

Economic Value Added: The Concept and its Disclosure Practices in India

*N N Pandey**

ABSTRACT

The weakness of conventional accounting system is that in measuring the performance of the firm it does not consider the cost of capital. Economic Value Added (EVATM), a registered trademark of Stern Stewart & Company, a management consulting firm of USA measures the profit that is earned over and above the cost of capital of the firm. It is a measurement technique being used to find out whether a business is creating or destroying shareholder wealth. The paramount significance of EVA as a measurement tool in today's capital intensive Indian economy that necessitates an objective and critical study of the existing EVA practices. The major objectives of this paper are to examine the concept of EVA, understand its computational methodology and explore the extent of disclosures about EVA being made available in the annual report of the Indian NIFTY based companies. A detailed study of latest available annual reports of last two financial years (that is, 2013–2014 and 2012–2013) for all the companies based on NIFTY as on April 09, 2014 has been conducted and conclusion has been drawn accordingly.

Key Words: Economic value added, Cost of capital, Capital employed, Annual report, NIFTY, Net operating profit after tax

1. Introduction

Economic Value Added (EVATM), a specific measurement concept for valuing economic surplus of a firm, is a registered trademark of Stern Stewart & Company, a management consulting firm of USA. EVA is a transformed form of 'residual income' concept advocated by various economists since the 1770's. In fact, EVA is so popular and well known that all residual income concepts are often called EVA even though they do not include the main elements defined by Stern Stewart & Company (Pinto, 2001). Both EVA and 'residual income' concepts are based on the principle that a firm creates wealth for its owners only if it generates surplus over the cost of the total invested capital. Modern corporate finance theories have strongly established 'the maximization of shareholders wealth by enhancing the firm's value' as an ultimate goal of a firm. The biggest merit of the goal of value maximization is that it reconciles the varied conflicting interest of different stakeholders. But problem with this goal is that how to search value of a firm from its financial statements (Profit & Loss Account, Balance Sheet, Cash Flow Statement etc.). Financial Statements are often just the outcome of accounting rules rather than a true wealth enhancement statement. Financial Statements are also highly tied to the subjective opinion of the accountant (i.e. FIFO vs. LIFO, alternative depreciation methodology etc). Traditional tools of financial analysis namely earnings per share (EPS), book value per share, debt-equity ratio, return on

investment (ROI), return on net worth (RONW), return on capital employed (ROCE) etc. are the by-products of such Financial Statements. As a result, managers can easily manipulate accounting performance measures (Hunt, 1985; Dyl, 1989; Jensen & Murphy, 1990).

Economic value added (EVA) measures the net value added by a company during a period. It equals net operating profit after tax minus average cost of capital employed. It is a concept similar to net present value. While net present value calculates total value added over the life of a project in present value terms, the economic value added finds net value added in a single period. If EVA for a period is positive, it means the management has increased the company's total worth. On the other hand, if the economic value added is negative it means that the cost of capital employed is greater than the profit generated by the company and this means a decline in the company's value over the period. The superiority of the EVA lies in its use of cash flow and cost of capital as determinants to value the firm.

The proposer and defendants of EVA concept assume that the company's EVA is the best indicator of the shareholder value enhancement during a period. They argue that profits calculated in accordance with financial reporting principles do not reflect the economic value generated by the company. Hence EVA should be primarily used by all to ascertain the true value increment of the firm. Stewart (1994) through his research concluded that "EVA stands well out from the crowd as the single best measure of wealth creation on a contemporaneous basis, and is

* Associate Professor, IMS Unison University, Dehradun

almost 50% better than its closest accounting-based competitor [including EPS, ROE and ROI] in explaining changes in shareholder wealth". Moreover he also opined that the compensation package of managers should be directly linked with the EVA. Uyemura, Kantor and Petit (1996) observed that EVA has a high correlation with market value added (the difference between the firm's value and cumulative investor capital) and thereby stock price. O'Hanlon and Peasnell (1996) assert that EVA provides a valuable framework for "converting wrong accounting numbers into correct estimates of value." The idea of EVA holds the firm accountable for both profit and cost of capital. In nutshell, a number of scholars through their research work suggested that by implementing a complete EVA based financial management and incentive compensation system, managers will obtain better information for decision making and will be more motivated to perform that will create the greatest shareholder wealth in any publicly owned or private enterprise.

The discussion so far put EVA in only positive light. But scholars have also found fault with the concept of EVA on various grounds. Kramer and Pushner (1996) have studied the magnitude of the relationship between EVA and market value added. Their findings do not fully support the arguments of EVA proponents that it is the best internal measure of corporate success in adding value to shareholder investments. In fact, their results show that, the market seems more focused on "profit" than EVA. Dodd and Chen (1996) have proved through their research that return on assets (ROA) has a better relationship with stock returns than EVA. Dillon and Owers (1997) believe that one of the major drawbacks of EVA is its single year focus in maximizing current year EVA which may lead to problems in the future. To calculate EVA for a firm correctly it is utmost important to arrive at accurate cost of capital which often becomes very difficult. Moreover, EVA requires a number of adjustments in book profit shown as per income statement which is subjective in nature. It may be possible that two analysts arrive at two different EVA for the same firm.

In spite of its various limitations, EVA has emerged as one of the popular ways to measure performance and value of the firm. While EVA is not a panacea of performance measurement, it is definitely a powerful tool when used in conjunction with other measures like earnings per share, book value per share, debt-equity ratio, return on investment, return on net worth, return on capital employed etc. The concept of EVA is not new to Indian companies. EVA was pioneered by blue-chip companies like HUL and Infosys. But, somehow the concept did not gain much popularity and acceptance in India. The justification for the present study arises due to paramount significance of EVA as a measurement tool in today's

capital intensive Indian economy.

The objectives of the present study are to:

- i. examine the concept of EVA as a measurement tool.
- ii. understand the computational methodology of EVA and
- iii. explore the extent of disclosures being made available in corporate annual reports about EVA.

2. Literature Review

Stewart (1994) has observed that EVA is a powerful management tool and is getting worldwide recognition as the standard tool of corporate performance. EVA provides an integrated decision-making framework for the companies to create sustainable value for customers, employees, shareholders and for managements. Mayfield (1997) has observed that EVA as a measure of financial performance is an excellent tool in the hands of management for strategy planning, investment appraisal, pricing decisions and compensation design. Brabazon and Sweeney (1998) studied 153 companies in the US and Canada. They found that 25% of the respondents were using EVA to measure performance and compensate managers. In their opinion, one of the most important factors that go in favor of EVA is that a strong correlation exists between it and the share price of the organization. Thenmozhie (1999) explained the concept of EVA and compared it with some other traditional measures of corporate performance viz. ROI, EPS, RONW, ROCE, etc. He used the coefficient of determination to demonstrate that the traditional measures do not reflect the real value of the shareholders, and thus EVA has to be taken into account to measure the value of shareholders' wealth. He has referred to some of the shortcomings of the concept of EVA but maintains that EVA is a better measure of corporate performance as compared to the traditional measures. Banerjee (2000) observed that Corporations in the US have started disclosing EVA information from the beginning of 90s as a measure of corporate performance. It is believed that market value of a firm (hence shareholders' wealth) would increase with the increase in EVA. He tried to find out the relevance of Stewart's claim that market value of a firm is largely driven by its EVA generating capacity in the Indian context. Based on a sample of 200 firms over a period of five years, he found that market value of a firm can be well predicated by estimated future EVA streams.

There are some studies which claim that traditional measures have better correlation with stock returns. Fernandez (2003) examined the correlation between EVA

and MVA (Market Value Added) of 582 American companies for the period 1983-97. It was shown that for 296 firms in the sample the changes in the NOPAT (Net operating profit after tax) had higher correlation with changes in MVA than the EVA, while for 210 sample firms the correlation between EVA and MVA was negative. Ismail (2006) conducted a study regarding association between EVA and stock returns vis- a- vis accounting earnings and stock returns and found that net operating profit after taxes and net income outperform EVA in explaining stock returns. Further, this study states that accruals and operating cash flows have significant incremental information content than EVA.

Literature survey reveals that EVA is more appropriate and applicable in a capital-intensive environment. Deo and Mukherjee (2009) have conducted an extensive research on the perceptions of EVA among Fortune 1000 firms. They concluded that 90% of respondents are of the opinion that EVA is more appropriate in capital-intensive organizations such as manufacturing rather than in an environment where organizations largely rely on intellectual capital. Kaur and Narang (2009) calculated EVA for a sample of 104 prominent organizations in India and found that, as per EVA, almost 50% of the sampled companies destroyed the wealth of their shareholders. Although they suggested methods of improving the EVA of these organizations, their findings also indicated that EVA is not a reliable measure of performance and value of an organization. Sharma and Kumar (2010) carried out a comprehensive review of articles dealing with the theory and application of EVA over the past 15 years. They found that the majority of the research (more than 50% of articles reviewed) was conducted on the relationship between EVA and stock returns. It therefore appears that most of the research focuses on the value of EVA as an indicator of value to external investors, as opposed to EVA being a tool for internal performance measurement.

3. Research Methodology

Information has been obtained and compiled mostly from annual reports, research journals, reference books and related websites. To fulfill the first two objectives viz. examining the concept of EVA and understanding of computational methodology of EVA, a detailed and in-depth study of existing literature has been conducted. To achieve the last objective, i.e. exploring the extent of disclosures being made available in corporate annual reports about EVA, a detailed study of latest available annual reports of last two financial years (that is, 2013–2014 and 2012–2013) for all the companies based on NIFTY as on April 09, 2014 (refer to Table 1) has been conducted, and conclusion has been drawn accordingly.

An annual report is a comprehensive report on a company's activities throughout the preceding year. Annual reports are intended to give the shareholders and other interested people, information about the company's activities and financial performance. Most jurisdictions are required for the companies to prepare and disclose annual reports. An annual report contains inter alia audited annual accounts, consolidated financial statements, directors' report, auditors' report, the management discussion and analysis (MD&A) report and other important information. NIFTY is the leading index for large companies on National Stock Exchange (A premier stock exchange of India). Due to its wide acceptance amongst Indian investors, The NIFTY is regarded as the pulse of the Indian stock market. It consists of the 50(fifty) largest and most actively traded companies, representative of various sectors, on the National Stock Exchange (NSE). The names of 50 companies comprising Nifty as on April 09, 2014, along with their market capitalization as on date are given in Table 1.

4. Concept of EVA

The weakness of conventional accounting system is that in measuring the performance of the firm it does not consider the cost of capital. Popularized by Stern Stewart & Co., EVA measures the profit that is earned over and above the cost of capital of the firm. It is a measurement technique being used to find out whether a business is creating or destroying shareholders' wealth. EVA measures the firm's ability to earn more than the true cost of capital. In simple terms, cost of capital is the required rate of return asked by investors, or a return equal to the amount they could have received had they invested their money elsewhere. It is the opportunity cost of the investor that a firm must earn. If the earning is less than the cost of capital that means the firm is destroying its shareholders wealth. "Only by earning more than the cost of equity can a company create wealth. The cost of equity is a critical cut-off rate, an invisible but profound dividing line between superior and inferior corporate performance" (Stewart, 2003). Ehrbar (1998) observed in his book *EVA: The Real Key to Creating Wealth*, "It is the framework for a complete financial management and incentive compensation system that can guide every decision a company makes, from the boardroom to the shop floor; that can transform a corporate culture; that can improve the working lives of everyone in an organization by making them more successful; and that can help them produce greater wealth for shareholders, customers, and themselves."

Dillon and Owers (1997) defined EVA as a measure of value created that compares the return from operations with the cost of financing those operations. Stern, Stewart, and Chew (1995) defined EVA as the internal measure that

Table 1: List of NIFTY Based Companies and their Market Capitalization

S. No.	Company	Market Capitalization (Rs. Crores)	S. No.	Company	Market Capitalization (Rs. Crores)
1	ITC	191430	26	NTPC	25499
2	Reliance Industries	172267	27	Maruti Suzuki	25482
3	Infosys	152252	28	Ultra Tech Cement	24636
4	HDFC	144702	29	Cairn	24054
5	ICICI Bank	144063	30	Lupin	23528
6	HDFC Bank	141909	31	Indusind Bank	22876
7	TCS	124935	32	Hero MotoCorp	22041
8	L&T	109695	33	Cipla	20740
9	Tata motors	97060	34	Hindalco	20594
10	ONGC	68861	35	Power Grid	19739
11	Hind. Unilever	66817	36	GAIL (I)	19144
12	SBI	60563	37	Coal India	18453
13	Sun Pharma	50985	38	Grasim Industries	18255
14	Axis Bank	49455	39	Tata Power	16532
15	M&M	47168	40	Ambhuja Cement	16419
16	Wipro	41523	41	IDFC	16065
17	Bharti Airtel	38345	42	BHEL	15981
18	HCL Techno	37980	43	Bank of Baroda	15307
19	Dr. Reddy's	32537	44	B PCL	13069
20	Kotak Mahindra Bank	30934	45	ACC	13042
21	Bajaj Auto	29257	46	Punjab National Bank	12750
22	Tata Steel	28404	47	NMDC	11870
23	United Spirit	26307	48	Jindal Steel	11835
24	Asian Paints	25970	49	DLF	7954
25	Tech Mahindra	25923	50	Sesa Steel	7755

management can decentralize throughout the company to be used as a basis for a completely integrated financial management system. In equation form EVA can be expressed as follows:

$$EVA = \text{Net Operating Profit after Tax (NOPAT)} - \text{Cost of Capital} \dots\dots\dots (1)$$

Where,

$$\text{Cost of Capital} = \text{Weighted Average Cost of Capital (WACC)} * \text{Capital Employed} \dots\dots\dots (2)$$

In a nutshell, EVA is a residual income after charging the Company's cost of capital provided by lenders and shareholders. It represents the value added to the

shareholders by generating operating profits in excess of the cost of capital employed in the business. When will EVA increase? EVA will increase if:

- Operating profits can be made to grow without employing more capital, i.e. greater efficiency.
- Additional capital is invested in the projects that give returns more than the cost of obtaining new capital, i.e. profitable growth.
- Capital is curtailed in activities that do not cover the cost of capital, i.e. liquidate unproductive capital.

5. Computational Methodology of EVA

From the equation mentioned above it is clear that for calculating EVA, we need three components namely:

- Net Operating Profit after Tax (NOPAT)
- Weighted Average Cost of Capital (WACC)
- Capital Employed

Net Operating Profit after Tax (NOPAT)

NOPAT is easy to calculate. From the income statement we take the operating income and deduct taxes. Operating income is sales less cost of sales and less selling, general and administrative expenses. The following example from ABC Company illustrates the NOPAT calculation.

<u>Component</u>	<u>Amount (Rs.)</u>
Sales	50,00,000
Less: Cost of Goods Sold	30,00,000
Gross Profit	20,00,000
Less: Selling, General & Admin Expenses	8,00,000
Operating Profit	12,00,000
Less: Taxes (Say 35%)	4,20,000
NOPAT	7,80,000

Weighted Average Cost of Capital (WACC)

WACC is a single composite number that reflects the claims of all suppliers of capital on aggregate basis. In equation form, it can be expressed as follows:

$$WACC = w_e * r_e + w_p * r_p + w_d * r_d \dots \dots \dots (3)$$

Where,

w_e = Proportion of equity

r_e = Cost of equity

w_p = Proportion of preference capital

r_p = Cost of preference capital

w_d = Proportion of debt

r_d = Cost of debt

Suppose for ABC Company:

$$w_e = 50\%, r_e = 16\%, w_p = 10\%, r_p = 8\%, w_d = 40\% \text{ and } r_d = 6\%$$

$$\begin{aligned} \text{So, WACC} &= 0.5 * 0.16 + 0.1 * 0.08 + 0.4 * 0.06 \\ &= 0.112 \text{ i.e. } 11.2\% \end{aligned}$$

Capital Employed

The term capital employed refers to long term funds supplied by the lenders and owners of the firm. In equation

form, it can be expressed as follows:

$$\text{Capital employed} = \text{Equity share capital} + \text{Preference share capital} + \text{Long term debt} \dots \dots \dots (4)$$

Suppose for ABC Company:

Equity share capital	= Rs. 15,00,000,
Preference share capital	= Rs. 3,00,000 and
Long term debt	= Rs. 12,00,000

$$\begin{aligned} \text{So, Capital employed} &= 15,00,000 + 3,00,000 + \\ &12,00,000 = \text{Rs. } 30,00,000 \dots \dots \dots (5) \end{aligned}$$

$$\begin{aligned} \text{EVA} &= \text{Net Operating Profit after Tax (NOPAT)} - \text{Cost of Capital} \\ &= 7,80,000 - 11.2 * 30,00,000 \\ &= 780000 - 336000 = \text{Rs. } 4,44,000 \dots \dots \dots (6) \end{aligned}$$

6. Information on EVA in the Annual Report of the Indian Companies

To assess the way of presenting information on EVA in the annual reports of the Indian companies a detailed study of latest available annual reports of last two financial years (that is, 2013–2014 and 2012–2013) for all the fifty companies based on NIFTY as on 9th April 2014 (refer to Table 1 above) has been done. On study of annual reports, it is found that out of fifty companies only following seven companies have provided information on EVA in their annual reports.

1. Hindustan Unilever Ltd
2. NTPC
3. Hero Motocorp Ltd
4. BHEL
5. BPCL
6. ACC
7. NMDC

Here, it may be noted that some of the other companies may be computing EVA but not reporting it in their annual reports though the chances of that are meager. It is surprising that in spite of its proven utility many Indian companies have not adopted EVA as a financial measure of business performance. May be these companies calculate EVA for internal performance evaluation purposes but they do not publish the data in Annual Reports probably because it is not mandatory under the companies Act, 2013.

As an example, the EVA statement of Hindustan Unilever Ltd from financial Year 2009-10 to 2014-15, taken from its annual reports is depicted below in Table 2.

Table 2: Economic Value Added Statement of Hindustan Unilever Ltd.

Description	(Rs. Crores)					
	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
1. Average Debt	119	2	0	0	0	0
2. Average Equity	2,497	3,118	3,462	4,018	3,715	4,338
3. Average Capital Employed : (1) + (2)	2,616	3,120	3,462	4,018	3,715	4,338
4. Cost of Debt, post-tax %	3.95	5.36	6.20	6.02	6.36	5.56
5. Cost of Equity %	12.51	12.93	10.10	10.07	11.62	10.91
6. Weighted Average Cost of Capital % (WACC)	12.12	12.92	10.10	10.07	11.62	10.91
7. Cost of Capital Employed (COCE): (3) x (6)	317	403	350	405	432	474
8. Profit after tax, before exceptional items	2,103	2,153	2,599	3,314	3,555	3,843
9. Add : Interest, after taxes	5	0	1	17	24	11
10. Net Operating Profits After Taxes (NOPAT)	2,108	2,153	2,600	3,331	3,579	3,854
12. EVA: (10) - (7)	1,791	1,750	2,250	2,926	3,147	3,380

7. Conclusion, Limitations and Scope of Further Research

Economic Value Added (EVA) is a wonderful tool to ascertain the financial performance of a firm. It sets high standards for achievement based on economic criterion rather than only accounting criterion. Though opinions of experts are divided regarding its utility, undoubtedly the concept of EVA is based on the sound economic principle that the firm value increases only if it is able to generate surplus over its cost of capital. It is true that concept of EVA is not new; still the credit of making it popular goes to Bennett Stewart and Joel Stern of Stern, Stewart & Company. As explained in Section 6 above, the greatest merit of EVA is that it is easy to calculate. EVA is an effective measure of the quality of managerial decisions and a reliable indicator of a company's value growth in the future. Constant positive EVA values over time will increase company value, while negative EVA values might decrease company value. In spite of its various limitations, EVA is definitely a powerful tool when used in conjunction with other measures like earnings per share, book value per share, debt-equity ratio, return on investment, return on net worth, return on capital employed etc.

After going through the Annual Reports of NIFTY based 50 (Fifty) companies listed on National Stock Exchange, we can categorically state that only seven Indian companies are showing EVA in their annual reports. May be other companies calculate EVA for internal performance

evaluation purpose but they do not publish the data in Annual Reports probably because it is not mandatory under the companies Act, 2013.

The findings of this study must be interpreted with reference to one of the most important limitations of this study, which in turn provide motivation for further research. The analysis of the Annual reports is based on only NIFTY based fifty companies, which means that the findings should not be generalized for all Indian companies. This necessitates a much wider and deeper empirical research through survey and interviews based on a larger sample.

References

1. Banerjee, Ashok (2000). Linkage between Economic Value Added and Market Value: An Analysis, *Vikalpa*, Vol. 25(3), pp. 23-36.
2. Deo, P. & Mukherjee, T. (2009). How Fortune 1000 Firms View EVA, *Corporate Finance Review*, Vol. 14(2), pp. 9-15.
3. Dillon, Ray and James, E. Owers (1997). EVA as a Financial Metric: Attributes, Utilization, and Relationship to NPV, *Financial Practice and Education*, pp. 32-40.
4. Dodd, James L and Chen, Shimin (1996). EVA: A New Panacea? *Business and Economic Review*, Vol. 42.

5. Dyl, E. A. (1989). Agency, Corporate Control and Accounting Methods: The LIFO-FIFO Choice, Managerial and Decision Economics, Vol. 10, pp.141-147.
6. Ehrbar, A. (1998). EVA: The Real Key to Creating Wealth. New York: John Wiley & Sons pp. 1-2.
7. Fernandez, P. (2003). EVA, Economic Profit and Cash Value Added do not Measure Shareholder Value Creation, Journal of Applied Finance, Vol. 9(3), pp. 74-94.
8. Hunt, H. G. (1985). Potential Determinants of Corporate Inventory Accounting Decisions, Journal of Accounting Research, Vol. 23, pp. 448-467.
9. Ismail, A. (2006). Is EVA associated with stock return than accounting earnings? The UK evidence. International Journal of Managerial Finance, Vol. 2(4), pp. 343-353.
10. Jensen, M. C., & Murphy, K. J. (1990). CEO Incentives-It's Not How Much You Pay but How. Harvard Business Review, Vol. 68, pp.138-149.
11. Jonathan, K. Kramer and George, Pushner (1996). An Empirical Analysis of Economic Value Added as a Proxy for Market Value Added. Financial Management Association Conference in New York, 1996.
12. Kaur, M. & Narang, S. (2009). Shareholder Value Creation in India's Most Valuable Companies: An Empirical Study. IUP Journal of Management Research, Vol. 8(8), pp.16-42.
13. Mayfield, John. (1997). Economic Value Management. Management Accounting, Sept. 1997, pp.32-33.
14. O'Hanlon, John O. & Ken, Peasnell (1996). Measure for Measure. Accountancy-International Edition, pp. 44-46.
15. Pinto, F. (2001). Economic Value Added. <http://www.evanomics.com> (access 2002/06/03).
16. Stewart, G. B. (1994). EVA: Fact and Fantasy. Journal of Applied Corporate Finance, Vol. 7(2), pp. 71-84.
17. Sharma, A. K. & Kumar, S. (2010). Economic Value Added (EVA): Literature Review and Relevant Issues. International Journal of Economics and Finance, Vol. 2(2), pp. 200-221.
18. Stern, Joel M., G. Bennett Stewart III, and Donald Chew, Jr. (1995). The EVA Financial Management System. Journal of Applied Corporate Finance, Vol. 8, No. 2, pp. 32-46.
19. Stewart, G. Bennet (1994). EVA: Fact and Fantasy. Journal of Applied Corporate Finance, Vol. 7, No. 2, pp. 71-84 .
20. Stewart, G. Bennet (2003). How to Fix Accounting Measure and Report Economic Profit. Journal of Applied Corporate Finance, Vol. 15 (3), pp. 63-82.
21. Thenmozhi, M. (1999). Economic Value Added as a Measure of Corporate Performance. The Indian Journal of Commerce, Vol.52, No.4, pp. 72-85.
22. Tony, Brabazon & Breda, Sweeney (1998). Economic Value Added - Really Adding Something New? Institute of Chartered Accountants In Ireland, Accountancy Ireland, Vol. 30, No 3.
23. Uyemura, D. G., Kantor, C. C. and Petit, J. M. (1996). EVA for Banks: Value Creation, Risk Management, and Profitability Measurement. Journal of Applied Corporate Finance, Vol. 9(2), pp. 94-111.