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CHAPTER -2

CONCEPTUAL FRAMEWORK

2.1 INTRODUCTION

Financial performance is the snapshot of position of concern. One can judge the ability of concern to withstand the ever changing environment through the financial performance. It is the blue print of the financial affairs, financial position and the end result of its operations of concern. It is a technique of X-raying the financial position as well as progress of a company.

The overall objectivity of a company is to earn satisfactory returns on the funds invested in it. An evaluation of such performance is done in order to measure the efficiency of operations or the profitability of the organization and to appraise the financial strength as compared to a similarly situated concern.

The firm can measure the financial position and efficiency of operations through the financial statement. These financial statements are the end result of the process of financial accounting. It is very important for a firm to measure the financial performance through its financial statements which helps to evaluate the past performance for forecasting and planning future performance of enterprise. The main objective of financial performance measurement is to evaluate the liquidity, stability and profitability of a concern.

There are number of techniques of corporate performance analysis which are developed in recent years to analyze the corporate financial performance of the organization. But keep one thing in mind that different techniques are appropriate for different purposes. Therefore, an analyst must clearly define the objectives of the analysis and potential standards of comparison before any analysis. The analyst should choose proper technique for the analysis because performance analysis technique may have direct affect on the behavior of owners, managers, shareholders etc… the following techniques are mainly used for the analysis of corporate performance.
2.2 RATIO ANALYSIS

Ratio analysis is one of the most powerful techniques of analysis and interpretation of financial statement and it is widely used to analyze the financial activities of a firm. It is the process to present financial statements in simplified, systematized and summarized form. It establishes a quantitative relationship of the items or a group of items appearing in the financial statements. Ratio analysis is a tool of analyzing and interpreting various ratios based on the past performance of a company and with the help of these ratios financial statements i.e. Profit & Loss Account and Balance-sheet can be analyzed more clearly and various decisions can be taken from such analysis. It helps various interested parties like management, government, shareholders, stakeholders and other analysts to make an evaluation of company’s performance from their own point of view and interests.

2.2.1 CLASSIFICATION OF RATIOS

Ratio analysis is most widely used technique for the purpose of analysis and interpretation of financial statements. A large number of ratios are computed to analyze the problems of business firms. Hence, the ratios may be classified into the following categories:

**Structure or Source-wise Classifications**

Under this classification, the ratios are classified into three broad categories on the basis of accounting information given in the financial statements, i.e. Balance-sheet and Profit & Loss Account from which accounting date are derived to determine the ratios. On this basis, each category consists of a number of ratios. On the basis of structure of source-wise classification, accounting ratios may be classified into three categories as presented below.
1. **Balance-sheet Ratios**

The Balance-sheet ratios deals with the relationship between two items or two groups of items appeared in the Balance-sheet. These ratios are computed from the information given in the Balance-sheet. Therefore, these ratios are also known as Financial Ratios. Examples of such ratios are: Current Ratio, Acid-test Ratio, Liquid Ratio, Debt-Equity Ratio, Proprietary Ratio, Capital Gearing Ratio, etc…

2. **Profit and Loss Account Ratios**

The Profit and Loss Account Ratio deals with the relationship between two items or two groups of items of the Profit and Loss Account or the Income-statement. The accounting information is derived from the Profit and Loss account for the purpose of calculations. Therefore, these ratios are also known as Operation Ratios or Income Statement Ratios. Examples of such ratios are: Gross Profit Ratio, Net Profit Ratio, Expenses Ratio, Operating Ratio etc…

3. **Composite or Inter-statement Ratios**

This type of ratios deals with the relationship between two items, one is from the Profit and Loss Account and other from the Balance-sheet. The figures used for these ratios are taken from both Profit and Loss Account and Balance-sheet. Therefore, these ratios are also known as Combined Ratios. Examples of such ratios are: Rate of Return on Capital Employed, Rate of Return on Net Worth, Rate of Return on Owner’s Fund, Debtors Turnover Ratio, Creditors Turnover Ratio, Working Capital Ratio, etc…

*Function or Purpose-wise Classification*

Recently, it is the most popular and useful method of classifying the ratios. These ratios are classified with certain tests which directly or indirectly satisfy the financial needs of the parties of business concern. For example, shareholders are interested in the profitability of the firm, whether the firm is capable of paying dividend or not, debenture holders are interested in the long-term solvency of the firm, whether the firm is able to pay interest amount or capable of paying back the
principal amount after the stipulated period or not, creditors and financial institutions are interested in the liquidity of the firm whether the firm is able to meet its current liabilities or not. Hence, on the basis of function or purpose-wise classification, these ratios highlight insight of every particular function. These accounting ratios may be classified into five categories as presented below:

1. **Liquidity or Short-term Solvency Ratio**

   The word liquidity refers to the ability of a firm to meet its current financial obligations as they arise. These ratios are used to analyze the short-term liquidity position of a business. In other words, these ratios establish the relationship between current assets and current liabilities which indicate whether current assets are sufficient to pay current liabilities and help to determine the solvency of the firm and to find out whether the firm is able to meet its current obligations. This liquidity or short-term solvency ratios include Current Ratio or Working Capital Ratio or 2:1 Ratio, Quick Ratio, Absolute Liquid Ratio.

2. **Profitability Ratio**

   Profit is the difference between the total revenue and total cost. Profit is the prime object of every business enterprise. It is essential for every business to earn sufficient profit not only to survive and grow over a period of time but also for the expansion and diversification of the business. This profitability ratio helps to measure the end result of business enterprises. In fact, this profitability indicates the two word profit as well as ability that mean this ratio refers the ability and efficiency of business enterprises. The profitability of a business may be measured in two ways:

   I. **Profitability based on Sales**

      It includes Gross Profit Ratio, Operating Expense Ratio, Operating Profit Ratio, Expenses Ratio and Net Profit Ratio.
II. **Profitability based on Investment**

It includes Return on Investment or Return on Capital Employed (ROCE), Return on Shareholder’s Fund or Proprietor’s Fund or Net Worth, Return on Equity Shareholder’s Fund and Return on Total Assets.

3. **Leveraged or Capital Structure or Long-term Solvency Ratio**

These ratios measure the ability of a company to meet its long-term obligations. It reveals whether the company can pay its long-term liabilities or not. It also provides the information about company’s financial leverage. It includes Fixed Assets Ratio, Capital Gearing Ratio, Dividend Coverage Ratio, Interest Coverage Ratio, Solvency or Debt to Total Assets Ratio, Debt-Equity Ratio, and Proprietary Ratio.

4. **Turnover or Activity Ratio**

Turnover or activity ratios measure the efficiency of an enterprise in as far as the management of its non-cash assets is concerned. This ratio indicates how quickly the assets have been converted into cash during the year and also evaluates the efficiency. It includes Stock or Inventory Turnover Ratio, Debtors or Receivable Turnover Ratio or Debtors Velocity, Creditors or Payable Turnover Ratio or Creditors Velocity, Total Assets Turnover Ratio, Fixed Assets Turnover Ratio, Current Assets Turnover Ratio, Working Capital Turnover Ratio and Capital Turnover Ratio.

5. **Market Test or Investment Valuation Ratios**

Market test or valuation ratios measure investors’ response to owning a company’s stock and also the cost of issuing stock. It is related to the market value, stock price and the book value obtained from the firm’s financial statements. These are concerned with the return on investment for shareholders, and with the relationship between return and the value of an investment in company’s share. It includes Dividend Pay-Out Ratio (D/P), Dividend Yield Ratio, Price-Earning (P/E) Ratio,
Dividend Coverage Ratio, Earning Per Share Ratio and Dividend per Share.

2.2.2 SIGNIFICANCE OF RATIO ANALYSIS

Measures Efficiency

Ratio analysis is a widely useful tool to measure the firm’s efficiency by using various turnover or activity ratios. These ratios evaluate the performance of management over a period of time by comparing the present ratios with the past ratios. These ratios are used by many parties such as bankers, suppliers and investors of credit.

Measures Profitability

The owners and the management of a firm are primarily concerned with the overall profitability of the firm. The profitability ratios like Return on Capital Employed, Return on Investment, Net Profit Ratio etc… helps to measure the earning capacity of the firm. These profitability ratios are best measure of profitability.

Measures Long-term Solvency

Ratio analysis is equally important in measuring the long-term solvency of the firm by using capital structure or solvency or leverage ratios. These ratios are very good advantageous for long-term creditors, bankers, customers, security analysts as well as present and future prospective investors as it shows the financial soundness or weakness of the firm.

Measures Liquidity Position

Ratio analysis is useful to the management in evaluating the liquidity position of the firm. The liquidity position of the firm is said to be satisfactory, if a firm is able to meet its current obligation as and when they arise. In other words, when a firm is able to meet its current obligation or short-term obligation within a year out of its sufficient liquid funds, it is said to be satisfactory. These ratios are helpful to the bankers and short-term creditors.
Useful in Inter-firm and Intra-firm Comparison

Ratio analysis is the basis for comparison of similar nature of firms and various divisions of the same firm over the period of time. Absolute figures are not important for the comparison but accounting ratios are the best tool for inter-firm and intra-firm comparison.

Useful in Simplifying Accounting Figures

Accounting figures which are presented in financial statements such as Profit & Loss A/c and Balance-sheet are very complex and difficult to understand for those who do not understand the accounting language. These accounting data are simplified, summarized and systematized with the help of ratio analysis.

Useful in Analysis of Financial Statement

Ratio analysis analyses the financial statement such as Profit & Loss A/c and Balance-sheet. Such analysis is helpful not only to the management but also to the outside parties like customers, bankers, investors etc…

Useful in Improving Future Performance

Ratio analysis pin points the weak points of the business so with the help of this, the management can pay more attention to these weak points and can improve overall performance of the business in future by taking preventive measures.

Managerial uses

Ratio analysis is an invaluable tool of management. This tool fulfills the basic functions of management such as financial forecasting and planning, co-ordination, communication, control and decision-making.

2.3 ECONOMIC VALUE ADDED

The main aim of financial management is to maximize the wealth/ value of its shareholders by maximizing the market price of its shares. The shareholders wealth is measured in terms of returns which they receive on their investments either in the form of dividend or capital appreciation. The capital appreciation is based on the market value of the shares and the market value of shares is highly affected by various
internal and external factors. The corporate entity which gave lower preferences to the shareholder’s curiosity, are now focusing more on shareholder’s wealth because new challenges like severe competition, globalization, rapid change in technology, strict government policy, wide volatile real and financial markets etc… have increased the burden on manager to devote superior performance and value for their shareholders. The shareholders value is treated as an essential measure of the corporate performance. Hence it becomes the ultimate aim of managers to create or generate value of the shareholders. To create value for shareholders, value-based management system was evolved known as Economic Value Added (EVA) which seeks to integrate financial hypothesis with strategic economic philosophy of the corporation. Value-based management system has identified five key institutional value drivers such as governance, strategic planning, resource allocation, performance management and top management compensation that are essential for sustainable value creation.

The traditional accounting-based performance measures like Earning Per Share (EPS), Return on Capital Employed (ROCE), Return on Investment (ROI), Return on Net Worth (RONW), Operating Profit Margin (OPM), Net Profit Margin (NPM) etc… were popular and successful in the past to measure the efficiency and profitability of the firm and becoming obsolete because it does not take into the concept of opportunity cost and risk adjusted rate of return on capital employed in the business so ultimately it fails to achieve the objective of value maximization. The failure of this concept indicates clear surplus which means whether the reported profit cover cost of capital. But ROI is still one of the most important yardsticks to measure the profitability of the firm. To overcome the shortcomings related to traditional profit based measures, a modern value based performance measures like Market Value Added (MVA), Shareholders Value Added (SVA), Cash Value Added (CVA), Total Quality Management (TQM), Financial Reengineering (FR), Balance Score Card (BSC), Economic Value Added (EVA) etc… are becoming more popular and superior to measure corporate performance. Out of all this, the use of popularity graph and the use of Economic Value Added (EVA) are being increasing and touché the new heights day by day.

Stern Stewart developed EVA to help senior managers which incorporate two basic principles of finance into their decision making: the primary objective is to maximize the wealth of its shareholders; and second is that the value of a company
depends on the extent to which investors expect future profits to exceed or fall short of the cost of capital. It is the modified concept of economic profit named Economic Value Added (EVA), firstly adopted by Stern Stewart in 1980. It is not new but a variation of the age-old “Residual Income (RI)” concept. This technique is based on economic concept.

The aim of EVA is to encourage senior managers of the companies to focus about the delivery of shareholders value and to maximize shareholders value whose shares are listed in the stock market. It is designed in such a way that the managers can think more about the amount of capital and the use of capital in each business.

The shareholders value is created when the return on the firm’s economic capital employed is more than the cost of capital. The company creates shareholders value only if it generates surplus from operating activities in excess of its cost of capital. The surplus generated over and above the cost of capital is simply known as Economic Value Added (EVA).

EVA is modern and innovative technique to measure the economic performance of the company. It presents an integrated financial management and incentive compensation schemes which give managers better-quality information and superior motivation to make decisions that will create the maximum shareholder wealth in an organization. It is the single corporate performance measurement tool which provides the basic information for the creation of shareholders value in future. It enables investors to identify investment opportunities and motivate managers to make value added business decisions. An EVA, modern financial management tool is becoming more and more admirable because of consistent approach in setting goals, communication with investors, evaluating strategies, reviewing capital projects, value acquisition, measuring performance and paying bonuses.

While computing EVA it is necessary to make certain accounting adjustments, which are required only for corporate reporting purposes. It is sometimes 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 argued that if a company is able to serve its shareholders then it can better serve all other stakeholders also.
Thus, no companies can grow and survive, if it fails to create shareholder’s value. Nevertheless, economic value added is the new corporate performance measure which is used to judge the financial performance of the organization in the corporate world. Highly recorded companies like AT & T, Coca-Cola, Eli Lilly, ICL, Quaker Oats, Briggs & Stratton and others adopted EVA model throughout their organization. These companies are the backbone of the United States economy. It is observed in USA that EVA developed financial discipline, encouraged managers to act like owners and boosted shareholder’s value.

2.3.1 EVOLUTION OF EVA CONCEPT

In order to overcome the limitations of traditional accounting-based performance measurement, Stern Stewart has introduced economic - income based a modified concept on the economic-based performance known as Economic Value Added (EVA). The term “EVA” was invented by a New York based consulting firm M/S Stern Stewart & Co. in 1980s and it is registered trade-mark of Stern Stewart & Co. (USA). The importance of EVA is gradually recognized in Indian corporate sector.

The EVA model is very easy to understand but tricky to implement. The mechanism of Economic Value Added (EVA) means any surplus generated from operating activities over and above the cost of capital. It is an amount that remains after capital charge or cost of capital is deducted from the amount of operating profit. In other words, it is the excess profit of a firm after charging the cost of capital provided by owners and shareholders. The result of EVA is emphasized on the positive or negative value of EVA.

Stewart defines EVA as Net Operating Profit after Tax (NOPAT) subtracted from a capital charge. It differs from the traditional measures like Return on Capital Employed (ROCE) and Return on Net worth (RONW), the traditionally used profit indicators parameters are ineffective in explaining whether reported profit covers cost of capital of a company. While calculating EVA many of the factors like estimation of stock-market data for analyzing the adjustment for systematic risk represented which do not form a part of standard accounting procedures. So to overcome the inherent limitations of this, Economic Value Added emerged to measure the performance.
Hence, it is a tool to measure whether the operating profit is sufficient to cover cost of capital of a company. According to Tully, EVA is equal to after Tax Operating Profit minus Cost of Capital.

EVA is a new and innovative concept in looking into corporate surplus. Its corporate surplus should be shared by the employees, management and shareholders. Efficiency bonus, managerial remuneration, issue of bonus shares to the equity shareholders, over and above a minimum sustenance salary, profit share schemes and incentive dividend to the preference shareholders can be better linked to EVA.

EVA attempts to measure the economic profit as it compares actual rate of return as against the required rate of return. It explains whether a business unit generates return from its assets already in the business and maximizes shareholder’s value. EVA is measuring an operation’s real profitability and economic efficiency of a company. Profit is contributed by land, labour, capital and management. It effectively measures the productivity of all the factors of production such as; land, labour, capital, entrepreneur and management.

It is a better system than the Return on Investment (ROI) to encourage growth of new product, new manufacturing facilities and new equipments. EVA measurement requires careful resource mobilization, resource allocation and investment decisions.

At last, EVA is nothing but accounting for the cost of capital and determining the sufficiency or insufficiency of earnings generated by a firm over the cost of capital. It is the most powerful tool to determine whether a firm is value creator or value destroyer. If a company’s EVA is positive, the firm is creating shareholder’s value and also creates economic value for the firm but if a company’s EVA is negative, the firm is destroying shareholder’s value even though it may be reporting positive and growing Earning Per Share (EPS) or Return on Capital Employed (ROCE).

2.3.2 EVA – AS A MANAGEMENT TOOL

EVA as a residual income measure of financial performance, is simply the operating profit after tax less a charge for the capital, equity as well as debt, used in the business.
Because EVA includes profit and loss, balance sheet efficiency as well as the opportunity cost of investor capital – it is better linked in shareholder’s wealth and it is superior to traditional financial metrics such as PAT or percentage rate of return measures such as ROCE or ROE.

In addition, EVA is a management tool to focus on the impact of manager’s decisions in increasing shareholder’s wealth. These include both strategic decisions such as what investments to make, which businesses to exit, what financing structure is optimal; as well as operational decisions involving trade-offs between profit and asset efficiency such as whether to make short or long production runs etc.

Most importantly the real key to increase shareholder’s wealth is to integrate the EVA framework in four key areas:

- To measure business performance
- To guide managerial decision making
- To align managerial incentives with shareholders’ interests
- To improve the financial and business literacy throughout the organization

To better align managers interests with shareholders – the EVA framework needs to be holistically applied in an integrated approach – simply measuring EVA is not enough but it must become the basis of key management decisions as well as be linked to senior management’s variable compensation.

EVA comprises three main areas: better asset efficiency, improved business and financial literacy at all levels, and more owner-like behavior by managers.

The EVA approach to management has been endorsed by many influential investors and independent experts. EVA has already become the primary focus in many companies around the world across a wide range of industry sectors. In India NIIT, Tata Consultancy Services, The Godrej Group and number of other companies have formally adopted the EVA framework.

However, the practitioners differ with one another in context to the method of calculation of adjustments required for conversion of accounting profit to NOPAT, market rate, beta and risk free rate.
The technique of computing EVA requires several adjustments in arriving at the NOPAT. The developers of the concept have identified 164 potential adjustments to obtain a real reflection of a company’s performance.

Omitting even a few may lead to serious errors. Large numbers of adjustments tend to complicate the concept and put off the management. Thus, it has been suggested that companies identify four-five critical adjustments that are simple to implement.

There are also no statutory guidelines – such as the FABS or the accounting Standards – for making the adjustments. Consequently, different companies can adopt ways of adjusting the NOPAT. This could seriously impair the comparability of EVA figures of different companies. Until proper standards are evolved, though a useful measure EVA will remain at best an internal measure of shareholder value.1

Performance Measurement

The basic purpose of any measurement system is to provide feedback relative to the goals. This feedback increases chances of achieving those goals efficiently and effectively. If performance measurement is right then the data generated will tell where the company is, how the company is doing and where it is going. The selection of the right measure is critical for the success of a firm. A right measure of the performance will lead to the right feedback; enable the concern to take right corrective measures and right decisions. Companies are using Economic Value Added internally as a performance measurement tool to improve productivity that would lead to enhancement of the shareholder value.

Goal Setting

By using Economic Value Added to set targets for managers, they can be made sensitive to capital employment in meeting their targets and engaged in shareholder value creation activities. Economic Value Added can be used alone or it may also used in conjunction with other targets.
**Benchmarking**

Economic Value Added can also be used for benchmarking analysis. By comparing the company’s Economic Value Added to the industrial Economic Value Added averages or best practices, a company can understand how they are performing in comparison with its peers. Benchmarking analysis of Economic Value Added can help managers to be better aware of the true performance of their company vis a vis competitors.

**Capital Budgeting**

When Economic Value Added becomes the singular focus for all decisions; it establishes a clear and accountable links between capital investments and shareholder value. Economic Value Added enables to make better the capital budgeting decisions because it eliminates the distortions in GAAP and changes the company for the total cost of funds employed. This system overcomes failure in creating shareholder wealth by converting Net Present Value (NPV) and a point-in-time measure of value into a period measure of performance and integrating it into the financial management and incentive compensation systems.

**Incentive Compensation**

Economic Value Added is not just a financial performance measure but it also has ability to act as a basis of Incentive Compensation Scheme. The Economic Value Added linked Incentive Compensation System scheme will motivate and guide the managers to take decision for the maximization of wealth. Under the Economic Value Added bonus system, the manager are paid the bonus on the basis of the Economic Value Added improvements, they have made. This ensures that the managers will get the bonus only in the case of Economic Value Added improvement. This kind of bonus system is usually beneficial both to management and the shareholders because file performance level is likely to rise after introducing Economic Value Added bonus system. Traditional incentive design draws upon a basket of incomplete performance metrics, diluting focus and sending conflicting signals. Many of these measures reward maintaining or investing capital at returns far below the cost of capital.
The Economic Value Added linked compensation system aims to achieve the following:

- To align management’s interests with the shareholders’ and to minimize agency costs.
- To provide sufficient rewards to motivate managers

The 3 basic steps in designing the Economic Value Added incentive plan are:

- Define the plan’s purpose and objectives.
- Determine whether Economic Value Added is right for the company.
- Develop the scope and mechanism of the plan.  

2.3.3 NEED FOR EVA

Over the last years, the main aim of all the company is to earn maximum profit so that they forget to create or generate a shareholder’s value. But now a days, to earn sufficient profit is not enough. They prioritized to increase share holders value along with maximize profit so that it ultimately sub-serve the interest of stakeholders which will automatically become sub goals and achieving these goals means to achieve the overall goal of the organization.

The goal of every firm is to maximize wealth of the shareholders. The shareholders wealth is measured by their return which they receive on their investment either in the form of dividend or in the form of capital appreciation. The capital appreciation depends on the market value of shares, of which market value is a dominant part. The market value of shares is highly influenced by number of internal as well as external factors, many of which may not be influenced by the management of the firm. But one of the factor which has direct impact on the market value of shares is that the expectations of the shareholders regarding the return on their investments.

There are various ratios to measure and evaluate the performance of the business like Return on Capital Employed (ROCE), Return on Equity (ROE), Earning per Share (EPS), Net Profit Margin and Operating Profit Margin. But these traditional performance measurement tools are ineffective parameters and are not proper for evaluation and comparison because it ignores the cost of capital. The expectation of
every shareholder is to earn minimum rate of return on their investment. Hence, the Stern Stewart has introduced a new concept to measure the corporate performance by taken into account the minimum required rate of return. This concept is known as Economic Value Added (EVA).

### 2.3.4 METHODS OF IMPLEMENTATION OF EVA

There are four aspects in the adoption and implementation of Economic Value Added (EVA). These four aspects are recommended by Stewart which begins with the letter M, so called as 4-Ms. These four aspects include:

1. Measurement
2. Management System
3. Motivation
4. Mindset

#### CHART NO - 2.1

**4 STEP PROCESS OF IMPLEMENTING EVA**

![Diagram of the 4-step process of implementing EVA](image)

**Measurement**

EVA is the most accurate corporate performance of the company for any given time period so any company can adopt, implement and measure EVA. For calculating EVA, a number of accounting adjustments should be made out in order to eliminate accounting charges and bring them closer to true economic results. In simple word, EVA transfers accounting profit into economic reality. There are more than 160 potential accounting adjustments in GAAP and in Balance-sheet areas such as amortization of goodwill, depreciation, B.D.R., inventory costing and restructuring charges identified by Stern Stewart. Stewart advised to make only 5 to 15 adjustments.

**Management System**

The EVA system is completely based on the management system on which the company should take managerial decision related to the choice of strategy, allocating capital, strategic planning, capital allocation, merger and acquisition, pricing acquisition or divesting business, setting annual goals even day to day operation decisions. The top most goal of every company is to increase EVA in all the cases. The managers in EVA companies learn that there are only three basic ways to increase value. Such as;

- Increase the return from the assets already in the business by running the income statement more efficiently without investing new capital.
- Invest additional capital and aggressively build the business so long as expected returns on new investments exceeds the cost of capital; and

Release capital from existing operations both by selling assets that are worth more to others and by increasing the efficiency of capital by such things as turning working capital faster and speeding up cycle time[^3]
A TYPICAL FINANCIAL MANAGEMENT SYSTEM AND EVA FINANCIAL MANAGEMENT SYSTEM

Figure: A Typical Financial Management System

- Setting Goals
- Communicating
- Evaluating Strategies
- Reviewing Capital Projects
- Valuing Acquisitions
- Measuring Performance
- Paying Bonus

Figure: EVA Financial Management System

- Setting Goals
- Communicating
- Evaluating Strategies
- Reviewing Capital Projects
- Valuing Acquisition
- Measuring Performance
- Paying Bonus


[Source: www.eva.com]
Motivation

To instill both a sense of urgency and the long term perspective of an owner, Stewart designed cash bonus plan that cause managers to think and act like owner because they are paid like owners. An EVA based incentive system encourages the managers to maximize the EVA. It is necessary for every company to plan basic incentive compensation and appraisal system on improvements EVA is the source of the greatest power in the EVA system. Under the bonus plan, the manager can create more money for themselves by creating the greater value for shareholders. It is only possible to have bonus plans with no upside limits. In fact, the shareholders will be happy only when there is the greater bonus for managers under EVA.

Mindset

Like other, the effective implementation of EVA is only possible, when the EVA financial management and incentive compensation system can change in the corporate culture and mindset of the company. All the organizations need to be given training to people in EVA and value building concept and taught them to focus on one objective - maximizing EVA. The EVA system provides a common language for employees across all corporate functions. Therefore, the company should keep all financial and operation functions on the same basis. EVA facilitates co-operation and communication among divisions and departments; it links the strategic planning with the operating decisions and eliminates much of the mistrust that typically exists between operations and finance.

2.3.5 COMPUTATION OF EVA

1. Computation of EVA to Determine the Past and Present Financial Performance:

EVA is the difference between Net Operating Profit after Tax (NOPAT) and the capital charge for both the debt and equity (overall cost of capital). Simply defined, EVA means the Economic profit that remains after deducting the overall cost of capital (both Debt and Equity).

If NOPAT exceeds the capital charge, EVA is positive means it is creating shareholder’s value and if reverse is the case, it is negative means destroying
shareholder’s value. It reveals whether a company is generating real value for its shareholders in terms of its economic performance or not.

The power of EVA comes from the income statement and Balance-sheet and it reflects the economic reality after eliminating accounting distortions.

The three accounting steps are required for the calculation of EVA of an organization to identify the financial performance whether the firm creates or destroys its shareholders value. The following are the steps for the calculation of Economic Value Added.

**Step-1: Computation of NOPAT**

NOPAT refers to the quantum of Net Operating Profit available in the business after tax but before interest expenses. In other words, NOPAT means the income available to shareholders plus interest expenses (after tax).

Additions and deductions of non-operating expenses and income to the net profit figure and making certain adjustments for turning accounting profit into economic profits are also desired. To convert accounting profit also known as GAAP earnings into economic profit known as EVA, Stern Stewart has identified 164 such potential adjustments to GAAP but due to diverse accounting policies adopted in India and a broad, only five or six adjustments are quite sufficient in Indian context.

- Research and Development
- Non-Interest bearing Current Liabilities
- Revaluation Reserve
- Goodwill
- Depreciation etc…

Any change in the accounting adjustments will show a different Economic Value Added, which are following:

- **Basic EVA:** The basic EVA is computed by using unadjusted operating profits and balance-sheet.
- **True EVA:** The true EVA is the most theoretically correct and accurate measure of Economic Profit. It is computed with all relevant adjustments to
accounting data and using precise cost of capital for each business unit in a company.

→ **Disclosed/Discounted EVA:** The disclosed EVA is computed by making about ten to twelve standard adjustments to publically available accounting data. It is much better than basic EVA but not as good as it should be for internal management.

→ **Tailored EVA:** The tailored EVA is special to the organizational structure, business mix, strategy and accounting policies of each company.

### Step-2: Computation of Invested Capital (IC)/ Capital Employed (CE)

The capital employed or invested capital in EVA is defined as an approximation of economic book value of all cash invested on going concern business activities. It can be calculated through the company’s net assets (Total Assets less Non-interest Bearing Current Liabilities). Capital employed is required for calculating EVA and it can be calculated through the assets side (Operating Perspective) or liabilities side (Financing Perspective) of a balance-sheet.

→ **From the Assets side of the Balance-sheet:**

\[
CE = \text{Current Assets-Non-interest bearing Current Liabilities} + \text{Fixed Assets} + \text{Investments}
\]

→ **From the Liabilities side of the Balance-sheet:**

\[
CE = \text{All Interest bearing Debt (Short term as well as long-term)} + \text{Net Worth less any Non-operating Assets}
\]

### Step-3: Computation of Cost of Capital

The cost of capital refers to the opportunity cost or rate of return. It is the shareholder’s required rate of return on a portfolio of all company’s existing securities. It is calculated by using Weighted Average Cost of Capital (WACC). WACC refers to cost of each source of capital such as Debt, Preference Shares and Equity Share Capital calculated separately and then add them together by assigning relative weights according to their proportion in total capital employed to the different
sources of capital respectively. Weights can be assigned either on Book Value Basis or Market Value Basis. Stewart suggested Market Value Basis for WACC.

\textit{WACC can be calculated as under:}

\[
\text{WACC} = \frac{\text{Debt} \times K_d}{\text{CE}} + \frac{\text{Preference Shares} \times K_p}{\text{CE}} + \frac{\text{Equity} \times K_e}{\text{CE}}
\]

\rightarrow \textbf{Cost of Debt (K_d):} The cost of debt refers to the average rate of interest the company pays for its debt obligation and then adjusting it for taxes.

\[K_d = \frac{\text{Interest Expenses} \times (1 - \text{Tax Rate}) \times 100}{\text{Debt}}\]

\rightarrow \textbf{Cost of Preference Capital (K_p):} The cost of preference capital refers to the discounted rate that equals to the present value of after tax dividend payment cash flows to current market value of the preference share capital.

\[K_p = \frac{\text{Dividend} \times 100}{\text{Preference Capital}}\]

\rightarrow \textbf{Cost of Equity (K_e):} Cost of equity determines the expected rate of return for the investors. It is more challenging to calculate because it does not give the fix return to its shareholders and it depends on the market expected rate of return. It can be calculated by using number of methods.

- Capital Asset Pricing Model (CAPM)
- Dividend yield
- Dividend Yield Plus Growth in Dividend
- Earning yield
- Realized Yield

But for the calculation of EVA, Stewart & Co. recommends the CAPM for the computation of cost of equity. Under CAPM, cost of equity capital is expressed as—

\[K_e = R_f + \beta (R_m - R_f)\]
Where,

\( R_f \) = Risk Free Rate of Return

\( \beta \) = Beta Coefficient Rate of Return

\( R_m \) = Expected Rate of Return for Market Portfolio

→ \( R_f \): It represents the most secure return that can be achieved. The current yields available in long-term government bonds in Indian context refer to risk free rate of return.

→ \( \beta \): Beta is the risk free coefficient which measures the sensitivity of the security returns of a particular security to change in the market returns. It is a risk measuring factor for different capital allotments. Mathematically, it is the statistical measure of volatility. Beta may be less than, equal or greater than the market beta. Higher the beta, greater the risk (\( \beta > 1 \)). Beta has been calculated based on SENSEX for each year separately.

\[
\text{Beta} \ (\beta) = \frac{N \sum_{XY} - (\sum X)(\sum Y)}{N \sum X^2 - (\sum X)^2}
\]

Where,

\( X \) = Monthly Closing Return on the Stock Market Indices (NSE)

\( Y \) = Monthly Closing Return on Share Prices of a Particular Company

\( N \) = No. of Months in a year

→ \( R_m \): It refers to the market expected rate of return. It is normally given as growth rate of market index. It can be calculated with the help of moving share market indices.

\[ R_m = \text{Today’s Index} – \text{Yesterday’s Index} \]

Yesterday’s Index

2.3.6 EVA FOR FUTURE STRATEGIC PLANNING

The EVA concept of value measurement has its management implications. Companies in the Western world, applying the EVA philosophy religiously have set value linked targets, value linked performance incentives, and value linked
receivables and inventory management policies. They have divested units earning less than the cost of capital and started outsourcing. Usually companies accepting EVA technique, adopt three basic strategies to increase their EVA. Those are:

→ **Building Strategy**

This refers to opting for more investments exclusively in the projects which provide an assurance of getting back more capital in future.

→ **Managing Strategy**

This refers to earning more returns with same investment dotting the efficient management of capital.

→ **Harvesting Strategy**

This refers to the destruction of all activities that affect the future value growth or lead the company to future value destruction.

Thus, for increasing the shareholder’s value in future, managers of a company may adopt any of the above three strategies. The whole process of the analysis for a shareholder value to strategic planning involves:

- Estimating the minimum pre-tax operating return on incremental sales required to create value for shareholders for each strategic sub-unit of the business and the business as a whole.
- Comparing minimum acceptable rates of return on incremental sales with rates realized during the past five years and its projections to the next years.
- Estimating the contribution to shareholder value following different alternative strategies at the sub-units and corporate level.
- Evaluation of the corporate plan to determine whether the projected growth is financially feasible in light of anticipated return on sales, investment requirements per rupee sales, target capital structure and dividend policy.
- A financial self-evaluation at the sub-units and corporate levels.⁴

**2.3.7 RELATIONSHIP BETWEEN EVA AND MVA**

The aim of EVA is to measure the wealth of shareholders and Economic Profit (EP). According to this theory, if rate of return is more than the cost of capital, it represents increase in shareholder’s value and if rate of return is less than the cost of
capital, it indicates decreased value of a company. For a listed company, Stewart & Co., who is the pioneer of EVA, introduced another measure of shareholders value called Market Value Added (MVA). The term EVA is closely related to MVA. MVA is also a registered trade-mark of Stern Stewart & Co. like EVA. MVA is cumulative measure of corporate performance. Stewart defined as “the difference between the company’s market value of invested capital and book value of invested capital”. Like EVA, if the total market value of a company is more than the amount of capital invested in it, the company has generated shareholders value and vice-versa. Hence, MVA should be the primary objective for any company because it is related to the shareholder’s wealth.

$$\text{MVA} = \text{Current Market Value of Debt & Equity} - \text{Economic Book Value}$$

Where,

- **Economic Book Value** = Net Worth (Share Capital + Reserves) + Debt
- **Market Value of Equity** = Number of Outstanding Shares × Average Market Price per share during the year
- **Market Value of Debt** = Number of Debt Instruments × Average Market Value

According to Stewart, successful companies add their MVA to enhance the value of capital invested in the business. Unsuccessful companies decrease the value of capital invested in the business. It is observed that success of a company to create Market Value Added or shareholder’s value depends on its rate of return. If a company’s rate of return is more than its cost of capital, the company will sell its shares in the stock market at a premium. On the other hand, if a company’s rate of return is less than its cost of capital, the company will have to sell its shares in the stock market at a discount. It means the positive and negative MVA of a company mainly depends on the level of rate of return. Thus, the concept of EVA is same as MVA. Stewart has observed that there is a relationship between EVA and MVA because both goes in the same direction like positive EVA means positive MVA and vice-versa. At last, it can be said that EVA is the internal measure of corporate performance and MVA is the external measure of corporate performance. By increasing EVA, a company increases its MVA or continuous improvement in EVA will lead to increase in MVA.
2.3.8 APPLICATION OF EVA

The concept of economic value added is increasingly used by the companies as a performance indicator. Its major application areas are given below:

EVA is Strong Tool for Business Planning

EVA is better approach than traditional profit indicator based on PAT or cash flow. EVA explains clear surplus to the company, which can be shared by different interested groups. It is not important to earn PAT but it is important to have positive EVA. A company cannot improve shareholder’s value by simply focusing on PAT or EPS. It should earn better than opportunity cost of capital.

EVA is good for Investors

EVA theory represents a framework on which investor may determine, whether a worth investing resources of business enterprise is. This helps to measure corporate performance and performance of a business segment as well. Investors like EVA because it is a running score showing that how well managers are performing their primary task and creating wealth. When a company uses EVA to set compensation, it seems to be powerful tool that gets managers to deploy capital for maximum gain.

Valuation of Goodwill and Shares

Valuation is an important issue in financial decision-making, particularly in mergers and acquisitions. EVA spread of a company in comparison with EVA spread of other companies in the same industry can be used as the basis for valuation of goodwill and shares. Discounted value of average EVA may be taken as goodwill. Value of shares may be taken as market value plus goodwill.

Employee Compensation

EVA can be widely used as a base for executive compensation. EVA linked employee compensation is the best way to set accountability towards shareholders and protecting and improving shareholder value. EVA can be effectively linked to bonus system, because
- EVA is the most powerful financial performance measurement system which is directly linked to creation of shareholder wealth.
- It helps to enhance the market value of a firm and measure the true economic profit.
- EVA is religiously followed by the world’s leading corporate and financial giants like Coca-Cola, Goldman, Sachs and Morgan Stanley.

2.3.9 SUPERIORITY OF EVA

The EVA is superior to other traditional measure because it replicates the discipline of the capital market within the firm by explicitly measuring ROCE relative to Cost of Capital. It is also superior in the following ways.

Measurement of Shareholders Value Creation

EVA mechanism forces management to recognize the cost of equity in all managerial decisions from board room to the shop floor and thus provides a comprehensive yardstick to measure the shareholder’s value creation or destruction by an individual business entity and focus towards maximization of absolute return above the cost of capital.

Integrated Criteria of Creating Value

The EVA based financial management system uses integrated criteria for creating value by incorporating all business issues like reviewing a capital budgeting process, valuing an acquisition and considering strategic plan alternatives. Assessing performance, rewarding management, communicating etc… may unite all employees in the pursuit of the single goal of creating value.

Linkage of Compensation to Shareholders Value

It links the management compensation to the shareholder value in a much refined manner. With EVA the bonus targets are set every year as a percentage gain in EVA and there is no cap on the maximum amount of bonus payment. A part of the bonus earned is banked and paid in later years. EVA results below the target will shrink the banked bonus and vice-versa. Thus, EVA based compensation system ties
management’s interest with those of shareholders and the value creation motion will permeate the whole organization.

**Helpful in Strategy Formulation**

EVA has an extremely important role in strategy formulation. It is used to assess the likely impact of competing strategies on shareholder wealth and thus helps the management to select the one that will best serve shareholders. It can be particularly effective in this regard when it is augmented by new tools such as Real Option Analysis, Balance Score Card, Activity Based Costing and Activity Based Management.

**Helpful in Corporate Governance System**

It also fit well with the concepts of corporate governance and thus considered to be the best corporate governance system. EVA bonus system does this by giving employees an ownership stake in the improvements of EVA of their divisions or operations. This causes employees to behave like owners and reduces or eliminates the need for outside interference in decision-making.

**Helpful in Resource Allocation Decisions**

The issue of capital charge compels operating managers to use assets more diligently by focusing directly on the costs associated with inventories, receivables and capital equipment. It enables managers to routinely and automatically consider the cost of capital in every decision and accurately assess the tradeoff between operating costs and capital costs. Combining operating costs and capital costs in a single profit measure, expressed in rupee rather than a rate of return which gives EVA another unique quality. Hence managers can use EVA to guide their future, resource allocation decisions and economic income of the firm by any of the following strategies or a combination of these-

- Improve the return with the same amount of capital;
- Invest in project as long as return exceed the cost of capital;
- Divest capital when return fail to achieve the cost of capital;
- Reduce cost of capital by maintaining optimal capital structure.
Ideal Techniques for Knowledge Industry

EVA is an ideal technique for companies operating in new-age sectors. The typical knowledge industry is not capital intensive, and the companies operating in these industries may not face with too many decisions involving huge amounts of capital. Moreover in such industries returns on the capital invested are immediate. As a result, EVA is almost a made-to-order performance metric for the knowledge industries.\(^5\)

Helpful in Brand Valuation

EVA helps in brand valuation. The brand equity or value created by a particular business unit for its brand could be equated with the value of wealth generated over a period of time.

Helpful to Managers

The utility of EVA simply does not end by indicating the degree of wealth creation. It goes beyond that to pinpoint the lacunae in the business performance. A regular monitoring of EVA emphasis on problem areas of a company, helps managers to take corrective actions.\(^6\)

2.3.10 STRATEGIES TO IMPROVE EVA

According to Rappaport (1986), within a business, there are seven drivers like sales growth rate, operating profit margin, income tax rate, working capital investment, fixed capital investment, cost of capital and forecast duration that can be managed to create value. The theory suggests that improvement in these value drivers leads to an increase in shareholders’ value. But there are some of steps which help to improve EVA are given below:

Improving the Returns on Existing Capital

This might be achieved through higher prices or margins, more volume, or lower costs.
Slow and Steady Approach

Invest in those projects that earn a return more than the cost of capital. A slow and steady approach of the management in the direction will ensure growth.\textsuperscript{7}

Better Utilization of Resources

Make better utilization of resources to improve profitability and productivity.

Elimination of Unprofitable Units

Eliminate less profitable business units that generate operating profits less than the cost of capital.

Motivation

Motivate management and employees by linking incentive pay with EVA.

Maintain Optimal Capital Structure

Maintain optimal capital structure by reducing the cost of capital.

2.3.11 CRITICISM OF EVA

Computational Difficulties

EVA is a technique of value creation. It is very simple and unavoidable but its implementation is tricky because it requires numerous adjustments to profit and capital employed. EVA is quite popular today because of some computational difficulties and accounting profits are popular for determining profitability of any firm even today.

Based on Historical Data

EVA is based on historical data or past performance given in financial statements with a few adjustments where as shareholders are interested in future performance so it fails to look forward.
**Personality Traits and Ego of Managers**

The personality traits and ego of managers may clash with employees and may affect the financial interest of the company. In such a situation, managerial decision making may not be in right direction of increasing the shareholder’s value. Thus, management control and investor’s interest should never be in conflict otherwise no value can be created for the firm.

**Cost of Capital**

The most difficult step while calculating EVA is the Cost of Capital. Monitoring, evaluating and controlling of cost of capital is complex, risky and quite expensive in the long run. Most of the times, it becomes difficult for the firm to keep a record of its cost of funds under firm’s limit.

**Short-sighted Approach**

Managers and investors are short-sighted. The short-term results and liquidity may destroy long-term value. Sometimes short term value may lead to erosion or destruction of future opportunities to create value in the long run.8

**2.3.12 ROLE OF MANAGEMENT ACCOUNTANT IN EVA**

The EVA is management and decision-making tool. The role of management accountant is expected to transform the traditional management system into value base management. Generally, a management accountant is engaged in advising the companies on issues related to cost management, strategic management, business restructuring and project evaluation. But EVA is a new concept of looking into corporate surplus. The main role of management accountant is to generate a shareholders’ value so automatically it sub-serve the interest of other stakeholders like customers, vendors, employees, government etc… The management accountant should generate new ideas relating to management. This may help to management in decision-making and also helpful to the management accountant in achieving its new goal of creating shareholder’s value. Hence, EVA is useful tool to the management accountant in decision- making process so that the management accountant should advice the company in deriving its EVA, calculating EVA as well as measurement of segment performance.
2.3.13 EVA APPLICATIONS – THE INDIAN SCENARIO

Indian companies are recognizing the importance of Economic Value Added (EVA). In Indian corporate sector, the computation and disclosure of EVA are not mandatory in the Annual published report for a company as per listing requirement. But now a day, the most of the Indian Companies have started to measure and evaluate EVA not only for the shareholders but also for the Financial Institutions and Foreign Institutional Investments (FIIs). EVA is new and modified way to gauge corporate financial performance over the past few years is going up. The EVA is a corporate performance measurement tool hence, highly rated and highly diversified companies like AT & T, Briggs and Stratton, Coca-Cola, Quaker Oats, Johnson and Johnson, Microsoft etc… have disclosed separate statement for EVA measurement system in their organization.

The EVA is not mandatory for Indian Companies but due to post liberalization process of India, the shareholders value creation is taken into consideration many of the foreign holding in Indian companies. Infosys Technologies Ltd is the first Indian company to report EVA in its Annual Report. Some other companies like Hero Honda Motors Ltd..., Hindustan Uniliver Ltd., NIIT, Tata Consultancy Services and BPL have started the calculation of EVA statements in their Annual Published Reports. Ranbaxy Laboratories and Samtel India Ltd. have started the calculation of EVA in their internal report.

But still today majority of companies are not ready to implement the EVA technique for evaluating their financial performances because of certain inherent difficulties associated with the computation. EVA measures the corporate performance and decides whether the management creates a shareholder’s value or not. There is need of EVA in Indian corporate not only for the global competition but also for their long-standing and continued existence. But in current scenario, countable numbers of the companies have undergone the training and orientation in the implementation of EVA in their business activities.
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