



COMPUTATION OF SHAREHOLDERS' VALUE ADDITION IN SELECT INDIAN PUBLIC SECTOR BANKS: EVA AND MVA ANALYSIS.



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ABSTRACT:

In the present paper, an attempt has been made to measure the shareholders' wealth in terms of Economic Value Added (EVA) and Market Value Added (MVA) for select Indian public sector Banks. And we have also enlisted top five banks in terms of EVA and MVA on the basis of computed value of EVA, MVA and their rankings. The secondary data were collected as input to achieve the objectives of the present study. The study sample consists of 20 nationalized banks listed in Bombay Stock Exchange (BSE) during the period 2005-2014. The secondary sources of information consisted Prowess database, Reserve Bank of India and annual reports of said banks. The study undertaken showed that almost all select Indian public sector banks have not been creating wealth for their shareholders' despite being in profits. Very few Indian public sector banks are earning a return on equity (ROE) in excess of the cost of equity.

Analysis and conclusion are drawn only on the basis of 20 nationalized banks. Hence, the results cannot be generalized and universally applied for all type of banking industry in India. A distinctive contribution of this study is that which helps the Indian Banking Industry especially for public sector banks which is undergoing a rapid metamorphosis.

Keywords: Economic Value Added, Market Value Added, ROE, shareholders' wealth

1. INTRODUCTION:

The financial sector in India plays a crucial role in the development of an economy. One of the key constituents of the financial sector in India is the banking system. Since the early 1990s, structure of the banking sector has significantly changed due to deregulation, liberalization and divestment of public banks. The economic liberalization has changed the business environment in the country. During the pre-liberalization period, the industry was merely focusing on deposit mobilization and branch expansion. Based on the recommendation of the Narasimhan Committee, the Government of India started diluting its stake in public sector banks. These developments are expected to have important implications for operating performance and profitability of the banking system. From the point of view of the shareholders, it is especially important to know the efficiency level of banking firms. Further, traditional performance measures are not best tools to measure the competitiveness and the efficiency level of banking firms because of their criticism. In order to overcome the limitation of traditional performance measures, we have adopted two new metrics (EVA-MVA) Economic Value Added and Market Value Added to evaluate the performance of select public sector banks.

EVA is the method used for the evaluation of the shareholders' wealth earned by the banks. Higher EVA means the bank is earning more value for the invested money by them. Market Value Added (MVA) is the invested capital subtracted from market value of the bank. If the MVA of the bank is greater than zero, then the bank is generating returns more than the capital invested. This paper discusses to measure the shareholders' wealth in terms of Economic Value Added (EVA) and Market Value Added (MVA) for select Indian public sector Banks. And we have also enlisted top five banks in terms of EVA and MVA on the basis of computed value of EVA, MVA and their rankings in the analysis part.

2. REVIEW OF LITERATURE

Before we bring out need for the study, it would be appropriate for us to review certain existing studies relating to shareholders' wealth creation. Review of existing earlier studies helps us to find the research gap and also provides some ideas regarding our study. Hence the following studies have been reviewed.

Stewart (1990) has first studied EVA and MVA relationship with market data of 618 U.S. companies. He examined the relationship between EVA and MVA of US companies and found a stronger correlation between EVA and MVA. **Grant (1996)** studied the relationship between MVA divided by capital and EVA divided by capital for 983 companies selected from the Stern Stewart Performance 1000 for 1993 and 1994. He concluded that his empirical results indicate that EVA has a significant impact on a company's MVA. **Uyemura, Kantor and Pettit (1996)** present findings on the relationship between EVA and MVA with 100 bank holding companies. They calculate regressions to 5 performance measures including EPS, Net Income, ROE, ROA and EVA. According to their study the correlations between these performance measures and MVA are: EVA 40%, ROA 13% ROE 10%, Net income 8% and EPS 6%. The data is from the ten-year period 1986 through 1995. **Kramer and Pushner (1997)** tested the hypothesis that EVA is highly correlated with MVA. The study concluded that no clear evidence to support the contention that EVA is the best internal measure of corporate success in adding value to shareholder investments. On the contrary, the market seems more focused on 'Profit' than EVA. The study found that there is no clear advantage to shareholders in looking at EVA, as the accounting return on their investment is NOPAT. **Isa and Lo (2001)** identified positive EVA as wealth creators and negative EVA as wealth destroyers. This study conducted on these two EVA samples, in identifying whether these samples behave differently in terms of the explanatory power of EVA on MVA. The correlation between the positive EVA and the negative EVA against MVA were studied. It concluded that, there is a strong positive relationship between EVA and market values for value creators, while the negative relationship for value destroyers is inconsistent with expectations. They found that positive EVA is higher correlated with MVA. **Panigrahi (2001)** examined how the Economic Value Added (EVA) is superior to Market Value Added (MVA). This has been examined by financial performance of ITC Ltd, which has adopted the EVA as its performance measurement. This study found that by increasing Economic Value Added (EVA), Shareholder Wealth is created and established the fact that the Economic Value Added (EVA) is superior to the Market Value Added (MVA). **Ghanbari (2003)** analyzed the relationship between EVA and MVA of automobile industry in India and results indicate that there are strong evidences to support Stern-Stewart's claim. **Singh et al (2004)** examined an appropriate way of evaluating bank's performance and also found out which Indian banks have been able to create (or destroy) shareholders' wealth since 1998-1999 to 2002-2003. This study is based on 28 Indian private and public sector banks that are listed on the Bombay Stock Exchange (BSE). The study suggested that the relationship between EVA and MVA is statistically significant. The study showed impressive performance in terms of EVA by Banks such as State Bank of Bikaner and Jaipur, Jammu and Kashmir Bank, Global Trust Bank and IndusindBank. **Wet (2005)** conducted a study on EVA-MVA relationship of 89 Industrial firms of South Africa and found that EVA did not show the strongest correlation with MVA. **Aminimehr and Iqbal (2008)** through the trend analysis and Pearson correlation analysis investigated the relationship between EVA and MVA. The study found that there is significant negative relationship between them. **Ambuj, Gupta (2010)**, used a sample of the 30 major Indian banks including 19 public sector banks, 5 new private sector banks and 6 old private sector banks which are listed on Bombay stock exchange (BSE). The study was undertaken for the eight-year period from

2001-2008 (8 years) to calculate MVA, EVA and to test the correlation between MVA, EVA and traditional performance measures. It was found in the study that there is strongly correlation between changes in SMVA (Market Value Added divided by invested capital) and change in SEVA (Economic Value Added divided by invested capital), but there is very weakly correlation between change in SMVA and change in other traditional performance measures. Finally, it was found that SEVA predicts change in SMVA much better than other traditional performance measures. **Rajesh, Raman, and Narayan (2012)** investigated a comparative study between EVA and MVA for the selected cement companies in India and found that EVA and MVA play an important role in order to assess the financial performance of the companies. The findings also proved the two measures (EVA and MVA) provide consistent shareholder's value creation activities.

NEED OF THE STUDY

The need for the study has arisen due to the following reason:

After reviewing above literature we came to know that several studies have been undertaken on examining shareholders' value in manufacturing sector. But very rare studies are undertaken in service sector particularly banking sector in Indian context. Hence this research gap is prompted us to take the study on **SHAREHOLDERS' VALUE CREATION IN SELECT INDIAN PUBLIC SECTOR BANKS: EVA AND MVA ANALYSIS**.

3. RESEARCH OBJECTIVES AND METHODOLOGY

OBJECTIVES OF THE STUDY

The first and foremost objective of the present study is to assess the performance of public sector banks in terms EVA and MVA. In this context, it attempts to pursue the following objectives.

1. To evaluate the extent of value creation in Indian public sector banks using Economic Value Added and Market Value Added.
2. To identify the top five banks in terms of Economic Value Added and Market Value added.
3. To offer policy recommendations to selected PSBs to improve their shareholders' value and also to provide suggestions to the investing class.

SELECTION OF VARIABLES

The present research in hand identified two important key financial variables for the purpose of achieving stated objectives. These variables consist of EVA and MVA. Computation of these variables was made for period of ten years. A concise explanation of these select variables for banks is categorized between dependent and independent variables, these are outlined as below.

Independent Variable:

Economic Value Added (EVA): has been taken as independent variable which shows the net addition in value/ economic value of the banking company. This is calculated by deducting the cost of equity (calculated) from net profits (given) of the company.

Dependent Variable:

Market Value Added (MVA): has been taken (calculated) as dependent variable which shows the net increase in market capitalization (given) of the company over and above its invested capital (calculated by minor adjustments).

METHODOLOGY

The following methodology has been adopted to conduct our study;

Measurement of Economic Value Added (EVA):

We have computed EVA as per the equity approach with the following formula:

EVA=Net Profit after Taxes- (Equity* cost of Equity)

In order to calculate EVA as per equity approach, we need profit after tax, book value of equity and cost of equity. Profit after Tax (PAT) has been taken from Prowess (CMIE database).

As regards to the value of equity (invested capital). It has been calculated from the financial data collected from the PROWESS with minor adjustments. In paid-up equity capital of the banking company, free as well as specific reserves were added while accumulated losses were reduced. However, revaluation reserves were not included as these are not surplus coming out of the routine operations of banks and are not part of equity capital.

Cost of equity has been calculated as per Capital Asset Pricing Model (CAPM). To compute cost of equity, we need risk-free rate, beta coefficient of banks, market risk premium. We have collected risk-free rate (being average auction rate on 364- days Govt. of India treasury bills) from the website of Reserve Bank of India.

As regards to the beta coefficient of banks, beta for each stock has been obtained from proweess, the databases of Centre for Monitoring Indian Economy. And as far as Market risk premium is concerned it has been taken as 9% by some of the leading firms like Hindustan Lever, Infosys etc, for calculating EVA for their firm. As 9% is quite a reasonable premium for upholding market risk. Therefore, we have also picked-up as same with the assumption that investors expect this much as minimum excess return (over risk-free return) by investing in banking stocks.

Measurement of Market Value Added (MVA):

MVA has been calculated as per the following formula.

Market Value Added (MVA) Market Capitalization –Invested Capital (Book Value of Equity)

In order to calculate Market Value Added (MVA), we need Market Capitalization and Invested capital (book value of equity).

Market capitalization has been taken from Prowess (CMIE database). As regards to the value of equity (invested capital). It has been calculated from the financial data collected from the PROWESS with minor adjustments. In paid-up equity capital of the banking company, free as well as specific reserves were added while accumulated losses were reduced. However, revaluation reserves were not included as these are not surplus coming out of the routine operations of banks and are not part of equity capital.

DATA COLLECTION

The secondary data is taken as input to achieve the objective of the current study. This study covers a period of 10 years starting from 2004-05 and ending 2013-2014 (i.e., 1st April-2004 to 31st March-2014). Initially, the study was conceptualized for 5 years i.e 2009-10 to 2013-14 but later on, it was thought to consider 5 more years i.e. from 2004-05 to 2008-09 so as to give the study a contemporary relevance. The secondary data has been collected from proweess, the database of Centre of Monitoring Indian Economy. The financial statements (i.e. income and expenditure statement and the balance sheet) of all the selected banks have been picked-up from the above database. The beta of various banks was taken from proweess. However, risk-free rate (being average auction-rate on 364-days Govt. of India treasury bills) has been taken from the website of Reserve Bank of India.

STRUCTURE OF THE STUDY

The paper is divided into five different sections. Section I covers a brief introduction to the topic. Section II reviews the existing related literature on the study. Section III gives methodology used in the study. Section IV presents the results and discussion of the study. Last but not the least, Section V covers findings and suggestions.

4. RESULTS AND ANALYSIS

Table: 4.1.Economic Value Added of Sample Banks

(Rupees are in crores)

NAME OF THE BANK	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Allahabad Bank	265.23	194.68	109.81	180.01	-125.06	313.68	96.26	19.46	-793.39	-956.39
Andhra Bank	244.18	28.84	-56.12	13.12	34.52	420.51	204.26	-13.59	-218.47	-1176.48
Bank of Baroda	-117.62	-340.1	-351.27	-376.58	158.92	1052.37	1178.65	467.25	-753.8	-1589.45
Bank of India	-375.22	-138.25	63.19	338.72	817.9	-281.43	-384.38	-1224.12	-1679.48	-2525.09
Bank of Maharashtra	-36.57	-179.03	-1.46	38.69	43.53	120.35	-124.33	-218.08	-35.68	-616.94
Canara Bank	225.67	254.59	77.61	151.43	396.81	1277.24	1137.31	-407.07	-1146.26	-1947.16
Central Bank of India	NIL	-255.79	33.77	-40.24	-79.62	364.91	293.76	-1242.86	-1299.83	-4011.7
Corporation Bank	-12.16	-12.86	98.17	172.49	481.31	405.41	189.34	-58.53	-1072.07	-402.5
Dena Bank	-122.01	-38.43	49.15	43.01	111.61	-41.81	-84.34	-190.16	-775.86	-44.17
Indian Overseas Bank	257.27	300.94	311.33	232.57	-284.75	-381.64	-1064	-1808.49	-2253.72	-104.36
Oriental Bank of Commerce	-272.75	-376.84	-662.18	-221.32	76.86	-196.2	-901.41	-865.58	-1252.89	60.15
Punjab National Bank	266.55	48.27	-121.12	230.81	921.48	1676.85	1243.48	222.68	-689.55	-2862.25
State Bank of Bikaner & Jaipur	8.4	-79.31	24.5	15.36	52.69	108.02	79.07	-111.81	-129.21	-266.12
State Bank of India	472.24	-204.36	-1007.92	-2199.73	-1228.23	-779.09	-2958.57	-4293.81	-4445.6	-11996.5
State Bank of Mysore	102.26	81.19	72.01	97.92	75.01	178.25	33.58	-206.03	-206.96	-409.35
State Bank of Travancore	71.3	41.35	48.46	79.43	214.11	266.14	142.04	-212.51	-188.12	-564.42
Syndicate Bank	106.12	125.03	185.17	185.97	141.77	82.12	-29.81	-131.44	313.22	-279.54
Uco Bank	49.68	-147.32	-89.89	-55.93	40.91	444.83	-14.49	-131.08	-800.12	-615.11
Union Bank of India	272.95	62.54	87.12	459.18	587.27	897.31	357.95	-465.54	-517.12	-1285.84
Vijay Bank	129.1	-150.65	-5.23	-31.78	-161.96	93.66	-65.05	-155.44	-201.24	-700.60

Source: CMIE database Prowess calculated with proposed adjustments NA=Not availability of data

While looking the values of EVA from the above table, we get an early impression that economic value added which a bank must earn to maintain its viable existence, has been lost by many banks while earned by many others in different periods. And it may also be observed from the table that EVA was having more positive values in the initial years, (from 2005 to 2011) and more negative values in the later years (2012 to 2014). This simply reflects most Indian public sector banks have a higher cost of equity capital compared to the returns in later years, which means that value is not being created for their investors, but rather that value is being destroyed.

Table 4.2 Frequency Distribution of Economic Value Added of sample Banks

Frequency Years	Negative	Up to Rs.- 100 crore	Rs. 100- 500 Crore	Rs.500- 1000 Crore	Above 1000 Crore	Total
Mar-2005	6 (31.57)	3 (15)	10 (50)			19
Mar-2006	11 (55)	5 (25)	4 (20)			20
Mar-2007	8 (40)	9 (45)	3 (15)			20
Mar-2008	6 (30)	6 (30)	8 (40)			20
Mar-2009	5 (25)	6 (30)	6 (30)	3 (15)		20
Mar-2010	5 (25)	2 (10)	9 (45)	1 (5)	3 (15)	20
Mar-2011	9 (45)	3 (15)	5 (25)		3 (15)	20
Mar-2012	17 (85)	1 (5)	2 (10)			20
Mar-2013	19 (95)		1 (5)			20
Mar-2014	19 (95)	1 (5)				20

Note: figures in bracket are in percentage of total

The frequency distribution of EVA is exhibited in the table.4.2 in the table banks are categorized in term of level of EVA into five class intervals i.e. negative EVA earners those ruined shareholder wealth are in first group, up to Rs 100 Crore EVA banks are in second group, Rs 100-500 crore wealth creator banks are kept in third class interval, Rs 500-1000 crore of EVA exhibitor banks are in the fourth class interval, and the banks with highest economic value creator are in the fifth class interval which is above Rs 1000 crore EVA. The table exhibit that during 2012, 17 out of 20 bank, 2013, 19 out of 20 banks and in 2014, 19 out of 20 sample banks generated negative EVA this may be due to all banks are having high cost of equity and high beta values (systematic risk) of banks Except Oriental Bank of Commerce, syndicate bank. It would also be worthwhile to mention here that during two years' period 2010-2011, 6 banks were in the category of high EVA generator (above Rs 1000 Crore) this may be due to the Indian economy passes way from economic crisis.

Table 4.3 EVA based Ranking of the Sample banks

(Rupees are in Crores)

NAME OF THE BANK	2004-05	RANK	2005-06	RANK	2006-07	RANK	2007-08	RANK	2008-09	RANK
Allahabad Bank	265.23	4	194.68	3	109.81	3	180.01	6	-125.06	17
Andhra Bank	244.18	6	28.84	9	-56.12	15	13.12	14	34.52	15
Bank of Baroda	-117.62	16	-340.1	19	-351.27	18	-376.58	19	158.92	7
Bank of India	-375.22	19	-138.25	13	63.19	8	338.72	2	817.9	2
Bank of Maharashtra	-36.57	15	-179.03	16	-1.46	13	38.69	12	43.53	13
Canara Bank	225.67	7	254.59	2	77.61	6	151.43	8	396.81	5
Central Bank of India	NA	NA	-255.79	18	33.77	11	-40.24	16	-79.62	16
Corporation Bank	-12.16	14	-12.86	10	98.17	4	172.49	7	481.31	4
Dena Bank	-122.01	17	-38.43	11	49.15	9	43.01	11	111.61	9
Indian Overseas Bank	257.27	5	300.94	1	311.33	1	232.57	3	-284.75	19
Oriental Bank of Commerce	-272.75	18	-376.84	20	-662.18	19	-221.32	18	76.86	10
Punjab National Bank	266.55	3	48.27	7	-121.12	17	230.81	4	921.48	1
State Bank of Bikaner & Jaipur	8.4	13	-79.31	12	24.5	12	15.36	13	52.69	12
State Bank of India	472.24	1	-204.36	17	-1007.9	20	-2199.7	20	-1228.2	20
State Bank of Mysore	102.26	10	81.19	5	72.01	7	97.92	9	75.01	11
State Bank of Travancore	71.3	11	41.35	8	48.46	10	79.43	10	214.11	6
Syndicate Bank	106.12	9	125.03	4	185.17	2	185.97	5	141.77	8
UCO Bank	49.68	12	-147.32	14	-89.89	16	-55.93	17	40.91	14
Union Bank of India	272.95	2	62.54	6	87.12	5	459.18	1	587.27	3
Vijaya Bank	129.1	8	-150.65	15	-5.23	14	-31.78	15	-161.96	18

Source: CMIE database Prowess calculated with proposed adjustments NA=Not availability of data

Table4.3 EVA based Ranking of the Sample banks-contd.

(Rupees are in Crores)

NAME OF THE BANK	2009-10	RANK	2010-11	RANK	2011-12	RANK	2012-13	RANK	2013-14	RANK
Allahabad Bank	313.68	9	96.26	9	19.46	3	-793.39	12	-956.39	12
Andhra Bank	420.51	6	204.26	6	-13.59	4	-218.47	7	-1176.48	13
Bank of Baroda	1052.37	3	1178.65	2	467.25	1	-753.8	10	-1589.45	15
Bank Of India	-281.43	18	-384.38	17	-1224.12	17	-1679.48	18	-2525.09	17
Bank Of Maharashtra	120.35	12	-124.33	16	-218.08	13	-35.68	2	-616.94	10
Canara Bank	1277.24	2	1137.31	3	-407.07	14	-1146.26	15	-1947.16	16
Central Bank of India	364.91	8	293.76	5	-1242.86	18	-1299.83	17	-4011.7	19
Corporation Bank	405.41	7	189.34	7	-58.53	5	-1072.07	14	-402.5	6
Dena Bank	-41.81	16	-84.34	15	-190.16	10	-775.86	11	-44.17	2
Indian Overseas Bank	-381.64	19	-1064	19	-1808.49	19	-2253.72	19	-104.36	3
Oriental Bank of Commerce	-196.2	17	-901.41	18	-865.58	16	-1252.89	16	60.15	1
Punjab National Bank	1676.85	1	1243.48	1	222.68	2	-689.55	9	-2862.25	18
State Bank Of Bikaner & Jaipur	108.02	13	79.07	10	-111.81	6	-129.21	3	-266.12	4
State Bank Of India	-779.09	20	-2958.57	20	-4293.81	20	-4445.6	20	-11996.5	20
State Bank of Mysore	178.25	11	33.58	11	-206.03	11	-206.96	6	-409.35	7
State Bank of Travancore	266.14	10	142.04	8	-212.51	12	-188.12	4	-564.42	8
Syndicate Bank	82.12	15	-29.81	13	-131.44	8	313.22	1	-279.54	5
Uco Bank	444.83	5	-14.49	12	-131.08	7	-800.12	13	-615.11	9
Union Bank of India	897.31	4	357.95	4	-465.54	15	-517.12	8	-1285.8	14
Vijaya Bank	93.66	14	-65.05	14	-155.44	9	-201.24	5	-700.6	11

Source: CMIE database Prowess calculated with proposed adjustments NA=Not availability of data

Table 4.3 presents the EVA-based ranking of the selected banks. It is evident from the table that banks like state bank of India is topping the list in 2005, Indian overseas bank occupied first position in 2006 as well as 2007, Union Bank of India holds top position in 2008, Punjab national bank holds top position constantly for three years i.e. from 2009-2011, Bank of Baroda holds first rank in 2012, syndicate bank holds first in 2013 and Oriental Bank of Commerce holds first position in 2014.

Table 4.4: Top Five Banks in terms ofEVA

Based on the computed value of EVA and their rankings, researcher has enlisted top fivebanks in terms of EVA

RANK	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
1	State Bank Of India	Indian Overseas Bank	Indian Overseas Bank	Union Bank of India	Punjab National Bank	Punjab National Bank	Punjab National Bank	Bank of Baroda	Syndicate Bank	Oriental Bank of Commerce
2	Union Bank of India	Canara Bank	Syndicate Bank	Bank of India	Bank of India	Canara Bank	Bank of Baroda	Punjab National Bank	Bank of Maharashtra	Dena Bank
3	Punjab National Bank	Allahabad Bank	Allahabad Bank	Indian Overseas Bank	Union Bank of India	Bank of Baroda	Canara Bank	Allahabad Bank	State Bank of Bikaner & Jaipur	Indian Overseas Bank
4	Allahabad Bank	Syndicate Bank	Corporation Bank	Punjab National Bank	Corporation Bank	Union Bank of India	Union Bank of India	Andhra Bank	State Bank of Travancore	State Bank of Bikaner & Jaipur
5	Indian Overseas Bank	State Bank of Mysore	Union Bank of India	Syndicate Bank	Canara Bank	UCO Bank	Central Bank of India	Corporation Bank	Vijaya Bank	Syndicate Bank

TABLE 4.5 EVA DESCRIPTIVE STATISTICS

Year	N	Range	Minimum	Maximum	Mean	Standard Deviation
2004-05	19	847.46	-375.22	472.24	80.7695	208.5789
2005-06	20	677.78	-376.84	300.94	-39.2755	186.63231
2006-07	20	1319.25	-1007.92	311.33	-56.745	301.00807
2007-08	20	2658.91	-2199.73	459.18	-34.3435	542.12249
2008-09	20	2149.71	-1228.23	921.48	113.754	444.49003
2009-10	20	2455.94	-779.09	1676.85	301.074	577.19222
2010-11	20	4202.05	-2958.57	1243.48	-33.534	900.54602
2011-12	20	4761.06	-4293.81	467.25	-551.3375	1034.08136
2012-13	20	4758.82	-4445.6	313.22	-907.3075	1035.85495
2013-14	20	12056.65	-11996.5	60.15	-1614.691	2663.26965

The descriptive statistics for EVA Values has been calculated through SPSS. (Table 4.5) This shows the range, minimum EVA Value, maximum EVA Value, mean EVA Value and Standard Deviation. If we look at the mean EVA Values, we find a very fluctuating trend with in some year, EVA lost and some other years, EVA gained. And there is a degree of variability in terms of Standard Deviation. It is also clear from the table (4.5) that the mean of Economic Value Added of only 30 percent of selected banks are positive and 70 percent of those banks have destroyed their shareholders' wealth by negative EVA.

Table 4.6 Market Value Added of Selected Banks

(Rupees are in Crores)

NAME OF THE BANK	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Allahabad Bank	1614.79	476.91	-345.84	-918.8	-3243.16	481.2	3343.13	-333.63	-4171.22	-6000.85
Andhra Bank	2483	1024.86	532.15	344.56	-1466.92	832.81	1954.45	-803.61	-3153.16	-4966.87
Bank of Baroda	768.15	545.86	-802.39	-701.15	-4334.59	8180.62	17911.97	6326.9	-2311.16	-3955.95
Bank of India	746.07	1607.89	2433.44	4456.12	-235.3	5094.72	10156.76	988.31	-4709.23	-11478.77
Bank of Maharashtra	-99.1	-224.97	-32.29	389.36	-1171.67	-266.31	-78.02	-543.41	-1687.67	-2446.29
Canara Bank	2224.36	3924.04	-128.42	937.57	-3237.71	4285.24	9796.99	357.88	-5813.42	-11928.48
Central Bank of India	NIL	NIL	NIL	413.96	-2114.08	1559.46	3808.39	-2458.57	-4840.05	-6883.04
Corporation Bank	1943.24	2100.21	378.52	-168.45	-2316.74	1124.6	2315.28	-1983.39	-3691.48	-5449.23
Dena Bank	-77.62	-21.52	-236.4	-108.02	-1022.48	-142.92	16.4	-1140.98	-1779.89	-3074.07
Indian Overseas Bank	1709.83	2226.87	1739.04	2613.62	-3462.56	-1339.54	720.29	-3270.71	-6284.34	-8055.99
Oriental Bank of Commerce	2658.09	738.2	-901.45	-1350.13	-3698.92	718.05	1078.97	-3725.32	-4793.21	-6089.73
Punjab National Bank	4552.04	5783.06	4729.63	5239.45	-184.11	15723.4	18618.04	5043.74	-5886.32	-7545.52
State Bank of Bikaner & Jaipur	-117.68	676.52	20.29	785.8	-1065.72	-149.14	786.39	-1345.63	-1872.79	-3048.02
State Bank of India	10503.08	23304.28	20957.67	51929.98	9765.45	66042.9	110775.33	56632.69	42899.46	24932.87
State Bank of Mysore	-17.48	1345.37	713.2	1325.14	-476.18	219.81	-43.43	-1055.41	-1169.02	-1942.3
State Bank of Travancore	-117.41	744.31	-95.26	669.86	-1188.15	222.42	259.7	-960.66	-1770.73	-2467.82
Syndicate Bank	536.98	2026.24	149.45	52.2	-2089.62	-731.32	334.27	-1351.09	-2947.15	-4870.39
Uco Bank	633.71	135.16	-500.62	469.11	-1476.61	-507.6	1575.27	-1061.71	-3118.81	-3236.59
Union Bank of India	2062.19	2062.38	514.88	1498.85	383.48	5989.61	7138.25	-58.58	-2676.33	-8257.21
Vijay Bank	1251.36	658	-8.88	46.01	-1307.98	-610.78	427.41	-1014.33	-1771.95	-2223.94

Source: CMIE database Prowess calculated with proposed adjustments NA=Not availability of data

A quick examination of the computed values of MVA and their rankings from the above table shows that MVA has been lost by many banks and gained by many other banks during the period of study. It can also be observed from the table that 70 percent of the banks in 2005, 85 percent in 2006, 50 percent in 2007, and 75 percent in 2008, have positive MVA. This rate decrease to 15 percent in the year 2009, 65 percent in 2010, 90 percent in 2011, have also positive MVA, This rate decrease to 20%, 05% and 05% for the years 2012, 2013, and 2014 respectively. The result of the table also put question mark on the market efficiency of the sample companies for the later years in the reference period (2012-2014). And it may also be observed that MVA was having more positive values in the initial years (from 2005 to 2011) and more negative values in the later years (2012 to 2014). This simply reflects less of the market capitalization and decrease in the market value of banking stocks in the later years.

Table 4.7 Frequency Distribution of Market Value Added of sample Banks

Frequency Years	Negative	Up to Rs.- 100 crore	Rs. 100-500 Crore	Rs.500- 1000 Crore	Above 1000 Crore	Total
Mar-2005	5 (26.31)			4 (21.05)	10 (52.63)	19
Mar-2006	2 (10.52)		2 (10.52)	5 (26.31)	10 (52.63)	19
Mar-2007	9 (47.36)	1 (5.26)	2 (10.52)	3 (15.78)	4 (21.05)	19
Mar-2008	5 (25)	2 (10)	4 (20)	3 (15)	6 (30)	20
Mar-2009	18 (90)		1 (5)		1 (5)	20
Mar-2010	7 (35)		3 (15)	2 (10)	8 (40)	20
Mar-2011	2 (10)	1 (5)	3 (15)	2 (10)	12 (60)	20
Mar-2012	15 (75)		1 (5)	1 (5)	3 (15)	20
Mar-2013	19 (95)				1 (5)	20
Mar-2014	19 (95)				1 (5)	20

Note: figures in bracket are in percentage of total

The frequency distribution of MVA is also exhibited in the table-4.7. In the frequency distribution table, banks are categorized in term of level of MVA into five class intervals i.e. negative, those destroyed Market Value are in first group, up to Rs 100 Crore MVA banks are in second group, Rs 100-500 Crore MVA banks are kept in third class interval, Rs 500-1000 Crore of MVA exhibitor banks are in the fourth class interval, and the banks with highest economic value creator are in the fifth class interval which is above Rs 1000 Crore MVA. And it may also be observed from the table that MVA was having more positive values in the initial years between the three class interval from 100-500 Crore, 500-1000 Crore and Above Crore (from 2005 to 2011) and more negative values in the later years in the first class intervals (i.e from 2012 to 2014). This simply reflects less of the market capitalization and decrease in the market value of banking stocks in the later years.

Table 4.8 MVA based Ranking of the Sample banks

(Rupees are in Crores)

NAME OF THE BANK	2004-05	RANK	2005-06	RANK	2006-07	RANK	2007-08	RANK	2008-09	RANK
Allahabad Bank	1614.79	9	476.91	16	-345.84	16	-918.8	19	-3243.16	17
Andhra Bank	2483	4	1024.86	10	532.15	6	344.56	13	-1466.92	11
Bank of Baroda	768.15	11	545.86	15	-802.39	18	-701.15	18	-4334.59	20
Bank of India	746.07	12	1607.89	8	2433.44	3	4456.12	3	-235.3	4
Bank of Maharashtra	-99.1	17	-224.97	19	-32.29	12	389.36	12	-1171.67	8
Canara Bank	2224.36	5	3924.04	3	-128.42	14	937.57	7	-3237.71	16
Central Bank of India	NIL	nil	NIL	nil	NIL	Nil	413.96	11	-2114.08	14
Corporation Bank	1943.24	7	2100.21	5	378.52	8	-168.45	17	-2316.74	15
Dena Bank	-77.62	16	-21.52	18	-236.4	15	-108.02	16	-1022.48	6
Indian Overseas Bank	1709.83	8	2226.87	4	1739.04	4	2613.62	4	-3462.56	18
Oriental Bank of Commerce	2658.09	3	738.2	12	-901.45	19	-1350.13	20	-3698.92	19
Punjab National Bank	4552.04	2	5783.06	2	4729.63	2	5239.45	2	-184.11	3
State Bank of Bikaner & Jaipur	-117.68	18	676.52	13	20.29	10	785.8	8	-1065.72	7
State Bank of India	10503.08	1	23304.28	1	20957.67	1	51929.98	1	9765.45	1
State Bank of Mysore	-17.48	15	1345.37	9	713.2	5	1325.14	6	-476.18	5
State Bank of Travancore	-117.41	18	744.31	11	-95.26	13	669.86	9	-1188.15	9
Syndicate Bank	536.98	14	2026.24	7	149.45	9	52.2	14	-2089.62	13
UCO Bank	633.71	13	135.16	17	-500.62	17	469.11	10	-1476.61	12
Union Bank of India	2062.19	6	2062.38	6	514.88	7	1498.85	5	383.48	2
Vijaya Bank	1251.36	10	658.00	14	-8.88	11	46.01	15	-1307.98	10

Source: CMIE database Prowess calculated with proposed adjustments NA=Not availability of data

Table 4.8 MVA based Ranking of the Sample banks-contd.

(Rupees are in Crores)

NAME OF THE BANK	2009-10	RANK	2010-11	RANK	2011-12	RANK	2012-13	RANK	2013-14	RANK
Allahabad Bank	481.2	11	3343.13	8	-333.63	7	-4171.22	14	-6000.85	13
Andhra Bank	832.81	9	1954.45	10	-803.61	9	-3153.16	12	-4966.87	11
Bank of Baroda	8180.62	3	17911.97	3	6326.9	2	-2311.16	8	-3955.95	9
Bank of India	5094.72	5	10156.76	4	988.31	4	-4709.23	15	-11478.77	19
Bank of Maharashtra	-266.31	16	-78.02	20	-543.41	8	-1687.67	3	-2446.29	4
Canara Bank	4285.24	6	9796.99	5	357.88	5	-5813.42	18	-11928.48	20
Central Bank of India	1559.46	7	3808.39	7	-2458.57	18	-4840.05	17	-6883.04	15
Corporation Bank	1124.6	8	2315.28	9	-1983.39	17	-3691.48	13	-5449.23	12
Dena Bank	-142.92	14	16.4	18	-1140.98	14	-1779.89	6	-3074.07	7
Indian Overseas Bank	-1339.54	20	720.29	14	-3270.71	19	-6284.34	20	-8055.99	17
Oriental Bank of Commerce	718.05	10	1078.97	12	-3725.32	20	-4793.21	16	-6089.73	14
Punjab National Bank	15723.4	2	18618.04	2	5043.74	3	-5886.32	19	-7545.52	16
State Bank of Bikaner & Jaipur	-149.14	15	786.39	13	-1345.63	15	-1872.79	7	-3048.02	6
State Bank of India	66042.9	1	110775.33	1	56632.69	1	42899.46	1	24932.87	1
State Bank of Mysore	219.81	13	-43.43	19	-1055.41	12	-1169.02	2	-1942.3	2
State Bank of Travancore	222.42	12	259.7	17	-960.66	10	-1770.73	4	-2467.82	5
Syndicate Bank	-731.32	19	334.27	16	-1351.09	16	-2947.15	10	-4870.39	10
UCO Bank	-507.6	17	1575.27	11	-1061.71	13	-3118.81	11	-3236.59	8
Union Bank of India	5989.61	4	7138.25	6	-58.58	6	-2676.33	9	-8257.21	18
Vijaya Bank	-610.78	18	427.41	15	-1014.33	11	-1771.95	5	-2223.94	3

Source: CMIE database Prowess calculated with proposed adjustments NA=Not availability of data

Table 4.8 presents the MVA-based ranking of the selected banks. It is evident from the table that banks like state bank of India occupied first position in all the years' i.e. from 2005 to 2014. This simply reflects State bank of India has more of the market capitalization in all the years, due to this the market value of banking stocks have increased. And Punjab national bank holds second rank and dominates in almost all years except 2009, 2012, 2013, and 2014.

TABLE 4.9 TOP FIVE BANKS IN TERMS OF MVA

Based on the computed value of MVA and their rankings, researcher has enlisted top five banks in terms of MVA

RANK	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
1	State Bank of India	State Bank of India	State Bank of India	State Bank of India	State Bank of India	State Bank of India	State Bank of India	State Bank of India	State Bank of India	State Bank of India
2	Punjab National Bank	Punjab National Bank	Punjab National Bank	Punjab National Bank	Union Bank of India	Punjab National Bank	Punjab National Bank	Bank of Baroda	State Bank of Mysore	State Bank of Mysore
3	Oriental Bank of Commerce	Canara Bank	Bank of India	Bank of India	Punjab National Bank	Bank of Baroda	Bank of Baroda	Punjab National Bank	Bank of Maharashtra	Vijaya Bank
4	Andhra Bank	Indian Overseas Bank	Indian Overseas Bank	Indian Overseas Bank	Bank of India	Union Bank of India	Bank of India	Bank of India	State Bank of Travancore	Bank of Maharashtra
5	Canara Bank	Corporation Bank	State Bank of Mysore	Union Bank of India	State Bank of Mysore	Bank of India	Canara Bank	Canara Bank	Vijaya Bank	State Bank of Travancore

TABLE-4.10: MVA DESCRIPTIVE STATISTICS

Year	N	Range	Minimum	Maximum	Mean	Standard Deviation
2004-05	19	10620.76	-117.68	10503.08	1750.40	2449.56
2005-06	19	23529.25	-224.97	23304.28	2585.98	5220.85
2006-07	19	21859.12	-901.45	20957.67	1532.46	4882.23
2007-08	20	53280.11	-1350.13	51929.98	3396.25	11539.37
2008-09	20	14100.04	-4334.59	9765.45	-1197.18	2882.21
2009-10	20	67382.44	-1339.54	66042.90	5336.36	14858.60
2010-11	20	110853.35	-78.02	110775.33	9544.79	24502.09
2011-12	20	60358.01	-3725.32	56632.69	2412.12	12982.19
2012-13	20	49183.80	-6284.34	42899.46	-1077.42	10469.79
2013-14	20	36861.35	-11928.48	24932.87	-3949.41	7391.22

The descriptive statistics for MVA Values has also been calculated through SPSS. (Table 4.10) This shows the range, minimum EVA Value, maximum EVA Value, mean EVA Value and Standard Deviation. If we look at the mean MVA Values, we find fluctuating trend as we can see, the range of MVA has a variation over a period of time. However, the Standard Deviation shows high degree of variability in the MVA values. It is also clear from the table (4.6) that the mean of market value added of 70 percent of selected banks are positive and 30 percent of those companies have negative stocks return by negative MVA.

FINDINGS

Following are the major findings of the research paper:

1. In this study, researchers have evaluated the performance of the Indian Public sector banks using value-based performance measures like Economic Value Added and Market Value Added. It was found in the study that most of the Indian public sector banks have reported negative EVA and MVA.
2. The study undertaken showed that banks were not always adding economic value or market value or shareholder value despite being in profits.
3. An overview of banks EVA and MVA for selected period (10 years) under study reflects that in many years' banks have lost value either EVA or MVA.
4. As regard to the computed EVA values, it was found that EVA was having more positive values in the initial years (from 2005 to 2011) and more negative values in the later years (2012 to 2014). This simply reflects most Indian public sector banks have a higher cost of equity capital compared to the returns in later years.
5. As regards to EVA-based rankings of the selected banks. It was found that banks like state bank of India was topping the list in 2005, Indian overseas bank occupied first position in 2006 as well as 2007, Union Bank of India holds top position in 2008, Punjab national bank holds top position consecutively for three years (i.e. from 2009-2011), Bank of Baroda holds first rank in 2012, syndicate bank holds first in 2013 and oriental bank of commerce holds first position in 2014.
6. As far as average EVA is concerned, it was found a very fluctuating trend, within some year EVA lost and some other years EVA gained. And there is a degree of variability in terms of standard deviation.
7. As regards to computation values of MVA, it was found that MVA has been lost by many banks and gained by many other banks during the period of study. And it was also observed that 70 percent of the banks in 2005, 85 percent in 2006, 50 percent in 2007, and 75 percent in 2008, have positive MVA. This rate decrease to 15 percent in the year 2009, 65 percent in 2010, 90 percent in 2011, have also positive MVA, This rate decrease to 20%, 05% and 05% for the years 2012, 2013, and 2014 respectively.
8. It was found that MVA was having more positive values in the initial years (from 2005 to 2014) and more negative values in the later years (2012 to 2014). This simply reflects less of the market capitalization and decrease in the market value of banking stocks in the later years.
9. As regards to MVA-based ranking of the selected banks. It was found that banks like state bank of India occupied first position in all the years' (i.e. from 2005 to 2014). This simply reflects State Bank of India

10. has more of the market capitalization in all the years due this; the market value of state bank of India's stock has increased. And Punjab national bank holds second rank and dominates in almost all years except 2009, 2012, 2013, and 2014.
11. As far as average MVA is concerned, it is found fluctuating trend and the range of MVA has a variation over a period of time. However, the standard deviation shows high degree of variability in the MVA values.
12. It is found that while looking the mean of MVA values, majority of the select banks i.e. 70 percent of selected banks are reported positive MVA and 30 percent of those companies have reported negative MVA.

SUGGESTIONS

The following are the major suggestions of the research paper:

1. The Indian public sector banks may not be recognizing the EVA and MVA(financial performance measures') benefits or even investors are also not considering these financial performance measures for the valuation of the stocks. So it is suggested that Indian public sector banks will have to exploit their benefits of EVA and MVA as an internal as well as external performance measures along with disclosing EVA and MVA in their annual reports.
2. Mere preparation of new measuring reports, such as EVA and MVA (value -based measures) are just not enough. Recognizing, detailed understanding and implementations of these value-based performance measures is usually important. Institutes, Regulatory Authorities, Universities, Authors of Financial Journals and Newspapers can play a significant role to introduce these reports to financial users.
3. An understanding of various key drivers of shareholder value creation is required by the managers for decision making.
4. The parties like SEBI, Company Law Board, Department of Company Affairs, Government of India, Institute of Chartered Accountants of India (ICAI) that they should recognize the need to make value measures (like EVA and MVA) reporting mandatory in Indian banking sector. To enhance the decision usefulness of public reporting, there is a need to establish separate accounting standard for value based performance measures' computation and reporting.

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