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The importance of financial ratios in determining profit distribution policies for a sample of Iraqi banks

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ABSTRACT

This study aims primarily to demonstrate the importance of four types of financial ratios, namely profitability ratios, turnover rates, activity cost ratios, and financial leverage ratios, as well as to explain their impact on cash dividend distribution policies for a sample of Iraqi banks traded on the Iraqi Stock Exchange for the period (2010 - 2017). The number of banks was chosen from the Iraq Stock Exchange (13 banks), and the data for the aforementioned time period was taken according to the bulletins and financial statements issued by the official website of the market. After conducting statistical analysis of the data using the statistical package program (SPSS), where the sample size used was (104) observations, and the number of independent variables was (9), which represent the financial ratios, it was found that there is a significant impact of these financial ratios on determining profit distribution policies, and the study recommended to the specialists In the financial field, using these ratios and focusing on them in the financial analysis aspect.

Keywords : financial ratios, Profit distribution, Iraqi banks

1.1 introduction

Financial ratios are considered very important factors in determining the regulatory framework for financial institutions, as most studies rely on financial analysis methods to find out the reasons for failure and success of financial facilities and institutions. Senior management seeks to achieve the maximum possible profits and avoid risks that lead to failure or stumble. Dividend distribution policy receives great attention from officials because of its impact on financial positions. Dividend distribution policies include all methods and methods through which we can divide cash profits into reserved profits or other profits that are distributed to shareholders. Cash dividends express the return that shareholders receive as compensation for the organization's shares and investment issues. Also, undistributed profits represent a primary source of financing for the facility. Dividend distribution policies focus on the monetary benefit of companies and investors while ensuring shareholders' rights. This study indicates the importance of financial ratios in developing clear policies and plans for distributing cash prof. A sample was drawn from Iraqi banks

registered in the Iraqi Stock Exchange, and the data was then analyzed using statistical analysis software (SPSS). A multiple regression model was used to study relationships between variables, calculate correlations, and then estimate model parameters to obtain
results.

1.2 the study Problem

This study addresses a serious problem in the field of trading and financial investment, which is the difficulty of understanding policies for distributing profits in Iraqi banks and banks based on financial analysis using financial ratios and indicators affecting this
field.

1.3 Purpose of the study

The study aims to measure the impact of selected financial ratios on cash dividend distribution policies for a sample of Iraqi banks.

1.4 Research hypothesis

In this study, we test the null hypothesis that there is no effect of the financial ratios under study on the profit distribution policy in a sample of Iraqi banks, meaning that there are no significant differences between the means of the independent variables against the alternative hypothesis that states that there is at least one or more financial ratios. It affects the profit distribution policies of the Iraqi banks under study and means that there are statistically significant differences between the averages of the independent variables, as shown below:

$H_0: \mu_1 = \mu_2 = \cdots = \mu_K$

$H_1: \mu_1 \neq \mu_2 \neq \cdots \neq \mu_K$

Whereas:

$(\mu_1, \mu_2 \ldots \mu_K)$: General averages of the population

(k): The number of independent variables

2.1 Study variables

Previous studies, especially in the field of financial analysis, show that there are many financial ratios and indicators that affect profit distribution policies in financial institutions and institutions. We chose a set of these ratios, which we considered to be independent variables for the model, which are as follows.

Profitability ratios include:

The ratio (net profits to capital) is classified as a profitability ratio and is symbolized by (X_1)

The ratio (net income to shareholders' equity) is symbolized by (X_2)

Turnover rates include:

Total assets turnover rate, which is one of the turnover rates and is symbolized The turnover rate of current assets is also classified as turnover rates by (X_3). and is denoted (X_4).

Activity cost ratios include:

The ratio (revenues to total deposits) is classified as activity costs and is symbolized by (X_5).

The ratio of (expenses to revenues) and we symbolize it (X_6)

The ratio of (expenses to total deposits) and we symbolize it (X_7)

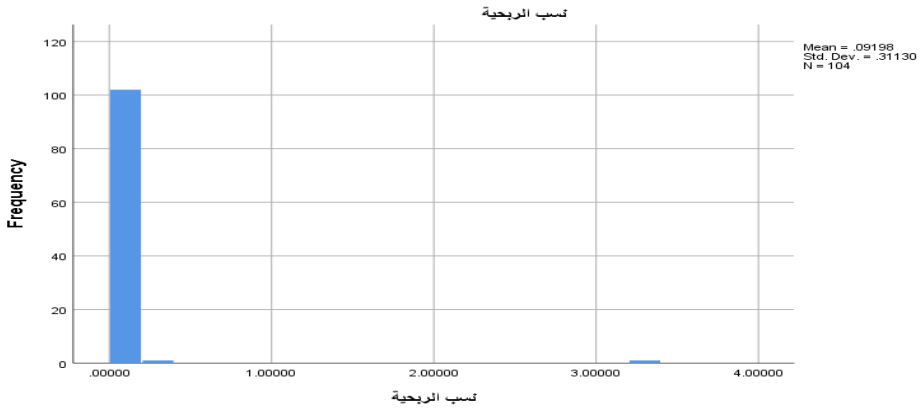
Leverage ratios include:

The ratio of deposits to (capital + reserves) and we symbolize it (X_8)

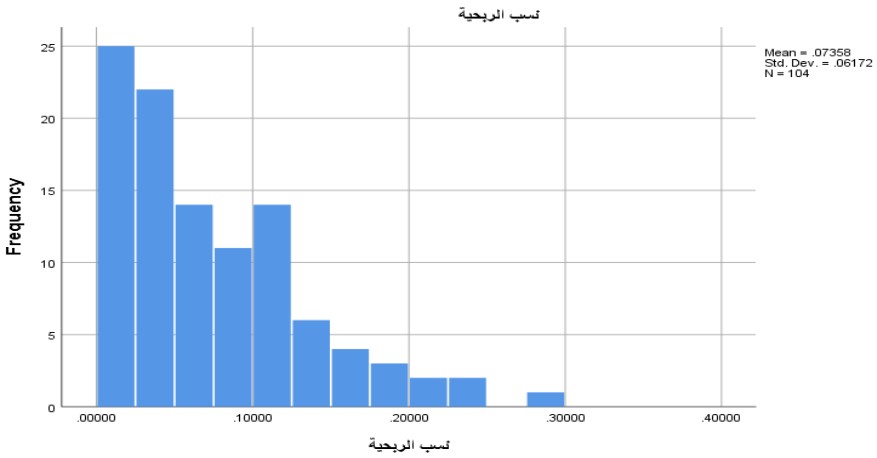
The ratio of (capital + reserves) to assets, and we symbolize it (X_9)

2.2 Data representation of variables

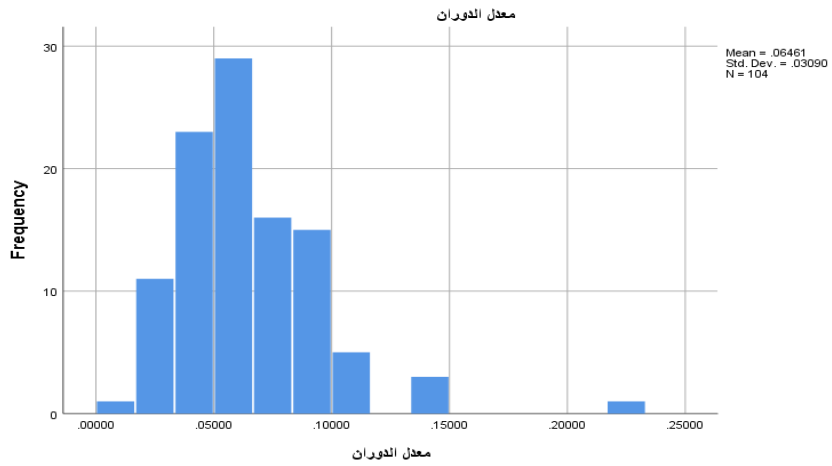
The data has been plotted and these are models of some of the variables under study:



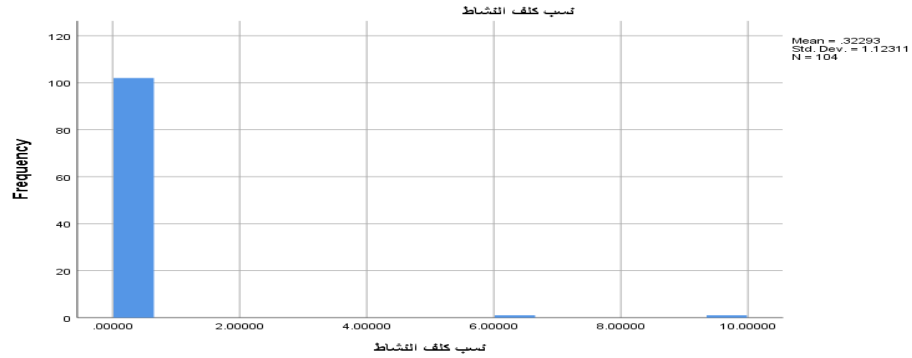
Shape (1): the data of (x_1)



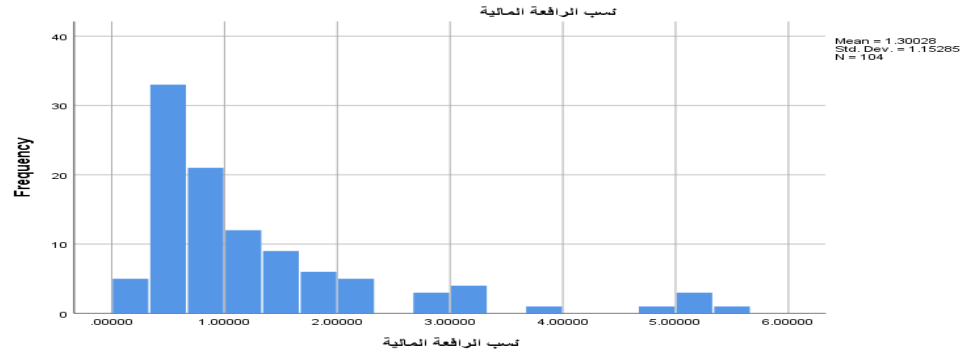
Shape (2): the data of (x_2)



Shape (3): the data of (x_3)



Shape (4): the data of (x_4)



Shape (5): the data of (x_5)

2.3 The model of study

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \beta_9 X_9 + \varepsilon_i$$

Where:

(X_1, X_2 ,…,X_9) are the independent variables.

($\beta_0, \beta_1, \dots, \beta_9$) Are the coefficients

2.4 Study Approach

In order to reach the objectives required to be achieved by the research, the researcher relied on the descriptive analytical approach by studying the administrative phenomena and financial conditions of the banks sampled in the study. Data on the study sample was collected through bulletins and financial statements issued by the Iraq Stock Exchange (www.isx-iq.net), summarized, tabulated, and analyzed to reach the final results. As for statistical analysis methods, we relied on the multiple regression analysis model and analyzed the data using the well-known statistical program (SPSS), and the results were compared based on well-known statistical indicators such as (arithmetic mean, standard deviation, coefficient of variation, flatness and skewness, correlation coefficient between
variables).

2.5 Study population and sample

This study was applied to a random sample of the most traded Iraqi banks in the Iraqi Stock Exchange for the period from (2010-2017), where the number of selected banks was (13) banks, which included (the Investment Bank, the National Bank of Iraq, the Bank of Baghdad, and the Bank of Assyria). , Bank of Babel, Sumer Bank, Commercial Bank, Elaf Bank, Gulf Bank, Iraqi Bank, National Bank of Iraq, Credit Bank and Al-Mansour Bank), so the size of the sample used was (104) views. Data collection was based on bulletins and financial statements issued by the official website of the Iraq Stock Exchange, and the chosen ratios were those that were focused on in the market's annual reports, as well as those mentioned in previous studies in the field of financial analysis.

2.6 Testing the study hypotheses

2.6.1 Descriptive statistics and analysis of results

The data under study was analyzed using the well-known statistical program (SPSS), where the sample size was (104) observations for the time period (2010-2017). Some descriptive and analytical statistical methods were used to extract the results. Descriptive statistics and measures of central tendency such as arithmetic averages for independent variables were calculated. The standard deviation and the lowest and highest values, as well as using the multiple regression method to study the relationship between the independent variables and the dependent variable and estimating the parameters of the mathematical model by calculating the coefficient of determination and the correlation matrix, as well as using t-tests to determine the importance of the independent variable over the dependent variable and also testing the analysis of variance (F). The results of the analysis will be presented as follows.

2.6.2 Descriptive statistics

Measures of central tendency were calculated, such as the arithmetic mean, standard deviation, and standard error, as well as the maximum value and minimum value for the sample studied, and the results were as in Table (1).

Statistics

		x_1	X_2	X_3	X_4	X_5	X_6	X_7	X_8	X_9
N	Valid	104	104	104	104	104	104	104	104	104
	Missing	62	62	62	62	62	62	62	62	62
Mean		0.0735827	0.0919843	0.0646134	0.0675357	0.3229273	0.5387051	0.0889874	1.3002753	0.4731956
Std. Error of Mean		0.00605261	0.0305252 4	0.0030304 0	0.0030363 6	0.1101299 6	0.0213164 8	0.0086433 5	0.1130458 0	0.018754 02
Std. Deviation		0.06172474	0.3112976 3	0.0309041 5	0.0309648 7	1.1231096 6	0.2173863 4	0.0881452 0	1.1528454 6	0.191254 21
Minimum		0.00119	0.00129	0.00200	0.00210	0.02600	0.17229	0.00800	0.14900	0.04641

Maximum	0.29684	3.20000	0.23259	0.23857	9.94000	1.48300	0.74740	5.55000	1.26760
Sum	7.65260	9.56637	6.71979	7.02372	33.58443	56.02534	9.25469	135.22863	49.21234

Table (1) Measures of central tendency

It is clear from Table (1) that the highest financial value is for the variable (X5), where it reached (9.94000), and the lowest value in the data is for the variable (X1), which reached (0.00119). The arithmetic average was for the financial leverage ratio for the variable (x8), where its value reached (1.3002753). The lowest arithmetic mean was for the turnover rate for the variable (X4), where its value was (0.0646134), while the highest value for the standard deviation was for the variable (x8), where its value was (1.15284546), and the lowest value for the standard deviation was for the variable (x3), with a value of (0.03090415).

2.7 Correlation matrix

The correlation matrix between the variables is calculated using the statistical analysis program (SPSS) The results were as in the following table.

table (2) the correlation matrix

		X1	X2	X3	X4	X5	X6	X7	X8	X9
X1	Pearson Correlation	1	0.091	.470**	.387**	-0.090	-.536-**	-.240-*	.267**	-.395-**
	Sig. (2-tailed)		0.360	0.000	0.000	0.361	0.000	0.014	0.006	0.000
	N	104	104	104	104	104	104	104	104	104
X2	Pearson Correlation	0.091	1	0.025	0.010	.831**	-0.069	-0.070	0.020	-0.051
	Sig. (2-tailed)	0.360		0.801	0.921	0.000	0.483	0.482	0.839	0.608
	N	104	104	104	104	104	104	104	104	104
X3	Pearson Correlation	.470**	0.025	1	.970**	-0.049	-.199-*	0.177	-0.140	.215*
	Sig. (2-tailed)	0.000	0.801		0.000	0.624	0.043	0.072	0.156	0.028
	N	104	104	104	104	104	104	104	104	104
X4	Pearson Correlation	.387**	0.010	.970**	1	-0.049	-0.155	.230*	-0.168	.254**
	Sig. (2-tailed)	0.000	0.921	0.000		0.618	0.117	0.019	0.088	0.009
	N	104	104	104	104	104	104	104	104	104

X5	Pearson Correlation	-0.090	.831**	-0.049	-0.049	1	0.058	0.013	-0.111	0.116
	Sig. (2-tailed)	0.361	0.000	0.624	0.618		0.561	0.898	0.261	0.240
	N	104	104	104	104	104	104	104	104	104
X6	Pearson Correlation	-.536-**	-0.069	-.199-*	-0.155	0.058	1	.322**	-0.152	.237*
	Sig. (2-tailed)	0.000	0.483	0.043	0.117	0.561		0.001	0.123	0.016
	N	104	104	104	104	104	104	104	104	104
X7	Pearson Correlation	-.240-*	-0.070	0.177	.230*	0.013	.322**	1	-.355-**	.340**
	Sig. (2-tailed)	0.014	0.482	0.072	0.019	0.898	0.001		0.000	0.000
	N	104	104	104	104	104	104	104	104	104
X8	Pearson Correlation	.267**	0.020	-0.140	-0.168	-0.111	-0.152	-.355-**	1	-.624-**
	Sig. (2-tailed)	0.006	0.839	0.156	0.088	0.261	0.123	0.000		0.000
	N	104	104	104	104	104	104	104	104	104
X9	Pearson Correlation	-.395-**	-0.051	.215*	.254**	0.116	.237*	.340**	-.624-**	1
	Sig. (2-tailed)	0.000	0.608	0.028	0.009	0.240	0.016	0.000	0.000	
	N	104	104	104	104	104	104	104	104	104
****. Correlation is significant at the 0.01 level (2-tailed).**										
***. Correlation is significant at the 0.05 level (2-tailed).**										

We notice from the table above that there is a clear difference in the correlation coefficients between the variables in terms of direction and strength of the relationship. For example, let us take the variables (x_5, x_6, x_7), Its relationship is of the inverse (negative) type with the variable (X_1), while the variable (X_1) has a direct (positive) relationship with each of the variables (x_2 x_3 x_4 x_8), In terms of the strength of the relationship, the highest correlation strength was between the two variables (x_3 x_4), where the correlation coefficient reached (0.97), which is a direct relationship. We also note that the lowest correlation value was between the two variables (x_2 x_4), where the correlation coefficient value reached
(0.01).

2.8 Significant relationship between variables

We use a one-sample t-test to test the hypothesis that there is a statistically significant effect for each of the independent variables on the dependent

variable. Therefore, the test was conducted with a significance level of (0.05) and a sample size of (104). The test was two-sided and the calculated values are as in the table below.

Table (3) One-sample t-test

One-Sample Test

var.	Test Value = 0					
	t	Df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
x_1	12.157	103	0.000	0.07358267	0.0615788	0.0855866
x_2	3.013	103	0.003	0.09198429	0.0314447	0.1525239
x_3	21.322	103	0.000	0.06461340	0.0586033	0.0706235
x_4	22.242	103	0.000	0.06753574	0.0615138	0.0735576
x_5	2.932	103	0.004	0.32292726	0.1045105	0.5413441
x_6	25.272	103	0.000	0.53870514	0.4964289	0.5809814
x_7	10.295	103	0.000	0.08898744	0.0718454	0.1061295
x_8	11.502	103	0.000	1.30027528	1.0760756	1.5244750
x_9	25.232	103	0.000	0.47319559	0.4360014	0.5103898

We notice from the table above that the highest value of the t-statistic is for the variable (X6), where its value was (25.272), and that the lowest value calculated for the test statistic was for the variable (X5), with a value of (2.932), and compared to the tabular t-value, with a degree of confidence of (0.95). We note that there are significant differences and an impact on the dependent variable.

To know the strength of the mathematical model in interpreting the results and its suitability to the data under study, the researcher calculated the coefficient of determination and the coefficient of determination corrected to increase accuracy, and the results were as in the table below.

Table 4: Coefficient of determination and corrected coefficient of determination

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate

1	.782a	0.611	0.578	0.04007631

We note that the value of the coefficient of determination is (0.811), while the value of the corrected coefficient of determination was (0.878). This means that the mathematical model interpreted the data at a rate of (0.878), which is the suitability rate of the model for the study, with a standard error of(0.04).

2.9 Test for differences between means

To test the significant differences between the means of the independent variables, the following hypothesis is tested:

H_0: $\mu_1 = \mu_2 = \ldots = \mu_k$

H_1: $\mu_1 \neq \mu_2 \neq \ldots \neq \mu_k$

The (F) test is used through the analysis of variance (ANOVA) table using the statistical analysis program (SPSS) and the results are as in Table (5):

Table (5): represents the analysis of variance (ANOVA) table

ANOVA[a]

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	0.240	8	0.030	18.666	.000[b]
	Residual	0.153	95	0.002		
	Total	0.392	103			

The results in the table above showed that the calculated value of (F) is equal to (18.666), and compared with the tabulated value with degrees of freedom (n-1, k-1,0.05), we note that the calculated value is greater than the tabulated value. Therefore, we reject the null hypothesis that there are no significant differences. between the variables and we accept the alternative hypothesis, meaning that there are statistically significant differences between the variables.

2.10 Estimating model parameters

To estimate the parameters of the model under study, the variables under study were entered into the statistical package program (SPSS) with a sample size of (104) and the number of independent variables (9). The results were as in Table (6).

Table (6): Coefficients for the regression model and estimation of model parameters

	B	Std. Error	t	Sig.
(Constant)	0.118	0.021	5.642	0.000
x_1	0.018	0.028	0.781	0.38
x_2	0.020	0.024	0.838	0.404
x_3	2.217	0.548	4.046	0.000
x_4	-1.265	0.551	-2.296	0.024
x_5	-0.005	0.007	-0.749	0.456
x_6	-0.084	0.021	-4.067	0.000
x_7	-0.043	0.052	-0.813	0.418
x_8	0.001	0.004	0.166	0.869
x_9	-0.115	0.028	-4.084	0.000

After obtaining the estimation results using the Ordinary Least Squares (OLS) method, the model becomes as follows:

$$\hat{y} = 0.118 + 0.018x_1 + 0.02x_2 + 2.217x_3 - 1.265x_4 - 0.005x_5 - 0.084x_6 - 0.043x_7 + 0.001x_8 - 0.115x_9$$

We note that the highest value was for the parameter (β3 = 2.217), which is the coefficient of the variable (x_3), which represents the turnover rate, and thus this variable has a significant impact on the value of the dependent variable in the direct direction. As for the lowest value, it was for the parameter (β8 = 0.001), which is the coefficient of the variable (x_8). which represents the financial leverage ratio, has the least influence among the independent variables and in a direct
direction.

3. Conclusions and recommendations

The study concluded that the model used contributed to the interpretation of (80%) of the data under study. This indicates that (80%) of profit distribution policies are explained or affected by the financial ratios mentioned in this study, while the remaining percentage is due to other external and internal factors. We also noticed that the effect of the ratios varies, with the highest

effect being the turnover ratio, followed by the other variables, with the lowest effect value being the financial leverage
ratio.

The researcher recommends that specialists in the financial field use the financial ratios mentioned in this study for the purpose of determining cash dividend distribution policies, as well as increasing the sample size and increasing some other variables such as market value and others.

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