THE APPLICATION OF ECONOMIC VALUE ADDED: AN EMPIRICAL ANALYSIS ON INDIAN BANKING

INDUSTRY

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Abstract

EVA is used for assessing Economic value of the firm. With, the help of EVA it is very useful to determine the amount of capital shareholder has committed in the company throughout the life span of its existence and also including earnings retained that have earned in the business. EVAis a performance metric that calculates the creation of shareholder value and it helps to increase productivity and profits. In the present study, an analysis is made on the financial performance of service sector Industry with the help of Economic Value Added Approach. From the last two decades, many of the researchers done the research work on EVA and accounting measures, but no one focus on service sectors performance. So, in these we take some selected Banks in INDIA which are listed in BSE. A sample period of 2009 - 2013 was considered for the study. The financial performance of the Banking industry was critically examined by using Statistical tools such as mean, and rank correlation used in the study. From the findings it is found that there is a strong positive correlation exist between EVA and different criteria indicates such as Return on Assets, Net Profit, Profit per Employee, Interest income and Spread have close similarities to the ranking under EVA. Except deposit per employee does not match with the ranking under EVA.

KEYWORDS: Banking Industry, Economic Value Added (EVA), Mean, Rank Correlation.

Introduction

EVA is widely used by Economic value of the company can be determined as the amount of capital that shareholders have committed throughout its existence to the firm, including earnings that have been retained in the business. EVAis a performance metric that determines the creation of shareholder value and it helps to increase productivity and profits. EVA is an attempt to measure the true economic profit it measures whether the operating profit are sufficient enough to cover the cost of capital. EVA is the most successful parameter which is used by companies and consultants.

Economic Value Added (EVA), have also appeared on the scene to measure the corporate financial performance. Of these new performance measures, EVA has gained popularity as a performance measure and a yardstick of shareholder value creation. The concept of Economic Value Added (EVA) helps investors to measure the return over and above minimum return (i.e. cost of equity) as expected by investors before making investments. Banks and financial institutions have some characteristics that are peculiar to their business. Due to this, the ratios and other measures of performance when applied to banks need to be modified in order to obtain the relevant information. Same is true for calculation of EVA also. The standard and widely accepted method for calculating EVA is, EVA = NOPAT − (invested

capital X WACC). This method is known as 'entity method'. Another method is equity approach. (Ashok Thampy, 2000)followed the method proposed by Tom Copeland, Tim Koller and Jack Murrain in 1996. (Parasuraman N. R., 2000)also proposes equity approach for valuation of banks. He mentions that the equity approach is more suited to banks compared to the entity approach. In this paper we have also followed equity approach to compute EVA. In the case of banks, the equity approach is recommended: The formula for EVA is:

$$EVA = \text{ Net Profit ater Taxes} - (\text{Equity } \times \text{Cost of equity})$$

Review Of Literature

The practicality of traditional accounting measures, such as earnings per share (EPS), return on assets (ROA) and return on equity (ROE), and their influence on shareholder (market) value, have been discussed for some time. Since the 1990s, strong influences have been raised in favour of economic value added (EVA) as an accounting measure, majorly by the Stern Stewart Consulting Company and Associates (Stewart, 1991).

Dodd and Chen (1996) found that return on assets (ROA) explained stock returns better than EVA. Hamel (1997) was critical about the superiority of EVA. He opined that EVA reveals little about a company's share of new wealth creation. Biddle (1998) revealed that EVA has a high correlation with MVA (the difference between the firm's value and cumulative investor capital) and thereby stock price. Brewer (1999) recommends that EVA provides Better goal correspondence than ROI.

Roji George (2005) has conducted research on Computation of EVA in Indian Banks the research finished that banks add value to the shareholder's wealth and do not destroy them and a positive relationship was found between EVA, NPA and employee productivity. The study reveals that public sector banks perform better than private sector banks for the selected period in spite of high cost of capital.

G Soral and Shurveer S Bhanawat (2009) have driven on Shareholder Value Creation in the Indian Banking Industry: An EVA Analysis-sample of 14 public sector banks and 12 private sector banks was selected by the authors to measure bank performance on the basis of EVA. The analysis was done for 4 years and equity approach was been followed to calculate EVA. After finding the EVA the authors found out the correlation between EVA and other financial figures. The authors conclude that in Public sector SBI has contributed highest EVA they also conclude that EVA has significant correlation with Operating profit.

Therefore, present paper made an attempt to analyze the performance of banking industry in India through EVA and Other measures such as Return on Asset, Net Profit, Profit per Employee, Interest income and Spread by using rank correlation.

Research Methodology

Need of the Study

Based on the references of the Narasimhan Committee, the Reserve Bank of India had advised the banks to approach the capital market to augment their capital requirements. Due to this and to maintain the minimum capital adequacy standards, banks will have to tap the capital market regularly. Investors who have a variety of options will evaluate the performance of banks based on the returns they provide, before making investments. It is necessary to banks to improve financial performance of them to meet the expectations of investors. So, creation of wealth is an important task for banks. So far, the banking sector in India has not, addressed itself to the need of analyzing its performance from the angle of shareholder value addition (Parasuraman N. R., 2000)(Non-creation of EVA leads to investor dissatisfaction. This will affect the equity mobilization activities of banks, which have a great impact on the economy. In this context, it is relevant to see whether banks are earning returns on their costs, and thereby, creating wealth for their shareholders.

Objectives Of The Study
- To evaluate the performance of select banks in India through the performance measure EVA.
- To carry out a relative study of EVA of select banking companies with other parameters used for judging the performance of banks.

Hypotheses Of The Study
- Following hypotheses have been tested against the objectives of the present study.
- Ho: There is no significant correlation between the various performance measures such as EVA with ROA, Interest Income, Spread, Net Profit, Profit Per Employee or Deposit Per Employee.
- Ha: There is a significant correlation between the various performance measures such as EVA with ROA, Interest Income, Spread, Net Profit, Profit Per Employee or Deposit Per Employee.

Data Sources
The present study has been undertaken to make a critical evaluation of Banking Industry based on simple random sampling techniques. Firms are placed and selected from different parts of India. To do the analysis data drawn from the annual reports selected Bank companies in India for the period from 2009 to 2013 have been tabulated, analyzed and interpreted through Economic value added and other variables such as Return on assets, Deposit per employee, Profit per employee, Interest income, Spread. The following companies are selected samples for the current study.
- ING Vysya bank
- State Bank of India
- UCO Bank
- HDFC Bank
- ICICI Bank
- Allahabad Grameena Bank
- Punjab Grameena Bank
- Bank of Muscat
- HSBC Bank
- Andhra Bank

Tools Of Analysis

➢ Return on assets
➢ Deposit per employee
➢ Profit per employee
➢ Interest income
➢ Spread
➢ EVA

Return On Assets (ROA)

It is one of the conventional ratios for measuring managerial efficiency of a bank. It indicates how capably the management of the bank has been converting the bank asset into net income and computed in the process.

$$\text{Return on asset (ROA)} = \frac{\text{Net income after tax}}{\text{Total assets}}$$

Deposit Per Employee

It shows the amount of deposit mobilized by each employee of the bank. The survival of a bank totally depends up on the deposit mobilization in a highly competitive and rapidly changing environment.

$$\text{Deposit per employee} = \frac{\text{Total deposit}}{\text{Total no of employees}}$$

Profit Per Employee

This ratio shows income generation capacity each employee in the bank.

$$\text{Profit per Employee} = \frac{\text{Net profit}}{\text{Total no of employee}}$$

Interest Income

Interest income is the total interest earned on loans and advances.

$$Interest\ Income$$
$$= \frac{Total\ intrest\ loan\ and\ advences}{Intrest\ recieved\ money\ at\ call\ +\ interest\ recieved\ against\ investment}$$

Spread

The difference between the interest income and interest expenses is known as spread.

$$\text{Spread} = (\text{Total interest income} - \text{Total income expenditure})$$

Economic Value Added

$$\text{EVA} = \frac{\text{Net profit before interest}}{\text{Capital employeed}} \times 100$$

Data Analysis And Interpretation

Table 1: Mean Calculation

BANKS	ROA	PE	DE	INI	SPREAD	EVA
INGVysya Bank	0.0911	234.496	12434	2.53922	30390.7	3.1537
State Bank of India	0.1794	0.03476	2.61242	0.19364	36927	2.58204
UCO Bank	0.0818	0.04258	6.56738	0.25144	4142.43	0.79074
HDFC Bank	0.131	0.05102	0.89788	0.96948	9007.27	3.17712
ICICI Bank	0.0874	0.0821	3.17928	0.1985	11241.4	2.14822
Allahabad Grameena Bank	0.0884	0.0606	6.78864	0.24986	6267.47	1.2173
Punjab Grameena Bank	0.1044	0.72668	0.17156	3.6676	113.008	11.3734
Bank of MUSCOT	0.0699	0.20706	19.1665	0.1977	9678.67	1.6039
HSBC Bank	1.4303	4.44352	5.10992	3.34112	39.812	4.72756
Syndicate Bank	0.0826	0.05708	6.3219	0.2496	4640.3	1.11522
Andhra Bank	6.3268	0.03788	5.18318	0.15708	2911.79	0.95106

SOURCE: Calculated from selected annual reports of the bank

Interpretation

By examining   Table - 1 it is revealed that performance of selected banks in respect of Mean values are differ from measure to measure. Table -1 show that based on EVA, Punjab Grameena bank and HSBC banks have greater values rather than others and remaining selected banks have in order of magnitudes. An examination ranking of the selected banking companies under ROA indicates that Andhra Bank and HSBC bank Mean values are ranked 1st and 2[nd]respectively. It has also been observed from theTable-1 that Mean values of the selected banks under other performance measures such as Interest Income, Spread, Net Profit, Profit Per Employee and Deposit Per Employee give different rankings as compared to EVA.

Table 2: Ranking Under Various Measures Of Selected Banks

Bank name	ROA	PE	DE	INI	SPREAD	EVA
INGVysya Bank	6	1	2	3	2	4
State Bank of India	3	9	9	7	1	5
UCO Bank	9	7	4	5	8	11
HDFC Bank	4	6	10	4	5	3
ICICI Bank	10	10	8	10	3	6
Allahabad Grameena Bank	7	11	3	6	6	9
Punjab Grameena Bank	5	3	11	1	10	1
Bank of MUSCOT	11	4	1	11	4	8
HSBC bank	2	2	7	2	11	2
Syndicate Bank	8	5	5	9	7	7
Andhra Bank	1	8	6	8	9	10

SOURCE: Calculated from selected annual reports of the bank

Interpretation

By examining   Table - 2 it is revealed that performance of selected banks in respect of ranking differ from measure to measure. Table – 2 shows that based on EVA, Punjab Grameena bank and HSBC banks grab first and Second rank and remaining selected banks have ranked from 3[rd]to 10[th]in order of magnitudes. An examination ranking of the selected banking companies under ROA indicates that Andhra Bank and HSBC bank have ranked 1st and 2[nd]respectively. It has also been observed from theTable-1 that ranking of the selected banks under other performance measures such as Interest Income, Spread, Net Profit, Profit per Employee, and Deposit per Employee give different rankings as compared to EVA. Although some banks such as Punjab Grameena bank, HSBC bank, have been found within top 10 ranking under almost all performance measures. It implies that these commercial banks have been performing well in all perspectives. Considering the rankings of the selected banks under different performance measures, EVA has been found to be inconsistent with other parameters of measuring performance. The difference in rankings of the selected banks between EVA and other performance measures has led the researchers to note that EVA is independent of other measures to a higher extent. To put it differently, EVA can be a better tool for measuring managerial performance of the selected banks.

Table 3: Rank Correlation Coefficient BetweenEVA And Other Criteria

Banks	EVA with ROA	EVA with PE	EVA with DE	EVA with INI	EVA WithSPREAD
INGVysya Bank	4	9	4	1	4
State Bank of India	4	16	16	4	16
UCO Bank	4	9	49	36	9
HDFC Bank	1	9	49	1	1
ICICI Bank	16	16	4	16	16
Allahabad Grameena Bank	4	4	36	9	9
Punjab Grameena Bank	16	4	100	0	81
Bank of MUSCOT	9	16	49	9	16
HSBC Bank	0	0	25	0	49
Syndicate Bank	1	4	4	4	0
Andhra Bank	81	16	16	4	1
Rank correlation	0.5674	0.9652	1.7451	0.5051	0.7564

SOURCE: Calculated from selected annual reports of the bank

Interpretation

Table – 3 shows the correlation coefficients of rank between EVA and other measures of performance. An examination of the Table – 3 indicates that rank correlation coefficients between EVA and ROA, EVA and Net Profit, and EVA and Profit Per Employee are found statistically unimportant at 1% level and "EVA and Deposit Per Employee" at 5% level because rank correlation coefficient lies outside the acceptance region. These statistical results have led the researcher to reject the null hypothesis (Ho) that there is no significant correlation between EVA and ROA, EVA and Profit Per Employee, and EVA and Deposit Per Employee.

It suggests that EVA has statistically significant relationship with other parameters of performance measures such as ROA, Net Profit, Profit Per employee, and Deposit Per Employee. On the other hand, the rank correlation coefficients between EVA and Interest Income and EVA and Spread have been found insignificant. In these cases, the null hypothesis i.e., there is insignificant correlation between EVA and Interest Income and EVA and Spread has been accepted.

EVA has been found to have a moderate degree of correlation with ROA, Net Profit, Profit Per Employee and Deposit Per Employee. These relationships are reasonably expected. Higher ROA, Net Profit, Profit Per Employee and Deposit Per Employee are expected to produce higher EVA. It is also not surprising that Bank which has higher ROA, Net Profit, Deposit Per Employee and Profit Per Employee have a negative EVA. It is therefore, imperative that Banks underscore the importance of measuring EVA separately.

Conclusion

The above analysis had made researchers to conclude that EVA is an important measure to judge a bank's performance in view of the current scenario of Banks having to satisfy a large number of shareholders. It has been found in the study that EVA does have a moderate degree of correlation with ROA, Spread, Net Profit, and Profit Per Employee. It has also been found in some of the cases that the ranking under EVA is high but not so high under the criterion of ROA. This is explained by the fact that banks essentially work on the principle of Asset-Liability Management and the funds employed in the

business will therefore be considerable more than the Net Worth. When return is computed as a percentage of net worth the rank is pretty low, whereas in terms of EVA, which just takes the return as a percentage of Net Worth the banks are doing pretty well. In fact, the latter is the better strategy from the viewpoint of Shareholders. It can therefore be concluded in view of the current scenario and intense competition anticipated in the coming years that Banks will replace other performance measures with EVA and eventually, will get to be judged by the extent the value generated for shareholders over and above the weighted average cost of capital.

References

1. Ashok Thampy. (2000). *Economic Value Added in Banks and Development Financial Institutions.* Banglore: IIM.

2. Bhanwat, G. S. (2009). Shareholder Value Creation in the Indian Banking Industry: An EVA Analysis. *Journal of Accounting Research & Audit Practices*.

3. Biddle, G.C.,. (1998). Economic Value Added: Some Empirical evidance. *Managerial Science*, 60-70.

4. Brewer, P. C. (1999). Economic Value Added (EVA): Its Uses and Limitations. *SAM Advanced Management Journal,*, 4-10.

5. Dodd, J.L., and Chen, S.,. (1996). EVA: A New Panacea? *Business Economic Review*, 26-28.

6. Dr. D.V. Ramana. (2005). Market Value Added and Economic Value Added: Some Empirical Evidences.

7. George, R. (2005). "Computation of EVA in Indian Banks" Vol. 1V (2), May, pp 30 – 4. *The ICFAI Journal of Bank Management,*, Vol. 1V (2), May, pp 30 –.

8. Hamel, gary. (1997). Killer Strategies that make Shareholders Rich. *Fortune* .

9. Lehn, k. & Makhija,A.K. (1996). EVA and MVA :as performance measures and signals for strategic change . *Strategy and Leadership*, 34-41.

10. Parasuraman, N. R. (2000, October). The Economic value added – its computation and impact on select banking companies. *Journal of Applied Finance*, 4-30.

11. Ramachandra reddy. (2008, April). Analyzing Financial Performance:EVA Approach. *PORTFOLIO ORGANISER*, pp. 51-55.

12. Stern and Shiely. (2001). The EVA Challenge: Implementing Value-Added Change in Organisation. *John Wiley & Sons Inc*.

13. Stewart. (1991). The EVA Financial Management System. *Journal of Applied Corporate finance*, 32-46.

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