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EFFECT OF DEBT STRUCTURE ON PROFITABILITY TOOLS (ANALYTICAL STUDY: A SAMPLE OF IRAQI INDUSTRIAL FIRMS)

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ABSTRACT
This study aims to know the impact of the corporate debt structure on its profitability tools. The industrial sector firms operating in the Iraq Stock Exchange were selected as one of the important sectors as a community for the study. A sample of 10 industrial firms was chosen for the period (2014-2018), and the study problem focused That most firms suffer from high cost of capital as a result of the lack of prior planning to develop an optimal financial structure commensurate with its financial capabilities, by which the firm can reach safety through the use of a structure that includes the ratio of debt and equity from which the firm can achieve a higher rate of return From the cost of funding sources and with less risks, and then provide a theoretical and cognitive framework for the variables of the study, and use the descriptive analytical method, as the statistical programs (SPSS-26) and (Excel-21) were used to analyze the effect of independent variables (debt structure) on the dependent variables (profitability tools) to reach a set of results by testing the hypotheses of the study whether they were accepted or not, Multiple regression was used to test the effect between the variables, and a number of conclusions were reached, the most important of which is that the debt structure has a positive effect if the rate of return for profitability tools(return on investment, return on equity and revenue power) is higher than the cost of debt for investments that were financed with debt. And vice versa, as she referred to a number of recommendations, the most important of which is paying attention to raising the debt ratio in the financial structure for the purpose of benefiting from tax savings and achieving higher returns than the cost of debt to achieve the optimal financial structure.

KEYWORDS: Debt structure, profitability tools.

INTRODUCTION

First topic: the methodology of study:

First: The problem of study: Most firms suffer from a high cost of capital as a result of the lack of prior planning from the industrial firms to set an optimal financial structure commensurate with their financial capabilities, (determining the ratio of debt and equity) that the firm reaches the ratio of debt use and equity that the firm achieves A rate of return that exceeds the cost of funds sources and with less risk. Therefore, it is imperative for industrial firms to choose their optimal financial structure to limit or avoid losses in the future. Most industrial firms resort to debt as it is less expensive than issuing the right of ownership and can achieve returns that exceed the cost of debt. Therefore, it can be formulated the main question, according to the problem of study, is: Is there an impact of the debt structure of firms through their financial structure on their profitability tools, and the following sub-questions emerge from it:

- Is there an effect of debt structure (total debt to total equity X1 and total debt to total assets X2) on the firm's profitability tool (rate of return on investment Y1).
- Is there an effect of debt structure (total debt to total equity X1 and total debt to total assets X2) on the firm's profitability tool (rate of return on equity Y2).
- Is there an effect of debt structure (total debt to total equity X1 and total debt to total assets X2) on the firm's profitability tool (basic revenue power Y3).

Second: The importance of study: The importance of the study lies in its theoretical and practical aspects. In the first, its importance stems from the fact that it helps to identify the percentage of debt of the firm in its financial structure, which is less expensive than the right of ownership, taking into account the degree of risk that affects the profitability of the industrial firms under study. The second one shows the extent of the relationship between the debt ratio and the profitability of industrial firms through the use of the three profitability tools. This gives importance to this study by analyzing the financial structure and the amount of debt that affects the profitability of firms.

Third: Study Objectives: The study aims to achieve the following:

1. Experimental testing whether debt tools have an effect on the three profitability tools.
2. Identify the most important debt tools that affect profitability tools.
3. Statement of the effect of debt tools X1 and X2 on the rate of return on investment Y1.
4. Find out the effect of debt tools X1 and X2 on the rate of return on equity Y2.
5. Knowing the effect of debt tools X1 and X2 on the basic revenue strength Y3.

Fourth: Study Hypotheses: Depending on the questions in the study problem, the following hypotheses were formulated:

1. The first hypothesis: There is a significant effect of debt tools (total debt to total equity X1 and total debt to total assets X2) on the profitability tool (rate of return on investment, Y1).
2. The second hypothesis: There is a significant effect of debt tools (total debt to total equity X1 and total debt to total assets X2) on the profitability tool (rate of return on equity Y2).
3. The third hypothesis: There is a significant effect of debt tools (total debt to total equity X1 and total debt to total assets X2) on the profitability tool (basic revenue power Y3).

Fifth: The limits of study: The limits of study are divided into:

1. Place limits: The study sample firms are listed in the Iraq Stock Exchange, which is located in Baghdad.
2. Temporal limits: The study period is five years from 2014-2018.
3. Knowledge limits study variables (debt structure as an independent variable and profitability toolsas a dependent variable.

Sixth: The financial and statistical methods used: In order to test the hypotheses of the study and achieve its objectives, a number of statistical and financial methods were used, the most

important of which are the arithmetic mean, standard deviation, and multiple regression analysis, as well as tests of significance through the use of (EXCEL-21 and SPSS) programs (AL-janabi, 2019, p. 28), Among the financial methods used are (Al-Amiri, 2013, p. 87); Brigham & Houston, 2009: 96)) ; (Brigham & Ehrhardt, 2014, p. 10) :

1. Ratio of total debt to total equity (X1): This ratio can be obtained by dividing the total debt on the total equity.

Ratio of total debt to total equity = Total debt / Total Common equity*100 %……..(1).

2. Ratio of total debt to total assets (X2): This ratio can be obtained by dividing the total debt on the total assets.

Ratio of total debt to total assets = total debt / total assets*100 %.....(2).

3. . The rate of return on investment (assets) (Y1): This rate can be obtained by dividing the net income on the total assets.

Return on Assets (ROA) = net income / total assets …….... (3).

4. Rate of Return on Equity (Y2): This rate can be obtained by dividing the net income on the equity

Return on Equity (ROE) = net income / equity ……..... (4)

5. Basic Earning Power (Y3): This ratio can be obtained by dividing operating profit on total assets.

Basic Earning Power (BEP) = EBET/ total assets …….. (5)

Seventh: Research Society and Sample: A sample consisting of (10) joint-stock firms operating in the industrial sector was selected from a community consisting of (25) industrial firms listed in the Iraq Stock Exchange for the period from 2014-2018. One of the justifications for selecting this sample is that it is listed in the market All of them have been since 2004, and they are large joint-stock firms, continuous without interruption, and have not been exposed to cases of bankruptcy or mergers with other firms. The percentage of the selected sample was about 40%, which is an acceptable percentage as a representative of society, as shown in Table (1).

Table (1) The industrial firms of the study sample listed on the Iraq Stock Exchange

N0	Firm's name	Code	Capital	Listing date
1	Baghdad Soft Drinks Firm	IBSD	177,333,333,333	2004
2	The Iraqi firm for the manufacture and marketing of dates	IIDP	17,250,000,000	2004
3	Al-Mansour Firm for Pharmaceutical Industries	IMAP	6,469,100,000	2004
4	Al-Kindi Firm for the production of vaccines and veterinary medicines	IKLV	5,940,000,000	2004
5	Modern Sewing Firm	IMOS	2,000,000,000	2004
6	Ready-to-wear production firm	IRMC	1,593,301,000	2004
	Iraqi Firm for Engineering Works	IIEW	1,500,000,000	2004
8	Baghdad Firm for the manufacture of packaging materials	IBPM	1,080,000,000	2004
9	The Iraqi Firm for Carpets and Furniture	IITC	500,000,000	2004
10	Modern Chemical Industries Firm	IMCI	180,000,000	2004

Source: prepared by the researcher based on the data of the financial statements of the study sample firms

Second topic: the philosophical and cognitive framework of study variables:

First: Concept of financial structure:

We must deal with the concept of financial structure considering debt as one of its foundations. Therefore, the financial structure includes a variety of funds that firms use to finance their investments, As this formation consists of sources of owned financing and sources of borrowed financing, as the owned funds include ordinary shares, preferred shares and retained earnings, while the sources of borrowed financing include bank loans, commercial credit and bonds, and these funds are classified in terms of maturity into long-term and short-term financing (Naceur & Goaied, 2002)and (López & Sánchez, 2007) indicated that the financial structure is used to compare between funding sources and the risks resulting from them, and the cost of each source. In this regard, (Martlan, 1997:37) mentioned the financial structure as how the firm finances its assets from external and internal sources, while (Mackay & Phillips, 2005)defines the financing structure as a variety of sources that the firm obtains to finance its investments. It includes all the paragraphs that make up the liabilities side and the right of ownership.

On the other hand, he mentioned (Ross, 1977) that the firms have the same operations, but their financial structures are different, their assets are different, and with different taxes, which leads to their net income being different, The financing structure decisions of firms have received special attention because of their significant impact on the firm's profitability (Cappa, et al, 2019:2). Therefore, the failure to take into account the cost and adherence to the entitlement of firms with regard to debt and property rights, which often hinders the growth of firms, as firms always seek to create a diversified combination of debt and property rights that lead to maximizing the wealth of shareholders (Yinusa, 2015) . When comparing the use of debt by firms to finance their assets and ordinary shares, we find that the debt option may have a tangible positive impact on the wealth of shareholders, if the ratio of debt to total assets, or to equity, is appropriate and not exaggerated. Also, the opportunities for firms to obtain debt for the purpose of financing their investments are not equal, as some firms do not rely heavily on debt, unlike other firms, This depends on the percentage of corporate indebtedness in its financial structure, the restrictions placed by lending firms, and the expected rate of return from using this debt (Al-Ardhi, 2013). Most firms have a targeted financial structure consisting of two parts, the first part represents debt and the other part represents equity, and as long as the firm is funded with an optimal mixture of debt and equity (retained earnings, a source of internal funding with a low cost) that the firm maintains, this leads to a reduction in marginal cost For capital, retained earnings are used to finance new investments. If these investments are large, meaning that the percentage of ownership is not enough, the firm must issue new shares with a higher cost than the internal funding source (retained earnings), and this leads to an increase in the cost of ownership and thus Marginal cost of capital (Brigham & Ehrhardt, 2005, pp. 622-623). And the firm that is able to maintain its optimal financial structure, in other words, maintains the percentage of both ownership and debt close to the target range, then its financing decisions are consistent with maximizing its value (AL-Janabi & et.al,2018: 2695).

The researcher believes that: firms should accurately define the parameters of the target financial structure and the amount of the percentage of each element that makes up this structure, and that firms should seek to achieve and maintain this structure as much as possible, as it is expected that the target structure will be chosen on the basis of the amount of its contribution In achieving the goal that the firm seeks to reach. It is increasing the wealth of shareholders, i.e. maximizing the value of the firm, so the firm should achieve a balance between return and risk to achieve this goal, i.e. achieving the return that shareholders get and the risks associated with this return, and what is

meant by balance is that the expected return that these shareholders receive is sufficient to compensate them for the risks that they may be exposed to in exchange for this return.

Second: Concept of debt structure:

The debt structure is called the debt ratio in the financial structure, that is, the extent to which the borrowing firms are able to achieve an increase in the return on equity (ROE) and the extent to which it is related to the financial structure. The greater the dependence on debt financing in financing the firm's investments, the greater the debt structure of the firm and its impact on achieving greater returns (profits) on investment (ROI) (Van Horne , 1980, p. 297). Debt structure: It is the amount used by the firm from the income securities. fixed (loans, bonds and preferred shares) in its capital structure (Brigham & Houston, 2009: 425), and the high debt ratio negatively affects the firm's flexibility in paying its obligations to others and the high debt ratio in the financial structure will oblige the firm to reduce its expenditures, especially in the field of research and development in order to provide cash liquidity to fulfill its financial obligations, and this in turn will negatively affect the firm's competitive position in the future (Reich, 1989, p. 99) , Debt financing is defined as the amount of increase in returns as a result of using borrowed money in the firm's business, and its impact will be positive on the return if the firm's management succeeds in exploiting the opportunities and investing the borrowed money at a rate of return that exceeds the interest paid on it, i.e. the debt is in favor of the firm if the rate of return is more than Investment is greater than the cost of debt and vice versa, and thus the increase in debt is associated with financial risks (Ross & David, 2002, p. 560).

The researcher believes that: there should be limitations when using debt, in the firm's financial structure, because the exaggeration of the use of debt by the financial management of firms and failure to take risk into account exposes the firm to great risks, in other words, the lack of balance between return and risk, i.e. return What the firm can obtain in the future, and the risks resulting from the use of this debt, will lead to the occurrence of major financial problems and a decrease in the level of its financial performance as a result, and the firm may reach a state of hardship and financial failure and then declare bankruptcy, which ultimately leads to the liquidation of its assets, so it should The management of the firm must choose the optimal percentage of debt in its financial structure that maximizes its profits and raises its market value, in order to achieve its main goal that firms always seek, namely maximizing the wealth of shareholders, i.e. maximizing the value of the firm.

Third: The importance of debt structure:

Debt structure is of great importance because it improves shareholders' returns, as a result of the difference between the cost of debt and the return on investment, and it also helps to control and manage the firm, because creditors have no influence or vote in its management. In other words, the creditors do not share the profits achieved with the shareholders, except for what is paid to them in the form of fixed interest. Therefore, it will achieve tax savings for the firm, considering that the interests are expenses, which are deducted from the profits before the tax is imposed. Also, debt structure is of great importance because it works to obtain profits at a lower cost, and that is in periods of inflation, as the process of borrowing money with high purchasing power, and returning it upon payment is less than its value at the time of borrowing. Debt structure also seeks to build a good reputation for the firm in the financial markets, and this is considered one of the good and important things that are in the interest of the firm, especially when it needs to borrow again (Al-Agha, 2005, p. 88).

Therefore, the more the firm uses debt in its financial structure, the greater the use of its financial leverage, and there will be a significant change in shareholder returns (Ross & David 2002:559), and debt increases the expected flows of earnings per share, and the reason for this is that the change in the expected flow It is

exactly equal to the change in the ratio of profits to capital, and this means that the return on assets is equal to the operating income divided by the market value of the firm, as the expected rate of return on leverage firm's shares increases in a consistent manner with the increase in the ratio of debt to equity, and this increase depends on expected rate of return from the investment portfolio of the firm, as well as from the expected rate of return from the debt. The higher these flows, the higher the expected rate of return for that firm (Brealey & Myres.3003:472).

Fourth: The most important tools of debt structure: The most important and most widely used debt structure tools have been selected, which consist of the following ratios:

1. Ratio of total debt to total equity: This ratio is one of the commonly used ratios and is considered an important indicator for evaluating the total debt of the firm, as this ratio is calculated by dividing the total debt on the total equity as shown in equation (1).
2. Ratio of total debt to total assets: This ratio is calculated by dividing the total debt (short and long term) on the total assets (current and fixed) as shown in equation (2).

Fifth: The concept of profitability: It consists of two words, the first is profit, and the second is ability, so by profit we mean the total revenues that firms obtain from which their total expenses are excluded. As for ability, it means the firm's ability to achieve profits, and it also refers to the strength of the firm's revenues or its operational performance. Thus, the definition of profitability is the ability of investment firms to obtain a certain return as a result of exploiting their investment opportunities (Tulsian, 2014, p. 19).

Profitability is also the first goal and the basis for the firm's survival and continuity in the market, and the goal that investors aspire to, and it is an indicator that creditors care about when dealing with the firm, as it is the outcome of the collective effort in the firm, and the main goal that firms aspire to with its various names, as it is considered an important and essential indicator for measuring The efficiency of financial and administrative performance in general, through which the firm can grow, develop and expand continuously, so profitability is a guide to the success of firms and their survival as a strong competitor in the market (Jasim, 2019, p. 61)

Sixth: profitability tools:

Profitability toolsreflect the total performance of the firm. While other toolsmeasure a specific aspect of the firms' performance, profitability toolsunify the impact of most management decisions. Profits are the main measure of the effectiveness of the firm's investment, operational, and financing decisions and policies (Al-Amri, 2013: 87). The following are the most important toolsof profitability (Brigham Houston, 2009: 96) ; (Brigham & Ehrhardt, 2014: 10).

1. Rate of return on investment (assets): This ratio is one of the commonly used ratios and is an important indicator for measuring the profitability of firm, as this ratio is calculated by dividing the net income on total assets as in equation (3).
2. The rate of return on equity: It is one of the commonly used ratios and is an important indicator for measuring the profitability of firm. This ratio is calculated by dividing the net income on total equity, as in equation (4).
3. Basic revenue strength: It is also one of the commonly used ratios to measure profitability of firm. This ratio can be obtained by dividing the operating profit on total assets, as in equation (5).

Third topic: financial analysis - descriptive and statistical analysis of the variables of study:

First: Descriptive Financial Analysis: The study examines the effect between the basic variables represented by debt ratio in the financing structure, which are (total debt to total equity), (total debt to total assets) as independent variables, and profitability toolsrepresented by (rate of return on investment, rate Return on property rights, basic revenue power) as dependent variables, according to the hypotheses of the study. These variables have

been previously clarified, and how they are calculated, in order to pave the way for analyzing and interpreting the results, testing the study hypotheses, and knowing whether they were accepted or rejected

1. Analysis of Independent Variables:

a) Total Debt to Total Equity:

This is evident from the ratio (total debt / equity) for the sample of firms listed on the Iraq Stock Exchange for the period (2014 - 2018), as Table (2) shows in the last two rows both (mean and standard deviation, respectively). The highest average debt ratio was in the year (2016), when it reached (0.202), with a standard deviation of (0.434). This means that the risk is high, meaning that firms have high debt in this year, while the lowest debt ratio to the market average was in the year 2018, when it reached (0.131 (So we notice that the risk this year is low according to the standard deviation measure of 0.132. That is, the amount of dispersion from the arithmetic mean is low, while the general average for the market reached (0.161) with a standard deviation of 0.187, and the average debt ratio was for firms whose averages were higher than the general average for the market. They are the Modern Tailoring Firm in (the first, second, and fourth quarters), the Iraqi Carpets and Furnishings Firm in (the first, second, third, and fourth quarters), the ready-to-wear clothing production firm in (the first, second, third, and fourth quarters), and the Iraqi Firm for Manufacturing and Marketing of Tambourines (the first, second, third, and fourth quarters). As for the rest of the firms, their average debt ratios were lower than the general market average

Table (2) Ratio of total debt to total equity for the study sample firms

NO	Firm's name	2014	2015	2016	2017	2018	firm average
1	Baghdad Soft Drinks	0.025	0.027	0.033	0.084	0.061	0.046
		0.023	0.013	0.03	0.093	0.101	0.052
		0.025	0.03	0.088	0.037	0.101	0.056
		0.025	0.03	0.088	0.037	0.101	0.056
2	Al-Kindi for the production of vaccines and veterinary medicines	0.01	0.01	0.017	0.023	0.019	0.016
		-0.03	0.047	0.022	0.140	0.018	0.039
		-0.01	-0.028	0.022	0.011	0.019	0.008
		-0.01	-0.028	0.022	0.013	0.105	0.020
3	Modern Sewing Firm	0.135	0.204	0.222	0.237	0.194	0.198
		0.135	0.181	0.178	0.209	0.205	0.182
		0.117	0.111	0.178	0.202	0.189	0.159
		0.124	0.249	0.381	0.21	0.358	0.264
4	Baghdad for the manufacture of packaging materials	0.001	0.001	0.006	0.032	0.024	0.013
		0.001	0.001	0.007	0.032	0.004	0.009
		0.001	0.002	0.002	0.033	0.004	0.008
		0.015	0.005	0.033	0.042	0.008	0.021
5	Iraqi Firm for Carpets and Furniture	0.667	0.481	0.356	0.396	0.295	0.439
		0.667	0.365	0.356	0.682	0.096	0.433
		0.526	0.344	0.39	0.643	0.139	0.408

		0.673	0.344	0.362	0.643	0.139	0.432
6	Modern Chemical Industries Firm	0.004	0.004	0.015	0.017	0.016	0.011
		0.002	0.017	0.015	0.017	0.016	0.013
		0.006	0.015	0.015	0.017	0.016	0.014
		0.006	0.015	0.015	0.017	0.016	0.014
7	Al-Mansour Firm for Pharmaceutical Industries	0.038	0.090	0.050	0.099	0.068	0.069
		0.027	0.054	0.072	0.101	0.123	0.075
		0.094	0.024	0.052	0.081	0.225	0.095
		0.094	0.024	0.052	0.081	0.225	0.095
8	Ready-to-wear production firm	0.595	0.526	0.583	0.202	0.18	0.417
		0.527	0.568	0.604	0.174	0.179	0.410
		0.610	0.468	2.686	0.166	0.193	0.825
		0.610	0.549	0.215	0.166	0.692	0.446
9	The Iraqi firm for the manufacture and marketing of dates	0.101	0.107	0.107	0.669	0.242	0.245
		0.101	0.11	0.185	0.669	0.242	0.261
		0.116	0.145	0.253	0.295	0.242	0.210
		0.107	0.145	0.253	0.339	0.242	0.217
10	Iraqi Firm for Engineering Works	0.029	0.029	0.035	0.035	0.038	0.033
		0.023	0.028	0.03	0.042	0.028	0.030
		0.029	0.027	0.031	0.065	0.037	0.038
		0.029	0.027	0.031	0.065	0.029	0.036
market average		0.157	0.138	0.202	0.178	0.131	0.161
standard deviation		0.235	0.179	0.434	0.208	0.132	0.187

b) Total Debt to Total Assets:

It is evident from the ratio (total debt / total assets) for a sample of firms listed in the Iraq Stock Exchange for the period (2014 - 2018), as Table (3) shows in the last two rows (average and standard deviation, respectively), so it was the highest average of debt ratio in a year (2016), as its percentage reached (0.155) with a standard deviation of (0.335), and this means that the risk is high, meaning that firms have a high debt ratio in this year, while the lowest debt ratio for the average market was in the year 2015 as it reached (0.097), we note that the risk in this year is low through the standard deviation measure, which amounted to 0.117, meaning that the amount of dispersion is small. As for the general rate of the market, it amounted to (0.117 (with a standard deviation of 0.129)), and the average debt ratio for firms whose averages were higher From the general average of the market, there are the Modern Sewing Firm in (the first, second, third and fourth quarters), the Iraqi Firm for Carpets and Furniture in the (first, second, third and fourth quarters), the ready-made clothing production firm in (the first, second, third and fourth quarters) and the Iraqi Firm for the Manufacturing and Marketing of Dates (first quarter The second, third and fourth) As for the rest of the firms, their average debt was lower than the general average of the market.

Table (3) The ratio of total debt to total assets of the study sample firms

NO	Firm's name	2014	2015	2016	2017	2018	firm average
1	Baghdad Soft Drinks	0.025	0.026	0.032	0.078	0.058	0.044
		0.022	0.013	0.029	0.085	0.091	0.048
		0.025	0.03	0.081	0.036	0.091	0.053
		0.025	0.03	0.081	0.036	0.091	0.053
2	Al-Kindi for the production of vaccines and veterinary medicines	0.01	0.009	0.017	0.023	0.018	0.015
		-0.027	0.045	0.022	0.14	0.016	0.039
		-0.011	-0.029	0.022	0.011	0.018	0.002
		-0.011	-0.029	0.022	0.012	0.095	0.018
3	Modern Sewing Firm	0.118	0.173	0.189	0.171	0.149	0.16
		0.110	0.143	0.153	0.152	0.144	0.14
		0.100	0.093	0.153	0.137	0.127	0.122
		0.110	0.158	0.248	0.173	0.264	0.191
4	Baghdad for the manufacture of packaging materials	0.001	0.001	0.006	0.031	0.023	0.012
		0.001	0.001	0.006	0.032	0.004	0.009
		0.0001	0.002	0.002	0.032	0.004	0.008
		0.015	0.005	0.032	0.040	0.008	0.02
5	Iraqi Firm for Carpets and Furniture	0.383	0.32	0.255	0.281	0.228	0.293
		0.383	0.253	0.255	0.377	0.088	0.271
		0.314	0.239	0.26	0.366	0.122	0.26
		0.398	0.239	0.248	0.366	0.122	0.275
6	Modern Chemical Industries Firm	0.004	0.004	0.015	0.016	0.015	0.011
		0.002	0.017	0.015	0.016	0.015	0.013
		0.006	0.014	0.015	0.016	0.015	0.013
		0.006	0.014	0.015	0.016	0.015	0.013
7	Al-Mansour Firm for Pharmaceutical Industries	0.033	0.072	0.041	0.076	0.063	0.057
		0.024	0.045	0.058	0.092	0.109	0.066
		0.084	0.021	0.043	0.075	0.184	0.081
		0.084	0.021	0.043	0.075	0.184	0.081
8	Ready-to-wear production firm	0.373	0.345	0.368	0.166	0.153	0.281
		0.345	0.362	0.377	0.151	0.152	0.277
		0.379	0.319	2.117	0.142	0.162	0.624
		0.379	0.354	0.177	0.142	0.409	0.292
9	The Iraqi firm for the manufacture and marketing of dates	0.092	0.097	0.097	0.427	0.195	0.182
		0.092	0.099	0.166	0.427	0.195	0.196
		0.104	0.127	0.202	0.228	0.195	0.171
		0.097	0.127	0.202	0.256	0.195	0.175
10	Iraqi Firm for Engineering Works	0.028	0.028	0.034	0.034	0.036	0.032
		0.022	0.027	0.029	0.04	0.027	0.029

		0.028	0.026	0.030	0.061	0.036	0.036
		0.028	0.026	0.030	0.061	0.028	0.035
market average		0.105	0.097	0.155	0.127	0.104	0.117
standard deviation		0.140	0.117	0.335	0.123	0.089	0.129

2. Dependent Variable Analysis:

a) Rate of Return on Investment (assets):

It is evident from (the rate of return on investment for the study sample firms) listed on the Iraq Stock Exchange for the period (2014-2018), as Table (4) shows in the last two rows (the average and the standard deviation), so the highest rate of return on investment was in the year (2018) As the rate reached (0.026) and the highest (risk) standard deviation amounted to (0.056), we note that there is a trade-off between return and risk. This means that the higher the rate of return on investment, the higher the risk. The lowest rate of return on investment for the average market was in the year 2016, when it reached (-0.002, with the lowest standard deviation (lowest risk), with the least dispersion of (0.030). The general average for the market was (0.008). With a standard deviation of (0.036), the average firms for the rate of return on investment that was higher than the general market average were Baghdad Soft Drinks Firm, the Modern Sewing Firm, the Iraqi Carpet and Furniture Firm, and Al-Mansour Pharmaceutical Industries Firm. As for the rest of the firms, the average rate of return on their investments was lower than the general market standard.

Table (4) rate of return on investment (assets) for the study sample firms

NO	Firm's name	2014	2015	2016	2017	2018	firm average
1	Baghdad Soft Drinks	-0.014	-0.024	-0.021	-0.022	-0.025	-0.021
		0.026	0.035	0.044	0.033	0.032	0.034
		0.013	0.022	0.018	0.022	0.032	0.0214
		0.013	0.022	0.018	0.022	0.032	0.0214
2	Al-Kindi for the production of vaccines and veterinary medicines	-0.039	-0.012	-0.003	0.0002	0.012	-0.008
		-0.035	-0.017	0.038	-0.019	0.046	0.0026
		0.016	-0.011	-0.014	-0.005	0.007	-0.001
		0.016	-0.011	-0.014	0.031	0.010	0.0064
3	Modern Sewing Firm	0.003	-0.02	-0.06	0.098	0.071	0.0184
		0.075	0.066	-0.02	0.102	0.136	0.0718
		-0.03	0.048	-0.02	0.161	0.163	0.0644
		0.096	0.210	0.09	0.179	0.171	0.1492
4	Baghdad for the manufacture of packaging materials	0.003	-0.014	-0.031	-0.008	0.006	-0.009
		-0.027	-0.041	-0.021	-0.032	9E-04	-0.024
		-0.018	-0.067	-0.01	-0.021	0.015	-0.02
		-0.045	-0.079	0.005	0.004	0.019	-0.019
5	Iraqi Firm for Carpets and Furniture	0.042	0.015	0.029	0.011	0.008	0.021
		0.042	0.04	0.029	0.07	0.139	0.064
		0.09	0.011	-0.007	0.071	0.065	0.046
		0.011	0.011	0.066	0.071	0.065	0.0448
6		0.022	-0.011	-0.011	-0.039	-0.048	-0.017

	Modern Chemical Industries Firm	0.006	-0.004	-0.004	-0.039	-0.048	-0.018
		0.023	0.005	-0.011	-0.039	-0.048	-0.014
		0.023	0.005	-0.004	-0.039	-0.048	-0.013
7	Al-Mansour Firm for Pharmaceutical Industries	0.012	0.024	0.016	0.012	0.014	0.0156
		0.025	0.08	0.006	0.008	0.006	0.025
		0.033	0.066	0.009	0.011	0.012	0.0262
		0.033	0.066	0.009	0.011	0.012	0.0262
8	Ready-to-wear production firm	-0.008	-0.017	-0.007	-6E-04	0.1374	0.021
		-0.009	-0.018	0.0215	-0.013	0.0214	0.0006
		0.0094	0.0075	-0.002	-0.018	-0.006	-0.002
		0.0094	-0.024	-0.022	-0.018	0.0467	-0.002
9	The Iraqi firm for the manufacture and marketing of dates	0.029	-2E-04	-2E-04	-0.055	-0.002	-0.006
		0.029	-0.027	-0.049	-0.055	-0.002	-0.021
		-0.069	-0.032	-8E-04	-0.088	-0.002	-0.038
		3E-04	-0.032	-8E-04	-0.012	-0.002	-0.009
10	Iraqi Firm for Engineering Works	-0.029	-0.033	-0.033	-0.036	-0.04	-0.034
		0.0057	-0.032	-0.030	-0.042	0.044	-0.011
		-0.033	-0.032	-0.040	-0.035	0.041	-0.02
		-0.033	-0.032	-0.040	-0.035	-0.041	-0.036
market average		0.008	0.004	-0.002	0.006	0.026	0.008
standard deviation		0.035	0.049	0.030	0.056	0.056	0.036

b) Rate of Return on Equity:

It is evident from (the rate of return on equity for the study sample firms) listed in the Iraq Stock Exchange for the period (2014-2018), as it was shown from Table (5) in the last two rows (mean and standard deviation), so the highest rate of return on equity in a year (2018) as the rate reached (0.034) with a standard deviation of (0.078), and this means that every dinar invested in equity gives a return of more than 3%, while the lowest rate of return on equity for the average market was in the year 2016 when it reached (0.0004) and with a standard deviation It reached (0.038), and the general rate of the market was (0.014) and a standard deviation of (0.049). The average rate of return on equity for firms that was higher than the general rate of the market was Baghdad Soft Drinks Firm, Modern Sewing Firm, Iraqi Carpet and Furniture Firm, and Al-Mansour Pharmaceutical Industries. As for the rest of the firms, the average rate of return on equity was lower than the general rate of the market.

NO	Firm's name	2014	2015	2016	2017	2018	firm average
1	Baghdad Soft Drinks	-0.014	-0.024	-0.022	-0.024	-0.027	-0.022
		0.027	0.035	0.046	0.036	0.035	0.036
		0.014	0.022	0.019	0.023	0.035	0.023
		0.014	0.022	0.019	0.023	0.035	0.023
2		-0.04	-0.012	-0.003	2E-04	0.013	-0.008

	Al-Kindi for the production of vaccines and veterinary medicines	-0.034	-0.018	0.039	-0.019	0.049	0.003
		0.016	-0.011	-0.014	-0.005	0.008	-0.001
		0.016	-0.011	-0.014	0.033	0.011	0.007
3	Modern Sewing Firm	0.004	-0.027	-0.065	0.135	0.101	0.030
		0.088	0.078	-0.026	0.15	0.204	0.099
		-0.033	0.075	-0.026	0.254	0.292	0.112
		0.114	0.313	0.139	0.234	0.232	0.206
4	Baghdad for the manufacture of packaging materials	0.003	-0.01	-0.03	-0.01	0.006	-0.008
		-0.03	-0.04	-0.02	-0.03	9E-04	-0.024
		-0.02	-0.06	-0.01	-0.02	0.016	-0.019
		-0.04	-0.07	0.005	0.004	0.02	-0.016
5	Iraqi Firm for Carpets and Furniture	0.073	0.022	0.041	0.015	0.01	0.032
		0.073	0.057	0.041	0.127	0.152	0.09
		0.152	0.015	-0.01	0.124	0.074	0.071
		0.018	0.015	0.097	0.124	0.074	0.066
6	Modern Chemical Industries Firm	0.022	-0.011	-0.011	-0.039	-0.049	-0.018
		0.006	-0.004	-0.004	-0.039	-0.049	-0.018
		0.023	0.005	-0.011	-0.039	-0.049	-0.014
		0.023	0.005	-0.004	-0.039	-0.049	-0.013
7	Al-Mansour Firm for Pharmaceutical Industries	0.014	0.030	0.020	0.016	0.015	0.019
		0.029	0.096	0.008	0.009	0.007	0.030
		0.038	0.078	0.011	0.012	0.014	0.031
		0.038	0.078	0.011	0.012	0.014	0.031
8	Ready-to-wear production firm	-0.012	-0.025	-0.011	-7E-04	0.162	0.023
		-0.013	-0.028	0.035	-0.015	0.025	0.001
		0.015	0.011	-0.003	-0.021	-0.007	-0.001
		0.015	-0.037	-0.027	-0.021	0.079	0.002
9	The Iraqi firm for the manufacture and marketing of dates	0.0323	-2E-04	-2E-04	-0.086	-0.003	-0.011
		0.0323	-0.03	-0.054	-0.086	-0.003	-0.028
		-0.077	-0.036	-1E-03	-0.114	-0.003	-0.046
		0.0003	-0.036	-1E-03	-0.016	-0.003	-0.011
10	Iraqi Firm for Engineering Works	-0.03	-0.034	-0.034	-0.038	-0.042	-0.036
		0.006	-0.033	-0.031	-0.043	0.045	-0.011
		-0.034	-0.033	-0.041	-0.038	-0.042	-0.038
		-0.034	-0.033	-0.041	-0.038	-0.042	-0.038
market average		0.012	0.008	0.0004	0.014	0.034	0.014
standard deviation		0.044	0.064	0.038	0.08	0.078	0.049

C) Basic Revenue Power of the Study Sample Firms

It is evident from (the basic revenue power of the study sample firms) listed on the Iraq Stock Exchange for the period (2014 - 2018), as Table (6) shows in the last two rows (the average and the standard deviation), so the highest revenue power was in the year (2018) when it reached (0.032) and the highest standard deviation (the highest level of dispersion) amounting to (0.078), and this means that there is a trade-off between return and risk. Therefore, each invested dinar of the total assets gives more than 3% operating profit, while the lowest revenue power of the average market was in the year 2015 when it reached (0.001) with a standard deviation of (0.048). As for the general average of the market, it was (0.013), with a standard deviation of (0.046). The average of the firms for the basic revenue strength that was higher than the general average of the market were each of the Baghdad Soft Drinks Firm, the Modern Sewing Firm and the Iraqi Firm for Carpets and Furniture and Al-Mansour Firm for Pharmaceutical Industries. As for the rest of the firms, their average basic revenue power was lower than the general average of the market.

Table (6): basic earning power of the study sample firms

NO	Firm's name	2014	2015	2016	2017	2018	firm average
1	Baghdad Soft Drinks	-0.014	-0.024	-0.022	-0.026	-0.025	-0.022
		0.03	0.039	0.049	0.037	0.035	0.038
		0.017	0.025	0.022	0.026	0.354	0.089
		0.017	0.025	0.022	0.026	0.035	0.025
2	Al-Kindi for the production of vaccines and veterinary medicines	-0.039	-0.012	-0.005	0.0004	0.013	-0.009
		-0.035	-0.017	0.038	-0.025	0.047	0.002
		0.016	-0.011	0.014	-0.005	0.026	0.008
		0.016	-0.011	0.014	0.016	0.023	0.012
3	Modern Sewing Firm	0.004	-0.02	-0.060	0.095	0.071	0.018
		0.076	0.054	-0.020	0.097	0.128	0.067
		-0.030	0.039	-0.020	0.146	0.151	0.057
		0.113	0.196	0.391	0.212	0.212	0.225
4	Baghdad for the manufacture of packaging materials	0.033	-0.01	-0.03	-0.01	0.006	-0.002
		-0.03	-0.04	-0.02	-0.03	9E-04	-0.024
		-0.02	-0.07	-0.01	-0.02	0.015	-0.021
		-0.04	-0.08	0.106	0.004	0.019	0.002
5	Iraqi Firm for Carpets and Furniture	0.048	0.022	0.03	0.006	0.018	0.025
		0.048	0.015	0.03	0.054	0.016	0.033
		0.100	0.012	-0.007	0.143	0.077	0.065
		0.013	0.012	0.015	0.143	0.077	0.052
6	Modern Chemical Industries Firm	0.021	-0.011	-0.011	-0.039	-0.048	-0.018
		0.006	-0.004	-0.004	-0.039	-0.048	-0.018
		0.022	0.005	-0.011	-0.039	-0.048	-0.014
		0.022	0.005	-0.004	-0.039	-0.048	-0.013
7		0.039	0.022	0.016	0.018	0.004	0.02
		0.021	0.08	0.018	0.019	0.005	0.029

	Al-Mansour Firm for Pharmaceutical Industries	0.039	0.07	0.018	0.024	0.005	0.031
		0.039	0.07	0.018	0.024	0.005	0.031
8	Ready-to-wear production firm	-0.022	-0.016	-0.007	-6E-04	0.1375	0.018
		-0.011	-0.017	0.0215	-0.014	0.0217	2E-04
		0.0647	0.0076	-0.002	-0.018	-0.005	0.009
		0.0647	-0.023	-0.070	-0.018	0.0705	0.005
9	The Iraqi firm for the manufacture and marketing of dates	0.045	-0.039	-0.039	-0.053	-1E-03	-0.017
		0.045	-0.065	-0.092	-0.053	-1E-03	-0.033
		-0.05	-0.031	-8E-04	-0.063	-1E-03	-0.029
		0.006	-0.031	-8E-04	-0.012	-1E-03	-0.008
10	Iraqi Firm for Engineering Works	-0.024	-0.033	-0.033	-0.036	-0.04	-0.033
		0.0055	-0.034	-0.030	-0.041	0.044	-0.011
		-0.028	-0.032	-0.034	-0.035	-0.041	-0.034
		-0.028	-0.032	-0.034	-0.035	-0.041	-0.034
market average		0.015	0.001	0.006	0.011	0.032	0.013
standard deviation		0.039	0.048	0.071	0.063	0.078	0.046

Second: Testing hypotheses by statistical analysis of the study variables:

First hypothesis: There is a significant effect of debt tools (total debt to total equity X1 and total debt to total assets X2) on the profitability tool (rate of return on investment, Y1). Multiple regression was used to test this hypothesis, at a significant level of 5%, and this means that the return on investment, Y1, is a function of the debt tools (X1 and X2). As shown by the following equation, and the results of testing this hypothesis are shown in Table (7)

$$Y1 = \alpha + \beta 1X1 + \beta 2X2$$

Table (7) The relationship of variables according to multiple regression between debt tools and the rate of return on investment

independent variable	dependent variable	The rate of return on investment Y1					
	correlation	coefficient of determination	effect coefficient	Calculated t-test	Sig. - T	Calculated (F) Test	Sig.-F
	R	R^2	B				
Total debt to total equity X1	0.192	0.037	0.173	2.105	0.037	3.77	0.025

Total debt to total assets X2			-0.21	-1.805	0.073		

Source: prepared by the researcher based on the results of the SPSS program

Table (7) showed that the coefficient of the effect of (total debt to total equity X1) on the return on investment (Y1) was (0.173). By increasing the total debt to total equity of the industrial firms, the study sample, by one unit, it is accompanied by an increase in the rate of return on investment by ((0.173), which is significant when comparing the level of significance achieved, which amounted to (0.037), with the level of significance assumed by the researcher (0.05) and a level of confidence (95%), while the effect of debt was negative (total debt to total assets X2) in the return on investment Y1 it reached (-0.21) This means that when the total debt to the total assets of the industrial firms, the study sample, increases by one unit, it is accompanied by a decrease in the rate of return on investment of (-0.21), which is not significant when comparing the achieved level of significance (0.073) with the level of significance assumed by the researcher (0.05). The tools of debt explain the value of (0.037) of the variation in the dependent variable (the rate of return on investment) for the industrial firms, the study sample. The other effects amounting to (0.963) are attributed to other variables that were not included in this model, and it was tested with the calculated F value that recorded (3.77), which is greater than the tabular (F) of (3.07), with a degree of freedom of 199 and a significant level (0.025), which is Less than the 5% significance level assumed by the researcher. Therefore, the first hypothesis is accepted that there is a significant effect of debt tools (total debt to total equity X1 and total debt to total assets X2) on the profitability tool (rate of return on investment Y1), and this is consistent with the expectations of the study.

Second hypothesis: There is a significant effect of debt tools (total debt to total equity X1 and total debt to total assets X2) on the profitability tool (rate of return on equity Y2). Multiple regression was used to test this hypothesis, and this means that the rate of return on equity, Y2, is a function of the debt tools (X1 and X2), as shown by the following equation, and the results of testing this hypothesis are shown in Table (8):

$$Y2 = a + \beta 1X1 + \beta 2X2$$

Table (8) The relationship of variables according to multiple regression between debt tools and the rate of return on equity

independent variable	dependent variable	The rate of return on equity Y2					
	correlation	coefficient of determination	effect coefficient	Calculated t-test	Sig. - T	Calculated (F) Test	Sig.-F
	R	R^2	B				

Total debt to total equity X1	0.24	0.058	0.316	2.888	0.004	6.009	0.003
Total debt to total assets X2			-0.394	-2.555	0.011		

Source: Prepared by the researcher based on the results of the (SPSS) program

Table (8) shows that the debt tool effect coefficient (total debt to total equity X1) on the return on equity Y2 has reached (0.316) , This means that when the total debt is increased to the total equity of the industrial firms, the study sample, by one unit, it is accompanied by an increase in the rate of return on ownership rights by an amount of (0.316) and an achieved level of significance amounted to (0.004), which is less than the level of significance assumed by the researcher (0.05), while the effect of debt tool (Total debt to total assets X2) in the return on equity, Y2, was negative, as it amounted to (-0.394), and this means that when the total debt to total assets of the industrial firms of the study sample increased by one unit, it was accompanied by a decrease in the rate of return on equity by an amount of (-0.394). However, it is significant when comparing the achieved level of significance (0.011) with the level of significance assumed by the researcher, (0.05) Also, debt tools explain approximately (0.06) of the variance in the dependent variable (rate of return on equity), while the other effects amounting to (0.94) are attributed to other variables that were not studied in this model, and it was tested with the calculated F value that was recorded (6.009), which is greater than the tabular (F) of (3.07) and at a significant level (0.003), which is lower than the 5% level of significance assumed by the researcher. Therefore, the second hypothesis is accepted that there is a significant effect of debt tools (X1 and X2) on the profitability tool (the rate of return on equity, Y2), and this is consistent with the expectations of the study.

Third hypothesis: There is a significant effect of debt tools (total debt to total equity X1 and total debt to total assets X2) on the profitability tool (basic revenue power Y3). Multiple regression was used to test this hypothesis, and this means that the basic earning power Y3 is a function of the debt tools (X1 and X2) as shown by the following equation and the results of testing this hypothesis are shown in table (9)

$$Y3 = a + \beta 1X1 + \beta 2X2$$

Table (9) The relationship of variables according to multiple regression between debt tools and basic earning power

independent variable	dependent variable		basic earning power Y3				
	correlation	coefficient of determination	effect coefficient	Calculated t-test	Sig. - T	Calculated (F) Test	Sig.-F
	R	R^2	B				

Total debt to total equity X1	0.228	0.052	0.29	2.704	0.007	5.391	0.005
Total debt to total assets X2			-0.36	-2.382	0.018		

Source: prepared by the researcher based on the results of the SPSS program

Table (9) showed that the coefficient of the effect of debt tool (total debt to total equity X1) on the basic revenue power Y3 has reached (0.29)) and this means when The increase the total debt to total equity for the industrial firms of the study sample by one unit, it is accompanied by an increase in power of revenue amount is (0.29) and the level of significance achieved amounted to (0.007), which is less than the level of significance assumed by the researcher (0.05), while the effect of debt tool (total debt to total assets X2) on the basic revenue power Y3 was negative, as it reached (-0.36), which means when The increase of the total debt to the total assets of the industrial firms, the study sample, by one unit, accompanied by a decrease in the revenue power of (-0.36), which is significant when comparing the achieved level of significance (0.018) with the level of significance assumed by the researcher (0.05), and the tools of debt explain approximately (0.052) of the variation obtained in the dependent variable, the basic revenue power Y3, while the other effects amounting to (948.0) are attributed to other variables that were not studied in this model, and this was tested with the calculated F value, which was recorded (5.391), and it It is greater than the tabular (F) of (3.07) and at a significant level (0.05), which is lower than the 5% level of significance assumed by the researcher. Therefore, the third hypothesis is accepted that there is a significant effect of debt tools (X1 and X2) on the profitability tool (basic revenue power (Y3).

Fourth topic: conclusions and recommendations:

First: Conclusions: In the light of the results, the study reached a set of conclusions, the most important of which are:

1. Debt structure has a positive effect if the rate of return for profitability tools(return on investment, return on equity, and revenue power) is higher than the cost of debt for investments that are financed with debt, and vice versa.
2. By testing the hypotheses of the study, we note that the results were consistent with what is expected regarding the effect of debt structure on profitability tools, as all hypotheses were accepted.
3. The ratio of debt compared to the right of ownership was high, as most firms rely on debt to finance their investments, so we notice that there is a significant effect of debt structure in the industrial firms, the study sample.
4. Through the statistical results, the researcher concluded that there is a significant effect of debt structure X1 (total debt to total equity) on the rate of return on investment, Y1, the rate of return on equity, Y2, and the basic revenue power, Y3.
5. Through the statistical results, the researcher concluded that there is a significant effect of debt structure X2 (total debt to total assets) on the three profitability tools.
6. We conclude that most of the firms rely on debt in the financing process, and the firms did not succeed significantly in investing their money in investment operations that bring them high returns from equity financing.

Second: Recommendations: The study came out with a set of recommendations in the light of the conclusions:

1. We recommend that others researcher study the impact of debt structure on profitability toolson samples from other sectors.
2. Urging researchers and firms to pay attention to studying the effect of debt structure on financial ratios other than profitability tools.
3. Interest in raising the debt ratio in the financial structure for the purpose of benefiting from the tax savings and achieving higher returns than the cost of debt in order to achieve the optimal financial structure (the highest returns at the lowest costs).
4. Reducing dependence on the right of ownership because the cost of issuing it is high. Moreover, it sends a negative signal to investors, while the debt has a positive informational content.

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