

EVA BASED PERFORMANCE MEASUREMENT: A CASE STUDY OF DABUR INDIA LIMITED

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ABSTRACT

Traditional measures of corporate performance are many in number. Measures using common bases are Net Profit Margin, Operating Profit Margin, Return on Investment (ROI), Return on Net Worth (RONW), Earning Per Share (EPS) etc. Among these, again ROI is recognized as the most popular yardstick of overall performance. But it is often argued that, in general, these traditional measures fail to identify the true surplus. Economic Value Added (EVA) is advocated as a new measure of corporate performance that focuses on clear surplus in contrast to the traditionally used profit based indicators.

For evaluation of the efficiency of any decision, value creation or value addition aspect is of utmost importance in the present backdrop of corporate governance. Although adopting a holistic approach safeguarding the interests of all stakeholders is being emphasized and rightly so, it should be kept in mind that value creation or value addition aspect is of prime consideration in the assessment of the corporate policy guidelines. If that is not satisfied, wrong signals will be emitted from securities market and the continuance of the operations of the entity will be at stake. In view of the above considerations, in the present paper an attempt has been made to analyse the financial performance of Dabur India Limited by using EVA.

Introduction

The term 'Economic Value Added (EVA)' is a registered trademark of Stern Stewart & Co. of New York City (USA). Bennett Stewart in his book, "*The Quest for Value*", used the term EVA with a symbol TM as super script, which is the normal practice of referring to any registered trademark whenever the term is used. Thus EVA is actually Stern Stewart & Co.'s trademark for a specific method of calculating economic profit. "*The Quest for Value*" was published in 1991. Peter Drucker claimed that he discussed EVA in 1964 in his book, "*Managing for Results*". It cannot be denied, however, without going into argument as to who invented EVA first that the concept became popular only after Stern Stewart & Co. marketed it.

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Just earning profit is not enough, a business should earn sufficient profit to cover its cost of capital and create surplus to grow. Stated simply, any profit earned over and above the cost of capital is Economic Value Added.

Traditionally the methods of measurement of corporate performance are many. Common bases used are: - Net Profit Margin (NPM), Operating Profit Margin (OPM), Return on Investment (ROI), Return on Net Worth (RONW) etc. Profit After Tax (PAT) is an indicator of profit available to the shareholder and Profit Before Interest After Tax (PBIAT) is an indicator of the surplus generated using total funds. ROI is still recognized as the most popular yardstick of profitability measurement.

However, the traditionally used profit indicators are ineffective parameters in explaining whether the reported profit covers the cost of capital. Old profit concept fails to indicate clear surplus.

The basic proposition is that the Return on Capital Employed should be greater than the Cost of Capital (i.e. $ROCE > K_0$).

Capital Employed highlights long term capital and cost of capital represents weighted average cost of capital.

Traditionally, Profit After Tax is shown in the Profit & Loss Account to indicate the profit available to the shareholders, both preference and equity. Ability to maintain dividend is not a test of profit adequacy. Ability to generate Economic Value Added is the only test of profit adequacy. Any surplus generated from operating activities over and above the cost of capital is termed as EVA.

It is a new measure of corporate surplus that should be shared by the employees, management and shareholders. EVA focuses on clear surplus in contradiction to the traditionally used profit available to the shareholders. It is used by companies as a performance indicator and also as a basis for executive compensation. Surplus should be derived by deducting cost of capital from profit before interest but after tax.

$EVA = NOPAT - WACC \times \text{Capital Employed}$.

Where, NOPAT means Net Operating Profit before Interest and after Tax.

WACC represents Weighted Average Cost of Capital.

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Capital Employed = Net Block + Trading Investment + Net Current Assets.

It is free from subjective assumption that needs to be adopted while identifying profit and cost of capital. Cost of equity is derived on the basis of Capital Assets Pricing Model (CAPM).

The founders of EVA traditionally use CAPM. Under CAPM Cost of Equity (K_e) is given by the following

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

Where, R_f = Risk free return.

R_m = Market expected Rate of Return

β = Risk Co-efficient.

Both market return and Beta are highly volatile, and if annual market return and yearly beta of a company are chosen for finding cost of equity, abnormally high or low market related cost of equity may be obtained. To avoid this difficulty, one may apply “*Long run approach*”.

While deriving EVA it becomes 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.

Objectives of the Study

This study has the following objectives:

1. To examine whether Dabur India Limited (DIL) has been able to generate value for its shareholders.
2. To compute the performance of the company by applying traditional performance indicator like ROI and the new corporate performance measure EVA.

Database and Methodology

The financial data of DIL, selected for this study has been collected from the published Annual Reports for the period 1998-99 to 2002-03. Capitaline-2000 Database Package has also been used for the collection of BSE Sensex and DIL Share Price data.

Computation of EVA involves calculation of three figures, (i) Net Operating Profit Before Interest After Tax, (ii) Capital Employed and (iii) Weighted Average Cost of Capital based on CAPM. To compute market return long run averaged annualized daily return has been considered. The long run period should represent all cycles and abnormalities of the capital market. For the purpose of analyzing risk containment measures in Indian stock index futures market, J.R.Varma Committee used data for the period 1st July 1990 to 30th June 1998. The objective of taking a long sample period was to consider two full business cycles that will cover more than two interest rate cycles and two stock market cycles. Prof. Varma deliberated upon the reasons for inclusion of 1992 when index was influenced by the security scam. It is viewed that scam is a period of episodic volatility which could easily recur.

Thus, for the purpose of determining market return, abnormality in the market index should not be eliminated. It should be filtered through increasing the sample size. So it is possible to consider BSE Sensex during 1st April 1991 to 31st March 2003 for determining Market Return. In this study Market Return has been considered as 18.56% p.a., which is average of 2808 annualized daily return from 1st April 1991 to 31st March 2003.

It has been assumed that 10 year Treasury Gold Bond Yield i.e. 9% rate is the risk free rate in this study.

To calculate Beta it has been considered BSE Sensex Return & DIL Share Price Return from 7th March 1994 to 31st March 2003 and result is 0.71.

Survey of Literature

Easton, P. Harris, T. and Ohlson, J (1992) observed that Economic Value Added (EVA) is an increasingly popular corporate performance measure one that is often used by companies not only for evaluating performance, but also as a basis for determining incentive pay. Like other performance measures, EVA

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attempts to cope with the basic tension that exists between the need to come up with a performance measure that is highly co-related with shareholders wealth, but at the same time somewhat less subject to the random fluctuations in stock prices. This is a difficult tension to resolve and it explains the relatively low correlation of all accounting based performance measures with stock returns at least on a year to year basis.

Stewart (III), and Bennett, G. (1994) observed that “EVA is a powerful new management tool that has gained growing international acceptance as the standard of corporate governance. It serves as the centerpiece of a completely integrated frame-work of financial management and incentive compensation.” In essence, EVA is a way both to legitimize and to institutionalize the running of a business in accordance with basic microeconomics and corporate finance principles. The experience of a long list of adopting companies throughout the world strongly supports the notion that an EVA system, by providing such an integrated decision making framework, can refocus energies and redirect resources to create sustainable value for companies customers, employees, shareholders and for management.

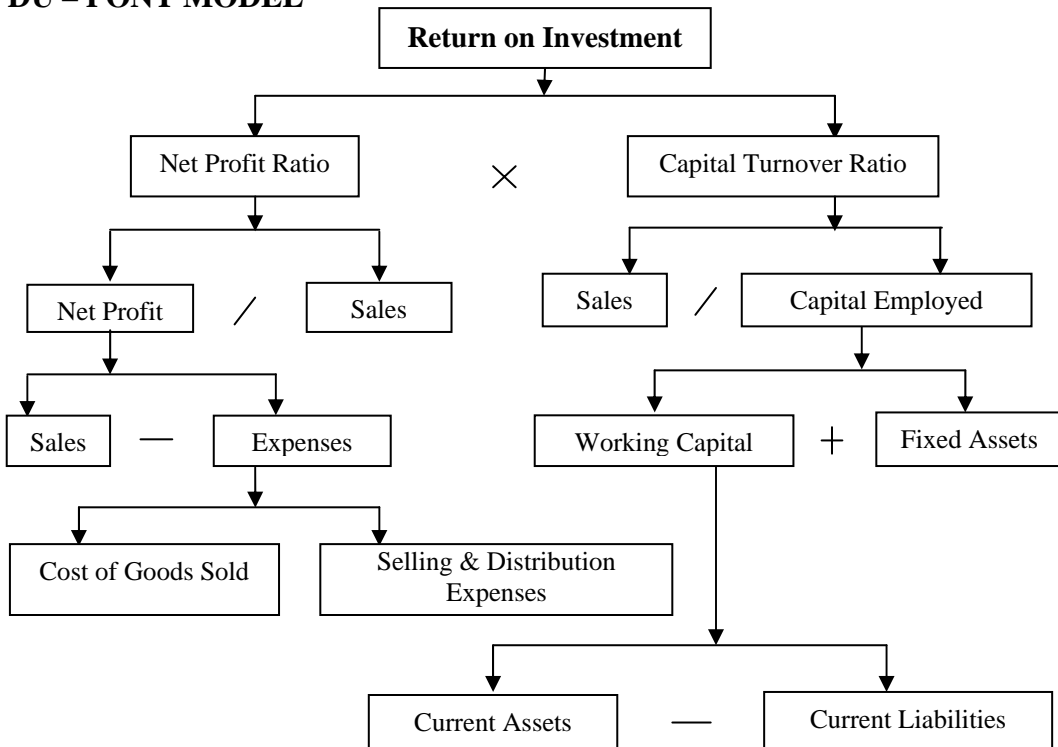
Rice, V.A. (1996) observed that “previously we used several measurements to gauge our financial outlook from earnings per share to discounted cash flow and return on average assets. With EVA, I saw a way to meet our business objectives and create a new corporate culture. It permeates every level from boardroom to the shop floor. Bonuses of all managers are determined solely by whether variety achieves its EVA targets. At our company every decision and every action result from analysis that uses EVA principles. We focus on ensuring that every investment produces return that exceeds our cost of capital. We believe this approach enables us to directly align management and shareholders interest”.

Thenmozhi, M. (2000) In order to have an understanding of how the traditional performance measures are comparable to EVA, data of three financial years between 1996 and 1999 were chosen from 28 companies. Only 6 out of the 28 companies have positive EVA while the others have negative. The EVA as a percentage of Capital Employed (EVA/CE) has been found to indicate the true return on capital employed. Comparing EVA with other traditional performance measures the study indicates that all the companies depict a rosy picture in terms of EPS, RONA and ROCE for all the three years. The study shows that the

traditional measures do not reflect the real value of shareholders and EVA has to be measured to have an idea about the shareholders value.

Ray, Russ (2001) observed that the missing link between EVA and improved financials is actually productivity. EVA can be a powerful tool. When properly applied, it allows a firm to ascertain where it's creating value and where it's not. More specifically it allows a firm to identify where the return on its capital is outstripping the cost of that capital. For those areas of the firm where the former is indeed greater than the latter EVA analysis then allows the firm to concentrate on the firm's productivity in order to maximize the value created of the firm. Finally, as investors buy more shares in the firm in order to have more claims on its increased value, they automatically bid up and eventually maximize the firm's share price. And as any good capitalist knows, maximizing share price is the name of the game in a free market economy. Thereafter marginal increases in value added can be attained by either decreasing the firm's cost of capital or by increasing its productivity.

DU – PONT MODEL



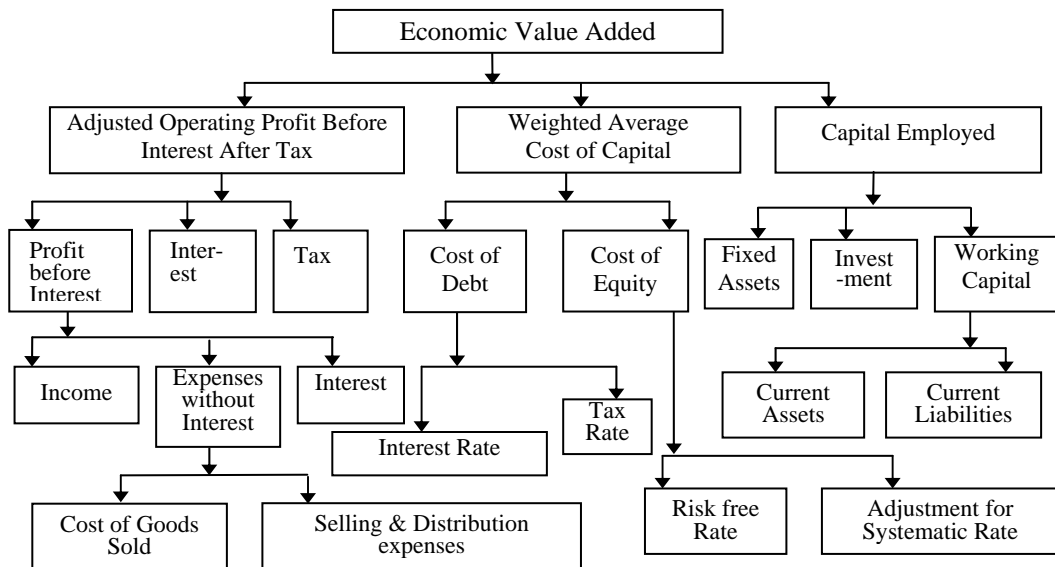
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The DU – PONT model is a typical traditional model of measuring financial performance on the basis of accounting income concept. The idea behind the model is that the Return on Investment (ROI) is the best overall financial performance measure and all activities of an organization ultimately contribute to the ROI. For such an analysis much emphasis is laid on financial ratios based on four related financial aspects of business i.e. Profitability, Liquidity, Leverage and Activity.

ROI represents the earning power of the company. ROI depends on two ratios (i) Net Profit Ratio and (ii) Capital Turnover Ratio. A change in any of these ratios will change the firms earning power. These two ratios are affected by many factors.

A change in any of these factors will change these ratios also. The various factors affecting the ROI can be put through a chart given above. This chart is known as DU –PONT Control Chart since it was first used by DU –PONT Company of the USA. The chart helps the management in concentrating attention on different forces affecting profit. An increase in profit can be achieved either by more effective use of capital which will result in a higher turnover ratio or better sales efforts which will result in a higher net profit ratio. The same rate of return can be obtained either by a low net profit ratio but a high turn over ratio or vice versa.

ECONOMIC VALUE ADDED MODEL



Economic Value Added represents value generating power of an organization. There are three factors to compute EVA. (i) Adjusted earning before interest after tax. (ii) Weighted average cost of capital and (iii) Capital Employed. A change in any of the three factors will change EVA. The various factors affecting the EVA can be put through a chart given above. The chart helps the management in concentrating attention on different factors affecting value. It is clear from the above chart that top management can take appropriate decision to create value in the following way:

Deploy more and more funds to those activities where the amount of NOPAT generated by the activities is greater than the cost of capital.

Withdraw fund from those activities wherein the amount of NOPAT is less than the amount of cost of capital unless there is strategic decision to lose in one activity in order to gain in another.

Improve the operating efficiency of the organization to retain the same amount of NOPAT by possible continuous reduction of existing capital or / and continuous increase of the existing NOPAT with existing amount of capital.

Optimize the capital structure through optimum debt equity mix in order to have the lowest possible weighted average cost of capital (WACC).

Till now, in India the finance managers are not computing EVA to measure financial performance of an organization due to subjective function. In this study it has been tried to eliminate subjective function as far as possible.

TABLE 1
Performance Highlights: Traditional System

(Amounts in Rs. Crore)

Financial Year	1998-99	1999-00	2000-01	2001-02	2002-03
Profit After Tax	50.1	77.43	77.92	64.44	85.1
Add Interest	28.8	26.93	29.18	22.13	14.53
Profit Before Interest After Tax	78.9	104.36	107.1	86.57	99.63
Average Capital Employed	518.76	574.31	576.47	580.68	564.58
Return on Investment (%)	15.21	18.17	18.58	14.91	17.65

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TABLE 2										
Financial Performance of Dabur India Ltd.										
FROM 1998-99 TO 2002-03 (Amount in Rs. Crore)										
PARTICULARS	FY: 1998-99		FY: 1999-00		FY: 2000-01		FY: 2001-02		FY: 2002-03	
	Amount	% OF Sales	Amount	% OF Sales	Amount	% OF Sales	Amount	% OF Sales	Amount	% OF Sales
Sales	914.77		1042.59		1166.47		1163.19		1232.3	
Other Income	17.42		34.19		18.87		13.87		8.3	
Material Cost	458.49	50.12	526.95	50.54	538.47	46.16	515.61	44.33	521.19	42.29
Excise Duty	37.01	4.05	42.24	4.05	59.36	5.09	60.61	5.21	73.37	5.95
Manufacturing Expenses	22.76	2.49	21.98	2.11	29.06	2.49	29.94	2.57	29.67	2.41
Selling & Administration Cost	258.95	28.31	292.09	28.02	339.73	29.12	364.57	31.34	386.27	31.35
Employee Cost	54.88	6.00	63.14	6.06	77.69	6.66	84.49	7.26	93.81	7.61
Financial Expenses	26.7	2.92	25.11	2.41	29.66	2.54	23.95	2.06	17.08	1.39
Depreciation & Misc. Expenditure Written off	22.19	2.43	24.16	2.32	26.2	2.25	25.38	2.18	23.66	1.92
Profit Before Tax	51.6	5.64	81.29	7.80	85.17	7.30	75.51	6.49	95.53	7.75
Provision For Tax	1.5	0.16	3.86	0.37	7.25	0.62	11.07	0.95	10.42	0.85
Profit After Tax	50.5	5.52	77.43	7.43	77.92	6.68	64.44	5.54	85.11	6.91

From the above table it is clear that Material Cost as a ratio to sales has come down from 50.12% in 1998-99 to 42.29% in 2002-03. It is possible due to increased yield ratio and efficient usage of raw and packing material. In few cases the company produced raw material for captive consumption purpose.

Selling & Administration expenses as a percentage of sales increased from 28.31% in 1998-99 to 31.35% in 2002-03. Excise Duty and Employee Cost as a percentage of sales registered an upward trend during the study period. Financial Expenses as a percentage of sales registered a downward trend during the study period except the F.Y. 2001-02.

EVA based Performance Management System

Cost of Equity under Capital Asset Pricing Model (CAPM):

According to CAPM, the expected return on equity is given by the following equation:-

$$K_e = R_f + \beta (R_m - R_f).$$

$$\text{So, } K_e = 9\% + 0.71(18.56\% - 9\%) \\ = \mathbf{15.79\%}$$

Where K_e = Cost of Equity,
 R_f = Risk free rate of Return,
 β = Risk Co-efficient,
 R_m = Rate of Return on market index.

Cost of Redeemable Debt:

The cost of redeemable debt is calculated by applying the following formula:

$$K_d = [I + (R_v - S_v)/N] * (1-T) / [(R_v + S_v) / 2]$$

Where: K_d = Cost of debt,
 I = Annual interest payment,
 N = Term of maturity period,
 R_v = Redeemable value of debt at the time of maturity,
 S_v = Sale value less discount and flotation expenses.

Cost of Redeemable Debt is shown in the following table :

Year	1998-99	1999-00	2000-01	2001-02	2002-03
Cost of Redeemable Debt (%)	9.59	9.59	9.59	9.59	9.59

Cost of Other Debts:

$K_0 = I (1-T)$ Where : K_0 = Cost of other debts,

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I = Average annual interest rate,

T = Company's effective corporate tax rate.

TABLE 3

Cost of Other Debts

Year	1998-99	1999-00	2000-01	2001-02	2002-03
Cost of Other Debt (%)	6.17	5.86	9.68	6.61	8.99

Weighted Average Cost of Capital (WACC)

According to The Chartered Institute of Management Accountants, London (CIMA) terminology the Weighted Average Cost of Capital "as the average cost of the company's finance, equity, debentures, bank loans weighted according to the proportion each element bears to the total pool of capital, weighting is usually based on market valuations, current yields and costs after tax." But for EVA calculation purpose the WACC is computed by applying book value weights to cost of debt, cost of equity and cost of preference shares (if any). In other words, initially, cost of each source of capital is calculated separately. Then a weightage, representing the proportion of a particular source on the total invested capital is applied to compute overall cost of capital.

We have calculated weighted average cost of capital in the following way.

$$WACC = K_e * ESF / CE + K_d * LTD / CE + K_p * PSF / CE$$

Where, WACC = Weighted average cost of capital,
 K_e = Cost of equity,
 ESF = Equity shareholders fund,
 CE = Capital employed,
 K_d = Cost of debt,
 LTD = Long term debt,
 K_p = Cost of preference share,
 PSF = Preference shareholders fund.

The capital structure of the company from 1998-99 to 2002-03 is given overleaf-

TABLE 4
Capital Structure of DIL (Based on Book Value)

Year	1998-99		1999-00		2000-01		2001-02		2002-03	
Particulars	Book Value (Rs. lac)	Proportion (%)	Book Value (Rs. lac)	Proportion (%)	Book Value (Rs. lac)	Proportion (%)	Book Value (Rs. lac)	Proportion (%)	Book Value (Rs. lac)	Proportion (%)
Share Capital	2850.67		2852.06		2852.13		2855.94		2857.50	
Reserves & Surplus	23299.61		29151.56		33368.09		37181.14		38251.58	
Total	26150.28		32003.62		36220.22		40037.08		41109.08	
Less Misc. Expenditure	983.81		704.08		738.41		347.93		240.03	
Net Worth	25166.47	0.46	31299.54	0.52	35481.81	0.64	39689.15	0.65	40869.05	0.79
14.75% Debentures	1500.00	0.03	1500.00	0.02	1500.00	0.03	1000.00	0.02	500.00	0.01
Other Loans	27993.58	0.51	27402.00	0.46	18109.79	0.33	20316.73	0.33	10500.81	0.20
Loan Funds	29493.58	0.54	28902.00	0.48	19609.79	0.36	21316.73	0.35	11000.81	0.21
Capital Employed	54660.05		60201.54		55091.60		61005.88		51869.86	

The capital structure of the company from 1998-99 to 2002-03 on the basis of Market Value is given below :

TABLE 5
Capital Structure of DIL (Based on Market Value)

Year	1998-99		1999-00		2000-01		2001-02		2002-03	
	Market Value (Rs. lac)	Proportion (%)	Market Value (Rs. lac)	Proportion (%)	Market Value (Rs. lac)	Proportion (%)	Market Value (Rs. lac)	Proportion (%)	Market Value (Rs. lac)	Proportion (%)
Net Worth	18587.84	0.39	23367.65	0.45	17369.58	0.47	15879.00	0.43	10258.42	0.48
14.75% Debentures	1500.00	0.03	1500.00	0.03	1500.00	0.04	1000.00	0.03	500.00	0.02
Other Loans	27993.58	0.58	27402.00	0.52	18109.79	0.49	20316.73	0.54	10500.81	0.50
Loan Funds	29493.58	0.61	28902.00	0.55	19609.79	0.53	21316.73	0.57	11000.81	0.52
Capital Employed	48081.42		52269.65		36979.37		37195.73		21259.23	

The closing market price of DIL's one share in 1998-99 was Rs. 65.20. The market value of the company's equity is obtained by multiplying the number

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of the outstanding shares (285.08950 lacs) by the Closing share price. The market value of Debt is assumed to be equal to the book value. In the same way it has been calculated for 1999-00, 2000-01, 2001-02 & 2002-03 respectively. The WACC of the company under CAPM from 1998-99 to 2002-03 is given below–

**TABLE 6
WACC of DIL under CAPM (Based on Book Value)**

Year	1998-99		1999-00		2000-01		2001-02		2002-03	
	(%)	Prop- ortion	(%)	Prop- ortion	(%)	Prop- ortion	(%)	Prop- ortion	(%)	Prop- ortion
Cost of Equity	15.79	0.46	15.79	.52	15.79	.64	15.79	.65	15.79	.79
Cost of Debenture	9.59	0.03	9.59	.02	9.59	.03	9.59	.02	9.59	.01
Other Cost of Debt	6.17	0.51	5.86	.46	9.68	.33	6.61	.33	8.99	.20
WACC	10.70		11.10		13.59		12.64		14.37	

The WACC of the company under CAPM from 1998-99 to 2002-03 on the basis of Market Value is given below

**TABLE 7
WACC of DIL under CAPM (Based on Market Value)**

Year	1998-99		1999-00		2000-01		2001-02		2002-03	
	(%)	Prop- ortion	(%)	Prop- ortion	(%)	Prop- ortion	(%)	Prop- ortion	(%)	Prop- ortion
Cost of Equity	15.79	0.39	15.79	0.45	15.79	0.47	15.79	0.43	15.79	0.48
Cost of Debenture	9.59	0.03	9.59	0.03	9.59	0.04	9.59	0.03	9.59	0.02
Other Cost of Debt	6.17	0.58	5.86	0.52	9.68	0.49	6.61	0.54	8.99	0.50
WACC	10.02		10.44		12.55		10.65		12.27	

Basic EVA: It is a rudimentary form of EVA arrived at without making any adjustments. Basic EVA of DIL is as follows:

**TABLE 8
WACC as per CAPM (Weight based on Book value) (Amounts in Rs. Lac)**

Financial Year	1998-99	1999-00	2000-01	2001-02	2002-03
Average Capital Employed	51876.25	57430.795	57646.57	58068.375	56457.505
WACC	10.70%	11.10%	13.59%	12.64%	14.37%
Cost of Capital Employed	5550.76	6374.82	7834.17	7339.84	8112.94
Profit After Tax	5010.32	7743.16	7792.34	6444.34	8510.44
Add : Interest after tax	2879.78	2693.08	2918.31	2213.44	1452.84
NOPIAT	7890.10	10436.24	10710.65	8657.78	9963.28
EVA	2339.34	4061.42	2876.48	1317.94	1850.34
EVA on Capital Employed (%)	4.51	7.07	4.99	2.27	3.28

TABLE 9
WACC as per CAPM (Weight based on Market value)

(Amounts in Rs. Lac)

Financial Year	1998-99	1999-00	2000-01	2001-02	2002-03
Average Capital Employed	51876.25	57430.795	57646.57	58068.375	56457.505
WACC	10.02%	10.44%	12.55%	10.65%	12.27%
Cost of Capital Employed	5198.00	5995.77	7234.64	6184.28	6927.34
Profit After Tax	5010.32	7743.16	7792.34	6444.34	8510.44
Add : Interest after tax	2879.78	2693.08	2918.31	2213.44	1452.84
NOPBIAT	7890.10	10436.24	10710.65	8657.78	9963.28
EVA	2692.10	4440.47	3476.01	2473.50	3035.94
EVA on Capital Employed (%)	5.19	7.73	6.03	4.26	5.38

From the above tables it is evident that the company has been able to create value for its shareholders but due to change weight, to compute WACC, amount of EVA has materially changed. Selection of weight is a very tricky area, because one can easily manipulate the WACC (%) and also change the amount of EVA. Without any accounting adjustment any company can easily compute basic EVA to know whether the company is value creating or value destroying roughly. But as per Stern Stewart recommendation to compute true EVA more than 160 potential accounting adjustments are required. In Indian scenario if we analysis deeply after considering Indian Accounting Standards and Corporate Laws certain accounting adjustments are necessary to compute true EVA. Important adjustments are: Stock valuation, Government grants of revenue & capital nature, Tax effect accounting, Prior period adjustments, R&D expenses, Amortization of Intangibles, Capitalization of asset linked foreign currency loss or gain, Provision for retirement benefits, Warranty claims, Prior period adjustments, adjustment for revaluation reserve and related depreciation and Off Balance Sheet Asset etc.

After considering all the necessary accounting adjustments *Disclosed EVA* has been computed in the following way.

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TABLE 10
Adjusted Capital Employed and Adjusted Net Operating Profit.

(Amounts in Rs. Lac)

Capital Employed	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03
Shareholders' Funds	21929.07	25166.47	31299.54	35481.81	39689.2	40869.1
Loan Funds						
14.75% Debentures	1500	1500	1500	1500	1000	500
Secured Long term Loans	392.06	341.93	478.06	487.21	1819.27	1488.07
Others Loan Funds	13509.81	16741.82	12917.93	12228.74	8563.92	6599.42
Total Loan Funds	15401.87	18583.75	14895.99	14215.95	11383.2	8587.49
Less : Adjusment for foreign exchange	-1251.72	-1624.48	-1817.86	-1993.05	-1980.64	-1925.49
Add: Adjusted Depreciation for foreign exchange	144.79	209.69	227.79	246.86	243.16	235.21
Adjusted Capital Employed	36224.01	42335.43	44605.46	47951.57	49334.9	47766.3
Average Capital Employed		39279.72	43470.445	46278.515	48643.2	48550.6
Adjustment for foreign exchange						
Exchange fluctuation loss capitalised						
For 1996-97	101.38	72.77	61.65	52.23	44.25	37.49
For 1997-98	1150.34	906.28	804.41	714	633.74	562.51
For 1998-99		645.43	572.82	508.38	451.19	400.43
For 1999-00			378.98	341	306.84	276.09
For 2000-01				377.44	337.54	301.87
For 2001-02					207.08	185.83
For 2002-03						161.27
Total adjustment	1251.72	1624.48	1817.86	1993.05	1980.64	1925.49
Adjusted Depreciation due to exchange fluctuation loss capitalised						
For 1996-97		13.12	11.12	9.42	7.98	6.76
For 1997-98		114.76	101.86	90.41	80.25	71.23
For 1998-99		81.81	72.6	64.44	57.19	50.76
For 1999-00			42.21	37.98	34.16	30.75
For 2000-01				44.61	39.9	35.68
For 2001-02					23.68	21.25
For 2002-03						18.78
Total adjustment		209.69	227.79	246.86	243.16	235.21
Adjusted Net Operating Profit						
Profit After Tax		5010.32	7743.16	7792.34	6444.34	8510.44
Add : Interest		1845.28	1460.35	2018.53	1055.8	1062.18
Less : Foreign Exchange Loss Capitalised		727.25	421.18	422.05	230.75	180.05
Add: Adjusted depreciation due to foreign exchange loss capitalised		209.69	227.79	246.86	243.16	235.21
Adjusted Net Operating Profit		6338.04	9010.12	9635.68	7512.55	9627.78

Accounting Adjustments

Certain accounting adjustments are necessary for computation of Net Operating Profit After Tax (NOPAT) and Capital Employed because certain accounting policies adopted by a company may wrongly classify revenue, expense, assets and liabilities.

Necessary accounting adjustments are discussed below: -

- 1) Depreciation:- Depreciation on Fixed Assets have been provided on written down value method at rates specified in schedule XIV of the Companies Act. For assets impaired depreciation has been charged on pre-impaired amount. As regards fixed assets acquired out of loan taken in foreign currencies loss or gain on such loans at the year-end is adjusted to the value of such fixed assets and depreciation on the differential amounts of fixed assets arising out of exchange loss or gains on foreign currency loan are adjusted over the remaining life of the concerned fixed assets. But to calculate EVA interest on exchange loss or gain should be charged to P&L A/C not Assets A/C, so it has been adjusted to calculate “Disclosed EVA”.
- 2) Impairment of Assets:- The Company has identified impairable assets at the year end in terms of para 5 to 13 of AS-28 issued by ICAI and arrived at impairment loss therein being the difference between the book value and recoverable value of relevant assets. Impairment loss, so arrived at, has been adjusted against opening general reserve as per transitional provision laid down in para 124 of AS-28. This accounting policy has actual impact on EVA.
- 3) Investment: Investment being long term in nature (except for investment in Dabur International Ltd, Dabur Oncology Plc and Dabur Pharma Ltd. which are current in nature) is held at cost. Provision will be made as and when deemed necessary under AS-13 issued by ICAI.
- 4) Deferred Entitlement on LTC: - In terms of the opinion of the Expert Advisory Committee of the ICAI, the Company has provided liability occurring on account of deferred entitlement towards LTC in the period in which the employees concerned render their services. So no accounting adjustments are necessary to calculate “Disclosed EVA”.

EVA BASED PERFORMANCE MEASUREMENT

- 5) Inventories:- Stocks are valued at lower of cost or net realizable value. Basis of determination of cost remain as follows :
- Raw Materials, Packing Materials, Stores & Spares:- on FIFO Basis.
 - Work-In-Process: At cost of input plus overhead up to the stage of completion.
 - Finished Goods: At Cost of Input plus Appropriate Overhead.
- 6) Research and Development Expenses:- Contributions towards scientific research expenses are charged to the profit & loss account in the year in which the contribution is made. But due to lack of data it is not possible to segregate research expenses and development expenses.
- 7) Retirement Benefits: Liabilities in respect of retirement benefits to employees are provided for as follows:
- Leave salary of employees of the company on the basis of actuarial valuation.
 - Gratuity liability on the basis of payment advice from Life Insurance Corporation of India from whom the company's gratuity trust has taken the Group Gratuity Insurance Policy.
 - Liability for superannuation fund on the basis of the premium paid to Life Insurance Corporation of India in respect employees covered under the superannuation fund policy. So no accounting adjustments are required to calculate disclosed EVA.
- 8) Reorganization of Income and Expenses: Sales and Purchase are accounted for on the basis of passing of title to the goods.
- Sales comprise of sale price of goods including excise duty and sales tax but exclude discount.
 - Export sales are accounted for on the basis of date of bill of lading.
 - All items of incomes and expenses have been accounted for on accrual basis.

So to calculate disclosed EVA no adjustments are required.

- 9) Deferred Taxation: The liability of company is estimated considering the provision of the Income Tax Act 1961. Deferred Tax is recognized subject to the consideration of prudence, on time differences being the difference between taxable income and accounting income that originate in one

period and capable of reversal in one or more subsequent periods. Tax effect accounting has the effect of spreading tax impact and estimating timing difference. This should be followed while determining EVA.

10) Foreign Currency Transaction: In respect of foreign branches /offices, revenue items have been converted at average of month end exchange rates during the year. Fixed assets have been converted at the rates prevailing on dates of purchase. Assets & Liabilities other than fixed assets are converted at the year-end exchange rate. Exchange gain or loss arising out of above is charged to profit & loss account.

As regards fixed assets acquired out of loan taken are foreign currencies, loss or gain on such loans at the year-end is adjusted to the value of such fixed assets. But to calculate disclosed EVA it has been adjusted. Capital Employed and Net Operating Profit After Tax have been charged due to that adjustment.

11) Miscellaneous Expenditure:

- Share issue expenses are being amortized over a period of ten years.
- Technical know-how fees paid to Technical Collaborators are being amortized over a period of five years.
- Strategic Management Consultancy expenses are being amortized over a period of five years.
- Deferred Employees compensation under ESOP are being amortized on straight line basis over vesting period.

So no accounting adjustments are required to calculate disclosed EVA.

Disclosed EVA is as follows:

TABLE 11
WACC as per CAPM (Weight based on Book value)

Financial Year	1998-99	1999-00	2000-01	2001-02	2002-03
Average Capital Employed	39279.72	43470.445	46278.515	48643.215	48550.56
WACC	10.70%	11.10%	13.59%	12.64%	14.37%
Cost of Capital Employed	4202.93	4825.22	6289.25	6148.50	6976.72
Adjusted Net Operating Profit	6338.04	9010.12	9635.68	7512.55	9627.78
EVA	2135.11	4184.90	3346.43	1364.05	2651.06
EVA on Capital Employed (%)	5.44	9.63	7.23	2.80	5.46

EVA BASED PERFORMANCE MEASUREMENT

TABLE 12
WACC as per CAPM (Weight based on Market value)

(Amounts in Rs. Lac)

Financial Year	1998-99	1999-00	2000-01	2001-02	2002-03
Average Capital Employed	39279.72	43470.445	46278.515	48643.215	48550.56
WACC	10.02%	10.44%	12.55%	10.65%	12.27%
Cost of Capital Employed	3935.83	4538.31	5807.95	5180.50	5957.15
Adjusted Net Operating Profit	6338.04	9010.12	9635.68	7512.55	9627.78
EVA	2402.21	4471.81	3827.73	2332.05	3670.63
EVA on Capital Employed (%)	6.12	10.29	8.27	4.79	7.56

TABLE 13
ROI versus EVA performance indicators of DIL

Financial Year	1998-99	1999-00	2000-01	2001-02	2002-03
ROI (%)	14.43	17.34	19.44	14.18	19.21
WACC (%)	10.02	10.44	12.55	10.65	12.27
Basic EVA on Capital Employed(%) (Weight based on book Value)	4.51	7.07	4.99	2.27	3.28
Basic EVA on Capital Employed(%) (Weight based on market Value)	5.19	7.73	6.03	4.26	5.38
Disclosed EVA on Capital Employed(%) (Weight based on book Value)	5.44	9.63	7.23	2.80	5.46
Disclosed EVA on Capital Employed(%) (Weight based on market Value)	6.12	10.29	8.27	4.79	7.56

The above table shows that divergence exists between the performance results given by traditional measure (based on ROI) and percentage of EVA on Capital Employed both basic and disclosed. The Return on Investment (ROI) does not reflect the real value addition to shareholders' wealth and it is not possible to judge the efficiency of any decision, value creation or value addition aspect is of utmost importance in the present backdrop of corporate governance but EVA based performance measurement system give an idea clearly about the

shareholders value addition or value destruction. The company has been successfully able to create value for its shareholders during the study period.

Conclusion

Performance measurement systems that were successful in the past are becoming obsolete and in some cases are dysfunctional and obstructive to improvements. A dynamic and more competitive environment requires dynamic benchmarks to get a clear picture of whether the firm is a value generator or a value destroyer.

The EVA based performance measurement system is the basis on which the company should take appropriate decisions related to the choice of strategy, capital allocation, merger & acquisitions, divesting business and goal setting. While deciding resource allocation it becomes necessary to appreciate the EVA impact of such decision. Management Accountants have the full knowledge about the company that would create value. They are in a position to guide a company in its restructuring mission for value creation. So a Management Accountant is expected to successfully transform traditional management system into value based management system.

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