

**The Relationship between the Stock Return and Financial Indicators
(Profitability, Leverage):
An Empirical Study on Manufacturing Companies Listed
in Amman Stock Exchange**

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Abstract:

This study examines the relationship between several financial indicators (profitability & leverage measures) and stock return, to assist the management in the Jordanian manufacturing companies in decision making. The study sample consists of 65 manufacturing companies that have been listed in Amman Stock Exchange over the 10-year period (2001-2011). Five financial ratios are used to examine the relationship between profitability measures (Net Profit margin (NPM), Gross Profit Margin (GPM), Return on Assets (ROA), Return on Equity (ROE), Earnings per Share (EPS)) and stock returns. Three financial ratios are used to examine the relationship between leverage measures (Debt Ratio (DR), Debt to Equity Ratio (DER), Interest Coverage Ratio (CR)) and stock returns. Statistical analysis undertaken to examine the relationship between stock return and the financial indicators (Profitability and Leverage measures) are: correlation analysis, multiple regression and descriptive statistics. Data are obtained from the published annual reports and the monthly statistical bulletins issued by (ASE) over the study period. The results show that (GPM), (ROA), (ROE), and (EPS) have a significant relationship with stock return. And the others (NPM) and leverage measures ((DR), (DER), and (CR)) don't have a significant relationship with stock return. This study recommends managers of manufacturing companies to focus more on financial ratios that have significant relationship with stock return for more profits and less debts, future research is also recommended to examine this relation in other sectors and to use other financial ratios.

Keywords:

Stock Return, Profitability, Leverage, Amman Stock Exchange, Jordan

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1. Introduction

Financial ratios allow analysts to synthesize large amounts of financial and accounting information into metrics that can be easily compared and contrasted. Examination of these ratios can help to assess the financial health of a firm. Financial ratios are an excellent tool for understanding if the company's performance is improving or declining, there are numerous parties that utilize financial ratios to provide insight into company performance, or to use them as indicators to the financial health of a company. Stockholders, potential investors, managers, lenders, creditors, regulatory agencies and competitors are each interested in different ratios. Financial ratios are often used in benchmarking. Comparisons are made between the financial ratios of a firm and those of its peers or an industry standard. A financial ratio can be used as a yardstick for measuring how the firm stacks up against its competition. Internal comparisons are also commonly made. Looking at historical financial ratios over a period of time can uncover important trends. Financial ratios are as of a certain size to hold the interpretation of financial statement analysis. Financial ratios will show all aspects of finance, such as liquidity, solvency, and profitability. Interpretation or analysis of a company's financial statements will be very useful to know the progress and weaknesses of the activities undertaken by the company, and general financial ratios can be used as a tool to assess the financial performance of a company (Masa'deh and Kuk, 2009; Mirfakhr et al, 2011; Obeidat et al, 2013; Masa'deh et al, 2015; AlHarrasi et al, 2016).

This study will examine the relationship between profitability and leverage measures on one hand and the stock return on the other hand. Eight of the financial ratios are used due to their importance to examine this relationship which are: NPM, GPM, ROA, ROE, EPS, DR, DER and CR. The study will be conducted on 65 manufacturing companies in the manufacturing sector in Jordan listed on ASE during the period 2001-2011, were the following questions should be answered. Is there a relationship between profitability ratios and stock returns? Is there a relationship between leverage ratios and stock returns? According to the study results there is a significant relationship between profitability ratios and stock returns except for NPM, and there is not a significant relationship between leverage ratios and stock return. The purpose of this study is to examine the relationship between the profitability and leverage measures on one hand and the stock return on the other hand during the period 2001-2011 for Jordanian companies in the manufacturing sector in Amman Stock Exchange. So the objectives of this study can be stated as:

1. To examine the relationship between the profitability measures and stock return.
2. To examine the relationship between the leverage measures and stock return.
3. To help top managers in the manufacturing companies in decision making.
4. To increase the knowledge in the literature.

The problem of this study is to examine the relationship between the profitability and leverage measures on one hand and the stock return on the other hand during the period 2001-2011 on the Jordanian companies in the manufacturing sector listed in Amman Stock Exchange, and that could be through answering the following questions:

Profitability Ratios:

- Is there a relationship between Net Profit Margin (NPM) and Stock return?
- Is there a relationship between Gross Profit Margin (GPM) and Stock return?
- Is there a relationship between Return on Assets (ROA) and Stock return?
- Is there a relationship between Return on Equity (ROE) and Stock return?
- Is there a relationship between Earnings per Share (EPS) and Stock return?

Leverage Ratios:

- Is there a relationship between Debt Ratio (DR) and Stock return?
- Is there a relationship between Debt to Equity Ratio (DER) and Stock return?
- Is there a relationship between Time Interest Earned (or Coverage Ratio) (CR) and Stock return?

Eight financial ratios (profitability and leverage measures) are used in this study to examine the relationship between those financial ratios and the stock return. Each financial ratio is a simple calculation. The inputs for these calculations can be found in a firm's published financial statements. The study will be carried on 65 manufacturing companies listed on ASE in the manufacturing sector in Jordan during the period 2001-2011. The data of these manufacturing companies are listed on ASE in their published financial statements. To examine this relationship certain statistical analysis will be undertaken which are: descriptive statistics, correlation analysis and regression analysis. Test of hypotheses will be based on regression results.

2. Study Hypotheses

The study hypotheses can be stated as follows:

H0: "There is no statistically significant relationship between the Independent Variables and the Dependent Variable"

H0₁: "There is no statistically significant relationship between Earnings per Share (EPS) and Stock returns".

H0₂: "There is no statistically significant relationship between Return on Equity (ROE) and Stock returns".

H0₃: "There is no statistically significant relationship between Gross Profit Margin (GPM) and Stock returns".

H0₄: "There is no statistically significant relationship between Return on Assets (ROA) and Stock returns".

H0₅: "There is no statistically significant relationship between Net Profit Margin (NPM) and Stock returns".

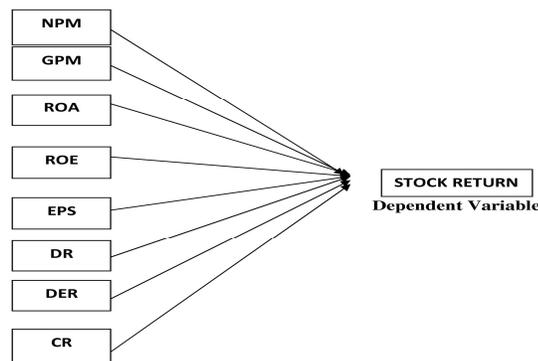
H0₆: "There is no statistically significant relationship between Debt to Equity Ratio (DER) and Stock returns".

H0₇: "There is no statistically significant relationship between Debt Ratio (DR) and Stock returns".

H0₈: "There is no statistically significant relationship between Interest Coverage Ratio (CR) and Stock returns".

3. The Study Model

3. The Study Model



Financial Indicators : Profitability and Leverage Independent Variables

4. Study Methodology

To examine the study hypotheses, correlation analysis will be undertaken to examine the relationship between stock return and financial ratios (profitability and leverage ratios), in addition the annual stock realized return is regressed on a set of accounting-based financial measures. These include the most common profitability and leverage measures. The following general model is applied in the pooled data set:

$$R_{i,t} = \alpha_0 + \beta_1(NPM_{i,t}) + \beta_2(GPM_{i,t}) + \beta_3(ROA_{i,t}) + \beta_4(ROE_{i,t}) + \beta_5(EPS_{i,t}) + \beta_6(DR_{i,t}) + \beta_7(DER_{i,t}) + \beta_8(CR_{i,t}) + e_{i,t}$$

Where:

$R_{i,t}$ = realized stock return percentage of firm i in year t.

α_0 = intercept

$NPM_{i,t}$: Net Profit Margin for firm i in year t.

$GPM_{i,t}$: Gross Profit Margin for firm i in year t.

$ROA_{i,t}$: Return on Assets for firm i in year t.

$ROE_{i,t}$: Return on Equity for firm i in year t.

$EPS_{i,t}$: Earnings Per Share for firm i in year t.

$DR_{i,t}$: Debt Ratio for firm i in year t.

$DER_{i,t}$: Debt to Equity Ratio for firm i in year t.

$CR_{i,t}$: Time Interest Earned (or Coverage Ratio) for firm i in year t.

$e_{i,t}$ = error

The annual stock return is calculated using the following formula:

$$R_{i,t} = (P_{i,t} - P_{i,t-1} + D_{i,t}) / P_{i,t-1}$$

Where:

$R_{i,t}$: Realized stock return percentage of firm i in year t.

$P_{i,t}$: The stock market price for firm i at the end of period t.

$P_{i,t-1}$: The market stock price for firm i at the end of period t-1.

$D_{i,t}$: Dividends of firm i in year t.

The annual stock return measured over the 12-month period ended three months after the fiscal year end. It is measured so to increase the possibility that stock returns incorporate as much as possible of the information embodied in contemporaneous accounting measures, since firms are required to file their annual reports within the three-month period following the fiscal year end. Accounting based performance measures are computed from the published annual reports of the sample firms. While stock prices and dividends data needed to calculate stock returns were obtained directly from the monthly statistical bulletins issued by ASE over the study period. This study is conducted on 65 companies in the manufacturing sector in Jordan listed in Amman Stock Exchange during the period 2001-2011. And due to the large number of manufacturing companies in the manufacturing sector in Jordan and due to time limitations the data of the sample companies were collected from the published financial statements on Amman Stock Exchange. The study is based on 65 companies in the manufacturing sector that have been listed in ASE over the 10 year period (2001-2011), and which satisfied all the following conditions:

1-The availability of all the required information to compute the profitability and leverage measures, stock return and all the other variables in the study.

2-The continuity of listing during the study period.

3-The assurance of the companies` independence and that they have not being affected by a merge with other company during the period of the study.

After applying all the previous conditions, excluding companies that have been delisted from the regular market for a period of more than six months and those merged with other company during the study period and companies operating in service, insurance and banking sectors because they are heavily regulated , and other manufacturing companies that didn't apply to the previous conditions, the final sample for the study became (65 manufacturing firms).

4. Data Analysis

This section reports the study findings. It will include descriptive statistics of the study variables, correlation analysis between the study variables and regression analysis. Test of hypotheses will be based on regression results.

4.1. Multicolleniarity

VIF test was used to test multicollinearity between variables and it was found that VIF values are less than 5 which means that there are no serious multicollinearity.

Table 1: VIF Test for Multicollinearity

Model	Collinearity Statistics	
	Tolerance	VIF
1 (Constant)		
NPM	.882	1.133
GPM	.684	1.462
ROA	.301	3.323
ROE	.254	3.940
EPS	.550	1.819
DR	.385	2.594
DER	.297	3.364
CR	.873	1.146

4.2. Descriptive Statistics

The following table presents the descriptive statistics for the dependent variable and the independent variables employed in the study.

Table 2: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
NPM	615	-12	3	-.07	.985
GPM	613	-2	1	.22	.236
ROA	630	0	1	.03	.092
ROE	629	-2	1	.01	.202
EPS	630	0	4	.12	.378

The Relationship between the Stock Return and Financial Indicators.....

DR	631	0	1	.32	.199
DER	631	0	11	.72	1.034
CR	579	0	62	11.22	18.412
STOCK RETURN	564	-1	4	.07	.510

Table (2) shows that the mean of EPS =0.12, with maximum value of 4 and minimum value of 0. While the mean for ROE = 0.01, with maximum value of 1 and minimum value of -2. These results indicate that manufacturing firms retain a reasonable part of its net income as equity. The mean for DR =0.32, with maximum value of 1 and minimum value of 0. This result shows a conservative trend through more financing from the owners than creditors. And the mean for CR=11.22, with maximum value of 62 and minimum value of 0. The mean for GPM= 0.22, with maximum value of 1 and minimum value of -2 which is in my opinion low to cover the operating expenses. The mean for NPM= -0.07, with maximum value of 3 and minimum value of -12. This result refers that manufacturing firms on average realized losses. The mean for DER= 0.72, with maximum value of 11 and minimum value of 0. This ratio consists with the Debt Ratio. The mean for ROA= 0.03 with maximum value of 1 and minimum value of 0, and the mean for Stock Return = 0.07, with maximum value of 4 and minimum value of -1. The above results seem reasonable and within the normal range.

4.3. Correlation Analysis

The following table reports the results of pearson correlation for the study variables.

Table 3: Correlation Analysis

	EPS	ROE	DR	CR	GPM	NPM	DER	ROA	Stock return
EPS Sig.level	1 .000	.576** .000	-.176** .000	.249** .000	.308** .000	.179** .000	-.176** .000	.637** .000	.103* .014
ROE Sig.level	.576** .000	1 .000	-.385** .000	.184** .000	.433** .000	.264** .000	-.547** .000	.773** .000	.170** .000
DR Sig.level	-.176** .000	-.385** .000	1 .000	-.264** .000	-.357** .000	-.131** .001	.743** .000	-.255** .000	-.002 .965
CR Sig.level	.157** .000	.148** .000	-.288** .000	1 .000	.165** .000	.104* .012	-.122** .003	.206** .000	.014 .757
GPM Sig.level	.308** .000	.433** .000	-.357** .000	.110** .009	1 .000	.220** .000	-.269** .000	.453** .000	.107* .012
NPM	.179**	.264**	-.131**	.048	.220**	1	-.070	.326**	.048

Sig.level	.000	.000	.001	.252	.000		.083	.000	.255
DER	-.176**	-.547**	.743**	-.128**	-.269**	-.070	1	-.245**	-.045
Sig.level	.000	.000	.000	.002	.000	.083		.000	.289
ROA	.637**	.773**	-.255**	.226**	.453**	.326**	-.245**	1	.141**
Sig.level	.000	.000	.000	.000	.000	.000	.000		.001
Stock return	.103*	.170**	-.002	.034	.107*	.048	-.045	.141**	1
Sig.level	.014	.000	.965	.438	.012	.255	.289	.001	

**significant at .01

*significant at .05

NPM_{it}: Net Profit Margin for firm I in year t.

GPM_{it}: Gross Profit Margin for firm I in year t.

ROA_{it}: Return on Assets for firm I in year t.

ROE_{it}: Return on Equity for firm I in year t.

EPS_{it}: Earnings Per Share for firm I in year t.

DR_{it}: Debt Ratio for firm I in year t.

DER_{it}: Debt to Equity Ratio for firm I in year t.

CR_{it}: Time Interest Earned (or Coverage Ratio) for firm I in period t.

According to table (3) there is a relatively high correlation between ROA & ROE (0.773) which is significant at 1% level. The second largest correlation coefficient reported in the table is between DER & DR (0.743) which is also significant at 1% level. The third largest significant correlation is between ROA & EPS (0.637) which is also significant at 1% level. The results also show moderate & significant correlation between EPS & ROE (0.576). the other pair wise correlation coefficient between independent variables are significant, and range from low (0.103) to moderate (0.433). However, only three independent variables show significant correlation with the dependent variable (Stock Return). Among the three independent variables, ROE shows the highest correlation with stock return. With a correlation coefficient of 0.17 which is relatively low but statistically significant at 0.01 level. The second independent variable which is significantly associated with stock return is ROA with correlation coefficient of 0.14. the third independent variable significantly associated with stock return is GPM with a relatively low correlation coefficient of 0.107, but statistically significant at 0.01 level. According to correlation results reported in table (3), the pairwise correlation for other independent variables with stock return seem to be low and statistically insignificant.

4.4. Regression Model

The following general model is applied in the pooled data set:

$$R_{i,t} = \alpha_0 + \beta_1(NPM_{i,t}) + \beta_2(GPM_{i,t}) + \beta_3(ROA_{i,t}) + \beta_4(ROE_{i,t}) + \beta_5(EPS_{i,t}) + \beta_6(DR_{i,t}) + \beta_7(DER_{i,t}) + \beta_8(CR_{i,t}) + e_{i,t}$$

H0: "There is no statistically significant relationship between the Independent Variables and the Dependent Variable"

The Relationship between the Stock Return and Financial Indicators.....

The results of regression of the eight independent variables against the stock return are reported in table (4). Table (4), lists the eight independent variables that are entered into the regression model and R (0.203) is the correlation of the eight independent variables with the dependent variable, after all the intercorrelations among the eight independent variables are taken into account.

Table 4: Regression Model Summary

Variables Entered	R	R ²	Adjusted R ²	Std. Error of the Estimate
NPM, GPM, ROA, ROE, EPS, DR, DER, CR	0.203 ^a	0.041	0.026	0.516

The regression results reported in table (4) show a relatively low value for the adjusted R² of 0.026 which means that the change in the independent variables explain less than 3% of the variation in stock return. Table (5), the model F value of (2.688) is significant at (0.01) level.

Table 5: ANOVA Table

	Sum of Squares	Df	Mean Square	F	Sig.
Regression	5.724	8	.716	2.688	.007 ^a
Residual	132.807	499	.266		
Total	138.531	507			

The F-value of 2.688 indicates that the regression model is in general significant at 0.01 level. Table (6) shows the regression results of Stock Return on the independent variables.

Table 6: Regression Coefficients Result

Model	Reg. Coeff.	T	Sig.
	Beta		
(Constant)		-.946	.345
NPM	.001	.032	.975
GPM	.065	1.233	.218
GPM	.065	1.233	.218
ROA	-.008	-.104	.918
ROE	.212	2.437	.015
EPS	-.031	-.528	.598
DR	.100	1.420	.156
DER	.015	.182	.856
CR	.026	.563	.574

According to regression results only ROE is shown to be positively & significantly associated with stock return with regression coefficient of 0.212 which is also statistically significant at 0.05 level. The other regression coefficient for the remaining independent variables failed to be statistically significant. The lack of significance association between stock return and the remaining independent variables maybe due to multicollinearity problem. This is evident by high correlation between ROE & ROA and also between DER & DR. To improve the regression results and to minimize the impact of multicollinearity on regression results we exclude two independent variables the first one is DER because it is highly correlated with the independent variable DR (.743), and because there is another

alternative measure (DR) to leverage already included in the model. The second one is ROA which is excluded from the model because it is highly correlated with the independent variables ROE (.773) and EPS (.637), and because there is another alternative measure to profitability (ROE) already included in the model.

So we run the following modified model (excluding ROA & DER):

$$R_{i,t} = \alpha_0 + \beta_1(NPM_{it}) + \beta_2(GPM_{it}) + \beta_3(ROE_{it}) + \beta_4(EPS_{it}) + \beta_5(DR_{it}) + \beta_6(CR_{it}) + e_{it}$$

Table 7: Regression Model Summary for the New Modified Model

Variables Entered	R	R ²	Adjusted R ²	Std. Error of the Estimate
NPM, GPM, ROE, EPS, DR, CR	0.203 ^a	0.041	0.030	0.515

Multiple regression were used to test this hypothesis, the results of Stock Return regression on the six independent variables against the stock return can be seen in table (7). Table (7), lists the six independent variables that are entered into the regression model and R (0.203) is the correlation of the six independent variables with the dependent variable, after all the intercorrelations among the six independent variables are taken into account. In the model summary table, the adjusted R Square is (0.030), this result means that (3%) of the variance in the stock return has been explained by the variation in the six independent variables. Table (8), the model F value of (3.593) is significant at (0.01) level.

Table 8: ANOVA Table for the New Modified Model

	Sum of Squares	Df	Mean Square	F	Sig.
Regression	5.715	6	.952	3.593	.002 ^a
Residual	132.817	501	.265		
Total	138.531	507			

Table 9: Regression Coefficients Result for the New Model

Model	Reg. Coeff.	T	Sig.
	Beta		
(Constant)		-1.055	.292
NPM	.002	.038	.970
GPM	.065	1.280	.201
ROE	.201	3.4	.001
EPS	-.031	-.562	.575
DR	.109	2.183	.029
CR	.027	.584	.560

After omitting the two variables DER & ROA because they are highly correlated with other variables. The regression results in table (9) are improved, ROE remains significant but at a better significance level 1% and DR became significant at 5% level. And the adjusted R² is improved slightly from (0.026) to (0.030).

4.5. Simple Regression

In this section we examine the effect of each independent variable individually, on the dependent variable (stock return).

H0₁: “There is no significant relationship between Earnings Per Share (EPS) and Stock Return”.

Simple regression was used to test this hypothesis, the results of regression the independent variable against the stock return can be seen in table (10). Table (10), shows that the independent variable (EPS) that is entered into the regression model and R (0.103) is the correlation of EPS variable with the stock return. In the model summary table, the adjusted R² (0.009), this result means that less than 1% of the variance in the stock return is explained by the EPS variable.

$$R_{i,t} = \alpha_0 + \beta 1_{it} (EPS_{it}) + e_{it}$$

Table 10: Regression Model Summary for H0₁

Variables Entered	R	R ²	Adjusted R ²	Std. Error of the Estimate
EPS	.103 ^a	.011	.009	.508

Table (11) shows the regression coefficients that the t value of (2.454) is significant at (0.05) level ,since its greater than tabulated t (1.979), [Referring back to the rule: Accept H₀ if calculated value is less than tabulated value, and reject H₀ if calculated value is greater than tabulated value (Sekaran and Bougie, 2013)]. Thus, hypothesis is substantiated. So that there is a positive relationship between EPS and stock return.

Table 11: Regression Coefficients Result for H0₁

Model	Reg. Coefficients	T	Sig.
	Beta		
(Constant)		2.200	.028
EPS	.103	2.454	.014

H0₂: “There is no significant relationship between Return on Equity (ROE) and Stock Return”.

Simple regression was used to test this hypothesis, the results of regression the independent variable against the stock return can be seen in table (12). Table (12), shows that the independent variable (ROE) that is entered into the regression model and R (0.17) is the correlation of ROE variable with the stock return. In the model summary table, the adjusted R² is (0.027), this result means that (2.7%) of the variance in the stock return is explained by the change in the ROE variable.

$$R_{i,t} = \alpha_0 + \beta 1_{it} (ROE_{it}) + e_{it}$$

Table 12: Regression Model Summary for H0₂

Variables Entered	R	R ²	Adjusted R ²	Std. Error of the Estimate
ROE	.170 ^a	.029	.027	.503

Table (13) shows the regression coefficients that the t value of (4.091) is significant at 1% level ,since its greater than tabulated t (1.96). Thus, hypothesis is substantiated. So that there is a positive relationship between ROE and stock return.

Table 13: Regression Coefficients Result for H0₂

	Reg. Coefficients	T	Sig.
Model	Beta		
(Constant)		2.902	.004
ROE	.170	4.091	.000

H0₃: “There is no significant relationship between Debt Ratio (DR) and Stock Return”.

Simple regression was used to test this hypothesis, the results of regression the independent variable against the stock return can be seen in table (14). Table (14), shows that the independent variable (DR) that is entered into the regression model, and R (0.002) is the correlation of DR variable with the stock return. In the model summary table, the adjusted R² (-0.002), this result means that the variance in the stock return is not explained by the DR variable.

$$R_{i,t} = \alpha_0 + \beta_1(DR_{it}) + e_{it}$$

Table 14: Regression Model Summary for H0₃

Variables Entered	R	R ²	Adjusted R ²	Std. Error of the Estimate
DR	.002 ^a	.000	-.002	.510

Table (15) shows the regression coefficients that the t-value of (-0.044) is not significant at (0.05) level, since it is less than tabulated t (1.96). Thus, hypothesis is not substantiated. So that there is no significant relationship between DR and stock return.

Table 15: Regression Coefficients Result for H0₃

	Reg. Coefficients	T	Sig.
Model	Beta		
(Constant)		1.675	.094
DR	-.002	-.044	.965

H0₄: “There is no significant relationship between Interest Coverage Ratio (CR) and Stock Return”.

Simple regression was used to test this hypothesis, the results of regression the independent variable against the stock return can be seen in table (16). Table (16), shows that the independent variable (CR) that is entered into the regression model and R (0.034) is the correlation of CR variable with the stock return. In the model summary table, the adjusted R² (0.000), which means that the variance (R-Square) in the stock return has not been significantly explained by the CR variable.

$$R_{i,t} = \alpha_0 + \beta_{1it} (CR_{it}) + e_{it}$$

Table 16: Regression Model Summary for H0₄

Variables Entered	R	R ²	Adjusted R ²	Std. Error of the Estimate
CR	.034 ^a	.001	.000	.521

Table (17) shows the regression coefficients that the t value of (0.776) is not significant at (0.05) level, since it is less than tabulated t (1.96). Thus, hypothesis is not substantiated. So that there is no significant relationship between CR and stock return.

Table 17: Regression Coefficients Result for H0₄

Model	Reg. Coefficients	T	Sig.
	Beta		
(Constant)		2.135	.033
CR	.034	.776	.438

H0₅: “There is no significant relationship between Gross Profit Margin (GPM) and Stock Return”.

Simple regression was used to test this hypothesis, the results of regression the independent variable against the stock return can be seen in table (18). Table (18), shows that the independent variable (GPM) that is entered into the regression model and R (0.107) is the correlation of GPM variable with the stock return. In the model summary table, the adjusted R² (0.010), this result means that (1%) of the variance in the stock return has been explained by the GPM variable.

$$R_{i,t} = \alpha_0 + \beta_{1it} (GPM_{it}) + e_{it}$$

Table 18: Regression Model Summary for H0₅

Variables Entered	R	R ²	Adjusted R ²	Std. Error of the Estimate
GPM	.107 ^a	.011	.010	.508

Table (19) shows the regression coefficients that the t value of (2.534) is significant at (0.05) level, since its greater than tabulated t (1.96). Thus, hypothesis is substantiated. So that there is a positive relationship between GPM and stock return.

Table 19: Regression Coefficients Result for H0₅

Model	Reg. Coefficients	T	Sig.
	Beta		
(Constant)		.656	.512
GPM	.107	2.534	.012

H0₆: “There is no significant relationship between Net Profit Margin (NPM) and Stock Return”.

Simple regression was used to test this hypothesis, the results of regression the independent variable against the stock return can be seen in table (20). Table (20), shows that the independent variable (NPM) that is entered into the regression model and R (0.048) is the correlation of NPM variable with the stock return. In the model summary table, the adjusted R² (0.001), this result means that (.1%) of the variance in the stock return has been explained by the NPM variable.

$$R_{i,t} = \alpha_0 + \beta 1_{it} (NPM_{it}) + e_{it}$$

Table 20: Regression Model Summary for H0₆

Variables Entered	R	R ²	Adjusted R ²	Std. Error of the Estimate
NPM	.048 ^a	.002	.001	.510

Table (21) shows the regression coefficients that the t value of (1.139) is not significant at (0.05) level ,since its less than tabulated t (1.96). Thus, hypothesis is not substantiated. So that there is no significant relationship between NPM and stock return.

Table 21: Regression Coefficients Result for H0₆

Model	Reg. Coefficients	t	Sig.
	Beta		
(Constant)		3.256	.001
NPM	.048	1.139	.255

H0₇: “There is no significant relationship between Debt to Equity Ratio (DER) and Stock Return”.

Simple regression was used to test this hypothesis, the results of regression the independent variable against the stock return can be seen in table (22). Table (22), shows that the independent variable (DER) that is entered into the regression model and R (0.045) is the correlation of DER variable with the stock return. In the model summary table, the adjusted R² (0.000), this result means that the variance in the stock return has not been explained by the DER variable.

$$R_{i,t} = \alpha_0 + \beta 1_{it} (DER_{it}) + e_{it}$$

Table 22: Regression Model Summary for H0₇

Variables Entered	R	R ²	Adjusted R ²	Std. Error of the Estimate
DER	.045 ^a	.002	.000	.510

Table (23) the regression coefficients for DER is low and not statistically significant as it is indicated from the t-value of (-1.061). So that there is no significant relationship between DER and stock return.

Table 23: Regression Coefficients Result for H0₇

Model	Reg. Coefficients	T	Sig.
	Beta		
(Constant)		3.149	.002
DER	-.045	-1.061	.289

H0₈: “There is no significant relationship between Return on Assets (ROA) and Stock Return”.

Simple regression was used to test this hypothesis, the results of regression the independent variable against the stock return can be seen in table (24). Table (24), shows that the independent variable (ROA) that is entered into the regression model and R (0.141) is the correlation of ROA variable with the stock return. In the model summary table, the adjusted R² (0.018), this result means that (1.8%) of the variance in the stock return has been explained by the ROA variable.

$$R_{i,t} = \alpha_0 + \beta 1_{it} (ROA_{it}) + e_{it}$$

Table 24: Regression Model Summary for H0₈

Variables Entered	R	R ²	Adjusted R ²	Std. Error of the Estimate
ROA	.141 ^a	.020	.018	.505

Table (25) shows the regression coefficients that the t value of (3.370) is significant at (0.01) level ,since its less than tabulated t (1.96). Thus, hypothesis is substantiated. So that there is significant relationship between ROA and stock return.

Table 25: Regression Coefficients Result for H0₈

Model	Reg. Coefficients	T	Sig.
	Beta		
(Constant)		1.753	.080
ROA	.141	3.370	.001

4.6. Data Analysis Results

The results of the analysis show that:

- Net Profit Margin (NPM) don't have a significant relationship with stock returns.
- Debt Ratio (DR) don't have a significant relationship with stock returns.
- Debt to Equity Ratio (DER) don't have a significant relationship with stock returns.
- Interest Coverage Ratio (CR) don't have a significant relationship with stock returns.
- Gross Profit Margin (GPM) have a significant relationship with stock returns.
- Return on Assets (ROA) have a significant relationship with stock returns.
- Return on Equity (ROE) have a significant relationship with stock returns.
- Earnings Per Share (EPS) have a significant relationship with stock returns.

The results were as expected compared to what have been analyzed in previous literature, where most of the profitability ratios had a significant relationship with stock returns. As the profitability ratios indicate how successful the management of the company is at

controlling costs and generating profits that is all reflected by the returns received from the stocks. On the other hand, the leverage ratios appeared not to have a significant relationship with stock returns. Although in the researcher's opinion they are very important and do have a relationship with stock returns due to their importance to stockholders because they will only get paid once the debt obligations have been met and the firm that has higher leverage is usually considered more risky. This study has proven the opposite were the data analyzed did not show this relationship for the chosen sample.

5.1. Conclusions

The results of this study show that four of the financial ratios have a significant relationship with stock return which are : EPS, ROE, ROA and GPM and they are all from the profitability measures. And the other four financial ratios don't have a significant relationship with stock return and they are : CR, DER, DR and NPM and they are all from the leverage measures except for NPM which is from the profitability measures. As a result it is obvious that profitability measures have strong effect on stock return and also most of the profitability measures have significant relationship with stock return. This study is consistent with other previous studies, such as (Modigliani and Miller, 1958) the two studies proposed that leverage measures have no effect on value. And although leverage may be expected to be favorable but, the higher the leverage, the greater the loss to shareholders. Another study that is consistent with this study is (Arditti, 1967) who found a negative though insignificant relation between leverage and stock return, he explained that some risks are indigenous to each industry grouping and hence the true nature of the leverage return can be disclosed only by testing this relation. Also, Hall et al. (1967) indicated that leverage has a negative relation with returns. Moreover (Al Khalayleh, 2001) who showed that there is a significant positive relationship between the stock return and the ratios of ROA and ROE as it is showed in this study where most of the profitability ratios had a significant relationship with stock returns. Nissim and Penman (2003) found that the portfolios with the lowest financial leverage have higher profitability than portfolios with high financial leverage. (Korteweg, 2004; Dimitrov and Jain, 2005; George and Hwang, 2006; Hou and Robinson, 2006) reported a negative relation between stock returns and leverage. On the other hand it wasn't consistent with (Hamada, 1972; Bhandari 1988; Brigham and Houston, 2007) which showed that returns increase in leverage.

5.2. Future Recommendations

- Results from testing the hypotheses reflect that (GPM), (ROA), (ROE), and (EPS) have a significant relationship with stock returns. Thus it is suggested that financial managers of the companies focus more on those financial ratios for more profits and less debts.
- Results from testing the hypotheses reflect that (NPM), (DR), (DER), and (CR) don't have a significant relationship with stock returns. Thus it is suggested that financial managers of the companies should not waste their time on calculating and focusing on those financial ratios.
- Extended research can be done on other sectors such as banking and service sectors for additional benefits.
- Extended research can be done on other financial measures and their relationship with stock returns.

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