



Identify the Superior Measure Among the Traditional and Modern Measures by Establishing Relationship with Stock Market Returns – A Study on Select Cement Companies in India.

* Dr N R V Ramana Reddy

*** Professor & Head, MBA, Annamacharya Institute of Technology and Sciences(Autonomous), Rajampet, Kadapa(Dist), A.P.

ABSTRACT

There has been a growing concern about the performance measures based on traditional accounting information such as Return on Equity (ROE), Return on Capital Employed (ROCE), Return on Net Worth (RONW), Earning Per Shares (EPS), Net Operating Profit After Taxes (NOPAT) and Return on Investment (ROI) etc. These measures although widely used fails to capture the shareholders' value creation/destruction as a result of management actions. The concept of EVA (Economic Value Added) and MVA (Market Value Added) has gained popularity all over the world particularly in USA, UK and European countries as companies are using modern measures (EVA and MVA) as an internal as well as external performance measure because EVA and MVA are consistent with the organizational objective of shareholder's value creation. In the present study an analysis is made to establish relationship between Stock Market Returns (StMR) and ROA, ROCE, RONW, EPS, EVA, and MVA.

Keywords: ROA, ROCE, RONW, EPS, EVA, MVA and StMR.

Introduction

Companies are adopting both modern and traditional accounting measures and indicators for measuring their financial performance. Traditional accounting measures, such as Earnings Per Share (EPS), Return On Assets (ROA) and Return On Equity (ROE), and their effect on shareholder (market) value, have been discussed for long time. In recent years, the capital markets became more internationalized (Tortella and Brusco, 2003 and Maditions et al., 2009) and there is a lot of competition between American and Japanese firms. In addition, it became clear that managers can manipulate accounting earnings to show that their firms have a good performance (Jensen and Murphy, 1990 and Tortella and Brusco, 2003). Moreover, investors were interested to know all financial information of a firm (Maditions et al., 2009).

In order to overcome the criticisms against traditional accounting measures, several researchers (Lehn and Makhija 1996, O'Byrne 1996, Worthington and West 2004, Dastgir and Izadinia 2004), suggested new performance measures, EVA, MVA and SVA. One of these measures is economic value added (EVA) is a trade-marked variant of residual income. "Earnings, earnings per share and earnings growth are misleading measures of corporate performance and EVA is the best practical periodic performance measure". (Stern Stewart & Co. Stewart 1991). In addition, "EVA is almost 50% better than its closest accounting-based competitor (including EPS, ROE and ROA) in explaining changes in shareholder wealth" (Stewart, 1994).

EVA is the financial performance measure that most accurately reflects a corporation's true profit (Stewart, 1991). EVA is the difference between a company's net operating income after taxes and its cost of capital of both equity and debt (Stewart, 1994). If a company's return on capital exceeds its cost of capital, it is creating true shareholder value. Companies that consistently generate high EVAs are valued most highly by shareholders (Dierks & Patel, 1997). Market value Added (MVA) is also an efficient measure of shareholder wealth along with EVA. MVA is equal to the present value of the firm's expected future EVA. Firms with positive EVA momentum are more likely to see their share price go up over time as the rising net profits of the overall capital costs increase in the firm's MVA (Milunovich & Tsuei 1996).

EVA and MVA are effective performance measures that are more associated with Economic Value Added than ROA, ROE and return on sales (ROS) (Lehn and Makhija 1996). The explanatory power of EVA changes is more than that of earning changes (O'Byrne 1996). EVA is superior to accounting based measure, including ROA, ROE, NI and EPS (Uyemura et al. 1996). There are significant relationships between EVA, market value and market value added (MVA) measures (Milunovich and Tseui 1996, Lehn and Makhija 1997, Forker and Powell 2004 and Worthington and West 2004. Dastgir and Izadinia 2004).

Review of Literature

Studies related to Traditional Performance Measures, EVA, MVA and Stock Market Returns.

Bacidore (1997) investigated the ability of EVA to predict future abnormal returns. The results revealed that EVA had a significant effect on abnormal returns. This conclusion was based on a regression of abnormal returns on EVA to determine how well EVA explained abnormal return. Chen and Dodd (1997) reported that EVA measure provides relatively more information than the traditional measures of accounting profits. They also found that EVA and RI (Residual Income) variables are highly correlated and identical in terms of association with stock returns. Lehn & Makhija (1997) investigated the degree of correlation between different performance measures and stock market returns. The results indicate that EVA is the most highly correlated measure with stock returns. Martikainen & Kallunki and Torppa & Lumijärvi (1997) made a study on EVA and Market returns and conclude that, Periodic EVAs cannot explain changes in market values caused by changes in long term EVA. Tero Telaranta (1997), The only public study about the correlation of EVA and share prices that has been done on Finnish data. The study and article based to it concluded that EVA is not any better than traditional performance measures. Bao and Bao (1998) studied the usefulness of EVA and abnormal economic earnings of US firms and results indicate that EVA is a significant factor in market returns and its explanatory power is higher than that of accounting earnings. Makelainen (1998) investigated the claim that EVA was more closely associated with stock returns and firm value than was net income. Based on their analysis they found that EVA did not dominate net income in associations with stock returns and firm value.

Selection of Sample Companies

The following are the selected sample companies for the present study.

1. ACC Ltd.
2. Ambuja Cements Ltd.
3. Anjani Cements Ltd.
4. Grasim Cements Ltd.
5. India Cements Ltd.
6. Madras Cements Ltd.
7. Panyam Cements Ltd.
8. Sagar Cements Ltd.
9. Shree Cements Ltd.
10. UltraTech Cements Ltd.

Period of Study

The period of the study is 10 years beginning from the financial year 2001-02 and ending with financial year 2010-11. The rationale behind the selection of a 10-year period for the study is to cover a complete business cycle.

Tools of Analysis

following are the selected financial performance tools of the present study.

1. Return on Assets (ROA)
2. Return on Capital Employed (ROCE)
3. Return on Net worth (RONW)
4. Earnings per Share (EPS)
5. Economic Value Added (EVA)
6. Market Value Added (MVA)
7. Stock Market Returns (StMR)

ANALYSIS

In Multiple regression model, the study considered, StMR is dependent variable and ROA, ROCE, RONW, EPS, EVA and MVA are the independent variables. The study adopted the step-wise regression through backward elimination method to eliminate statistically insignificant independent variables from the model. In this process, the statistically (5% Probability level) insignificant variables ROA, ROCE, RONW, EPS and MVA are eliminated

from the model. The independent variable EVA is only statistically significant with StMR. The model is tested by F - test statistics and found the model is Good fit. The estimated regression model after applying step-wise regression is as follows.

$$\text{StMR}_{ij} = a_{ij} + b_{ij} \text{EVA}_{ij} + e_{ij}$$

$$\text{StMR} = 30.060 + 0.265 \text{EVA}$$

The estimated coefficient of EVA is 0.265 and it is statistically significant at 5% Probability level based on t- test statistic. All the remaining independent variables are statistically insignificant and they are eliminated from the model in step-wise regression process.

The step-wise regression clearly reveals that the EVA is the only measure, which established the significant relationship with stock Market Returns (StMR). In general the Stock Market Returns is the bench mark for investor at investment. The investors concentrated not only on performance of a company but also on StMR. So the study concluded that the EVA is the superior measure to compare ROA, ROCE, RONW, EPS and MVA. But ROA, ROCE, RONW, EPS and MVA are also the significant measures of financial analysis of Cement industry in India.

CONCLUSION

In this study, an attempt has been made to explain the behavior of Stock Market returns (StMR) in terms of EVA, MVA and other traditional measures ROA, ROCE, RONW and EPS through step-wise regression analysis. The analysis was carried out with the help of SPSS package.

From the analysis, the model provides the evidence that ROA, ROCE, RONW, EPS and MVA have no significant relationship with StMR. So, all these variables were removed under Step-wise method. From the model, it was observed that EVA is the only variable that significantly affects with StMR.

REFERENCES

- Bacidore, Jeffrey M, Boquist, John A, Milbourn, Todd T, Thakor, Anjan V., The search for the best financial performance measure, *Financial Analysts Journal*, Charlottesville, May/June, (1997), 11-20. | Banerjee A., Economic Value Added and Shareholder Wealth- An empirical study of relationship, *Paradigm*, 3(1), (1997), 99-133. | Bao, B.H., and Bao, D.H., Usefulness of value added and abnormal economic earnings: an empirical examination, *Journal of Business Finance and Accounting*, 25(2) (2000), 251-265. | Benedikt Wahle., Economic Value Added: A comprehensive Financial Management System, seminar of arbeit zur Erlangung eines Leistungsnachweises im Fach Risiko Management, June(2001), 26-35. | Biddle, G. C., Bowen, R. M. and Wallace, J.S., Dose EVA beat earning? Evidence on associations with stock returns and firm values., *Journal of Accounting and Economics*, 25(3) (1997), 301-36. | Black, A., Wright, P. and Davies, J., In search of shareholder value, Pearson 2nd Edition, London(2001). | Chen, S. and J. L. Dodd, Economic Value Added: An Empirical Examination of a New Corporate Performance Measure, *Journal of Managerial Issues*, 9(3) (1997), 318-333. | Christensen, P., Feltham, G., and Wu, M., Cost of Capital in Residual Income Measurement under Moral Hazard, Working paper, UBC, (2000), 72-80. | Copeland, T., Want to create value? , *Strategic Finance*, 83(9) (2002), 48-54. | Dastgir, M., and Izadinia, N., The Relationship between Internal and Measures of Value Creation and External Measures of Operation Evaluation, *Iranian Accounting Studies*, 5(1) 2004, 131-155. | Dinca M., Sis temul de indicatori ai rezultatelor economico-financiare ale firmei, *Scrisul Romanesc*, Craiova, 2001. | Erasmus, P.D., The Relative and Incremental Information Content of the Value Based Financial Performance Measure Cash Value Added (CVA), *Management Dynamics*, 17(1) (2008), 2-15. | Esa Makelainen and N. Roztocki., Economic Value Added (EVA) for small business, The Retrieved, 2(2) March (1998), 22-37. | Ferguson, R., and Leistikow, D., Search for the Best Financial Performance Measure: Basics are Better, *Financial Analysts Journal*, 4(2) January/February (1998), 81-85. | Fernandez, Pablo., EVA, Economic Profit and Cash Value Added Do Not Measure Shareholder Value Creation, *IESE Business School*, May (2001), 72-79. | Finegan, P.T., Maximising shareholder value at the private company, *Journal of Applied Corporate Finance*, 4(1) (1991), 30-45. | Firer, C., Investment Basics EVA: the real key to creating value, *Investment Analysis Journal*, 40 summer (1995), 57-59. | Forker, J. and Powell, R., Does EVA beat earnings? Evidence on associations with stock returns and firm values – revisited”, paper presented at EAA Meeting, Prague, April (2004), 1-3. | Geysler, M. and Liebenberg, I. E., Creating a new valuation tool for South African agricultural co-operatives, *Agrekon*, 42(2) (2003), 106-115. | Ghanbari, A., To study the relationship of economic value added and financial ratio of companies listed in Tehran Stock Exchange, M.A. thesis, Tehran University, (2003). | Hall, J. H., and L. M., Brummer., The Relationship Between the Market Value of a Company and Internal Performance Measurements, Working Paper, University of Pretoria, (2001), 1-23. | Harper, David., www.investopedia.com, (2010). | Isa, M., and Lo, W., Economic Value-Added in the Malaysian Listed Companies: A Preliminary Evidence, *Capital Markets Review*, 9(1) (2001), 83-84. | Ismail, Ahmad., Is economic value added more associated with stock return than accounting earnings? The UK evidence, *International Journal of Managerial Finance*, 2 (4) (2006), 343-353. | James L. Grant., Foundations of EVA for Investment Managers, Fall, 23(1) (1996), 41-48. | Jogiyanto Hartono, Chendrawati., ROA and EVA: A Comparative Empirical Study, *Gadjah Mada International Journal of Business*, 1(1) May (1999), 45-54. | Ken C., Yook and George M. McCabe, MVA and the Cross-Section of Expected Stock Returns, 27(3) Spring (2001), 75-87. | Kim, G.W., EVA and Traditional Accounting Measures: which Metric is a better predictor of market value of hospitality companies?, *Journal of Hospitality & Tourism Research*, 30(1) (2006), 34-49. | Kleiman, R.T., Some New Evidence on EVA Companies, *Journal of Applied Corporate Finance*, Summer (1999), 80-91. |