3.500\ X84}$	**A change in one unit of X84 will cause a change in Y by ($\boldsymbol{3.500}$)**
$\boldsymbol{Y = 0.973 - 0.258\ X85}$	**A change in one unit of X85 will cause a change in Y by ($\boldsymbol{-0.258}$)**
$\boldsymbol{Y = 0.980 - 0.259X86}$	**A change in one unit of X86 will cause a change in Y by ($\boldsymbol{-0.259}$)**

CONCLUSIONS

From the analysis and discussion of the research variables, it was found that (the ratio of investments/assets) in the banks of the research sample, it had a different effect on the TQ of the banks (investment, Mosul, Babel), which indicates the bank's interest in employing the investments of its assets. While its effect was weak for Bank of Ashur, while there was no effect of this ratio on TQ of banks (Credit, Commercial, Gulf, and Al-Mansour). It was found that the effect of (loans/assets ratio) on TQ was strong for a bank (investment, credit, and Ashur), and this indicates the interest of those banks in operating the financial resources available in loans, while the effect of the ratio was weak with a bank (commercial, Gulf, Al-Mansur, Babylon), and there is no effect of this ratio on TQ in Mosul Bank. The analysis showed that (the ratio of expenses/ assets) in the banks of the research sample has a weak effect on the TQ of the bank (Credit, Gulf, Al-Mansour), while there is no effect of the ratio on the TQ of the bank (investment, Ashur, credit, Mosul, and Babel). As for the effect of (revenue/assets ratio) it was strong on TQ in (investment, credit, and Gulf) banks, and weak in (Ashur, credit, Al-Mansour, and Babel), and there is no effect of this ratio on TQ in Mosul Bank. The results showed that (loans / deposits ratio) had a strong impact on TQ in the bank (investment, Ashur, credit, commercial, and Babel). And weak in (Al-Gulf and Al-Mansour) bank, and there is no effect of the ratio on TQ in the Mosul bank. As for the (gap ratio) its effect on TQ was strong

with the banks (Assyria, the Gulf, and Babylon). Weak in a bank (Investment, Credit, Al-Mansour, Mosul,), and there is no effect of the gap ratio on TQ in the commercial bank.
Therefore, loans are considered to be a state of balance with investments. Banks that obtain a high level in the quality of assets with a low level of investments must strive to strengthen the loan system to enhance their classification in the quality of their assets.

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