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Measuring the impact of interest rate risks on banking Performance

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Abstract : This study aimed to measure the impact of interest rate risk on the financial performance of banks through a series of historical data for a sample consisting of (10) commercial banks listed on the Iraq Stock Exchange for the period (2014-2023), The study dealt with one of the important influences on the overall financial performance of banks, which is interest rate risk, after which it plays an important role in the subject of financial and banking investment, and then affects the value of funds, whether in the form of assets or bank requirements. For the purpose of achieving the objectives of the study, the interest rate risk indicators (asset gap, relative gap, gap ratio, and net interest margin) were adopted, while the variables of the dependent variable (bank performance) were represented in (adequacy of property capital, rate of return on equity, rate of return on assets, and rate of return on deposits)The Statistical Program (SPSSvr.24) Was Also Used When Using The Program (Exile) To Measure The Impact Of Each Independent Variable Indicator On Each Of The Variable Indicators Of The Sample Banks. The study reached a set of conclusions, the most important of which was that the change in the interest rate has an impact on the values of both assets and liabilities and, therefore affects financial performance. In light of this, the study reached several recommendations, the most important of which is the management of banks needs to provide a comprehensive framework for monitoring and measuring interest rate risks. Therefore, banks need to closely integrate business strategies and the work of asset and liquidity management to assess the types of risks facing financing and to regulate management dynamically and effectively for the purpose of risk management.

Introduction:

Commercial banks are one of the important types of private financial institutions that the country's economy focuses on because they are one of the basic tools. Based on the importance and role of commercial banks in economic activity in general and financial activity in particular, these banks must seek to unify their efforts in order to achieve harmony between the surrounding environmental factors and take... decision, Commercial banks seek to provide various services to members of society effectively and efficiently, as managing interest rate risks is important to many traders in the market and in the global community, and at the same time performance is important.

The banker is a ruling element in light of the conditions of intense competition between different banks. The development witnessed by the banking industry has led to an increase and diversification of the services it provides. It has also led to the complexity of banking operations in managing its assets and liabilities. This makes it difficult to achieve satisfactory returns with the least possible risk, because it operates in an environment characterized by effectiveness and control of all variables is difficult, if not difficult. impossible. Especially since it operates in a market characterized by intense competition, and to meet this development and the risks associated with it, it has become necessary to monitor the level of risks surrounding the work and put in place the necessary control measures to control the negative effects of this Risk.

First: Research Methodology

1- The importance of the research

The importance of the study lies in examining the management of the asset-liability gap and its importance in managing banking risks, especially interest rate risks, as the impact of interest rate risks is A major determinant of the work of banks, The study focuses on sensitive changes in assets and liabilities to interest rate risk Its impact on the rise and fall of interest rates, Private commercial banks have been structured to include senior management that manages the bank's risks through direct and effective supervision of the interest rate risks to which it is exposed.The bank's balance sheet.

2- Research Problem

Commercial banks listed on the Iraq Stock Exchange are exposed to several risks related to interest rate fluctuations, which could negatively affect their financial performance and stability. Among these risks, the risks of the gap in the duration of assets and liabilities stand out, as changes in interest rates can expose banks to unexpected losses or reduce the profit margin.

1. Is there a significant relationship between assets and liabilities gap management And the financial performance of banks?
2. To what extent does the asset-liability gap affect the financial performance of commercial banks and what are the appropriate aspects of dealing with changes in interest rates?

3- **Research hypotheses**

There is no statistically significant effect of interest rate risk indicators on banking performance indicators for the period (2014-2023).

1. There is no statistically significant effect of interest rate risk on the rate of return on equity for the period (2014-2023).
2. There is no statistically significant impact of interest rate risk on the rate of return on assets for the period (2014-2023).

4. Research objective

First: Understanding the relationship between interest rate risks and banking performance and the extent of their interrelation.

Second: Determine the extent of the impact of asset and liability management and its indicators on the performance of banks.

Third: Focusing on how to use financial technologies to manage the interest sensitivity gap and protect against the risks of price fluctuations.

5. Research limits

Spatial boundaries: commercial banks (stock market)

Time limits: for the period (2014-2023)

Second : Theoretical framework

Chapter One :Interest rate risk and Banking performance

First: The concept Interest rate risk

Interest rate risks are one of the most monitored variables in the economy because they are subject to the monetary authority, and reports and interest rate movements are published daily in the media, because they directly affect daily life. They have an important impact on the economy and affect the economic and personal decisions of individuals and companies (Hemert, 2010: 467-505).

There is also another dimension to interest rates, which is the market value risks facing the bank due to movements in interest rates and the market value of assets and liabilities, which can change. In addition, interest rates are used to discount cash flows when determining values (Habi, 2021:30)

Therefore, interest rate risks are defined as exposing banks to negative fluctuations in interest rates, and interest rate risks have a significant impact on the profits and capital of the bank, as they affect the position of financial institutions in the rise and fall of interest rates, as this leads to a change in the current value, And then a change in cash flow. This change, in turn, leads to a change in the values of assets, liabilities, and balance sheet activities, which affects their economic value, but there is a possibility of a decrease in these risks, which greatly affects the bank's capital (Burucs, 2014: 30).

He also defined it (Kruchynenko, 2011:17) as the risk that occurs as a result of negative changes in interest rates, causing an increase in interest costs or a decrease in income from investment, and then a decrease in profits or even losses and an increase in interest rate risks leads to a mismatch between the timing of changes in Prices and timing of cash flows.

Second: Banking performance

(Al-Qutb, 2002: 19) defined banking performance as the image that reflects the level of the bank's ability and the final result of the banking activity in exploiting resources and the ability to achieve the required goals according to standards that are compatible with the bank and the nature of the bank's work and activity. (Salam 2004: 245) defined it as a set of necessary means, various aspects of activity, and efforts made for banks to play their role and carry out their functions in light of the surrounding external banking environment, in order to provide banking services that may achieve the objectives.

He also defined it (Mattar, 2006: 6) as an important process in exploring many qualitative and quantitative indicators of the activity of economic projects, which may be concerned with determining the characteristics of the financial and

operational activities of the project, through information extracted from financial statements and other sources, and these indicators are used in Evaluating financial performance.

Despite this discrepancy in the definition of performance, most researchers express banking performance as "an expression of how the bank uses its human and material resources in a way that makes the bank able to achieve its goals" (Al-Shamsi, 2022: 729).

Third : managing the assets and liabilities gap

The management of assets and liabilities is considered to have a great deal of risk management, as risks can be reduced to the lowest possible extent while maintaining an appropriate group of assets and liabilities, in order to achieve the bank's objectives, the most important of which are maximizing profitability and reducing risks (Zhang, 2015:10).

Asset and liability management is one of the most important risk management procedures for banks, as it is considered one of the important decision-making tools that aims to achieve the least amount of value for stakeholders. Asset and liability management is an attempt to analyze the gap between assets and liabilities in terms of their maturity period and sensitivity to the interest rate so that the bank can By reducing the risks resulting from this gap, mainly liquidity and interest rate risks (Sheela & Bastray, 2015:34).

(Novickytea & Petraityte, 2014: 1083) believe that the main goal of asset and liability management is to manage liquidity risks and interest rate risks. Traditional asset and liability management programs rely on liquidity risks and interest rate risks because they are among the most prominent risks that have an impact on the bank's budget and thus require regulation among assets. And liabilities.

In general, the process of managing assets and liabilities can be viewed as a comprehensive work to manage the various risks that occur as a result of the mismatch between assets and liabilities within banks, as the banking sectors face many risks, including those associated with assets and changing interest rates (Martha, 2015: 2).

The second topic

Analysis of gap indicators and indicators
(Relative gap, Gap ratio)
First: Analysis Relative gap For the period (2014-2023)

National Bank of Iraq	Commercial Bank of Iraq	Credit Bank of Iraq	Sumer Commercial Bank	Bank of Baghdad	The Year
0.403	0.556	0.459	0.570	0.128	2014
0.444	0.568	0.483	0.640	0.136	2015
0.131	-0.017	0.509	0.608	-6.775	2016
0.150	-0.001	0.552	0.648	-1.085	2017
0.163	0.004	0.569	0.688	-0.082	2018
0.373	0.016	0.618	0.693	-0.036	2019
0.377	0.074	0.633	0.695	-0.004	2020
0.465	0.092	0.672	0.700	1.160	2021
0.465	0.230	0.680	0.705	4.289	2022
8.680	0.240	0.732	0.737	5.027	2023
1.165	0.176	0.590	0.668	0.275	Average

Source: Prepared by the researcher based on the financial reports issued by the Iraq Stock Exchange for the period (2014-2023)

We note from Table (1) that the highest average recorded at the bank level was in the National Bank of Iraq, reaching (1.165), while the lowest percentage recorded was in the Commercial Bank of Iraq, reaching (0.176), and the range in light of these two ratios is (0.989). We note the variation in these ratios. The ratio for the banks in the study sample. It is worth noting that this ratio being close to (the correct one) means low interest rate risk.

Returning to the years of the study (2014-2023), we notice that the relative gap was high for the Bank of Baghdad in the years (2021-2023), and this explains the high interest rate risks for the bank compared to the other banks in the study sample.

Through the general average of the relative gap, we notice that the relative gap was within the acceptable standard (the correct one) for all banks in the study sample. This explains that the banks in the study sample take into account the stability of the level of the relative gap, and thus the stability of interest rate risk.

2- Gap ratio index

This indicator expresses interest rate-sensitive assets over interest rate-sensitive liabilities, and this ratio reflects the risk that the bank bears based on predictions of future interest rate trends, with a preference for a ratio higher than one.

Second: Analysis Gap ratio For the period (2014-2023)

National Bank of Iraq	Commercial Bank of Iraq	Credit Bank of Iraq	Sumer Commercial Bank	Bank of Baghdad	The Year
1.706	2.561	1.857	2.497	1.153	2014
1.864	2.676	1.944	3.234	1.165	2015
1.176	0.946	2.305	2.892	0.113	2016
1.184	0.996	2.389	3.400	0.849	2017
1.210	1.016	2.528	3.979	0.896	2018
1.684	1.058	2.740	4.419	0.952	2019
1.778	1.245	2.771	4.575	0.999	2020
2.030	1.296	3.183	4.704	1.155	2021
2.030	1.544	3.197	4.771	6.584	2022
17.160	1.707	4.081	5.485	7.604	2023
3.182	1.5	2.699	3.995	2.147	Average

Source: Prepared by the researcher based on the financial reports issued by the Iraq Stock Exchange for the period (2014-2023)

We notice from Table (2) that the gap ratio for the Bank of Baghdad was low for the period (2016-2020), while for the rest of the years the gap ratio was greater than the correct (1), and it rose clearly in the years (2022 and 2023).

In light of the results achieved, we note that three banks recorded the highest average and were greater than the correct one, which are (Sumer Commercial Bank, Iraqi Credit Bank, and National Bank of Iraq), which means that these banks were more likely to avoid interest rate risks in a way that enhances their banking work, because the risk is affected. Due to the continuous fluctuations in interest rates, the bank may be exposed to losses or profits as a result of these fluctuations.

The third topic

Analysis of banking performance indicators (return on equity, return on assets)

First: Analysis Rate of return on equity for banks in the study sample for the period (2014-2023)

Gulf Commercial	Commercial Bank	Credit Bank of	Sumer Commercial	Bank of Baghdad	The Year

Bank	of Iraq	Iraq	Bank		
98.064	**43.876**	**7.539**	**13.349**	**9.500**	**2014**
292.152	**315.276**	**7.539**	**1.369**	**21.290**	**2015**
188.184	**11.521**	**6.107**	**1.413**	**32.884**	**2016**
184.769	**4.135**	**0.458**	**0.442**	**15.203**	**2017**
171.255	**3.826**	**0.425**	**0.405**	**9.698**	**2018**
166.248	**3.576**	**0.372**	**0.394**	**7.254**	**2019**
165.571	**3.444**	**-1.166**	**0.389**	**7.158**	**2020**
131.325	**2.687**	**-1.710**	**0.374**	**2.667**	**2021**
128.178	**2.402**	**-1.723**	**0.341**	**2.210**	**2022**
0.480	**0.474**	**-3.579**	**0.149**	**1.556**	**2023**
152.622	**39.121**	**2.142**	**1.826**	**10.942**	**Average**

Source: Prepared by the researcher based on the financial reports issued by the Iraq Stock Exchange for the period (2014-2023)

We note from Table (3) that the highest value recorded at the bank level was in Al Khaleej Commercial Bank and amounted to (292,152) for the year (2015), which means the bank's ability to achieve returns and profits, while the lowest value was recorded at the bank level in Sumer Commercial Bank and amounted to (-3,579) for the year (2023), which means that the bank does not have the ability to achieve returns and profits.

Returning to the general average at the level of the study sample, the highest average recorded at the level of banks is for Al-Khaleej Commercial Bank, which reached a percentage of (152.622). This indicates the efficiency of the bank's management in making investment and operational decisions and the ability to generate profits and real investment of its assets, compared to other banks, while the lowest average was recorded. Overall, the ratio of Sumer Commercial Bank reached (1.826). This indicates the bank's inability to make its investment and operational decisions with high efficiency.

Second : Analysis Rate of return on assets For the period (2014-2023)

Mosul Investment Bank	Commercial Bank of Iraq	Credit Bank of Iraq	Sumer Commercial Bank	Bank of Baghdad	The Year
100.544	**27.773**	**3.639**	**8.268**	**1.520**	**2014**
131.051	**208.366**	**3.678**	**0.977**	**36.890**	**2015**
148.245	**5.747**	**3.452**	**1.073**	**56.679**	**2016**
119.564	**2.539**	**0.281**	**0.320**	**30.828**	**2017**
83.351	**2.446**	**0.276**	**0.315**	**19.470**	**2018**
69.070	**2.204**	**0.234**	**0.315**	**16.864**	**2019**

63.076	**2.181**	**-0.650**	**0.313**	**14.230**	**2020**
48.051	**1.788**	**-0.980**	**0.287**	**6.443**	**2021**
36.544	**1.452**	**-1.058**	**0.222**	**5.609**	**2022**
34.820	**0.300**	**-2.636**	**0.102**	**3.728**	**2023**
83.431	**25.479**	**1.247**	**1.219**	**19.226**	**Average**

Source: Prepared by the researcher based on the financial reports issued by the Iraq Stock Exchange for the period (2014-2023)

We note from Table (4) that the highest value recorded at the level of the banks in the study sample was in the Mosul Investment Bank, which amounted to (148.245) for the year (2016), which means that the bank achieved a high percentage of profits, and this means that the bank has a high efficiency in achieving profits, while the lowest value was recorded. Value at the level of the banks of the study sample in the Credit Bank of Iraq (-2.363) for the year (2023), which means the bank's inability to employ its assets optimally.

Returning to the general average at the level of the study sample, the highest percentage was achieved for the Mosul Investment Bank, amounting to (83.431). This indicates the management's ability to generate profits from the bank's assets. Therefore, the return on assets is considered an indicator of efficiency in measuring the bank's profitability, while it achieved the lowest percentage for the general average. The level of banks in the study sample for the Sumer Commercial Bank reached (1.219) and indicates the inability of the bank management to maximize profits.

Testing and analyzing hypotheses

The researcher used descriptive statistics represented by general statistics such as the arithmetic mean, standard deviation, highest and lowest value, in addition to graphs to know the nature of the data and its characteristics. The researcher also used analytical statistics, represented by analyzing correlations and impact relationships using the linear regression method, and used the statistical program SPSS vr.24 for the purpose of drawing conclusions from the data.

Table (5): General statistics for bank data in the study sample

Descriptive Statistics					
Std. Deviation	Mean	Maximum	Minimum	N	
448248230	**93200339**	**774107903**	**-813311980**	**10**	**Asset-liability gap**
3.1865609	**.275879**	**5.0273**	**-6.7752**	**10**	**Relative gap**
2.6358854	**2.147494**	**7.6042**	**.1137**	**10**	**Interest sensitivity gap**
.0877700	**.065358**	**.2254**	**.0007**	**10**	**Net interest margin**
68.5866471	**193.174840**	**253.7200**	**16.0010**	**10**	**Owned capital adequacy index**
9.8379744	**10.942470**	**32.8849**	**1.5566**	**10**	**Rate of return on equity**
17.5829516	**19.226400**	**56.6790**	**1.5201**	**10**	**Rate of return on assets**
26.0170036	**27.701580**	**71.7805**	**.5308**	**10**	**Rate of return on deposits**

Source: Prepared by the researcher based on the results of the statistical program SPSS vr.24

1- Discussion and analysis of hypotheses for the Bank of Baghdad:

A- Measuring the effect of (X1,X2) on (Y1,Y2) for the Bank of Baghdad

The researcher conducted an analysis of the regression model (impact) For two indicators of interest rate risk (asset-liability gap, and relative gap)and their impact on the adequacy of the capital owned by the Bank of Baghdad using the statistical program SPSS vr.24. The results were summarized in Table (6). Following

Sequence of importance In terms of the strength of the impact	Sig.	T	Beta	F	R Square	Independent variable	Dependent variable
2	**.003**	**-4.323**	**-.837**	**18.691**	**.700**	**Asset-liability gap**	**Y2**
1	**.001**	**-5.040**	**-.872**	**25.404**	**.761**	**Relative gap**	
4	**.093**	**-1.904**	**-.558**	**3.625**	**.312**	**Interest sensitivity gap**	
3	**.026**	**2.718**	**.693**	**7.385**	**.480**	**Net interest margin**	
1	**.003**	**-4.322**	**-.837**	**18.677**	**.700**	**Asset-liability gap**	**Y3**

2	**.003**	**-4.168**	**-.827**	**17.376**	**.685**	**Relative gap**	
4	**.127**	**-1.702**	**-.515**	**2.895**	**.266**	**Interest sensitivity gap**	
3	**.010**	**3.337**	**.763**	**11.135**	**.582**	**Net interest margin**	

Source: Prepared by the researcher based on the results of the statistical program SPSS vr.24 It is clear that the value of the impact parameter for the assets and liabilities gap reached -0.837, with a significant value (sgi) equal to (0.003). This value is less than the significance level assumed by the researcher, which is 5%. This indicates that there is an inverse effect of the assets and liabilities gap on the rate of return on equity, and it amounted to The value of the coefficient of determination is 0.70, and this value indicates that 70% of the change in the rate of return on equity has been explained by the assets and liabilities gap, and the remaining percentage is due to other factors.

The value of the impact parameter for the relative gap reached -0.872, with a significant value (sgi) equal to (0.001). This value is higher than the significance level assumed by the researcher, which is 5%. This indicates that there is an effect of the relative gap on the rate of return on equity, and the value of the coefficient of determination was 0.76. This value indicates that 76% of the change in the rate of return on equity has been explained by the relative gap and the remaining percentage is due to other factors.

Figure (1) shows the importance of each independent variable in terms of its impact on each dependent variable, as the graph represents the t-test values for each risk indicator:

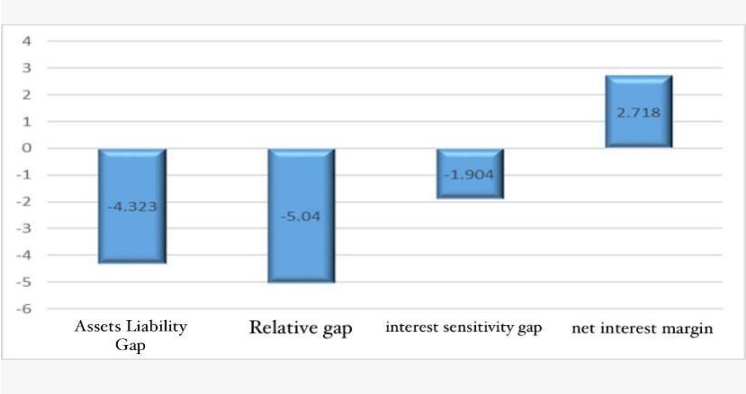

Figure (1) t-test values for the effect of independent variables on the dependent variables of the Bank of Baghdad

2- Discussion and analysis of hypotheses for Sumer Commercial Bank:

B- Measuring the effect of (X1,X2) on (Y1,Y2) for Sumer Commercial Bank

The researcher conducted an analysis of the regression model (impact) For two indicators of interest rate risk (asset-liability gap, and relative gap)and their impact on the adequacy of the capital owned by the Bank of Sumer Commercial Bank Using the statistical program SPSS vr.24, the results were summarized in Table (7) as follows

Table (7) Results of the regression model of interest rate risk indicators on the banking performance indicators of Sumer Commercial Bank

Sequence of importance In terms of the strength of the impact	**Sig.**	**T**	**Beta**	**F**	**R Square**	**Independent variable**	**Dependent variable**
4	**.669**	**-.444**	**-.155**	**.197**	**.024**	**Asset-liability gap**	**Y2**
1	**.013**	**-3.157**	**-.745**	**9.964**	**.555**	**Relative gap**	
2	**.055**	**-2.246**	**-.622**	**5.043**	**.387**	**Interest sensitivity gap**	
3	**.197**	**1.409**	**.446**	**1.984**	**.199**	**Net interest margin**	
4	**.639**	**-.488**	**-.170**	**.238**	**.029**	**Asset-liability gap**	**Y3**
1	**.011**	**-3.282**	**-.757**	**10.768**	**.574**	**Relative gap**	
2	**.048**	**-2.330**	**-.636**	**5.428**	**.404**	**Interest sensitivity gap**	
3	**.182**	**1.461**	**.459**	**2.135**	**.211**	**Net interest margin**	

Source: Prepared by the researcher based on the results of the statistical program SPSS vr.24

It is clear that the value of the impact parameter for the assets and liabilities gap reached -0.553, with a significant value of sig. Equal to 0.097, and this value is higher than the significance level assumed by the researcher, which is 5%. This value indicates that there is no effect of the asset-liability gap on the adequacy of the capital owned. The

value of the coefficient of determination was 0.30, and this value indicates that 30% of the change in capital adequacy The holding is explained by the asset-liability gap and the remaining proportion is due to other factors.

The value of the effect parameter for the relative gap was -0.623, with a significant value of sig. Equal to 0.054, and this value is higher than the significance level assumed by the researcher, which is 5%. This value indicates that there is no effect of the relative gap in the adequacy of the owned capital. The value of the coefficient of determination was 0.38, and this value indicates that 38% of the change in the adequacy of the owned capital This may be explained by the relative gap and the remaining percentage is due to other factors.

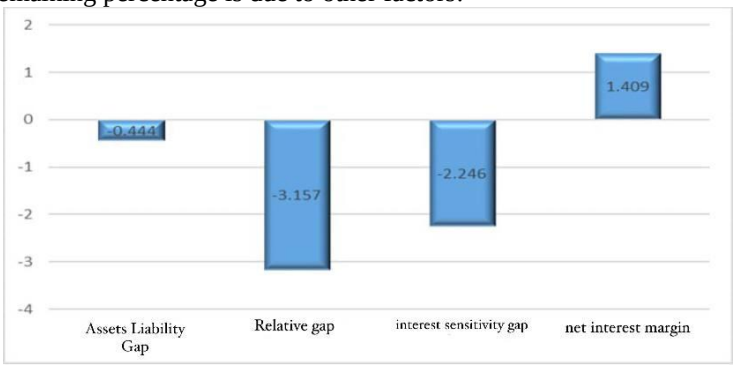

Figure (2) t-test values for the effect of independent variables on the dependent variables of the Sumer Commercial Bank

3- Discussing and analyzing the hypotheses of the Iraqi Credit Bank

A- Measuring the effect of (X1,X2) on (Y1,Y2) for the Iraqi Credit Bank

The researcher conducted an analysis of the regression model (impact) of the risk indicators (assets and liabilities gap, and the relative gap) and their impact on the banking performance indicators of the Credit Bank of Iraq using the statistical program SPSS vr.24. The results were summarized in the following table:

Table (8) Results of the regression model of interest rate risk indicators on the banking performance indicators of the Credit Bank of Iraq

Sequence of importance In terms of the strength of the impact	Sig.	T	Beta	F	R Square	Independent variable	Dependent variable
3	.025	-2.742	-.696	7.517	.484	Asset-liability gap	Y2
1	.000	-7.975	-.942	63.607	.888	Relative gap	
2	.001	-5.072	-.873	25.726	.763	Interest sensitivity gap	
4	.967	-.043	-.015	.002	.001	Net interest margin	
3	.010	-3.369	-.766	11.352	.587	Asset-liability gap	Y3
1	.000	-9.181	-.956	84.284	.913	Relative gap	
2	.000	-6.056	-.906	36.681	.821	Interest sensitivity gap	
4	.824	.230	.081	.053	.007	Net interest margin	

Source: Prepared by the researcher based on the results of the statistical program SPSS vr.24

It is clear that the value of the impact parameter for the assets and liabilities gap amounted to -0.696, with a significant value (sig) equal to (0.025). This value is less than the level of significance assumed by the researcher, which is 5%. This value indicates the existence of an inverse effect of the assets and liabilities gap on the rate of return on equity, and the value of the coefficient was determination is 0.48, and this value indicates that 48% of the change in the rate of return on equity has been explained by the assets and liabilities gap, and the remaining percentage is due to other factors.

The value of the effect parameter for the relative gap was -0.942, with a significant value (sig) equal to (0.000). This value is less than the significance level assumed by the researcher, which is 5%. This value indicates the presence of an effect. The inverse of the relative gap in the rate of return on equity, the value of the coefficient of determination was 0.88, and this value indicates that 88% of the change in the rate of return on equity was explained by the relative gap and the remaining percentage is due to other factors.

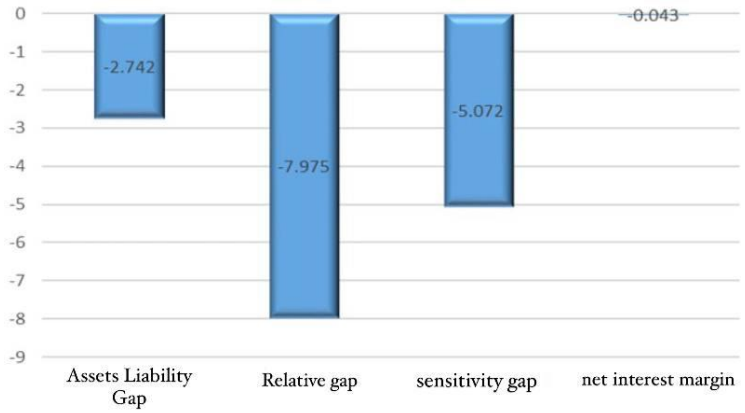

Figure (3) t-test values for the effect of independent variables on the dependent variables of the Iraqi Credit Bank

4- Discussion and analysis of hypotheses for the Commercial Bank of Iraq:

A- Measuring the effect of (X1, X2) on (Y1,Y2) for the Commercial Bank of Iraq

The researcher conducted an analysis of the regression model (impact) of the risk indicators (assets and liabilities gap, and the relative gap), and their impact on the adequacy of the capital owned by the Commercial Bank of Iraq using the statistical program SPSS vr.24. The results were summarized in the following table (9):

Table (9) Results of the regression model of interest rate risk indicators on the banking performance indicators of the Commercial Bank of Iraq

Sequence of importance In terms of the strength of the impact	Sig.	T	Beta	F	R Square	Independent variable	Dependent variable
3	.056	2.233	.620	4.985	.384	Asset-liability gap	Y2
2	.027	2.702	.691	7.303	.477	Relative gap	
1	.017	2.989	.726	8.932	.528	Interest sensitivity gap	
4	.803	.258	.091	.067	.008	Net interest margin	
3	.056	2.228	.619	4.963	.383	Asset-liability gap	Y3
2	.027	2.694	.690	7.260	.476	Relative gap	
1	.018	2.981	.725	8.886	.526	Interest sensitivity gap	
4	.795	.268	.094	.072	.009	Net interest margin	

Source: Prepared by the researcher based on the results of the statistical program SPSS vr.24

It is clear that the value of the impact parameter for the assets and liabilities gap reached 0.620, with a significant value (sig) equal to (0.056), and this value is higher than the level of significance assumed by the researcher, which is 5%. This value indicates that there is no effect of the assets and liabilities gap on the rate of return on equity, and it reached a value The coefficient of determination is 0.38, and this value indicates that 38% of the change in the rate of return on equity has been explained by the assets and liabilities gap, and the remaining percentage is due to other factors.

The value of the effect parameter for the relative gap was 0.691, with a significant value (sig) equal to (0.027), and this value is less than the significance level assumed by the researcher, which is 5%. This value indicates the presence of A direct effect of the relative gap in the rate of return on equity. The value of the coefficient of determination was 0.47. This value indicates that 47% of the change in the rate of return on equity was explained by the relative gap and the remaining percentage is due to other factors.

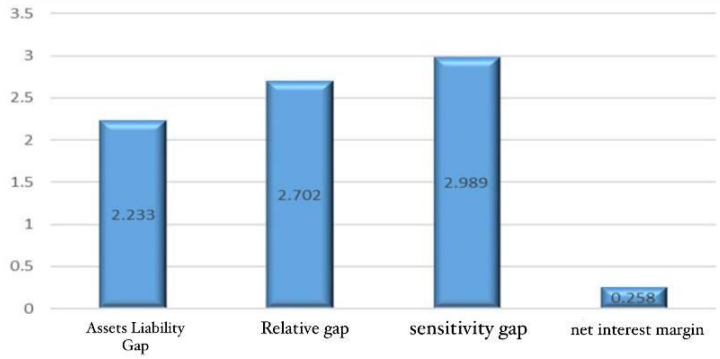

Figure (4) t-test values for the effect of independent variables on the dependent variables of the Commercial Bank of Iraq

5- Discussion and analysis of data for Khaleej Commercial Bank:

A- Measuring the effect of (X1, X2) on (Y1,Y2) for Khaleej Commercial Bank

The researcher conducted an analysis of the regression model (impact) risk indicators (assets and liabilities gap, and relative gap), and their impact on the banking performance indicators of Al Khaleej Commercial Bank using the statistical program SPSS vr.24. The results were summarized in the following table:

Table (10): Results of the regression model of interest rate risk indicators on the banking performance of Al Khaleej Commercial Bank

Sequence of importance In terms of the strength of the impact	Sig.	T	Beta	F	R Square	Independent variable	Dependent variable
3	**.336**	**-1.023**	**-.340**	**1.048**	**.116**	**Asset-liability gap**	**Y2**
2	**.184**	**-1.454**	**-.457**	**2.114**	**.209**	**Relative gap**	
1	**.058**	**-2.216**	**-.617**	**4.911**	**.380**	**Interest sensitivity gap**	
4	**.621**	**.515**	**.179**	**.265**	**.032**	**Net interest margin**	
3	**.112**	**-1.788**	**-.534**	**3.197**	**.286**	**Asset-liability gap**	**Y3**
2	**.058**	**-2.216**	**-.617**	**4.912**	**.380**	**Relative gap**	
1	**.014**	**-3.108**	**-.740**	**9.658**	**.547**	**Interest sensitivity gap**	
4	**.399**	**.890**	**.300**	**.792**	**.090**	**Net interest margin**	

Source: Prepared by the researcher based on the results of the statistical program SPSS vr.24

It is clear that the value of the impact parameter for the assets and liabilities gap reached -0.340, with a significant value of sig. Equal to 0.336, and this value is higher than the significance level assumed by the researcher, which is 5%. This value indicates that there is no effect of the asset-liability gap on the rate of return on equity. The value of the coefficient of determination was 0.11, and this value indicates that 11% of the change in the rate of return On equity has been explained by the asset-liability gap and the remaining proportion is due to other factors.

The value of the effect parameter for the relative gap was -0.457, with a significant value of sig. Equal to 0.184, and this value is higher than the significance level assumed by the researcher, which is 5%. This value indicates that there is no effect of the relative gap in the rate of return on equity. The value of the coefficient of determination was 0.20, and this value indicates that 20% of the change in the rate of return on equity Property rights is explained by the relative gap and the remaining percentage is due to other factors.

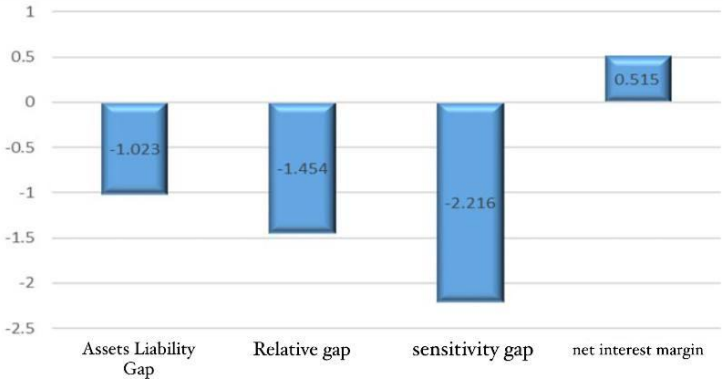

Figure (5) t-test values for the effect of independent variables on the dependent variables of the Khaleej Commercial Bank

Conclusions and Recommendations

First: Conclusions

1- The banks in the study sample describe their assets according to the sensitivity to changes in interest rates in order to avoid exposing the value of assets and liabilities to a sharp decline in the event of a negative change in interest rates.

2- We conclude from the analytical aspect that it is possible to divide the banks according to the interest rate risk (the interest rate sensitive gap), as the Bank of Baghdad came in first place in terms of high interest rate risk, and then (the Commercial Bank of Iraq, the Mosul Investment Bank, the Development Bank, the Middle East Bank, and the Sumer, the Credit Bank, the Gulf Bank, the Investment Bank, and the National Bank of Iraq) respectively.

3- 3- We notice from the analytical side that interest rate-sensitive assets were larger than
interest rate-sensitive liabilities in most years and in most of the banks in the study sample, and this was clearly evident in the positive gap between assets and liabilities.

Secondly: Recommendations

1- The banks (Baghdad, the Commercial Bank of Iraq, the Mosul Bank, and the Development Bank) must take the necessary measures to reduce interest rate risk by improving the relative gap between assets and liabilities by reducing interest rate-sensitive liabilities to the level that ensures a reduction in risk.

2- Banks (Baghdad, Sumer, and Iraqi Credit) should work to improve the rate of return on equity by increasing net income by granting more loans and reducing operating expenses.

3- Do not underestimate any form of risk, especially since financial markets are highly volatile. This requires banks to create units that can predict the paths and trends of future interest rates, which requires banks to rely on a defensive method in dealing with the change in interest rates.

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