

Financial leverage and its impact on enhancing the financial sustainability of industrial joint-stock companies listed on the Iraq Stock Exchange for the period from 2010 – to 2020

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Abstract

The research aims to test the relationship between leverage and financial sustainability of industrial joint-stock companies listed on the Iraqi Stock Exchange for the period 2010-2020 and to diagnose the importance of leverage and its impact on promoting financial sustainability in industrial joint-stock companies and the trade-off between the various sources of leverage available for financial sustainability. The research community includes 14 manufacturers. Twelve industrial joint-stock companies have been selected, and to process data, some financial equations and statistical methods were used, and the results were extracted using programs (Eviews-9). It is a positive effect and goes in the same direction (a negative relationship) and the need for companies to rely on a research sample for an optimal combination of their internal sources of financing. This is through the expansion of capital and retained profits and financial leverage (loans) to achieve financial sustainability. The findings show that the companies' sample research varies among them in terms of leverage. It is found through the results that all companies' sample research is characterized by financial sustainability but at different levels. The study recommends that the financial sustainability of the research sample companies in particular and all companies listed on the Iraqi Stock Exchange, in general, should be strengthened.

Keywords: The leverage, Financial sustainability, Industrial companies

to the need for further studies on financial sustainability due to the wide controversy. Because the financing processes depend on the dual outcome of financing and commitment to maintaining financial sustainability, the importance of research at the level of variable, independent research variables highlight the financial leverage and variable of financial sustainability in industrial joint-stock companies. To preserve the company's value and thus achieve the financial sustainability of the industrial joint-stock companies. What is the relationship between leverage and the financial sustainability of industrial joint-stock companies? The current research aims to solve the problem of financial leverage and how companies can invest it optimally. What is financial sustainability, and what are its most important indicators? Is there financial sustainability for the research sample companies? And what is the impact of

Introduction

Since Modigliani & Miller, 1958:261, he has proposed under restrictive assumptions that the capital structure does not affect the company's value. Between leverage and the company's value, others found an inverse correlation (Farooq,2016:73). It is also mentioned that when debt financing is used, it provides a tax shield for the company and ensures increased efficiency due to the attempt to meet the covenants imposed by the lenders. From the perspective of conventional finance, financial markets aim to allocate capital efficiently to create and increase shareholder value ideally. In this way, companies can obtain the capital needed to grow and profit. At the same time, investors get an adequate return on their capital. So companies should pay attention to financial sustainability and their decisions (Hauptmann,2017:1). The same source pointed

retained cash and the company's high financial leverage due to increased risk of default and financial hardship.

The researcher defines leverage as a combination of shareholders' capital and creditor funds, and his image in the company is evident through the ratio of debt to total assets. And to the extent of the company's dependence on creditors' funds to finance its purchases during its working life.

Leverage measures

According to most recent studies and specialized references, most fixed financial costs (long or short-term) raise the financial leverage in their impact on the net profit available to owners, reflecting the change in return. Therefore, the financial leverage available to owners, net profit after tax or earnings per share, changes due to a specific change in net profit of operations. The leverage arises from fixed financial costs of loan interest and premium stock distributions according to the following measures.

A- The ratio of indebtedness:

The high debt ratio means that the company's financial risks will rise and that its financing costs will rise in the future if the company needs new financing. If a decrease in the debt ratio indicates that the company does not use borrowing adequately, depriving the owners of possible increases in the rate of return on the right of ownership. The debt ratio is calculated by dividing the total liabilities (debt) short-term and long-term by total assets (Amri, 2013: 80).

Debt ratio = Total liabilities / Total assets

The higher the index, the greater the company's future burden and the greater the risk. A more than 50 percent rise will lead to borrowers being reluctant to lend to the company. In addition, the increase in the index will expose shareholders to risk in the event of the failure of the company's projects. Still, in the event of a decline in the index, it indicates the company's ability to pay liabilities, liabilities, debts, or financial obligations on the enterprise that arise during its operations and pay these obligations over time (Saadeh, 2017:44).

B- The ratio of total liabilities to shareholders' equity

financial leverage on the financial sustainability of the research sample companies?

Literature Review

1- The concept of leverage

Javed & Tabassim (2018:457) defined leverage as the company's management experience in employing its borrowed funds. Klob (1996) introduced it to the results of fixed costs in financing. It is clear from previous definitions and as Aivazian, 2003:114 pointed out, that leverage includes measuring the total obligations (long and short term) to total assets. Still, some have considered that leverage is limited to the impact of debt or long-term commitments only. Garrett (1995:155) explained two leverage models, the first of which is based on the measurement of total fixed financial obligations on total assets. In contrast, the second model relies solely on long-term commitments, ignoring debt Short-term. Chiha (2005:57) also outlined the concept of leverage as the company's reliance on borrowing from banking and financial institutions to meet its financial needs, so its fixed costs are the interest owed or paid. Suppose the company offers outstanding shares to meet these needs. In that case, the fixed costs are the tremendous dividends the company will pay to shareholders because the premium shares have guaranteed. Specified profits, as Bick & Batty (2017:98), believes that the level of cash retention is affected by the level of leverage of the company as it can increase to meet its obligations. Borhanuddin (2011) indicates a negative relationship between leverage and the company's ability to meet the debt. Here, the company's policy on cash retention is influenced by its decision on corporate financing, and companies with weak governance practices have a high level of cash retention. The economic relationship between the company's growth decisions and financial leverage should be examined as an influential variable. A high financial raise means that the company has retained cash to meet its financial obligations. This means that there is a positive relationship between leverage and the level of cash retention. Rao, kt & Vigneswaram (2018:145) believe that the conflict between leverage and cash retention is due to a positive relationship between

stable and flexible and one that effectively mobilizes the allocation of sustainable capital. It is also a system with fewer "sustainability effects." For example, achieving timely asset passage avoids adverse impacts on sustainability and compelling asset valuation (Chabrak, 2018:15). The interest in studying and applying the principles of financial sustainability by financial management researchers and corporate finance policymakers is an attempt to address the contemporary challenges of economic development and long-term resource management. Paraque Lagoarde (2015) emphasizes that the main reason for allocating efforts to research this field is the sustainable financing turmoil of the 2000s that undermined timely financial theories and gave impetus to alternative approaches to the principles of corporate financial management, such as risk management and value maximization policies no longer protect managers, bankers and investors from potential losses. Therefore, financial sustainability to balance returns and risks in financial decision-making has emerged, and joint-stock companies achieve sustainable financial performance when investing resources that lead to value creation in the company's current operations to create value in future periods. Future. Only if the company has a sustainable competitive advantage can it continue to maintain superior financial performance in the long run. Whether or not the company has a sustainable competitive advantage requires examining the financial performance of companies over time (Banker et al., 2014: 873).

Financial sustainability measures

The researcher (Santoso, 2012: 104) shows that the return on assets (ROA) indicates the company's performance, as in the following equation.

$$\text{ROA} = \text{net income} / \text{total assets}$$

Lassala et al. (2017:7) indicate that measuring the financial performance and financial sustainability of companies is done through (ROA), and here the relationship between (ROA) and the sustainable performance of companies and financial sustainability in the industry to which the company belongs.

The high ratio of total liabilities to shareholders' equity represents the company's net value. Or the amount to be returned to shareholders if all the company's assets are liquidated and all its debts are repaid. Shareholders' equity measures the company's net worth and can be found on the company's balance sheet. It is a standard financial measure used by analysts to determine the company's financial situation, leading to higher risks for shareholders and creditors and its impact on the distribution of cash dividends to shareholders (Salsabila, Rizqiyah, 2022: 236).

$$\text{Debt-to-equity ratio} = \text{Total liabilities} / \text{Property rights}$$

Financial sustainability

This research was devoted to covering the theoretical framework of the concept of financial sustainability of industrial companies in its many aspects and clarifying the views of researchers on this subject in their cognitive efforts, which touched on the topic of financial sustainability according to the following paragraphs:

The concept of financial sustainability

Financial sustainability is one of the terms used in fiscal policies, whether private or government. There is no agreement on a specific definition of the term. Sustainability is a characteristic of something that can continue. And able to continue at a certain level in the end. Sustainability may be seen as how something is retained at a certain level. The orientation of the organizations depends on how they work according to customers' wishes. Organizations targeting them identify a specific market that targets them, and anticipate their current and future requirements. This, in turn, helps companies achieve superior customer value. That stands among its main objectives that those high-level companies tend to achieve financial sustainability (Kazemian et al., 2020: 6).

A financial sustainability system creates, evaluates, and deals with financial assets in ways that constitute real wealth to serve long-term needs that are comprehensive and continuous. A sustainable financial system is

Modern sewing. That lasted for 11 eleven years of the year (2010-2020)

Results

The paragraph of the research was devoted to discussing the test of natural distribution, the results of the financial analysis of the financial lift variable, and the study of its indicators in the company sample research from the (ratio of liabilities to total assets and the percentage of liabilities to ownership), so the approved indicators will be analyzed. The availability and application in the companies sample research, as the availability of each of the hands approved in the companies will be revealed sample research agencies:

Testing relationships and impact

This research will analyze correlation relationships and impact levels between search variables (leverage and financial sustainability). The sample of study and temporal analysis of the target time series in a way (Panel) will show the determining factor and impact and the level of significance adopted by the researcher with limits (0.05), which is a criterion for accepting or not accepting the hypothesis if the resulting significance level is less than or equal to the level of significance adopted the hypothesis will be accepted and vice versa. The companies will arrange the research sample from the top to the most negligible impact, and the differentiation of the fixed effect will be diagnosed at the period level as follows: -

First: The first hypothesis:

The research assumed ((that there are significant correlations between leverage indicators and financial sustainability indicators)) and the analysis of correlations between indicators using the Statistical Program (SPSS) will be tested according to the results to be shown in table (1).

Table (1) Relationships between search variables

ROA t-1		ROA t		Independent variables
Itself	R	Itself	R	

Banker et al. (2014: 881) also state that there are various ways to measure corporate performance since accounting-based metrics can be affected by discretionary accounting options. Here, the use of ROA is relied upon to measure the company's performance. For example, achieving a higher return on assets is a goal that most companies aspire to and is widely relied upon by managers. To assess the performance of financial sustainability by sustaining future performance, ROA is examined in three periods whether the company's current and future performance continues to depend on the concept of sustainability to gradually explore the performance of the financial sustainability of subsequent years as an indicative point of the company's current version. Through the above, the researcher adopts measures of financial sustainability for the present study through net income-to-total asset ratios (ROA) for periods as described in the following equation measure, (....., ROA, ROAt, ROAt-1, ROAt-2),).

Research hypotheses

1- The first hypothesis: - There is a significant correlation between fiscal raising indicators and financial sustainability indicators.

2- The second hypothesis: - There is a significant effect of ROA t t indicators

3- The third hypothesis: - There is a significant effect of ROA t-1 leverage indicators

Data and Method

1-5- The search sample.

The researcher relied on the financial reports issued by the companies in sample research and listed on the Iraqi Stock Exchange consisting of (12) joint-stock industrial companies (National Chemical and Plastic Industries Company, Iraqi cartoon industry, Iraqi carpet and furniture, Mansour Pharmaceutical Industries, production of ready-made clothing, Baghdad for soft drinks, Baghdad for the manufacture of packaging materials, national metal industries, and bicycles, Canadian vaccine production veterinary, Iraqi engineering works, Iraqi for the manufacture and marketing of dates,

0.000	0.313	0.001	0.291	Liability ratio to total assets
0.000	0.275	0.000	0.381	The ratio of liabilities to property rights

by adopting the statistical program (EViews) and the results shown in table 2 were tested as the identification factor, and the amount of impact, as well as the significance level of the value (T), were diagnosed to test the significance of the effect between indicators, as well as the significant status of the F index. To determine the quality of the model adopted in the methods of CT and temporal analysis, table (3) the CT analysis test of companies shows the research and temporal sample of the target time series to determine the differentiation between companies in the amount of impact at the corporate level and then at the level of periods (time series) as follows: -

Table (2) Testing the impact relationship between leverage indicators and (ROA t)

Independent Indicators	Affiliate index	Estimates Coefficient	Standard error Std. Error	t-Statistic	Significance level Prob.	Resolution
X1	Y1	0.312	0.034	9.207	0.000	Accept
X2	Y1	0.404	0.156	2.598	0.000	Accept
Constant (C)	0.47	<div>Ct method of micro-squares Method: Pooled Least Squares $Y1 = (0.47) + (0.31)X1 + (0.40)X2$</div>				
(R ²)	0.48					
F-statistic	4.302					
Significance level (F)	0.000					
Source: Prepared by the researcher based on the outputs of the program (EViews)						

Table (3) CT analysis test for companies research sample between leverage indicators and (ROA t)

Differentiation between companies by constant impact Fixed Effects (Cross)			Differentiation between periods by the constant effect Fixed Effects (Period)		
companies (Cross)	Estimates Coefficient	Order	(Period)	Estimates Coefficient	Order
08--C	1.04	1	2015--C	0.33	1
03--C	0.60	2	2011--C	0.18	2
06--C	0.03	3	2019--C	0.04	3
01--C	-0.02	4	2018--C	0.02	4

12--C	-0.10	5	2017--C	0.00	5
11--C	-0.11	6	2016--C	-0.04	6
10--C	-0.14	7	2020--C	-0.09	7
04--C	-0.18	8	2014--C	-0.09	8
09--C	-0.21	9	2013--C	-0.11	9
05--C	-0.21	10	2010--C	-0.12	10
02--C	-0.25	11	2012--C	-0.12	11
07--C	-0.45	12			

Source: Prepared by the researcher based on the outputs of the program (EViews)

at the indicative level (0.05) and according to these results accepts the hypothesis at the corporate level the sample of research and the target duration and rejects the alternative hypothesis.

Third: The third hypothesis:

The research (((the significant effect of ROA t)-1 leverage indicators was assumed) and the analysis of the impact relationship between indicators by adopting the statistical program (EViews) would be tested according to the results shown in table (4) as the identification factor. The amount of impact and the significance level of the value (T) was diagnosed to test the significant impact between indicators and the significance level of the F index. To determine the quality of the model adopted in the methods of CT and temporal analysis, table (5) the CT analysis test of companies shows the research and temporal sample of the target time series to determine the differentiation between companies in the amount of impact at the corporate level and then at the level of periods (time series) as follows: -

The results shown in table (2) show that the selection coefficient (R^2) was (0.48) and this shows the discrepancy between the indicators of the independent variable (fiscal lift) in the sub-variable (ROA t), according to the model quality between indicators (independent variable and sub-variable) and the accuracy of results extracted by adopting the statistical program (EViews) and by table results (2)) It turns out that the impact factor for the independent variable indicators in the ROA t sub-variable was as follows:

1. The impact factor for the total liability ratio index in ROA t (0.312), a positive indicator, i.e., when a change (one unit) is made in the ratio of total liabilities, will lead to a change in ROA t (0.312), which is significant at the indicative level (0.05) and according to these results the hypothesis at the corporate level accepts the research sample and the target duration and rejects the alternative hypothesis.
2. The impact factor for the ROA t sub-variable (0.404), a positive indicator, i.e., when a change (one unit) is made in the ratio of liabilities, the total assets will lead to a change in ROA t (0.404), which is significant

Table (4) Testing the impact relationship between leverage indicators and (ROA t-1)

Independent Indicators	Affiliate index	Estimates Coefficient	Standard error Std. Error	t-Statistic	Significance level Prob.	Resolution
X1	Y2	0.332	0.065	5.103	0.000	Accept
X2	Y2	0.299	0.060	4.964	0.000	Accept
Constant (C)	0.34	Ct method of micro-squares Method: Pooled Least Squares $Y2 = (0.34) + (0.33)X1 + (0.299)X2$				
(R^2)	0.39					
F-statistic	3.032					
Significance level (F)	0.001					

Source: Prepared by the researcher based on the outputs of the program (EViews)

Table (5) CT analysis test for companies research sample between leverage indicators and (ROA t-1)

Differentiation between companies by constant impact Fixed Effects (Cross)			Differentiation between periods by the constant effect Fixed Effects (Period)			
companies (Cross)	Estimates Coefficient	Order	(Period)	Estimates Coefficient	Order	
07--C	0.38	1	2017--C	0.94	1	
03--C	0.27	2	2012--C	0.52	2	
10--C	0.05	3	2015--C	0.03	3	
11--C	0.05	4	2010--C	-0.05	4	
09--C	0.04	5	2020--C	-0.08	5	
08--C	0.03	6	2011--C	-0.16	6	
05--C	-0.04	7	2019--C	-0.17	7	
06--C	-0.09	8	2013--C	-0.21	8	
02--C	-0.10	9	2018--C	-0.23	9	
04--C	-0.12	10	2014--C	-0.24	10	
01--C	-0.14	11	2016--C	-0.34	11	
12--C	-0.32	12				

Source: Prepared by the researcher based on the outputs of the program (EViews)

indicator, i.e., when a change (one unit) in the ratio of liabilities to total assets will lead to a change in (ROA t-1 is 0.299, which is significant at the indicative level (0.05) and according to these results the hypothesis at the corporate level accepts the research sample and the target duration and rejects the alternative hypothesis.

Conclusions and discussion

The research aims to ensure a relationship between leverage and financial sustainability in joint-stock companies, and the research objectives can be summarized as follows. First, diagnosing the importance of leverage and its impact on financial sustainability in joint-stock companies 0 identify available sources of financing from loans to industrial joint-stock companies. The trade-off between the various sources of leverage available for financial sustainability. Determining the nature of the relationship between leverage and financial sustainability. The importance of research is highlighted at the level of variable, independent research variables financial leverage and variable of financial

The results shown in table (4) show that the selection coefficient (R^2) was (0.39) and this shows the discrepancy between the indicators of the independent variable (fiscal lift) in the sub-variable (ROA t-1), according to the quality of the model between indicators (independent variable and sub-variable) and the accuracy of the results extracted by adopting the statistical program (EViews) and according to the results of table (4)) It turns out that the impact factor for independent variable indicators in the ROA t-1 sub-variable was as follows:

1. The impact factor for the total liability ratio index in the ROA t-1 sub-variable (0.332), a positive indicator, i.e., when a change (one unit) is made in the ratio of total asset liabilities will lead to a change in (ROA t-1) is (0.332), which is significant at the indicative level (0.05) and according to these results accepts the hypothesis at the corporate level the sample of research and the target duration and rejects the alternative hypothesis.

2. The impact factor for the ROA t-1 sub-variable (ROA t-1) index was a positive

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sustainability in industrial joint-stock companies is to determine the ability of industrial companies to carry out financial raisings that enable them to achieve financial sustainability, maintain the value of the company and thus achieve the financial sustainability of industrial joint-stock companies. The conclusions are one of the essential pillars of scientific research. The reader can identify the possibility of the scientific researcher by answering the questions of scientific research and all hypotheses, and the most important conclusions are. The company's sample research varies among themselves in terms of leverage because each company has its policies and procedures in the process of obtaining its revenues, and this depends on the company's policy in getting the resources available to achieve high profits with an acceptable degree of risk to be able to afford the company. Therefore, it cooperates in achieving the financial sustainability of industrial companies listed on the Iraqi Stock Exchange. Companies finance their investments through financial leverage because there are not enough financial resources to cover their investments, as well as insufficient capital to compete in the financial market. From the current study results, we conclude that financially raising financing contributes to the economic value and level of companies listed on the Iraqi Stock Exchange.

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