Volume: II, Issue: III
ISSN: 2581-5628
GAP INTERDISCIPLINARITIES -
An International Peer-Reviewed Open Access Journal of Interdisciplinary Studies

# AN EMPIRICAL STUDY ON FINANCIAL SUSTAINABILITY AND SHAREHOLDERS' VALUE CREATION

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## Abstract

*One of the most important purposes of every business is to maximize their profit and wealth of their shareholders. Now day's companies are focusing their efforts on creating shareholder value to survive in strong competition. It is becoming essential for companies to measure the value they create for their shareholders. No companies can exist and develop, if it fails to create value to its shareholders. Hence, value creation is a basic measure which is used for measuring the financial Sustainability of an enterprise. Sustainable oriented actions have become progressively more important for firms. The correlation between sustainability-oriented activities and financial performance carries significant possible importance for managers and investors. Corporate sustainability implies the creation of long-term shareholder wealth by adopting sustainable development into business strategy and operations. By keeping this in mind, this study is an attempt to study the value creation of shareholders' and financial sustainability in selected companies.*

***Key Words:*** *financial Sustainability, value creation of shareholders', corporate sustainability*

## INTRODUCTION

One of the most important purposes of every business is to maximize their profit and wealth of their shareholders. Now day's companies are focusing their efforts on creating shareholder value to survive in strong competition. It is becoming essential for companies to measure the value they create for their shareholders. No companies can exist and develop, if it fails to create value to its shareholders. Hence, value creation is a basic measure which is used for measuring the financial Sustainability of an enterprise. Sustainable oriented actions have become progressively more important for firms. The correlation between sustainability-oriented activities and financial performance carries significant possible importance for managers and investors. Corporate sustainability implies the creation of long-term shareholder wealth by adopting sustainable development into business strategy and operations.

In ethics, "Values" denote orientations standards and objectives which direct and steer people's action. They are constitutive for every cultural, social and economic system and thus also for economic action.

Examples of this include economic value, protected value, existence or preservation value, moral values or self – oriented values, social values, capitalist value, liberal value, socialist values, green values and democratic values".

The concept of equitable value creation for all stakeholders including debt holders, employees, customers, suppliers and society is now gaining momentum. Strong and equitable value creation for each of the stakeholders has undoubtedly been a contributing factor in company's continued success.

Thus, unless companies create value for stakeholders, shareholder wealth creation will not be sustained in the long run. Value creation is a never ending cycle. It begins with modeling business operations, prioritizing areas for more detailed investigation, identifying opportunities for improvement, implementing the changes required to maximize success and the measurement and revision that starts the process over again and allows management to stay abreast of company and market changes. Value creation analysis is a critical but often overlooked component for the financial sustainability of every company. Without this type of inspection, value will not be created at the maximum pace.

**Definition of Value Creation:**

- Value creation is the Primary financial performance indicator for measuring and evaluating financial performance within the group".
- The essence of investing is putting funds at risk with the hopes of receiving a greater amount in return. If this is accomplished, it can be said that one has created value.

There are different stakeholders who are directly interested in financial matters of a company. These stakeholders include promoters, money lenders, government, creditors, shareholders etc. in the era of corporate governance and globalization, the efficient management of a company is pre-condition for survival of any company. The value creation for shareholders is one of the parameter of efficient management of the company. It is continuous endeavor of companies to increase shareholder wealth. Shareholders wealth is directly connected with financial sustainability of the company and shareholder both.

1) According to Beatric Nyiramahoro and Natalia Shooshia have defined shareholder value as the "Total economic value of an entity such as a company or a business unit is the sum of the value of its debt and its equity. This value of the business is named corporate value while the value of the equity portion is named shareholder value in the form of equation".
2) 'Every for – profit organization's goal is to create consistent, profitable growth for the company and a return to the investors that is consistently above what they could earn somewhere else at a similar amount of risk. When company improves the return on investment, company is creating shareholder value'.

-By Nanda Ramanujan

'Shareholder value creation is real key to creating wealth'.

For measuring the value of a firm and consequently the value of Equity, there are many methods. Appropriate corporate sustainable performance may be considered as a sign of superior management skills and more successful business and financial planning (Waddock, S.A.; Graves, S.B 1997)

There are traditional measures like earnings per share (EPS), dividend per share (DPS), return on equity (ROE), return on assets (ROA), and the like have been used by the shareholders to measure performance appraisals. Such traditional measures have been criticized due to not inclusion of cost of capital resources of the firm (Hasani and Fathi, 2012). Thus in order to overcome such issues economic value based measures like economic value added (EVA), Market Value Added (MVA), Cash Value Added (CVA) and Shareholder Value Added (SVA) were proposed (Al Mamun, Entebang, & Mansor, 2012; Erasmus, 2008).

## REVIEW OF LITERATURE

**Miller and Modigliani (1961)** found that the value of the firm is unchanged by the dividend policy in a world without taxes and the business cost and where everyone was fully informed about the distribution of the firm's uncertain cash flows.

**Gordon Donaldson (1985) concluded that** the importance of managing for better shareholder value by classifying value drivers and using the same to reduce the value gap by focusing on Return on Net Assets , growth, retention rate and debt equity ratio.

**Johnsen, B. (2003)** observed that sustainability in corporate finance is firmly connected to socially responsible investing (SRI). It can be defined as a synthesis of conventional and sustainable investment optimization, intended at achievement of better social and environmental performance while maintaining the financial excess return.

**Madhu Malik (2004)** observed the relationship between shareholder wealth and different financial variables like Earning per share, Return on net worth , return on capital employed By using correlation analysis, it was found that there was positive and high correlation between economic value added and Return on net worth , return on capital employed.

**Irala *et al.* (2006)** stated that managers are encouraged to undergo projects that could increase shareholder's wealth using measurement tools like economic value added (EVA).

**Cui, X.G.; Wang, L.Y.; Xu, H. (2007)** studied the relationship between corporate growth and financial risk and found that the probability that a company will experience financial distress increases dramatically when its growth rate is excessive. The authors also report an insignificant relationship between the probability of financial distress and the real growth rate of non-excessively growing companies.

**Artiach lee & Nelson Alker (2010)** suggested that the relation between financial performance and social responsibility is also sensitive to the specification of substitute for profitability.

**Soppe (2011)** noted that Sustainability in finance certainly requires a multidimensional approach, which defines sustainable finance as a financial policy that makes every effort for triple bottom-line performance measurements with human actors that opt to maximize multidimensional preference functions.

**Pratapsinh Chauhan (2012)** observed the shareholders' value creation in the Indian petroleum industry. He analyzed the performance of the petroleum company divided into public sector firm and private sector firms. EVA has been found to have significant correlation with OP, NOPAT, EPS, Market Capitalization and MVA figures of firms of both the sectors.

## RESEARCH METHODOLOGY

**OBJECTIVES OF THE STUDY**

1. **To calculate Economic Value Added (EVA) and Market Value Added (MVA) of selected five Indian Pharmaceutical Companies listed on BSE.**
2. **To study the appropriate metrics of Economic Value Added (EVA) and Market Value Added (MVA) of selected five Indian Pharmaceutical Companies listed on BSE.**
3. **To assess and set up the interrelationship among Economic Value Added (EVA) and Market Value Added (MVA) of selected five Indian Pharmaceutical Companies listed on BSE.**

**SAMPLE SIZE AND TECHNIQUE**

In this research, the researcher has selected five companies from pharmaceutical industry as per purposive convenient sampling technique. The companies have been selected in the study by considering the following criteria.

- The companies which have been taken for the study are listed in Bombay Stock Exchange (BSE)
- The data for the study has been collected from 2009-10 to 2013-14.
- The companies selected for the study are top 5 pharmaceutical companies which have highest market capitalization in India.

Five companies from pharmaceutical industry have been selected for this research i.e. Sun Pharmaceutical Industries Ltd., Dr. Reddys Laboratories Ltd., Lupin Ltd., Cipla Ltd., Cadila Healthcare Ltd. these are trading in BSE stock market in India and the data is collected from respective company web sites and ACE EQUITY database from IIM library.

**Sources of Data**:

This study is purely based on secondary data. Data has been taken from Audited Published Annual reports, respective company web sites and ACE EQUITY database from IIM library.

**METHODOLOGY**

**FINANCIAL TOOLS**

**1) ECONOMIC VALUE ADDED (EVA)**

EVA as a residual income measure of financial performance is simply the operating profit after tax less a charge for the capital, equity as well as debt, used in the business.

| Economic Value Added = NOPAT – [Invested Capital × WACC] |
|---|

**Step – 1** NOPAT = Net Profit + Interest on Borrowings – [1- Tax Rate]
**Step – 2** Invested Capital = Paid – up Capital + Reserves + Total Borrowings
**Step – 3 WACC = Paid –up Capital × Ke + Borrowings × Kd**
**Where (1) Cost of Debt (Kd): =** Interest on Borrowings (1- Tax Rate) * 100
**(2) Cost of Equity (Ke): Ke = Rf + β (Rm - Rf)**

**Rf -** The researcher has taken 365 T-Bills rate of particular year from Reserve Bank of India Websites as a risk free rate of return.
**Rm** - The market rate of return is calculated based on market Index.
**β -** Beta is the risk free coefficient which measures the sensitivity of the security returns of a particular security to change in the market returns. Beta has been calculated based on SENSEX for each year separately.

$$\textbf{Beta } (\beta) = \frac{N\Sigma XY - (\Sigma X)(\Sigma Y)}{N\Sigma X^2 - (\Sigma X)^2}$$

**X** = Monthly Closing Return on the Stock Market Indices (BSE)
**Y** = Monthly Closing Return on Share Prices of a particular company
**N** = No. of Months in a year

**2) MARKET VALUE ADDED (MVA)**

| Market Value Added = Market Capitalization – Net Worth |
|---|

For calculating MVA, market capitalization as on 31st March for each year of the study was considered which was taken from ACE EQUITY database from IIM library.

**STATISTICAL TOOLS:**

Mean, Standard Deviation, Correlation and Regression Analysis, t test and f test.

**FORMULATING HYPOTHESIS**:

**H0: There is no significant relationship between Economic Value Added (EVA) and Market Value Added (MVA).**
**H1: There is significant relationship between Economic Value Added (EVA) and Market Value Added (MVA).**

## DATA ANALYSIS AND INTERPRETATION

TABLE 1: NOPAT CALCULATION

| | NOPAT (RS. IN CR.) | | | | |
|---|---|---|---|---|---|
| COMPANY | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |

| | | | | | |
|---|---|---|---|---|---|
| Cadila Healthcare Ltd. | 632.051 | 733.687 | 887.292 | 712.339 | 1065.94 |
| Cipla Ltd. | 1161.93 | 1178.05 | 1368.05 | 1759.12 | 1733.05 |
| Dr. Reddys Laboratories Ltd. | 1032.04 | 1112.35 | 1180.71 | 1535.61 | 2294.1 |
| Lupin Ltd. | 749.613 | 936.563 | 932.978 | 1394.54 | 2463.88 |
| Sun Pharmaceutical Industries Ltd. | 964.84 | 1445.49 | 2067.38 | 583.753 | 196.738 |

(Source: data collected from ACE EQUITY database)

TABLE 2: CALCULATION OF INVESTED CAPITAL

| | INVESTED CAPITAL (RS. IN CR.) | | | | |
|---|---|---|---|---|---|
| COMPANY | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
| Cadila Healthcare Ltd. | 2215 | 2653.9 | 3841.6 | 4697 | 5216.1 |
| Cipla Ltd. | 5910.2 | 7045.4 | 7554.2 | 9826.5 | 10938.4 |
| Dr. Reddys Laboratories Ltd. | 6443.9 | 7425.7 | 8198.5 | 9814.9 | 11913.7 |
| Lupin Ltd. | 3436.8 | 4134.7 | 4830.6 | 5508.5 | 7097.28 |
| Sun Pharmaceutical Industries Ltd. | 5747.5 | 6730.9 | 7918.3 | 7831.9 | 9816.78 |

(Source: data collected from ACE EQUITY database)

TABLE 3: CALCULATION OF WACC

| | WACC (%) | | | | |
|---|---|---|---|---|---|
| COMPANY | **2009-10** | **2010-11** | **2011-12** | **2012-13** | **2013-14** |
| Cadila Healthcare Ltd. | 0.1043 | 0.1014 | 0.1116 | 0.0829 | 0.0747 |
| Cipla Ltd. | 0.1464 | 0.1315 | 0.1387 | 0.1347 | 0.136 |
| Dr. Reddys Laboratories Ltd. | 0.1205 | 0.1152 | 0.1202 | 0.0901 | 0.116 |
| Lupin Ltd. | 0.0984 | 0.1306 | 0.0966 | 0.0931 | 0.1287 |
| Sun Pharmaceutical Industries Ltd. | 0.1274 | 0.148 | 0.1414 | 0.1345 | 0.1229 |

(Source: researcher’s calculated data)

TABLE: 4 EVA CALCULATIONS

| | EVA (RS. IN CR.) | | | | |
|---|---|---|---|---|---|
| COMPANY | **2009-10** | **2010-11** | **2011-12** | **2012-13** | **2013-14** |
| Cadila Healthcare Ltd. | 401.081 | 464.620 | 458.450 | 322.749 | 676.051 |
| Cipla Ltd. | 296.420 | 251.546 | 320.258 | 435.322 | 245.947 |
| Dr. Reddys Laboratories Ltd. | 255.647 | 256.703 | 194.882 | 651.627 | 912.129 |
| Lupin Ltd. | 411.575 | 396.659 | 466.402 | 881.612 | 1550.112 |
| Sun Pharmaceutical Industries Ltd. | 232.440 | 449.464 | 947.704 | -469.688 | -1010.098 |

(Source: researcher’s calculated data)

TABLE: 5 MVA CALCULATIONS

| | MVA (RS. IN CR.) | | | | |
|---|---|---|---|---|---|
| COMPANY | **2009-10** | **2010-11** | **2011-12** | **2012-13** | **2013-14** |
| Cadila Healthcare Ltd. | 9632.1000 | 14115.9240 | 13009.7480 | 12271.3480 | 17390.7720 |

| | | | | | |
|---|---|---|---|---|---|
| Cipla Ltd. | 21160.6390 | 19173.1245 | 16911.0095 | 21629.5775 | 20746.2530 |
| Dr. Reddys Laboratories Ltd. | 15671.6800 | 21743.3700 | 23163.6000 | 22276.8700 | 34337.3200 |
| Lupin Ltd. | 11918.7377 | 15381.5070 | 19925.2073 | 23313.3028 | 35012.9460 |
| Sun Pharmaceutical Industries Ltd. | 31348.2152 | 39072.4680 | 51099.4600 | 76959.5760 | 111344.4820 |

(Source: researcher's calculated data)

TABLE: 6 MARKET CAPITALISATION CALCULATIONS

| | MARKET CAPITALISATION (RS. IN CR.) | | | | |
|---|---|---|---|---|---|
| COMPANY | **2009-10** | **2010-11** | **2011-12** | **2012-13** | **2013-14** |
| Cadila Healthcare Ltd. | 11253.00 | 16205.82 | 15566.85 | 15182.85 | 21020.67 |
| Cipla Ltd. | 27065.76 | 25777.10 | 24452.32 | 30490.13 | 30807.27 |
| Dr. Reddys Laboratories Ltd. | 21552.38 | 27724.27 | 29826.7 | 29991.77 | 43584.82 |
| Lupin Ltd. | 14448.75 | 18532.92 | 23656.82 | 28153.13 | 41965.76 |
| Sun Pharmaceutical Industries Ltd. | 37066.20 | 45752.81 | 58977.42 | 84748.33 | 118752.25 |

(Source: data collected from ACE EQUITY database)

TABLE: 7 NET WORTH CALCULATIONS

| | NET WORTH (RS. IN CR.) | | | | |
|---|---|---|---|---|---|
| COMPANY | **2009-10** | **2010-11** | **2011-12** | **2012-13** | **2013-14** |
| Cadila Healthcare Ltd. | 1620.90 | 2089.90 | 2557.10 | 2911.50 | 3629.90 |
| Cipla Ltd. | 5905.12 | 6603.98 | 7541.31 | 8860.55 | 10061.02 |
| Dr. Reddys Laboratories Ltd. | 5880.7 | 5980.9 | 6663.1 | 7714.9 | 9247.5 |
| Lupin Ltd. | 2530.01 | 3151.41 | 3731.61 | 4839.83 | 6952.81 |
| Sun Pharmaceutical Industries Ltd. | 5717.98 | 6680.34 | 7877.96 | 7788.75 | 7407.77 |

(Source: data collected from ACE EQUITY database)

**TABLE : 8 REGRESSION STATISTICS**

| | **CADILA** | **CIPLA** | **DR. REDDY'S** | **LUPIN** | **SUN PHARMA** |
|---|---|---|---|---|---|
| **Multiple R** | 0.838967 | 0.266984 | 0.788965 | 0.959699 | 0.840272 |
| **R Square** | 0.703866 | 0.07128 | 0.622466 | 0.921023 | 0.706057 |
| **Adjusted R Square** | 0.605154 | -0.23829 | 0.496621 | 0.894697 | 0.608076 |
| **Standard Error** | 82.47291 | 85.32039 | 222.7711 | 160.3695 | 483.9773 |
| **Observations** | 5 | 5 | 5 | 5 | 5 |

Above table explains Pearson's correlation co-efficient of selected pharmaceutical companies. As per Pearson's correlation coefficient, highest positive correlation between EVA and MVA is of Lupin which is 0.9597. Sun pharmaceutical has also positive correlation between EVA and MVA of 0.8402 following by Cadila healthcare at 0.839. Dr Reddy's correlation between EVA and MVA is of 0.7889. Cipla has lowest positive correlation between EVA and MVA of 0.267. Overall it shows that all the companies have positive correlation between EVA and MVA.

**TABLE 9: ANALYSIS OF VARIANCE AND T- TEST:**

| **COMPANY** | **F stat** | **T stat** | **P value** | **Hypothesis** |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| **CADILA** | 7.130541 | 2.670307 | 0.075671 | **$H_0$ Rejected** |
| **CIPLA** | 0.230253 | 0.479847 | 0.664149 | **$H_0$ Rejected** |
| **DR. REDDY'S** | 4.946297 | 2.224027 | 0.11262 | **$H_0$ Rejected** |
| **LUPIN** | 34.98563 | 5.914865 | 0.009653 | **$H_0$ Accepted** |
| **SUN PHARMA** | 7.206053 | -2.68441 | 0.074768 | **$H_0$ Rejected** |

[*All the tests are conducted at 0.05 level of significance and the degree of freedom is 4]

Above table represents analysis of variance and t test of selected pharmaceutical companies of the study. For Cadila Healthcare Limited, F Test is 7.130541 and T test is 2.670307. Its P value is 0.075 which is grater that 0.05 hence null hypothesis is rejected. As for Cipla limited, F test is 0.230253 and T test is 0.479847. Its P value is 0.664 which is grater that 0.05 hence null hypothesis is rejected. F test and T test of Dr. Reddy's lab is 4.946297 and 2.224027 respectively. Its P value is 0.11262 hence null hypotheses is rejected. As of Lupin limited has 34.98563 for F test and 5.914865 for T test. its P value is 0.009653 hence null hypothesis is accepted. Sun pharmaceutical's F test and T test is 7.206053 and -2.68441 respectively. P value of Sun pharmaceuticals is 0.074768 hence null hypothesis is rejected. Overall, results shows that as per ANOVA and t-test all the companies except lupin show that there is a significant relationship between EVA and MVA of selected companies.

## MAJOR FINDDINGS

- As per Pearson's correlation co-efficient, all the selected companies for the study have positive correlation between their EVA and MVA.
- As per Analysis of variance and T-test, all the companies except Lupin show no significant relationship between EVA and MVA.
- Overall result shows that EVA and MVA of selected companies do not have significant relationship between EVA and MVA.

## CONCLUSION

Speculators are putting their well deserved cash in the organizations. It is the obligation of the organization the executives to build their riches. Stern Stewart recommended a real and true performance metric to find out the economic profit of the company. In India very a small number of organizations are unveiling its EVA in Annual reports. It should be compulsory for every company to disclose EVA, in its annual reports. So that Investor can check true financial sustainability of the company while investing. Getting financial sustainability is a long-term goal that requires the combined efforts of the entire organization.

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