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Relationship between financial ratios and stock value

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***Abstract*---**Financial ratios examines the items in the financial statements and converts them from Rial concept to comparable ratios. These ratios establish a meaningful relationship between the effective factors of financial statements and by establishing this relationship between the information in the financial reports, it gives the users the power of analysis. In this research, the relationship between the changes in financial ratios and the stock value of companies listed in the Tehran Stock Exchange is investigated. For this purpose, financial ratios were divided into liquidity ratios, profitability ratios, efficiency ratios, and debt ratios to measure liquidity ratios from current ratio and current ratio indicators, to measure profitability ratios from gross profit margin ratios, Return on sales, return on assets and return on equity were used. Also, in order to measure efficiency ratios, indicators of inventory turnover, accounts receivable turnover, and debt payment period were used, and finally, debt ratio and capital ratio were used to measure leverage ratios. The results showed that the results of the first hypothesis showed that there is a positive and significant relationship between the current ratio and the future ratio with stock value. In fact, the increase in current ratios and instantaneous ratio leads to an increase in the stock value. In this way, the increase in liquidity is a factor that can help improve the stock value. The results of the second hypothesis show that there is a positive and significant relationship between gross profit margin, return on sales, return on assets and return on equity with stock value. In fact, increasing the profitability indicators helps to increase the value of the company's shares. The results of the third hypothesis showed that there is a relationship between efficiency ratios and stock value. In fact, the increase in inventory turnover, the increase in the receivables collection period, and the decrease in the debt payment period increase the value of the company's shares. Finally, the results

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of the fourth hypothesis showed that there is a relationship between leverage ratios and the company's stock value. In fact, an increase in the debt ratio leads to a decrease in the stock value and an increase in the capital ratio leads to an increase in the company's stock value.

Keywords---financial ratios, stock value, leverage ratios.

Introduction

To analyze the financial situation of a company, it is not possible to be satisfied only with its financial statements and figures. Rather, creating a meaningful connection between the concepts and items of these forms and comparing them with each other gives a more comprehensive and accurate view to examine the current state of the company and predict its future.

Financial ratios

Financial ratios are considered useful tools in determining the financial statements of companies, which by providing the ratio of some important accounting items, a correct understanding of important facts, in the range of operation results and financial status of a company.They get the company.By examining and analyzing financial ratios, the pathology of a company's financial activity can also be obtained. Financial ratios are divided into four major groups:

Liquidity ratios
These ratios measure the company's ability to pay short-term debts and receivables. Activity ratios: With this ratio, the efficiency of a company in the use of its resources can be measured.

Leverage ratios
It shows financial needs through creating debt. In fact, these ratios determine to what extent the company has met its financial needs from other sources. Profitability Ratios: It analyzes the company's success rate in earning profit and the method of providing it from the source of income, sales and investment. The analysis of financial ratios is done by comparing two items in the financial statements. The final ratio can be interpreted in a way that is not possible by interpreting each item separately.

Financial ratios can be based on what it measures; He categorized: profitability, liquidity, activity, leverage, valuation and growth, each of which has its own subsets. Due to the great importance of cash flows in the situations of economic units, its necessity for their continued survival, forecasting cash flows as one of the integral components of financial planning is one of the important issues that are of particular importance to managers of economic units.

It has the fact that the cash flow of economic units can be compared to the flow of blood circulation in the body. Also, the statement of cash flows is used by various groups, including investors and creditors, government units, and on the other hand, investors and creditors are interested in making decisions in the form of

cash flows, because most of the securities models or evaluation methods, as well as Its impact on the return of stocks and economic units is based on future cash flows. Today, the analysis offinancial statements and the analysis of financial statements, as well as financial statements and the balance sheet of Vasodouzian, play a significant role in predicting the trend of joint stock companies in the stock market and can play a very important role in Reduces market fluctuations

Research method

this research is to investigate the relationship between the changes in financial ratios and the stock value of companies listed on the Tehran Stock Exchange. Therefore, this research is an applied research because its results can be used in the formulation of the rules and regulations of the stock exchange. Applied research is research that uses theories, laws, principles and techniques to solve practical and real problems. Also, considering that this research seeks to find the relationship between several variables, it is of the correlation type and the ali posterior method; This means that research is done based on past information. In correlational research, the main goal is to determine whether there is a relationship between two or more quantitative (measurable) variables. If this relationship exists, what is its size and extent? In correlational research, a number of variables that are thought to be related to the problem are evaluated. Variables that are found to be not highly dependent are removed and not investigated further (Abbasi et al., 2014).

Population and statistical sample

The statistical population of this research includes all companies admitted to the Tehran Stock Exchange for the period of 2018-2019. Due to the large size of the statistical population and the specific difficulties resulting from it, as well as the existence of some inconsistencies among the community members in relation to the data required for the research, the following conditions have been selected for the selection of the sample, which is presented in Table 1-3:

Table 1-3. The steps and method of data selection of the sample companies

The total number of companies is 420 by the end of 1998	Limitation	Row
(45)	Companies that have changed their financial year during the period under review (2009-2018).	1
(90)	Companies whose fiscal year does not end at the end of March (to be more comparable).	2
(85)	Companies that were admitted to the stock exchange before 2009 but were not listed on the stock exchange until the end of 2019	3
(80)	Companies whose data is not accessible	4
120	the number of investigated companies	

According to Table 1-3, the number of sample companies in this study is 120 and the number of observations is 1200 years.company.

Research hypotheses Main hypothesis

There is a relationship between financial ratios and stock value.
The first sub-hypothesis: There is a relationship between liquidity ratios and stock value.
Second sub-hypothesis: There is a relationship between profitability ratios and stock value.
Third sub-hypothesis: There is a relationship between leverage ratios and stock value.
The fourth sub-hypothesis: There is a relationship between efficiency ratios and stock value.

Research variables

Independent variable (financial ratios)
Liquidity, profitability, efficiency and leverage indicators are used to measure financial ratios. Liquidity ratios: includes current ratio and current ratio.

Current ratio
is the result of dividing current assets by current liabilities. This ratio shows the ability to repay the current debts from the current assets of the institution. The formula for calculating the current ratio is as follows.

$$\text{current ratio} = \frac{Current\ assets}{Current\ liabilities}$$

Quick ratio (instantaneous)
The quick ratio is obtained by dividing the most liquid items of current assets (cash, bank balance and documents receivable) by current liabilities. Inventories are not included in this calculation because they need a longer period of time to be liquidated.

$$\text{Quick ratio} = \frac{(Current\ assets - (stock + prepayment)}{Current\ liabilities}$$

Profitability ratios
Profitability ratios show the company's source of income and its effect on the company's total profit. These ratios are one of the important indicators in determining the efficiency of company management, the ability to earn profit or the appropriate return rate in investments. Profitability ratios examine how the company provides profit from revenues, sales, return on investments, etc. As a result, it can be said that these ratios play a significant role in evaluating the adequacy of the company's management in obtaining profits and overall performance.

Gross profit margin: this ratio shows the percentage of profit that is earned after paying the full price of the sold goods. Obviously, the higher this ratio is, the

better it is. Gross profit is the difference between net sales and the cost of goods sold.

$$\text{Gross profit of net sales} = \frac{\text{Gross profit}}{\text{net sales}}$$

Return on assets

The ratio of return on assets shows how the company has used the resources and assets under its authority to earn profit and has created returns for its investors and creditors. The ratio of return on assets can be the final index to evaluate the adequacy and efficiency of the company's management.

$$\text{return on assets} = \frac{\text{Net profit}}{assets}$$

Sales return

The ratio of sales return shows how much net profit is created for the company from each rial of sales. This ratio is the scale of the company's profitability, and costs such as the cost of financing the company, which are not related to sales, are affected in this ratio.

$$\text{Sales return} = \frac{\text{Net profit}}{\text{net sales}}$$

Return on equity

the return on equity ratio expresses how much of each Rial of equity A net profit has been created for the company. This ratio shows the return on equity.

$$\text{Return on equity} = \frac{\text{Net profit}}{\text{equity}}$$

Efficiency ratios

ratios that show the work of this business unit in using current and non-current assets. The above ratios are Inventory turnover ratio:

Inventory turnover is obtained by dividing the cost of goods sold by the average inventory of a financial period. The cost of goods sold is deducted instead of sales because sales include profit. The average inventory is placed in the denominator of the fraction because this ratio shows the activity during a period.

$$\text{Inventory turnover} = \frac{\text{Cost of goods sold}}{\text{Average inventory}}$$

Accounts receivable circulation

In theory, Accounts receivable circulation is obtained by dividing net credit sales by average receivables. In practice, in case of deduction, because most companies do not report credit sales separately, it is the sum of sales during the period.

$$\text{Accounts receivable circulation} = \frac{\text{net sales}}{\text{Average accounts receivable}}$$

The period of payment of debts shows the time it takes for the company to settle its debt with suppliers - debt for the purchase of raw materials on credit.

$$\text{accounts payable circulation} = \frac{\text{Credit purchases}}{\text{Average accounts payable}}$$

Leverage Ratios
It shows the financing of financial needs through the creation of debt. In fact, these ratios determine to what extent the company has met its financial needs from other sources.

Debt ratio
measures the ratio of the company's assets that are invested with liabilities (obligations to third parties).

$$\text{Debt ratio} = \frac{\text{Total debts}}{\text{Total assets}}$$

Capital ratio
determines the ratio of total assets obtained by capital (for example, owner's shares and cumulative profit of the company).

$$\text{capital ratio} = \frac{\text{equity}}{\text{assets}}$$

dependent variable (stock value)
the company's stock value is one of the components that investors pay attention to in order to make investment decisions and rank companies. In other words, investors compare different types of stocks based on different criteria and invest in certain stocks. As a result, comparing the value of companies is one of the ways to improve the investment process. In the financial literature, various indices have been used to measure the value of the company, among which we can refer to Qotubin index, market to book value ratio, valuation models (including economic and accounting models), stock price, etc. Meanwhile, the stock price is one of the most obvious investment criteria that shows the value of the company for the investor. Therefore, in this research, Qotoin index is used to measure the value of the company. The value of the company is calculated by dividing the market value of equity by its book value.

$$\text{stock value} = \frac{\text{Total market value of equity}}{\text{Total book value of equity}}$$

The model related to the research hypotheses test:
the first sub-hypothesis test model
$VALUE_{i,t} = \beta_0 + \beta_1 CUR_{i,t} + \beta_2 QUR_{i,t} + e_{i,t}$
VALUE = stock value
CUR: current ratio;
QUR: instantaneous ratio.

Second sub-hypothesis test model

$VALUE_{i,t} = \beta_0 + \beta_1 MAR_{i,t} + \beta_2 ROS_{i,t} + \beta_3 ROA_{i,t} + \beta_4 ROE_{i,t-1} + e_{i,t}$

MAR: Gross profit margin
ROS: Sales return
ROA: return on assets
ROE: Return on equity

Third sub-hypothesis test model
$VALUE_{i,t} = \beta_0 + \beta_1 INV_{i,t} + \beta_2 AR + \beta_3 AP_{i,t} + e_{i,t}$
INV: Inventory turnover
AR: Accounts receivable circulation
AP: accounts payable circulation

The fourth sub-hypothesis test model
$VALUE_{i,t} = \beta_0 + \beta_1 LEV_{i,t} + \beta_2 CAP + e_{i,t}$
LEV: debt ratio
CAP: Capital ratio

Findings

Descriptive Findings First, descriptive statistics of the data under study are calculated to analyze the data. Table (2-4) shows the descriptive statistics of research variables at the level of all companies, which shows the value of descriptive parameters for each variable separately and includes information about the mean and median. The second category of information includes parameters related to dispersion, such as standard deviation, which represents the distribution of data around the mean axis. In the table (2-4); The main central index is the average, which shows the balance point and the center of gravity of the distribution, and is a good indicator to show the centrality of the data. The average current ratio, current ratio, inventory turnover, accounts receivable turnover and debt payment period are equal to 44.1, 642.1, 28.86, 96.66, and 15.59, respectively. Also, the average value of the company's shares should be equal to 0.1713.

Table (2-4). Descriptive statistics of research variables at the level of all companies

Variables	Maximum	Minimum	Standard Deviation Median	Mean	Average
current ratio	9.161	0.223	0.780	1.316	1.446
instantaneous ratio	11.845	0.267	0.670	1.532	1.642
Gross profit margin	0.597	0.053	0.665	0.265	0.252
Sales return	3.753	0.064	0.422	0.188	0.294
return on assets	0.703	-0.036	0.164	0.091	0.129
Return on equity	0.780	0.001	0.181	0.073	0.118

Inventory turnover	552.42	2.020	74.30	65.16	86.28
Accounts receivable circulation	683.62	1.136	84.59	41.21	66.96
Debt payment period	390.13	2.372	36.87	55.65	59.15
debt ratio	0.887	0.234	0.223	0.605	0.590
Capital ratio	0.896	0.233	0.242	0.614	0.610
stocks value	7.164	0.015	0.777	1.511	1.713

also the average profitability indicators such as gross profit margin, sales return, return on assets and return on equity equal to 0.265, 0.188, 0.091 respectively. and it is 0.118. The median is another central index that shows the state of society. The mean current ratio, current ratio, inventory turnover, accounts receivable turnover and debt payment period are 1.316, 1.532, 16.65, 21.41, and 65.55, respectively, and it shows that half of The data are less than this value and the other half are more than this value. Minimum and maximum indicate the lowest and highest number of variables in the statistical population, respectively. For example, the lowest value is equal to -0.036 for the property return variable and the highest value for the stock value is 164.7. In general, dispersion parameters are a measure to determine the degree of dispersion from each other or the degree of dispersion of them compared to the average. One of the most important dispersion parameters is the standard deviation. The value of this parameter for the accounts receivable turnover variable is equal to (59.84) and for the asset return variable is equal to (164.0), which shows that among the research variables, accounts receivable turnover and asset return have the highest and lowest values, respectively. are the amount of dispersion.

The normalization test of the research data. The normality of the variables is the basic condition for performing all parametric tests. In order to check the normality of the research variables, the Kolmogorov-Smirnov test was used. In this test, whenever the significance level is less than 5% (5% > Sig), the null hypothesis is rejected at the 95% confidence level. The assumptions of the Kolmogorov-Smirnov test are as follows: H0: The data distribution is normal. H1: The data distribution is not normal. As the results show, the significance level of the share value is 0.063, which is more than 5%; With 95% confidence, dependent variables have a normal distribution; Therefore, at the confidence level of 95%, hypothesis H1 is rejected, and hypothesis H0 is confirmed. Also, among the independent variables, current ratio, instantaneous ratio, return on equity and debt payment period have a normal distribution with a significant level of 0.144, 0.144, 0.092 and 0.086.

Table (4-3). Test results K-S

Variables	P-Value	Statistics Z	Number of observations
current ratio	0.155	0.893	1200
instantaneous ratio	0.144	0.927	1200
Gross profit margin	0.000	3.224	1200
Sales return	0.000	5.328	1200
return on assets	0.000	4.612	1200
Return on equity	0.092	1.007	1200
Inventory turnover	0.000	4.056	1200
Accounts receivable circulation	0.000	2.339	1200
Debt payment period	0.086	0.023	1200
debt ratio	0.013	1.506	1200
Capital ratio	0.009	1.643	1200
stocks value	0.063	1.112	1200

The inferential findings of the correlation coefficient test are used to examine the relationship between variables, the type of relationship (direct or inverse) and the extent of the relationship. The correlation coefficient is always between 1 and -1. If there is no relationship between two variables, these two variables are independent of each other and its value will be zero. Also, the greater the absolute value of the obtained number, the higher the correlation between the two variables, and the positive and negative signs also indicate the direction of the relationship. High correlation between independent variables causes collinearity problem. Gujarati (2004) suggests that if the correlation between independent variables is greater than 0.80, the collinearity problem is a serious problem and should be investigated further. They have also mentioned that if the purpose of the regression model is prediction, this issue will not be an acute problem and the highest adjusted coefficient of determination (adj R2) can indicate the best model. The most important assumption of the Pearson correlation test is the assumption of normal distribution of variables. Whenever the distribution of variables is not normal and their relationship is not linear, it is better to use Spearman's correlation test. Due to the fact that the distribution of most research variables is not normal, we use Spearman's correlation coefficient to check the relationship between variables. The results of the Pearson correlation test show that there is a positive and significant relationship between the current ratio and the current ratio as indicators of liquidity with the stock value of companies listed on the Tehran Stock Exchange, in fact, with the increase of the company's liquidity. The value of the company's shares increases. The results also show that there is a positive and significant correlation between gross profit margin, sales return, return on assets and return on equity.

This means that the increase in profitability leads to an increase in the value of the company's shares, which is consistent with the results of the research findings. Also, the correlation results show that there is a positive correlation between inventory turnover and accounts receivable turnover with the stock value, while there is a negative and significant correlation between the two debt payments with the company's stock value, which is consistent with the results of

the research hypotheses. Finally, the correlation test of debt indicators with company value shows that there is a negative and significant correlation between the debt ratio and the company's stock value. While the correlation between capital ratio and stock value is positive and significant, which is consistent with the results of research hypothese

Table (4-4). correlation coefficient of research variables

	The relationship between changes in financial ratios and stock value											
	VALUE	CUR	QUR	MAR	ROS	ROA	ROE	INV	AR	AP	LEV	CAP
VALUE	1.000											
CUR	0.093*	1.000										
QUR	0.181**	0.139**	1.000									
MAR	0.100*	0.029	0.132**	1.000								
ROS	0.128**	0.041	-0.044	0.08	1.000							
ROA	0.262**	0.190**	-0.039	-0.003	0.055	1.000						
ROE	0.143**	0.288**	-1.018	-0.007	0.023	-0.170**	1.000					
INV	0.177**	0.247**	-0.066	-0.133**	0.029	-0.074	-0.031	1.000				
AR	0.128**	0.392**	-0.051	0.071	-0.026	-0.055	0.017	0.083	1.000			
AP	-0.144**	0.001	0.056	0.013	0.014	0.057	-0.343**	0.005	-0.108*	1.000		
LEV	-0.132**	0.001	-0.022	0.094	-0.015	-0.012	-0.082	-0.017	0.115**	-0.009	1.000	
CAP	0.097*	-0.007	-0.024	0.119**	-0.009	0.094*	-0.088*	0.004	0.027	0.065	0.334**	1.000
SDRET	-0.007	0.076	-0.080	-0.084*	0.015	0.119**	0.206**	-0.025	0.139**	-0.127**	0.299**	0.373**

Note: Significant correlation between research variables is indicated by * and *, * indicates correlation at a significance level of 0.01 and * indicates a significance level of 0.05.

Panel data is used to determine the reliability of 2 model variables from the unit root tests in panel data. Reliability of variables means that the mean and variance of the variables are stable over time and the covariance of the variables between different years. To determine whether the distribution of the variables used in this research is stable or not, Levin, Lin and Chu 3 test is used. The null and opposite assumptions of this test are as follows: H H_1: existence of unit root (variables are not stable): absence of unit root (variables are stable) Table 4-5 shows the results of "Levin, Lin and Chu" test for dependent variables. It shows independent and control considering the whole company. Table 4-5. Reliability test of research variables, variable symbol, current ratio, current ratio, gross profit margin, return on sales, return on assets, return on equity, turnover, inventory turnover, accounts receivable turnover, debt settlement period, debt ratio, capital ratio,

equity value, according to this table, it can be seen that none of the variables They do not have a unit. Because the probability value of all of them is smaller than 0.05.

Table 4-5. Reliability test of research variables

Variables	probability value	Levin, Lin & Chu	symbol
current ratio	0.000	-11.091	CUR
instantaneous ratio	0.000	-266.002	QUR
Gross profit margin	0.000	-43.786	MAR
Sales return	0.000	-54.025	ROS
return on assets	0.000	-34.614	ROA
Return on equity	0.000	-44.027	ROE
Inventory turnover	0.000	-41.265	INV
Accounts receivable circulation	0.000	-65.086	AR
Debt payment period	0.000	-57.148	AP
debt ratio	0.000	-35.741	LEV
Capital ratio	0.000	-31.812	CAP
stocks value	0.000	-32.976	VALUE

Limer's (Chow) F test and Hausman test have been used to estimate the research models from the pooled data technique. The necessity of using this technique, which combines time series and cross-sectional data, is mostly due to increasing the number of observations, increasing the degree of freedom, reducing variance heterogeneity, and reducing collinearity between variables. Therefore, the models are estimated using combined data for all sample companies during the years 2009 to 2019. Then, based on the obtained estimates and with the help of F and t statistical tests, the calculated probability (p-value) and coefficient of determination will be used to judge and evaluate each of the research hypotheses. A question that is often raised in applied studies is whether there is evidence of data pooling or whether the model is different for all cross-sectional units. Therefore, it should be checked first whether there is heterogeneity or individual differences between the stages or not. If there is heterogeneity, the panel data method is used, otherwise, the pooled data method with the ordinary least squares (OLS) approach is used to estimate the model. For this purpose, the Limer (Chow) test is used, which tests the hypotheses as follows: H0: uniformity of the width from the origin (combined data) H1: heterogeneity of the width from the origin (panel data) if it is determined that The examined sections are heterogeneous and have individual differences, panel methods (panel data) are more suitable, in order to choose between fixed and random effects, Hausman test was used. If the statistical data were such that the cross-sections have different reactions and a separate origin is considered for each cross-section, the origin of the errors caused by the estimation should also be determined. In other words, it should be clear that the error caused by the estimation happened over time, even though the mentioned error, in addition to happening over time, was also due to a change in time. In the way of considering such errors, there are two effects, fixed effects and random effects. In fixed effects, the estimation error

caused by the change of sections in the width from the origin is considered, but in the random effect model, such errors are considered randomly. Hausman (1978) has presented a test to identify the estimation method. Based on this test, the null hypothesis indicates that the random effects method is efficient and consistent, and the opposite hypothesis is based on the fact that the fixed effects method is efficient and consistent. The results of Leimer (Chow) F test and Hausman test for the research hypotheses are presented in table (4-6): First step: Identifying the homogeneity or heterogeneity of the data using the Leimer (Chow) test.

Table (4-6). The results of Limber's F test (sameness of width from the origin of sections)

Test result	P-Value	Statistic	Test model	null hypothesis (H_0)
Hypothesis H0is rejected	0.000	3.784	The first sub-hypothesis	The width from the origin of all sections is the same
Hypothesis H0 is rejected	0.000	4.875	The second sub-hypothesis	
Hypothesis H0 is rejected	0.000	4.041	The third sub-hypothesis	
Hypothesis H0 is rejected	0.000	3.431	The fourth sub-hypothesis	

In Limer's F test, the hypothesis H0 shows the use of the consolidated data method in contrast to the hypothesis H1, which means the use of the panel data method. According to the level of significance obtained from Table 6-4, the result of this test indicates that the studied sections are heterogeneous and have individual differences, so the use of panel data methods is more suitable for all the desired models.. After choosing the panel data method by Lemer test, Hausman test was performed. In this test, if H0 is accepted, the random effects model is used, and if H1 is accepted, the fixed effects model is used.

Table 7-4. The summary of Hausman test results is presented in

Test result	P-Value	StatisticsK2	Test model	null hypothesis (H_0)
Hypothesis H0is rejected	0.267	11.127	The first sub-hypothesis	The difference in coefficients is not systematic. (The model is random effects)
Hypothesis H0is rejected	0.232	14.006	The second sub-hypothesis	
Hypothesis H0is rejected	0.247	12.761	The third sub-hypothesis	
Hypothesis H0is rejected	0.278	10.752	The fourth sub-hypothesis	

As the results of table 7-4 show, the value of this statistic is non-significant for all the models and the significance level reported in table 7-4 for All the hypotheses

are greater than 0.05 and indicate the acceptance of the HO hypothesis and the rejection of the H1 hypothesis at the confidence level of 95% and indicate the use of the random effects method. This hypothesis states that there is a relationship between liquidity ratios and stock value, and the null hypothesis and the opposite hypothesis are set as follows: Zero hypothesis (H0): There is no relationship between liquidity ratios and stock value.

Opposite hypothesis (H1): There is a relationship between liquidity ratios and stock value. The results of the first sub-hypothesis test in Table 8-4 show that the current ratio and the instantaneous ratio with the stock value have a positive (1.104, 0.098) and significant (0.009, 0.000) relationship. has it. The adjusted coefficient of determination shows that about 31.7% of the changes in the dependent variable of stock value can be explained by the independent variable of current ratio and instantaneous ratio. Watson camera statistic is between 1.5 and 2.5 and it can be confirmed that the errors are independent of each other with the difference between the actual values and the values predicted by the regression model. The significance level of F is equal to 0.000 and smaller than 0.05, which indicates the significance of the whole model. Also, in the test of the first sub-hypothesis, the value of the VIF statistic for all variables was less than 10, so there was no problem of collinearity between the research variables.

Table (9-4). Relationship between liquidity ratios and stock value

$VALUE_{i,t} = \beta_0 + \beta_1 CUR_{it} + \beta_2 QUR_{i,t} + e_{it}$					
Dependent variable: stock value					
VIF	Significant level	t	Unstandardized coefficient		Variables
			Error rate	Coefficient	
-	0.250	1.152	0.709	0.817	Fixed coefficient
1.049	0.009	2.641	0.148	1.104	CUR_{it}
1.256	0.000	4.877	0.020	0.098	$QUR_{i,t}$
0.317					R^2 justified
1.600					Watson
29.129					F statistics
0.000					Statistical probability F

The test of the second sub-hypothesis of this hypothesis states that there is a relationship between profitability ratios and stock value, and the null hypothesis And the opposite hypothesis is set as follows: Zero hypothesis (H0): There is no relationship between profitability ratios and stock value. Opposite hypothesis (H1): There is a relationship between profitability ratios and stock value. The results of the first sub-hypothesis test in Table 10-4 show that there is a positive (0.101, 0.080) and significant (0.009, 0.000) relationship between the gross profit margin and sales efficiency, respectively.. Also, the findings show that there is a positive (0.483, 655.2) and significant (0.000, 0.000) relationship between return on assets and return on equity with stock value. The adjusted coefficient of determination shows that about 32% of the changes in the dependent variable of

stock value can be explained by the independent variables of gross profit margin and sales return, return on assets and return on equity. Watson camera statistics between 1.5 and 2.5 and it can be confirmed that the errors or the difference between the actual values and the values predicted by the regression model are independent of each other. The significance level of F is equal to 0.000 and smaller than 0.05, which indicates the significance of the whole model. Also, in the test of the second sub-hypothesis, the value of the VIF statistic for all variables was less than 10, so there was no problem of collinearity between the research variables.

Table (10-4). Relationship between liquidity ratios and stock value

$VALUE_{i,t} = \beta_0 + \beta_1 MAR_{i,t} + \beta_2 ROS_{i,t} + \beta_3 ROA_{i,t} + \beta_4 ROE_{i,t-1} + e_{i,t}$					
Dependent variable: stock value					
VIF	Significant level	t	Unstandardized coefficient		Variables
			Error rate	Coefficient	
-	0.781	0.278	0.650	0.181	Fixed coefficient
1.151	0.009	2.637	0.038	0.101	MAR_{it}
1.245	0.000	3.831	0.021	0.080	$ROS_{i,t}$
1.223	0.000	3.561	0.136	0.483	$ROA_{,t}$
1.588	0.000	5.620	0.472	2.655	$ROE_{i,t}$
0.320					R^2 justified
1.606					Watson
29.131					F statistics
0.000					F Statistical probability

The third sub-hypothesis test of this hypothesis states that there is a relationship between efficiency ratios (activity) and stock value, and the null hypothesis and the opposite hypothesis are set as follows: Null hypothesis (IO): There is no relationship between efficiency ratios and stock value. Opposite hypothesis (1): There is a relationship between efficiency ratios and stock value. The results of the third sub-hypothesis test in Table 11-4 show that there is a positive (0.273, 0.099) and significant (0.002, 0.000) relationship between inventory turnover and accounts receivable turnover with stock value. exists, while the relationship between debt payment period and stock value is negative (-0.533) and significant (0.000). The adjusted coefficient of determination shows that about 1.32% of the changes in the dependent variable of stock value can be explained by the independent variables of inventory turnover and accounts receivable turnover and debt payment period and other variables. The statistics of the Watson camera are between 1.5 and 2.5 and it can be confirmed that the errors Or the difference between the actual values and the values predicted by the regression model are independent of each other. The significance level of F is equal to 0.000 and smaller than 0.05, which indicates the significance of the whole model. Also, in the test of the third sub-hypothesis, the value of the VIF statistic for all variables was less than 10, so there was no problem of collinearity between the research variables.

Table (11-4). The relationship between efficiency ratios and stock value

$VALUE_{i,t} = \beta_0 + \beta_1 INV_{i,t} + \beta_2 AR + \beta_3 AP_{i,t} + e_{i,t}$					
Dependent variable: stock value					
VIF	Significant level	t	Unstandardized coefficient		Variables
			Coefficient	Coefficient	
-	0.820	-0.227	0.650	-0.148	Fixed coefficient
1.151	0.002	3.169	0.086	0.273	INV_{it}
1.157	0.000	4.930	0.020	0.099	$AR_{i,t}$
1.227	0.000	-3.935	0.135	-0.533	$AP_{i,t}$
0.321					R^2 justified
1.594					Watson
29.630					F statistics
0.000					F Statistical probability

The test of the fourth sub-hypothesis of this hypothesis states that there is a relationship between leverage ratios and stock value, and the null hypothesis and The opposite hypothesis is set as follows: Zero hypothesis (H0): There is no relationship between leverage ratios and stock value. Opposite hypothesis (1): There is a relationship between leverage ratios and stock value. The results of the third sub-hypothesis test in Table 12-4 show that there is a negative (-0.495) and significant (0.000) relationship between debt ratio and equity value. While the relationship between equity ratio and stock value is positive (0.097) and significant (0.000). The adjusted coefficient of determination shows that about 30.8% of the changes in the dependent variable of stock value can be explained by the independent variables of debt ratio and capital ratio. Durbin Watson's statistic is between 1.5 and 2.5 and it can be confirmed that the errors or the difference between the actual values and the values predicted by the regression model are independent of each other. The significance level of F is equal to 0.000 and smaller than 0.05, which indicates the significance of the whole model. Also in the test The fourth sub-hypothesis, the value of VIF statistic for all variables was less than 10, so there was no problem of collinearity between research variables.

Table (12-4). Relationship between leverage ratios and stock value

$VALUE_{i,t} = \beta_0 + \beta_1 LEV_{i,t} + \beta_2 CAP + e_{i,t}$					
Dependent variable: stock value					
VIF	Significant level	t	Unstandardized coefficient		Variables
			Coefficient	Coefficient	
-	0.844	0.196	0.665	0.131	Fixed coefficient
1.227	0.000	-3.626	0.137	-0.495	LEV_{it}
1.172	0.000	4.734	0.020	0.097	$CAP_{i,t}$
0.308					R^2 justified
1.615					Watson
28.042					F statistics
0.000					F Statistical probability

Table (13-4): Summary of research hypothesis test results

Research hypotheses	Type of relationship	Results	hypotheses
There is a relationship between current ratio and stock value	Positive	the reception	subordinate 1
There is a relationship between the current ratio and stock value	Positive	the reception	
There is a relationship between gross profit margin and stock value	Positive	the reception	subordinate 2
There is a relationship between return on sales and stock value	Positive	the reception	
There is a relationship between asset returns and stock value	Positive	the reception	
There is a relationship between return on equity and stock value	Positive	the reception	
There is a relationship between inventory turnover and stock value	Positive	the reception	subordinate 3
There is a relationship between accounts receivable turnover and stock value	Positive	the reception	
There is a relationship between debt repayment period and stock value	negative	the reception	
There is a relationship between debt ratio and equity value	negative	the reception	Subordinate4
There is a relationship between capital ratio and stock value.	Positive	the reception	

Discussion and Conclusion

Financial ratios examine the items in the financial statements and convert them from Rial concept to comparable ratios. These ratios establish a meaningful relationship between the effective factors of financial statements and by establishing this relationship between the information in financial reports, it gives the users the power of analysis. In this research, the relationship between the changes in financial ratios and the stock value of companies listed in the Tehran Bahadur Stock Exchange is investigated. For this purpose, financial ratios were divided into liquidity ratios, profitability ratios, efficiency ratios and debt ratios. To measure liquidity ratios, current ratio and instantaneous ratio indicators were used, and to measure profitability ratios, gross profit margin ratios, sales yield, asset yield and equity yield were used. Also, in order to measure efficiency ratios, indicators of inventory turnover, accounts receivable turnover, and debt payment period were used, and finally, debt ratio and capital ratio were used to measure leverage ratios. The results showed that the results of the first hypothesis showed that there is a positive and significant relationship between the current ratio and the current ratio with the stock value. In fact, the increase in current ratios and

instantaneous ratio leads to an increase in the stock value. In this way, the increase in liquidity is a factor that can help improve the stock value. The results of the second hypothesis show that there is a positive and significant relationship between gross profit margin, return on sales, return on assets and return on equity with stock value. In fact, increasing the profitability indicators helps to increase the value of the company's shares. The results of the third hypothesis showed that there is a relationship between efficiency ratios and stock value. In fact, the increase in inventory turnover, the increase in the receivables collection period, and the decrease in the debt payment period increase the value of the company's shares. Finally, the results of the fourth hypothesis showed that there is a relationship between leverage ratios and the company's stock value. In fact, an increase in the debt ratio leads to a decrease in the stock value and an increase in the capital ratio leads to an increase in the company's stock value. The results are consistent with the findings of Deluf (2003); Baker et al. (2007), Ishak et al. (2009); Garcia et al. (2011); Gill and Shah (2012); Sheo et al. (2012) and Gill and Biger (2013).

Limitations of the research

In general, scientific researches require systematic and logical doubt, and researchers should look at the results of the research with a critical eye and be a fierce critic of their own research and that of others. In other words, the world that is given to us to study is not a world that is 100% right or wrong. In experimental science, nothing can be proven with absolute certainty, and basically, theory is neither provable nor disprovable, nor improbable. The current research is not excluded from the above-mentioned cases and has limitations that make its results to be expressed with caution. The limitations and problems that existed in the implementation of the current research and should be considered while interpreting the findings of the research and its generalization are as follows: 1. To measure the stock value, the ratio of the market value to the book value of equity is used. If other indicators are used, other results may be created.
2. In this research, financial statement indicators were used to measure financial ratios. These indicators are not adjusted for inflation. Therefore, the obtained results may not match the actual results. 3. Considering that the sample of the research was selected from among the companies admitted to the Tehran Stock Exchange and the sample companies in terms of size, industry, ownership structure, type of products, are not necessarily representative of all economic units active in the country, therefore the findings should be generalized with Be careful. 4. The most important limitation in conducting this research is the multitude of disturbing variables that may affect the relationships between variables; Among them, the most important factors are macroeconomic factors such as inflation rate, interest rate and political and economic instability of our country, which have a great impact on investments and stock market transactions. Of course, this issue is discussed in most researches in the field of humanities. d. Due to the existence of audit clauses whose effects on the financial statements are unknown to the researcher, the present research is based on the financial statements and attached notes published by the companies.

Research suggestions

Suggestions from the research 1. According to the results obtained from the first sub-hypothesis regarding the positive impact of the receivables collection period on the stock value, it is suggested to companies to use expansionary credit policies in sales and increase income and profitability and growth and investment opportunities at the same time. Paying debts, reducing the level of cash holding and eliminating opportunistic behaviors related to agency conflicts. 2. According to the results obtained from the second sub-hypothesis regarding the negative impact of the debt payment period on investment inefficiency, it can be suggested that managers can create a positive value in the company's investment by reducing the debt payment period as much as possible. help in financing for investment in projects with positive net present value, and this will require the favorable management of payments and the use of creditors' credit conditions. 3. According to the results obtained from the effect of stock turnover period on stock value, it can be said that poor management of goods causes deviation of the company's stock value. Therefore, it is necessary for internal and external users of the company's information to analyze other management behaviors in order to obtain reliable results in the direction of the impact on the stock value. 4. Considering the results of the research, investors are suggested to include financial ratios as a main factor in the analysis of their investments at the time of investment, because by increasing liquidity, increasing profitability, improving activities And reducing the leverage ratios, the value of the companies' shares in the Tehran Stock Exchange increases.

3. The results suggest that companies present in the stock exchange pay more attention to indicators such as liquidity and profitability, because considering these indicators means paying attention to the interests of shareholders and investors. In such environments, investors will be more willing to invest... Suggestions for future research..... 1. Based on the results of this research, it is suggested to investigate the effect of other indicators of financial ratios on stock value. 2. It is suggested to investigate the effect of market ratios on the company's stock value. 3. It is suggested to investigate the relationship between dividend indicators and the intrinsic value of shares. 4. Considering that the increase in stock value is caused by the reduction of conflict of interest, it is suggested to investigate the relationship between financial ratios and stock value under the conditions of information asymmetry. d. It is suggested that the effect of the company's life cycle on the relationship between the financial ratios and the stock value of the companies admitted to the Tehran Stock Exchange should be investigated. 6. It is suggested to investigate the effect of working capital management indicators on the company's stock value.

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