CHAPTER 1
INTRODUCTION

1. INTRODUCTION

Risk nourishes business but it could also kill it. There can be no business without risk. It is the return that comes from taking risk that keep the spirit of entrepreneurship alive and business going while it encourages and tempts business, risk could kill if not properly managed. It could just wipe away the company. The move so in a borderless world with volatile markets. Every new move, every attempt by companies to make a move ahead have some or other caveat attached to it as an accompanying risk.

Business being the speculative affair, involves tremendous risk and present the organization from the uncertainty, the management must recognize the sensitive areas, identify problems and counter act their effects upon the firm. As business risk takes into account financial, economical, political, social, industrial and corporate problems, there are many possible adverse consequences like potential business failure, inability to raise financing, excessive loan restrictions, increased cost of capital, declining Profitability and drop in market prices.

Economic Value Added (EVA) is a blossoming model for corporate financial disclosure in India. The practically all right hard fact, that equity has a cost is slowly but surely striking in the minds of corporate managers. The insinuation of the study also lies in the bright future of Indian corporate with a
A chock-a-block compliance with the concept. The use of Economic Value Added as an alternative of turnover-based analysis crosses all industrial and commercial boundaries and allows meaningful comparison between the different schools of thought.

Value Added indicated the net wealth created by the production of goods or services during a specified period in a corporate; therefore the concept is superior to the exiting methods. No enterprise survives or grows if it fails to generate wealth for ultimate stakeholders. An enterprise may exist without making profit but cannot survive without adding value. The enterprise not making profit shall turn into poor health, as we find many examples in Public sector, but not adding up value may cause it termination over a period of time.

Economic Value Added is a basically a broader financial measure of judging the output of a corporate in particular and the industry in which such corporate works in general to economic growth and development of nation. Hence the mounting significance of the EVA concept has necessitated the research to carry-out a self regulating study for throwing light on some of the myths and realities of EVA in relation to business risk.

Business and risk are inseparable. The nature and the magnitude of risks that companies have to cope with have increased at a mind-boggling rate in the recent times. Each of these, though emanating from unexpected corners has a
definite impact in the bottom lines of the companies beside its value & Valuations\(^1\).

2. REVIEW OF LITERATURE

At the commencement of any research work, it is necessary to have the idea about the research which was done previously. Generally literature survey is to be considered as the collection of information from other sources. A literature review is a critical and in-depth evaluation of previous research. It is a summary and synopsis of a particular area of research. The following few important studies have been reviewed to know the importance of EVA and its related topics and the research gap that exist.

Stern (1990)\(^1\) 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 shareholder’s wealth in an organization. EVA is a performance measure which is 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. 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.

Stewart (1991)\(^2\) was the first person who studied the relationship between EVA and shareholder wealth with market data of 618 U.S. companies and presented the results in his book “The quest for value”. He started that EVA and MVA correspond with each quite well among selected U.S. companies. The study provided the first empirical evidence of EVA potential as a proxy for MVA and reported a R2 of 0.97 between changes in EVA and changes in MVA for 25 groupings of firms over the period 1987-88. Only the relationship between negative MVA did not hold very well. According to Stewart it was because the potential of liquidation, recovery, recapitalization,
or takeover used to set a floor on a company’s market value. The study found that MVA and EVA corresponded to each other best when changes in EVA and MVA were studied and not the absolute levels. Moreover, changes in EVA and MVA were not affected so much by accounting distortions and inflation than the absolute values. Further, Stern, Stewart, and Chew (1995) concluded that changes in EVA over a Five-year period explained 50% of the change in MVA over the same period.

**Rutledge (1993)** supported the concept as such. Economic value added so a phrase used by Stern Stewart & Company to describes the way to measure economic profit. The way to calculate economic profit. The way to calculate economic profit is to subtract its cost of charge capital from after tax profits.

A positive number means that an economic profit exists. Managers today are being swamped of sophisticated new management concepts, each with a fancy name and its own glossary of technical terminology. The latest serving dish of this kind is EVA(Economic Value Added), Stern Stewart and Co’s name for the old friend’s economic profit, the old Alfred Marshal concept taught everywhere in micro economic classes.

**Basu and Fernald (1995)** did some analyses of data on gross output for two digit manufacturing firms. The analysis reveals that a rise in the performance of manufacturing sector has virtually no impact on the productivity of other sectors. Examination of various data confirms the findings
of past studies that bring to close output spillovers instead appear huge. An idea was projected for the differences, illustrating why, with imperfect competition, the application of value added concept caused doubtful findings of enormous apparent external effects.

Ochsner (1995) brought into being that ‘Economic Value Added’ (EVA) is a performance measure that examines the company’s financial results in economic language. It also quantifies the annual constituent of free cash inflows minus total capital expenses. This over 50-years old methodology is becoming popular once again because it is not an accounting-based approach, something that may managers have found unreliable. More importantly, EVA technique is making a comeback because they can gauge whether a firm is generating economic returns. This capability satisfies investors that want companies to record such returns. In addition, EVA can be used as a tool for assessing financial performance. This performance measures also has a downside that makes it unacceptable to some managers, who include the fact that EVA uses software in computing financial results, so that managers can not actually know, how performance numbers are derived.

Myers (1996) Myers amongst others has arrived at this conclusion, “The fact is EVA, CFROI, and all the others are promised on fundamental economics that 20 years ago was called residual income.”
Birchard (1996)\textsuperscript{7} established that NE-based Valmont Industries Inc. has implemented a variation of the economic concept called Total Value Impact(TVI) in a bid to simplify profit calculations. TVI differs from traditional computation of net operation profit by subtracting a 10\% charge for capital employed, rather than the capital used to produce the profit. The implementation of TVI has allowed the company to rationalize its profit computations.

Krishna (1996)\textsuperscript{8} in his study “profitability analysis-an overview”, has suggested that for measuring long-term profitability gross fixed capital at current prices is considered as investment base and for measuring short-term profitability the value added at current prices is considered as the denominator. In both the cases the numerator can be EBDIT or OCF as the case may be.

Luber (1996)\textsuperscript{9} confirmed that MVA is in compliance with the direction of the market. Studies have shown that a company which shows a positive EVA over a period of time will also have an increasing MVA while negative EVA will bring down MVA as the market losses confidence in the competence of a company to ensure a handsome return on the invested capital. The five topmost companies as the wealth creators-Coke, GE, Microsoft, Merck and Philip Morris- have strong EVAs and are expected to remain in the top niche in the upcoming years.
Padgett (1996) recognized that the ranking of top 100 banks in terms of MVA and EVA by the financial consulting company Stern Stewart & Company reveals that the 100 banks had an average return of 12.37%. The figure was only 97 basic points higher than their average weighted cost of capital of 0.11, which indicates that the value of bank’s capital to their shareholders has stagnated. The bank that had the best position for creating MVA in 1995 was Citicorp, which created dollar 13.5 billion.

Zimmerman (1997) Zimmerman argues that such deviations significantly increases both litigation costs (with the implication that the official financial statements are not really “true and fair”) and administrative costs (through accounting systems becoming more complicated, costly to administer, and difficult for operating managers to comprehend.)

Stewart’s (1997) Stewart’s recommendation that adjustments should be limited to those situations where the outcomes are significant, where the item of interest maybe reasonably influenced by management, and where the required information is readily available.

Chen and Dodd (1997) Argue that a firm could “implement performance measures based on (the computationally simpler) residual income which will likely provide them with most of the practical benefits promised by an EVA system.”
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.

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.

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 measure.

Benerjee (1997) has conducted an empirical research to find the superiority of EVA over other traditional financial performance measures. Ten industries have been chosen and each industry is represented by four/ five companies. ROI and EVA have been calculated for sample companies and comparison of both has been undertaken, showing the superiority of EVA over ROI. Indian companies are gradually recognizing the importance of EVA.
Some of such companies are Ranbaxy Laboratories, Samtel India Ltd. and Infosys Technologies Ltd.

Uyemura (1997)\textsuperscript{18} observed that over the last 20 years, bankers have toiled with a variety of risk management and profit concepts, such as matched-maturity funds transfer pricing, duration analysis and activity based costing accounting. Today, the interest has developed in Value-at-Risk(VAR) capital allocations and risk adjusted return on capital. Such tools are important to understand and implement when analyzing specific transitions; however, a top down approach be the best choice for portfolios or lines of business. The article describes a ‘top-down’ approach to risk management, easily understood and simpler to implement and lower in cost than traditional approaches by using economic value added(EVA) concept.

Brands, K(1997)\textsuperscript{19} puts pen to paper and held that Management Accountants who want to sharpen their financial management skills may come for attending the Financial Management Workshop being offered by the Institute of Management Accountants to learn about theory as well as practical examples and cases, and are given handouts in addition to the course material. At the beginning of the course, the discussion touches on the financial manager’s role. It is subsequently followed by the topics as capital budgeting, cost of money and international finance. Aside from these basics, the workshop also tackles current of economic profit is discussed. Management accountants intending to further their education benefited greatly from the workshop.
**Kirchner (1997)** brought into being through the CEO of Millennium Chemicals, William M. Landuyt that the company is prepared to restructure business in order to remain competitive in the industry. Landuyt supplemented that the company is implementing EVA, that would lower operating costs by $11 million in 1997 and that a new corporate culture is being instilled in the workforce in hopes to further increase the companies productivity. His investment decisions are based on the economic value added approach.

**Rajeshwar (1997)** offered in his study that EVA can also be used as a device for shareholder’s communication and manager incentive systems, apart from measuring the financial performance of an organization. Demand for EVA among the corporate world has spurred competition among financial consultants, who help in computing EVAs of business organizations.

**Biddle et al (1998)** concluded in their study that firms that adopt residual income based incentives plans exhibit increased income. This study supports that managers do respond to residual income based plans. Therefore, EVA and residual income could prove effective in motivating managers for shareholder wealth creation but whether implementation of EVA and residual income based incentives have been truly effective remain an open question for future research.
Peter Drucker (1998)\textsuperscript{23} As Peter Drucker puts it in his Harvard Business review (1998 p,14) Article EVA is based upon something we have known for a long time, what we call profits, the money left to service equity, is usually no profit at all. Until a business returns a profit that is greater than its cost of capital, it operates at a loss. Never mind that it pays taxes as if it had a genuine profit. The enterprise still returns, less to the economy than it devours in resources, Until then it does not create wealth it destroys it.

Brabazon and Sweeney (1998)\textsuperscript{24} 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.

Ethiraj (1998)\textsuperscript{25} derived that in Indian market many companies are using capital inefficiently and thus destroying value. The tool to measure capital inefficiently and destroying value, the tool of measure capital efficiency 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 criteria.

**Chhabria (1998)**\(^{26}\) confirmed that many companies are taken as wealth destroyers due to the reason that they are in commodity business. Their fortunes are closely linked to the cyclical wings of these industries. ‘Intelligent Investors’ took 1638 companies for the period 1993 to 1998 and analysed, which companies were creating or destroying wealth. A number of measures have been evolved to find out the wealth creating or destroying wealth. A number of measures have been evolved to find out the wealth creating companies such as Boston Consulting Group’s TSR (Total Shareholder’s Return), Stern Stewart consulting firm’s EVA (Economic Value Added) and MVA (Market Value Added). Among these EVA is quite popular. However, it is not without limitations and cannot be used in isolation. The author suggests that while seeking for the stocks to invest in, keep away from capital intensive commodity businesses and companies that are into unrelated diversifications. Finally, a wealth creator is that which can expand and strengthen its existing business.

**Young (1999)**\(^{27}\) EVA is essentially the same as residual income, though the latter measure is normally expressed as net income less a charge for the cost of equity capital (with the cost of debt already included in the calculation of net income)
Banerjee and Jain (1999)\textsuperscript{28} Studied the relationship between shareholder wealth and certain financial variables such as Earning Per Share, Adjusted Return on Net worth, Capital Productivity, Labor Productivity, EVA & Market value Added by using multiple linear regression models. A statistical analysis of the Drugs and Pharmaceutical industry during the period 1990-91 through 1997-98 rebuild that EVA was the most significant variable in every year except for 1991-92 and 1997-98. However it is to be noted that this was undisclosed information. If companies were to disclose this information fully, there could be a direct link between share prices and EVA.

Hall and Brummer (1999)\textsuperscript{29} determined empirically which performance measures of a company correlate the best with its external performance measure as represented by MVA of the corporation. Based on a sample of 135 industrial companies listed on the Johannesburg Stock Exchange, an empirical analysis was conducted for 11 years time-period. The results showed that the highest consistent positive correlation coefficient obtained was between MVA and EVA with inflation adjustments to data. The very same pattern was obtained with discounted EVA. Slightly lower positive correlations were found between MVA and the other performance measures like ROA, ROE, EPS and DPS. These correlation coefficients were found to be higher when data with inflation adjustments were utilized.
Moore (1999)\textsuperscript{30} developed a model that examined the relationship between firm strategy in terms of EVA, customer satisfaction (CS) and firm performance in terms of MVA. The combined data tracked the satisfaction scores of 95 publically traded companies from 1994 to 1998. The data regarding MVA and EVA was collected from Stern Stewart and Company’s performance 1000 database. The construct chosen to measure firm level customer satisfaction was American customer Satisfaction Index (ACSI) using a cross-sectional regression framework, the study found a positive and significant relationship between CS, EVA and MVA. It depicted that interaction effect of EVA and CS provide incremental information about the nature of MVA. Moreover, by using a matrix approach, the study identified four groups i.e. integrated leaders, cost advantaged, differential advantaged and competitive parity firms. It was hypothesized that the differential advantage based on high level of ACSI would provide a larger benefit to MVA than the cost advantage based on EVA. The cost advantaged group was the second highest performer indicating that the market may be rewarding economic efficiency over long-term customer satisfaction building.

Evans, John(1999)\textsuperscript{31} argued that despite a growing literature, the relationship between the structure of executive compensation and firm the link between Economic Value Added as a measure of firm performance and the form of executive compensation. An examination of the compensation structure and economic value added of 209 companies in 1995-98 provides evidence supporting incentive compensation. Economic Value Added is found to be
positively and significantly related to incentive-based compensation. Cash-based remuneration was found to be unrelated to EVA performance.

**Singh, A.K. (1999)**\(^{32}\) tried to provide a new framework of decision making based on EVA and BPR. Both of them have gained a lot of attention of corporate managers in the Fortune 500 companies but still a lot needs to be done. Many of the finance managers in India are not able to appreciate the potential of EVA and BPR. Although Indian corporate sector has slowly started giving recognition to these critical concepts of success in the light of competitive global village but it seems that it may take a few more years for the corporate executives to realize the potential of the buzzwords of 21\(^{st}\) century. It can be concluded that maximizing value of shareholders is the prime concern of any organization and it should be kept in mind that change is the only thing which is permanent in nature and obliteration should be welcomed if it is for the better and the managers of public organizations should take decisions as if it is a private organization so that the capital is optimally utilized and result in maximizing wealth of shareholders.

**Kumar, S. (2000)**\(^{33}\) 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 terms of EVA (in Rs.) per unit of capital employed.

**Fernandez (2001)**\(^{34}\) examined the correlation between EVA and MVA of 582 American companies for the period 1983-97. 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.

**Weaver (2001)**\(^{35}\) observed that over the past decade, consultants, the popular business press, a number of companies, and a few investment analysts have heralded Economic Value Added. In theory, it is net operating profit after tax (NOPAT) less a capital charge for the invested capital (IC) employed in the business. This survey bridges the gap between “theory” and “practice” by detailing how EVA proponents measures EVA. This survey is important because its fieldwork identifies significant in consistencies in the measurement of EVA and its major components.

**Mangala and Joura (2002)**\(^{36}\) supported Stern’s belief that EVA is the most important driver influencing the market value of share. So, if the company improves EVA by increasing its return on capital employed and lowering its cost of capital, its market value will increased. In this study, EVA of 15 companies among five industries (Fast moving consumer goods, information technology, pharma, Automobiles and textile) was computed for a period of
four years ranging from 1996-97 to 1999-2000. The results obtained by using regression 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

Bardia (2002)\(^{37}\) wrangled that the concept of EVA is better than the concept of accounting profit as a tool of 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 of EVA.

Bardia, S.C. (2002)\(^{38}\) revealed that the concept of EVA has caught on the fancy of investment analysts as of measuring corporate performance. In a dynamic corporate environment a common investor finds it increasingly difficult to monitor his investments. The method of EVA guides the investors in evaluating the performance of the company and monitoring their investments. It is claimed that EVA is the sole method of accounting properly for various dimensions by which a company’s value may be added or lost. In fact, the method emphasizes the quality of earning and not just the quantity. As a matter of number of companies adopting EVA as a tool of performance measurement, is increasing sharply in India.
Costigan and Linda (2002)\textsuperscript{39} observed that the EVA is a new measure of performance that is purported to better align managers incentives to that of the shareholders. Accordingly, firms that experience higher agency conflicts should be more included to use this performance evaluation system. Additionally, the organizational strategy of the firm are defined as firms that apply a differentiation strategy while defender firms focus on being cost-leaders. Firms identified as prospectors should be less likely to use EVA. One hundred and fifteen firms were identified as being adopters of EVA. Logistic regression was performed to contrast these firms to a control group of 1,271 non-adopters. The results indicate that firms using EVA exhibit percentage of institutional ownership and a lower percentage of insider ownership than non-adopters. Prospectors firms as defined by a higher ratio of research and development to sales trend to use EVA less than defender firms. Accounting adjustment are a focal point of the EVA formulation and the results presented in this study suggest that providing appropriate incentives may be more complex than the developers of EVA.

Mangala and Simpy (2002)\textsuperscript{40} discussed. That maximizing shareholder value had become the new corporate paradigm. Although shareholder’s wealth maximization has been recognized by managers and researcher 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 and Co. shareholders wealth is equal to the market price of shares multiplied by the number of equity shares outstanding.
Stern believed that EVA is the most important driver influencing the market value of a share. So, if the company improves EVA by increasing its return on capital employed and lowering its cost of capital, its market value will increase. The author in his 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, Automobiles, and Textile) has been computed. The results of the analysis confirm stern’s hypothesis and that the company’s Current Operational Value (COV) is more significant in contributing to a change in a market value of shares in Indian context.

Shriever (2002)\textsuperscript{41} concluded that the researcher should help the user of DCF methods by clearly setting for the relationship of free cash flow (FCF) and economic value added (EVATM) concepts to each other and to the more traditional applications of DCF thinking. The research team follows others in demonstrating the equivalence between EVA and NPV, but their approach is more general in that it links the problem of security valuation, organization valuation, and investment project selection, and additionally, the approach relates more directly to use of standard financial accounting information. Beginning with the cash budget identify, we show that the discounting of appropriately defined cash flows under the free-cash value at on approach (FCF) is mathematically equivalent to the discounting of appropriately defined
economic profit after-tax (NOPAT), found by adding after-tax interested payments to net profit after taxes, is central to both approaches, but there the computational similarities and the FCF approach focuses on the periodic total cash flows obtained by deducting total net investment and adding net debt issuance to net operating cash flow, whereas the EVATM approach requires defining the periodic total investment in the firm. In a project valuation context, both FCF and EVATM are conceptually equivalent to NPV. Each approach necessitates a myriad of adjustment to the accounting information available for most corporations.

Wet (2005)\textsuperscript{42} conducted a study on EVA–MVA relationship of 89 Industrial firms of South Africa and found that EVA did not show the strongest correlation with MVA.

Kukreja and Giridhar (2005)\textsuperscript{43} evaluated the financial performance of 23 selected companies from Indian pharmaceuticals industry by using various new breed value based performance measures. It found that the companies that perform well on appropriate value based performance metrics are amply awarded by capital markets. Using 115 firm year observations, a correlation study was undertaken to see which metric (out of nine i.e. RONW, ROCE, EPS, EVA, current Operational value, Future Growth value, CFROI (%), Free Cash MVA were Future Growth Value, Current Operational Value, Free Cash Flow and EVA. Here Growth Value which accounted for 71% variation in MVA.
Medeiros (2005)\textsuperscript{44} reported empirical evidence on the relationship between Economic Value Added and stock returns in Brazilian firms. The sample comprised of 6 Brazilian companies, which had disclosed their EVA for at least a four-year period (1996-1999). The hypothesis that EVA affected stock returns was tested through linear regression, using alternative models. A stock return was taken as the dependent variable and one-year lagged change in EVA to be the independent variable. The study found that stock returns were influenced by the past behavior of EVA.

Irala (2005)\textsuperscript{45} An appropriate performance measure should assess how managerial actions affect the firm value. In this regard EVA is considered as better alternative to the traditional performance measures such as Profits, EPS, and ROE etc. EVA based performance drive managers to employ firm’s assets more productively and it helps in reduction of differences in the interests of the managers and shareholders.

Kim (2006)\textsuperscript{46} conducted a study and tested the hypothesis on hospitality sectors firms and compared EVA with traditional measures where he found high association of returns of hospitality industry firms that to with EVA.

Dhananjay Sahu, Prashant Kumar & Brijesh Pratap singh (2007)\textsuperscript{47} had undertaken the study on “SVA: The Value Driver and its Traditional Counterparts” had found that the shareholder value did not have the strongest
correlation with the market price. The regression analysis was used for the study of variables.

Ghanbari and More (2007)\textsuperscript{48} analyzed the relationship between EVA and MVA of automobile industry in India and results indicate that there are strong evidences to support Stern- Stewart’s claim.

Kumar and Pal (2008)\textsuperscript{49} described that measurement of shareholders value in an enterprise forms the core of corporate performance. Companies adopt different methods for measuring the wealth they create for their shareholders. However, the subject matter of the best method still attracts a great deal of discussion among academicians and corporate managers. This paper examined whether the concept of Economic Value Added (EVA) is well understood by corporate managers and compared it with the other traditional financial performance indicators. For the purpose of analysis, this study relied on the information gathered through a primary survey in 18 out of 30 companies included in the BSE sensex. According to this study, EVA has been ranked as the best indicator of performance, followed by Return on Capital Employed (ROCE), Rate of Return, Profit Margin, and Residual Income. It was also found that while some companies had already adopted the EVA technique to measure the shareholder value, a majority of the companies were aware of it, but yet to adopt this model.
Vishwanath (2009) discussed the implementation of EVA financial management system at Godrej Consumer Products Ltd. (GCPL), a leading FMCG company in India in 2001. Six group companies of Godrej (Godrej Consumer Products, Godrej Sara Lee, Godrej Foods, Godrej Industries, Godrej Properties and Godrej Agrovet) implemented EVA. This was facilitated by Stern Stewart & company. GCPL implemented the EVA programmer at all non-unionized levels. The program covered 2500 employees. The study explained three elements of EVA program followed by GCPL i.e. a) EVA centers, b) Operational Practices of EVA drivers which improve EVA results and c) EVA-based incentive program for bonus-eligible managers. The steps involved in the EVA implementation at GCPL were (1) EVA of various businesses was measured and the implications of the numbers understood, (2) Targets on EVA improvement were then set over a three year time frame and (3) An exhaustive manual was made about what each function could do to improve the EVA of the business. This was a detailed task involving the consultants, the functional heads and HR department. In addition, this case study also highlighted the motivations, benefits, mechanics, limitations and issues in implementing EVA. The existing literature reveals the research gap as far as answers to certain crucial queries are concerned like to what extent EVA metric is being used by Indian companies and what are the factors that can influence the Indian companies EVA-disclosure choices. Thus, it addresses the need for a detailed study that specifically explores the EVA usage and reporting practices adopted by Indian companies.
3. NEED FOR THE STUDY

The need for the study has arisen due to the following reasons:

1) The reviewing of existing literature has provided a point to emphasize on the performance measurement using better metrics which showed here better explanatory power in terms of value added such as EVA, MVA and SVA.

2) Another reason for the study is that in order to provide unique methodology of measuring of competitiveness in the cement industry and its relation with business risk.

3) As there is no exhaustive empirical investigation available on select cement companies of the study though there are several studies on measurement of shareholder value creation in manufacturing sector.

4. SIGNIFICANCE OF THE STUDY

This study will be useful to the Indian cement companies which have been experiencing rapid change in business environment due to liberalization, privatization and Globalization. The study conducted here will help the manufacturers and other stakeholders in understanding the gimmicks of value creation and competitiveness. The knowledge of value addition in the cement companies enables the respective companies in adopting measures to improve their level of competitiveness. The change in environment has produced the impact on business models that the cement companies are practicing. Due to this depth and dimension of business risk underwent a change. The impact of
business risk on value creation in term of Economic Value Added, Market Value Added and Shareholders Value Added is understood. Impact assessment and analysis is done here will help the companies of the study to manage their risk in an optimum manner in adding value. This study will serve as a milestone to the policymakers in the government and to Confederation of Indian Industry (CII) so that the Indian cement industry may be directed towards a better pace with 21st century and times ahead.

Apart from these, this study will provide a chance to prospective researchers to conduct similar study in other Indian Industries. And, the present study will serve this society at large in terms of quality production, shareholders wealth maximization and overall prosperity of the nation.

5. OBJECTIVES OF THE STUDY

The first and foremost objective of the present study is to understand the impact of business risk on the value creation which brings the competitiveness of the firms in the industry. In this context, the study attempts to peruse the following objectives specifically:

1) To calculate EVA and MVA of Indian select cement companies for the study period to assess their success in creating value;

2) To classify the select cement companies in the industry as the Value Creators, Value Destroyers, Value Pretenders and Value Victims.

3) To know the different components of business risk of cement companies;
4) To know the relationship between different component of business risk and value addition of companies;

5) To understand the performance of cement companies through the metric called Economic and Market Value Addition per unit of Business Risk; and

6) To offer suggestions along with the suggestive framework of value management in the light of findings.

6. HYPOTHESIS OF THE STUDY

Hypothesis formulated for the study are three in number. They are as follows:

**HYPOTHESIS 1**

Ho = There is no difference in the performance of select cement companies in the industry in creating value such as Economic Value and Market Value as the nature of business is same.

Ha = There is significant difference in the performance of select cement companies in creating value though the nature of business is same.

**HYPOTHESIS 2**

Ho = All profit making cement companies are having uniform amount of business risk

Ha = All profit making cement companies are not having uniform amount of business risk
HYPOTHESIS 3

Ho = There is no significant relation between business risk consisting of operating and financial risk and value added in term of Economic and Market Value Added respectively.

Ha = There is significant relation between business risk consisting of operating and financial risk and Economic Value Added and Market Value Added respectively.

7. METHODOLOGY

In order to conduct the study, the following two methods have been employed.

I. Methodology relating to the determination of competiveness of cement companies through EVA

II. Methodology relating to Business Risk

I) Methodology relating to competiveness understanding of select cement companies through EVA metric

In the first, Economic Value Added is ascertained by deducting over-all cost of capital from Net operating Profit After Tax (NOPAT). The over-all cost of capital is computed using the following:

\[ K_o = K_i \left( \frac{B}{v} \right) + K_e \left( \frac{S}{v} \right) \]

Where,

\[ K_i = \text{Cost of debt after tax} \]

\[ B = \text{Market Value of Debt} \]
Ke = Cost of equity =Rf+β(Rm-Rf)

Rf = Risk Free Rate of Return

β = Beta

Rm = Market Return

S = Market Value of equity

V = Value of Firm=B+S

In the second, Market Value Added is found by capitalizing Earnings Before Interest and Tax called Operating Profit by Over-all cost of Capital rate and deducting capital invested from the capitalized value of earnings before interest and taxes.

Standardization of EVA and MVA is undertaken in the form of value by dividing EVA and MVA respectively by capital Invested. Finally, Classification of companies is undertaken using value positioning Matrix which is explained below:

CLASSIFICATION OF COMPANIES

In order to understand the competitiveness of companies in the industry the Value Positioning Matrix (VPM) is used. The first step is the application of Value Positioning Matrix is identification of companies. Each Company so identified is then distributed into a matrix position on the basis of two criteria:

i) Standardized Economic Value Added (SEVA) and

ii) Standardized Market Value Added (SMVA)
Four possible categories of positions of companies may thus be found in the industry,

<table>
<thead>
<tr>
<th>SMVA</th>
<th>Value Creator</th>
<th>Value Pretender</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>Value Victim</td>
<td>Value Destroyer</td>
</tr>
<tr>
<td>High</td>
<td>SEVA</td>
<td></td>
</tr>
</tbody>
</table>

SEVA: Standardized Economic Value Added
SMVA: Standardized Market Value Added

Each one of the Companies in the industry in the matrix is explained below.

**VALUE DESTROYER**

A business company in this category is at a competitive disadvantage with a low no recognition in the market in terms of Market Value Added.

**VALUE VICTIM**

Companies in this category being in a strong competitive position in terms of Economic Value Addition but with low market recognition in terms of Market Value Added. Hence, value victim company is one where the Standardized Economic Value Added (SEVA) is high and Standardized Market Value Added (SMVA) is low.

**VALUE PRETENDER**

Companies in this category operating at a competitive disadvantage i.e. low Standardized Economic value Added (SEVA) but having a high Market
Value Addition. Value pretender company is one where low SEVA and high SMVA.

**VALUE CREATOR:**

Companies in this category are in the most favorable position with respect to both Economic Value Addition and Market Value Addition which mean that operationally and market performance wise companies are contributing/ adding value to organization and also to shareholders.

The above classification brings the strategic prescription to investors (shareholders) that the value destroyers should be got rid of, value creators should be cherished and reinforced, value victims must be invested by way of accumulating shares in systematic investment manner. Value Pretenders should be avoided for investment.

**II) Methodology Relating to Business Risk:**

Business risk has two components such as operating risk and financial risk. In order to calculate operating risk of the business, the degree of operating leverage is employed. Therefore,

\[
DOL = \frac{Sales - Variable \ Cost}{Operating \ Profit \ (EBIT)} \quad \text{........... (i)}
\]

Or

\[
DOL = \frac{Contribution}{Operating \ Profit \ (EBIT)} \quad \text{........... (ii)}
\]
As the information in regard to variable cost and contribution was not available specifically from annual reports of concerned companies, therefore, to get operating profit and contribution respectively, the following equations are used.

\[
EPS = \frac{(X-I)(1-T)-PD}{N} \quad \text{.......... (iii)}
\]

Where,

- \(EPS\) = Earnings per share
- \(X\) = Operating profit (EBIT)
- \(I\) = Interest
- \(T\) = Effective tax rate
- \(PD\) = Preference dividend
- \(N\) = Number of shares outstanding

Substituting all the values for variables in the equation (iii) except \(X\), operating profit is ascertained. To get the contribution, operating profit ascertained is added with operating fixed costs consisting of staff salary and depreciation representing one cash, and another non-cash.

In the second to understand the financial risk, degree of financial risk is adopted. The mathematical calculation of which is as follows:

\[
DOL = \frac{\text{Operating Profit (EBIT)}}{\text{Profit before tax (EBT)}} \quad \text{.......... (iv)}
\]

\[
DOL = \frac{\text{Operating Profit (EBIT)}}{\text{Profit before tax (EBT)}} \quad \text{.......... (v)}
\]
and, finally to know the total business risk of the firm, the degree of combined leverage (DCL) is used, the calculations of which is as follows;

\[
\text{DCL} = \text{DOL} \times \text{DFL} \quad \ldots \quad (vi)
\]

Or

\[
\text{DOL} = \frac{\text{Sales} - \text{Variable Cost}}{\text{Earnings before Tax (EBIT)}}, \quad \ldots \quad (vii)
\]

After the risk ascertainment, an analysis was carried out by using co-efficient of correlation technique to know the relationship between risk and Economic Value Added. Moreover, Economic Value Added Per unit of Business Risk and Market Value Added per unit of risk are also ascertained and analyzed respectively.

8. SAMPLE DESIGN

The whole Indian Cement Industry serves the population for the study. For the present study only seven profit making stock market listed Indian Companies were selected. They are as under:

1. ACC Ltd...
2. Ambuja Cements Ltd.
3. Birla Corporation Ltd
4. JK Cement Ltd.
5. Madras Cement Ltd/Ramco Cement
6. Shree Cements Ltd
7. Ultra Tech Cement Ltd
9. DATA COLLECTION

This study conceptually covers a period of only Five Years starting from 2009-10 to 2013-14 the data has been collected only through secondary sources. The secondary data has been collected from the book entitled 'Compendium of Top 500 Companies in India'. The financial information of all select seven Indian cement companies have been picked-up from the above data base. The beta of companies was taken from CMIE (Centre of Monitoring Indian Economy). However risk free rate bearing average auction rate on 364-Days Government of India Treasury Bills has been taken from the website of Reserve Bank of India.

10. PRESENTATION OF THE STUDY

The present study is being organized into six chapters. The presentation is in the following manner.

- First chapter is introductory in nature which deals with research design which includes introduction, significance of the study, objectives methodology employed, hypothesis, presentation and limitations of the study.

- A conceptual clarity as regard to business risk, value addition measurement tools like Economic Value Added (EVA), Market Value Added (MVA), and Shareholders Value Added (SVA) is dealt in the second chapter.
• The third chapter aims to provide a detailed background and profile of select Indian Cement Companies such as ACC Ltd., Ambuja Cements Ltd., Birla Corporation Ltd., JK Cement Ltd., Madras Cements Ltd., Shree Cement Ltd., and Ultratech Cement Ltd.

• Demystification of competitiveness of select Indian Cement companies through value added metric is undertaken in the fourth chapter.

• Dimension and depth of business risk and its impact on value addition is the subject matter of fifth chapter under the heading ‘Business Risk and value added: An impact Assessment and Analysis’, and

• The sixth chapter presents the major findings and conclusion emerged from the present study and suggestions offered for the improvement of efficiency in adding value through the proper management of business risk.
11. LIMITATIONS

Though the study brings to the fore interesting findings, it will not be of place to mention here some of its inherent limitations.

1. The calculation of EVA, MVA, and SVA could be done only for publicly traded companies i.e. these companies which are listed either in National Stock Exchange (NSE) or in Bombay Stock Exchange (BSE).

2. In order to calculate cost of equity, risk free rate of return is added with risk premium which is the multiplication of Beta with the difference in market return and risk free rate of return. The risk free rate of return can be interest rate provided on public provident Fund (PPF), Treasury bill or Government Bond Yield rate. But researcher has considered 364 days-Treasury bill as a proxy for risk free rate of return.

3. Results calculated and analyzed using the data is not validated personally

4. The sources of information used for the study is secondary in nature. No primary sources of information are used. To make more effective the present type of study, prospective researchers can work using both types of information.

5. The cost of equity used for our study is calculated adopting Capital Asset Pricing Method (CAPM). It could also be calculated using Equity Dividend Discount Model (DDM).

6. The present study is mainly confined to 5 years starting from 2009-10 to 2013-14 only.
7. The impact of inflation on Value Addition and other variables of business risk are not ascertained.

8. Operating fixed costs included cash as well as non-cash but staff salary and depreciation representing one cash and another non-cash are taken as fixed operating costs only. No other fixed costs are included to find the operating risk.

9. In order to make an assessment of refined EVA, a number of adjustments are to be made. But to calculate the EVA in our study, the information provided about EBIT and effective tax rate in the annual reports were only used.

10. Whatever the conclusions drawn on the basis of our study may not represent the entire industry because the accounting policies and methods adopted in preparing the final accounts vary from firm to firm in the industry.

12. **KEYWORDS USED IN THE STUDY**

The following keywords have been used in the study:

1. Risk free rate of Return
2. Beta
3. Market Risk Premium
4. Cost of Equity
5. Cost of debt
6. Cost of capital
7. NOPAT
Brief explanations of the terms is given as under

1. **Risk free rate of Return**: It is the rate of return from securities which are free from any type of risk. Generally, Government, backed securities are providing risk free return.

2. **Beta**: Beta is the measure of volatility of the stock in relation to the market. It is the index of systematic risk.
3. **Market risk Premium**: Market risk premium is the excess return generated in the market and above the risk free rate of return.

4. **Cost of Equity**: It is the minimum rate of return which investors expects from an equity financed project. This can be computed using risk of return plus risk premium.

5. **Cost of debt**: It is the minimum rate return which creditor expects from an financed project.

6. **Cost of capital**: Cost of capital is the minimum annual rate of return a business should earn on its long term capital to satisfy the providers of funds – since long term capital consists of equity and debt funds. Overall cost of capital is the weighted average cost of equity and debt.

7. **NOPAT**: It is the difference between sales revenue and operating costs including interest and taxes.

8. **Economic value added (EVA)**: It is the excess of NOPAT over cost of capital. In other words, it is the difference between Saturn on capital and cost of capital employed multiplied with invested capital.

9. **Market Value added (MVA)**: It is the excess of market capitalization over capital invested.

10. **Marketing Capitalizations**: It is the combination of market value debt and market of equity.

11. **Standardized Economic value added SEVA**: When economic value added is denuded by capital invested to produce the percentage to
understand the relative performance of capital invested is known as standardized economic value added (SEVA)

12. **Value positioning Matrix:** It is an arrangement of two value adding an a row and column

13. Standardized Market value added (SMVA): When market value added is divided by capital invested to produce the percentage to find the relation performance of capital invested is known as standardized market value added (SMVA)

14. **Operating risk:** It is the percentage change in company’s earnings before interest and tares due percentage change in sales in others, it is the relationship between contribution of the business and operating earnings.

15. **Financial risk:** It is the capacity of using financial fixed cost such as interest on loan and preference dividends to magnify the effect of change in operating earnings on earnings on earning viable to shareholders.

16. **Business risk:** It is the capacity of using fixed operating and financial cost to mighty the effect of change in sales on earnings available to share. Part differently, loss arising due to nom- meeting of fixed operating costs and financial cost through the sales is called business risk.

17. **Sustainable growth rate of earnings:** It is the product of savings and earnings which is a proxy for provision for growth to get this retained earnings ratio multiplied with return on equity ratio.
18. **EVAPUR**: Dividing of economic value added by degree of combined leverage produces economic value added per unit of risk (EVAPUR) which standardizes the EVA to know the efficiency of business risk management.

19. **Value creating Company**: A company is said to be value creating company only when it has high amount of standardized economic value added and standardized market value added.

20. **Value Destroying Company**: A company is said to be value destroying only when it has low amount of standardized economic value added and low amount of standardized market value added.

21. **Value Pretending Company**: A company is said to be value pretending only when it has high Amount of standardized market value added and low amount of standardized economic value added.

22. **Value Victim Company**: Value victim company is one company which has high Amount of standardized economic value added operationally at organizational level but has standardized market value added due to poor performance of the stock in the market.

23. **Range**: Range is a statistical teahouse which measures high and low.

24. **Volatility**: Volatility is the relationship between the range and average which measures the percentage of fluctuation.
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