**MULTIDISCIPLINARY COSMOPOLITAN JOURNAL OF RESEARCH (MUCOJOR)-2583-9829 (Online)**
**International Peer Reviewed & Referred Journal**
**ISSN: 2583-9829, Volume: 01, Issue: 02, December 2023**

# EVA AS A PERFORMANCE MEASUREMENT TOOL: A STUDY OF ACC LIMITED

**VIBHA CHHAGAN,** Research Scholar Saurashtra University, Rajkot
**Dr. N.D.Zala** Associate professor of M.B.Arts and Commerce College, Gondal.

## ABSTRACT

In the recent competitive market, the main focus of every company is to satisfy its shareholders by giving maximum value towards its investment. Value creation become the most important objective of business financial strategy. To measure their financial positions many traditional tools are there like Return on equity (ROE), Return on Net worth (RONW), Return on capital employed (ROCE), Earning per share (EPS) etc., But there is a limitation of traditional measure that it does not consider the overall cost of capital which includes equity capital. To overcome this limitation value-based measures were introduced in which one of the measures is Economic Value added (EVA). EVA has been introduced by Stern Stewart and company in 1991 it has fulfilled the limitation of traditional measure and includes the overall cost of capital. EVA gain popularity in the modern era as a value-based measure and it is used to measure the performance of a company. Also, it guiding shareholders towards their investment decisions and help them to identified whether a company is creating or destroying the value of their investment. Here, in this paper, we tried to analyzed financial performance of ACC Limited by using Economic Value Added and also tried to know is EVA is better than the traditional measure ROCE.

**Key words**: EVA- Economic Value added, ROCE – Return on capital employed Traditional accounting measures, Value based measure, accounting profit, Economic Profit.

## INTRODUCTION

Today's corporate objective is to increase their shareholders investment value. To provide greater return to their investors. They are mainly focus on their financial performance and growth. In the past era to measure company's performance there are some traditional accounting measures were used like Return on investment, Return on capital employed, Return on net worth, Earning per share etc. These accounting ratios were calculated on the basis of historical data which means it's easy to manipulate, to overcome this limitation value-based measures were found. From the last few years business environment have been changed dramatically it became more competitive and advance, that's why businesses were shifted to value maximisation from profit maximisation. Traditional measure only shows accounting profit of the company where as value-based measure shows the economic profit of the company. It is not just showing how much profit is created but also shows if the company is creating enough profits to bare not only debt cost or preference cost but also its cost of equity.

EVA – economic value added is the most reliable and popular value-based measure for evaluating financial performance of a company. It is developed by stern steward and company in 1991. In a simple term EVA is nothing but an indicator which shows how much a company earns over and above from its cost of capital. EVA is not only focus to create the profit but also it focusses on creation of wealth for the shareholders. EVA is the modified version of Residual Income (RI) that includes cost of capital into calculation with some adjustments. It calculates as

$$EVA= NOPAT- (WACC* IC)$$

Here, basically three components are used to calculate EVA first is NOPAT – net operating profit after tax is the operating profit after tax but before financial and non-financial costs, second invested capital (IC) or capital employed is the company's total assets after deducting non-interest liabilities and third is WACC is the weighted average cost of capital it is the cost of various financial sources. EVA calculation is nothing but deduction of opportunity cost of invested capital from net operating profit after some adjustments because of this majority of studies drawn on the conclusion that EVA is the superior measure of performance evaluation compare to other traditional measures and its show the true economic profit of the company.

Here, some hypothetically questions that relates to the problem statement are like, Is the eva gives the true economic value? Is it the superior performance measure than ROCE? Is ACC limited creating value for their investor? Thus, in this study we must be focus on this question and based on the collective data find the answers and give the suggestion on the bases of findings. To get the more clarification on the research topic we go through the literature survey as under.

**REVIEW OF LITERATURE**

There are so many researchers who conducted the different types of study related to Economic Value Added. Here, are some brief overviews of studies related to our problem statement as below:

**Madhavi, (2015)** study aimed to examine the superiority of EVA over the traditional accounting measures. The study made on 12 selected companies from the cement and FMCG industries, which were listed on NSE for the period of 5 years, i.e., 2010 to 2014. The study proved that all the selected companies have created their wealth after post-crash period but the study was unable to prove the superiority of EVA over traditional accounting measures.

**Chauhan and Patel (2013)** the empirical study is about to describe the value-based measurement in the Indian pharmaceutical industry. Economic value added is the popular value based major in today's era. The Study conclude that selected sample companies have the mix results to creating wealth for their investors.

Furthermore, it also provides evidence of superiority of EVA as predictor of market value for Indian companies.

**Dr. A. Vijaykumar (2012)** the study examines whether EVA is a better predictive than traditional accounting measures like EPS, ROCE, RONW, etc. it also claims that EVA is the better predictor of market value as compare to other accounting measures. Here in the study automobile sector is chosen for the calculation of the study. The results shows that most of the selected companies were generating negative EVA during the selected period where as some of them are generating positive EVA. It is also claim that EVA is the superior to other traditional measure.

**Debdas Rakshit (2006)** performance measurement system were very much successful in 90's but in the moder era there is the need to change some of the traditional way for evaluating performance of the company to show the clear picture of the firm to overcome the limitation of traditional measure development of value-based measure were found. EVA is the one of the popular tools of performance evaluation. It's not only calculated the profit but also its show the capabilities of the company to maximise their shareholder's wealth. Here in this study the researcher analysed the Dabur India ltd and found that Dabur is giving the best value to their stakeholders and increasing wealth of their shareholders.

**Dr. Mandeep K. and Sweety N. (2006)** in their study they analysed financial performance of Infosys Technologies limited by value-based measurement tool EVA and make a comparison with the traditional performance measures to know is Infosys creates value towards their shareholders or not. The study drawn on the conclusion that Infosys is a financially sound company not only in the base of profitability but it also creates wealth for their shareholders by achieving profits which are beyond their cost of capital.

**Anand, Manoj, et.al, (1999)** the study is carried a detail analysis of financial performance measure of selected sample companies through the Economic value added and traditional measure like ROI and EPS. Their findings of the study explain that economic value added is the superior measure of the performance evaluation because it gives the true economic profit by consider cost of capital into its calculation. They suggest to include EVA as the measure of shareholder's value maximization.

**Stewart, and Bennett, G. (1994)** observed that "EVA is a powerful new management tool that has gained growing international acceptance as the standard of corporate governance. It serves as the centrepiece of a completely integrated frame-work of financial management and incentive compensation." In essence, EVA is a way both to legitimize and to institutionalize the running of a business in accordance with basic microeconomics and corporate finance principles. The experience of a long list of adopting companies throughout the world strongly supports the notion that an EVA system, by providing such an integrated decision-making framework, can refocus energies and redirect resources to create sustainable value for company's customers, employees, shareholders and for management.

**RESERCH METHODOLOGY**

The present study is analytical research in which available information and facts are used to analysed and evaluation of financial performance of Associated Cement Company Limited (ACC Ltd.). ACC limited is an Indian Cement Producer company. It is a subsidiary of Ambuja Cements and a part of the Adani Group. ACC limited reporting EVA from 2006 in their financial statement and still there are no research is there which analysed whether ACC add value towards their shareholder's invested money or not. Therefore, in this paper we conduct this research having below objectives,

- To study and analyse the EVA statement of ACC limited.
- To compare the performance of the company by applying traditional indicator like ROCE with value-based indicator EVA.
- To examine the relationship between ROCE and EVA as a percentage of Average capital employed.
- To examine whether ACC limited has been able to generate value for its shareholders.

The study is totally based on secondary data and it was collected from the annual reports of ACC Limited for the period of 2012-13 to 2022-23. Here, correlation technique is used to analysing degree of relationship between EVA and ROCE, further regression Technique was also used to estimate value of EVA taking ROCE as an independent variable to find out difference between observed value of EVA and estimated value of EVA chi-square test of goodness has been used in this study. The Study having the below hypothesis,

**HYPOTHESIS**

H0– There is no significant difference between observed and expected values of EVACE.

H1– There is a significant difference between observed and expected values of EVACE.

**CALCULATION OF ECONOMIC VALUE ADDED**

According to Stewart, Eva is a residual return measure that subtracts the cost of invested capital from NOPAT. In this study, we are taking computed EVA statement from the annual report of ACC limited. ACC limited having a very much transparency into their financial statements. It also includes EVA into their annual reports. The calculation of EVA in ACC limited are based upon Indian General accepted accounting Principles. This study made an attempt to analysed EVA statement given into annual reports of ACC limited. Computation of EVA involves calculation of three figures, (i) Net Operating Profit Before Interest After Tax, (ii) Capital Employed and (iii) Weighted Average Cost of Capital. The below table.1 presents the EVA statement of ACC limited for the period of 5 years from 2017-2018 to 2021-2022. Also, the graphical presentation of the same is given in figure.1 which shows the trend in EVA value of ACC limited,

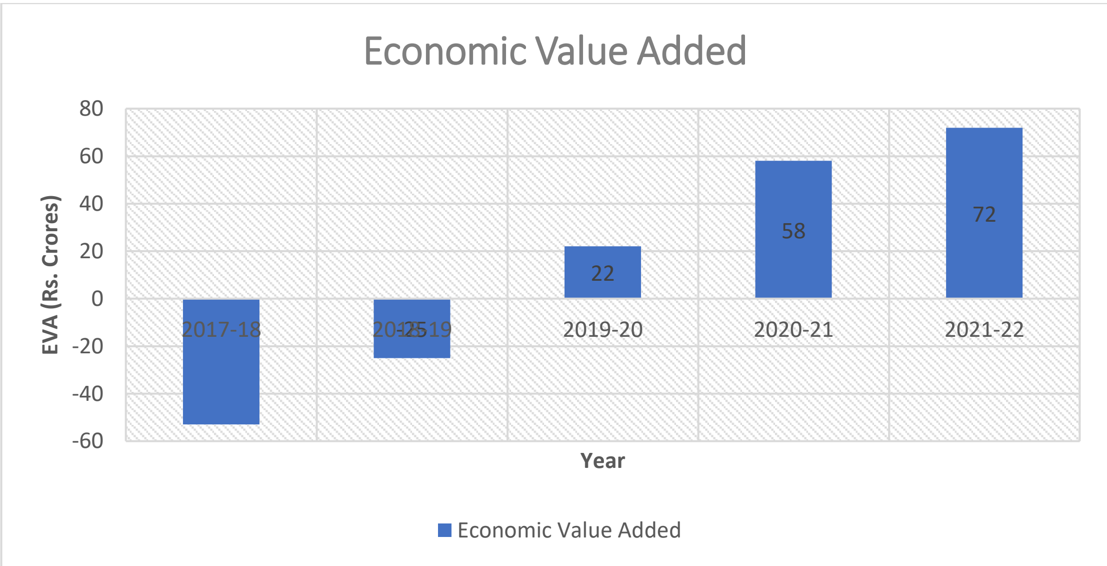
**Table 1: Economic value added of ACC limited** (Rs. in crore)

| YEAR | NOPAT (Rs.) | WACC (%) | CAPITAL EMPLOYED (Rs.) | EVA (Rs.) |
|---|---|---|---|---|
| **2017-18** | 1034 | 12.16 | 8941 | (53) |
| **2018-19** | 948 | 11.26 | 8637 | (25) |
| **2019-20** | 1140 | 12.88 | 8679 | 22 |
| **2020-21** | 1097 | 12.90 | 8049 | 58 |
| **2021-22** | 1089 | 13.20 | 7703 | 72 |

Source: Annual reports of ACC Limited from the year 2017-18 to 2021-2022.

From the above Table 1 showing that ACC limited have negative EVA of 53 and 25 in the year 2017-18 to 2018-19 respectively. Then after its evident of an upward trend from the year 2019-20 to 2021-22 that means the company was creating value for its shareholders from the year 2019.

**Figure-1: Trends in Economic Value Added**




As per the above figure we can see that during the selected period ACC limited giving negative returns in the first two year which are 2017-18 and 2018-19 than after it is start to going in the upward direction and gives positive values in the year 2019-20, 2020-21 and 2021-22 which are beyond the cost of capital. It shows the increasing trend from 2017-18 to 2021-22. Which shows that company is creating value towards its shareholders year by year.

## RETURN ON CAPITAL EMPLOYED VS ECONOMIC VALUE ADDED

**Return on capital employed (ROCE):** This ratio measures the profit which a firm earns on investing a unit of capital. It further tells whether the company's borrowing policy was wise economically and whether the capital had been employed fruitfully. The ROCE is determined by the formula:

$$ROCE = \frac{Adjusted\ Net\ Profit}{Capital\ Employed} \times 100$$

A firm can increase its ROCE either by increasing its profit margin i.e. (PAT / Sales) or by improving the productivity of its capital employed (Sales / ACE) or by a mix of both the above measures. It also indicates that a company with higher operating profit margin may have a lower ROCE if its asset efficiency is poor.

**EVA as a percentage of capital employed (EVACE):** It indicates that how much value has been added by the company at given level of capital employed and is determined by the formula:

$$\text{EVA as a \% of capital employed} = \frac{\text{EVA}}{\text{Invested capital}}$$

### Financial Performance of ACC Limited

The financial performance of ACC ltd. based upon the traditional parameter ROCE as well as value-based measures EVACE is presented in table 2.

**Table 2: ROCE and EVACE as performance indicators of ACC**

| Years / Ratios | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 |
|---|---|---|---|---|---|
| **ROCE (%)** | 11.56 | 10.97 | 13.14 | 13.63 | 14.14 |
| **EVACE(%)** | (0.59) | (0.29) | 0.25 | 0.72 | 0.93 |

Source: Annual reports of ACC Limited from the year 2017-18 to 2021-2022.

**Table 2** shows an increasing trend in both ROCE (%) and EVACE (%) over the period under study. ROCE was 11.56% in 2017-18 and it reached at 14.14 in the year 2021-22. Similarly, EVACE has also shown an upward trend from negative to positive during the period under study. It was -0.59 in 2017-18 and from that it reached to 0. 93% in the year 2021-2022.

## DATA ANALYSIS AND INTERPRETATION

In this section, it has been analysed whether ROCE and EVACE have any significant relationship between them. For this purpose, Karl Pearson's coefficient of correlation has been used. The result shows r = 0.89 that indicates a high degree of positive correlation between ROCE and EVACE. Regression analysis has been used to establish a cause-and-effect relationship between the two variables. For this analysis, EVACE is taken as a dependent variable i.e., Y and ROCE as an independent variable i.e., X. The Regression equation of EVACE (Y) on ROCE (X) comes out to be Y = .794X – 17. The estimated values of EVACE on the basis of above regression equation model and the application of chi-square test are given below in table 3.

**Table 3: Calculation of Chi-square with Observed and Estimated values of EVACE (%)**

| Year | Observed Value(O) | Estimated Value (E) | (O-E) | $(O-E)^2$ | $(O-E)^2/E$ |
|---|---|---|---|---|---|
| **2017-18** | (0.59) | 10.80 | -11.39 | 129.73 | 12.01 |
| **2018-19** | (0.29) | 10.51 | -10.80 | 116.64 | 11.10 |
| **2019-20** | 0.25 | 13.18 | -12.93 | 167.18 | 12.68 |
| **2020-21** | 0.72 | 14.12 | -13.40 | 179.56 | 12.72 |
| **2021-22** | 0.93 | 14.83 | -13.90 | 193.21 | 13.03 |
| **TOTAL** | **1.02** | **63.44** | | | $x^2 = 61.54$ |

The above Table 3 explain the difference between observed and estimated values of EVACE in percentage. Here, to know whether, there is any significant difference is there or not chi – square test of goodness is used. The $X^2$ comes 61.54 which is more than the table value which is 9.48 at 5% level of significance. Hence the alternative hypothesis H1 is accepted which means there is a significant difference between observed EVACE and expected value of EVACE. Therefor it can be concluded that the ACC Limited is not fulfilled the shareholders expectation of value creation.

## LIMITATIONS OF THE STUDY

The study used only few variables, which are based on the literature survey, and it is made only for the period of five years, which may cause biased result. The study only incorporates the cost of equity for calculating EVA because of non-availability of data for cost of debt. Also because of the unavailability of the data we take calculated rations from the company's annual reports.

## CONCLUSIONS AND SUGGESTIONS

The trend in EVA figures clearly shows that the company has been not able to generate value for its shareholders. The objective of shareholder's value creation is not achieved by the, as its earnings are lesser than the overall cost of capital. Company is using the concept of EVA for fixing the targets, analysing the financial performance of the company and while taking various investment decisions. Moreover, the comparison between traditional and value-based performance measure of the company clearly shows that traditional performance measures like ROCE, are overstated when compared to the value-based measures because they don't take cost of equity into account. So, it can be concluded that traditional parameters have shown a positive picture of company's performance in almost all the years but not so with EVA. Hence, the traditional measures of financial performance seem to have failed in reflecting the true view of the financial performance of the company. It has been further identified that both ROCE and EVACE are positively correlated. The results of chi-square test also reveal that there is no significant difference between the expectations of shareholders regarding value creation and actual value created by the company. Hence, ACC limited is not achieving the goal of shareholder value creation. Finally, it can be concluded that ACC, as reflected by traditional parameters and EVA both, is a not sound company. Though ACC Limited has not considered economic adjustments while calculating EVA, it can't be said that EVA figures reported are misleading. Rather company can provide a more reliable view of company's value addition by taking these adjustments into account. So, not just ACC Limited but other companies must also compute and publish EVA statement in its annual reports to show the true picture of company's financial performance.

## REFERENCES

Anand, M.; Garg, A. & Arora, A. (1999), Economic value added: Business performance measure of shareholder value, The Management Accountant. 34(5), pp 351- 356.

Chauhan, P. and Patel, V.K. (2013). A study of shareholder value creation and measurement in Indian Pharmaceutical Industry. International Journal of Conceptions on Management and Social Sciences, 1(1), 5-8.

Debdas Rakshit, (2006) EVA based performance measurement: a case study of Dabur India ltd., Vidyanagar university journal of commerce vol.11.

Narang, D. K. (2006). Economic value added and corporateperformance: A case study of Infosys Technologies Limited. Apeejay journal of Management and Technology, 1.

Madhavi, E., & Prasad, M. S. V. (2015). Assessing corporate performance with measures of value added as key drivers of shareholder wealth: An empirical study. IUP Journal of Business Strategy, 12(4), 19-34

Stewart, G. Bennett (1994), "EVA TM: Fact and Fantasy", Journal of Applied Corporate Finance, Summer, Vol. 7, No. 2, 1994, pp. 71-84. http://www.Sternstewart.com.

Vijayakumar, A. (2012). Economic value added (EVA) and other accounting performance indicator: An empirical analysis of Indian automobile industry. International Journals of Marketing and Technology, 2(3), 131-153.

https://www.acclimited.com

https://www.moneycontrol.com

https://www.Sternstewart.com

Certificate No.:010212202332

multidisciplinary COSMOPOLITAN JOURNAL OF RESEARCH (MUCOJOR)-2583-9829 (on-line)

International Peer Reviewed and Refereed Journal

# Certification of Publication

The Board of Multidisciplinary Cosmopolitan Journal of Research (MUCOJOR) is hereby awarding this certificate to

**Vibha Chhagan**

In recognition of the publication of the paper entitled

**EVA AS A PERFORMANCE MEASUREMENT TOOL: A STUDY OF ACC LIMITED**

Published in Volume 01, Issue 02, December 2023.

**EDITOR IN CHIEF**

Certificate No.:010212202332

multidisciplinary COSMOPOLITAN JOURNAL OF RESEARCH
(MUCOJOR)-2583-9829 (on-line)
International Peer Reviewed and Refereed Journal

# Certification of Publication

The Board of Multidisciplinary Cosmopolitan Journal of Research (MUCOJOR) is hereby awarding this certificate to

**Dr. N.D.Zala**

In recognition of the publication of the paper entitled

**EVA AS A PERFORMANCE MEASUREMENT TOOL: A STUDY OF ACC LIMITED**

Published in Volume 01, Issue 02, December 2023.

**EDITOR IN CHIEF**