

The Effect of Profitability Ratios on Market Capitalization in Jordanian Insurance Companies Listed in Amman Stock Exchange

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Abstract

This study aims to examine the effect of profitability ratios on market capitalization in the Jordanian insurance companies listed in Amman stock exchange (ASE) by examining time series data collected over a period of four years from (2010 – 2013) which included 25 companies and utilizing content analysis to extract the data from the company's annual reports. The finding indicated that there's an effect of Return on Investment (ROI) upon market capitalization for the companies operating in the insurance sector listed in the ASE. In terms of the effect of Return on Equity (ROE) on market capitalization, the study revealed that ROE does not affect the market capitalization for the companies operating in the insurance sector listed in ASE. In respect of the effect of Return on Asset (ROA) on market capitalization, the result indicated that there is an effect of ROA on Market Capitalization for the companies operating in the insurance sector listed in ASE. Additionally, by examining the effect of the independent variables (ROA, ROI, and ROE) combined in the market capitalization variable, the study revealed that all of ROA, ROI, ROE combined effects on the market capitalization and thus the main hypothesis was accepted and requires that there is an effect of profitability measured by (ROA, ROI, ROE) on market capitalization for the companies operating in the insurance listed in (ASE). Finally, the study contributes by utilizing a content analysis for a time series data in order to track the relation between financial performance indicators and market capitalization in an emerging economy such as Jordan, specifically Jordanian insurance sector.

Keywords: Profitability Ratios, Market Capitalization, Insurance Sector, Jordan

1. Introduction

Financial Analysis defined as the process of assessing the financial position of a company by analyzing its stability, viability and profitability. One of the primary objectives of financial analysis is to recognize changes in financial trends, to help measure the progress made by an enterprise and identify a relationship to draw a logical conclusion on the performance of the company, (Sultan, 2014).

Profitability or financial performance could be defined as a measurement of the results of a firm's policies and operations in monetary terms. In order to evaluate the company's inclusive financial situation, accounting out provides two main statements, the income statement and the financial position statement which are significant recourses, as the income statement captures the company's operating performance in a period of time. Nevertheless, the income statement will not serve the users straightforward information that they need, the profitability ratios give a worthy indicator that might help users to make their decisions and managerial tasks. Accordingly, many studies conducted in order to examine the profitability ratios effect on many variables as it's a critical indication for the firm's survival, growth, market capitalization and various other variables. See (Narayan, et al, 2011; Burge, 2014; Graham, and King, 2013; and Diéguez, et al, 2014).

Market capitalization which is referred to is the total value of the shares outstanding of a publicly traded company, and its considered as an important market indicator to the value of shares and the value of companies in general and there are studies which carry out on this term such as (Toramane ,2009; and Dias 2013)

Most of the studies indicated that the significant role of profitability indicators in explaining the market variables and the changing of the market price and other market ratios, for instance ;(Peles, and Schneller, 1982; Olajire ,1996; and Abdolmohammadi, 2005).

Accordingly, the current study will attempt to examine the effect of profitability ratios mainly; Return on investment (ROI), Return on Equity (ROE), and Return on Asset (ROA) upon the market capitalization in the Jordanian insurance companies listed in Amman Stock Exchange (ASE) and attempt to focus how much the market capitalization is explained by the profitability ratios.

2. Objective of the Study and study question

The current study will examine the effect of profitability ratios mainly; Return on investment (ROI), Return on

Equity (ROE), and Return on Asset (ROA) upon the market capitalization in the Jordanian insurance companies According to the study objective, the current study will attempt to answer the following question:
Do profitability ratios affect the market capitalization in the Jordanian insurance companies?

3. Literature review:

Sultan (2014) indicated that ROE is the most comprehensive measure of profitability for a firm; it considers the operating and investing decisions made as well as the financing and tax related decisions in a study which attempts to analyze the financial statements and measure the performance in terms of assets utilization, and profitability.

Toramane (2009) investigated the long run relationship between stock market capitalization rate and interest rates in Turkey and revealed that there is a long-run relationship between stock market capitalization rate and interest rates.

Another study conducted by Dias (2013) in order to examine the role of market capitalization in the estimation of Value-at-Risk (VaR). The study indicated that VaR methods are performed differently for portfolios with different market capitalization. For portfolios with stocks of different sizes we obtain better VaR estimates when taking market capitalization into account.

A study carried out by Guenthera and Sansing (2006) to investigate how shareholder-level taxes are capitalized into stock prices using a model that incorporates the investment and payout decisions of a firm and the investment alternatives available to investors. Shareholder taxes affect stock prices both indirectly, via the effect of taxes on corporate investment decisions, and directly, by reducing both the mean and variance of after-tax returns.

Financial stability and economic performance, Creel, et al (2014) attempted to establish the link between economic performance and financial stability in the European Union. The study contributed involves testing how different measures of financial instability and indicates that financial instability has a negative effect on economic growth.

Another study carried out to explore and examine the relationship between microeconomic factors and financial performance. The dataset includes 55 Romanian industrial companies listed at the Bucharest Stock Exchange and covers the period of 1999-2012. Through a panel data analysis, results indicated that the relationship is positive and statistically significant; supporting the importance and independence of the set of factors in explaining performance (Pantea, et al , 2014).

Similar study conducted in respect of financial performance, particularly the profitability in a study which aimed to shed light on how the relative positions of an industry change over time. The study indicated as expected, often outperform low-performing firms in more profitable industries. Contrary to previous research, the paper shows that industries shift relative position over time: the industries with the highest return on equity in one year often are not the highest in subsequent years; and, contrary to IO theory, the paper finds that concentration is not a reliable predictor of profitability. Although certain industries may show increased profitability after undergoing concentration, there is no consistent relationship between an industry's concentration ratio and that industry's average profitability. (Bourgeois and Nedell, 2014).

In China, Tan and Floros, (2001) in their study which aimed to evaluate the determinants of bank profitability. The study examined the effects of inflation on bank profitability, while controlling comprehensive bank - specific and industry - specific variables. The study indicated that there is a positive relationship between bank profitability, cost efficiency, banking sector development, stock market development and inflation in China. Moreover, suggested that propose policy actions should be taken to improve bank profitability in China.

Borhan, et al (2012) examined the impact of financial ratios on the financial performance of a chemical company: by examining several ratios current ratio (CR) and quick ratio (QR) represent the liquidity ratios; debt ratio (DR) and debt equity ratio (DTER) represent the leverage ratios, while operating profit margin (OPM) and net profit margin (NPM) represent the profitability ratios. The findings showed that CR, QR, DR and NPM have a positive relationship while DTER and OPM have a negative relationship with the company's financial performance. Among the six ratios, CR, DR and NPM show the highest significant impact on the company's performance.

4. Research variables and Research hypothesis

Based on the research objectives the study determined the independent variables and dependent variable as followed and the measurement of each of them

1- Independent variables

- ROA = is calculated by dividing a company's annual earnings by its total assets
- ROI = is calculated the benefit (return) of an investment is divided by the cost of the investment
- ROE = is calculated by dividing a company's annual earnings by its total Shareholder's Equity

2- Dependent variable

- Market Capitalization = is calculated by multiplying a company's shares outstanding by the current market price of one share

In addition, for the purpose of the current study and based on the relevant literature, the hypothesis is formulated to examine the effect of profitability measured by (ROA, ROI, and ROE) all combined in market capitalization as the following:

H1 (Main hypothesis):

There is an effect of profitability measured by (ROA, ROI, ROE) all combined in market capitalization for the companies operating in the insurance sector listed in Amman Stock Exchange.

This underlies the following sub-hypothesis:

H1:1: There's an effect of ROI upon market capitalization for the companies operating in the insurance sector listed in the ASE.

H1:2: There is an effect of ROE on market capitalization for the companies operating in insurance sector listed in ASE.

H1:3: There is an effect of ROA on market capitalization for the companies operating in insurance sector listed in ASE.

5. Research Methodology

With reliance on the Ministry of Industry and Trade records at March2014, the Jordanian insurance sector consisted of 27 companies, therefore the current study will include the whole population in the study. The study utilized a content analysis by taking time series data collected over a period of four years from (2010 – 2013) by studying the annual report for the insurance sector for the selected years. Accordingly two companies were isolated because of missing data within the study period, therefore the last study sample consisted of 25 companies.

6. Discussion of Results

After collecting the data of the study and based on what has been invoked in the previous chapter of statistical methods, data were collected to extract the results to insurance companies listed on the ASE, this section includes three main things:

The first is related to the descriptive statistical methods for all dependent and independent variables, Second, reliability test for the study variables, and thirdly includes test hypotheses through simple and multiple regression to access the results of the acceptance of the hypothesis or reject it in addition to finding the equation that describes the effect between them which will be the introduction of the independent and dependent variables to the computer at the statistical program SPSS and based on independent study variables and the dependent variable that will obtain Multiple regression equations and to predict future values

$$Y=B_0+B_1X_1+B_2X_2+B_3X_3+e$$

Where: Y = Market Capitalization, X1 = ROI, X2 = ROE, X3 = ROA, and e= error

6.1 Descriptive analysis of the variables of the study:

Table 1: Descriptive Statistics

	Minimum	Maximum	Mean	Std. Deviation
ROI	-50.12	15.83	-1.3777	8.79132
ROE	-136.22	297.65	-1.5798	42.62093
ROA	-50.12	15.83		8.81200
Market Capitalization	1920000	2600000	1.316E7	1.442E7

Table (1) displays a descriptive analysis of the dependent and independent variables that were tested and the results of branches, including the following:

The minimum value of **ROI** is -50.12 and the maximum value is 15.83,

And the minimum value of **ROE** is -136.22 and maximum value of 297.65,

And the minimum value of **ROA** is -50.12 and a maximum of 15.83,

And the minimum value of **market capitalization** is 1920000 and a maximum value of 72600000.

6.2 Variables correlation test

The study conducted correlation tests to examine the lack of high correlation between the variables of the study. This Highlights the problem when the variables in the regression model are on Change explanatory factors, It also gives a rise to the high non-real Pearson correlation that is coefficient between any two independent variables with a value of more than 80% and to verify the absence of a high correlation between the variables of

the study; which has been relying on the following Pearson correlation matrix:

Table (2) Correlation test

	ROI	ROE	ROA
ROI	1		
ROE	-0.003	1	
ROA	0.971**	0.028	1

** . Correlation is significant at the 0.01 level (2-tailed).

And in view of Table (2), which shows the correlation between the independent study of the companies operating in the insurance listed on the Amman Stock Exchange sector variables , To prove to us that ROA and ROI have reached (0.971 **) and the reason for this is

ROA = Net Income / Total Assets

ROE = Net Income/Shareholder's Equity

With reference to the above, and by the nature of the research that has been selected ROA, and ROI as a profit of the company and the exclusion of some other factors such as EPS advance of the examination and study of the non-adoption of these companies on the EPS in nature or total, and will display a link to the tables of all the independent studies and static variables:

Table 3: Correlation test between independent variables and depend variable

	ROI	ROE	ROA	Market Capitalization
ROI	1	-0.003	0.971**	0.318**
ROE		1	0.028	0.035
ROA			1	0.310**
Market Capitalization				1

Correlation is significant at the 0.01 level (2-tailed)

clearly from Table(2.3) there is a strong positive relationship between ROI and ROA which have the amount of(0.971**) and have been justified in advance, followed by a positive strong relationship between ROI and Market capitalization which have the amount of (0.318 **) and followed by strong correlation between ROA and Market Capitalization which have the amount of(0.310 **) and the presence of a weak positive correlation between ROA and ROE relationship and a weak inverse correlation between ROE and ROI with the amount of (-0.003) .

6.3 Hypotheses test

H1 (Main hypothesis):

There is an effect of profitability measured by (ROA, ROI, ROE) all combined in Market Capitalization for the companies operating in the insurance sector listed in Amman Stock Exchange.

In order to prove or deny this hypothesis, there has been a selected sub-hypotheses affiliation and The following are the results of testing hypotheses that are a branch of the main hypothesis and discuss those results, and has been adopted by (Sig) to accept or reject the hypotheses If the value of (Sig) is less than 5% then it is accepted premise and otherwise be rejected, and will be referred to the percentage that explains each variable independently and the change in the dependent variable And depending on the value of the co-efficiency of determination (Adjusted R square) .

H1:1: There's an effect of ROI upon Market Capitalization for the companies operating in the insurance sector listed in the ASE.

Table 4 : Effect of ROI on market capitalization

Sig	t- statistics	Coefficients	Constant B	ROI B
0.003	182.688	0.318	6.962	0.013
0.091		Adjusted R Square		
Model F test		9.580		

Table (4) presents the results of a simple independent variable(ROI) decline and its impact on the(Market Capitalization) variable analysis, and after a review of this table it shows that the co-efficiency of determination (Adjusted R square) of (\$ 0.091) , which means that the market interpreted this rate of change in the ROI and results of the analysis have shown the value of co-efficiency in the amount of(0.318**), which means that there is a strong positive correlation relationship between the dependent variable and the independent variable . In addition, the regression results have shown that the value of (Sig) which is \$ 0.003 are lower than 5%, which means that ROE affects the Market Capitalization and therefore were accepted for the first sub-hypothesis Which stipulates that (There's an effect of ROI upon Market Capitalization for the companies operating in the insurance

sector listed in the ASE.)

H1:2: There is an effect of ROE on Market capitalization for the companies operating in insurance sector listed in ASE.

Table 5: Effect of ROE on Market Capitalization

Sig	t- statistics	Coefficients	Constant B	ROE B
0.741	179.428	0.035	6.946	0.001
0.010		Adjusted R Square		
Model F test			0.110	

The table (5) presents the results of a simple independent variable ROE regression analysis and its impact on the Market Capitalization variable, and after a review of this table it shows that the co-efficiency of determination (Adjusted R square) which is (-0.10), which means that the market interprets this rate of change in ROE and also value of the co-efficiency of (0.035) and it's a weak positive correlation between the dependent variable and the independent variable. The results showed that the value of Sig (0.741) is greater than 5%, which means that ROE does not affect the Market Capitalization therefore rejected the second sub-hypothesis, which stipulates that There is an effect of ROE on Market capitalization for the companies operating in insurance sector listed in ASE.

Table 6: Effect of ROA on Market Capitalization

Sig	t- statistics	Coefficients	Constant B	ROA B
0.003	187.372	0.310	6.962	0.013
0.086		Adjusted R Square		
Model F test			9.669	

The table(6) presents the results of a simple regression of independent variable ROA and its impact on the dependent variable Market Capitalization , and after reviewing these results that the value of co-efficiency (0.310**)which means that there is a strong positive correlation relationship between ROA and Market Capitalization. The results showed that the coefficient of determination (Adjusted R square) of (0.086) which means that the ratio of the market interpreted the change in ROA and the results have shown that the value of Sig (0.003) is less than 5%, which means that ROA affects the Market Capitalization and builds on it and accepted the third sub-hypothesis, which stipulates that There is an effect of ROA on Market Capitalization for the companies operating in insurance sector listed in ASE.

Table 7: Summary of test results Sub hypotheses:

Adjusted R square	Coefficient	Sig	
0.091	0.318	0.003	ROI
0.086	0.31	0.003	ROA
-0.01	0.035	0.741	ROE

It is clear that the ROA and ROI both of which have a close effect (the value in red) and the reason is due to the nature of the equations, and may have been justified in advance.

The independent variables were arranged in descending order according to the value of sig on the market.

H1: There is an effect of profitability measured by (ROA, ROI, ROE) all combined in Market Capitalization for the companies operating in the insurance sector listed in Amman Stock Exchange.

Model Summary

Model	R	Square	Adjusted R Square	Std. Error of the Estimate
1	316a	0.100	0.067	0.35607

a. Predictors: (Constant), ROA, ROE, ROI

ANOVA^b

MOdel	Sum of Squares	Df	Mean Square	F	Sig.
Regression	1.141	3	0.380	2.999	0.035a
Residual	10.270	81	0.127		
Total	11.410	84			

a. Predictors: (Constant), ROA, ROE, ROI

b. Dependent Variable: Market Capitalization

Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Constant	06.963	0.039		177.772	0.001
ROI	0.010	0.018	0.249	0.561	0.577
ROE	0.001	0.001	0.027	0.252	0.801
ROA	0.003	0.018	0.068	0.153	0.879

a. Dependent Variable: Market Capitalization

For the purpose of proving the results that have been reached in advance, as well as the order of the effect of some factors on the profitability on market capitalization, multiple regressions were conducted for all the independent variables, as shown in the table 8 above.

After discussing the sub-hypotheses given in Table 8 above, it is clear that sig is amounting to a value of 0.035 is less than 5%, which means that all of ROA, ROI, ROE combined effects the market capitalization and thus the main hypothesis was accepted and which stipulates that there is a trace of profitability measured by (ROA, ROI, ROE) all combined in Market Capitalization for the companies operating in the insurance sector listed in Amman Stock Exchange.

Multiple regression results have shown that the coefficient value which is (0.316) means there is a strong positive relationship between the independent variables combined with the dependent variable, In addition, the results showed that the value of the selection adjusted square amounting to 0.067, which means that the market interpreted this rate of change in the independent variables ROA,ROE,ROI combined and this is consistent with the findings of the researcher in the selection of sub-hypotheses using the table No. 2.7 data, we can prepare a linear regression equation to predict the future values for all the variables of the study as follows:

$$Y=6.963+(0.010*X1)+(0.001*X2)+(0.003*X3)+e$$

Where:

Y = Market Capitalization; X1 = ROI; X2 = ROE; X3 = ROA; and e= error

7. Conclusion

The study aimed to examine the effect of profitability ration on market capitalization in the Jordanian insurance sector by examining four years from 2010 until 2013 including 25 companies. The finding indicates that there's an effect of ROI upon Market Capitalization for the companies operating in the insurance sector listed in the ASE. In terms of the effect of ROE on Market Capitalization, the study revealed that there is a weak positive relationship between ROE on Market Capitalization which means ROE does not affect the Market Capitalization and therefore rejected the second sub-hypothesis, which stipulates that There is an effect of ROE on Market capitalization for the companies operating in insurance sector listed in ASE. In respect of the effect of ROA on Market Capitalization, the result indicated that there is an effect of ROA on Market Capitalization for the companies operating in the insurance sector listed in ASE.

By examining the effect of the independent variables combined with the dependent variable. The study revealed that all of ROA, ROI, ROE combined effects the market capitalization and thus the main hypothesis was accepted and which stipulates that there is a trace of profitability measured by (ROA, ROI, ROE) all combined in Market Capitalization for the companies operating in the insurance sector listed in Amman Stock Exchange.

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