CHAPTER-2
CONCEPTUAL FRAMEWORK OF VALUE-BASED PERFORMANCE METRICS (SUCH AS, EVA, MVA AND SVA) IN INDIAN PUBLIC SECTOR BANKS
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2.1 INTRODUCTION:

This chapter is to give theoretical framework of the research subject and also to provide some useful surroundings information in order to present a full understanding of the subject that this study will explore. Furthermore, this chapter includes an introduction of the concept of the Economic Value Added, Market Value Added and Shareholder Value Added in Indian public sector banks.

The banking sector in India has undergone remarkable changes during the last sixty years. The banking sector reforms introduced in 1991 and 1998 led to the end of the era of ‘Financial Repression’ prevailing in Indian banking sector, with liberalization measures initiated to make the banking sector move towards market–oriented banking. The journey of Indian banking through nationalization to now, liberal entry of private banks has seen a lot of changes. Besides increased competition in the banking landscape, the banking sector reforms have taken special care to strength Indian banks through prudential regulation and supervision. And of course, technology has played a greater role in changing the face of banking services from ‘brick and mortar’ banking to ‘one-click’ banking.
Now, the banking sector in India is characterized by the three Sc: Competition, Convergence, and consolidation. Because the entry of private sector banks and foreign banks in India, the share of the market in which public sector banks, earlier had, near monopoly is now being shared with private sector banks and foreign banks. Consequently, share of public sector banks in deposits and advances has gone down. Besides, banks are becoming ‘one-stop shop’ (Universal bank) for all sorts of financial services being provided under the same roof. Another interesting trend is to that of consolidation. Consolidation, in the past, has taken place especially in the case of private banks. However, it remains difficult for public sector banks.

Consequent to the commitment to the World Trade Organization (WTO), Reserve Bank of India (RBI) unveiled its road map on 28th February, 2005 for the ‘Presence of Foreign Bank in India’ for implementation in two phases’ viz. phase I –March 2005 to March 2009 and Phase II-April 2009 and onwards which permitted foreign banks to set-up wholly-owned subsidiary or conversion of existing branches into wholly-owned subsidiary in the first phase, and later on, extending to national treatment to wholly-owned subsidiary, dilution of stake and permitting mergers/acquisitions of any private sector banks in India in the second phase. This is going to further increase competition and present a battleground for more space in the market.

A stock-taking of competitiveness state of Indian banks revealed that there is a strong growth in terms of deposits, investments, advance, interest
income, other income, total income, etc. as well as interest expenses, operating expenses and total expenditure of private sector banks and foreign banks in India in comparison to public sector banks. Public sector banks have seen a decline in their share of the market.

There is much more growth in interest spread and net profit in private sector banks followed by foreign banks and public sector banks. However, foreign banks gain mileage in terms of spread as % to total assets and net profit as % to total assets followed by private sector banks and public sector bank. The business per employee is also highest in foreign banks, however, followed by public sector banks and then by private sector banks.

Net NPAs have been decreased fastly in public sector banks. This is clearly an achievement of public sector banks in the past-reforms period. Net NPAs of private sector banks have also decrease; however, Net NPAs of foreign banks have increased. Still, foreign banks hold smallest percentage of Net NPA to total assets compared to public sector banks and private sector banks.

The credit-deposit ratio of foreign banks is highest followed by private sector banks and public sector banks because of their more liberal credit policies compared to public sector banks. In terms of capital adequacy also, foreign banks and private sector banks are not far behind. They have reasonable level of CRAR (above to the average of scheduled commercial
banks i.e. 13%) also. This is quite higher than the requirement of 9% as stipulated by RBI under BASEL norms.

Therefore, it is clear that the private banks and foreign banks are posing a great challenge to the Indian public sector banks. This necessitates an urgent attention to improve the level of competitiveness in these banks. There is need to know various areas of concerns in Indian Banking Industry which demand solutions to address and give way to enhanced competitiveness.

While talking of concerns, first of all, it is the state ownership of PSBs which restricts them to operate freely in the market. Besides, The level of customer service in banks especially in public sector banks is still not upto the desired levels. Despite various regulatory steps taken by RBI whether it is the Banking Ombudsman Scheme or the Banking Codes and Standard Board of India, the number of complaints is increasing every year. The average number of complaints receive per Banking Ombudsman office has increased from 360 in 2002-03 to 3051 in 2007 -08. Another serious concern is to that of scaling – up of abilities of human resources especially of public sector banks. Not only this, there is no system of reward and compensation which can commensurate with performance and increase their motivation levels. Generating higher fee income is another areas which can give them fee-based income such as corporate advisory, investment banking, wealth management, derivative business and so no. One way to fight competition by achieving size and scale
efficiency is consolidating through mergers and acquisitions. This is, however, much easier in case of private banks, poses difficulty in case of public sector banks. A very important issue is effective corporate governance for banks. Now, the government is no longer the 100 percent owner of public sector banks, besides we have private sector banks also. Banks are fast approaching the capital markets for their efficiency, accountability and transparency in banking operations needs to be taken care of so that the confidence of investors investing in banks remains and not lost.

Value creation or shareholder value creation is one area which is fast catching-up attention of one and all across all industries and companies throughout the world. If we talk of only banks, upto 1980s, regulators were more concerned with market stability; therefore, they implemented a structured regulation approach because of which there was little effective competition in the market and no thrust for productive efficiency and quality of banking services. Since the start of the 1990s, deregulation process was started all around the world which provided liberal entry of new players in the market. Consequently, banks started thinking about improving their business models which can improve their productive efficiencies. Marketing abilities, quality of banking services and so on. In this thrust for becoming more competitive, all banking systems in Europe and US started focusing on shareholder value creation. They changed their business models in which they took special care that each and every business segment should be profitable, efficient at generating returns more than its cost to the company. Not only
this, they found that traditional ways (tools) such as Return on Assets (ROA), Return on Net worth (RONW), etc. Are

Not sufficient enough to measure the performance of company. Therefore, a of new performance metrics such as EVA-MVA, RAROC (Risk-adjusted return on Capital), TSR (Total Shareholder Return), etc which were developed to measure the economic value and net returns to shareholders, attracted quick attention of bankers. A peculiar feather of these new tools of performance measurement is that they are aligned with the market value (returns) generated on the stock markets so that internal performance of the company can be matched with the external (Stock market based) performance. Over a period of time, these tools become popular among all banks and became part of their core banking strategy creating value across all customer segments.

In order to overcome the above mentioned problem, the following three approaches are generally employed for measuring and analyzing the shareholders’ value creation:

- The Economic Value Added (EVA) approach
- The Market Value Added (MVA) approach
- The Shareholder Value Added (SVA) approach.
Each of these approaches is briefly discussed below.

2.2 Economic Value Added (EVA) approach

The concept of Economic Value Added (EVA) helps us to measure the return over and above minimum return (i.e. cost of equity) as expected by investors. This finds the extent of value creation in the enterprise in terms of net value addition beyond payment to shareholders.

Banks and financial institutions have some characteristics that are peculiar to their business. Due to this, the ratios and other measures of performance when applied to banks need to be modified in order to obtain the relevant information. Same is true for calculation of EVA also.

One of the standard methods for calculating EVA is.

\[
\text{EVA} = \text{Net Operating Profits Adjusted for Taxes} - (\text{Invested Capital} \times \text{WACC})
\]

Where; WACC is the Weighted Average Cost of Capital

In this method, called the entity approach, the capital charge takes into account the cost of debt as well as that of equity.

Another approach known as the equity approach, as per this approach EVA can also be calculated with the help of the following formula.

\[
\text{EVA} = \text{Net Profit after Taxes} - (\text{Equity} \times \text{cost of Equity})
\]

This method is more suited to banks compared to calculating the weighted average cost of capital since a big part of the banking business is
liability management. i.e., raising deposits at rates below the opportunity cost of capital, the deposits franchise given by banking license gives the bank the potential to create value on the liability side of the balance sheet. The liability side of the bank’s balance sheet is part of the business operations of a bank and it is not pure financing. This makes the equity approach more appropriate for banks.

The equity approach is also easier to use for banks. In the entity approach, The cost of capital for deposit funds can be difficult to estimate since there would be significant costs associate with servicing deposits funds can be difficult to estimate since there would be significant costs associate with servicing deposits such as free cheque writing facility and so on which are part of the cost of raising deposits. The true cost of a deposit is difficult to estimate and since the deposits is the major source of funds constituting 85% 95% of the capital, error in the estimate of cost of deposits would get magnified when calculating the weighted average cost of capital. (Parasuraman. N.R. (2000). Ashok Thampy and Rajiv Baheti (2001)

Further, to calculate EVA, it is necessary to determine NOPAT, and the capital Charge. NOPAT, or net operating profits after-tax, represents the operational profits of the company restated in such a way that conventional accounting profit (‘net income) is adjusted to better reflect the current economics of the business.
Therefore, EVA has been calculated as per the equity approach with the following formula.

\[
\text{EVA} = \text{Profit after Tax (Net)} - (\text{Equity} \times \text{Cost of Equity})
\]

There can be several EVA numbers as stated by AI Ehrbar (1998). We have calculated disclosed EVA’ Which is an EVA value with some standard adjustments. Profit after Tax (PAT) has been taken from Prowess (CMIE database). Cost of equity has been calculated as per Capital Asset Pricing Model (CAPM) (Table 9.3). As regards to the value of equity (invested capital). It has been calculated from the financial data collected from the PROWESS with minor adjustments. In paid-up equity capital of the banking company, free as well as specific reserves were added while accumulated losses were reduce. However, revaluation reserves were not included as these are not surplus coming out of the routine operations of banks and are not part of equity capital.

2.3 Standardized EVA

Similar to the calculation of Standardized MVA, Standardized EVA has also been calculated. The economic value added (EVA) which was calculated and shown earlier were purely in absolute terms. So, we got an idea as to whether Indian banks added economic value or lost economic value but a true comparison among banks is rather possible through relative measure as like standardized EVA. (TABLE 9.13)
Standardized Economic Value Added (SEVA) = EVA/Invested Capital

A positive sign shown increase in Standardized EVA, however, a negative sign shows decrease in Standardized EVA.

EVA™ is actually Stern Stewart & Co’s trademark for a specific method of calculating economic profit. EVA is defined as: operating profit of a business after charging cost of capital. EVA focuses on clear surplus in contradiction to the traditionally used profit available to the shareholders. It is defined as:

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

Where,

- \( \text{NOPAT} \) = Net operating profit before interest after tax during period \( t \),
- \( \text{WACC} \) = Weighted average cost of capital and
- \( \text{CE} \) = Capital employed at the end of period \( t \).

It is free from subjective assumptions that need to be adopted while identifying profit and cost of capital. Here for calculating WACC cost of equity is derived on the basis of CAPM. For EVA analysis certain accounting policies, which Indian companies generally follow as per Companies Act and relevant Accounting Standard are not always suitable. To find out the meaningful EVA certain accounting adjustments are required. Sometimes it is alleged that EVA talks too much about the shareholders value added rather than focusing on the interest of all stakeholders, but EVA is a powerful
performance measurement tool and it is also argued that if a company is able to serve its shareholders then it can also serve its all other stakeholders.

2.4 VALUE METRICS AND EVA-MVA:

There is a popular quote in management which says, ‘What gets measured gets done’. This also true in the case of value based management. Value creation is not something which can occur naturally by itself. It requires setting up of a well functioning financial management information and control system which can appropriately measure value and focuses the attention of management as well as employees towards value creation.

However, value managers today are faced with a wide range of value based performance metrics such as Economic value added (EVA) market value added (MVA) Total shareholder return (TSR), Cash flow return on investment (CFROI) and shareholder value added (SVA), etc. Several of these value metrics are also linked to consulting firms such as stern stewart’s EVA/MVA Boston consulting Group’s CFROI and L.E.K. Consulting LLC with SVA.

This new metric (EVA-MVA), trademarked by stern stewart and company is a profit measure based on the concept of true economic income, which includes the cost of capital of true economic income for all types of financing based on the concept that a successful firm should earn at least its cost of capital. Therefore, EVA does eliminate the impact of accounting distortions while treating the impact of financing costs more comprehensively
in its capital cost charge. There are adjustments done to calculate EVA based on the criteria such as materiality, manageability, definitiveness and simplicity. Further, EVA is linked to MVA (Marked value Added) which measures the market returns on stocks of the company. The origin of EVA can be traced back to the 1950s when General Electric developed a performance measure, labeled Residual Income calculated as the difference between the net operating profit after tax and a charge for invested capital (measured in terms of book value). EVA has gained from considerable promotion in financial newspapers, academic journals, books and publicly available statistics. EVA when applied to the fullest, changes behavior and becomes far more than just another way of adding-up costs and computing profits.

Some of the characteristics features of EVA are enumerated as follows:

- EVA is the performance measure which is theoretically and empirically tied most directly to the creation of shareholder wealth. Managing for EVA does mean managing for a higher stock price (MVA)
- EVA is the only performance measure that always give the right answers. It is the only genuine continuous improvement metric; others like profit margins, EPS and even rate of return sometimes destroy shareholder wealth.
- EVA is a complete framework which provides a comprehensive new system of corporate financial management. It guides every decision,
from annual operating budgets to capital strategic planning as well as mergers and acquisitions.

- EVA is an effective method for teaching business literacy to even the least sophisticated workers.
- EVA provides a unique incentive compensation system through setting of individual EVA targets for managers, thereby, making them think, act and behave like managers.
- EVA provides investors a tool through which they can identify the superior performing companies. Companies can also communicate their goals and achievements through EVA values.
- Most importantly, EVA provides a comprehensive corporate governance system so as all managers and employees can work cooperatively and enthusiastically in order to achieve the best performance possible.

2.5 SPECIAL ISSUES IN THE MEASUREMENT OF EVA-MVA FOR BANKS

As Indian markets brace itself to the new environment (liberalization, privatization and globalization). Relevant performance metrics need to be employed to provide new direction and concurrent focus on relevant aspects. EVA is a useful measure in this regard and has been found to be very useful for a number of companies that have given good returns to their shareholders.
Traditional performance measures (net income, Return on capital Employed (ROCE), Return on Net Worth (RONW), and earnings per share, etc.) do not properly reflect risk and therefore reinforce behavior that is either too aggressive (that is, aims to maximize earnings) or too conservative (aims to prevent dilution of returns). The conclusion is that no return or ratio measure can accurately assess shareholder value creation for a portfolio of activities. Ratios and returns indicate only average profitability. As such, Wealth maximization correlates with EVA maximization.

EVA is a measure for internal performance evaluation of the company. More explicitly it differs from conventional earnings measures such as profit after tax (PAT) Return on capital Employed (ROCE) and Return on Net worth (RONW) etc, in two ways;

- It explicitly charges for the use of capital and, for this reason, is sometimes referred to as a residual income measure; and
- It adjusts reported earnings to minimize accounting distortions and to better match the timing of revenue and expense recognition.

While MVA on the other hand, takes care of the market value addition. It is not practical to take MVA as an internal performance measure for several reasons. Some of which are.

- Operating units do not usually have share prices or market-determined valuations.
- Not all companies are publicly traded;
• Market values are subject to significant market volatility that may be unrelated to the operating decisions of management.

• Therefore, we need two measures, one EVA for internal performance evaluation and another MVA for external (market) performance evaluation. EVA is regarded as superior over traditional performance measures (PAT, ROCE, RONW, etc.) because of the following characteristics.

• It has a strong correlation with changes in MVA

• It is robust enough to be used for all financial management activities

• It is measurable at all levels of the organization, and in all dimension-line of business, functional department, product, and customer

• It is practical and effective basis for a value-based incentive compensation program.

Economic value Added (EVA) and Market value Added (MVA) as propounded by stern stewart and co. though have been found as effective means for shareholder value creation, their applicability is always subject to the nature of industry where they are applied. Banks and financial institutions have some characteristics that are peculiar to their business; therefore some changes need to be made to the standard method of calculating EVA when it comes to banks.
One of the standard methods for calculating EVA is;

\[
\text{EVA} = \text{Net operating profits Adjusted for Taxes for Taxes} - (\text{Invested capital} \times \text{WACC})
\]

Where; WACC is the weighted Average cost capital.

In this method, called the entity approach the capital charge takes into account the cost of debt as well as that of equity.

Another approach, Known as the equity approach calculates EVA as per the following formula:

\[
\text{EVA} = \text{Net profit after Taxes} - (\text{Equity} \times \text{cost of Equity})
\]

This method is more suited to banks compared to calculating the weighted average cost of capital since a big part of the banking business is liability management, i.e. raising deposits at rates below the opportunity cost of capital. The deposits franchise given by banking license give the bank the potential to create value on the liability side of the balance sheet. The liability side of the banks balance sheets is part of the business operations of a banks and it is not pure financing. This makes the equity approach more appropriate for banks.

The equity approach is also easier to use for banks. In the entity approach, the cost of capital for deposit funds can be difficult to estimate since there would be significant costs associate with servicing deposits such
as free cheque writing facility and so on and so on which are part of the cost of raising deposits. The true cost of a deposit is difficult to estimate since deposits are the major source of funds constituting 85% 95% of the capital therefore, errors in the estimate of cost of deposits would get magnified when calculating the weighted average cost of capital (parasuraman. N.R. (2000), Ashok Thampy and Rajiv Baheti (2001)

Further, to calculate EVA it is necessary to determine NOPAT and the capital charge NOPAT, or net operating profits after-tax represents the operational profits of the company restated in such a way that conventional accounting profit ( “net income) is adjusted to better reflect the current economics of the business.

Therefore; Profit After Tax = (Net)- (Equity* Cost of Equity)

To date, over 160 potential accounting adjustment have been identified and catalogued for calculation of EVA. However, for any single company it is rare to make more than 10 adjustments of GAAP accounting . The filter criteria which is applied to determine the necessary adjustments is as follow.

**Materiality:** The adjustment should be significant enough to be material to performance measurement.

**Effect on behavior:** It should drive value increasing behavior. It should not cause distortions
2.6 EVA: AN APPROPRIATE PERFORMANCE MEASURE

Maximizing shareholders value is becoming the new corporate standard in the world. Shareholder’s wealth is measured in term of the returns they receive on their investment. The returns can either be in the form of dividends or in the form of capital appreciation or both. Capital appreciation depends on the subsequent changes in the market value of the shares. This market value of shares is influenced by a number of factors, which can be company specific, industry specific and macro-economic in nature.

To help corporate to generate value for shareholders, value-based management systems have been developed. Indeed, value-based management, which seeks to integrate finance hypothesis with strategic economic philosophy, is considered as one of the most significant contributions to corporate financial planning in the last two decade or so.

Many of the traditional corporate performance measures have been found to poorly correlate, or even conflict, with management's primary objective which is maximizing the market value of a firm's stock. Now, there are several new measures in the financial world that attempt to align the behaviors of an organization with its stockholders' interests. One measure that has received a great deal of notice and acceptance is Economic Value Added (EVA) which developed by Joel M. Stern and G. Bennett Stewart & Co.
Implementation of one of these measures, such as EVA, can fundamentally change the behavior of an entire organization. The new measure focuses the behavior of individuals throughout all parts of the organization in a way that is better aligned with creating stockholder wealth. Because performance compensation incentives are based upon the new measure, employees and stockholders mutually benefit.

The EVA framework, which is becoming more and more desirable tool for measuring the financial performance of corporates, 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 ongoing initiatives for a new corporate.

2.7 EVA: Evolution and Growth

Stern Stewart defines EVA as the difference between a company's net operating income after taxes and its cost of capital (Stern Stewart, 1993). The idea is that the value (positive or negative) a company creates over a period of time is determined by its actual financial performance minus the cost of capital required to fund the performance. In essence, Stern Stewart took an accounting-based metric, residual income (RI) that has existed for several decades and breathed new life into it by manufacturing a very attractive acronym, EVA.
At first glance this appears almost identical to the definition of EVA and raises the question as to whether EVA is simply another name for RI. There are, however, some important differences. In general, RI does not adjust accounting earnings or accounting assets in calculating the level of RI generated by an organization during a given time span. In essence, RI is a simplified form of EVA. It means EVA is not a newer innovation.

Residual income is defined as operating profit subtracted with capital charges. EVA is thus, one variation of residual income with adjustments to how one works out income and capital. According to Wallace, one of the earliest to point out the residual income concept was Alfred Marshall in 1890. Marshall described economic profit as total net gains less the interest on invested capital at the current rate\(^81\). However residual income has been used by companies for years. For example, General Electric (GE) used residual income in the 1950s and 1960s to measure performance.

During 1970s, the residual income concept did not get enough publicity and it did not finish upto be the prime performance measure of companies. However EVA, practically, the same concept with a different name, has come to fore in to fore in the recent years. Moreover, the propagation of EVA and residual income measure does not seem to be on an abating trend. On the contrary, the number of companies adopting EVA is increasing rapidly. One can only guess why residual income did never gain

recognition of this level. One of the possible reasons is that Economic Value Added was marketed with a concept of Market Value Added (MVA) and it did offer a hypothetically significant connection to market valuations.\textsuperscript{82} This relation can be observed clearly in the definition of EVA by Stern and Stewart (1990)\textsuperscript{83}. They expressed it appropriately:

"EVA reflects a reality of the stock market and a reality of the capitalist society we live in. The reality is that all companies are in the same business which is to make efficient use of scarce capital resources. To be successful, companies must essentially "beat" their respective capital associates. They must earn returns on scarce capital that exceed the returns offered by its capital competitors who are also competing for scarce capital. Companies that succeed will add value to invested capital. The stock will then trade at premium to reflect this. Companies that don't succeed will essentially misallocate or misuse capital. The market will discount the stock accordingly…"

The only significant difference between RI and EVA is the financial statements used in the calculations. Stern Stewart believes that traditional financial statements do not adequately reflect the underlying economic events associated with the enterprise. It argues that GAAP-based performance measures are distorted and must be adjusted to obtain meaningful metrics. For

example, GAAP requires expensing Research & Development (R&D) in the period incurred.

It can be argued that R&D benefits future periods and should be capitalized. Hence, in a year of relatively high R&D, GAAP statements will understate income statement earnings and balance sheet accounts. To correct for such distortions, Stern Stewart suggests a list of specific adjustments that add equity equivalent reserves to capital and periodic changes in the reserves to after-tax operating profits (Stewart, 1991; Stern Stewart, 1993). Examples of the equivalent reserves include items such as: deferred Income tax reserves, LIFO reserves, cumulative goodwill amortization, unrecorded goodwill, intangibles not capitalized, allowance for doubtful accounts, and other reserves.

EVA is a powerful tool for several reasons: It aligns employee behavior with stockholder value generation, separates employee incentive compensation from the traditional performance measurement that compares actual to budgeted results, and it is relatively easy to communicate and understand. EVA can bring great value to a company by focusing the entire organization on activities that produce results valued by shareholders. With a well-grounded understanding of EVA, the financial organization is uniquely capable of providing counsel that will ensure successful implementation of this new measure.
2.8 EVA as a tool of financial management measurement

The important goal of financial management is to create highest capital employees (owners & lenders) wealth and consequently enhancing the value of the firm. Shareholder wealth is traditionally reflected by either standard accounting magnitudes (such as profits, earnings and cash flow from operations) or financial statement ratios (including earnings per share and the returns on assets, investment and equity). This financial statement information is then used by managers, shareholders and other interested parties to assess current firm performance, and is also used by these same stakeholders to predict future performance. The question then arises is whether these measures of corporate performance are linked to the expectation of the shareholders.

The problem with these performance measures is that they lack a proper benchmark for comparison. The shareholders require at least a minimum rate of return that the above mentioned performance measures ignore. Most of the time the benchmark used is the industry average or the nearest competitor performance. But the fact the industry average or competitors performance may be below what is required by the investors is ignored. So a company may be earning returns better than others in the industry but it might not meet the capital employee’s minimum expectations. An appropriate performance measure should assess how managerial actions
affect the firm value. For this to be happen, the performance measure must incorporate at least three things.

a) The amount of capital invested  
b) The return earned on the capital and  
c) The cost of capital (WACC)

Over the past several years, an alternative performance measure called Economic Value Added (EVA) has been gaining acceptance in United States. It is acknowledged by institutional firms as a credible performance measure. In order to overcome the limitations of accounting based measures of financial performance, Joel Stern postulated a modified concept of economic profit in 1990 in the name of *Economic Value Added (EVA)* as a measure of business performance.

Stern has claimed that EVA as a tool of financial management was neither just a phenomenon not it is limited to ‘for profit’ organizations. Economic Value Added has been put to use for management performance evaluation and much more than just a measure of performance, it is the framework for a complete financial management (for improving scarce capital allocation; and for valuation of a target company at the time of acquisition) Economic Value Added, through the implementation of a complete EVA-based financial management and incentive compensation system, gives managers superior information and superior motivation to make decisions that will create the greatest shareholder wealth in any publicly owned or private
enterprise. It can improve the working lives of everyone in an organization by making them more successful and can help them produce greater wealth for shareholders, customers, creditors and themselves.

EVA as a tool of financial measurement enlightens us whether the operating profit is enough to cover the cost of capital. Shareholders must earn sufficient return for the risk they have taken in investing their funds in company’s capital. The return generated by the company for shareholders has to be more than the overall cost of capital to justify risk taken by shareholders. If a company’s EVA is negative, the firm is destroying shareholders wealth even though it may be reporting a positive and growing earning per share and return on capital employed.\footnote{Purikh Parag, “the Universe of Wealth Creation”, PPFAS- Financial Advisory Service Ltd, On line, June 2000, P. 2.}

Economic Value Added simply balances a company's profitability against the capital it employs to generate this profitability. If a company's earnings, after tax, exceed the cost of the capital employed in the business, EVA is positive. Market studies have indicated that a company that continually generates an increasingly positive EVA will be rewarded by a higher stock price. Of course, if a company's long-term prospects are impaired, due to market conditions, litigation, management change or some other reason, then its stock price will not necessarily increase.

Several evidences exist to support the relationship between EVA and firm performance. Specifically, the advantage of EVA is that it tends to
identify specific idle assets or, from a portfolio of assets, identify those that provide the lowest economic return.

Consequently, EVA can be raised and by:

1. Earning more profit without using more capital,
2. Using less capital, and/or
3. Investing capital in high return projects.

2.9 EVA defined and EVA calculation

What is the Definition of EVA?

EVA is defined as the excess of a company’s after tax net operating profit over the required minimum rate of return that investors and lenders could get by investing in other securities of comparable risk. EVA is the financial performance measure that captures the true economic profit of a company.

A company that wishes to fill a demand for a good or service obtains capital (debt, equity), which is used to build products and services. In order to build these products, the company must buy materials, equipment, and labor which results in the company incurring operating expenses and affects on operating profit. In addition, the company must also pay the costs of obtaining the capital. If capital is in debt form, then the cost is simply interest. Equity is trickier. The cost of equity is simply a level of return that would be acceptable to its shareholders. This is essentially called the opportunity cost which is basically a return that a shareholder could have been obtained if the
shareholder invested their capital somewhere else. These costs are defined as cost of capital.

Then Net operating profit after taxes (NOPAT) subtracted with capital costs (cost of capital x capital employed), whatever remains is economic value added (EVA), which can be distributed or reinvested accordingly. If you have Positive EVA, congratulations, you have created wealth. If you have negative EVA, be worried, you’ve destroyed wealth in your company.

Stewart defined EVA (1991) as Net operating profit after taxes (NOPAT) subtracted with a capital charges.

\[ EVA = NOPAT - CAPITAL COST \]

\[ EVA = NOPAT - (COST OF CAPITAL \times CAPITAL EMPLOYED) \]

Cost of capital or weighted average cost of capital (WACC) is the average cost of both equity capital and interest bearing debt. Cost of equity capital is the opportunity return from an investment with same risk as the company has.

Adjustments in Financial reports:

When computing EVA, there are adjustments to both NOPAT and capital employed to reduce what could be considered non-economic accounting and financing conventions on the income statement and on the balance sheet. In computing NOPAT, certain expenses that do not affect cash

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are added back to the income statement. These non-cash entries are not believed to affect value. Some of the adjustments required include those for last in, first out (LIFO), bad debts, deferred taxes, inventory obsolescence and warranty. Depreciation is not included among these adjustments because it is considered a proxy for a true economic cost in the EVA model. Interest expense after taxes, on the other hand, is added back to income to eliminate the effect of leverage on the income statement. The result of these adjustments is that NOPAT is unaffected by material, non-cash accounting adjustments or by the financial composition of capital.

On the balance sheet, the reserves associated with the aforementioned adjustments to NOPAT are considered to be "equity equivalents" in that they are included as part and parcel of capital employed. The argument is that if the reserves had not been recorded for accounting purposes, they would be included as part of the income included in equity. Another important adjustment to the balance sheet to arrive at capital employed is the capitalization of operating leases. The net present value of operating leases is considered an asset, and the future payments are considered a debt equivalent. These adjustments are intended to restate the balance sheet to its "economic" book value. Adjustments are designed to address the distortions suffered by traditional measures, such as return on equity, earnings per share and earnings growth, that change depending upon the generally accepted accounting principles (GAAP) adopted or the mix of financing employed.
To illustrate an adjustment to both balance sheet and income statement, a LIFO reserve is added back to inventory on the balance sheet to bring the valuation back to what would have been paid for the inventory if it had been bought today. The net increase to the LIFO reserve from one year to the next would be added back to net income to arrive at NOPAT. A decrease in the LIFO reserve would be subtracted from net income. The tax effect of LIFO in NOPAT is not adjusted because the cash flow from the tax benefit or loss was, in fact, realized.  

In order to compute Economic Value Added, Stern Stewart adjusts the NOPAT and Capital components of Residual income for what are termed “accounting anomalies”, or “distortions”.  

- GAAP-based accounting is adjusted 
- R & D costs Expense Record as asset and amortize 
- Deferred taxes Record as asset Reserve recording of asset and/or liability to reflect cash basis reporting 
- Purchased goodwill Record as asset; Reserve amortization to reflect Amortize over original asset amount particular years 
- Operating leases Expense Record asset and amortize; record liability and related interest 
- LIFO inventory costing LIFO permitted Convert to FIFO

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2.10 What are the Benefits and Limitations of EVA?

At the outset, it must be stated that much has been written over the past two decades concerning the dangers of relying on any single measure in assessing performance. Evaluating performance based on a single criterion will tend to encourage managers to behave dysfunctional so as to manipulate the performance measure. With this in mind, the benefits and limitations of using EVA as a performance measure will be assessed.

The ultimate aim of 'for-profit' organizations is to generate acceptable returns for their shareholders. A problem with many traditional measures of performance such as ROI is that they are not highly correlated with the share price of the organization. One of the major selling points of EVA is that its supporters suggest that a strong correlation exists.

Ultimately, to ensure that a performance measure is taken seriously by managers, it must be easy to understand and be linked to managerial compensation. Use of a performance measure which is highly correlated to share price makes it easier to ensure that managers act in the interests of shareholders because the pay of managers can be closely linked to the creation of shareholder wealth.
When EVA is used as a performance measurement tool, it can help in making strategic decisions about subcomponents of the business. Because it highlights where shareholder wealth is being generated or destroyed, it is useful in deciding which business segments to expand or contract.

EVA can be linked to customer profitability analysis as EVA can be used to assess the value generated by any component of the organization including individual customers.

A side benefit of EVA is that it highlights the cost of capital of the business. This may encourage senior management to more carefully examine the capital structure of the organization. In many small and medium sized business concerns, the capital structure can arise due to historical accident without having being subject to close scrutiny. Making the cost of capital (especially the cost of equity) explicit, may serve to concentrate managers’ attention on financing the business in a cost effective manner.\textsuperscript{88}

However, EVA does suffer from a number of limitations which have been mentioned as follows:

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. It fails to explicitly consider the current strategy being

\textsuperscript{88} Tony Brabazon, Breda Sweeney, “Economic value added-really adding something new?”, Institute of Chartered Accountants In Ireland, Accountancy Ireland, Vol. 30, No 3, Jun 1998.
pursued by the organization and does not attempt to assess whether the organization is taking action to ensure it will develop and maintain a sustainable competitive advantage. One result of this is that EVA would appear to be of limited use for a young growing company.

Use of EVA may encourage short-term decisions amongst managers and may result in managers refusing to make investments which although having a large positive net present value (NPV), would depress EVA in the short term.

In common with other financial measures of performance, EVA does not explicitly attempt to place a value on the intellectual assets of an organization such as brands or goodwill. The result of this, is that EVA is not a complete measure of the manager's stewardship of the shareholders' investment (which is valued at market value and inherently contains a component of value for the future cash flow implications of the intellectual assets) and may therefore overstate the wealth generated during an individual accounting period.

In large multi-product organizations the difficulties in calculating EVA will multiply. Common assets and costs will need to be apportioned between divisions and/or products to enable calculation of divisional and/or product EVA. Of course, such problems do not solely arise in the calculation of EVA and already exist in the calculation of divisional/product ROIs. Use of activity based costing and activity based cost management techniques could assist in
the apportionment of assets and joint costs between subcomponents of the organization.

A major practical issue that arises in the calculation of EVA is how earnings and capital should be defined. Stern Stewart has identified in excess of 164 alterations which might be required to adjust accounting earnings. It may be difficult for investors or analysts to make all the suggested adjustments because they will only have access to the information disclosed in the published accounts.\(^{89}\)

2.11 The common mistakes in implementing/using EVA

There are a few common mistakes that are often made in implementing or using EVA. Most of them are bound up with either misunderstanding and thus misusing the concept at upper levels (peculiar definition of EVA) or not training all the employees to use EVA and thus not using the full capacity of the concept. The common mistakes include:

**Defining capital costs intentionally wrong**

With EVA approach capital costs are intended to be defined as correct as possible (as all the other costs). Capital costs are not supposed to set to some kind of target level:

Some companies have understood EVA controlling in the same way than ROI-controlling; if a unit produces a good return then also capital costs

\(^{89}\) Ibid, Jun 1998.
are set to a high level. This kind of procedure is against the whole EVA approach: the challenges are supposed to build in EVA-targets and not into capital costs because the whole idea is to enable and encourage making all the investments that offer a return greater than the alternative investments.

In order to calculate EVA correctly all the capital must be allocated to units. Usually ROI is calculated so that only capital affect able to units is taken into account. With EVA the same procedure cannot be used. If all the capital is not taken into account then the EVA-figures are upward biased (with ROI this has not caused any harm since the level of ROI has not been important)

2.12 Using EVA only in the upper management level

Investing too little in training of employees and EVA is not used at its full potential. Many companies use and train EVA only in the upper levels of organization. Thereby a lot of potential in lower levels is lost -especially at lower levels, in operating activities, the concept helps in finding the right actions Similar “under capacity-situation” is likely if EVA is not trained properly and thus employees do not know how to use the concept or are reluctant to use it

2.13 Practical definition of EVA in controlling

Usually companies do not really need all the complicated adjustments to EVA which originally belong to the concept, created by Stern Stewart & Co. EVA should be simplified to a degree where it is easily explained to
employees and easily calculated in daily reporting as long as it does not cause any steering failures.

### 2.14 EVA in Indian Corporate

The corporate procedures have undergone through a deep-seated change in the modern time and the use of traditional financial variables to explain the behavior of the present capital market is not an appropriate move toward. Further, in the changing corporate environment, the time has come to gaze at association between financial variables and stock prices or market risk in different way.

One outcome of the economic reforms implemented in 1990’s in most of the countries around the globe is that the whole world is becoming a universal economy and the size of business entities has been increasing. This has been happening because, in order to compete in the world market, an organization needs to have sizable resources and the capability to be the best performer of these resources.

A question that arises, as organizations grow in size, get decentralized and are put into units, is that of financial performance evaluation. The financial performance evaluation measure used needs to be accurate, consistent, and globally analogous and should lead to goal similitude between the owners and managers. When all is said and is done, leading multinational companies, worldwide have already adopted EVA-based system financial management that out the system ahead of its competitors. In such
circumstances, the Indian corporate simply may not stay behind for understanding and implementing the concept. The corporate in India need to be fully equipped with ‘ifs’ along with ‘buts’ of EVA just not for the reason of global competition but for their long-standing persistent survival.

Outstanding and competent management or good corporate governance or a system for shareholders’ value conception, these are popular terms. Everybody speaks on the subject within and outside the corporate organization, but not many are aware of as what to do and what not to do with reference to this concept. On the other hand, the concept of good corporate governance is here to stay in this country and shareholders and financial institutions turn more down to business, feels Tejpavan Gandhok, country Manager, India for Stern Stewart & Company. According to him,” India companies on the whole have a poor average in wealth creation.” Over 400 companies’ worldwide implement the economic value added (EVA) program, but it is still relatively a new-metric and quite emerging technique for corporate performance measurement in India.90

The EVA analysis, unquestionably, has attracted 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, nevertheless, shows to some extent diverse trends. Majority of companies are still not prepared to put in the EVA technique for evaluating their financial

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performance because of certain inherent difficulties associated with the computation. But in a country like India where capital is still costly, one would have thought, corporate managements would be trying to get a bigger return for every rupees invested in the business. This will be happened by utilizing the new performance measure, EVA.

It is emerging out from the discussion made above that the global market place is asking for some change in the role of policy-makers and managers in corporate sector. As information systems get more refined, managers will have the task of providing top management with information that is globally competitive for corporate decision-making. EVA is a measure that should be used by top management to evaluate investment centre managers because it considers goal picture between shareholders and corporate managers.

Recently a lot of emphasis is being positioned on EVA rather than ROI, as a measure of corporate performance in the Indian financial literature. However, using the concept may not be suitable since it is not without deficiencies and pitfalls. Certain disputes regarding EVA calculation and implementation have been highlighted by Sateesh Kumar (2000)\(^9\). Some of the important pitfalls in the use of EVA revealed by them are as follows:

- Most of Indian companies suffer from over-capacity situations, which distort the EVA results.

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EVA analysis does not give any idea about the financial performance of companies that are affected by business cycle variations.

Possibility of error in calculating NOPAT and also estimating WACC is another gray area.

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.

Despite all these arguable issues, 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 coming years, more and more Indian companies will start relying upon this new measure of financial performance. This would, possibly, catch the attention of policy-makers at Government level, corporate level, and NGO’s engaged in investors’ protection to press the corporate managers to come upto the expectation of shareholders in the country. With the appearance of EVA, the managers may be quite aware about the expected return by shareholders which is invariably higher than return expected by the debt holders. That is why, now a days, the corporate superiors are being required to work on the model of trading on equity that would design some surplus for equity shareholders. This surplus, if placed under technical terminology, may lead to positive EVA for the organization.
In view of the above fact, the competent authorities in India like ICAI, SEBI and Company Law Board should issue wide-ranging guiding principles for the computation of EVA and its practices in financial reporting and accounting disclosures by the corporate world. It further expected from ICAI to issue necessary guidelines to the appropriate bodies in the country so that it may become obligatory for Indian companies to disclose their EVA in the financial statements.

2.15 Market Value Added Approach (MVA):

Every company wishes to have highest market value in stock markets. But market is a competitive place. NO company or artificial force can expect to maintain market price/value high or low for a long period. Now, markets are transparent. Share price/value reflects the position of the company including its profitability, past trends and likely future. Market value Added is one definite way of rewarding shareholders. Shareholders would like to be with such companies where market value added is positive and would like to dilute their holdings in companies where market value added is negative. Therefore, market value added (MVA) is in line with the overall goal of shareholder wealth maximization. The computation of market value added (MVA) assumes relevance in this context.

MVA has been calculated as per the following formula.

Market Value Added (MVA) = Market Capitalization – Invested Capital (Book Value of Equity)
The market value of the shares of the company multiplied by the total issued shares constitutes the market capitalization. It is a measure of the presence of the company in the market. In this case, 365 days average market capitalization of Indian banks has been picked-up from the PROWESS, database of Centre for Monitoring Indian Economy (CMIE). As regards to the book value of equity (invested capital), it has been calculated from the financial data collected from the PROWESS with minor adjustments. In paid-up equity capital of the banking company, free as well as specific reserves were added while accumulated losses were reduced. However, revaluation reserves were not included as these are not part of equity capital.

In the present economic scenario, the investor's perception of the world around is constantly undergoing a change. They need appreciation in the value of their investment in capital market instrument. As such, "maximization of wealth" has become a widely accepted objective of the firms. The value is estimated in the terms of benefit that the investment can generate. With a view to measure shareholder's value, Stewart invented the term Market Value Added. (MVA)

Market Value Added (MVA) is the difference between the current market value of the firm and the capital contributed by investors. If MVA is positive, the firm has added value. If it is negative, the firm has destroyed value. The amount of value added needs to be greater than the firm's investors
could have achieved investing in the market portfolio, adjusted for the leverage (beta coefficient) of the firm relative to the market.

The value will be created when:

- The management deploys its resources in efficient and effective manner yielding expected return for shareholder.
- The productivity of the organization increases continuously.
- There is a constant improvement in Price Earning (P/E) ratio as well as Earning Per Share (EPS)
- The existing investors receive a constant and good rate of dividend in order to keep flow of investments.
- The marginal productivity of capital in a company increases as compared to its competitors.

Market value of invested capital refers the market value of equity capital and debt capital, but the market value of debt is not easily available as debts are generally traded. Thus, the definition of MVA can be stated as market capitalization less net worth. Market capitalization is the product of closing share prices and the number of outstanding shares as on that date (i.e. date of balance sheet). Whereas, net worth is the sum of equity capital, reserves and surplus net of revaluation reserves less accumulated losses and miscellaneous expenses.

**MVA = Market Capitalization – Net Worth**

Market capitalization = closing share prices x no. of outstanding shares.
Net worth = capital invested including debt and equity capital less accumulated losses and miscellaneous expenses.

It is clear from the above definition that MVA simply reflects the price to book value relationship that is depicted by P/B ratio (Market price to book value ratio). The only difference between the MVA and P/B ratio is that MVA is an absolute measure whereas P/B ratio is a relative measure. A positive MVA implies that P/B ratio is greater than one. Therefore, it may be concluded that MVA is the change in the market value of a company between the two different points of time reference to a fixed quantity of outstanding shares.

It may be noted that if the number of shares change between two given points, MVA should be calculated with reference to shares outstanding on the latest point of time.

MVA represents the value added to the particular share over its book value. MVA informs how much value a shareholder has added to this wealth, which he has invested in the share. Accordingly, a company with an objective of enhancing the shareholder’s wealth should attempt to capitalize on its MVA. MVA can be estimated by subtracting the book value of shares from the market value of shares. It is the silent that EVA helps in pushing up the MVA of the organization. As a result, EVA can be considered as an internal measure and MVA as the external measure of a company’s performance.
2.16  STANDARIZED MVA

Market Value Added is an absolute measure of addition in market value. In order to take a relative measure of value addition, market value added (calculated) was further divided by invested capital in order to calculate standardized market value added (SMVA). Standardized market value added can tell how much % (Percent) there is increase in market value added in relation to the invested capital. This is particularly important as different banks may have different amount of invested capital. Looking at their absolute figure of Market Value Added may not give the correct picture. As for one bank, absolute MVA may be positive and very high. However, when it is calculated as a parentage to invested capital (i.e. Standardized MVA), it may not be that high (or may be low) because of high amount of invested capital. So for the same MVA for two banks with different invested capital may give altogether different SMVA and may change the rankings.

Standardized Market Value Added (SMVA) = MVA/Invested Capital

2.17  Shareholders’ Value Added approach:

When managers try to increase the ROI, EVA, MVA or SVA, are they really creating value for the shareholders? The answer is clearly no because EVA and MVA, as per Stern Stewart recommendation are computed based on financial statement. But financial statement only reflects the firm’s history.

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All the items of financial statements, which explain what has happened during a certain year and also of the balance sheet, which reflects the state of a firm’s assets and liabilities at a certain point of time are historic data. But conceptually a company creates value for its shareholders when the shareholders’ return exceeds the equity’s cost (the required return to equity). A company destroys value when the opposite situation occurs. So shareholders’ value creation should simply be calculated as:

**Shareholder value creation = Market value of equity x (shareholders’ return –Ke)**