ECONOMIC VALUE ADDED: A REVIEW OF LITERATURE

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This paper aims to review the existing literature on the EVA to get the insight view of the concept EVA, its calculation and to attain the information of various areas covered by the researchers for the itinerary of their observations and also to analyze the methodology followed by them. The studies conducted in the developed countries have largely been found to be supporting EVA though there are certain studies in these countries too that consider traditional measures as better tools of corporate performance reporting. However, in developing economies less numbers of studies are available supporting the practical soundness of the concept as a corporate performance measurement tool. The concept of EVA has gained significant attention in the advanced economies, but implementation issues and its soundness is under debate all over the world. The paper presents a wide-ranging literature review and a critical analysis to move towards EVA. It may be a very useful source of information to the researchers and managers who wish to understand and implement EVA and carry out further research on the diverse issues of this interesting and value adding performance metric.

Keywords: EVA, Market Value Added, NOPAT, Traditional measures, ROE.

1. Introduction

Wealth creation for the shareholders becomes the key to the prolonged survival of the organization. Shareholder’s wealth is measured in terms of returns they receive on their investment. Shareholder value creation is an innovative way of reflecting the quantum of incremental value a company generates for its shareholders, after providing for its Cost of operations and opportunity cost of capital. Many companies create wealth for its
shareholders in the present scenario, whereas other firms certainly destroy it. Creating shareholder value is the key to success in the financial world. There is increasing pressure on corporate executives to measure, manage, and report shareholder value creation. Now which measure is accurate to evaluate, that is the question for the current economic world. The empirical studies highlight that there is no single accounting measure which explains the variability in the shareholders wealth (Chen and Dodd, 1997; Rogerson, 1997). Any financial measures used in assessing firm’s performance must be highly correlated with shareholders wealth and on the other hand should not be subjected to randomness inherent in it. Traditional performance measures such as NOPAT, EPS, ROI, ROE etc. have been criticized due to their inability to incorporate full cost of capital thereby accounting income is not a consistent predictor of firm value and cannot be used for measuring corporate performance. To measure the firm's value, the Modern Value-Based Performance Measures were emerged and have received countless attention in recent years. Modern Value-Based Performance Measures aims to find out the generation or creation of shareholder's wealth by considering Net Present Value, Free Cash Flow, and Cost of Capital approaches. Such performance measures drive all business proceedings towards generating shareholder value and reach the pre-determined destination, i.e., maximizing shareholders' wealth, the eventual objective of a business firm grounded on sensible, pragmatic, and proficient stance. Among the various Value-based performance measures, the most reliable corporate performance measures are Economic Value Added (EVA). Pioneered and advocated by US based business consultant Stern Stewart and company argue that EVA can be used instead of earnings or cash from operations as measures of both internal and external performance. “Abandon earnings per share”, “Earnings, earnings per share, and earnings growth are misleading measures of corporate performance” and “The best practical periodic performance measure is EVA” (Stewart 1991). Further to support his hypothesis that EVA is a better performance measures than other performance measures Stewart (1994) cites in-house research indicating that “EVA stands well out from the crowd as the single best measures of performance. He further remarks that ‘EVA is almost 50% better than accounting based measures in explaining changes in the shareholders wealth”. Apart from this popular study, support for EVA has been acknowledged from other sources, Fortune, which regularly publishes EVA performance rating since 1993 has acknowledged EVA under different notations “today’s hottest financial idea”, “The Real way to creating wealth” and “A new way to find Bargains”. A sampling of the transnational’s implementing EVA-Siemens, Sony, Telstra,
Johnson Worldwide, and Akzo Nobel—indicates that this could well be this millennium's most relevant management technique (Business Today, 2000). Proponents of EVA have made following various claims about EVA to prove the supremacy of EVA over the traditional measures like EVA helps in reducing Agency conflict and improve decision making (Costigan & Lovata, 2002; Biddle et al. 1999) and EVA is more strongly associated with stock return than other measures. (Maditinos et al., 2006; Garvey and Milbourn 2000, Lehen and Makhija, 1997) EVA Improves Stock Performance (Ferguson et al., 2005) 4) EVA adds more informational content in explaining stock returns (Erasmus, 2008; Chen and Dodd, 1997; Kim, 2006; Palliam, 2006) 5) EVA and Market Value are correlated (Lefkowitz, 1999; O’Byrne, 1996; Uyemura, 1996; Peterson and Peterson, 1996).

1.1 Economic Value Added (EVA)
Economic Value Added (EVA) is an internal performance measure and the registered trademark of Stern Stewart & Co. of New York City (USA). EVA is a measure of calculating economic profit. Economic Value Added (EVA) is the financial performance measure that comes closer than any other to capturing the true economic profit of an enterprise (Alam and Nizamuddin 2012). EVA is another value-based metric that attains maximum attention and is recognized as the most accurate measure of its value. It is possible to calculate EVA separately, i.e. department-wise, product-wise, and service-wise EVA generated/lost (Narang 2012). Economic Value Added or EVA is a performance metric used to estimate the true economic profit generated by a firm. It also serves as an indicator of managerial performance. A negative EVA indicates that the business firm did not make enough profit to cover up the capital charges. EVA measures whether the operating profit is sufficient enough to cover the cost of capital. Stewart (1994) stated, "EVA is almost fifty percent better than its closest accounting-based competitor (including EPS, ROE and ROI) in explaining changes in shareholder wealth" The EVA methodology sanitizes the financial information it uses. Hence, the EVA process is real, or economic figures, and not notional ones (business today 2000). Stewart (2000) defines EVA as an estimate of real economic profit 'or the amount by which earnings fall short of the required minimum return rate that shareholders and lenders could get by investing in other securities of comparable risk. It is not a function of the market price of a company's scrip; instead, it is a measure that best explains the changes in the MVA of a company (Business Today, 2000).
1.2 Computation of Economic Value Added

EVA is the difference between NOPAT and the capital charge for both debt and equity, i.e., the overall capital cost.

Operationally defined,

\[ \text{EVA} = \text{NOPAT} - \text{WACC} \times \text{Economic Capital} \]

Where

\[ \text{NOPAT} = (\text{PAT} + \text{non-recurring expenses} + \text{revenue expenditure on R & D} + \text{interest expense} + \text{goodwill written off} + \text{provision for taxes}) - \text{non-recurring income} - \text{R & D amortization} - \text{cash operating taxes}. \]

\[ \text{WACC} = \text{Weighted average Cost of capital} = \text{cost of equity} \times \text{proportion of equity in total capital} + \text{Cost of debt} \times \text{proportion of debt in total capital} (1 - \text{tax rate}) + \text{cost of preference capital} \times \text{proportion of preference capital in total capital}. \]

\[ \text{Economic Capital} = \text{Net Fixed Assets} + \text{Investments} + \text{Current Assets} - (\text{NIBCLs} + \text{Miscellaneous Expenditure not written-off} + \text{Intangible Assets}) + (\text{Cumulative Non-Recurring Losses} + \text{Capitalized expenditure on R & D} + \text{Gross Goodwill}) - \text{Revaluation Reserve} - \text{Cumulative Non-Recurring Gains} \]

Here, if NOPAT exceeds the cost of capital, i.e., capital charge, the return is more than the cost, and hence company's EVA is positive. It indicates that the company has generated value for its shareholders. On the contrary, if NOPAT is less than the Cost of Capital, EVA is negative, and the company is a wealth destroyer. In such a situation, the firm should either increase the NOPAT or reduce the capital invested in improving EVA. Further, if NOPAT is equal to the Cost of Capital, it means EVA = 0, but this should be taken as sufficient achievement because shareholders have earned a return that compensates the risk taken by them. Hence, EVA, as an absolute measure that provides information about the value addition of the firm. EVA is a measure of financial performance, indicating whether a firm is generating real economic profit or not for creating wealth for shareholders.

1.3 Scope and objective of the Study

There has been a growing popularity of the EVA as a performance measure over the traditional measures because of many flaws of such measures. The most discussed disadvantage of traditional measures used fails to capture the shareholders value creation/destruction as a result of management actions. EVA has established as an internal
as well as external performance measure because it is consistent with the organizational objective of shareholder’s value creation. Due to its popularity lot of research work has been conducted in late 1990’s covering diverse issues on EVA. Although theoretically the significance of EVA has been proved but there exist gaps between the various studies about the superiority of EVA. Growing popularity of EVA create the curiosity to understand the concept with more clarity. So, this study is conceived with the idea of understanding of EVA and the various methodologies followed by the previous studies on this Concept. The paper covers existing empirical studies conducted on EVA during 1994 to 2015.

Literature on EVA: There is lot of literature available on the concept of EVA; most of the work is available on the debate of EVA’s relationship with stock returns and MVA and comparison of EVA with the standard accounting measures i.e., EPS, ROCE, PAT, ROTA etc. In the present paper First of all, it has been studied that in the different countries what are the various areas in which studies have been conducted in relation to the EVA. The different areas considered by the different researchers are discussed below:

1. **Relationship of EVA and MVA**– As per the claims of the advocates of EVA that EVA is the best predictor of MVA and this was also considered the ultimate proxy of the MVA. Such claims create the urge among the researcher to analyze them and there is lot of literature available on debating on this issue. This concept includes literature on linkages between EVA and MVA of companies, EVA as proxy for MVA, correlation between EVA & MVA, value drivers, firm performance and MVA, inter-industry analysis and survey, effectiveness of EVA and efficacy score approach etc. A survey of all the available literature in this regard speaks about the fact that a good number of empirical studies have concluded in favour of EVA over other conventional accounting based measures. Proponents of EVA include Stewart (1991), O’Byrne (1996), Uyemura et al., (1996), Milunovich and Tseui (1996), Lehn and Makhija (1997), Banerjee(1997), Patnayak and Mukherjee (1998), Banerjee and Jain (1999), Thenmozhi (2000), Geyser & Liebenberg (2003), Felltham et al. (2004), Medeiros (2005), Ebrahim et al. (2011), Reddy et al. (2011), Sharma and Kumar (2012), Nakhaaei and Hamid (2013) and Panigrahi et al. (2014). On the contrary, EVA has been criticised by many of the researchers on a number of grounds. Researchers who have criticised EVA include Peterson and Peterson (1996), Dodd and Chen (1996), Chen and Dodd (1997), Makelainen (1998), Biddle et al. (1999), Kramer and Peters (2001), Fernandez (2001), Ramezani, Soenen and Jung (2002), Peixto (2002), \

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EVA association with stock returns- EVA advocates claims that EVA is more strongly associated with stock return than other measures. This is also most widely covered aspect in the number of studies conducted on the concept of EVA. This includes literature on relationship of EVA and firm performance, evidences from stock returns, comparison of EVA with other accounting measures, portfolio selection tool, testing information content of EVA, error–rate, earning forecasts and residual income model etc. This aspect also divides the researchers in two groups. One group supports the findings of stern Stewart and company i.e EVA significantly associated with the stock returns. Lehn and Makhija(1997), Felltham et al. (2004), Taufik et al. (2008), Ebrahim et al. (2011), Maditinos et al., (2006); Garvey and Milbourn (2000). Contrary to this another group opposed the findings of first group. This group finds that conventional measure can more accurately associated to the stock returns eg.Dodd and Chen (1996), Peterson and Peterson (1996), Biddle et al. (1997), Bao and Bao (1998), West and Worthington (2004), Ismail (2006) and Hajjabbasi et al. (2012).


Firm’s value enhancement- It was claimed by the advocated of EVA that adoption of EVA can lead to the value creation in the lon run and EVA is accurate measure of the value creation. Value based management (VBM), true value, value creation & measurement, investment recovery and value added, cash value added and share holder value creation, shareholder value drivers etc. are some important aspects that have been studied under this category.But researcher have mixed view concerning to it. For instance, Panigrahi et al. (2014) Reddy et al. (2011) favored the claims of pioneered of EVA and on the other hand,Pareja and Grancolombiano (2001) Fernandez (2001) found no evidence to support the claims of Stern and steward that EVA has
significant impact on the firm’s value.

- EVA disclosure practices: Implementation of EVA process and its reporting in the annual reports of the companies considered the key for the long survival of the firm. So, this area is also considered by the researcher to analyze. There is very less literature available in this context and most of the research conducted in India found that there are very less companies who are reporting EVA in their annual reports may be because of the complicated procedure of calculating and implementing EVA. Kaur and Narang (2010) stated that just 37 companies (7.4 percent of the sample) specifically mentioned the EVA metric application in their Annual Report. Jain, R. K., and Jain, A. (2014) concluded that only thirteen companies reported EVA.

Methodologies used in the studies under review

In the present paper, methodology used and the methodology used by different researcher also observed and it was found that the methodology used can be classified into four categories that are conceptual, descriptive, empirical and exploratory cross-sectional. Conceptual papers are those covering basic/fundamental concepts in EVA while studies providing explanation or description of EVA content or process and implementation issues are classified as descriptive studies. Empirical studies cover those which have taken data from existing databases, reviews and case studies. Studies in which data collection is done through survey are classified as exploratory cross-sectional (Sharma and Kumar 2010) In the present study, about 80 papers analyzed and it was observed that maximum research is done using empirical research and very few researchers used the cross-sectional research.

5. Practical evidences on EVA

Stewart (1994) has expended that EVA is a powerful new management tool that has gained worldwide recognition as the standard corporate performance tool. Stern, Stewart, and Chew (1995) concluded that EVA changes over five years explained 50% of the change in MVA over the same period. Luber (1996) examines the relationship between MVA and EVA, and it was confirmed that MVA and EVA have a positive relationship. Milunovich and Tsuei (1996) It undoubtedly proved that EVA overpowered the other performance measures in association with MVA. It was concluded that a company could boost its MVA by consistently improving its EVA. The study argued that the relatively weak correlation between MVA and Free Cash Flows (FCF) was because FCF can be a
misleading indicator because it did not consider the capital cost. O'Byrne (1996) used capitalized EVA as an independent variable in a regression where market value divided by invested capital is the dependent variable using the nine-year data from 1985 to 1993 for the 6,551 companies, sample based on the 1993 Stern Stewart Performance 1000. The study found that EVA's level explained about 31% of the variance in market value, whereas the level of net operating profit after taxes explained only 17%. It was also observed that EVA changes explained 55% of variations in market value; on the other hand, changes in NOPAT explained only 33% variations. Hall and Brumer (1999) The study concluded that EVA and MVA had a highly positive consistent coefficient of correlation in case of inflation as well as with discounted EVA, whereas other measures ROA, ROE, EPS had lower positive correlated with MVA. The study favors EVA as a tool of performance measures and a predictor of value creation as it is positively correlated with MVA. Biddle et al. (1999) concluded that EVA is more closely related to stock returns than net income and other performance measures, and the study favors EVA and residual income techniques for the managerial decision-making tool and increases the shareholder's wealth. As such, it can be a useful tool for internal incentives decisions. Mangala and Joura (2002) supported Stern's belief that EVA is the most critical driver influencing share market value. Awan, Ghafoor (2014) value of the stock is affected by variable economic value added (EVA) and it is significant at a level less than 10%. Economic Value Added (EVA) is a key performance index that initiates or motivates companies to find out ways to increase efficiency of capital utilization and consequently produce a superior operating performance, and therefore should in theory reflect a stock's intrinsic value. Biddle et al. (1997) results do not support claims that EVA dominates earnings in relative information content, and suggest that earnings generally outperform EVA. Kramer and Pushner (1997) Standardised NOPAT explained more of the total variation in MVA than in Standardised EVA. Chen and Dodd (1998) did not support the assertion that EVA was the best measure for valuation purposes. Weaver (2001) the disparity of measurement techniques yielded significantly different EVA values, making it a limited tool that cannot be used for competitive analysis. Ramana (2004) demonstrated that the market responds to the accounting numbers (like PBIT & PAT) more than the numbers which are generated using some adjustments (NOPAT and EVA). So, companies should be careful in overusing the EVA as a proxy for MVA. Zaima et al. (2005) MVA-EVA relationship showed a systematic bias between the largest MVA firms and the smallest MVA firms. Finally, the results also provided corporate executives with a method to utilize the MVA-EVA-GDP
relationship to determine a reward payout ratio. Samadiyan et al. (2013) did not support Stewart in which economic value added had been introduced as a superior performance assessment criterion compared with other criteria in describing stock return behavior. Bhasin and Shaikh (2013) “there is no strong evidence to support Stern Stewart’s claim that EVA is superior to the traditional performance measures in its association with MVA”. Kaur and Narang (2010) stated that just 37 companies (7.4 percent of the sample) specifically mentioned the EVA metric application in their Annual Report. Jain, R. K., and Jain, A. (2014) concluded that only thirteen companies reported EVA.

**Conclusive Remarks**

EVA is now accepted as a significant tool of performance measurement and management all over the world, particularly in advance economies by adopting it as corporate strategy. There are many areas touched by the researchers to conduct the research and in every area contained the mixed review. The most dominant area of research is association of EVA with MVA. Most studies used the empirical methodology to conduct the research and there are very less literature available on reporting practices of EVA. Empirical studies conducted till date on EVA had used data for smaller period whereas there is scope for future research on the concept by considering the data pertaining to longer durations in order to test the validity of the concept. Therefore efforts should be made in this direction.

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