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Shareholders' Value Creation: An Empirical Study Of Selected Indian It Companies Listed On National Stock Exchange

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Abstract:

Severe competition, rapid technological change, wide volatility in real and financial markets etc., have increased the burden on managers to deliver 'superior' performance, and 'value' for their shareholders. The ultimate role of managers is often presented as 'increasing shareholder value'. Although managers exist to create value for their owners, corporate managers do not always act to maximise shareholder value, because of perceived conflicts with other goals. Shareholder value does not necessarily conflict with good citizenship toward employees, customers, suppliers, the environment and the local community. Companies that respect those constituencies tend to outperform others, suggesting that value can be delivered to shareholders only if it is first delivered to other constituencies. This paper makes an attempt to know, which measures are beings used to create shareholders value in Indian IT companies. Various measures have been calculated with the help of financial data, i.e., DPS, EPS, ROE, ROA, EVA and MVA. Also, it has been examined whether there exits any relationship between different measures. Secondary method has been used to derive conclusion. Based on the result it is clear that most of the companies have positive EVA that means they are creating shareholders value. Also, there is difference between the mean values of all the measures of five companies.

Key words: Shareholder Value Creation, EVA, MVA, IT Companies, NSE.

1. Introduction:

Shareholders' value can be defined as the value that shareholders of a company receive as dividends and stock price appreciation as a result of better decision making by the management that ultimately results in a company's growth in sales and profit. It is nothing but the value that is delivered by an entity to its existing equity holders. Maximizing the shareholders' value is one of the key objectives for any organization. It highly depends on the ability of its management to make appropriate decisions and the way these decisions are implemented for driving in more sales and leveraging the profits earned by the same. Higher the profits earned, higher shall be the dividends offered to the equity holders. In highly volatile and complicated marketplace, it is import to create shareholder value which can lead to firm's success. The **Information Technology & Information Technology Enabled Services** sector is a field which is undergoing rapid evolution and is changing the shape of Indian business standards. This sector includes software development, consultancies, software management, online services and business process outsourcing (BPO). India is an affordable market destination for software development and IT & ITES services. There are various factors which are responsible for the growth of the Indian IT industry like, government initiatives to promote the IT sector, India is offering high reliability and cost-effective IT services to the other country so there is increase in the demand of Indian IT services.

2. Review of Literature

2.1. The research paper entitled **'Creating and Measuring Shareholders' Value in Indian Companies'** in the year **2015** by **Pooja Sharma and Abhay Grover** stated that Shareholder Value Creation is the return generated by the company over and above the cost of capital. Some companies can create the value and some can destroy the value. This study attempts to explore and study the shareholder's value creation in Indian companies as measured by EVA and to determine the key factors that have an impact on shareholders' value creation. In this study researchers have taken dividend policy and capital structure as independent variables and EVA as dependent

variable. EVA measures the excess of return over the cost of capital. EVA is a measure of the financial performance that differs from most other methods because it includes a charge against the profit for the total cost of capital that company employs. According to the study most of the companies have positive EVA; this indicates that the companies are focusing on shareholder's value creation. Also, after doing a regression analysis, they found out that dividend and capital structure have a 40 percent impact on shareholder value.

2.2. This study entitled '**Defining Key Factors to Sustain Maximum Shareholder Value'** by **Julia Bistrova and Natalja Lace** in the year **2012** looks into the conflict between the short-term and long-term return to understand which factors can provide sustainable long-term return. According to the study, there should be a long-term focus when talking about the shareholder value creation. Moreover, the sustainability of the return is achieved not only by high profitability, but also by such factors as optimal capital structure, good level of corporate governance, accountability and high innovative potential.

2.3. '**Shareholder Value Creation: A Conceptual Framework with Relevant Matters And Corporate Case Studies'** by **Dr. Mahesh Patel and Uday Lakhani** in the year **2020** stated that there are two methodologies that deal with the issue of value maximization. They are: The stakeholder value method and the shareholder/investor value method. Based on the study there are various mode of shareholders value creation, In traditional point of view ROI, ROE, IRR, EPS etc. were used but nowadays Economic value added (EVA), Market value added (MVA), Total shareholder return are mostly used. EVA succinctly summarizes how much and from where a company created wealth. It includes the balance sheet in the calculation and encourages managers to think about assets as well as expenses in their decisions. Implementing value-added measures into a company is a costly and timely process. It will also require extensive training and communication effort directed to everyone in the company. Everyone must be educated on the basic theory underlying the notion of creating economic value. According to the research EVA "should not be viewed as the answer to all things". It doesn't solve business problems, which is the manager's responsibility.

2.4. The paper entitled **'A Study on Shareholders Value Creation and Financial Performance of Selected Auto Mobile Companies in India'** in the year **2015** was undertaken by **S. Suresh and A. Sengottaiyan.** Based on the secondary data, the study showed that Economic Value Added of selected companies has recorded positive and a high fluctuation trend. The EVA of sample companies has positive value and above the industrial average. Research shows that EVA reveals high fluctuating trend throughout the study period. MVA created by the selected automobile companies during the study period has recorded positive and a high fluctuation trend. Based on the study it can be concluded that, the actual EVA and MVA have significant association of its trend values throughout the study period.

2.5. In the year 2015, **Kwadwo Boateng Prempeh and Eugene Odartei-Mills,** published the paper **Corporate Governance Structure and Shareholder Wealth Maximization'.** Using the data of past 10 years it was found that over the period of time the ideology of shareholder value has become deep-rooted as a principle of corporate governance among companies. Good corporate governance is focused on the principles of accountability, transparency, fairness and responsibility in the management of the firm. Three key corporate governance variables were considered board size, board independence and CEO duality. For the study purpose dependent variables, dividend per share and dividend yield are used as a measure of shareholder wealth maximization and the relation between corporate governance and shareholder wealth maximization is investigated. The findings show that both the board size and the independence have statistically significant relationship with shareholder wealth maximization. However, in the case of CEO duality, the result is fake and therefore inconclusive.

2.6.The paper entitled **'Shareholder Value Creation Measurement Analysis in Healthcare, Materials, and Real Estate Industry in Indonesia'** was published by '**Eveline Siburian and Agustinus Yohanes** in the year **2018.** According to the study, the most appropriate measures for describing shareholder value creation in the healthcare industry, the materials industry, and the housing industry in Indonesia are different. In the healthcare industry, accounting based measurements represented by value have significant results on shareholder value creation. Meanwhile, economics-based measurements represented by having more significant results on the creation of shareholder value in the materials and housing industries. In the healthcare industry, the cause factor of the main shareholder value is Cash Flow from Operating Activities. In the materials industry, the trigger factor of the main shareholder value is Economic Value Added.

Management must make efficiency and effectiveness as a priority in each of their business activities, oriented toward the company's vision and mission, and continues to adhere to shareholder values.

2.7. **Madan Lal Bhasin and Junaid M. Shaikh** in the year **2013** published the paper entitled **'Economic value added and shareholders' wealth creation: the portrait of a developing Asian country'.** According to the study shareholder value maximization has become the major goal of corporations in India and the world over. To achieve such goal, it is important for companies to device performance measures that are aligned towards the corporate goal of shareholder value enhancement. EVA has become popular measure in the India to measure shareholders value. EVA concentrated companies concentrate on improving the net cash return on invested capital. In this context, it is relevant to see whether corporate sector is earning returns on their cost, and thereby creating wealth for their shareholders. Results of the study do not support the, that EVA is a better performance indicator than traditional accounting measures in explaining market value. This implies that there are other factors that drive market value and should be taken into consideration for shareholders' value creation or for performance measurement.

2.8. The study on **'Measurement of Value Creation Vis-À-Vis EVA: Analysis of Select BSE Companies'** was conducted by **Shagufta Khan, Dr. Vineet Chouhan, Dr. Bibhas Chandra, Dr. Shubhamgoswami** in the year **2012** with the objective to establish the relationship between the EVA and MVA and to correlates EVA with Sales, Net Worth and Profitability. The study showed that MVA (Measure of value creation) and EVA (Economic value of wealth) both are proactive approach which provides the indication of the value shareholders earned and a return that compensated their risk. Study does not explain the determinants of MVA, but it only shows how well EVA acts as a genuine explanatory variable for creating value to the organization in order to justify its usefulness for performance measurement, shareholder value creation, executive compensation, and financial reporting. The positive direction of relationship in all the significant cases suggests that the profitability is an important factor for creating value in BSE-30companies.

2.9. **Fernandez** in the year **2003 'examine the correlation between EVA and MVA'**. Researcher has examined the correlation between EVA and MVA of 582 US companies for the period 1983–1997. It was shown that for 296 firms in the sample the changes in the NOPAT had higher correlation with changes in MVA than the EVA, while for 210 sample firms the correlation between EVA and MVA was negative. According to research stock returns are closely associated with EVA than residual income, earnings and net cash flow.

2. Research Methodology

3.1 Statement of the Problem:

The IT industry is one of India's most vibrant and growing industries. Contribution of Indian IT industry in GDP has increased over a period of time. Shareholder wealth maximization is now widely considered to be the main objective of the management of firms. A firm can finance its investment project either through debt or equity. The prime objective of a firm is to maximize shareholders wealth. Wealth maximization implies the maximization of market price of shares which depends on economic value added (EVA) and focus on stake holders. With increased competition and greater awareness among investors, new and innovative ways of measuring corporate performance are being developed. So, the statement of problem for this study is "**Shareholders' value Creation: An empirical study of selected Indian IT companies listed on National Stock Exchange"**

3.2 Objectives of the study:

- To identify various measures for shareholders value creation.
- To analyze the impact of accounting based measures on shareholders value creation.
- To analyze the impact of economic based measures on shareholders value creation.
- To identify the interrelationship between the accounting and economic based measures

3.3 Significance of the study:

The IT industry is one of the key drivers that boost the economic growth of the country. The Information Technology & Information Technology Enabled Services sector is a field which is undergoing rapid evolution and is changing the shape of Indian business standards. There has been growing concern about the effectiveness of accounting and economic based measures to measure the shareholders' value. Study will help to know the impact of these measures on shareholders value creation. Also study will help to know the interrelationship between the accounting and economic based measures.

3.4 Research Design: Descriptive Research design will be used for the research.

3.5 Population and sample size:

The target population comprises of IT companies which are listed on National Stock Exchange (NSE). However sample size is five companies. They are Wipro, TCS, Tech Mahindra, HCL and Infosys.

3.6 Sampling method: Sampling method to be used for the research purpose is judgmental.

3.7 Data collection method:

Data collection method is secondary. Data for the research purpose is collected from the annual reports, which are published by the companies. Also for the study purpose data from various published reports, journals and online database has been collected.

3.8 Tools and techniques of analysis:

Tools and techniques for the research purpose have been divided in three parts.

a) Accounting based tools: it includes measures like EPS, DPS, ROA and ROE

Variable	Measurement scale
EPS	Net income of the company/average outstanding shares of the company
DPS	Dividend / total number of shares
ROA	ROA= Net income/Total asset
ROE	ROE= Net income/Total equity

b) Economic based: it includes measures like EVA and MVA

Variable	Measurement scale
EVA	EVA= NOPAT-(invested capital* WACC)
MVA	MVA= Total market value of equity- total book value of equity

c) Statistical tools: It includes measures like mean, correlation and regression.

3.9 Hypothesis for Study:

H_0: There is no significant impact of ROA, EPS and DPS on EVA.

H_0: There is no significant difference between mean values of EPS, DPS, ROA, EVA and MVA of sample companies

3.10 Limitations of study:

- ✓ The study is limited to the selected Indian IT companies only.
- ✓ For the study purpose only few measures have been considered, which might not provide true result.
- ✓ As data collection method is secondary the process of available data collection is not known to the researcher.

4. Data Analysis and Interpretation:

Data analysis is most important part of any research. Data analysis is useful to take right decision to various parties. The researchers have used various measures to discover useful information. Measures are classified into 3 categories. Accounting measures, economic based measures and statistical measures.

4.1 Dividend per Share (DPS):

Dividend per share (DPS) is the sum of declared dividends issued by a company for every ordinary share outstanding. The figure is calculated by dividing the total dividends paid out by a business, including interim dividends, over a period of time by the number of outstanding ordinary shares issued.

Formula: Dividend per Share = Total Dividends Paid / Shares Outstanding

Table 1 Dividend per Share ratio of selected IT companies
(Figure in INR)

DPS (in RS.)					
Year	**TCS**	**Wipro**	**Infosys**	**HCL**	**Tech Mahindra**
2015-16	48.10795	143.66	29.93	15.96	64.53
2016-17	55.5572	35.93	30.49	23.73	127.29
2017-18	56.03385	11.98	34.34	12.14	96.37
2018-19	30.44533	9.0057	31.61	8.1	151.6
2019-20	100.2958	12.01232	22.44	5	257.99
Mean	**58.088026**	**42.517604**	**29.762**	**12.986**	**139.556**
General Mean	**56.581926**				
Std. deviation	**25.76742**	**57.57461**	**4.43122**	**7.29114**	**73.85129**
CV	**44.36%**	**135.41%**	**14.89%**	**56.15%**	**52.92%**

Source: Computed from the Annual Report

Analysis:

Above table indicates the DPS of sample companies for the period of 2015 to 2020. DPS indicates the distribution of the company's earnings to investors, steady or growing dividend payment by the company can be a signal of stability and growth. Based on the mean of all five companies it can be conclude that Tech Mahindra has provided highest average per share dividend i.e.139.57 followed by TCS i.e. 58.08. General mean of five companies is 56.58. Based on the coefficient of variation it seems that Infosys has maintained consistency i.e. 14.89% followed by the TCS

(44.36%). On the other hand Wipro has failed to maintain the consistency. It has CV of 135.41% which indicates the high variability.

H_0: There is no significant difference between mean values of DPS of sample companies

H_1: There is significant difference between mean values of DPS of sample companies

Table 2 One Way ANOVA

Source of Variation	SS	df	MS	F	F crit
Between Groups	48523.42	4	12130.85	6.380894	2.866081
Within Groups	38022.43	20	1901.122		
Total	86545.85	24			

From the table it can be seen that calculated value of F is 6.38 and tabular value is 2.86 at 5% significant level. That means calculated value is greater than tabular value, so null hypothesis is rejected and alternative hypothesis is accepted. Hence it can be concluded that there is significant difference between the means values of DPS of sample companies.

4.2 Earning per Share (EPS):

EPS is typically used by analysts and traders to gauge the financial strength of a company. A higher EPS means a company is profitable enough to pay out more money to its shareholders.

EPS = Net Income – Dividends on Preferred Stock /Average Outstanding Shares

For the calculation of Net income there is a need of total sales, cost of goods, financing costs, and income tax. Total revenue is taken adjusting the cost of goods sold, depreciation, interest, income taxes and other expenses. This financial information is found in company's income statement and is an important measure of profitability in over a specific time period. When calculating EPS, it is more accurate to use a weighted average number of shares outstanding over the reporting term, because the number of shares outstanding can change over time.

Table 3 Earnings per Share ratio of selected IT companies

(Figure in INR)

EPS					
Year	**TCS**	**Wipro**	**Infosys**	**HCL**	**Tech Mahindra**
2015-16	123.18	36.26	59.02	39.79	34.51
2016-17	133.41	34.98	62.8	60.33	32.14
2017-18	131.19	16.85	71.07	62.23	43.02
2018-19	83.05	14.99	35.44	73.58	48.47
2019-20	86.19	16.67	38.97	40.75	46.21
Mean	**111.404**	**23.95**	**53.46**	**55.336**	**40.87**
General Mean	**57.004**				
Std. deviation	**24.76953**	**10.68746**	**15.51565**	**14.66066**	**7.203481797**
Coefficient of variation	**22.23%**	**44.62%**	**29.02%**	**26.49%**	**17.63%**

Source: Computed from the Annual Report

Analysis:

Above table depicts the earning per share of sample companies over five year period, from 2015 to 2020. EPS share indicates how much per share investors are getting. So steady EPS shows growth of the company. On the basis of average TCS is having highest i.e. 111.404 EPS and Wipro is having lowest i.e. 23.95. That means for the five year of period Wipro has provided lowest EPS to its shareholders. General mean of all the five companies is 57.00. Based on the coefficient of variation it seems that consistency in EPS is maintained by the Tech Mahindra (17.63%) followed by the TCS (22.23%). Wipro has recorded EPS of 44.62% that indicates variability on higher magnitude during five year period of time.

H_0: There is no significant difference between mean values of EPS of sample companies

H_1: There is significant difference between mean values of EPS of sample companies

Table 4 One Way ANOVA

Source of Variation	SS	df	MS	F	F crit
Between Groups	21637.875	4	5409.469	21.89515	2.8660814
Within Groups	4941.2488	20	247.0624		
Total	26579.124	24			

From the table 5.3.3 it can be seen that calculated value of F is 21.89 and tabular value is 2.86 at 5% significant level. That means calculated value is greater than tabular value, so null hypothesis is rejected and alternative hypothesis is accepted. Hence it can be concluded that there is significant difference between the means values of EPS of sample companies.

4.3 Return on Asset (ROA)

Return on assets is a profitability ratio that provides how much profit a company is able to generate from its assets. ROA is shown as a percentage, and the higher the number, the more efficient a

company's management is at managing its balance sheet to generate profits.

ROA= Net Income/ Average total asset

Net income is the amount of total revenue that remains after accounting for all expenses for production, overhead, operations, administrations, debt service, taxes, amortization, and depreciation, as well as for one-time expenses for unusual events such as lawsuits or large purchases. Average total assets are used in calculating ROA because a company's asset total can vary over time due to the purchase or sale of vehicles, land or equipment, inventory changes, or seasonal sales fluctuations.

Table 5 Return on Asset ratio of selected IT companies
(Figure in %)

ROA					
Year	**TCS**	**Wipro**	**Infosys**	**HCL**	**Tech Mahindra**
2015-16	27.24	13.91	17.9	14.24	13.28
2016-17	25.46	12.92	17.21	18.8	10.79
2017-18	24.29	13.16	20.06	18.16	12.48
2018-19	27.38	11.36	18.17	17.27	12.84
2019-20	26.74	13.29	17.88	13.33	10.79
Mean	26.222	12.928	18.244	16.36	12.036
General Mean	17.158				
Std. deviation	1.31898	0.94972	1.0750	2.4339	1.17219
Coefficient of variation	5.03%	7.35%	5.89%	14.88%	9.74%

Source: Computed from the Annual Report

Analysis:

Above table depicts the ROA generated by sample companies for the period of 2015-2020. Higher ratio indicates that the management is more efficient and productive in utilizing economic resources. From the table it can be conclude that TCS has recorded highest average ROA for the five year of period. It means TCS is efficiently using assets to generate high shareholder value. On the other hand Tech Mahindra has recorded lowest (12.04%) average ROA that means company is somewhere lacking in using economic resource effectively to generate shareholders return. General mean of all five companies is 17.16. Based on the coefficient of variation result it seems that consistency is maintained by TCS (5.03%) followed by Infosys (5.89%). HCL is not able to maintain consistency in generating ROA.

H_0: There is no significant difference between mean values of ROA of sample companies

H_1: There is significant difference between mean values of ROA of sample companies

Table 6 One Way ANOVA

Source of Variation	SS	df	MS	F	F crit
Between Groups	640.5004	4	160.1251	72.15572	2.866081
Within Groups	44.3832	20	2.21916		
Total	684.8836	24			

From the table it can be seen that calculated value of F is 72.16 and tabular value is 2.86 at 5% significant level. That means calculated value is greater than tabular value, so null hypothesis is rejected and alternative hypothesis is accepted. Hence it can be concluded that there is significant difference between the means values of ROA of sample companies

4.4 Economic Value Added

Economic Value Added (EVA) or Economic Profit is a measure based on the Residual Income technique that serves as an indicator of the profitability of projects undertaken. Its underlying premise consists of the idea that real profitability occurs when additional wealth is created for shareholders and that projects should create returns above their cost of capital**.**

EVA= NOPAT- WACC*(TA-CL)

Where NOPT=Operating profit*(1-Tax)

WACC= cost of debt* proportion + cost of equity*proportion

Table 7 Economic Value Added of selected IT companies
(Figure in INR)

EVA					
Year	**TCS**	**Wipro**	**Infosys**	**HCL**	**Tech Mahindra**
2015-16	19696.86	8318.88	12572.76	2407.34	2497.06
2016-17	21806.4	7954.27	14168.04	3596.77	2316.11
2017-18	16644.98	7432.15	16198.68	2565.04	3220.84
2018-19	-11629.07	8357.67	14180.54	9246.42	3919.73
2019-20	30710.98	8496.69	16639	9757.12	3376.99
Mean	15446.03	8111.93	14751.80	5514.53	3066.146
General mean	9378.09				
Std. deviation	16015.938	429.5969	1663.604	3672.82	658.705
CV	103.69%	5.30%	11.28%	66.60%	21.48%

Source: Computed from the Annual Report

Analysis:

Above table depicts the EVA of sample companies for the five year period. It can be inferred that, on an average basis of five years, the maximum (Rs. 15446.03 crores) and minimum (Rs.3066.15 crores) EVA were posted by the TCS Limited and Tech Mahindra respectively. A careful study of the results of Coefficient of Variation shows that Wipro (with 5.30% variations) has been able to add value for its shareholders on a consistent basis, followed by Infosys (11.28% variations). TCS is

having highest coefficient of variation which indicates TCS is not able to consistently maintain the shareholders value.

H_0: There is no significant difference between mean values of EVA of sample companies

H_1: There is significant difference between mean values of EVA of sample companies

Table 8 One Way ANOVA

Source of Variation	SS	df	MS	F	F crit
Between Groups	610337626	4	152584406	2.790641	2.866081
Within Groups	1093543681	20	54677184		
Total	1703881307	24			

From the table it can be seen that calculated value of F is 2.79 and tabular value is 2.86 at 5% significant level. That means calculated value is lower than tabular value, so null hypothesis is accepted and alternative hypothesis is rejected. Hence it can be concluded that there is no significant difference between the means values of EVA of sample companies.

4.5 Market Value Added

Market value added (MVA) is a calculation that shows the difference between the market value of a company and the capital contributed by all investors, both bondholders and shareholders. In other words, it is the sum of all capital claims held against the company plus the market value of debt and equity.

MVA= Total market value of equity- total book value of equity

MVAs are representations of value created by the actions and investments of a company's management. A high MVA is evidence that the value of management's actions and investments is greater than the value of the capital contributed by shareholders, whereas a low MVA means just the opposite.

Table 9 Market Value Added of selected IT companies
(Figure in INR)

MVA					
Year	TCS	Wipro	Infosys	HCL	Tech Mahindra
2015-16	245015.34	51,501.78	136,654.82	57613.5556	45331.76
2016-17	240562.24	46,529.94	115,935.86	61880.60	44347.07
2017-18	272515.50	94,585.98	122,181.58	67208.90	62067.02
2018-19	750253.85	152,416.29	318,036.22	73117.05	75452.31
2019-20	666089.76	104,039.15	263,835.89	113482.47	50606.73
Mean	434887.34	89814.63	191328.87	74660.51	55560.98
General Mean	169250.47				
SD	251539.67	43259.421	93229.18597	22466.52145	13161.75235
CV	57.84%	48.17%	48.73%	30.09%	23.69%

Source: Computed from the Annual Report

Analysis:

Above table shows the Market Value Added by the sample companies for the period of 2015 to 2020. MVA is the amount of wealth that a company is able to create for its shareholders, since its foundation. So higher MVA indicates that since its inception company is able to generate wealth.
Based on the result of mean it can be concluded that TCS has recorded highest average MVA that indicates from its inception company is able to create wealth for its shareholders. Whereas Tech Mahindra has recorded lowest (55560.98) average MVA over a period of time. It indicates that company is not effectively generating wealth for its shareholders. Based on the coefficient of variation result Tech Mahindra has maintained consistency in MVA even though its average is low. TCS is having highest average MVA but is fails to maintain consistency in generating wealth for its shareholders.

H_0: There is no significant difference between mean values of MVA of sample companies

H_1: There is significant difference between mean values of MVA of sample companies

Table 10 One Way ANOVA

Source of Variation	SS	df	MS	F	F crit
Between Groups	4.96165	4	1.24041	8.323437	2.866081
Within Groups	2.98053	20	14902648		
Total	7.94218	24			

From the table it can be seen that calculated value of F is 8.32 and tabular value is 2.86 at 5% significant level. That means calculated value is greater than tabular value, so null hypothesis is rejected and alternative hypothesis is accepted. Hence it can be concluded that there is significant difference between the means values of MVA of sample companies.

4.6 Karl Pearson's correlation

Correlation is a statistical measure that indicates the extent to which two variables fluctuate together. A positive correlation indicates the extent to which those variables increase or decrease in parallel. A negative correlation indicates the extent to which one variable increases as the other decreases. The Karl Pearson's correlation measures the degree of linear relationship between two variables.

Table 11 Karl Pearson's correlation matrix

TCS	EVA	EPS	DPS	ROA
EVA	1			
EPS	0.38	1		
DPS	0.81	-0.19	1	
ROA	-0.31	-0.68	-0.11	1
WIPRO	**EVA**	**EPS**	**DPS**	**ROA**
EVA	1			
EPS	0.03	1		
DPS	0.23	0.78	1	
ROA	-0.12	0.54	0.61	1
INFOSYS	**EVA**	**EPS**	**DPS**	**ROA**
EVA	1			
EPS	-0.09	1		
DPS	-0.31	0.59	1	
ROA	0.47	0.40	0.53	1
HCL	**EVA**	**EPS**	**DPS**	**ROA**
EVA	1			
EPS	0.11	1		
DPS	-0.74	0.07	1	
ROA	-0.36	0.83	0.54	1
TECH MAHINDRA	**EVA**	**EPS**	**DPS**	**ROA**
EVA	1			
EPS	0.98	1		
DPS	0.47	0.57	1	
ROA	0.19	0.10	-0.68	1

Above table depicts the relationship that exists between the variables. They are EPS, EVA, DPS and ROA. For that Karl Pearson's correlation is calculated.

From the table it is clear that in TCS case there is highest correlation between EVA and DPS, i.e. 0.81. There is negative correlation between EVA and ROA. Also there is negative correlation between EPS and DPS, EPS and ROA.

The result of Wipro shows that EVA and traditional measures are not highly correlated but there is high correlation between EPS and DPS. Based on the result it can be conclude that in case of Wipro all traditional measures are somewhat highly correlated.

The result of Infosys shows that there is no correlation between EVA and EPS, EVA and DPS. Based on the result EPS and DPS are highly correlated. In case of traditional measures there is mix correlation, which means some measures are highly correlated and some are negatively correlated.

The result of HCL shows that majority of the traditional measures are negatively correlated with the EVA. All traditional measures are also positively correlated with each other.

The result of Tech Mahindra shows that there is positive correlation between EVA and traditional measures, there is highest correlation between EVA and EPS, i.e. 0.98. DPA and ROA are negatively correlated. EPS is positively correlated with the other accounting based measures.

5. Findings & Conclusion

- Findings shows that value of all the accounting and economic based measures, i.e. DPS, EPS, ROA, ROE, EVA and MVA are fluctuating over a period of time.
- Based on the coefficient of variation of DPS it seems that Infosys has maintained consistency i.e. 14.89% followed by the TCS (44.36%). On the other hand Wipro has failed to maintain the consistency. It has CV of 135.41% which indicates the high variability.
- On the basis of average of EPS TCS is having highest i.e. 111.404 EPS and Wipro is having lowest i.e. 23.95.
- Based on the coefficient of variation of EPS it seems that consistency in EPS is maintained by the Tech Mahindra (17.63%) followed by the TCS (22.23%). Wipro has recorded EPS of 44.62% that indicates variability on higher magnitude during five year period of time.
- From the table it can be conclude that TCS has recorded highest average ROA for the five year of period. On the other hand Tech Mahindra has recorded lowest (12.04%) average ROA.
- Based on the coefficient of variation result of ROA it seems that consistency is maintained by TCS (5.03%) followed by Infosys (5.89%). HCL is not able to maintain consistency in generating ROA.
- It can be inferred that, on an average basis of EVA of five years, the maximum (Rs. 15446.03 crores) and minimum (Rs.3066.15 crores) EVA were posted by the TCS Limited and Tech Mahindra respectively.
- A careful study of the results of Coefficient of Variation of EVA shows that Wipro (with 5.30% variations) has been able to add value for its shareholders on a consistent basis, followed by Infosys (11.28% variations). TCS is having highest coefficient of variation which indicates TCS is not able to consistently maintain the shareholders value.
- Based on the result of mean it can be conclude that TCS has recorded highest average MVA, that indicates from its inception company is able to create wealth for its shareholders. Whereas Tech Mahindra has recorded lowest (55560.98) average MVA over a period of time.
- Based on the coefficient of variation result of MVA Tech Mahindra has maintained consistency in MVA even though its average is low. TCS is having highest average MVA but is fails to maintain consistency in generating wealth for its shareholders.
- From the correlation result it is clear that in TCS case there is highest correlation between EVA and DPS, i.e. 0.81. There is negative correlation between EVA and ROA.
- Form the correlation result it is clear that in case of Wipro it shows that EVA and traditional measures are not highly correlated. But ROA and ROE are highly correlated.

- Based on the result of correlation it can be conclude that in case of Wipro all traditional measures are somewhat highly correlated.
- The result of Infosys shows that there is no correlation between EVA and EPS, EVA and DPS. Based on the result ROA and ROE and EPS and DPS are highly correlated.
- Based on the correlation result of Infosys it seems that in case of traditional measures there is mix correlation, which means some measures are highly correlated and some are negatively correlated.
- The result of HCL shows that majority of the traditional measures are negatively correlated with the EVA. Whereas ROA and ROE are highly correlated. All traditional measures are also positively correlated with each other.
- Result of ANOVA shows that there is significance difference between the mean values of all the measures.

6. Conclusion:

Thus it can be concluded that shareholder value maximization has become the predominant goal of corporations in India and the world over. Many consulting firms have come up with different value-based measures (VBM) of performance to cater to the above need. Of these measures, EVA has become quite popular in India. The EVA has attracted many of the world's best managed and largest corporations to implement EVA as performance measurement system. Non-creation of EVA leads to investor dissatisfaction. EVA focused companies concentrate on improving the net cash return on invested capital. Since creating shareholder value has become the widely accepted corporate objective nowadays, EVA deals with accounting for the cost of capital and determines the sufficiency or insufficiency of earnings generated by a firm to cover the cost of capital, i.e., whether a firm is a value generator or a value diluter. The present study has examined the value creation measures for selected Indian IT companies. To know the relation between different measures multiple correlation is used. ANOVA is also used to know whether there exists any difference between the mean values of all the measures. EVA of all the companies is positive. In general, management must make efficiency and effectiveness as a priority in each of their business activities, oriented toward the company's vision and mission, and continue to adhere to shareholder values. The empirical results of the study do not support the claim that EVA is a better performance indicator than traditional accounting measures in explaining market value. This implies that there are other factors that drive market value and should be taken into account for shareholders' value creation or for performance measurement. There are various factors related to customers, employees and community satisfaction, product quality, R&D innovations those affect the market value of firms apart from financial variables.

References:

[1]. Angayarkanni and Anand Shankar Raja .M, "A study on the Capital Structure of Bimetal

[2]. Bearings Limited and its impact using EVA", Indian Journal of Applied Research, Vol.4, Issue 9, September 2014. pp: 79-81.

[3]. Asha Sharma, "Economic Value Added in Infosys Limited", International Journal of Management and Social Sciences Research, Volume 2, No.5, May 2013, pp: 55-62.

[4]. Blair, A., "EVA fevers", Management Today, 78(7), Jan 1997, pp: 42 (4).

[5]. Burkette, G. Hedley, T., "The truth about economic value added", The CPA Journal, Volume 4, No.7, June 1997, pp: 46.

[6]. Chauhan Pratapsinh and Bhayani Sanjay, "Effect of Mergers on Shareholders Value: Indian Evidence", Management Trends, Vol. 7, No. 2, pp: 1-30, 2010.

[7]. François Larmande and Jean-Pierre Ponssard, "EVA and Incentives Theory: A case study", September 2003.

[8]. Hejazi, R., & Khademi, S. (2013), "The impact of firm characteristics and economic factors on the capital structure of listed companies in Tehran Stock Exchange", Financial Accounting Research Journal, 2, pp: 11-16.

[9]. Kaur, M., & Narang, S. (2009). Shareholder Value Creation in India‟s Most Valuable Companies: An Empirical Study. The Icfaian Journal of Management Research, 8 (8), 16-42.

[10]. Kramer and George Pushner, "An Empirical Analysis of Economic Value Added as a Proxy for Market Value Added", Financial Management Association Conference in New York, 1996.

[11]. Malik, Madhu, (2004), "EVA and Traditional Performance Measures: Some Empirical Evidence", the Indian Journal of Commerce, Vol. 57, No. 2, April-June, pp: 32-37.

[12]. Pratapsinh Chauhan, "Shareholders Value Creation in Indian Petroleum Industry: An Empirical Analysis", International Conference on Business, Economics, Management and Behavioral Sciences (ICBEMBS'2012) Jan. 7-8, 2012, Dubai.

[13]. Sakthivel N., "Shareholders" Value in Indian Pharmaceutical Industry: An Empirical Analysis", Indian Journal of Commerce & Management Studies, Vol. II, No. 1 January, pp: 87-99, 2011.

[14]. Stern,Joel, "One way to build value in your firm, Executive Compensation", Financial Executive, Nov/Dec. 1990, pp: 51-54.

[15]. Stewart, G. Bennet, "EVATM Fact and Fantasy", Journal of Corporate Finance, Vol. 7, No. 2, June 1994, pp: 71-84.

[16]. Thenmozhi, M., "Economic Value Added as a Measure of Corporate Performance", The Indian Jounal of Commerce, 52 (4), 1999, pp: 72-88.

[17]. Vijaykumar, A. (2012) EVA and other accounting performance indicator: an empirical analysis of Indian automobile industry" International Journal of Management and Technology, Volume 2, Issue No. 3, pp: 131-153.