

# PERFORMANCE EVALUATION AND SHAREHOLDERS VALUE MAXIMISATION THROUGH CFROI AND EVA: AN EMPIRICAL STUDY

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## Abstract:

*The major financial objective of a firm is the maximization of its shareholders' value. All management decisions and approaches should contribute to this objective. Management, though, faces the problem of determining what the effect of its actions would be on maximizing the shareholder's value. A firm must be able to identify an appropriate measure to analyse its financial performance which in turn reflects the shareholders' value, measures like EVA and CFROI serve this purpose. This paper aims at evaluating modern financial performance measures and maximizing shareholders value. This study has been done using a sample of 20 Indian cement companies quoted on the Indian Stock exchanges from 2006 to 2017. The study identifies that Shareholders value maximization measured by adjusted R<sup>2</sup> and found variations in stock markets explained by EVA and CFROI. The study concluded that there is a significant positive relationship between CFROI and EVA and great impact on stock market returns. Moreover, these two techniques are best financial performance measures for shareholders value.*

**Key factors:** EVA, CFROI, StMReand Regression analysis

## I. INTRODUCTION

One of the problems that management may face is to determine which measure should be used to evaluate and value corporate performance and value creation. According to Obrycki and Resendes (2000: 158) an ideal performance measure should not only focus on the financial performance of a firm, but should also provide an indication of what it is worth. The correlation between such a measure and the firm's market value should consequently be high. But in practice this is not always the case. A number of studies report that the majority of the accounting based performance measures exhibit weak correlations with market values (Black *et al.*, 2001: 51; Obrycki & Resendes, 2000: 158). There are number of different value based financial performance measures have been developed. These include, amongst others, Market Value Added (MVA), Economic Value Added (EVA), and Cash Flow Return on Investment (CFROI). These measures include a firm's cost of capital in their calculation (Fabozzi and Grant, 2000: 68). EVA and CFROI are the measures to stipulate an estimate of a company's economic profit by incorporating its total cost of capital in their calculation. While proponents of these measures report high correlations between the measures and the creation of shareholder value (Stewart 1991: 2; Stewart 1994: 75; Walbert, 1994: 110; O'Byrne, 1996: 117).

Generally company creates value to its shareholders whenever returns exceed the cost of capital. Shareholders get the returns in two ways in the form of dividends or capital appreciation which is reflected on stock market returns. The market return of share is affected by some external factors and some internal factors may be affected by the management decisions of a firm. Therefore, every firm must work for value maximisation to its shareholders. However, only value creation or generation is not enough for a company. There should also an effectual technique for the calculation of this created value.

## II. LITERATURE REVIEW

Some of the following reviews found with regard to shareholders value maximisation through selected metrics, these reviews are Walbert, (1994); O'Byrne, (1996), Many studies have conceded far weaker relationships, Biddle, Bowen & Wallace, (1997); Degel & Degner (2000) these studies are not clear whether the performance of value based

measures really benefit to a company in its objective to maximise shareholders' value. **Sharma & Kumar** (2009) they studied 112 literatures on Economic Value added by the use of descriptive statistics. The study revealed that the EVA is a metric/tool used in measuring financial performance. **Grant** (1992), Investigated relationship between Economic Value Added and Firms' value. The study found that the EVA significantly effects on firms' value. **Wallace** (2004) examined the performance of firm based on Economic Value Added (EVA) and other residual income methods. The study concluded that the EVA adopters dispose of more assets and make new investments. **Ghanbari and More** calculate the relationship between EVA and Market Value Added of automobile companies in India. The study found that there is strong support to Stern Stewart's claim.

**Kristina Jančovičová** (2010) the aim of the study is evaluate the incremental and relative information of CFROI. In this study whether CFROI able perform than traditional accounting measures in explain the changes in stock market return. In this study traditional measures are applied like EBEI and OCF and shareholder value creation measure is CFROI. The study concluded that CFROI margin is the difference between CFROI and cost of capital.

**Clinton and Chen** 1996 study the EVA, CFROI of BCG and RCF in association with stock market returns. In this study 325 companies are selected during the period of 1991 to 1995. The study found that Economic Value Added and CFROI insignificantly associated with stock returns.

**Nichols** (1998) he study and analyse the EVA and CFROI. He stated that there is no specific and long term impact of business decisions on shareholders value. with regard this the study observed that Economic value added is better than CFROI measure.

### **III. OBJECTIVES OF THE STUDY**

The following objectives made on the above studies

- To examine the performance value based measures Economic Value Added (EVA) and Cash Flow Return on Investments (CFROI),
- To study the relationship between Economic Value Added and Cash Flow Return on Investments
- To study the impact of EVA and CFROI on Stock Market Returns (StMRe)

### **IV. RESEARCH METHODOLOGY**

Data were collected from the annual reports of the 20 select cement companies in India which are listed in recognized stock exchange. In this study EVA and CFROI is calculate based on the following formula

- (a) Economic Value Added (EVA) is an evaluation of the economic profit made by a company after deducting total cost of all its forms of capital (debt, as well as equity) from Net Operating Profit After Tax (NOPAT). When increase in firm's EVA should result an increase in shareholder value whereas decrease in EVA results an destroy the firm value. The EVA calculated by the following formula:

$$\text{EVA} = \text{NOPAT} - (\text{WACC} * \text{CE})$$

Where:

**EVA** : Economic Value Added

**NOPAT** : Net Operating Profit after Taxes

**WACC** : Weighted Average Cost of Capital

**CE** : Capital Employed.

- (b) Cash Flows Return on Investment is another important tool of performance measurement for managers who can use for all financial aspects of their organizational unit. It is a percentage rate of return valuation model that is basically cash flow divided by capital employed. The objective of this measure is to guide the company managers. The CFROI calculate by the following formula:

$$\text{CFROI} = \text{OCF} / \text{Capital Employed}$$

**OCF** = Net Income + Non Cash Exp + Changes in Working Capital

**Non-cash Exp.** = Depreciation and Differed Tax

**Capital Employed** = Total Assets – Current Liabilities

#### **c) Statistical Tools**

F-Test, Regression and correlation method of data analysis were used in this study. The regression equation is

$$\text{StMRe} = \alpha + \beta_1 \text{EVA} + \beta_2 \text{CFROI} + \mu$$

Where:

StMr = Stock Market Returns of selected companies

$\alpha$  = Constant  
 EVA = Economic Value Added  
 CFROI = Cash Flows Return on Investment  
 $\mu$  = Error term

**d) Hypothesis statement**

Based on the above objectives of the study the following hypothesis were formulated for finding the impact of selected measures on stock market returns

- H<sub>0</sub>** = Impact of EVA and CFROI on Stock Market Returns not create shareholder value
- H<sub>1</sub>** = Impact of EVA and CFROI on Stock Market Returns create shareholder value

**V. INTERPRETATION AND RESULTS**

The study applied modern measures techniques like EVA and CFROI for evaluating financial performance based on the secondary data which are published annual financial statements and stock market returns calculated based on the published share price in Indian stock exchanges. Descriptive statistics were used to summarize the mean, standard deviation, and statistical techniques R<sup>2</sup>, regression and coefficient of the study variables. The study applied hypotheses and tested using Linear Regression with the help of SPSS statistical software, was used to predict the value of a variable based on the value of the financial performance variables.

Table No:1

Model	R	R Square	Adjusted Square	R	Std. Error of the Estimate
1	.430 <sup>a</sup>	.185	-.087		47.53972

Table No: 1 the study identifies that Shareholders value maximisation measured by adjusted R<sup>2</sup> equal to 18% and variations in stock markets explained by EVA and CFROI. Many studies have found the weaker relationships between modern measures (Biddle, Bowen & Wallace, 1997: 316; Chen & Dodd, 1997: 325; Farsio, Degel&Degner, 2000: 117). It is thus not clear whether the implementation of a value based measure will actually benefit a firm in its quest to maximise its shareholders' value.

ANOVA					Table No:2
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	2	3306.385	1653.193	0.744504	0.514258
Residual	6	13323.17	2220.528		
Total	8	16629.56			

Table No: 2 The F Statistics of 0.74 shows that the result typically explained the model. The F Statistics shows that a change in stock return is caused by CFROI and EVA.

**Coefficients** Table No: 3

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	13.410	17.261		.777	.467
1 EVA	.040	.035	.427	1.157	.291
CFROI	.008	.042	-.068	-.185	.859

Table No: 3 The EVA contributes to explain significantly at 0.05 % level of the stock market return. Modern Measures has value which is equal to 40% and 8%, this means that when the EVA increases by a one unit, Stock return increased by 40% whereas CFROI increases by one unit, stock returns increases by 8%. These significant results prove that when EVA and CFROI are positive, it increases in shareholders' value too. In those cases where these measures

yield positive values, economic profits are generated, and consequently shareholder value is expected to increase. Negative values indicate the destruction of shareholder value (Stewart, 1991: 174; Grant, 2003: 81).

## **VI. Recommendations:**

1. The study suggest that EVA and CFROI are the best financial performance measures, and these two technics can be used.
2. Management, investors and stakeholders can be used EVA and CFROI as a benchmark for their investments.
3. These two techniques showing great impacton stock market returns.
4. Fund managers can also use these performance measures before making a scheme/portfolio to the public.

## **VII. CONCLUSION**

This paper investigates the performance evaluation and value creation. Performance evaluation is the most important yardstick applied by shareholders to assess the company. In this study, EVA and CFROI are significant tools of performance evaluation. The study found that the Economic Value Added and Cash flows Return on Investment contributes to explain significantly at 0.05 % level of the stock market return. These two techniques are equal to 40% and 8%. These significant results prove that when EVA and CFROI are positive, it increases in shareholders' value too. Finally, the study concluded that there is a significant positive relationship between CFROI and EVA and impact on stock market returns and these two techniques are best financial performance measures for shareholders value creation.

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