

RESEARCH ARTICLE

## Economic Value Added: A Better Technique for Performance Measurement

Bharata Bhusan Sahoo<sup>1</sup>, Alok Kumar Pramanik\*<sup>2</sup>

<sup>1</sup>Department of Commerce, Nilgiri College, Nilgiri, Odisha, India.

<sup>2</sup>Department of Commerce, Bhatler College, Dantan, Paschim Medinipur, West Bengal, India.

\*Corresponding Author: Alok Kumar Pramanik

### Abstract

Measuring performance in a day to day business to corporate managers. The job is very much important for corporate performance also. Rewarding out performers and treating under performers are today's norm to establish equity to work place. Aptly, lots of techniques have been developed so far to address this issue. Each technique has its own parameters and conceptual underpinning. Conceptualization of techniques with their limitations and challenges are very much important before their application. This paper gives an overview of different performance measures emphasizing Economic Value Added (EVA). An attempt is made to compare EVA with other performance measures to give the readers a more focused orientation with the EVA. Literature review is used as a methodology with qualitative orientation of research.

**Keywords:** Performance measures, Economic Value Added, Residual Income, Market Value Added and Return on Investment.

### Introduction

The performance of corporate entities are measured commonly on the basis of "Net Profit Margin (NPM), Operating Profit Margin (OPM), Return on Investment (ROI), Return on Net Worth or Return on Capital Employed (RONW or ROCE) etc. Return on Investment is still recognized as the most popular yardstick of profitability measurement. But it is now increasingly felt in Western countries that ROI may not necessarily indicate maximum value of the business. In fact, some people have starting calling "ROI" as a short-term indicator. Moreover, the above measures, including ROI lacks in proper benchmark for comparison. In each measures, "industry average" or "nearest competitors' performance" is used as benchmark ignoring expectation of shareholders.

To overcome the limitations of these types of accounting based measurement technique of financial performance of companies, *M/s Stern, Stewart & Co.*, the New York based global consultancy firm had devised an accounting method, called "Economic Value Added". As a result, scores of companies in

United States have become interested to this concept and adopted as a new way to measure financial performance. Ultimately, Economic Value Added (EVA) has been getting plenty of attention in recent years a new form of financial performance measurement. In a fortune, article entitled "*The Real Key to Creating Wealth*", the author claimed that "using EVA can give you a marked competitive advantage" over competition. The author also states that EVA is "to-day's hottest financial idea and getting hotter"[1].

Simply, Economic Value Added is net operating profit after tax (NOPAT) minus an appropriate charge for the opportunity cost of all capital invested (WACC) in an organization. EVA is an estimate of "economic profit" or the amount by which earnings exceeds or fall short of the required minimum rate of return that shareholders and lenders could get by investing capital in other securities of analogous risk.

EVA as a tool of financial measurement enlightens us whether the operating profit is

enough to cover the cost of capital. The EVA framework, which is becoming more and more admired tool for measuring the financial performance of corporate, offers a consistent approach to set goals and measure performance, communicate with investors, evaluate strategies, allocate capital valuing acquisitions and determine incentive bonuses. However, the EVA implementing and improvement process is one of the several on-going initiatives for a new corporate.

The Economic Value Added is not really a new concept. It is essentially the same as residual income—a concept that has been there in management text book for few years. EVA is a registered trade mark of Stern, Stewart & Co., and is a wonderful example of “how it is always possible to sell old wine, as long as you can get hold of a new bottle and buzzy brand name.

*Peter Drucker*, a contemporary management intellectual, claimed that he discussed EVA at a considerable length long back in 1964 in his book “*Managing for Result*”. As examined by *Peter Drucker*, “EVA is based on something we have known for a long time: what we call profits, the money left to service equity, is usually not profit at all. Until a business returns a profit that is greater than its cost of capital, it operates at a loss. Never mind it pays taxes as if it has a genuine profit. The organization returns less to the economy that is devours resources ..... until less it does not create wealth it destroys it.”

An accounting performance measures called residual income is defined as operating profit subtracted with capital charge. EVA is thus, one variation of residual income with adjustments to how one works out income and capital. EVA, simply is the gain that remains after levying a charge against after-tax operating profits for the opportunity cost of all capital-equity as well as debt used to produce these profits. *Stern, Stewart & Co.*, coined for its particular variety of economic profit, a concept that has been the part of mainstream economic thinking for more than a century. *Alfred Marshall* mentioned the residual income concept in 1980. According to *Dodd and Chen*, the idea of residual income appeared first in accounting theory literature in the early part of the last

Century. This idea was propounded in *Church* in 1917 and further defined by *Scovell* in 1924. Later this concept appeared in management accounting literature in the 1960s [2]. Also, *Finish academics and financial Press* discussed the concept in the 1970s. The EVA concept is often called “Economic Profit” (EP) in order to avoid problems caused by the trade marking.

On the other hand, the name “EVA” is so popular and well-known that all residual income concepts are often called EVA although they do not include even the main elements defined by *Stern, Stewart & Co.*, Critics of EVA also argues that it is nothing more than NPV re-packaged at departmental, divisional and firm-wide levels. They argue that *Stern Stewart & Co’s* only real contribution to the capital budgeting and incentive compensation process is the development of measures with which to implement NPV on scales larger than a project basis. Such measures include capitalizing advertising, R&D and certain other expenses in order to ascertain the exact capital. After identifying the capital base, the firm is then able to use NOPAT to find its return on capital and, ultimately, it’s EVA.

*Joel Stern* (1990, 1997) and *Bennet G. Stewart* (1990) of *Stern Stewart & Co.*, (1996) propagated and popularized the concept of Economic Value Added which was supported to provide a risk-related performance measurement of value creation by a company. *Stewart* (1991) advocated the abandonment of earnings for two major reasons, which are:

- Earnings are subject to manipulations when a company is permitted to choose among alternative accounting methods ; and
- Earnings calculation is problematic because of the arbitrary rules specified in Generally Accepted Accounting Principles (GAAPs).

The technique of Economic Value Added (EVA) has already acquired acceptance as a tool for assessing the existing financial status and predicting the future performance of a company. It encompasses all aspects of a co’s financial management from capital budgeting, acquisition pricing to

strategic planning and shareholders' communications, apart from identifying the "value addition to shareholders by the organization during a specified period".

From the financial management point of view, the goal of a firm to be the maximization of shareholders' wealth. Financial management decisions are supported to be taken with those objectives and the proponents of EVA based on financial management and incentive compensation system claims that it (EVA) successfully works in that directions.

EVA is possibly the most popular value proposing financial performance indicator in the corporate parlance in recent times. To understand Economic Value Added properly, it is necessary to understand "Market Value Added (MVA)", which is also one of the principal tools for measuring the shareholders' value.

Market Value Added is the difference between Market Value of the firm and its invested capital (including equity and debt) contributed to the firm.

Mathematically, MVA can be expressed as under:

Market Value Added = (Market Value of Equity + Market Value of Debt) - (Book Value of Equity + Book Value of Debt)

Symbolically,  $MVA = (MVE + MVD) - (BVE + BVD)$

It can also be expressed as:

Market Value Added = (Market Value of Equity + Book Value of Equity)

Symbolically,  $MVA = (MVE - BVE)$  \*\*

MVA increases only when invested capital earns a rate of return greater than the cost of capital. When a company invests newly raised capital in value creating projects – those with a positive net present value – MVA increases. When that capital is invested in value destroying projects – those with a negative present value – MVA decreases. So it can be said that MVA is the present value of firm's expected future EVAs. The relationship stated above can, therefore, be expressed as under:

Market Value of Equity = Book Value of Equity + Present Value of all future EVAs.

Economic Value Added is similar to conventional measures of profit but with two important differences:

"Economic Value Added considers the cost of all capital, and it is not constrained by the generally accepted accounting principles (GAAP) that governs corporate financial reporting".

The net income figures reported in company's income statement considers only the most visible type of capital cost – interest – while ignoring the cost of equity finance. Financial accountants do not measure the cost of finance provided by the company's shareholders because these costs like all opportunity cost, cannot observe directly. Although estimating the cost of equity is a highly subjective exercise, measurement of performance that ignores such cost and not reveals how successful a company has been creating value for its owners. So Economic Value Added which also consider the cost of equity, represent a company's profit of the net cost of both debt and equity capital.

Economic Value Added is an easy to understand measure that recognizes improvement in earnings to the extent this exceeds the cost of the capital employed or invested capital to secure it. It represents the "value added" to shareholder's equity by generating operating profit in excess of the cost of capital employed or invested capital in business. [Invested Capital or Capital employed is the sum of all the company's financing apart from non-interest bearing short-term liabilities, such as account payable, accrued wages, and accrued taxes].

Thus, EVA is residual income with the company after charging for the cost of capital provided by lenders and shareholders. Simply, it is just a way of measuring an operation's real profitability. It holds a company accountable for the cost of capital it uses to expand and operate its business and attempts to show whether a company is creating a 'real value for its shareholder'. EVA is a better system, than ROI, to encourage growth through investment – investment in new products, new equipment's and new manufacturing facilities.

EVA may be defined, in other words, as the excess of a company's after tax operating profits over the minimum required rate of return the investors could obtain by investing in securities with equivalent or similar risk.

Economic Value Added (EVA) is operationally defined by formula:

$EVA = \text{Net Operating Profit after tax (NOPAT)} - [\text{Economic Book Value of}$

$\text{Assets in place (EBVA)} \times$

$\text{Weighted Average Cost of}$

$\text{Capital (WACC)}]$

Or

$[\text{Total Capital Employed}$

$\text{i.e., Total Borrowed and}$

$\text{Equity Fund used (CE)} \times$

$\text{Weighted Average Cost of}$

$\text{Capital (WACC)}]$

Symbolically,  $EVA = \text{NOPAT} - (\text{EBVA or CE} \times \text{WACC})$

### **Economic Value Added vs. Market Value Added**

EVA is the surplus of net operating profit after taxes (NOPAT) after adjusting the cost of capital. The theory of EVA states that earning a return greater than the cost of capital increases the shareholders value. For listed companies, Stewart defined another method that assess whether the company has created shareholders value that is Market Value added (MVA) method.

As per the MVA approach, the company has managed to create shareholders value if the total market value of a company is more than the amount of capital invested in it. When the case is opposite, then the company has destroyed shareholders value.

$MVA = \text{Company's total market value} - \text{Capital invested}$

Or

$MVA = \text{Market value of equity} - \text{Book value of equity}$ . From the above, it can be understood that EVA and MVA are two different approaches

used to find out the 'shareholder value' created by a company. The basic point of difference is that EVA is concentrating on "Net Operating Profit after Tax" (NOPAT), whereas MVA is considering the "Market Value of Equity".

Economic Value Added and Market Value Added are two approaches based on different variables, but both are used to evaluate the "SHAREHOLDER VALUE" created by a company.

### **Economic Value Added: Key Factors, Characteristics and Advantages**

Economic Value Added focuses on five key factors to analyze how shareholders' value is created:

- Net operating profit after tax and before financing cost ;
- The weighted average cost of capital ;
- Investment in the business ;
- The rate of return on investment ; and
- The competitive advantage period.

The following are the paths to increase EVA:

- Operating profits can be made to grow without employing more capital i.e., Greater Efficiency;
- Additional Capital is invested in projects that return more than the cost of obtaining new capital i.e., Profitable Growth ;
- Capital is curtailed in activities that do not cover the cost of capital i.e., Liquidate Unproductive Capital ;
- Reducing cost of capital, which means employing more of debt, as debt is cheaper than equity or preference capital i.e., Cost Control.

The characteristics of Economic Value Added are:

- It provides greater accountability for investor's capital as it measures the required return of all investments ;
- It is custom-made to a company's specific circumstances making only those accounting adjustments that are necessary;
- It is easy to communicate.

EVA is the financial performance measures that come closer than any other to capture the true economic profit of an enterprise. It

is most directly linked to the creation of shareholder wealth overtime. EVA based on financial management and incentive compensation system gives manager superior information and superior motivation to make decision that will create greatest shareholder private enterprise.

EVA is a powerful new and powerful management tool that has gained growing international acceptance and is being used successfully and increasingly by some of the world's best corporations. Practically, EVA is nothing more than a fine re-packaging of some very business principles. In essence, EVA is a way both to legitimate and institutionalize the running of a business in accordance with basic macroeconomic and corporate financial principles.

EVA provides a common language for employees across all operating and staff functions and allows all management decisions to be modeled, motivated, communicated and compensated in a single and consistent way – always in terms of the value added to shareholders investment.

EVA, when implemented at every levels of managerial decision making process, encourages managers to deploy resources only on value enhancing activities and to align the interests of shareholders with managers.

The simplicity of EVA in communicating the very fundamental principle that only the generation of surplus over the cost of capital can enhance shareholders wealth makes it a management technique superior to other planning and control techniques.

The advantages of EVA over other similar tools are that it improves business literacy. Business literacy is the effort of the management to convey to all the employees the fact for any activity to be value enhancing, the return generated should be greater than the cost of capital employed for the activity.

Use of EVA improves financial corporate governance in the sense that it motives the manager to get rid of value destructive activities and to invest only in those projects that are expected to enhance shareholders value.

As a performance measure, as an analytical tool and as a management discipline, EVA is cropping up all over. It satisfies the most cherished objective of business “wealth maximization of its owner-the shareholder”. Stern (1997) has also claimed that EVA as a tool of financial management was neither just as US phenomenon not is limited to “for-profit” organization.

The biggest advantage of EVA is that it focuses management to expressly recognize its cost of equity and to take that cost into account in all its decisions. EVA measures the amount of value of firm create during a defined period through operating decisions that improves margins, efficiently utilize its production facilities, improve management of working capital re-deploy underutilized assets.

Thus, it can be used to hold management accountable for all economic outlays whether they appear in the income statement, on the balance sheet or in the foot notes to financial statements. It makes manager conscious of the cost of every rupee is spent on operating costs, on working capital or on fixed assets. The goal of increasing overtime offers a clear financial mission for management, whether reviewing a capital budgeting project, valuing on acquisition, considering strategic plan alternatives, assessing performance or reward management.

### **Economic Value Added (EVA) vs. Net Present Value (NPV)**

The EVA concept is very closely related to the NPV concept. The present value of an investment's annual EVA stream is the same as its NPV. However, while NPV analysis is a one - time measure of the value by an investment, EVA is a continuous annual value added measure.

EVA is defined as:

$$EVA = NOPAT - (WACC \times CE)$$

Summing present values over the life of the company

$$\frac{EVA}{(1 + K)^t} = \frac{NOPAT}{(1 + K)^t} - \frac{K \times CE}{(1 + K)^t}$$

Where K = WACC

If the net asset use of the company remains constant,

$$\begin{aligned} \text{NOPAT}_t &= \text{Cash flow}, \\ \text{CE}_{t-1} &= \text{CE}_t = \text{CE} \text{ (a constant)} \end{aligned}$$

$$\text{PV of EVA} = \text{PV of Cash flow} - \text{CE} \times \frac{K}{(1+K)^t}$$

$$\text{PV of EVA} = \text{PV of Cash flow} - \text{CE} = \text{NPV}$$

At the project level, the present value of the future EVAs equals the NPV derived from the DCF methodology. But the difference between the two is that EVA is a flow measure and NPV is a stock measure. Further, NPV is a summary measure based on projected cash flows and not realized performance.

### Residual Income vs. Economic Value Added

It is strange but a fact that EVA has gained so much popularity in recent years when the concept of residual income has been in existence even before EVA. EVA is a just refinement of residual income; Residual Income is the difference between profit and the cost of capital. It differs from EVA in the fact that profits and capital employed are book figures, i.e., the same as appearing in the financial statement. No adjustment to profit and capital employed figures as reported in the Profit and Loss Account and Balance Sheet are made unlike EVA.

### Economic Value Added: Myths and Reality

The first and most popular myth about EVA is that it was propounded by Stern, Stewart of the US. The reality is that EVA was first propounded by General Motors in its annual report in the early 1920s.

The second myth about EVA is that the only complication in calculation of EVA is the estimation of cost of equity to arrive at the cost of capital. In reality, calculating EVA, for any firm involves several adjustments to arrive at credible figures of operating profit. This is because any change in depreciation policy, inventory valuation policy or in accounting for deferred taxation and also lease adjustments can have a major impact on profits and all these factors needs to be adjusted.

Another myth about EVA is that it is an ideal measure for comparing value creation

across companies and industries. EVA by definition is biased against companies which are capital intensive. This is because EVA only considers the capital outlay necessary for creation of physical assets and ignores the implicit capital outlay involved in the creation of intangible assets.

The fourth myth about EVA is that it is an ideal measure for divisional performance. There are two problems. One, a multi-divisional business may have different products with differing cycles and varying level of risk, but companies use a standard cost of capital for the company as a whole. The practice is biased towards high risk divisions. Another, which is most important, is that EVA as a measure of divisional performance appraisal tends to inculcate a myopic attitude among divisional managers who may be unwilling to invest in the requisite level of physical asset creation to sustain corporate growth.

The fifth myth about EVA is that it is not vulnerable to accounting jugglery.

The last and perhaps greatest myth about EVA is that companies with high EVA are cash rich. AS Prof. Israel Shaked, a scathing critique of EVA, remarks, "The cardinal sin in financial is to construe EVA as an indicator of financial liquidity." What EVA actually depicts is the notional value created by a business. It has no relation to the liquidity requirements of the business.

### Economic Value Added: Limitations

The EVA measures suffer from a number of accounting flaws on account of the treatment depreciation. For example, EVA is biased against new projects because when any investment is made, higher depreciation in the initial periods tend to lower EVA, except in those cases where the investment has a low pay-back period.

EVA does not really measure value creation in terms of effectiveness with which the resource deployed are utilized. This makes EVA a poor measure of attractiveness of a business relative to the quantum of capital employed.

EVA is dependent upon market valuation of equity. The value of market assigns to equity of a company reflects its perception about

the prospects of profitability and growth and not its performance in the past.

EVA is biased in favour of large enterprises. It represents incremental earning above a base level set by cost of capital employed. Thus, large enterprises earning at a rate slightly above the cost of capital have higher economic value added than small enterprises earning at a higher than cost of capital.

In case of an enterprise with rate of return near the cost of capital, a slight improvement may result in proportionately higher rise in Economic Value Added. This also makes EVA a poor measure for comparing business performance of different enterprises operating at different stages of growth.

While considering the cost of capital at the time of EVA calculation there is a mix-up between book value and market estimates. While the study has taken book value of capital employed (debt and equity), the cost of debt and equity are market rates. Since market to book value ratios can be expected to be greater than one for the companies considered, this will have the effect of introducing an errors that would result in overestimation of EVA figures.

EVA calculation is absolute figures. Companies with high EVA are not necessarily those with good prospects for investors.

It is recognized that there could be problems with EVA calculations which are specified as under:

- Stern, Stewart & Co., recommends nearly 164 adjustments to the accounting figures for a realistic estimate. These adjustments truly complicate the calculation of EVA ;
- These adjustments require in-depth data which involves additional costs ;
- The increase in the number of adjustments increase the subjectivity involved in measuring EVA ;
- It is very difficult to quantify all the value enhancement activities of a firm without involving a lot of subjective estimates ;
- It does not remove the limitations of accounting profit that forms the basis for computing EVA;
- It is difficult to measure exactly the risk-free rate of return, beta and risk premium.

The important accounting adjustments which are necessary are stated below:

- Capitalization of asset linked foreign currency loss or gain ;
- Adjustment for revaluation reserve and related depreciation ;
- Stock valuation ;
- Government Grants of revenue nature ;
- Tax effect accounting ;
- Prior Period Adjustments ;
- Percentage completed contract method ;
- Research and Development expenses ;
- Off-Balance Sheet Asset ;
- Investment valuation ;
- Minimum depreciation vis-à-vis full depreciation;
- Amortization of Intangibles ;
- Warranty Claims ;
- Provision for Retirement Benefits ;
- Capitalized finance charge.

### **Economic Value Added: Application Problems under Indian Context**

Many Western Companies have now started realizing that financial tools like ROI, ROCE, EPS, NPV etc., fall short of achieving the corporate objectives of maximizing shareholder's wealth. Recently, a lot of emphasis has been given on EVA rather than ROI, as a measure of corporate performance in the Indian financial literature. But, the use of this concept with a blind faith may not be suitable since it is not without deficiencies and pitfalls. Arjun Lahiri [3] and Satheesh Kumar [4] highlighted certain disputes regarding calculations and implementation. Some of the important pitfalls in the use of EVA revealed by them are follows:

- Most of the Indian Companies are plagued with over-capacity situations, which distorts the EVA results ;
- EVA analysis does not incorporate items like brand equity, human resources etc. ;
- EVA analysis does not give any ideas about the financial performance of companies that are affected by business cycle variations ;
- There is a possibility of error in estimating WACC ;
- All the individual projects are selected or rejected on the basis of NPV over their economic life. A project with positive NPV is selected. But, when all the projects are taken together or in other words, when the

company as a whole is taken, the present value may be negative in some initial years for the simple reason that some companies that grow rapidly on a large scale, need a huge investment in fixed assets. Such phenomenon may pull in the EVA figure on a negative scale for some initial years. Even if NPV is positive for a company in a particular financial year, the acquisition of assets can result in a decrease in the value of EVA [5].

- When EVA is used as a measure to evaluate the performance of managers and their units, they feel reluctant to acquire new fixed assets even if the circumstances demand so. Further, even if managers acquire new fixed assets they are tempted to use annuity method for depreciation in order to report positive EVAs. The managers of various divisions also try to take assets on lease rather than acquiring them in order to report positive EVAs. Taking assets on lease increases the risk involved which pushes the cost of capital on the higher side. But EVA usually does not take into account such factors while calculating the cost of capital.
- Generally, the cost of equity is considered to be more than that of cost of debt. But as the company raises equity to pay-off debt, the company becomes less risk prone thus reducing the total cost. Such factors are not taken into account in EVA calculations.
- Fast moving consumers goods and pharmaceutical companies are less capital intensive because of which EVA of such companies is generally higher as compared to the capital intensive companies. This makes the inter-firm comparison in different industries, unrealistic.

But, in spite of these, EVA has made a position for itself not only in the Western business community but also in the Indian Corporate Sector. However, the recognition of this concept in India is gradually picking up and it is expected that in the near future, more and more Indian companies will start relying upon this new measure of financial performance.

### **Refined Economic Value Added (REVA)**

Bacidore, et.al [6] observed that change in shareholder value can at best be captured by applying “market derived cost of capital” to market value of company assets (or enterprise value). The concept is “Refined Economic Value Added” (REVA) concept. It provides an analytical framework in the context of shareholder value creation. Refined Economic Value Added (REVA) is defined by the following formula:

$$REVA_t = NOPAT_t - WACC \times MV_{t-1}$$

Where,  $MV_{t-1}$  = Total market value of the company's assets at the end of the period-t - 1; WACC = weighted average cost of capital ;  $MV_{t-1}$  is given by the market value of the company's equity plus the book value of the firm's total debt less non-interest bearing current liabilities, all at the end of period t-1.

EVA performs quite well in terms of its correlation with shareholder value creation, but REVA is a theoretically superior measure for assessing whether a firm's operating performance is adequate from standpoint of compensating the firm's financiers for the risk to their capital.

### **Economic Value Added: Successful Implementation**

The idea of EVA is simple enough but the implementation is often complicated. The successful implementation of EVA requires:

- A full commitment from top management. Value creation philosophy must not only be integrated with all the company's key system-including strategic planning, capital budgeting and management compensation – it must constantly be reinforced in management meeting, performance reviews, and in communication with external parties ;
- A decision on which, if any, adjustments are to be made to the GAAP-based accounting numbers ;
- A careful consideration of transfer pricing and overhead allocation policies and their impact on EVA calculations.

### **Review of Related Literature**

“Maximizing shareholders' value” is a popular slogan, especially in the mind of top brass of the corporate world. But a small

number of companies go about measuring their 'shareholder value added' methodically. In this respect, the management should focus on increasing the value added to the shareholder's investment – a perspective provided by EVA. It is beyond doubt that EVA – based performance framework not only provides a far more accurate report card on corporate financial performance than conventional measures, but also has considerable implications for companies on how to make strategic decisions and manage the healthier financial performance in their pursuit of shareholder value.

Studies concerned with the Economic Value Added have been made by a number of researchers. At least some studies included in this literature in order of their occurrence. Stern [7] 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' wealth in an organization.

Tully [8] has confirmed that there is no tricky situation about the technique through which the EVA can be augmented. It is a basic measure of return on capital and there are three ways to increase it: (i) earn more profit without using more capital; (ii) use less capital; (iii) invest capital in high return projects. Stewart [9] has explained 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 management. Lehn and Makhija [10] affirm that EVA and Market Value Added (MVA) are increasingly being eyed as alternative measures of business performance and strategic development....." O'Hanlon and Peasvell [11] observed that the ability to create wealth of shareholders is crucial to

the survival of companies in today's business environment. This gives rise to the question of which tools best measure the extent to which shareholders' value is being enhanced or destroyed. Corporate performance has traditionally been measured in terms of earnings per share (EPS).

However, this methodology is believed to encourage myopic behaviour and to propagate that shareholders are a free source of funds. The 'economic profit' (EP) and EVA have been proposed as more sensible alternatives. Banerjee [12] has conducted an empirical research to find the superiority of EVA over other traditional 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 a comparison of both has been undertaken, showing the superiority of EVA over ROI. Some of such companies are Ranbaxy Laboratories, Samtel India Ltd.

And Infosys Technologies Ltd. Blair [13] 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. Burkette and Hedley [14] 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, stockholder interests, and to emphasize the long-term benefits of industrial research and employee training. Chang [15] concluded that the chemical firms, facing growing competition for capital and shareholder pressure to increase prices, are adopting value creation measurement systems.

Companies are using one such system, Economic Value Added (EVA), for internal decision-making and to evaluate and company performance. Dodd and Chen [16] analyzed that Economic Value Added has been acclaimed to the most recent and

exciting innovation in company performance measures. Although the popular press reports numerous stories of successful EVA adoption, there has been little empirical evidence supporting the claim that EVA is a useful measure of corporate performance.

This study examines the EVA performance of 656 US companies and compares the information usefulness of EVA with accounting earnings and residual income. The authors gave three conclusions from the examination: (i) although improving EVA performance is associated with a higher stock return; the association is not perfect as claimed by EVA advocates ; (ii) EVA is more powerful than traditional measure of accounting profit in explaining stock return ; however, accounting earnings are still of significant incremental information value in addition to EVA ; and (iii) not only is EVA similar to residual income in concept, they are empirically comparable. Elliott [17] that a budding number of consulting firms and financial officers are searching for ways to apply Economic Value Added to the oil and gas industry. The EVA is a performance measure which determines whether a company creates value for shareholders.....”

Rajeshwar [18] 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.

Teitelbaum [19] scolded that EVA has moved from buzzword to financial phenomenon. The concept of EVA is becoming more and more popular as a measure of financial performance, as an analytical tool and as a management device. The author has shown that EVA is used extensively by various organizations like community hospitals, US postal, etc. in order to run their operations. Many investors use EVA for evaluating scripts while investing in shares.

Todd [20] has argued that EVA is a better compensation measure than NPV because EVA is a flow measure whereas NPV is stock measure. The author is of the view that

what is needed for compensation are measures that can be computed periodically as they are realized ( i.e., a flow measure). EVA also takes into account the cost of capital and the amount of capital invested in the company. Thus EVA is more useful than another flow measure, i.e., cash flow.

Pattanayak and Mukherjee [21] discussed that there are traditional methods to measure corporate income or known as accounting concept and there is also a modern method to measure corporate income or known as economic concept. EVA, which is based on economic concept, is professed to be a superior technique to identify whether the organization’s NOPAT during a period is covering its WACC, thus generating value for its owners. But it is very tricky to calculate EVA. Companies trying to implement EVA are asked to incorporate 164 amendments to their financial accounts.

Thenmozhi [22] 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. Thenmozhi 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.

### Global and Indian Scenario

According to Tejpavan Gandhok, Company Manager, India for Stern, Stewart & Co., “Indian companies on the whole have a poor average in wealth creation”. Over 400 companies worldwide implement the economic value added (EVA) programme, but it is still relatively a new-fangled and quite emerging technique for corporate performance measurement in India [23].

The leading multinational companies throughout the globe have already adopted EVA-based system of financial management putting the system ahead of its rivals.

Business majors like Coca-cola, AT & T, IBM, Quaker Oats, Briggs and Stratton CSX, General Electric, Procter & Gamble, Johnson & Johnson, Microsoft, Phillip Morris and many other globally reputed corporate giants have already become the ardent follower of the concept of EVA.

The EVA analysis unquestionably, has captivated much attention in the Western Countries both as a management innovation as well as stock market analysis. The recognition of such a technique in Indian context shows, to some extent, diverse. In India, the corporate world is slowly recognizing the importance of EVA. Some companies in India, recognizing the utility of EVA as a measure of shareholders value, have included an “Economic Value Added Statement” as a part of annual accounts. The companies are Infosys, BPL Ltd., Hindustan Lever Ltd., Satyam Computers, Bangalore ; Balarpur Chinni Mills , NIIT, Tata Consultancy Services, Godrej Soaps , etc.

Moreover, some Indian companies (e.g., Ranbaxy Laboratory, Samtel India Ltd., etc.) have started calculating EVA as an internal report. The first Indian companies to disclose its EVA in the Annual Report is Infosys Technolices Ltd. Traditional valuation techniques have ultimately taken in a back seat as EVA has become a standard feature in the annual reports of

many companies. But, since the accounting standards and disclosure norms in Indian are not very stringent and given the fact that different companies following different accounting policies, it is unwise to rank companies on the basis of EVA.

## Conclusion

Economic value added has been proposed in the U.S. as a better financial measure of performance, like NPV. EVA measure the degree to which a company is successful in earnings rate of return that exceeds its cost of capital. Stern (1997) argues that EVA is a more useful all purpose corporate tool than NPV or DCF, even though both methodologies properly give the same result over an extended period of time.

Professor Israel Shaked, an ardent critique, also remarked that “EVA is the best proxy for value creation, but caution needs to be exercised instead of blindly applying this concept to any company and any industry. The most productive way to use Eva would be to understand its limitations.” In other words, EVA is the ideal measure for matured companies or matured industries. Both for cash sensitive companies or companies in growth stage of the business cycle, where liquidity is a major factor, the Cash Value Added (CVA) could better depict value creation.

## References

1. Tully S (1993) The Real Key to Creating Wealth”, *Fortune*, 128:6.
2. Dodd JL ( 1996) EVA : A New Panacea ?, *Business and Economic Review*,42(4).
3. Lahiri Arjun (1996) All about EVA,” *Business India*, September, 21, October 4
4. Kumar Satheesh, (2000) Economic Value Added-A Critique,” *Indian Management*, March
5. Harihar TS, (1999) EVA Porating Myths,” *Chartered Financial Analysts*.
6. Baccidore JM, Boquist JA, Milbourn, T.T., Thakor, A.V (1997) The search for the Best Financial Performance Measure, *Financial Analysts Journal*.
7. Stern Joel (1990) One way to build value in your firm, *Executive Compensation*”, *Financial Executives*.
8. Tully Shown (1993) The real key to creating wealth”, *Fortune*.
9. Stewart G. Bennet (1994) EVATM Fact and Fantasy”, *Journal of Applied Corporate Finance*.
10. Lehn K, Makhija AK (1996) EVA and MVA as performance measures and signals for strategic change, *Streategy and Leadership*, Vol. 24.
11. O’ Hanlon J, Peasvell K (1996) Measure for measure, *Accountancy -International Edition*, February
12. Bangerjee Ashok (1997) Economic Value Added (EVA): A better performance measure, *The Management Accountant*, Decembder.
13. Blair A ( 1997) EVA fevers, *Management To-day*, January
14. Burkette G, Hedley T (1997) The truth about economic value added, *The CPA Journal*, June
15. Chang J (1997) Spreading EVA”, *Chemical Market Reporter*, July, 14
16. Dodd James L, Chen Shimine (1997) EVA: A new panacea ? *Business and Economic Review*, Vol. 42.
17. Elliot L ( 1997) Is EVA for everyone? *Oil & Gas Investor*,17(2).
18. Rejeswar C (1997) Economic Value Added : Rediscovery Value,” *Financial Analyst*, December,
19. Teitelbaum R (1997) America’s greatest wealth creators, *Fortune*, 136(9).
20. Todd, Milbourn (1997) EVA’s charm as a performance measure,” *Business Standard*.

21. Ehrbar Al (1998) *EVA: The Real Key to Creating Wealth*, John Wiley & Sons. Inc., N.Y.
22. Pattanayak JK, Mukherjee K (1998) *Adding Value to Money*, The Chartered Accountant.
23. Thennozhie M, (1999) Economic Value Added as a performance measure of corporate performance, *The Indian Journal of Commerce*, 52(4).

## Endnotes

1. G. Bennett Stewart III in his book "Quest for Value", used the term EVA . It is actually *Stern Stewart & Co's* trade name for a specific method of calculating economic profit. The term "economic profit" is named as "Economic Value Added" by *Stern, Stewart & Co.*, "Quest for Value" was published in 1991]
2. The assumption is that market value of debt and book value of debt is the same.
3. Invested Capital or Capital employed is the sum of all the company's financing apart from non-interest bearing short-term liabilities, such as account payable, accrued wages, and accrued taxes