The Impact of Economic Value Added and the Market Value Added on Earning per Share; Case Study of the Industrial Companies Listed in Kuwait Stock Exchange During the Period 2012-2016

Melikaoui Mouloud [1,*]

[1] Faculty of economy and commercial and management sciences, Bordj Bou Arreridj University(Algeria)

Summary: This study aims to find the effect relationship between both economic value added and market value added as new measures for evaluation the performance and earning per share compared with return on assets and return on equity, through application on industrial companies listed in Kuwait stock exchange(28 companies) during period 2012-2016. With used the multiple regression model and the statistical program(spss). The study concluded a strong effect relationship and statistically significant between both all independent variables(economic value added, market value added, return on assets, return on equity) and the dependent variable(earning per share), where correlation coefficient is estimated at 0.879. the study concluded also found that 76.7% of change occurred in earning per share explains through previous independent variables, especially economic value added variable and return on equity.

Keywords: economic value added, market value added, return on assets, return on equity, earning per share.
Jel Classification Codes : C58,D53 ,D46,D24,D22

I- Introduction :

The financial ratio method is one of the most popular traditional methods in assessing the financial performance. It adopts as a principle the accounting evaluation to the analytic content in order to reach the performance assessing outcomes. With the radical change in business companies environment regarding the financial management in general and in the role that should play in view to maximize the owners' wealth or the actions wealth, as a target accepted by the financial management to be a basis to its decisions and yet is still a concern for its function.

A radical change therefore has occurred not in the performance evaluation only but also in the performance content itself. The financial management turned according the new role to leave the accounting evaluation of the performance shifting to the economic evaluation. Among the most popular modern methods and that adopts the economic evaluation, there is the criterion of economic value added (EVA) and the market value added (MVA). The modern financial thought centers agree that those two criteria have seized the financial management attention in the recent few years as being the criteria that should be utilized to evaluate the performance. Moreover, some of those interested in this regard unanimously agree that the criteria represent the hot financial idea that will be even hottest in the next period for being a confirming factor that the best way for maximizing the marketing value of the share and hence maximizing the owners' wealth is through the EVA and the MVA.

There is a belief that this content may become a strategic and central objective to the modern financial management due to the tremendous change in the content of the financial environment in general and in the content of financial management in business in particular and the objectives to reach. The modern financial management has been interested in an important goal that is achieving shareholder value rather than focusing solely on profitability, many units have achieved high rates of profitability. This result however didn't reflect on their stock prices. This led

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[*] Corresponding author, e-mail : melikaouim@yahoo.fr

to the dismissal of many boards of directors in the United States America and the European Union, This is due to the influence of investors' interests not only on the profitability of the unit but also on the changes in the market value of the unit's shares, which led to adopting appropriate and efficient measures for investors to achieve value. Accordingly, the next could be emerged:

What is the effect of both economic value added and market value added on earning per share compared to traditional measures ?

This question bisects to the following partial interrogations:
- what is the economic value added and how its effect on earning per share ?
- what is the market value added and how its effect on earning per share ?
- what are reasons for the shift from traditional measures to economic value added ?
- what are the effect both return on assets and return on equity on earning per share ?

►**Hypotheses of study.**

There is a statistically significant relationship between following independent variables (economic value added, market value added, return on assets, return on equity) and dependent variable (earning per share).

The following hypotheses are subdivided to principal hypothesis:

The first subdivided hypothesis:

H_0: there is not a statistically significant relationship between economic value added and earning per share.

H_1: there is a statistically significant relationship between economic value added and earning per share.

The second subdivided hypothesis:

H_0: there is not a statistically significant relationship between market value added and earning per share.

H_1: there is a statistically significant relationship between market value added and earning per share.

The third subdivided hypothesis:

H_0: there is not a statistically significant relationship between return on assets and earning per share.

H_1: there is a statistically significant relationship between return on assets and earning per share.

The fourth subdivided hypothesis:

H_0: there is not a statistically significant relationship between return on equity and earning per share.

H_1: there is a statistically significant relationship between return on equity and earning per share.

►**Objectives of study.**

The objective of the study is to identify the impact of both economic value added and market value added on earning per share compared to traditional measures such as return on assets and return on equity. Specifically, this study attempted to:
- examine the effect of new measures of performance like economic value added and market value added on the earning per share;
- examine the effect of traditional measures of performance such as return on assets and return on equity on the earning per share;
- identify the relationship among the economic value added, market value added, return on assets, return on equity on earning per share.

►**The previous studies.**

1- M. Thenmozhi[1], Market value added and share price behavior: an empirical study of BSE Sensex company, delhi business review, 2000. The studies try addressing the relationship between share price and market value added and its relation to other measures of performance such as return on investment and profitability of share. The study concluded that augmentation the market value added led to augment the market value of share and augment the wealth of owners.

2- Helaluddin ahmed[2], impact of earning and economic value added on the market share value, 2015. This study focuses on identifying the relationship among earnings, economic value added and the shareholders value of the selected Islamic banks in Bangladesh. The study findings reveal that there is strong association among the earning per share(EPS), economic value added per share and the market price per share furthermore it is also reveal that share price of Islamic bank in Bangladesh can be explained more significantly by the economic value added than the bank traditional measures of earnings.

3- Aloy niresh & Alfred M[3], the association between economic value added , market value added and leverage, 2014. The study aimed to find the relationship between previous variables of the selected listed private banks in sri lanka. Correlation and regression methods have been employed to find out in what way financial managers can practice the effect of leverage and EVA to maximize MVA. There is no indicative association between EVA and MVA and leverage and MVA, the findings reveal. Furthermore, the results showed that both EVA as well as leverage have no profound impact on market value added of the selected listed private banks in sri lanka.

I.1. The Economic Value Added criterion
1- Definition of EVA:

Bennett Stewart is the one who contributed first in giving the concept EVA and did a lot of works in this regard. He defines the EVA as "A criterion of the financial performance to assess the real profit related to maximizing the contributors' wealth and that represents the difference between the adjusted net operating profit after taxes and the cost of the capital owned and the borrowed[4].

Castillo defines EVA as:" The approach that enables business companies to improve profits from their available investments and to measure the economic output of shareholders. It is also the criterion by which owners' wealth is maximized and the individuals' behavior is spotlighted inside the structure of the organization in a way that allows maximizing the owners' wealth[5]. On the other hand, Scott define the economic value added as[6]: "The difference between what the capital owners invest in the unit and what they get from the sale at current prices prevailing in the stock market".

2- Reasons for the shift from traditional measures to economic value added:

It is common known for financial managers that the most utilized traditional measures in the performance evaluation and achieving the institutions' objectives in maximizing the market value for per share and thus maximize the wealth of owners but based on the criterion of rate of return on investment (ROI) and return on equity (ROE). The first reflects the robustness of the institution's decisions in supporting the profitability of the single dinar invested within the institution, while the second criterion presents the level of dinar interest invested by the owners

2-1- The EVA and the Return on assets:

those who advocate using EVA or similar measures based on the value claim that by using Net Present Value (NPV) to determine the internal rate of return (the necessity to utilize the equation of EVA performance evaluation) gives a bigger outcome by using ROA, and since practical performance cannot be measured at the internal rate of return, some use the accounting rate of return instead to estimate the rate of return on capital. Managers should choose which alternative to use either NPV or ROA[7]. EVA supporters think ROA is inappropriate because ROA is a tendency to give inaccurate results, Makelainen points out that EVA and NPV go hand in hand and so do ROA and IRR.

In fact, Makelainen says that EVA and NPV is a combination of value creation and ROA and IRR is a return-on-money mix. While it would be good to increase the effectiveness of the institution by using its funds, the most important objective of the institution, according to Makelainen is to increase the wealth of shareholders or make the institution of high value. The increase in EVA and NPV is more beneficial to shareholders compared to increased ROA and IRR. This can be illustrated by the example of Makelainen, whose results show that the attempt to increase ROA may lead managers to reject projects that enhance value but weaken or reduce the return on investment (ROA). It is the manager who decides to reject projects with lower returns than is required to build the ROA but more than is required to build an NPV, thus missing the opportunity to increase the real value of the organization because its return criterion is very high. According to Makelainen, what should be done by the manager in this case is considering all projects that may create value regardless of the impact that the rate of return on assets can have[8].

2-2-EVA and the rate of return on equity (ROE):

ROE is similar to ROA, however it may show more distorted results than ROA. "A slight increase in leverage can increase the rate of return on the right of equity" says Makelainen. This proves that the rate of ROE is virtually useless as an annual management performance measure because it can show that there is growth although the company did not grow[9]. There are many writers who encourage the use of EVA to avoid many other specific problems caused by the use of ROE rate where they believe that the project, which takes much time, leads to significant distortions than if it took less time to accomplish and that different tables of depreciation can also change the result (ROE-based value), plus the amount of time it takes to change the money spent

on improvements and the new investment growth rate can change results. Successful business companies ought to make profits equal to at least the cost of investment (cost of money).

Ergo, it is becoming increasingly accepted that a new financial management system has been adopted and that a new approach must be adopted in the restoration of financial management systems under which business companies operate, including the rejection of accounting profit as defined in the income statement and its use as a benchmark for performance appraisal, and the shift to economic profit as an alternative criterion for that valuation despite the idea of economic profit is not the new idea in the field of financial management, which covers at least the cost of investment. This made EVA more important than the ROI as a criterion for evaluating financial performance through its ability to link accounting profit and available investment without taking into account the cost of that investment[10].

3- Elements of economic value added:

The EVA uses the data excerpted from the accounting statements to measure the increase in value achieved by the enterprise and how would cost this progress of the spent money. It measures net profits through the cost of that profit. The EVA equation takes many different forms but all are based on the same basic ideas developed by Stewart in his equation[11].

EVA = Net Operatig Profit After Tax (NOPAT) – cost of capital X capital

Or   EVA = Operating profits – capital burdens

According to Stewart, EVA is the difference between the profits per unit arising from its operations (NOPAT) and capital burdens borne by each unit through the use of the credit line. EVA equation helps managers and decision makers to see if projects are profitable or not by showing the value adds to the enterprise. All projects that do not exceed the value of the enterprise do not deserve to be implemented regardless of their impact on accounting profits[12].

3-1-Elements of EVA: NOPAT and cost of capital:

The net operating profit after tax is a modified form and is determined by Stewart according to the following equation:

NOPAT = sales – operating expenses – taxes

This is one of the easiest adjustments to make accounting data taken from financial statements. It basically represents profits minus operational cash flows and taxes[13]. The cost of capital can simply be defined as the amount of money to be paid for use. Stewart defines cost of capital as: "the minimum of acceptable return on investment for the line between the good and bad performance of an enterprise", this is what matters because if investors are not satisfied with the returns of the enterprise, they will not choose to continue to support it. This means that the cost of capital is like a breakeven for the enterprise; if the enterprise couldn't achieve sufficient returns to cover the cost of capital it cannot pay to investors and this indicates the inefficiency of the administration which would be a bad attitude for the enterprise. Stewart describes the cost of capital as the opportunity cost. In this case, investors should have the time and money to invest in the institution concerned, otherwise they will invest elsewhere[14].

3-2- Elements of EVA: Taxes

It is important to note the divergence of views on how to deal with taxes in the calculation of economic value added. The formula of economic value added was built on the exclusion of taxes in part of the equation. This is due to the fact that taxes are a part that does not change in the financing of the enterprise, and the EVA equation by introducing taxes becomes as follows[15]:

EVA = {Net Operating Profit – [(Net Operating Profit- Increase in Depreciation)-(Other increase in reserves)] X (tax rate)}-Wacc x invested capital.

4- Advantages of applying EVA criterion

This criterion as an evaluation model of the strategic financial performance is characterized as being comprehensive. Researches that dealt with the subject have agreed unanimously that using this criterion by the financial administration in institutions achieves:

4-1- Efficiency:

Economic value added (EVA) refers to the effectiveness and efficiency of managers and institutions. EVA is utilized mainly because it leads the institution to achieve greater financial efficiency with less capital than is necessary. Efficiency is not the main concern of EVA but this latter could show how much value is realized and how much capital is used to achieve it, and in this way we can judge the efficiency[16]. Money is not free and must be used in such a way as to maximize returns or at least pay for their use. This is the basic concept of economic value added (EVA) i.e "get more but less cost[17]".

4-2- Incentives of the manager:

The efficiency arising from applying the EVA enhances the main reason for replacing EPS. According to Stewart, EVA can provide a bigger incentive on the performance. He wisely points out that it s better than financial rewards necessary to get excellent financial performance from managers. Stewart suggests that the enterprise should rely on incentives for managers on a percentage of EVA, so managers' goal is to make the enterprise more profitable and efficient[18].

4-3- Applicability:

there is feature related to EVA which is its applicability in practice, and its simplest form requires the use of only two financial statements: balance sheet and income statement which actually allows it to be applied to any institution with accurate financial statements[19].

4-4- Eliminating the mess of multiple goals:

most institutions use a set of metrics to express their objectives. Therefore strategic plans will usually be based on growth and increase in revenue or market share, or on the basis of gross margin or cash flow or on a return on investment basis. As a result of the multiplicity of these conflicting objectives and standards, disintegration will result in the planning and decision-making process. However, economic value added works to remove this mess by using it as a comprehensive financial measure that guides the decision-making process towards a single focus that is: how to develop the added economic value by being the only financial management system that produces a common language among employees across all levels and operational functions and the common control[20].

I. 2. The Market Value Added criterion:

1-Definition of MVA:

Ehabar defines MVA as: "The difference between the market value of the institution and the capital invested with by owners and borrowers". With this analytical form, the MVA is a high standard for wealth measurement and creation. It is the measure of the operational efficiency of the institutions according to their ability and efficiency in linking factors that lead to the success and effectiveness of the institution.

Stewart defines MVA as[21] "the increase of the market value of capital (whether debt or equity) comparing to the book value of capital, if the market value added (MVA) is positive, the institution is able to create wealth for the shareholders". MVA is also defined as:" The difference between the market value of the enterprise and the book value of the shares, and according to Stewart, if the total market value of the institution is greater than the value of the invested capital, then the institution is able to create value for the shareholders; however, if the market value of the enterprise is less than the invested capital, the institution shall have destroyed the value to the shareholder[22]". From here, we can distinguish between the content of the two criteria, the MVA and the EVA.

The latter represents a method of internal performance evaluation whereas the MVA shows the external performance evaluation. Accordingly, the MVA reflects not only the shareholders wealth but also the financial market valuation of the entire enterprises' current net value. This means that EVA shows the market appraisal in favor of the current value of the existing and expected investment projects of the company[23].

This means as well that MVA is the financial market standard for the value that the financial management of the institution seeks, this value might be achieved by the administration and added to the shareholders' wealth or wasted if the performance turned downward. In other words, MVA is the final measure of the value generated or wasted from the enterprise.

Also, MVA shows how the financial market evaluates the performance of the institution by comparing the market value of the loans with the market value of the equity with the invested capital.

2-Factors influencing market value added:

MVA is influenced by a number of key factors, some of which affect the increase and the other the decrease, among which are the following[24]:

2-1-Growth rates:

it refers to the relationship between growth in revenues, net operating profit and capital invested in the enterprise. There must be a growth in revenues and net operating profit that exceeds the cost of the invested capital so that the MVA is positive.

2-2-Invested Capital Intensity:

it refers to the amount of capital invested to achieve a DZD of revenue, i,e the lower the capital invested to achieve DZD of revenue, the higher the market value added (MVA) due to the lower cost of capital

2-3-Value of Profit Margin:

it refers to the minimum of profit margin required to achieve and to increase the value of the shareholders equity. This indicates that the lower the minimum profit margin required achieving an increase in the value of shareholders' equity the higher will be the MVA.

3-Methods of calculating market value added:

The market value added standard is one of the most modern standards for evaluating the performance of institutions, and therefore there are many interpretations and attempts to find the optimal way to calculate and determine the MVA. Among the most common ways of calculating market value added there are:

3-1-The difference between the market value of the share and the book value of property rights:

According to this method, MVA is the difference between the market value of the shares and the book value of the property rights[25]:

MVA= market value of the share – the book value of the property rights

3-2- The method of discounting the future economic value added of the company:

according to this method, MVA is merely the present value of EVA of the enterprise and expected during the productive life. In other words, it is the discount of the flow resulted from the EVA of the enterprise within time, and it is calculated as follow[26]:

MVA = present value of EVA

3-3-The difference between the total market value of the company and the invested capital:

MVA can be calculated according to this method as follows[27]:

MVA = total market value of the company – invested capital

II– Methods and Materials:

1- Model and variables of study.

the following model clear the variables of study which are represented in earning per share as dependent variable, and the economic value added, market value added, return on assets, return on equity as independent variables.

$$EPS= B_0+B_1(EVA)+B_2(MVA)+B_3(ROA)+B_4(ROE)+(U).$$

whereas:

EPS: earning per share

EVA: economic value added

MVA: market value added

ROA: return on assets

ROE: return on equity

U: the errors term

The appendix (01) shows the model and variables of the study.

2- population, sample and period of study.

The population of study include all companies listed in Kuwait stock exchange at diffence activities(industrial, bank, assurance, transport...) but the sample of study include the industrial companies listed in kuwait stock exchange where their number 28 companies, the study was surveyed the industrial sector and it built the model on the extracted data per year. As for the period of study was included the period between 2012-2016. By five years consecutive and collected all the data relating to the study.

3- Tools of data collection and its analysis.

The study based on secondary source represented of books, studies and researchs which are related to the subject of study for representing the theoretical framework. But the primary

informations related applied side collected from industrial companies guide issued by Kuwait stock exchange and other reports from website Kuwait stock exchange.

We used the statistical program (spss) by extract regression coefficients for independent variables and extract coefficient of determination (R^2) and then interpret the data and take an appropriate decision to accept or reject the hypotheses.

III- Results and discussion :

1-Multiple linear regression of the study model

The results estimation of the multiple regression model related to effect the independent variables (EVA. MVA. ROA. ROE) on dependent variable (EPS) in industrial companies listed in Kuwait stock exchange during 2012-2016 have been shown the positive impact(R=0.88) and statistically significant for most independent variables to earning per share (sig=0.000). When looking at amount of (adjusted R^2) note that the explanatory power amounted to about 76.7%. which means that 76.7% to change in earning per share can be explained through independent variables(EVA. MVA. ROA. ROE). the equation of the model is given as follows:

$$EPS=0.08+0.763(EVA)-0.272(MVA)+0.132(ROA)+0.325(ROE)$$

$R^2=0,880$ *Adjusted R square=0,767*   *F= 112,894*   *(sig=0,000)*

From table (01) which shows the multiple linear regression of the study model, we observe that the coefficient of variance inflation(VIF) for both ROA and ROE has exceeded five, where the variance inflation coefficient for ROA is estimated at (9,354), whereas the variance inflation coefficient for the ROE is estimated at (9,402). This means that there is a strong linear correlation between the independent variables, which led to the instability of the regression coefficients and their lack of reliability. This can be seen in the correlation matrix between the study variables in Table (02), where there is strong correlation (94.4%) to over 70%, as well as significant (less than 5 %) between the two independent variables (ROA and ROE), which means that the model is not valid.

To avoid this problem, the third hypothesis was abandoned, and a new model is formed by excluding the variable return on assets (ROA) of the original model. This is because the correlation between return on equity and earning per share is (54.6%) is higher than the correlation between return on assets and earning per share (54.3%); and the regression coefficient for return on equity is significant (sig = 0.012). but the regression coefficient for return on assets is insignificant (sig = 0,297). Therefore, the model of the study excluding the return on assets became as follows:
$$EPS=B_0+B_1(EVA)+B_2(MVA)+B_3(ROE)+(Ui)$$
The appendix (02) shows the model and variables of the study.

2- The new model validity test after excluding the return on assets (ROA)

In order to test the validity and quality of the new model, we measure the linear correlation between the independent variables through the variance inflation coefficients, as well as measuring the moderate probability distribution of the remainders, and the autonomy of the residuals.

2-1- Linear correlation between independent variables

Throughout table (03) which shows the multiple linear regression of the study model after excluding the return on assets, we find that the coefficients of variance inflation of independent variables (ROE. MVA. EVA) are respectively (1,033 1,226 1,244), which is less than 5. This means that there is no linear correlation between independent variables or that this correlation is weak after excluding the ROA variable.

2-2 - The moderate probability distribution of the residuals

A Kolmogorov-Smirnov test has been used in order to test the distribution moderation in the study model. The results of Table (04) indicate that the probability value (sig = 0.12) is greater than signification level (0.05). Therefore, it can be said that the residuals in this model follow the normal distribution, so the condition of the moderate distribution of the probability of the residuals is available.

2-3- Autonomy of residuals

A (Durbin- Watson) test has been relied on to identify the self-correlations between residuals. If DW value is bigger than the maximum value (du), it means that there is no self-correlation among the residuals. When the WD value is less than the minimum value (dl), this means the existence of a self-correlation among the residuals. But if the value of DW is trapped between the maximum value and the minimum value, a specific decision cannot be made with respect to the self-correlation among the residuals.

By looking to table (05), we find the value (DW=1,711) and is between the maximum value (du=1,774) and the minimum value (dl=1,693). Therefore, it is not possible to judge the extent of self-correlation between the residuals.

3- Studying the correlation and interpretive power of the model

From table (05), we observe the strong correlation between the dependent variable (earning per share) and the independent variables (economic value added, market value added, return on equity) after excluding the variable ROA, where the coefficient of correlation reached (R=87,9%). Looking at the Adjusted R^2 value, the interpretive power of the model is 76.7 % which means 76.7 % the change in earning per share in the industrial companies listed in the Kuwait Stock Exchange can be explained through all the independent factors combined that the study adopted after excluding the return on assets, the other changes (23.3 %) are due to other factors.

Regarding table (06), we find that value F counted is 150.053 which is bigger than F table value. Also, SIG value is 0,000 . Thus, there is a significant slope of the independent variables combined, namely the economic value added, the market value added and the return on equity on the dependent variable, which is earning per share.

From table (07) which shows the correlation matrix of the study model after excluding the return on assets, we note a significant correlation (72.5%) between the economic value added and the variable earning per share, which is a significant correlation (sig=0,000). Also, there is a medium correlation (54.6%) between the return on equity and earning per share, and it is also a significant correlation (sig=0,000). As for the market value added, there is weak correlation (10.4%) and insignificant (sig=0,113> 0,05) with earning per share.

According to these results, it is possible to say that the industrial companies listed in Kuwait Stock Exchange rely heavily on the economic value added index to improve earning per share, and relies at an average on the index of the return on equity to improve earning per share. The equation of new model is given as follows:

$$EPS=0,08+ 0,767(EVA)-0,279(MVA)+0,450(ROE)$$

$R^2= 0,879$ *Adjusted R square= 0,767*   *F= 150,053*   *sig= 0,000*   *DW=1,711*

4- testing the hypotheses of the study

We shall examine the study hypotheses based on the significant result test of the coefficients of regression, depending on statistic (t) shown in table (03) which represents the multiple linear regression of the study after excluding ROA.

First hypothesis: The probability value of test (t) was estimated for the regression coefficient of the economic value added (sig=0,000) less than the significant level 0,05. This means that the regression coefficient b1 is significant, and we, accordingly, reject the null hypothesis (H0) and

accept the alternative hypothesis (H1) that there is a statistically significant relationship between the economic value added as an independent variable and earning per share as a dependent variable. Therefore, the listed industrial companies in the KSE use the economic value added to improve earning per share.

Second hypothesis: The probability value of test (t) was estimated for the regression coefficient of the market value added (sig=0,000) less than the significant level 0,05. This means that the regression coefficient b2 is significant. Therefore, we reject the null hypothesis (H0) and accept the alternative hypothesis (H1) that there is a statistically significant relationship between the market value added as an independent variable and earning per share as a dependent variable.

Fourth hypothesis: The probability value of test (t) was estimated for the regression coefficient of the ROA (sig=0,000) less than the significant level 0,05. This means that the regression coefficient b4 is significant, and we, accordingly, reject the null hypothesis (H0) and accept the alternative hypothesis (H1) that there is a statistically significant relationship between the return on equity as an independent variable and earning per share as a dependent variable. Therefore, the listed industrial companies in the KSE use the ROE to improve earning per share.

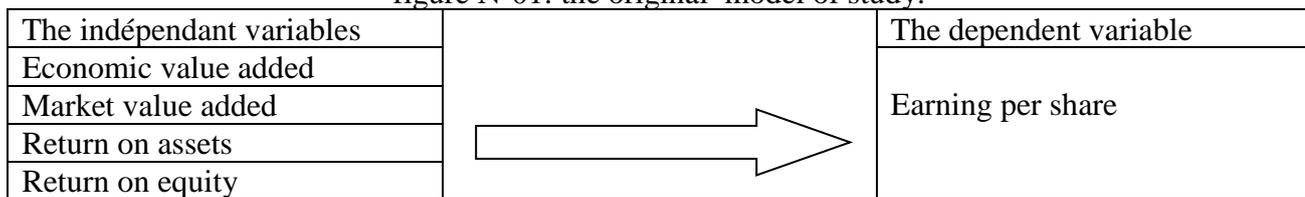## IV- Conclusion:

The results of study can be summarized below:
− the results of study indicated a statistically significant effect for economic value added variable and market value added and return on equity on earning per share ;
− the economic value added was the most factor influential on earning per share ;
− as for the relationship between return on assets and earning per share, the results found that was not statistically significant effect for return on assets on earning per share ;
According the previous results, we can represents the recommendations follow:
− it must be depend the companies tools and measures depending on value like economic value added which depend on economic profit concept ;
− in light competitive environment which companies operate, the incentive system should be linked to employers and managers to economic value added criterion to ensure the continuity and success of the company ;
− the economic value added measure the profitability in short term, so it must be supported by other measures that help measure the quality level and process flexibility ;
− the necessity of linking earning per share to the level of economic value added to stimulate the shareholders in the company.
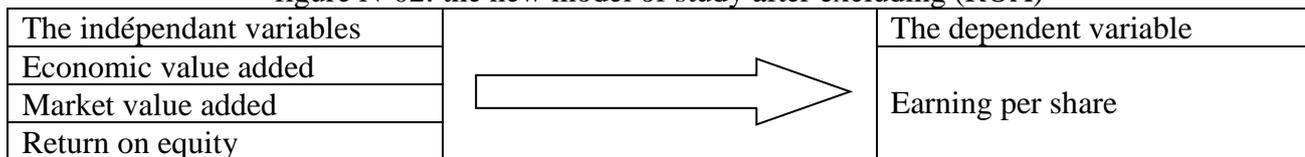
- Appendices:

figure N[0]01: the original model of study.

The indépendant variables		The dependent variable
Economic value added		
Market value added		Earning per share
Return on assets		
Return on equity		

The Source : by researcher

figure N[0]02: the new model of study after excluding (ROA)

The indépendant variables		The dependent variable
Economic value added		
Market value added		Earning per share
Return on equity		

The source : by researcher

Table N[0]01: Multiple linear regression of the original model before excluding (ROA)

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	,08	,002		3,708	,000		
	ROA	,132	,001	,001	1,046	,297	,107	9,354
	ROE	,325	,000	,001	2,557	,012	,106	9,402
	EVA	,763	,000	,002	16,499	,000	,800	1,249
	MVA	-,272	,000	-6,968	-5,885	,000	,801	1,249

a. Dependent Variable: EPS

the source : spss

Table N[0]02: the correlation matrix of the original model before excluding(ROA)

Pearson		EPS	ROA	ROE	EVA	MVA
Correlation	EPS	1,000				
	ROA	,543	1,000			
	ROE	,546	,944	1,000		
	EVA	,725	,165	,170	1,000	
	MVA	,104	,080	,125	,426	1,000
Sig. (1-tailed)	EPS	.	,000	,000	,000	,113
	ROA	,000	.	,000	,027	,178
	ROE	,000	,000	.	,023	,073
	EVA	,000	,027	,023	.	,000
	MVA	,113	,178	,073	,000	.

The Source : spss

Table N⁰03: Multiple linear regression of the new model after excluding (ROA)

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	,08	,002		3,848	,000		
	ROE	,450	,000	,002	10,686	,000	,968	1,033
	EVA	,767	,000	,002	16,604	,000	,804	1,244
	MVA	-,279	,000	-7,134	-6,078	,000	,815	1,226

a. Dependent Variable: EPS

the source : spss

Table N⁰04: the distribution modality of model after excluding(ROA)

	Kolmogorov-smirnov		
	statistic	df	sig
Standardized residual	,134	133	0,12

Table N⁰ 05: the summary of model after excluding (ROA)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,879[a]	,772	,767	,018881	1,711

The source : spss

Table N⁰ 06: Multiple linear regression of the new model after excluding (ROA)

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	,160	3	,053	150,053	,000[a]
	Residual	,047	133	,000		
	Total	,208	136			

The source : spss

Table N^0 07: the correlation matrix of the original model after excluding(ROA)

Correlations

		EPS	ROE	EVA	MVA
Pearson Correlation	EPS	1,000			
	ROE	,546	1,000		
	EVA	,725	,170	1,000	
	MVA	,104	,125	,426	1,000
Sig. (1-tailed)	EPS	.	,000	,000	,113
	ROE	,000	.	,023	,073
	EVA	,000	,023	.	,000
	MVA	,113	,073	,000	.

The Source: spss

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