CHAPTER-III
REVIEW OF EARLIER LITERATURE REGARDING “ECONOMIC VALUE ADDED”

The important goal of financial management is to create highest capital employees (owners & lenders) wealth and consequently enhancing the value of the firm. The question arises is, which measure evaluates firms value properly. In answer to this question, it can be said, various accounting based measures like Earning Per Share (EPS), Return on Equity (ROI); Return on Capital Employed (ROCE) and growth in sales have been used to evaluated the performance of the business. But the problem with these performance measures is that they lack a proper benchmark for comparison. The shareholders require at least a minimum rate of return that the above mentioned performance measures ignore.

In order to overcome the limitations of accounting based measures of financial performance, Joel Stern, managing partner of M/s Stern Stewart & Co. introduced a modified concept of economic profit in 1990 in the name of Economic Value Added (EVA) as measure of business performance.

This chapter contains the following aspects of review of relevant literature studied from different angles:

A - Articles published in journals
B - Specific books on the subject

3-1) ARTICLES PUBLISHED IN JOURNALS

In this chapter a review of earlier literature in the area of Economic Value Added is presented. On reviewing the articles published in both foreign and Indian journals on the subject matter; it was observed that the research work in literature
roughly classifies into three categories. Of course there are very few studies among these research works which have been done theoretically and also empirically in India.

I) Mainly professional literature mostly aimed at presenting, promoting or discussing the EVA concepts in relation to consulting work. While most of this literature looks at the advantages of the concept, a few critical views also occur in this category.

II) Empirical research literature measuring the strength of the relation between market returns (or market value) and EVA compared to the relation between market returns and the traditional income measures.

III) Literature looking at EVA as a management and evaluation tool from the point of view of the accounting measurement.

The summary of sixty three articles published in the journals, varied views, opinions and commands pertaining to theory and empirical work of the concepts of Economic Value Added (EVA) have been summarized in a chronologically as under:

1. Stern (1990) observed that EVA as a performance measure captures the true economic profit of an organization. EVA-based financial management and incentive compensation scheme gives manager better quality information and superior motivation to make decisions that will create the maximum shareholders’ wealth in an organization. EVA is a performance measure which is most closely linked to the creation of shareholders’ wealth over a period of time. The financial management and the incentive compensation system based on EVA give the manager superior information and higher motivation. Accordingly EVA should be made the focal point for financial reporting, planning, and decision-making. The
executives of an organization should look out for appropriate techniques that will guard them against any future attacks by corporate marauders. The best way of maximizing shareholder return is to offer incentives to managers for making decisions that boost long-term value. A major step is to provide cash bonus or stock option arrangements with incentives to that create built-in share value. The objective is to motivate the managers to look beyond short-term measures of economic performance by essentially turning managers into owners. The managers may be guided by EVA and pursue such objectives that improve operating profits investing more capital. Managers can be remunerated a proportion of both the total EVA and the positive change in EVA.\(^1\)

2. Stewart (1994) has expended that EVA is a powerful new management tool that has gained worldwide recognition as the standard tool of corporate performance. EVA presents an integrated framework of financial management and incentive compensation. The adoption of EVA system by more and more companies throughout the world clearly depicts that it provides an integrated decision-making framework, can reforms energies and redirect resources to create sustainable value for companies, customers, employees, shareholders and for managements.\(^2\)

3. Ochsner (1995) says companies that use shareholder value growth alone as a measurement for executive performance pay leave less-skilled management dependent on luck. Economic value added measures, with some modification and

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in varying forms, can serve as leading indicators of company performance. Thus, investors will use them to give managements a compass to steer by. A company that adopts economic value added (EVA) is likely to need a substantial education program for managers. It also may elect to state EVA in terms of operating profits and use of capital. This puts EVA in the role of a target-setting mechanism, which assures that EVA figures will be available to the board of directors and, if necessary, major shareholders for tracking and comparison purposes.³

4. Rice (1996) believes that there is a direct relationship between EVA improvement and a higher share price. EVA has been made a part of Varity's mantra company for building corporate culture and creating wealth for shareholders.

Specific ways that EVA has been applied at Varity Company include:

1. EVA caused the company to take a closer look at its capital structure.

2. EVA identifies operations and projects that return more than the cost of capital.

3. EVA is used to evaluate potential joint ventures and

4. EVA provides a means of determining whether the sale of businesses or assets is in the best interest of shareholders.⁴

5. Carr (1996) considers that there are still generous problems with measuring the value created by companies; even stock

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brokers have been giving the issue great attention in recent times. The traditional measures of earning per share, dividend yield, and dividend per share remain popular, but growing emphasis is also being given to financial performance ratios based on cash flow and capital efficiency. Among valuation methods of operating performance, economic value added, which measures the return on capital and its cost, has become predominantly well-liked.\(^5\)

6. Grant (1996) found that the EVA concept may have everlastingingly changed the way real profitability is measured. A survey was conducted that examines the empirical relations between EVA and corporate valuation. Results suggest that EVA significantly bangs the Market Value Added of a firm and that this wealth effect stems from the company’s residual return on capital.\(^6\)

7. Kramer and Pushner (1996) empirically test the strength of the relationship between EVA and market value added. The results do not fully support the arguments of EVA proponents that it is the best internal measure of corporate success in adding value to shareholder investments. On the contrary, the market seems more focused on “profit” than EVA.

Their results (which applicable to the SS1000) reveal shareholders can align management’s wealth enrichment more

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closely to their own, at least in the short-term, by tying compensation to profits rather than EVA.\(^7\)

8. Blair (1997) observed that the EVA has generated much interest in the business community. This financial tool advocates debt finance as evidenced by its basic formula, which uses the weighted cost as the cost of capital, thus becomes cheaper than equity, partly due to the tax deductible interest.\(^8\)

9. Burkette and Hedley (1997) explained that the EVA concept can be used to assess organizational performance known as economic profit; it can be applied for profit companies, public sector organizations and non-profit organizations. EVA is being used by these entities in a variety of ways, including as a management communication base, as a measure of corporate and divisional performance, to tighten management, shareholder interests and to emphasize the long-term benefits of industrial research and employee training.\(^9\)

10. Mayfield (1997) has sarcastically established that the shareholder value can be increased by investing in all those projects which give a positive NPV and by discounting all those products and projects whose return on capital is less than the cost of capital. The major task is to encourage the managers to create long-term value. The traditional accounting techniques are familiar with concept of residual value. When this concept is used in economic value measurement as a

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means of evaluating business performance it involves some important modification in traditional accounting concepts. EVA as a measure of financial performance provides an excellent tool for strategy planning, investment appraisal, pricing decisions and a basis for incentive compensation.\textsuperscript{10}

11. Rajeshwar (1997) offered in his study that EVA can also be used as a device for shareholders’ communication and manager incentive system, apart from measuring the financial performance of organization. Demand for EVA among the corporate world has spurred competition among financial consultants, who help in computing EVA of business organizations.\textsuperscript{11}

12. Tully (1997) brought to book EVA as a method for understanding as to what is happening to the financial performance of an organization. The paper presents the method for calculating EVA and also shows some pictorial presentations of EVA’s of several companies. It has been concluded that EVA can be a better financial performance evaluation measure than traditional measures.\textsuperscript{12}

13. Stephens and Bartunek (1997) examined Economic Value Added (EVA). They illustrated that EVA can bring great value to a company by focusing the entire organization on activities that produce results valued by shareholders. With a well-grounded understanding of EVA, the financial organization


is uniquely capable of providing counsel that will ensure successful implementation of this new measure.\textsuperscript{13}

14. Dillon and Owers (1997) place EVA in its context with other financial metrics. The debate regarding the relative merits of EVA and other metrics is outlined, but they don’t take a position on this sometimes vociferous debate. They have summarized emerging evidence on the relative use of EVA and other metrics. Their study concludes with an analytical investigation of the relationship between EVA and NPV (Net Present Value). The analysis suggests that there may be a somewhat more complex relationship between EVA and NPV than is sometimes assumed. Without taking a position, this Paper sought to take a balanced view of the issues.\textsuperscript{14}

15. Chen and Dodd (1997) examine the economic value added (EVA) performance of 566 US companies and compares the information usefulness of EVA with accounting earnings and residual income. They have explored three conclusions result from the study: (1) although improving EVA performance is associated with a higher stock return, but the association is not as perfect as claimed by EVA advocates, (2) EVA is more powerful than traditional measures of accounting profit in explaining stock return; however, accounting earnings are still of significant incremental information value in addition to EVA,
and (3) not only EVA is similar to residual income in concept, but also the two metrics are empirically comparable.  

16. Villiers (1997) studies the extent to which EVA is distorted by inflation, and finds that it cannot be used under inflation to estimate actual profitability. His study develops an adjusted EVA (AEVA) calculation procedure which provides a better estimate of actual profitability under inflation. He suggests that AEVA can be used instead of EVA for financial decision-making under inflation. He also shows that EVA is distorted by inflation and that it cannot be used under inflation to estimate actual profitability. While AEVA provides an alternative to inflation accounting, and could be used under inflation to estimate actual profitability from conventional historical cost accounts.  

17. Desai, Fatemi and Kats (1997) examine the relationship between executive compensation and measure of firm performance that capture the economic profit earned by the firm, namely, EVA and MVA. They test the hypothesis that after controlling for risk, these measures are more effective measures of wealth of top executives. They find evidence that top manager pay is related to market value added to the firm during the year. Finally they assess whether top managers pay is an incentive for future performance or reward for past behavior. According to their opinion top managers not also are stimulated to increase the EVA of the firm but are also

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rewarded for past additions the market value as measured by MVA.\textsuperscript{17}

\textbf{18.} Biddle, Bowen; Wallace and Kowloon (1997) test assertions that Economic Value Added (EVA) is more highly associated with stock returns and firm values than accrual earnings, and evaluate which components of EVA, if any, contribute to these associations. Incremental tests suggest that EVA components add only marginally to information content beyond earnings. Considered together, these results do not support claims that EVA dominates earnings in relative information content, and suggest rather those earnings generally outperforms EVA.

They examine the value-relevance of EVA and residual income compared to currently-mandated performance measures earnings and cash flow from operations. There is little evidence to support that EVA is superior to earnings in its association with stock returns or firm values.\textsuperscript{18}

\textbf{19.} Banerjee (1997) has conducted an empirical research to find the superiority of EVA over other traditional financial performance measure. Ten industries have been chosen and each industry is represented by four/five companies. ROI and EVA have been calculated for sample companies and a comparison of both has been undertaken, showing the


superiority of EVA over ROI. Indian companies are gradually recognizing the importance of EVA.\textsuperscript{19}

\textbf{20.} Brabazon and Sweeney (1998) survey 153 companies in the US and Canada. They indicate that one quarter of the respondents were using EVA to measure performance and compensate managers. In their idea one of the major selling points of EVA is that a strong correlation exists between it and the share price of the organization. However, like the majority of financial performance measures, EVA is inherently backward looking as it looks at the value added in a past accounting period and thus measures the success of past strategic decisions and investments.\textsuperscript{20}

\textbf{21.} Ethiraj (1998) derived that in Indian market many companies are using capital inefficiently and thus destroying value. The tool to measure capital efficacy and economic value is economic value added. Taking EVA as a tool of financial performance HLL and ITC stand at the top of the list. Also important is the relation between EVA and total operating capital employed. This would show how much value the company has generated in relation to the assets it has deployed. It is argued that stock price move up as a company adopts EVA as an internal performance criterion.\textsuperscript{21}

\textbf{22.} Saxena (1998) elucidated that there is no one method of measuring financial performance that is totally perfect. Thus a measure should be such that satisfies shareholders’

\begin{footnotesize}
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\item \textsuperscript{20} Tony Brabazon, Breda Sweeney, “ Economic value added-really adding something new?”, Institute of Chartered Accountants In Ireland, Accountancy Ireland , Vol 30, No 3, Jun 1998.
\item \textsuperscript{21} Ethiraj, Govindraj, “ The EVA feather in the market cap”, The Economic Times, 21Sep 1998, p.1
\end{itemize}
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expectations and is also being committed by top management. EVA is a measure that should be used by top management to evaluate investment center managers, because it considers goal congruence between shareholders and managers.  

23. Epstein and Young (1998) describe how EVA and its use can aid corporate environmental managers in promoting more proactive environmental investments, and in funding capital investments on environmental improvement, waste reduction, and pollution control in their companies. They believe that the use of EVA and other shareholder value measures can also improve general capital investment decisions by integrating environmental factors that affect the long-term interests of the corporation into the managerial decision-making process.  

24. Biddle, Bowen and Wallace (1998) believe that economic value added combines some truth with some chaff. They present recent empirical evidence that helps to sort the points out. Independent examination suggests that some of claims regarding EVA are overstated. While evidence confirms that managers respond to EVA incentives, and there is no evidence to support claims that EVA is more closely associated with equity returns or firm values than net income. They have discussed possible reasons in their article.  

25. Roztocki and Needy (1999) have examined Economic Value Added as a performance measure for small manufacturing

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companies. They have investigated advantages and disadvantages of using Economic Value Added as a primary measure of performance as compared to sales, revenues, earnings, operating profit, profit after tax, and profit margin are. They have also illustrated the Economic Value Added calculation within necessary adjustments in the financial statements is. Finally, they have discussed potential improvement opportunities resulting from using Economic Value Added as a performance measure in small manufacturing companies.

In their article a simplified methodology has been illustrated that allows the major pieces of Economic Value Added to be used by small manufacturing firms, while eliminating all of the details that a small enterprise would find cumbersome to implement.25

26. Banerjee and Jain (1999) carried out a research based on empirical data. Among the selected independent variables (EPS, EVA, Kp, Lp, and ARONW) EVA has proved to be the most explanatory variable, when MVA was taken as the dependent variable and Backward Elimination Method was applied to find the most explanatory independent variable. For this purpose the time frame was of eight years and all the variables were calculated over this period for the sample companies.26

27. Thenmozhie (1999) explained the concept of EVA and compared it with some other traditional measure of corporate


performance viz. ROI, EPS, RONW, ROE, ROCE, etc. he used the coefficient of determination to demonstrate that the traditional measures do not reflect the real value of the shareholders, and thus EVA has to be taken into account to measure the value of shareholders’ wealth. He has also described the concept of EVA in the Indian scenario with specific reference to companies like NIIT, Hindustan Lever and ITC. He has referred to some of the shortcomings of the concept of EVA but maintains that EVA is a better measure of corporate performance as compared to the traditional measures.²⁷


28. West and Worthington (1999) have examined whether the economic value-added is more highly associated with stock returns than conventional accounting-based measures by using a pooled time-series, cross-sectional data on 110 Australian companies over the period 1992-1998. The accounting-based measures of internal and external performance include earnings, net cash flow and residual income. According to relative information content tests they reveal earnings to be more closely associated with returns than net cash flow, residual income and EVA. Their analysis of the components of EVA confirms that the capital charges and GAAP-related adjustments most closely associated with EVA are significant at the margin in explaining market returns.²⁸

²⁸ Tracey West, Andrew Worthington, “The usefulness of economic value-added (EVA) and its components in the Australian context”, 1999.

29. McLaren (1999) discusses the results of an in-depth questionnaire survey of strategists at four New Zealand companies that work with the EVA system. In all four
companies, the overriding original reason given for the introduction of EVA was to align managerial and shareholder objectives. He concludes that EVA is seen as a tool for reducing conflicts of interest between the principals outside the firm and the agents within the firm.\(^\text{29}\)

30. Young (1999) demonstrates that the concept of residual income has gained unprecedented popularity with corporate users and investment analysts in the guise of "economic value added". Proponents of EVA argue that the reliability of residual income as an indicator of value and performance is substantially improved if adjustments are made for the perceived biases of GAAP. Finally he concludes that while these adjustments have a certain intuitive appeal, most companies that adopt EVA are probably better off making no adjustments at all, relying instead on unadjusted residual income measures.\(^\text{30}\)

31. Brewer, Chandra and Hock (1999) state EVA has some advantages over return on investment and also has some limitations as a decision-making tool, such as an overemphasis on short-term results. In their idea EVA should be valuable when used with a balanced set of measures that provide a complete financial picture. Their study answer four questions: (1) What is the definition of EVA, (2) Is EVA a new form of performance measurement?, (3) What are the strengths and


limitations of EVA? and (4) How should EVA be used to evaluate employee performance?  

32. Roztocki and Needy (1999) describe how to design and implement an integrated the Activity-Based Costing method with the Economic Value Added performance measurement system to determine costs as well as measure performance. They indicate motivation for switching to an integrated ABC-and-EVA system. They illustrate pre-implementation and implementation steps by using data from an actual implementation of the system at a small design and manufacturing firm. They also demonstrate changes to product costs resulting from the inclusion of full capital cost. Finally in their study, the impact of the increased reliability of cost information on the company’s decision-making, potential long-term business performance, and expected shareholder wealth creation is discussed.  

33. Cooper and Slagmulder (1999) believe that two major advantages of integrating the ideas of economic value added (EVA) and activity-based costing (ABC) are: (1) The decision maker becomes sensitive to the economic return of products, customers, and channels; (2) It rewards the more efficient use of capital. After integration, the concept of dedicated and non dedicated capital emerges naturally. According to their idea it is necessary to compute the cost of capital for each major line of business, but for the purpose of developing EVA maps, a


single rate for most enterprises is usually all that has to be determined.\textsuperscript{33}

\textbf{34.} Thibadoux, Scheidt, and Jeffords (1999) believe Using economic value added (EVA) as an evaluation tool ensures that when managers make strategic decisions they will do so in their own best interests as well as those of shareholders since positive changes in EVA will be impounded in stock prices. They have recognized the value of using EVA in over 300 major corporations worldwide. They state these techniques can be adopted by any oil and gas company involved in any phase of industry activity, including exploration, supply, processing and distribution.\textsuperscript{34}

\textbf{35.} Roztocki (2000) examines the implementation of an integrated Activity-Based Costing and Economic Value Added system, using a database approach. The proposed database approach allows the creation of a costing and performance measure system which provides decision-makers with up-to-date, complete, and reliable cost information. He illustrates the steps for designing and implementing this integrated information system with data from a real company. He also investigates the advantages for calculating product cost information when a database is used to collect, store, retrieve, and analyze data. Improvements in quality of product cost information, resulting from this proposed methodology, are presented. Finally, he discusses the impact of this

\textsuperscript{33} Robin Cooper, Regine Slagmulder, “Integrating activity-based costing and economic value added”, Management Accounting, Montvale, Vol. 80, Issue. 7, Jan 1999.

\textsuperscript{34} Greg M Thibadoux, Marsha Scheidt, Raymond Jeffords, “Using economic value added (EVA) as a strategic management and evaluation tool”, Oil, Gas & Energy Quarterly, New York, Mar 1999.
integrated information system on a company’s decision-making and long-term business performance.\(^{35}\)

**36.** Farsio, Degel and Degner (2000) have explained how Economic Value Added promotes shareholder interests. First, they clearly specify to management that the primary financial objective of the company is to create shareholder wealth. Secondly, their study emphasizes continuous improvement in the company's EVA as the basis for increased shareholder wealth. Their methodology for studying the relationship between EVA and stock return consists of testing companies that are found in well known stock indices such as Standard & Poor's 500 and the Dow Jones Industrial Average. \(^{36}\)

**37.** Shand (2000) says Economic value added (EVA) measures a corporation's true economic profit. The objective of EVA is to understand which business units best leverage their assets to generate returns and maximize shareholder value. According to economic theory, capital eventually moves to the investment opportunities with the best returns because investors want to maximize their profits. Getting decision-makers to think about economic profits as they evaluate new business opportunities is the purpose of using EVA. \(^{37}\)

**38.** Gurudas (2000) examines the different ways in which it can be ascertained whether the value of a share is being enhanced

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or not. He starts by looking at the shift from Earning Per Share, Price earning Ratio, etc, to Economic Value Added and Market Value Added. He demonstrates how EVA is the best measure for deducing shareholder value enhancement.\(^{38}\)

\(^{39}\) Banerjee (2000) says Corporations in the US have started disclosing EVA information from the beginning of 90s as a measure of corporate performance. It is believed that market value of a firm (hence shareholder wealth) would increase with the increase in EVA. Various studies done in the US also confirm this belief. He attempts to find the relevance of Stewart’s claim that market value of the firm is largely driven by its EVA generating capacity in the Indian context. Based on a sample of 200 firms over a period of five years, his study shows that market value of a firm can be well predicated by estimated future EVA streams. His study has also found that market value of most of the firms in the sample is explained more by current operational value than future growth value of firms.\(^{39}\)

\(^{40}\) Kumar, S. (2000) concluded that using EVA as the best financial indicator blindly may not be correct, since it is not without pitfalls. The pitfalls in EVA calculation and manipulation have been discussed. According to the author positive EVA figures do not ensure high financial performance. He suggests that EVA should be used for making comparisons between companies in the same industry group. He observes that computing COC at flat rates is meaningless. To make EVA


relatively comparable EVA should be expressed in term of EVA (in Rs.) per unit of capital employed.\textsuperscript{40}

41. Garvey and Milbourn (2000) pit EVA against earnings as two candidate performance measures. They use a relatively standard principal-agent model, but recognize that while the variability of each measure is observable; their exact information (signal) content is not. The model provides a formal method for ascertaining the relative value of such measures based on two distinct uses of the stock price.

They then show how to combine stock prices, earnings, and EVA to produce an optimally weighted compensation scheme. They also calibrate the theoretical improvement in incentive contracts from optimally using EVA in addition to accounting earnings at the firm and industry level.\textsuperscript{41}

42. Turvey, Lake; Duren and Sparling (2000) survey the relationship between economic value added (EVA) and the stock market performance of 17 publicly traded companies in the Canadian food processing sector. Using 1996 annual reports to compute EVA, and daily stock prices for 1994 through 1998, they attempt to correlate EVA with a variety of measures including accounting return on assets (ROA), return on equity (ROE), share price, the Capital Asset Pricing Model (CAPM) returns and risk, and others. Their results find little


\textsuperscript{41} Gerald T. Garvey, Todd T. Milbourn, “EVA versus Earnings: Does it matter which is more highly correlated with stock returns?”, Final Draft: Sep15, 2000.
support for the conjecture that high-EVA firms lead to higher shareholder value.\textsuperscript{42}

\textbf{43.} Shrieves and Wachowicz (2001) concluded that the researcher should help the user of Discounted Cash Flow (DCF) methods by clearly setting for the relationship of free-cash-flow (FCF) and economic value added (EVA) concepts to each other and to the more traditional applications of DCF thinking. They follow others in demonstrating the equivalence between EVA and NPV, but their approach is more general in that it links the problems of security valuation, enterprise valuation, and investment project selection, and additionally, their approach relates more directly to use of standard financial accounting information.

Beginning with the cash budget identity, they show that the discounting of appropriately defined cash flows under the free-cash-flow valuation approach (FCF) is mathematically equivalent to the discounting of appropriately defined economic profits under the EVA approach.\textsuperscript{43}

\textbf{44.} Jawahar Lal and Malik (2001) say that Economic Value Added is today’s hottest financial idea and it can be well considered a revolution in management. In their opinion EVA is a measure of corporate performance and reflects all the dimensions by which management can increase value. They attempt to decipher EVA and analyze its superiority over traditional profit based performance measure, computation,


implementation and application with special reference to a detailed case study of Hindustan Lever Ltd.\textsuperscript{44}

45. Kramer and Peters (2001) empirically test the relation between capital intensity and the ability of EVA to serve as an effective proxy of market value added. They find that EVA is no less “at home” in the information economy than it is in traditional manufacturing businesses. However, their results indicate that in most of the industries studied, the marginal costs of using EVA as a proxy for market value added are not justified by any marginal benefits.\textsuperscript{45}

46. Timo and Virtanen (2001) evaluated and compared the concept of EVA with traditional profitability measures within a controlled simulation framework. They observed that EVA is very sensitive to its cost of equity component, but it is unexpectedly insensitive to its cost of debt component under regular conditions. EVA and its variability are observed to be strongly affected by the firm’s growth policies because of leverage effects. EVA is observed to be much more unstable than the traditional return on investment and directly related to the return on equity measure. Methodologically, they demonstrate the advantages of using a controlled simulation approach in financial research.

This raised the question of the effect of the debt and equity cost components on the behavior of EVA. They observed that under realistic (with respect to the firm’s profitability) required returns (cost of equity) the loan interest rate has little effect

\textsuperscript{44} Jawaher Lal, Madhu Malik, “Economic Value Added (EVA) and corporate performance”, The Management Accountant, 36(7), July 2001, pp 528-534.

on the EVA's behavior until the cost of loans approaches the firm's profitability.46

47. Eljelly and Alghurair (2001) test the association between stock returns and wealth creation (as measured by Market Value Added, MVA) on the one hand, and various performance measures of joint stock companies in Saudi Arabia. These measures include traditional accounting measures; Earning Per Share (EPS), Return on Equity (ROE), and Cash Flow (CF), as well as a relatively recent measure, the Economic Value Added (EVA). Their study reveals strong links between various traditional accounting measures and show that those measures give similar indication of a company's overall performance. The results indicate that MVA and stock returns are associated with traditional accounting measures, but not with EVA. However, EPS is found to dominate other measures of performance with respect to its association with stock returns and MVA.47

48. Weaver (2001) believes his survey bridges the gap between “theory” and “practice” by detailing how EVA proponents measure EVA. This survey is important because its fieldwork identifies significant inconsistencies in the measurement of EVA and its major components.

He demonstrated that Economic Value Added measurement practices vary widely and in some cases significantly.48


49. Ray (2001) analyzes the efficiency of Economic Value Added, the relatively new financial-management tool. This analysis offers a new definition of value, and suggests that the missing link in the EVA process is productivity, generally found to be the engine of all economic growth.49

50. Spivey and McMillan (2001) first provide an overview of the standard asset, market, and income valuation methods that are generally used to estimate the value of small businesses. They then discuss economic value added (EVA) and demonstrate its potential use in the valuation of small businesses. They illustrate that EVA is a periodic performance measure that allows one to assess how “value” has been added to the business through its normal operations each accounting period.50

51. Lovata (2001) examines whether Market Value Added (MVA) increases subsequent to the integrating of Economic Value Added (EVA) into compensation contracts. Sixty-eight firms are identified as using EVA extensively to evaluate management. MVA for these firms is estimated resulting in 317 firm-years tested using logistic regression. His results provide weak evidence that the use of EVA in performance evaluation increases MVA.51

52. Riceman, Cahan and Mohan Lal (2002) examine the effect of EVA on the performance of individual managers. Specifically,

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they examine whether managers on EVA-based bonus plans outperform managers on traditional accounting-based bonus plans. Using a sample of 52 EVA bonus scheme managers and 65 traditional bonus scheme managers, their results indicate that managers on EVA bonus plans who understand the EVA concept perform better than managers on traditional bonus plans.

However, it is found that the increase in performance results from increased consistency or congruence in the manager’s evaluation-reward process rather than from superiority of EVA as a performance measure. It is further established that the effect of EVA bonuses and EVA understanding differs depending on the area of the firm in which the manager is employed. Finally they suggest that EVA may not be a universally appropriate base for reward systems.52

53. Baek and Kim (2002), use 1996-1998 data on the S&P 1,500 firms to study the relationship between executive pay and performance measured by the economic value added (EVA). After controlling for industry and firm size, they find that EVA is negatively related to salary level and positively related to the incentive compensations like bonus, restricted stocks and to the value of stock options and management stock ownership in a limited sense. Their findings suggest that management stock options are either excessively granted or economically inefficient.53


54. Kang and Kim (2002) indicate that numerous studies agree in that creating value is the ultimate goal of any corporation and that a financial measure is needed to assess the value creating ability of companies, but there is significant controversy around the validity of EVA as the final answer to this need. They think as with any other management tool, EVA should be used to guide and support corporate decisions and should be applied cautiously. This measure can be modified and adjusted in order to apply it to not-for-profit organizations. Their study compares and contrasts EVA to traditional performance measures. They examine the effectiveness of EVA in evaluating a firm’s financial performance. Thus, they question whether or not EVA adds any value in performance evaluation over the conventional measures.54

55. Bardia (2002) wrangled that the concept of EVA is better than the concept of accounting profit as a tool a value creation because it considers the overall cost of capital. In this paper an attempt has been made to analyze the financial performance of Infosys Technologies Ltd. On the basis of traditional parameters like ROCE, ROE, EPS, etc. and the new performance measure EVA.55

56. Mangala and Simpy (2002) discussed that maximizing shareholder value had become the new corporate paradigm. Although shareholder’s wealth maximization has been recognized by managers and researchers, is the ultimate corporate goal, the maxim has gained a new dimension only in


the recent years, due to the introduction of the concept of EVA. EVA was coined and registered by Stern Stewart &Co. the present paper attempts to study the relationship between EVA and Market value among various companies in India. The EVA of 15 companies among five Industries (Fast Moving, Consumer Goods, Information Technology, Pharma, Automobile and Textile) has been computed. The results of the analysis confirm Stern’s hypothesis and conclude that the company’s current operational value (COV) is more significant in contributing to a change in market value of shares in Indian context.56

57. Loi and Liow (2002) examine the implications of economic value added (EVA) on real estate corporate strategies. The economic profit of 19 Singapore property companies is computed. Overall, according to the results, they suggest that most property companies failed to generate enough periodic income to cover their cost of capital. Hence, the companies appear to be destroying rather than creating corporate wealth. They also highlight some reasons why economic value added (EVA) tends to understate the true economic performance of real estate, both as an investment and as a business unit.57

58. Roztocki (2003) examines the implementation of the Integrated Activity- Based Costing and Economic Value Added System in the service sector. This system is intended for use by those service companies for which the traditional costing system is not adequate. He discusses motivations for tracing overhead costs as well as capital costs, using the integrated

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system. In his study resulting improvements in the reliability of product cost information are illustrated through the example of a consulting firm, which moved from intuitive cost estimation to reliable cost analysis. Finally, he discusses the impact of this integrated system on the service sector's decision-making process and long-term business performance.\(^{58}\)

59. Larmande and Ponssard (2003) investigated an actual implementation of an EVA system through a case study. The case study provides detailed information on how the performance measure was cascaded down in the organization and how the standards were constructed. After two years in operation the actual bonuses paid by the system, as well as qualitative feedback from the managers involved, were analyzed. Based on their case study, and contrary to the general claims put forward by its advocates, they argued that EVA systems do not bypass the congruence-controllability dilemma.\(^{59}\)

60. Stoughton, Irvine and Zechner (2003) analyze firms’ capital allocation decisions when optimal capital structure is linked to the risk of underlying assets and when equity capital is costly and cannot be raised instantaneously. In their model, division managers receive private information and authority is delegated to them over risky project choices.

In their opinion the optimal mechanisms are related to EVA compensation and RAROC performance measurement systems. In the optimal mechanism, position limits will be

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employed but are not always completely utilized. Hurdle rates reflect capital allocation through a division specific capital structure. In the multidivisional context the optimal capital allocation mechanism incorporates valuable externalities leading to overall firm EVA maximization.\textsuperscript{60}

61. Sparling and Turvey (2003) revisit the relationship between EVA and shareholder return and reexamine the evidence and issues surrounding the use of EVA as a tool for valuing investments. Using the Stern Stewart Fortune 1000 data, they examine two potential relationships for 33 food companies listed in the database. The correlations found were extremely weak in all instances tested.\textsuperscript{61}

62. Anderson, Weaver and Bey (2004) believe that major consideration in the application of EVA is the adjustment of a large number of accounting variables. There is no theory to guide the selection of the most relevant variables. The relevant set of variables is dependent on the financial structure and nature of the given firm.

Their objectives of this research are (1) to determine given the approximate steady state nature of most firms (i.e., a firm’s financial variables – R&D, debt, leases, etc. – are relatively stable) are the suggested adjustments even significant, (2) which accounting adjustments are most critical, (3) what is the impact of accounting adjustments on the explanatory power of EVA versus MVA, and (4) to compare the explanatory power of

\textsuperscript{60} Neal M. Stoughton, UC Irvine, Josef Zechner, “Optimal Capital Allocation Using RAROC and EVA“, University of Vienna, November 2003.

EVA with and without adjustments with traditional accounting measures.\textsuperscript{62}

\textbf{63.} Ramana (2004) believes that the development in the Indian capital market, both in depth and breadth along with the increased awareness among the shareholders, has increased the pressure on the companies to consistently perform better. One of the indicators of such performance is the Market Value Added (MVA). As per Stewart’s (1991) claim, EVA is the ultimate proxy of MVA. Several studies examined the relationship between EVA and MVA and Most of them found evidence to support Stewart’s claim.

Despite the popularity of the concept, very few studies have been undertaken to empirically test the ability of EVA to reflect or proxy the MVA of Indian companies. Thus he makes in his study an attempt to fill the gap and empirically examines the relationship between MVA and EVA of the Indian companies. Finally he indicates that there is no strong evidence to support that EVA is superior to the traditional performance measures in its association with MVA.\textsuperscript{63}

\textbf{3-2) SPECIFIC BOOKS ON THE SUBJECT}

The survey of the earlier literature consists of three books. Out of these, two books have been written by foreign authors and only one book belongs to Indian authors.

\textbf{1.} Grant (1997) uses the neoclassical wealth model to show that MVA is equal to the present value of the firm’s expected EVA. Then the author looks at the empirical evidence for large U.S.


wealth creator and also financial characteristic of firms that have destroyed wealth. The empirical evidence for powerful wealth creators indicates that the dollar-based MVA and EVA relationship is statistically significant. Knowledge of the MVA and EVA characteristics of wealth wasters is important to corporate managers because it provides some meaningful insight into what not to do when making real investment decisions for the future. By those reviewing the author shows how EVA principles can be used to identify the best companies in the marketplace. Finally he focuses on the benefits of using EVA in a company and an industry analysis and also assessing the underlying strength of the economy.64

2. Young and Stephen (2003) they have striven to provide a fair and balanced assessment of EVA/VBM implementation, covering failures as well as success. The authors have organized their book in three parts. In part I, they lay out the basic concept of EVA and value based management. In second part they revisit key topics address. The topic of management compensation in both parts, but while the focus of the discussion in part I is mainly strategic and conceptual , part II shows in detail, how an EVA- linked bonus plan actually works. Part II addresses a number of other technical issues as well as, including the cost of capital, accounting adjustments to EVA, and alternative value-based management approaches. In the final part of the book, the authors present their conclusions; including some practical tips on making EVA work.65

3. Pal Singh and Garg (2004) have compared some selected financial variables like ROCE, EPS, ARNW, MVA, Kp, Lp and NPV with EVA. They observed in almost all cases, the positive relationship has been established between the variables under reference. The different correlation matrix tables have approved that EVA is also giving the results in the same direction for the rationale underlying.

During the multiple regression analysis in their study, it became apparent that EVA was the single largest and most consistent variable, which has a decisive role in predicting the MVA. Their study concludes that the relationship between EVA and MVA is statistically significant.66

EVA as an emerging concept of financial management has strong underlying standards, regulations and natural appeal. It appears that the concept is fairly clear in the mind of almost all these researchers whose studies have been reviewed above. It also appears that the entire business world is moving towards greater transparency, supporting financial disclosure mechanism and superior corporate governance. In such fast changing business environment, the investor friendly financial performance measure may, perhaps compose this corridor full of spanking new air. This is more so in the emerging international economic order where globally well-known companies are competing for lowest cost of capital and understandably the lower cost of capital may help them in providing some avenues of highest risk-adjusted returns.

Many researchers have applied econometric tools for assessing the impact of EVA concept on corporate financial performance. Starting from Stern in 1990 to Ramana in 2004, it may be revealed that Indian researcher started contributing to this field in

1997 with Banerjee “Economic Value Added (EVA): a better performance measure”. In the beginning, the researchers wrote on the conceptual aspects of EVA but later some empirical studies have also been accomplished. Ashok Benerjee, Govindraj Ethiraj, M. Thenmozhie, Deepa Mangala, Simpy Joura, Rajeshwar, Bardia and D.V. Ramana are among the leading Indian researchers who have carried out a range of empirical studies on EVA. However no study has been conducted to investigate the effect of capital structure on EVA but some studies have attempted to establish the cross-relationship of MVA concept with EVA, ROA, ROCE, NPV, EPS, etc.

According to the mentioned explanation, this study concentrates to identify the effect of capital structure on Economic Value Added and also to determine the situation of EVA among the other traditional performance measures in order to display companies’ market returns. It conducts an empirical survey of EVA on Automobile Industry for the period of the study.