

A Study on Eva and Its Impact on Share Prices of Select Indian Companies

Reshma Upadhya

Dept of Management Studies

Christ (Deemed to be University) Bangalore, Karnataka, India

Abstract- *With the rise in competition and expansion of market share, organisation are putting their focus on increasing shareholders wealth. EVA is one of the important tools to find out the true profitability and business performance of any company. It has been a debatable question, whether EVA has an impact on shareholders wealth or share prices or not. This paper attempts to find out the connection in between EVA together with share price connected with chosen organizations indexed by NSE SENSEX for five years point in time. The data was analysed with the help of calculated EVA to check whether there is connection between EVA and prices of share of each company. Statistical measures like correlation analysis were used to analyse the significance and impact. EVA and CAPM model was used as financial analysis. The changing nature of stock market, speculative activities, changes in government rules, policies & tax structures etc. have an influence on stock prices of the organization. Typically the outcomes ended up that there's basically no substantial association in between EVA and Share price belonging to the preferred organizations and in addition there is an inverse connection with regard to them.*

Keywords- Economic Value Added, CAPM Model, Shareholders Wealth, NSE-SENSEX, Regression Analysis, Correlation Analysis.

I. INTRODUCTION

The idea associated with economical income as well as revenue, made an appearance previously from the economic literary work couple of decades back, in the paper of Hamilton(1777) and Marshal(1890). After the beginning of 1990's, we can see the entry of value based measurements like MVA as well as EVA that are constantly being used as a substitute of old DCF and NPV methods for organization worth. The old concept before 1980's was to find Residual Income by subtracting Operating profit with Capital cost. However, this did not take into account the components like taxes and interest. This didn't give a true measure of the profitability of the business organisations. Also, with the development of capital markets, estimation of cost of capital, Shareholders value based approach; the old concept of residual income was losing its play.

Then, in the late 1980's, Stern Stewart & Co introduced the concept of EVA. Stern Stewart & Co, is a consulting firm which implements EVA for larger companies and is a registered trademark of the company.

EVA presented unique features in performance management and bonus systems. Thus, they found out that larger the EVA, larger will be the market capitalization of a company.

The question now arise is what EVA provided to its users that it expanded like this? When we compare EVA with traditional measures like EPS, ROI, ROE etc., it was found by Esa Mäkeläinen(1999) that when there is a change in invested capital of the business, Return on Investment (ROI) does not take this change into picture. The drawback is that it does not specify whether the profit has been enhanced or reduced. When we talk about ROCE, it was found by Esa Mäkeläinen that return on capital employed is very explanatory measure in significant level. When we compare EVA with traditional measures, EVA takes into account the concept of savings in cost, taxes, change in income, growth of capital and cost of capital employed.

[1] Measurement of Accounting- The Downfall

Various accounting measurement such as Earnings per Share (EPS) are attracting because they have the feature of simplicity. But the issue is that it does not give an explanation on the reality. Profit after Tax (PAT) which is the base of EPS doesn't take into account the component of cost from point of view of shareholders. Thus, it cannot be concluded that rise in EPS will contribute to meet stakeholders expectations. Other limitations that accounting measure suffer from are use of revenue and capital items. The financial statements are required to be made as per US GAAP or International Accounting standard which may lead to some kind of disruptions while explaining the impact of accounting performance.

[2] Measurement of Market Value – The Shortfalls

Some of the market value measures such as stock price of company, obviously lefts behind the shortfalls of

accounting measures to a certain extent. Moreover, it helps in knowing the wealth added to shareholders in absolute values. But, the limitations of this measure are that stock prices are always volatile in nature.'

[3] *Measurement of Economic Value- The Answer*

The best thing about EVA is that it takes into consideration the opportunity cost of capital. The concept of cost of capital is important and EVA takes this into consideration for the purpose of value creation. Profit after Tax do not consider cost of equity, and considers only cost of debt. The best thing about Economic measurement is that they can act as a benchmark themselves. Historically, various economic measurements like Residual income or Cash Value Added or Economic Profit and also Cash Flow Return on Investment have been developed. Out of these measures, Residual Income is the most simplest tool and is found by deducting charge of capital from profit, with no adjustment in the profit itself. The use of Economic profit by McKinsey is an advance level of Residual Income concept because in Economic profit adjustments are made to profit. Thus, EVA is an advance level of Economic Profit which is a copyright of Stern and Stewart.

II. LITERATURE REVIEW

The study is based on the article by M. Aravind & K. Ramya in the year 2015. According to the author, inverse relationship was noticed between EVA and share prices in certain companies. The variation in share prices of the companies under study is not well explained by EVA. According to the author and its study investors' decision are not always rationale and due to the speculation in the stock markets, there exists uncertainty and a company's EVA doesn't influence them much in their investment decision. But the fact that EVA of a company can improve and contribute productively towards shareholder's wealth cannot be overridden in the long run.

In an article written by V. Merugu and R. Reddy in the year 2016 the objective of the research was to invent out that the shareholders' value creation in order to compare the trends and compare company wise value. Data for the year 2007 to 2015 was used for 77 sample companies in Parma Sector listed in BSE-SENSEX. From the test, it was found that out of all the companies, most of them had positive EVA indicating not only profit maximization, but wealth maximization too.

Also in the study carried on by Banerjee (1997) examined the superiority of EVA over ROI by conducting an

empirical research of companies belonging to ten industries. Biddle, Bowen and Wallace (1997) analysed in their study EVA has greater correlation with share prices than net profits. The study results showed that profits have higher correlation with share prices than EVA.

Biddle (1998) in his article had discovered the actual cause regarding often the reduced informative strength associated with EVA in comparison to revenue while detailing share return. Typically the significant cause had been credited to mistakes made while determining WACC in comparison to real industry. The research came to the conclusion that executives and administrators reacted to EVA rewards and benefits. However, they did not have proof in order to assist the actual state that EVA ended up being much more correlated to company worth as compared to net earnings. Hence, the experimental studies performed throughout the past have identified that prices of shares are usually related along with E

Yusbardini, Y. (2017) in his research the objective of this specific examination is to check observationally the relative data substance of EVA factors, OP and NI of the MVA and the extra substance of the data contained on EVA, OP, N.I against MVA. Penelitan was directed on 18 organizations opening up to the world are incorporated into the shopper merchandise industry. The systematic apparatus utilized as a part of this exploration is the pool slightest square relapse between the reliable factors and free factor. The outcomes in light of the relative data content demonstrates that EVA can clarify MVA better in contrasted and NI and OP while in view of incremental data content, NI can clarify changes in EVA and MVA in comparison with OP. At long last, the consequences of this investigation demonstrated that EVA isn't the best measurement of execution.

Bacidore, Boquist, Milbourn & Thakor(1997) came up with an idea of Refined Economic Value Added. While performing statistical analysis it was found that REVA is much superior to EVA as the returns were higher in 25 REVA firms as compared to realised returns of EVA firms. Thus EVA is only estimation for predicting the correlation between share prices and value of shareholders, while REVA is much more beyond that.

S.K Bahadur &B.C Deb in their article aimed to know whether any company would generate enough revenue to overcome its capital cost or create shareholders wealth and thus the study analysed the performance of Square pharm Limited using traditional measures like EPS, ROE and ROCE and also the latest performance measure EVA using regression analysis and Chi Square. The results of the reading prove that

the business is being able to generate wealth for the shareholders because the earnings are much bigger than the capital cost.

M.L Bhasin and J.M. Shaikh (2013) in their article tried to analyse the strategies adopted by select Indian companies to create value for its shareholders. For this, the researcher analysed whether EVA is better in terms of showcasing the true market value associated with the chosen businesses when compared with conventional procedures. The actual investigator applied ANNOVA, trend evaluation as well as regression study resources to get the outcomes. Typically the findings exhibit that there are absolutely no powerful association as well as evidence to maintain Stern Stewart's declaration in which he says that EVA is actually larger when compared with traditional steps in its significance along with MVA. It also suggested that apart from financial variables there are other measures than define shareholders wealth creation like innovations in R&D, product quality, satisfaction in customers etc which was given by **Chen and Dodd (2001)** In an article by **Russ.R(2001)** the author tries to find out the missing link in the EVA process, as there are mixed evidences with regard to efficiency of EVA. Along with the aid of numerous assumptive overview it was discovered that there is lacking hyperlink within EVA procedure is actually efficiency, as well as fishbowl element that is a component overlooked through a lot of the organization.

III. MATERIALS

Objective of the Study:

The important objectives of the research are as follows:

- To find out EVA for the selected Indian companies and analyse its relationship with shareholders wealth creation.
- To identify the relationship between EVA and share prices of the select Indian companies in NSE-SENSEX.
- To help investors take rationale decision based on EVA.
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Research Hypothesis:

Null Hypothesis: There is no relationship between share prices and EVA of selected companies.

Alternate Hypothesis: There is relationship between share prices and EVA of selected companies.

The research uses statistical tools like:

- Correlation Analysis
- Regression Analysis

The Financial tools that can be used are:

- EVA(Economic Value Added)
- CAPM MODEL(Capital Asset Pricing Model)

IV. METHOD

NSE-SENSEX includes 50 top companies belonging to key sectors which best indicates the economic growth of India. Out of these 50 companies, five companies belonging to different sectors were selected. The study was done by collecting financial information of selected companies in NSE-SENSEX. The companies selected were Hindustan Unilever Limited, Cipla Limited, J.P Associates, Bajaj Auto Limited and ITC Limited. Details for data analysis was used from balance sheet, closing prices and Income Statement/ Profit and Loss Account as provided in the Annual reports for the year between 2012-13 till 2016-2017.

The data was collected from Secondary Source, annual reports and websites of the company, NSE websites along with PROWESS database.

V. DISCUSSION

Since its inception by founders Joel Stern and Bennett Stewart, many firms have adopted EVA either to know shareholders performance or managerial powers and so on. EVA is exceptional from other traditional measures in the sense that traditional measures are dependent on accounting data which is usually distorted and as a matter of fact doesn't reveal the real performance of the company.

The value for the shareholders increases when the company gives good returns in terms of providing dividend and capital gains. Both stock appreciation as well as payment dividends results in ability to increase the net income, shares outstanding or retained earnings. When compared with other traditional performance measures the relation of EVA is more with shareholders wealth and value of firms Wajih (2006). The exact amount or figure of return to shareholder can be known using EVA by taking into consideration measures like Cost of Equity, Debt or retained earnings as per Reddy and Rajesh (2011).

Thus, there is a need to understand the connection between share prices of selected companies and EVA.

VI. ANALYSIS

As the aim of this paper is to analyse the impact of EVA on share prices, the formula for calculating EVA is :

- 1) Economic Value Added = NOPAT(Net Operating Profit After Tax)-COCE (Cost of Capital Employed)
- 2) COCE(Cost of Capital Employed)= Capital Invested* Weighted Average Cost of Capital(WACC)
- 3) Capital Invested= Debt Capital+ Equity Capital
- 4) WACC(Weighted Average Cost of Capital)= $K_d * W_d + K_e * W_e$
- 5) K_e was calculated using CAPM Model: $R_f + \beta(R_m - R_f)$
- 6) $K_d = \text{Interest Expenses} (1 - \text{tax rate}) / \text{Borrowings}$

Assumptions:

- 1) Tax rate is assumed to be 30%, as applicable to Indian Companies under Companies Act 2013.
- 2) Market return (R_m) is calculated from log returns from each company.
- 3) Risk Free rate is taken as 364 Treasury Bills from RBI website.

Table 1: Risk Free Rate of Return (R_f)

Year	Risk Free Rate of return(R_f)
2012-2013	7.79
2013-2014	8.96
2014-2015	7.98
2015-2016	7.11
2016-2017	6.14

CIPLA LIMITED

Table 2: EVA and Share Prices of Cipla Limited (in crores)

Year	Equity & R&S (Cr)	Debt (Cr)	Capital Employed (Cr)	K_d	K_e	WACC	NOPAT (Cr)	SHARE PRICE	EVA (Cr)	EVA%
2012-13	9,018.68	966.93	9985.61	0.0	0.07299	0.06786	1438.92	379.75	761.29	7.62%
2013-14	10041.38	1228.34	11269.72	0.0	0.08977	0.08871	1316.02	410.6	316.2	2.81%
2014-15	10,79.76	1,701.76	12,494.28	0.0	0.08271	0.08098	1157.97	712.45	146.1	1.17%
2015-16	11844.96	5191.39	17036.35	0.0	0.05944	0.04742	1404.87	511.95	596.8	3.50%
2016-17	12525.42	4112.59	16,638.01	0.0	0.06193	0.05403	855.519	592.95	-43.57	0.26%

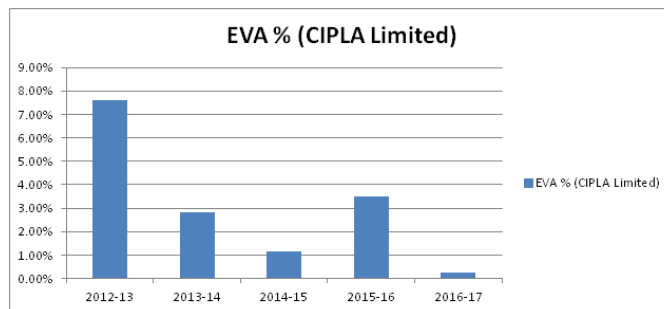


Figure 1: Trend of EVA% for Cipla Limited

Interpretation: From the above table and figure, it can be seen that when share prices rose in the year 2012-2013, EVA decreased from 761.29 to 316.2. Also, when share prices decreased from 712.45 to 511.95 from the year 2015-2016, EVA% increased from 1.17% to 3.50%.

J.P ASSOCIATES LTD

Table 3: EVA and Share Prices of J.P Associates Ltd.(in crores)

Year	Equity & R&S (Cr)	Debt (Cr)	Capital Employed (Cr)	K_d	K_e	WACC	NOPAT (Cr)	SHARE PRICE	EVA (Cr)	EVA%
2012-13	12,552.96	55,865.01	68,417.97	0.060	0.07671	0.063067	641.90	65.45	-3673.00	-5.37%
2013-14	10,073.70	61,100.92	71,174.62	0.070	0.08949	0.072759	-898.80	53.70	-6077.37	-8.54%
2014-15	14,760.68	61,285.38	76,046.06	0.080	0.07940	0.079885	-1849.84	24.80	-7924.76	-10.42%
2015-16	12,891.43	58,249.99	71,141.42	0.090	0.07031	0.086433	-3126.08	7.70	-9275.05	-13.04%
2016-17	3,810.31	30,188.84	33,999.15	0.170	0.06145	0.157835	-5258.97	13.45	10625.22	-31.25%

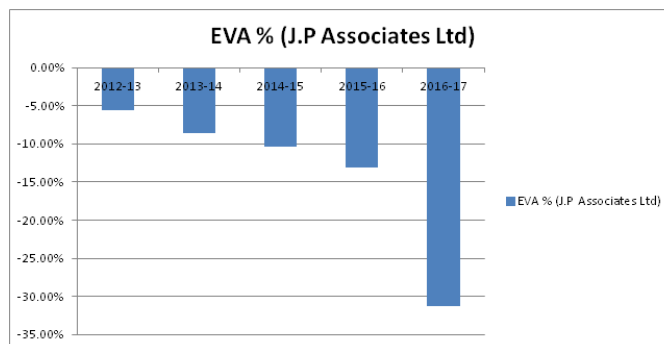


Figure 1: Trend of EVA% for J.P Associate Limited

Interpretation: In the above table, it can be seen that when share prices decreased every year, EVA% also decreased significantly. Decreases in EVA prices may be because of more debt in its capital as compared to Equity. The company wanted to go for diversification and purpose of that took more loans.

ITC LIMITED

Table 4: EVA and Share Prices of ITC Limited (in crores)

Year	Equity & R&S (Cr)	Debt (Cr)	Capital Employed (Cr)	Kd	Ke	WACC	NOPAT (Cr)	SHARE PRICE	EVA (Cr)	EVA%
2012-13	23,029.75	68.28	27,306.87	0.8900	0.074773	0.065286	7479.353	309.75	5696.59	20.86%
2013-14	27,107.03	199.84	27,306.87	0.0200	0.089028	0.088523	8861.377	352.85	6444.08	23.60%
2014-15	31,644.14	224.72	31,868.86	0.2100	0.080006	0.080923	9798.264	325.85	7219.35	22.65%
2015-16	33,872.81	70.61	33,943.42	0.5300	0.069523	0.070481	10470.6	328.25	8078.23	23.80%
2016-17	46,412.93	37.51	46,450.44	0.4500	0.061012	0.061326	10851.4	280.30	8002.78	17.23%

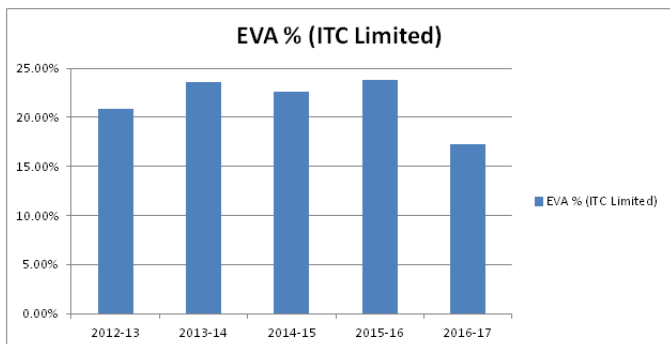


Figure 3: Trend of EVA% for ITC Ltd.

Interpretation: The above table shows positive relationship between EVA% and share prices of ITC limited. When prices increased from 309.75 to 352.85, EVA also increased. Whereas, when share prices decreased from 352.85 to 325.85 rupees, EVA% also decreased

HINDUSTAN UNILEVER LIMITED

Table 5: EVA and Share Prices of Hindustan Uniliver Limited (in crores)

Year	Equity & R&S (Cr)	Debt (Cr)	Capital Employed (Cr)	Kd	Ke	WACC	NOPAT (Cr)	SHARE PRICE	EVA (Cr)	EVA%
2012-13	2,864.10	24.74	2,888.84	0.7300	0.074129	0.079746	3122.217	466.95	2891.84	100.10%
2013-14	3,536.62	45.58	3,582.20	0.6200	0.089736	0.096483	3483.508	605.55	3137.89	87.60%
2014-15	4,020.97	43.04	4,064.01	0.2900	0.082779	0.084974	3948.203	873.45	3602.87	88.65%
2015-16	3,971.04	254.78	4,225.82	0.0100	0.064039	0.060781	4189.563	869.5	3932.71	93.06%
2016-17	6,744.00	277.00	7,021.00	0.0900	0.061798	0.062911	4369.4	911.75	3927.70	55.94%

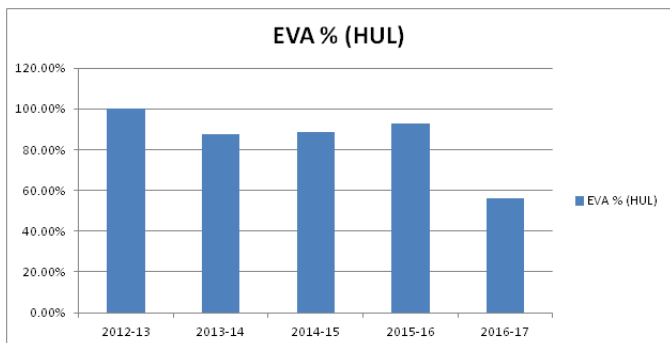


Figure 4: Trend of EVA% for HUL

Interpretation: From table 5, we can see that when share prices increases, EVA% decreases. But only from the year

2014-2015, when price increased from 605.55 to 873.45 EVA% didnot decrease, instead it increases.

BAJAJ AUTO LIMITED

Table 6: EVA and Share Prices of Bajaj Auto Limited (in cores)

Year	Equity & R&S (Cr)	Debt (Cr)	Capital Employed (Cr)	Kd	Ke	WACC	NOPAT (Cr)	SHARE PRICE	EVA (Cr)	EVA%
2012-13	8,065.30	98.41	8,163.71	0.0100	0.049998	0.049516	2993.627	1801.25	2589.39	31.72%
2013-14	10,167.26	57.74	10,225.00	0.0100	0.095632	0.095149	3258.409	6704.2	2285.51	22.35%
2014-15	11,095.32	111.77	11,207.09	0.0400	0.083082	0.082653	3096.268	2016.6	2169.97	19.36%
2015-16	13,045.42	162.48	13,207.90	0.0021	0.068871	0.06805	3706.717	2405.95	2807.92	21.26%
2016-17	17,856.57	-	17,856.57	0.0000	0.064444	0.064444	3733.051	2805.45	2582.30	14.46%

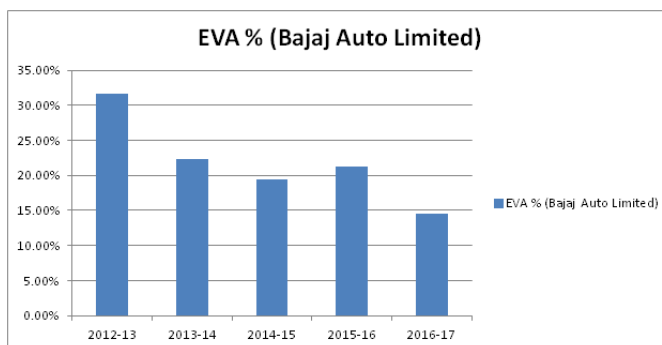


Figure 5: Trend of EVA% for Bajaj Auto Limited

Interpretation: From table number 6, we can see that in the year 2013-14 there is an inverse relationship between share prices and EVA%, as prices increases from 1801.25 to 6704.2, EVA % decreases. But from year 2015-2016, even though prices have increased, EVA% also has increased.

Table 7: Significance and Correlation between EVA and Share prices(2013-2017)

COMPANY	CORRELATION	SIGNIFICANCE
CIPLA LIMIED	-0.697	0.191
JP ASSOCIATES	0.951	0.013
ITC LIMITED	0.708	0.181
HUL	0.964	0.008
BAJAJ AUTO LIMITED	-0.369	0.542

Interpretation: From the above table, it can be interpreted that Significance level of all the companies is more than 0.05, which impls that there is no significant relationship between share prices and EVA of above stated company.

VII. FINDINGS

The study took into consideration 5 companies from different sectors. The findings of the study are as follows:

- When we took into consideration pharmaceutical sector and study the impact of EVA on share prices of CIPLA LIMITED, it was found that there is an inverse relationship between share prices and EVA% for the given company. With the help of correlation test also, it can be seen that there is a negative correlation between the two variables. When we wanted to test the significance between these two variables it was found that both the variables i.e. EVA and Share prices have a significant impact on each other.
- When we look into cement industry like J.P Associate Limited, there was a significant impact of EVA on share prices of the company the regression showed that it was significant at 95% level. But the impact between two variables is seen to be positive as they are positively correlated. Thus, rise in EVA impacts the rise in share prices of the company.
- The FMCG was also studied during the time frame and companies like Hindustan Unilever Limited and ITC Limited was studied and tested. It was found from regression analysis that there is a significant impact of EVA and share prices of the company. But when we see the relationship, it can be seen that the impact is negatively correlated for 2012-2014. From the year 2014-2015 it was seen that both the variables are positively correlated.
- The study was also conducted for automobile industry taking into consideration Bajaj Auto Limited. It was found that there was a significant impact of EVA on share prices of the company. From 2012-2015 there was inverse relationship or correlation between EVA and share prices of the company. And after that there exist a positive relationship between the variables.

VIII. CONCLUSION

The research could figure out the fact that the share prices and Economic Value Added of these 5 chosen businesses are not associated and also inverse connection had been observed among EVA as well as share price ranges in some firms. Therefore, the actual variance within share price ranges in the businesses in research is not really effectively explained by Economic Value Added. The outcomes from the research uncover that investors' selection are generally not often rationale and also because of the rumours within the share marketplaces, there is uncertainty and also an organization's EVA does not necessarily impact all of them a

lot within their financial commitment. However the undeniable fact that EVA of the organization may enhance and also lead proficiently in the direction of investor's wealth cannot be overridden in the long term.

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