INTERNATIONAL JOURNAL ON ECONOMICS, FINANCE AND SUSTAINABLE DEVELOPMENT
E-ISSN: 2620-6269

IJEFSD

Available online at www.researchparks.org

RESEARCH PARK

https://journals.researchparks.org/index.php/IJEFSD

Vol. 5 No. 7 | Jul 2023

The Impact of the Market Timing Theory on the Financial Structure of the Iraq Stock Exchange

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ABSTRACT

Purpose: The study aims to investigate the timing theory and its impact on the financial structure and how to interpret the decisions of the financial structure of the companies registered in the Iraq Stock Exchange.

Theoretical framework: Financial structure decisions are influenced by market timing. an effect of market timing on the financial structure was not continuous over time, but rather for specific periods of time.Basically, the market timing theory according to a scale approved by Wurgler and Baker consists of five sub-dimensions: the firm size, the structure of tangible assets, profitability, the market value of the stock to its book value, the weighted rate of external financing.

Design/methodology/approach: The focus of this study is to test the effect of the market timing theory on the financial structure of the Iraqi industrial companies registered in the Iraq Stock Exchange using the Baker and Wurgler (2002) model. The market timing theory is taken as independent variable, while financial leverage in terms of market- book value is taken as dependent variable. The Panel Data model and the theory equation were used to analyze the study sample of 16 Iraqi companies registered in various

ARTICLEINFO

Article history:
Received 04 May 2023
Received in revised form
04 Jun 2023
Accepted 24 Jul 2023

Keywords: Market timing theory, asset tangibility, panel data model, financial leverage.

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Peer review under responsibility of Emil Kaburuan.

industrial sectors out of 43 companies during the period 2008-2020.

Findings: The results showed that the market timing theory has continuous effects when using the book and market leverage. It also has an impact on the financial structure of Iraqi companies through the most important determinants of the financial structure in Iraq, including the firm size FS, asset tangibility AT, and profitability PR. New determinants were also added like market to book value MTB and external finance weighted-average WMTB in the short term.

Research, Practical & Social implications: This study has taken two separate models to analyses the impact of market timing theory on the financial structure of Iraqi companies. It is searched that circulation of stock in Iraqi market is negligible due to less amount of profit given to stockholders.

Originality/value: Previous studies investigated the factors affecting the capital structure of banks that are registered in Iraq stock exchange. Growth, profitability, size and liquidity are few characteristics of banks that are included in previous research work, but the significance of this study is that it incorporates two other new determinants of banks which are market to book value (MTB) and external finance weighted average (WMTB).

1. Introduction

1.1. Background

Financial structure is among the most critical issues that have attracted scientific research in the field of financial management. Several theories have emerged about choosing the financial structure and explaining their financial behavior, since companies are the decision-making center, and they establish a set of financial decisions for the purpose of comparison between them. In this sense, they strive to develop some sort of financial framework in accordance with the position of the companies through the variables of their environment (Khanh et al., 2020).

Baker and Wurgler (2002) developed timing theory by asking questions like: Does market timing have an impact on the financial structure of the company? This theory was based on Modigliani and Miller's (1958) assumptions, which suggested that: in inefficient financial markets, the existence of a difference between the costs of the sources of the financial structure leads to the existence of profits gained through the market timing depending on stocks or debts. Through that, the financial managers would have a vision of market timing to meet the owners' interests.

According to numerous recent research, the timing of debt and stock issuance has a crucial impact in a company's finance policy. Grahan (2001) conducted an exploratory study in which opinions of 392 executive managers were surveyed. Through this survey, he found limited support for both Trade-off Theory and Packing Order Theory, as managers seek market timing practices activity.

Baker & Wurgler (2002) developed the market timing theory, which provided a significant challenge to the trade-off theory and packing order theory since it employed an index to evaluate the company using

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the market value to the book value M/B. Through their theory, they demonstrated that companies with low leverage increase their capital when the market value of the stock is high, whereas companies with high leverage increase their capital when the market value of the stock is low. In this case, the market timing of the stocks is one of the main factors that are considered when making financing decisions.

Through his study, Hovakimian (2004) found that companies with a high market value to book value ratio have high opportunities and growth, and have low debt ratios, which leads to an increase in the issuance of stocks while the issuance of debt decreases. Hovakimian also emphasized the importance of market timing in financing companies. Hunany & Ritter (2006) carried out an analytical study of the time series differences in financing decisions of American companies. His study concluded that trade-off theory and packing order could not explain the differences, but the market timing theory explained the time differences in the cost of stocks and provided an explanation for the fluctuations that occur from year to year through using debt or stocks, which supports the effect of market timing.

1.1. Objectives of the study

In this study, the following question was raised "How does market timing affect the financial structure of Iraqi companies registered in the Iraq Stock Exchange",

Previous studies investigated the factors affecting the capital structure of banks that are registered in Iraq stock exchange. Growth, profitability, size and liquidity are few characteristics of banks that are included in previous research work in order to examine the impact on banks' performance in Iraq, but the significance of this study is that it incorporates two other new determinants of banks which are market to book value (MTB) and external finance weighted average (WMTB). The main objective of this study includes:

- To examine statistically significant relationship between the size of firm and the financial leverage.
- To examine the statistically significant relationship between the structure of the company's tangible assets and the financial leverage.
- To examine the statistically significant relationship between the company's profitability and financial leverage.
- To examine the statistically significant relationship between market value to book value ration and financial leverage.
- To examine the statistically significant relationship between weighted average of external financing and financial leverage.

2. Literature review

Tijs & Leo (2007) found that the impact of rising companies stock prices on choices between debt or equity issuance are consistent with the assumptions of market timing theory. As for Khemaies Bougatef (2010), he conducted a study on some companies, and the results showed that some companies tend to issue stocks when their valuations are relatively higher than their book value and after improving the market performance. This effect on the market timing for stocks on the financial structure of companies persists beyond eight years. Gabriela Brendea (2012) gave an opinion through her study on the existence of a positive relationship between stock price and profits. And that there is an effect of market timing on the financial structure that was not continuous over time, but rather for specific periods of time.

There is also a study conducted by Allard Bruinshoofd & Leo de Haan (2014) among American, United Kingdom, and some European companies, which concluded that there is an impact of the market timing

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theory on many of the study sample companies, which tended to increase debts instead of issuing stocks when prices are high and vice versa in the case of low prices. It is evident that the timing of profits and the financial structure have a positive correlation with long-term profits, because of the significant impact of market timing on those profits and its effect on the financial structure (Anton Miglo, 2017).

Financial structure decisions are influenced by market timing. According to a study conducted by Mushtaq Muhammad (2020) on companies in South Asia, the results revealed that during the 2007-2009 financial crisis, companies obtained more external financing, that is, an increase in financial leverage, which may indicate their need to compete in the market by choosing more external debts to finance their business operations, or perhaps taking more debts in return for the private benefits of managers, which, in turn, may involve an improper use of finance and lead to the bankruptcy of the company, which leads to the market timing impact on those decisions.

Mohammed et al. (2017) also investigated how the banks listed on Iraqi stock exchange would be impacted through factors of capital structure of 16 banks during the time period 2009 to 2014. Profitability, size, liquidity and growth are the four factors that have been taken as independent variables and considered as characteristics of banks of Iraq. Banks' capital structure has been measured through leverage which is taken as dependent variable in this study. Technique of multiple linear regression has been applied. The results stated that there is no impact of growth on leverage of these 16 banks. It is also found in this study that size has a positive significant impact but liquidity and profitability has a negative but significant impact.

Another study by Abbas et al. (2018) investigated the relationship between ratios of capital structure and capitalization of market in Iraq stock exchange market. The data has been collected from the published statements of market of stocks exchange of Iraq between 2006 to 2014. The sample has been taken from 17 banks of Iraq which are listed in stock exchange market of Iraq. Simple linear regression technique has been applied to find out the relationship between variables. The findings stated that existence of relationship between capital structure and market value has not been found. Furthermore, weak and negative relationship between profitibility and structure of bank has been observed. Researchers suggested that in order to financing any project, banks of iraq should reduce the capital cost.

In her study, Fadoua Kouki (2021) investigated the impact of market timing on the financial structure by comparing the reverse leveraged buyouts (RLBOs) of European companies. It appeared that the impact of market timing on capital structure is different between RLBOs and public companies in that it is persistent ten years after the IPO for public companies and only three years after the IPO for RLBOs. It was found that these companies move towards the target debt ratio more quickly than their peers do, and these results challenge the strength and generality of the market timing theory and its impact on the financial structure of companies.

2.1. Market Timing Model

The focus of this study is to test the effect of the market timing theory on the financial structure of the Iraqi industrial companies registered in the Iraq Stock Exchange using the Baker and Wurgler (2002) model. This includes the main factors that affect the financial structure, size, asset structure, profitability, and then the time analysis is measured, the ratio of the market value of the stock to its book value, the weighted rate of external financing through the regression model. The study sample to be tested was determined by using a regression model based on several parameters from the Kayhas and Titman study as a more compatible and relevant measure of market timing.

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In this study, the determinants of the financial structure were integrated and defined by testing the research hypothesis on the market timing theory, and it was implemented through several models to solve the research problem. There are two types of study models: The first test suggests that the dependent variable is the book value of financial leverage with the independent variable, the market timing theory according to a scale approved by Wurgler and Baker (2002), which consists of five sub-dimensions: the firm size, the structure of tangible assets, profitability, the market value of the stock to its book value, the weighted rate of external financing. The second test suggests that the dependent variable is the market leverage with the independent variable, market timing theory.

The level of financial leverage was calculated from the ratio of total liabilities to total assets from the financial position lists as a measure of the financial structure similar to the literature and financial management book. In this study, the total liabilities and total assets came from the financial position lists that appeared on the Iraqi Securities Commission website and were approved by the Iraqi Financial Supervision Bureau. Leverage can be measured by the following equations:

$$\text{Book Leverage (Blev)} = \frac{book\ debt}{total\ assets} \quad (1)$$

$$\text{Market Leverage (Mlev)} = \frac{book\ debt}{total\ assets - total\ equity + market\ equity} \quad (2)$$

2.1.1. Firm Size (Log (FS))

Some studies in the finance literature revealed the relationship of firm size to debt, i.e. financial leverage. Some of them have indicated that there is a positive relationship, especially the studies carried out by Marsh (1982), Wessel & Titman (1988), Rajan & Zingales (1995), Ghosh (2000), Booth et al. (2001), Baker & Wurgler (2002), Chen (2004), Delcoure (2007), Frank & Goyal (2009), Degry se et al. (2009), Begryse et al. (2016), Setiawan & Anugrahani (2020).

$$\text{Firm Size} = \text{Log (Total Assets)} \quad (3)$$

Ho1: There is no statistically significant effect relationship between the firm size and the financial leverage.

H11: There is statistically significant effect relationship between the firm size and the financial leverage.

2.1.2. Asset Tangibility (AT)

Some studies in the financial management literature regarding the structure of tangible assets have been interpreted as one of the determinants of companies leverage. Despite the discrepancy in interpretation, it is found that the agency theory concluded that there is a positive relationship between the structure of assets and financial leverage, that is, indebtedness. The theory indicated that the structure of tangible assets is less valuable than intangible assets. Therefore, tangible assets are considered more secure for the company's lenders in the event of financial hardship (Rajan & Zingales(1995), Baker & Wurgler (2002), Gaud (2003), Alti (2006)).

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$$\text{Asset Tangibility} = \frac{Fixed\ Assets}{Total\ Assets} \quad (4)$$

Ho2: There is no statistically significant effect relationship between the structure of the company's tangible assets and the financial leverage.

H12: There is statistically significant effect relationship between the structure of the company's tangible assets and the financial leverage.

2.1.3. Profitability (PR)

Some studies indicated that the relationship between profitability and financial leverage is unclear. Most researchers and writers in the field of finance have conducted studies on that relationship. The results came with the Pecking Order Theory emerging in the early sixties, which was conducted by Donaldson, and then Stewart Myers who developed it.

This theory highlighted the importance of companies in determining the financial structure through choosing to use various internal sources of financing, which is the first preference. In the event that this source is insufficient, companies resort to external financing sources, and this gives an indication that the relationship between profitability and financial leverage is positive (Marsh (1984), Rajan &Zingales (1995), Shyam Sunder (1999), Frank & Goyal (2000), Bontempi (2002), Vidal (2005), Bulan & Yan (2010), Jibran et al. (2012), Armenter & Hnatkovska (2017), Maroney et al. (2019)).

$$\text{Profitability (PR)} = \frac{EBITDA}{Total\ Assets} \quad (5)$$

Ho3: There is no statistically significant effect relationship between the company's profitability and financial leverage.

H13: There is statistically significant effect relationship between the company's profitability and financial leverage.

2.1.4. Market – to – book ratio (MTB)

The literature and studies on financing reflected some divergent views among researchers and scholars regarding the relationship between market value and book value. Some of them indicated that there is a positive relationship between them and the debt (Gerardo et al., 2014), (Bajaj et al., 2018). Others stated that there is a negative relationship between them (Rajan & Zingales, 1995), (Huang & Ritter, 2009). The model below is used to find out whether market timing affects Leverage changes (Baker & Wurgler, 2002), (Structure & Returns, 2003), (Lopes, 2020), (Lopes, 2021).

Ho4: There is no statistically significant effect relationship between the market value to book value ratio and financial leverage

H14: There is statistically significant effect relationship between the market value to book value ratio and financial leverage

2.1.5. External Finance Weighted Average Market-To-Book Ration (WNTB)

Many studies agreed with the market timing theory in terms of the indicator used for market timing Market-To-Book Ration to have an impact on the long-term results as well as the financial structure of companies (Hovakimian, 2004, 2006), (Elliott, 2009), (Bougatef & Chichti, 2010), (Bruinshoofd & Haan, 2012).

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$$\textbf{Market-To-Book Ration} = \frac{Market\ Value\ of\ Share}{Book\ Value\ Share} \quad (6)$$

Baker & Wurgler (2002) stated that the variable is an explanatory variable for the market timing theory of the financial structure, which is formulated as follows:

$$EFWAMTB_{\,i,t-1} = \sum_{S=0}^{t-1} \frac{e_s + d_s}{\sum_{r=0}^{t=1-1} e_r + d_r} \cdot \left(\frac{M}{B}\right)_S \quad (7)$$

Ho5: There is no statistically significant effect relationship between the weighted average of external financing and financial leverage.

H15: There is statistically significant effect relationship between the weighted average of external financing and financial leverage.

3. Material and methodology

The study is concerned with analyzing the data of the Iraqi companies registered in the Iraq Stock Exchange for the period 2008-2020 based on the research variables: the independent variable, which is the market timing theory, and the dependent variable, which is the financial leverage in terms of market - book value. In this regard, the standard model will be described depending on the economic phenomenon to be studied in line with economic and financial theory. The standard model consists of an equation or a group of equations. In this research, it will be described as follows:

The first model

The FS index, the AT, the PR, the MTB, and the WMTB were chosen as independent variables, while the BLEV was chosen as the dependent variable. Based on the above description, the functional relationship between the independent variables and the dependent variable will be as follows:

$y_1=\beta_0 + \beta_1x_1 +\beta_2x_2 +\beta_3x_3 +\beta_4x_4 + u$

The second model

The FS index, the AT, the PR, the MTB, and the WMTB were chosen as independent variables, while the MIEV was chosen as dependent variables. Based on the above description, the functional relationship between the independent variables and the dependent variable will be as follows:

$Y_2=\beta_0 + \beta_1x_1 +\beta_2x_2 +\beta_3x_3 +\beta_4x_4 + u$

3.1. The stability of the time series

It refers to the stability of random behavior over time. The series is constant in the case of stability of the mean and variance over time. Besides, the covariance of two different periods depends on the time gap of the observations only. The stability of the time series can be predicted by drawing it. If the series is unstable, the drawing curve will take the pattern of increase or decrease with time. Statistical tests can also be used to detect stability in the time series, as the Dickey-Fuller test is considered one of the most essential and common tests.

Figure (1) indicates the time series curve for the four variables of the study. From the figure, instability in the time series is observed. To ensure the stability of the series, the Augmented Dickey-Fuller test

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was used. Table (1) shows the test results.

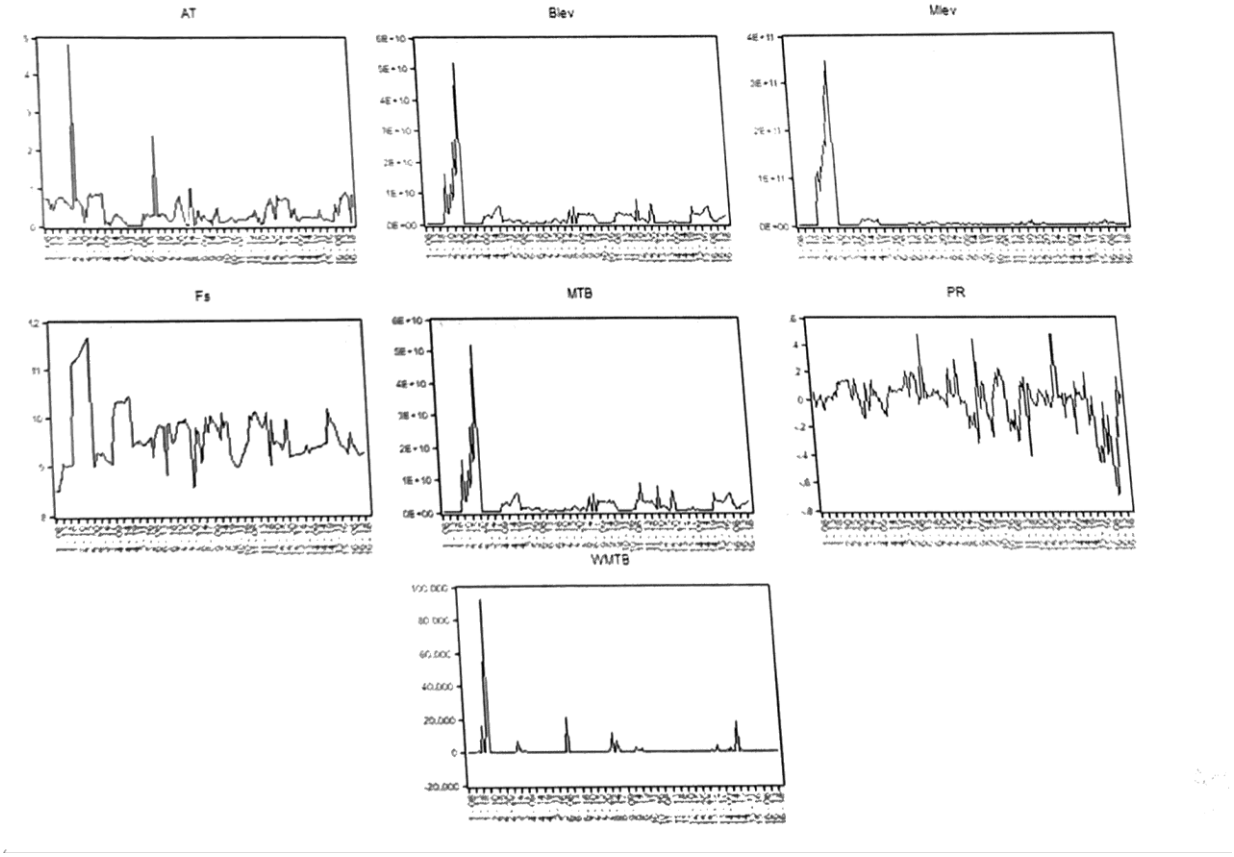

Figure 1: The stability of time series

Table (1): The results of the unit root test for the variables of the study

Variable	Difference	Test	Constant & Trend		Constant		No Constant	
			Value	Value	Value	Value	Value	Value
FS	I(0)	ADF	51.49	0.016	44.50	0.07	8.958	1.000
		PP	52.52	0.013	48.46	0.031	23.869	0.849
	I(1)	ADF	73.40	0.000	60.67	0.002	121.37	0.000
		PP	118.6	0.000	119.5	0.000	163.36	0.000
AT	I(0)	ADF	36.75	0.258	30.68	0.533	37.556	0.230
		PP	61.46	0.001	39.43	0.172	43.445	0.085
	I(1)	ADF	63.74	0.001	52.22	0.013	115.97	0.000
		PP	153.5	0.000	134.5	0.000	204.13	0.000
PR	I(0)	ADF	55.32	0.006	32.96	0.420	94.371	0.000
		PP	69.80	0.000	58.37	0.003	110.52	0.000
MTB	I(0)	ADF	39.06	0.182	47.46	0.039	26.007	0.763
		PP	49.46	0.025	61.11	0.001	34.984	0.328
	I(1)	ADF	87.82	0.000	60.20	0.002	150.33	0.000

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		PP	163.0	0.000	136.9	0.000	235.32	0.000
WMTB	I(0)	ADF	93.39	0.000	83.50	0.000	102.44	0.000
		PP	151.8	0.000	153.1	0.000	170.38	0.000
BLEV	I(0)	ADF	39.34	0.174	46.60	0.046	25.364	0.791
		PP	49.58	0.024	55.65	0.006	35.842	0.293
	I(1)	ADF	89.41	0.000	62.13	0.001	153.86	0.000
		PP	167.3	0.000	135.7	0.000	244.60	0.000
MLEV	I(0)	ADF	47.88	0.035	46.97	0.043	24.747	0.816
		PP	67.61	0.000	73.64	0.000	33.678	0.386
	I(1)	ADF	101.6	0.000	80.13	0.000	164.02	0.000
		PP	179.6	0.000	178.1	0.000	239.09	0.000

The Table shows the unit root test using the Augmented Dickey-Fuller test and the Phillips Perron test. From the results, it is clear that the PR variables are stable at the level, while the other variables are stable when taking the first difference for the three cases (with constant and trend, with constant, no constant).

Table (2): The Augmented Dickey-Fuller (ADF)

Variable	Method	Statistics	Prop
FS	ADF-Fisher Chi Square	**0.016**	**0.013**
AT	ADF-Fisher Chi Square	**0.258**	**0.001**
PR	ADF-Fisher Chi Square	**0.006**	**0.000**
MTB	ADF-Fisher Chi Square	**0.182**	**0.025**
WMTB	ADF-Fisher Chi Square	**0.000**	**0.000**
Blev	ADF-Fisher Chi Square	**0.174**	**0.024**
Mlev	ADF-Fisher Chi Square	**0.035**	**0.000**

Based on the foregoing, the first differences were taken for the data of the unstable variables. The test result when taking the first differences is shown in Table (3) as follows:

Table (3): The stability of the series when taking the first differences

Variable	Method	Prop
FS	ADF-Fisher Chi Square	0.000
AT	ADF-Fisher Chi Square	0.000
PR	ADF-Fisher Chi Square	0.000
MTB	ADF-Fisher Chi Square	0.000
WMTB	ADF-Fisher Chi Square	0.000
Blev	ADF-Fisher Chi Square	0.000
Mlev	ADF-Fisher Chi Square	0.000

3.2. The descriptive statistics of the study sample and its variables

Table (4) shows the descriptive statistics of the study sample, which includes 16 Iraqi companies working in the industrial sector, and they are among the most active companies in the Iraqi Stock Exchange. The time series were used for the period (2008-2020) by utilizing financial data for each company using Panel Data.

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Table (4): Descriptive Statistics

Variable	Obs	Mean	Std. Dev	Min	Max
FS	208	9.631	0.437	0.437	11.680
AT	208	0.375	0.258	0.010	4.843
PR	208	0.108	0.114	0.698	0.474
MTB	208	2.431	2.429	5.139	5.186
WMTB	208	1.089	1.825	2.575	9.166
Blev	208	2.391	2.400	2.630	5.186
Mlev	208	1.374	2.068	2.696	3.457

Based on Table, the average mean of the firm size (FS) is 9.631 with a standard deviation of 0.437, and the average mean value of tangible assets (AT) is 0.375, which indicates that the study sample companies keep a large amount of their assets in the formation of fixed assets, and this gives the impression that lenders in the Iraqi market are less risk-tolerant, so they need more guarantees to secure loan repayment. The result of the arithmetic mean of profitability (PR) is 0.108 with a standard deviation of 0.114.

Here, the results indicate that the arithmetic mean of the ratio of market value to book value (MTB) is 2.431, which is greater than one, and this means that the market values of companies, on average, are greater than their book values. This rise is an indication of overvalued, and according to market timing theory, a high percentage of MTB encourages companies to issue new shares.

On the other hand, the arithmetic mean of the weighted average external financing (WMTB) is 0.108, which indicates a limited effect of the weight of the market value to book value ratio. The book leverage (Blev) varies between 26.30% to 51.86%, and this indicates that most of the sample companies depend on debt as a source of financing in a limited way, while the effect of the market leverage is 34.57%, which is less than the average book leverage, and this indicates that the market values of the study sample companies exceed, on average, their book value.

According to Table (4), the standard deviation rates are low for all study variables, which indicates a relative stability in the method of calculating those variables, with a high standard deviation rate (Mlev, Blev, MT) despite the exclusion of outliers.

3.3. Estimating the appropriate model

To estimate the parameters of the first model, which represents the relationship between FS, AT, PR, MTB, WMTB variables as independent variables, and Blev as the dependent variable, a comparison will be made between the three models as required by the nature of the data for this study. Since the data is panel data, a comparison will be made among the pooled model, the fixed effects model, and the random effects model.

The pooled model is the simplest model, which assumes the stability of the transactions for different time periods, i.e., it ignores the effect of time. The fixed effects model assumes a focus on the effects of each group separately. The random effects model arises in the event of non-fulfillment of an imposition and an effect from the assumed fixed effects. Table (5) shows the results of testing the appropriate one between the pooled model and the fixed effects model.

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Table (5): Comparison test between the Pooled Model and Fixed Effects Model

Effects Test	Statistic	d.f.	Prob.
Cross-section F	40.827	(15,190)	0.000
Cross-section Chi-square	299.641	(15)	0.000

Table (5) shows the test results for the hypothesis indicating that the pooled model is the appropriate one for the first model. From the results of the table, the Prob value was less than the significance level (0.05); this means that the hypothesis is rejected. In this case, a comparison will be made between the fixed effects model and the random effects model.

Table (6): Hausman Test

Test Summary	Chi-Sq. Statistic	Chi- Sq . d. f.	Prob.
Cross-section random	38.0579	2	0.000

The Hausman test was used in Table (6) to compare between the fixed effects model and the random effects model. The null hypothesis of the Hausman test indicates that the random effects model is more appropriate than the fixed effects model. From the results of the table, it is clear that the Prob value of the test is 0.000, and this value is less than the level of significance of (0.05), and this means rejecting the hypothesis that indicates that the random effects model is the best model, and this means that the fixed effects model is the appropriate model.

To estimate the parameters of the second model, which represents the relationship between FS, AT, PR, MTB, and WMTB variables as independent variables, and the Mlev as the dependent variable. Table (7) shows the results of choosing the appropriate model between the pooled model and the fixed model.

Table (7): Comparison test between the Pooled Model and Fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	3.358	15,190	0.000
Cross-section Chi-square	48.913	15	0.000

Through the results of Table (7), it is noticed that the value of Prob is less than the level of significance (0.05), and this means that the hypothesis is rejected. In this case, a comparison will be made between the fixed effects model and the random effects model.

Table (8): Hausman Test

Test Summary	Chi-Sq. Statistic	Chi- Sq. d. f.	Prob.
Cross-section random	2.780	2	0.249

The Hausman test was used in Table (8) to compare between the fixed effects model and the random effects model. The null hypothesis of the Hausman test indicates that the random effects model is more appropriate than the fixed effects model. From the results of the table, it is clear that the Prob value of the test is 0.249, and this value is greater than the level of significance (0.05), this means accepting the

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hypothesis that the random effects model is the best model.

3.4 Estimating the parameters of the two models:

After obtaining the results of the two models parameters, they can be estimated through the following tables:

Table (9): Estimating the fixed model parameters for the first model

Prob.	F	R^2_{adj}	prob	t-test	β	Variable
0.000	90.21	0.87	0.008	3.183	2.22	constant
			0.008	-3.191	-2.4	FS
			0.008	-3.204	-1.4	AT
			0.007	3.295	5.42	PR
			0.000	139.64	0.989	MTB
			0.009	-3.101	-39.78	WMTB

Table (9) shows the fixed model regression relationship for the first model. The table shows that the FS variable is inversely proportional to the dependent variable (Blev). It is also evident that there is an inverse relationship between the AT variable and the Blev variable, while the other variables are directly proportional to the dependent variable. From the value of the coefficient of determination, one can conclude the significance of the explanatory variables in explaining the dependent variable.

Table (10): Estimating the random model parameters for the second model

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Prob.	F	R^2_{adj}	prob	t-test	β	Variable
0.000	114.63	0.73	0	-7.97044	-2.23	constant
			0	7.811511	2.28	FS
			0	5.12931	1.24	AT
			0.2413	1.175244	7.42	PR
			0	20.66979	5.23	MTB
			0.0008	-3.39672	- 40.77	WMTB

Table (10) shows the random model regression relationship of the second model. The table shows that the WMTB variable is inversely proportional to the dependent variable (Mlev). It is also noticed that there is a direct relationship between the Mlev variable and other variables with the dependent variable. From the value of the coefficient of determination, one can conclude the significance of the explanatory variables in explaining the dependent variable. Through the variables in Tables (9-10), it is noticed that the coefficients relationship appeared for the variables of the market timing theory and the impact on the financial structure through the book leverage (Blev) and the market leverage (Mlev). This can be explained as follows:

Table (9) shows that the value of the firm size (FS) is (-2.4), meaning that with an increase of one unit in the firm size, the book leverage (Blev) will decrease by (-2.4), which is less than the significance level (0.05), this is explained by the value (0.87). Therefore, the first hypothesis that there is an effective relationship between the firm size and the book financial leverage is rejected. In Table (10), the value of the firm size is (2.28), meaning that with an increase of one unit in the firm size, the market leverage (Mlev) will increase by (2.28), which is greater than the level of significance (0.05), and this is explained by the value (0.73).

Therefore, the first hypothesis is that there is an effective relationship between the firm size and the market leverage is rejected. Table (9) shows that the value of tangible assets variable (AT) is (-1.4), meaning that an increase of one unit in tangible assets will decrease the book leverage (Blev) by (-1.4), which is less than the significance level (0.05), and this is explained by the value (0.87). Therefore, the second hypothesis regarding the existence of an effective relationship between tangible assets and book financial leverage is accepted.

Table (10) shows that the ratio of tangible assets (AT) is (1.24), meaning that an increase of one unit of tangible assets will increase the market leverage (Mlev) by (1.24), which is greater than the level of significance (0.05), and this is explained by the value (0.73). Therefore, the second hypothesis about the existence of an effective relationship between tangible assets and market leverage is rejected. Profitability (PR) appeared in Table (9) of the first model at a rate of (5.42), meaning that an increase of

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one unit of profitability will increase the book leverage (Blev) by (5.42), which is greater than the significance level (0.05). Therefore, the third hypothesis regarding the existence of an effective relationship between profitability and book financial leverage is rejected.

According to Table (10), the profitability value is (7.42), meaning that an increase of one unit of profitability will increase the market leverage (Mlev) by (7.42), which is greater than the significance level (0.05), and this is explained by the value (0.73). So, the third hypothesis is rejected. In Table (9), the market value to the book value (MTB) is (0.989), which means that an increase of one unit of the market value to the book value will increase the book leverage (BLEV) by (0.989), and this is explained by the value (0.87).

In Table (10), (MTB) is (5.23), which means that an increase of one unit in the market to book value will increase the market leverage (Mlev) by (5.23), which is greater than the significance level (0.05), and this is explained by the value (0.73). So, the fourth hypothesis regarding the existence of an effective relationship between the market value to book value and the book leverage is rejected.

In Table (9), the weighted average ratio of external financing (WMTB) is (-39.78), which means that an increase of one unit of the weighted average will decrease the book leverage (Blev) by (-39.78), which is less than the level of significance (0.05), and this is explained by the value (0.87). So, the fifth hypothesis about the existence of an effective relationship between the weighted average of external financing and the book leverage is accepted.

In Table (10), the weighted average of external financing (WMTB) is (-40.77), meaning that an increase of one unit of (WMTB) will decrease the market leverage (Mlev) by (-40.77), which is less than the level of significance (0.05), and this is explained by the value (0.73). So, the fifth hypothesis regarding the existence of an effective relationship between the weighted average of external financing and the market leverage is accepted.

4. Market Timing Results and discussion

The market timing theory equation was used in the tests to identify the relationship between the variables and the book and market leverage. Table (11) shows that the relationship of the firm size FS and the book leverage (-2.399) is an inverse relationship, i.e. a negative one. Besides, its relationship to the market leverage (2.280) is direct, i.e. positive relationship. This is consistent with the market timing theory that considers the relationship of the firm size with the market leverage as a dependent variable is a direct relationship.

This is because large companies have the lowest possible information discrepancy since they provide information about all their issues, especially debts, which reduces financing decisions taken by companies. However, firm size remains highly significant when market leverage is used as a dependent variable.

Table (11): Market Timing Models

Variable	Panel: Market Timing Models BLEV		Panel: Market Timing Models MLEV	
	Fixed effects	Random effects	Fixed effects	Random effects
Constant	2.220	-2.590	-5.890	-2.230
FS	-2.399	2.454	6.280	2.280
AT	-1.443	3.199	4.230	1.240
PR	5.425	1.840	-1.280	7.420
MTB	0.989	0.992	4.651	5.234

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WMTB	-3.797	9.909	-7.317	-4.661
No. of Obs	208	208	208	208
R^2	0.92	0.89	0.92	0.73
F	2.306	8.516	1.328	1.148
Wald Chi^2	0.393	2.706	1.725	8.631
Hausman	3.288			11.129

According to the above table, it is clear that the relationship between tangible assets AT and book leverage (-1.443) is an inverse relationship, i.e. negative relationship, because companies with large tangible assets have an inverse relationship with the issuance of stocks, and their relationship with market leverage (1.240) is a direct relationship, that is, a positive relationship. This is consistent with the market timing theory, which considers the relationship of tangible assets with market leverage a direct one as dependent variable.

The relationship between profitability PR and book financial leverage (5.425) is a direct, i.e. negative relationship among those companies and the issuance of stocks as a source of financing, and its relationship with market leverage (7.240) is a direct relationship, i.e. negative, relationship, which is not consistent with the market timing theory, which considers the relationship between profitability and financial leverage to be an inverse relationship. The ratio of market values to the book value (MTB) and its relation to the book leverage (0.989) is a direct relationship and its relationship with the market financial leverage (5.231) is a direct one.

The relationship of the weighted average of external financing to the ratio of market value to book value WMTB (-3.797) is an inverse relationship with book leverage, as well as its relationship with market leverage (-4.661) is an inverse relationship, which is consistent with the market timing theory considering book and market leverage as dependent variables and. Therefore, the market timing theory has continuous effects when using the book and market leverage.

5. Conclusion

The study investigated the market timing theory and its impact on the financial structure of the Iraqi companies registered in the Iraq Stock Exchange, using two models to analyze the study sample of 16 companies through Panel Data and the theory equation. The first model consists of the study variables represented by the determinants of the financial structure, such as firm size FS, tangible assets AT, and profitability PR, in addition to two variables added from the timing theory equation like market-to-book value and MTB and the weighted average of external financing WMTB as independent variables, and the book leverage Blev as a dependent variable.

The second model, on the other hand, considered the above variables as independent variables, while the market financial leverage Mlev to be the dependent variable. Through the analysis, it was found that the fixed effects model is the best for the financial data of the companies that represent the first model, while the second model considered the random effects to be the best one.

Accordingly, a comparison was made between the two models using the market timing theory equation. The results of the two models show that there is a difference only in the variable of firm size FS, but it is similar in the case of other variables like tangible assets AT, profitability PR, market value to book value MTB, and the weighted average for external financing WMTB. The market timing theory is believed to have continuous effects when using the book and market leverage, but its impact is on the financial structure of Iraqi companies through the determinants of firm size FS, assets tangibility AT, profitability PR with two more new determinants that were added, like the MTB and the WMTB, in the

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short term.

Less amount of profit has been given to stockholders by the banks of Iraq is noted from the current situation of Iraqi market. Due to this step circulation of stocks in Iraqi market is negligible. It is recommended that Iraq stock exchange market should be fully updated along with availability of electronic data within the database. The direction for future research work suggested that various internal factors which include volatility, age, assets tangibility etc. would be incorporated in order to examine the impacts. Furthermore, investigation of external factors such as condition of capital market that is used in determination of banks' capital structure and policy of taxation would be incorporated in future research work. Therefore, exploration of other factors and creation of new knowledge could be done in future.

Our present study focuses on the industry of banks in Iraq, but it is suggested that multiple sectors would be taken and separately each sector could be focused or analyzed in order to draw comparison among different sectors. Lastly, it is present in this study that financial structure of 16 companies out of 43 companies has been taken to analyze their decision. Therefore, in order to draw different results along with different situation, the sample size of companies would be increase in future work.

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