

Economic Value Added: A Yardstick For Performance Measurement

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INTRODUCTION

It is the aim of every company to maximize the wealth of its shareholders since shareholders own the company and as rational investors expect good long-term yield on their investment. In the past, this was being often partly ignored or at least misunderstood. This can be seen e.g. from measurement systems. Metrics like Return on investment and Earnings per share are used as the most important performance measures and even as a bonus base in a large number of companies, although they do not theoretically correlate with the Shareholder value creation very well. Against this background, the Economic Value Added as a financial performance measure comes closer than any other in capturing the true economic profit of an enterprise. EVA also is the performance measure most directly linked to the creation of shareholder wealth over time. EVA was developed in 1982 by an American Consultancy firm, Stern Stewart and company as a financial performance tool. These new performance metrics seek to measure the periodic performance in terms of change in value. Maximizing value means the same as maximizing long term yield on shareholders' investment. The main differences between EVA, and traditional performance measurement systems such as earnings per share, return on assets, and discounted cash flow, are as follows:-

✳ **The value of EPS** is derived from the accounting profit, which is subject to manipulation. The EPS is calculated by dividing the net profits (after interest, depreciation and taxation) by the number of equity shares issued by the company to find out the profits earned per share. This measure is flawed because it does not consider the equity cost of capital employed. For example, if the cost of capital is, say, 16 percent, then a 14 percent earning is actually a reduction, not a gain, in economic value. Profits also increase taxes, thereby reducing cash flow, so that engineering profits through accounting tricks can drain economic value. (Note: - EVA is the registered trademark of Stern Stewart & Co. So read EVA as EVA®)

✳ **Return On Investment** is a more realistic measure of economic performance, but it ignores the cost of capital. Leading firms can obtain capital at low costs, via favorable interest rates and high stock prices, which they can then invest in their operations at decent rates of return on assets. That tempts them to expand without paying attention to the real return, economic value-added.

✳ **Discounted Cash Flow (DCF)** is very close to economic value-added, with the discount rate being the cost of capital. There is a close relation between the concepts of EVA and DCF as DCF computes a Net Present Value, which is also arrived at by taking into consideration the cost of capital.

The concept of EVA is very well established in financial world, but only recently has the concept of EVA come into the mainstream of corporate finance, as more and more firms are adopting it as the base for business planning and performance monitoring.

THE CALCULATION OF EVA

There are four steps in the calculation of EVA:

1. Calculate Net operating profit after tax (NOPAT)
2. Calculate Total Invested Capital (TC)
3. Determine a Weighted Average Cost of Capital (WACC)
4. Calculate $EVA = NOPAT - WACC\% \times (TC)$

Stern Stewart & Co proposes the following adjustment for calculating NOPAT and Economic book value:

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✿ **Economic Book Value** : Equity book value + debt book value + preferred stock + minority interest equity Adjustments + Deferred taxes + LIFO reserve + cumulative depreciation of goodwill + uncapitalized goodwill + allowance for bad debts + allowance for stock obsolescence + accrued R&D expenses + capitalization of non cancelable contracts + accrued losses from sale of assets.

✿ **NOPAT** : Earnings available for common stock + interest (1 - tax rate) + Interest (1 - tax rate) + preferred dividend + minority interest earnings Adjustment + Increase in deferred taxes + increase in LIFO reserve + depreciation of goodwill + increase in allowance for bad debts + increase in allowance for stock obsolescence + R&D expenses - depreciation of R&D + implicit interest on non cancelable contracts + losses from sale of assets.

According to Stern Stewart & Company, literally dozens of adjustments to earnings and balance sheets in areas like R&D, inventory, costing, depreciation and amortization of goodwill must be made before the calculation of standard accounting profit can be used to calculate EVA. To protect its trademark, Stern Stewart doesn't fully disclose the adjustments--making the job of using the metric even more difficult. The GAAP requires companies to expense research and development outlays even though those expenditures are investments in future products or processes. In contrast, EVA capitalizes R&D spending and amortizes it over an appropriate period. Similar adjustments to the balance sheet are to be made to get a more accurate accounting of the total capital invested in an enterprise in order to assess the proper capital charge.

Stern Stewart & Co. has identified more than 160 potential adjustments in GAAP earnings and balance sheets in areas such as inventory costing, depreciation, bad debt reserves, restructuring charges, and amortization of goodwill. However, in balancing simplicity with precision, Stern Stewart % Co. advises most clients to make only five to fifteen adjustments.

✿ **The Second Step Is To Determine The Weighted Average Cost Of Capital (WACC)** : WACC is a complex function of the capital structure (proportion of debt and equity on the balance sheet), the stock's volatility measured by its beta and the market risk premium. Small changes in these inputs can result in big changes in the final WACC calculation. Determining a firm's cost of capital requires making two calculations, one simple and one complex. The simple one figures the cost of debt, which is the after-tax interest rate on loans and bonds. The more complex one estimates the cost of equity and involves analyzing shareholders' expected implicit return. Investors have the choice of buying risk-free Treasury bonds or investing in other, riskier securities. They obviously expect a higher return for higher risk. To attract investors, firms must offer a premium. The cost of capital according to SML is:

$$R_f + \beta (R_m - R_f)$$

Where

R_f = Riskfree Rate

β is a relative measure of volatility that is determined by comparing the return on a share to the return on the stock market as a whole. R_m is the market return.

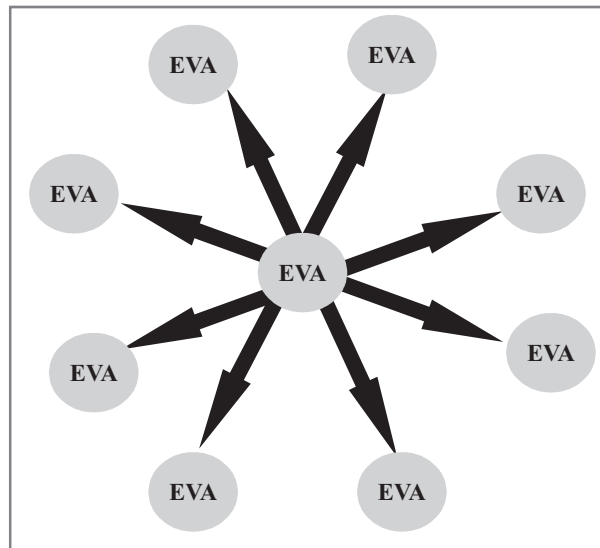
That said, if carried out consistently, EVA should help us to identify the best investments, that is, the companies that generate more wealth than their rivals. All other things being equal, firms with high EVAs should over time outperform others with lower or negative EVAs.

WHY EVA AS A PERFORMANCE MEASUREMENT TOOL ?

✿ **Greater Alignment With Shareholder Wealth** : The key factor was that employees would begin to think like owners. They would also start worrying about where the capital is employed and what returns are being generated from it, rather than sticking to just their own pay cheques and promotions. EVA takes into account all the capital costs, including the cost of equity, which shows the excess amount of wealth a business has created or destroyed in each reporting period. In other words, EVA is profit according to the shareholders wish. If the shareholders expect, say, a 10% return on their investment, they "make money" only to the extent that their share of after-tax operating profits exceeds 10% of equity capital. Everything before that is just building up to the minimum acceptable compensation for investing in a risky enterprise. By definition, a sustained increase in EVA will bring an increase in the market value of a company. This approach has proved effective in virtually all types of organizations, from emerging growth companies to turnarounds. This is because the level of EVA isn't what really matters. There is growing evidence that EVA, not earnings, determines the value of a firm. This has been empirically proofed to be good way to increase shareholder value (**Wallace 1997**). The good feasibility for this purpose is due to the nature of EVA as excess return to shareholders.

✿ **It Serves As A Guide To Every Decision From Strategic Planning To Business Acquisition :** Measuring EVA can give companies a better focus on how they are performing, its true value comes in using it as the foundation for a comprehensive financial management system that encompasses all the policies, procedures, methods and measures that guide operations and strategy. The EVA system covers the full range of managerial decisions, including strategic planning, allocating capital, pricing acquisitions or divestitures, setting annual goals - even day-to-day operating decisions.

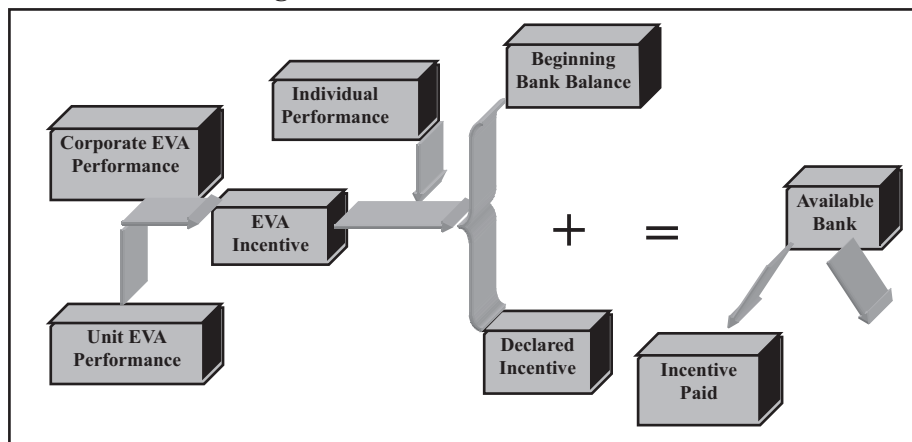
Figure 1 : A Common Focus, Language & Mission



Source: www.tcs.com

✿ **Designing A Better Compensation Plan :** Under an EVA bonus plan, the only way managers can make more money for themselves is by creating even greater value for shareholders. This makes it possible to have bonus plans with no upside limits. In fact, under EVA the greater the bonus for managers, the happier shareholders will be. EVA serves the dual purpose of rewarding managers and improving shareholder wealth. According to Godrej, EVA has emerged as a clear winner when compared to compensation systems like ESOPs or the performance-linked variable remuneration that was being followed at Godrej earlier. Also, EVA forced everyone to think long-term because it operated with a minimum three-year horizon. EVA seems to have importance for companies as a performance measurement and controlling tool. One of EVA's most powerful features is its suitability to management bonus systems. The idea of EVA bonuses is that if management can be paid some bonuses, the shareholders have always earned higher return on their

Figure 2 : An EVA Incentive Model



Source: www.tcs.com

capital than they can expect. This kind of bonus system is usually beneficial both to the management and the shareholders.

✿ **It Removes Multiple Measurement Parameters :** Most companies use a number of variables to measure the performance and to express financial goals and objectives. Strategic plans often are based on growth in revenues or market share. Companies may evaluate individual products or lines of business on the basis of gross margins or cash flow. Business units may be evaluated in terms of return on assets or against a budgeted profit level. Finance departments usually analyze capital investments in terms of net present value, but weigh prospective acquisitions against the likely contribution to earnings growth and bonuses for line managers and business-unit heads typically are negotiated annually and are based on a profit plan. The result of the inconsistent standards, goals, and terminology usually is in cohesive planning, operating strategy, and decision making. The proper implementation of EVA system overcomes this confusion.

✿ **Greater Focus On Optimal Capital Structure :** The lower the WACC; the higher would be the EVA. The EVA system helps to become more focus. Every employee knows what to do and how to go about doing it. For instance, a finance man will always try to get a lower interest rate so that the WACC is improved and a sales person will try and get the best combination of sales and credit for the highest EVA. In the long term, EVA will lead optimum utilization of capital. EVA can act as an internal system of corporate governance. It can motivate everyone to achieve the best attainable performance.

EVA IMPLEMENTATION OF INDIAN COMPANIES

The concept of EVA is catching on fast. Several Indian companies including TCS, Infosys, Dr. Reddy's laboratories and NIIT Ltd. have adopted it successfully.

Table 1 : Usage of EVA

COMPANY	THE USAGE OF EVA
INFOSYS	Here EVA is used as a tool to tell its clients that the value delivered by Infosys is greater than what the client pays for.
Marico	Simplified Economic Value Added (SEVA) as a tool for decision making and performance measurement, as a signaling device to tell its employees that capital is important.
DR. REDDY'S LABORATORIES	As a qualifying criterion to grant rewards such a variable pay, stock Options and performance bonuses.
Godrej	Here EVA is linked to compensation and has been implemented in great detail.
NIIT Ltd	EVA is used to bring sharp focus on the effective deployment and leveraging of all assets in the company.
Tata Steel	EVA lays stress on investment management
TCS	EVA is a major input for variable pay

Source: <http://sternstewart.in/images/testimonials>

✿ **Godrej Industries** decided to adopt the economic value addition (EVA) model to reinforce its commitment to the creation of shareholder value. The project broadly consists of four phases. The first involves defining EVA for each of the company's businesses. The second phase, which is EVA management, focuses on training operating people on how to improve EVA. Then comes the motivational phase, which consists of evolving a variable remuneration plan to reward improvements in EVA. The company believes that following the EVA model will enable it to build a mindset that emphasis's the creation of value for shareholders. EVA was also expected to complement the efficiency-enhancement initiatives like TPM and TOM. Implementing the EVA framework is a key business performance initiative in support of their efforts to evolve as a world class organization and enhance shareholder value. The main objective behind implementing EVA is to be driven, measured and rewarded by the ability to create sustainable shareholder value. Although EVA was a very widely accepted framework globally, it was a new concept in India. Only a few companies like TCS and NIIT had adopted EVA in the country by mid-2001. While the Godrej group adopted EVA, industry analysts were busy debating the pros and cons of EVA in general and for the group in particular. A few weeks after the EVA announcement, Adi Godrej declared the half yearly financial results of Godrej Consumer

Products Limited (GCPL) for the period ending September 30, 2001. The revenues had grown by 19% to ₹ 2.529 bn as against the growth of 15% in the corresponding period in 2000. GCPL reported an EVA of ₹ 0.137 bn for the six months ending September 30, 2001. Announcing the results, Adi Godrej said, "Our strong focus on EVA has delivered rising profitability."

✿ **Tata Consultancy Services Limited**, formerly, known as RR Donnelley India, is the country's leading IT/ITes providing company with global presence. TCS was operating as a division of Tata Sons Ltd. Later, its IT operations were transferred to Tata Consultancy Services Ltd.

The TCS compensation plan consists of Individual compensation, which consists of two parts:

✿ **Fixed Pay:** Reflects experience/competency. Fixed pay is based on industry survey and cost of living index.

✿ **Performance Pay:** Forms the Variable Component pay and is based on EVA achieved.

The various components of TCS EVA incentive are listed below:-

✿ **Target Bonus:** It provides employees with competitive rewards for achieving expected performance.

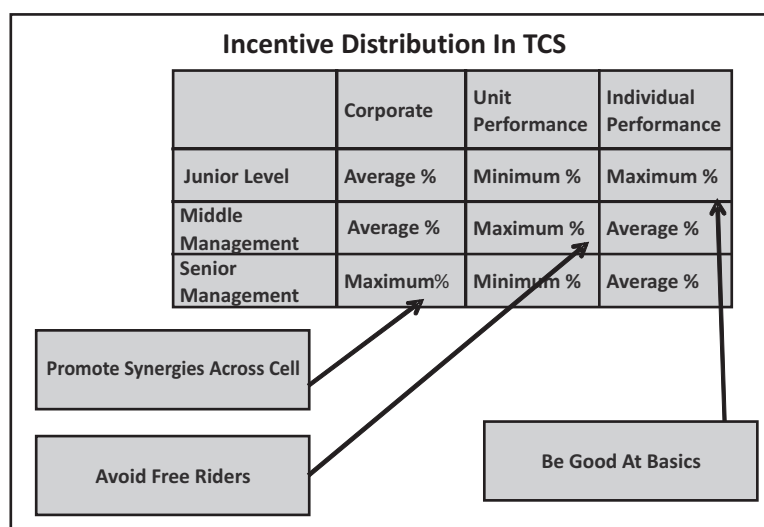
✿ **Actual EVA Improvement (Delta EVA):** Performance Standard consistent with TCS owners' expected return.

✿ **EVA Interval:** EVA Improvement (delta EVA) above expected improvement (EI) that results in a 2x Bonus declared and EVA below EI results in a 0x Bonus declared.

✿ **Bonus Multiple:** $1.0x + (\text{delta EVA} - \text{EI}) / \text{EVA Interval}$.

The individual works towards the improvement of the benefit package, which essentially has three components- the Corporate EVA, the Business Unit EVA, and the Individual Performance Factor. Out of the total EVA payment, a certain percentage goes to each employee on the basis of corporate EVA improvement. Secondly, if your business unit did better than another business unit, then automatically you get more than the other business unit. Again, it is a team reward concept. The third one depends on the evaluation of individual performance. The incentive distribution of TCS is given below.

Figure 3 : Incentive Distribution In TCS



Source: www.tcs.com

TCS is also implementing the bonus bank at the individual level. This exercise begins with a target bonus being earmarked for allocation on corporate target realization, with a built in multiplication factor for exceeding the targeted EVA. When the corporate target is exceeded, a 'potential bonus' is declared. This accrues to the bonus bank of the individual as two components: Component A, the result of the share in the corporate pie; Component B, a composite factor depending on the business unit and individual performance. The accruals are cumulative over the years and the pay out each year is decided as a portion of this cumulative balance, leaving a surplus in the bonus bank. This concept of bonus bank allows an unlimited multi-year decision horizon, replacing the traditional thresholds and caps. It demands sustainable performance improvements, and maintains the important cumulative relationship between pay and performance.

CONCLUSION

Economic Value Added is a residual income variable. It is defined as Net Operating Profit after taxes subtracted with the cost of capital tied in operations. The EVA is quite similar to standard DCF formula, because it is a modified version of DCF. The DCF and NPV are based only on future cash flows and EVA is also based on historical accounting items. EVA has been helpful because it forces to pay attention to capital employed and especially, to excess working capital. One of EVA's most powerful features is its suitability to management bonus systems. With implementation, it is important to understand the EVA-concept thoroughly and tailor the concept according to the situation of the company or business unit. EVA helps in quantitative assessing of different strategies, but that is all. Sometimes, in periodical performance measurement, EVA can give misleading information because it suffers from the same shortcomings as ROI. Inflation can distort the values of EVA. It is quite clear that EVA can be increased either by increasing NOPAT or by reducing the cost of capital. There can be various ways to increase NOPAT such as depreciating less. There are also many ways of reducing the cost of capital (For example if the interest rate fall) that has nothing to do with the executive performance. There are also ways to decrease the assets employed, for example, deferring investment in new project that decreases or defers the cash flow and decreases the company's value. At operational level, this new approach often leads to increased shareholder value through increased capital turnover. In many companies, everything has been done for cutting costs, but the capital efficiency has been ignored. Wealth does not arise from EVA alone. EVA only measures changes of wealth. It is also as short-term as all other periodic performance measures. Therefore, all companies should rely also on other performance measures. EVA can be important measure for those companies that use primarily other tools is assessing the achievement of their strategic goals. As **Michael Tensen** says, *"EVA is the best flow measure of performance currently known. It is not the universal answer to the search for the perfect performance."* Perfect measures of a capitalized value will never be found because value cannot be known with certainty until after a project has run its course to competition and shut down. The firsthand experience was a revelation, as we saw how we actually get paid out from the increases, demonstrating the dictum that EVA pays for itself. The reward is that the size of the pie could become different as it gets enlarged and the individual and the corporation appears to benefit considerably. It ensures the channelization of information across levels and each entity can see how it fares against targets. It enhances the sense of participation through the realization of the share in the larger pie, and provides the motivation to contribute to enlarge the pie. EVA really forces the organization to adopt a proper business planning approach, get a focus on strategies, and help monitor the accountability of people. In a nutshell, it gives a barometer on how the organization is being run and mandates critical short taking to evolve on a continuous improvement path. Implementation of EVA requires the integration of the planning and the tracking process. TCS sought to achieve this through a home grown tool called e-pilot, which essentially drills down from strategy to day to day activity. This facilitates the integrated planning approach, in defining the corporate EVA, linking it to the business unit/ cell, and further, to various components down the line, all the way to the drivers connected to each activity.

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