

INDIAN BANKING SECTOR: MEASUREMENT AND ANALYSIS OF MARKET VALUE ADDED AN EMPIRICAL STUDY IN THE SELECT INDIAN BANKS

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ABSTRACT:

The banking industry in India has a huge canvas of history, which covers the traditional banking practices right from nationalization to privatization of banks and now to multinational banks in India. Therefore, Banking in India has been through a long journey. Banking industry in India has also achieved a new height with the changing times. The use of technology has brought a revolution in the working style of the banks. However, with the changing dynamics, banking business has brought a new kind of risk exposure. Majority of the banks are successful in keeping with the confidence of the shareholders as well as other stakeholders but not all the banks are able to live up to the expectation of the shareholders. In order to grow and gain the faith of shareholders, organizations should try to improve the long-term financial performance and create wealth for the shareholders. Creating wealth or value for the shareholders is the core principle on which the economic system is based on. The main objective on any organization is 'Maximizing the Shareholders wealth'. No enterprise survives or grows if it fails to generate value for its stakeholders. The companies, which gave low preference to the shareholder inquisitiveness, are now bestowing the utmost inclination to it. In order to help companies to generate value to its shareholders, various value-based management systems have been developed. One of such model is MVA (Market Value Added) to measure the value added by the organization. We have chosen this tool to evaluate the performance of the Indian Banks. After deciding the measurement tool, we have chosen those banks which are listed on the Bombay Stock Exchange (BSE) and for which the data is available in the Ace Equity database.

In this research paper, the researchers have made an attempt to study the Market Value Added performance in the Indian banking industry as well as the researchers tried to explore the extend of relationship between MVA and other related variables namely, Dividend Pay/Out Ratio, Profit After Tax Margin, Cash Profit Margin, Return on Asset, Return on Equity, Return On Capital Employed, Net Sales Growth, Return on Net Worth, Dividend Yield, Capital Adequacy Ratio, Non-Performing Assets etc.

MVA analysis revealed that most of the public sector banks had eroded the wealth of shareholders. **Multiple regression analysis** using backward method was used to find the dependent variables. The research showed that MVA depends on Dividend Yield and Dividend Pay/Out Ratio. Thus, it implies that wealth creation is strongly influenced by the returns provided to the shareholders.

Jel Codes: C02, C35, C88, G17, G21

Key Words: MVA, Net Income Margin, Capital Adequacy Ratio (CAR), Dividend Pay/Out Ratio, PAT, ROA, ROE, ROCE, RONW, Dividend Yield and NPA

INTRODUCTION

Banks play a vital role in the economic development of a country; their performance undertakes or determines the pace of development of economy. Mostly they engage in the money transactions including accepting deposits from the customers and lending them to the needy ones in the form of loans. The last 2 decade witnessed many positive developments in the Indian banking sector, especially after arrivals of Private

Banks. Some banks established an outstanding track record of innovation, growth and value creation. The recent global financial crisis has triggered fall of many economies, contributed by financial losses and large nonperformance assets in banking sector. The banking sector in India emerged largely unscathed from the global financial crisis of 2007-08, but faced a slowdown in the momentum of growth due to the weakening of trade, finance and confidence channels. Macro-economic conditions in

fiscal 2011-12 continued to be challenging and the continuing uncertainties in the international financial markets had an impact on emerging market economies, including India. Sovereign risk concerns, particularly in the Euro zone, affected financial markets and a fear of defaults by some European countries along with a growth slowdown led to increased risk aversion. The year 2011-12 saw banks overseas reduce their debt exposure to emerging markets, causing a drop in fund flows to emerging markets, affecting India. The banking sector, which remains the largest financial intermediary, saw a slowdown in deposit growth in fiscal 2011-12, primarily due to liquidity pressures and lower financial savings. The turmoil in the Indian banking industry is still not showing any sign of easing soon, faced with various headwinds like asset quality deterioration and possible waning margins, arising out of savings interest rate increase, are likely to keep the sectors' growth under check for some more time.

The financial performance of banking sector always puts an impact on the performance of the economy. Hence, the stability of banking sector is vital for the growth of any economy. The growth of banks mainly depends on its conventional business services like deposits and loans. In order to grow and gain the faith of shareholders, organizations should try to improve the long-term financial performance and create wealth for the shareholders. Wealth creation is considered as imperative. The key to creating wealth is adding value. All financial success, especially business success, is based on adding value. Adding value is the way that all fortunes are made.

Value Based Management:

Value Based Management (VBM) has been referred to as the 'fastest and hottest ticket' to shareholders wealth. Value Based Management is a complete financial management and incentive compensation system that guides decision making at every level and includes techniques like Economic Value Added (EVA), Return on Operating Invested Capital (ROIC) and Market Value Added (MVA). Companies use VBM as a guide in financial planning, monitoring and controlling operations. Shareholder value

creation is represented by the difference between the market value of the firm's equity and the equity capital invested by shareholders.

Market Value Added:

Market Value Added (MVA) is the difference between the current market value of a firm and the capital contributed by investors. The market value added measurement shows the net difference between a company's market value and the cost of its invested capital. According to Stern Stewart (2006), if the total market value of a company is more than the amount of capital invested in it, the company has managed to create shareholder value. If the market value is less than capital invested, the company has destroyed shareholder value. Book value of equity refers to all equity equivalent items like reserves, retained earnings and provisions. In other words, in this context, all the items that are not debt (interest bearing or noninterest bearing) are classified as equity. According to Stewart, Market value added tells us how much value the company has added to, or subtracted from, its shareholders investment. Successful companies add their MVA and thus increase the value of capital invested in the company. Unsuccessful companies decrease or deteriorate the value of the capital originally invested in the company. Whether a company succeeds in creating MVA or not, depends on its rate of return. If a company's rate of return exceeds its cost of capital, the company will sell on the stock market with premium compared to the original capital. On the other hand, companies that have rate of return lesser than their cost of capital sell with discount compared to the original capital invested in company. Whether a company has positive or negative MVA depends on the rate of return compared to the cost of capital.

Computation:

Market Value Added is calculated as:

$$\text{Market Value Added} = \text{Company's total Market Value} - \text{Capital Invested}$$

With the simplifying assumption that market and book value of debt are equal, this is the same as

Market Value Added = Market Value of equity – Book value of equity

For example, if bondholders and shareholders have contributed \$1,000,000 to form Company XYZ and during its existence since inception and it is currently listed on the stock exchange with a stock market value of \$2,000,000, it can be said that the MVA of the company is \$1,000,000. Or, MVA (\$1,000,000) + Capital invested (\$1,000,000) = Market Value (\$2,000,000)

NEED OF THE STUDY

The equity shareholders are real owners of company form of business organizations. They all invest their money in equity shares of a company with the primary motive of achieving good capital appreciation and regular and stable return (i.e., dividends). The investors' objectives are purely based on the profitability and financial performance of the company. So, investors before taking their investment decisions, they consider several factors which influence the corporate performance. For measuring the corporate financial performance, there are accounting profitability measures and shareholders' value based measures. Accounting profitability measures include Dividend Pay/Out Ratio, Net Sales Growth, Dividend Yield, PAT, CPM, ROA, ROE, ROCE and RONW, Shareholders valued based measures include EVA and MVA. Maximizing the shareholder value is considered as one of the fundamental goals of all businesses. To help corporates to generate value for shareholders, value based management systems like MVA have been developed. In United States, there are number of companies which have adopted MVA as a tool of measuring the financial performance of an enterprise. But in India this concept is at very nasal stage.

Although conditions have improved since the beginning of the last financial year, the global environment is likely to continue to be an area of concern. Though, the Indian financial sector (including banks, non-banking financial companies, or NBFCs, and housing finance companies, or HFCs) reported a compounded annual growth rate (CAGR) of 19% over the last three years and their credit portfolio stood at

close to Rs.49trillion (around 62% of 2010-11 GDP) as on March 31, 2011 (ICRA Research report, June 2011), Indian banks still face several challenges, such as increase in interest rates on saving deposits, possible deregulation of interest rates on saving deposits, a tighter monetary policy, a large government deficit, increased stressing some sectors (such as, State utilities, airlines, and microfinance), restructured loan accounts, unamortized pension/gratuity liabilities, increasing infrastructure loans, and implementation of Basel III.

In the context of challenges faced by Indian banking industry and realizing the significance of MVA, an attempt is made to study the Market Value Added by the Indian banks.

LITERATURE REVIEW

Many researchers have studied MVA from different views and in different contexts. The following are very interesting and useful for our research. Stewart (1991) was the first person who studied the relationship between EVA and shareholder wealth with market data of 618 U.S companies and presented the results in his book "The quest for value". He stated that EVA and MVA correspond with each other quite well among selected U.S companies. The study provided the first empirical evidence of EVA's potential as a proxy for MVA and reported a R² of 0.97 between changes in EVA and changes in MVA for 25 groupings of firms over the period 1987-88.

Milunovich and Tsuei (1996) reviewed the correlations between MVA and several conventional performance measures in the US computer technology industry for the period from 1990 to 1995. The study indicated EVA to have strong correlation with MVA than the other measures of financial performance.

KPMG-BS Study (1998) assessed top companies on EVA, sales, PAT (Profit after Tax), and MVA criteria. The survey has used the BSE 1000 list of companies using a composite index comprising sales, profitability and compounded annual growth rate of those companies covering the period 1996-97. Sixty companies have been found able to create positive shareholder value

whereas 38 companies have been found to destroy it. Accounting numbers have failed to capture shareholder value creation or destruction as per the findings of the study. 24 companies have destroyed shareholder value by reporting negative MVA.

Ashok Thampy(2000) applied the concept of economic value added to the banking and Development Financial Institutions sector in India. The results of the study revealed that most banks in the public and private sector, as well as the development financial institutions in India are not earning positive EVA.

Madhu Malik (2004) examined the relationship between shareholder wealth and certain financial variables like EPS, RNOW and ROCE. By using correlation analysis, it was found that there was positive and high correlation between EVA and RONW, ROCE. There was a positive but low correlation between EVA and EPS. By using co – efficient of determination (r^2), EVA was compared with Traditional performance measures and it was found that not a single traditional performance measure explains to the fullest extent variation in shareholder wealth.

Singh (2005) 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 Indusind Bank.

Wet JHvH de (2005) endeavoured to analyze the performance of companies listed on the JSE Securities Exchange of South Africa for the period from 1994 to 2004, by using market value added (MVA) as a proxy for shareholder value. The findings did not support the purported superiority of EVA and revealed that on a year-on-year basis, EVA did not show the strongest correlation with MVA. However, among other

performance indicators chosen for the study, the changes in the standardised cash flow from operations (CFL/Beginning Invested Capital) explained the biggest percentage of changes in standardized MVA (38%). ROA came second best (15%) and standardized EVA (8%) third. Thus, the results suggested stronger relationships between MVA and cash flow from operations.

Ramachandra Reddy and Yuvaraja Reddy (2007) examined the effect of selected variables on MVA. This study was conducted with 10 cement companies in India and the objective of this study was to examine the effect of select variables on MVA. For this purpose, Multiple Regression technique has been used to test the effect of select variables on MVA. The study found that none of the factors is found to have impact on MVA and EPS is found to have negative and significant impact on MVA. The study concluded that the performance of select cement companies in terms of profitability cannot be increased unless the improved problems like modernization, cost reduction, control taxes etc., are solved.

Dr. (Mrs.) D. Kamalaveni and Dr. (Mrs.) S. Kalaiselvi (2010) in their paper, 'Market Value Added: A study in the select Indian Software Companies' examined the effect of selected variables on MVA in the Indian software industry. The researchers selected 102 software companies for which data were available for minimum eight years. The study concluded that MVA is very important to know the wealth creation by a company. The MVA analysis showed that many companies have destroyed the wealth of shareholders. The regression analysis concluded that MVA is influenced by the Market Price.

Dr. N. Sakthivel (2011) in the paper 'Value Creation in Indian Pharmaceutical Industry: A Regression Analysis' examined the value creation in Indian Pharmaceutical Industry from 1997-98 to 2006-07 by using regression analysis. The study strongly concluded that there is significant difference in mean value creation across low, moderate and high total productivity for pharmaceutical companies. In regression analysis, it is found that total productivity does not have explanatory power on value creation in short-term, but it has some

influence on value creation in the long-run in respect of pharmaceutical companies

All the above studies provide us a solid base and give us idea regarding value based management and its components. While there has been enough research on EVA and profitability's ratio, there is a dearth of literature and research on MVA as a tool for evaluating the creation of shareholders wealth. Thus taking into consideration the importance of MVA and the growth of banking industry, the research will help to understand that whether Indian banks are adding or destroying the shareholders wealth. This research will also help in formulating a regression model, which will help in understanding the factors on which MVA is dependent on.

RESEARCH OBJECTIVES

The main objective of the study is to compute Market Value Added performance in the Indian banks. The other objectives are to study the impact of MVA on Value Creation in Indian banks and to examine the relationship between MVA and other traditional measures of corporate performance like YieldonAdvances (YOA), Yieldoninvestments (YOI), Net Income Margin (NIM), Capital Adequacy Ratio (CAR), Dividend Pay/Out Ratio (DP/O), Profit After Tax Margin (PATM), Cash Profit Margin (CPM), Return on Asset (ROA), Return on Equity (ROE), Return On Capital Employed (ROCE), Return on Net Worth (RONW), Dividend Yield (DY) and NetNPAs to NetAdvances (NNTNA).

RESEARCH DESIGN

The study is done on the data available from the annual reports of the companies. Tabular analysis techniques employed are: Ratios, Percentages and Regression Analysis. MVA is computed for the 37 banks listed on Bombay Stock Exchange. The regression analysis is done through SPSS software.

Data Collection:

This study is based on the secondary data. For the purpose of present study the data is collected from the annual reports of the selected banks, Ace Equity software,

research journals, business magazines, various financial dailies, reports, websites etc.

Sample Selection:

The analysis of MVA is done for the 37 banks, of which 15 are private sector banks and 22 are public sector banks. The data used in the study relate to the banks which are listed on the Bombay Stock Exchange 2012.

Period of study:

The data collected for computing MVA and the regression model pertains to a period of 10 years i.e. 2003 to 2012.

Selection of variables:

In the present study, a number of key financial variables have been identified for the purpose of analysis like, YieldonAdvances, Yieldoninvestments, Net Income Margin, CAR, Dividend Pay/Out Ratio, PATM, Cash Profit Margin, ROA, ROE, ROCE, RONW, Dividend Yield and NetNPAs to NetAdvances.

Data Analysis:

To understand Market Value Added by the Indian banks average MVA is calculated. To analyze the impact of financial and economic variables on value creation, a multivariate technique, multiple linear regression models has been applied.

Findings and Analysis

MVA is one of the external indicators which give the utmost satisfaction to the investors. From the investors' perspective, increase of the share price is always desirable. The most reliable measure of a management's long term success in adding value is known as 'Market Value Added (MVA)'. MVA is the best internal performance indicator as it indicates the market assessment of the effectiveness with which companies managers have used the scarce resources under their control. Hence, it turns out to be very significant and important to analyze and identify the internal indicators that relate well with MVA.

The following are the observations from the Table – 1:

1. It could be observed out of 37 banks, 22 banks are public banks whereas 15 banks are private sector banks.
2. It is also evinced that out of 37 banks, 24 banks or 64.86% of banks have shown a positive MVA trend in the last 10 years. It means that these banks are successfully adding value to the shareholders whereas 13 banks or 35.14% of banks have shown a negative MVA. It means that these banks have destroyed the value of the shareholders.
3. It is also observed that out of 15 private banks, 13 banks or 86.67% of banks have shown a positive MVA. However only 2 banks or 13.33 banks have shown a negative MVA. The bank with the highest average MVA is HDFC Bank Ltd. It has an average MVA of Rs.37, 165. 56 crores. Karnataka Bank Ltd. had the least MVA which is Rs. (87.57) crores. It is a negative MVA, stating that the Karnataka Bank has deteriorated the shareholders wealth.
4. From the 22 public banks; 11 or 50.00% of banks have shown a positive MVA whereas 11 banks or 50.00% of banks have shown a negative MVA. State Bank of India have a highest MVA of Rs.35,855.94crores whereas Central Bank of India had the least MVA of Rs.(2,293.36) crores.
5. The overall analysis implies that 50% of public banks have added value to shareholders wealth whereas 86.67% of private banks have added value to shareholders wealth. But 50% of the public banks have ruined the shareholders wealth, whereas 13.33% of private banks have destroyed the shareholders wealth. It means 64.86% of banks have added to shareholders wealth whereas 35.14% of banks have deteriorated the shareholders wealth.

Table: 1 Calculation of Market Value Added

Company Name	MVA 2012	MVA 2011	MVA 2010	MVA 2009	MVA 2008	MVA 2007	MVA 2006	MVA 2005	MVA 2004	MVA 2003	Average MVA
Axis Bank Ltd.	24540.49	38627.44	31324.28	4665.96	19171.80	10401.93	7045.52	4205.64	2260.39	5.28	14224.87
City Union Bank Ltd.	734.70	807.92	315.21	-269.56	325.94	41.15	-17.35	-39.12	-38.33	-75.37	178.52
Development Credit Bank Ltd.	277.80	352.45	101.50	-209.04	859.26	709.65	-139.31	-174.05	-285.50	-219.97	127.28
Dhanlakshmi Bank Ltd.	-147.62	120.37	412.02	-102.94	29.89	40.32	-34.70	-25.96	-44.47	-64.76	18.22
Federal Bank Ltd.	1585.69	2062.13	-118.86	-1957.80	-219.89	349.60	483.28	297.93	168.40	-328.37	232.21
HDFC Bank Ltd.	92114.86	83620.79	66936.40	26118.07	35286.13	23889.74	18921.78	12344.94	8081.70	4341.18	37165.56
ICICI Bank Ltd.	41867.29	73069.27	54589.79	-12507.56	38861.24	52053.18	29875.31	16052.97	9878.48	923.27	30466.32
IndusInd Bank Ltd.	10475.35	8457.59	4838.81	-282.11	1406.99	284.81	494.08	623.80	85.95	-415.60	2596.97
INGVysya Bank Ltd.	1466.55	1366.64	1129.57	-264.38	2051.84	592.42	387.36	-374.62	448.17	-43.42	676.01
Jammu & Kashmir Bank Ltd.	353.93	760.70	281.66	-1115.93	996.78	1112.02	388.81	98.94	794.90	-692.76	297.91
Karnataka Bank Ltd.	-797.27	-406.04	-227.71	-774.36	1046.66	836.95	103.29	-120.27	-166.16	-370.81	-87.57
KarurVysya Bank Ltd.	1288.54	1655.98	873.99	-268.64	621.62	208.45	12.04	-27.99	-69.95	-291.13	400.29
Kotak Mahindra Bank Ltd.	32197.95	26830.59	21537.62	5875.18	18070.70	13982.13	7733.80	3442.23	1799.41	393.80	13186.34
Lakshmi Vilas Bank Ltd.	-49.69	144.05	18.16	-143.99	60.05	-24.64	-106.94	-35.49	-69.20	-116.88	-32.46
South Indian Bank Ltd.	763.25	886.54	547.69	-705.87	116.23	-7.76	-206.80	-150.11	-135.11	-192.94	91.51
Allahabad Bank	-333.62	3343.14	481.21	-3243.15	-918.79	-345.83	476.91	1614.79	-226.97	-482.25	36.54
Andhra Bank	-803.60	1954.45	832.81	-1466.92	344.56	532.15	1024.86	2483.00	571.42	-51.43	542.13
Bank of Baroda	5325.64	17910.72	8179.35	-4335.85	-702.40	-803.65	544.60	766.90	1986.54	-858.58	2701.33
Bank of India	987.58	10156.02	5093.98	-236.03	4455.38	2432.71	1607.15	745.33	-964.56	-1509.98	2276.76
Bank of Maharashtra	-1131.41	-666.01	-266.31	-1171.67	389.37	-32.28	-224.97	-99.10	-1404.97	-948.13	-555.55
Canara Bank	357.88	9796.98	4285.24	-3237.71	937.57	-128.41	3924.04	2224.36	797.72	-1104.93	1785.27
Central Bank of India	-3178.69	-3250.62	192.47	-3031.08	-386.04	-3303.98	-2934.33	-2741.65	-2434.15	-1865.52	-2293.36
Corporation Bank	-1983.39	2315.15	1124.49	-2316.78	-168.51	378.46	2100.13	1943.16	1250.45	-477.56	416.56
Dena Bank	-1140.98	16.40	-142.92	-1022.47	-108.02	-236.40	-21.53	-77.61	-333.09	-267.33	-333.40
IDBI Bank Ltd	-4189.33	1353.37	108.79	-4153.79	-345.87	-618.59	-704.75	650.58	626.46	-122.46	-739.56
Indian Bank	664.18	1663.46	508.33	-2328.25	2005.41	255.21	-2267.69	-1878.38	-1474.89	-1049.25	-390.19
Indian Overseas Bank	-2413.10	1568.30	-494.26	-2759.85	2623.00	1739.05	2226.87	1709.84	1123.24	-599.97	472.31
Oriental Bank of Commerce	-3725.32	1078.97	718.05	-3698.92	-1350.12	-901.44	738.20	2658.09	3118.65	-876.12	-224.00
Punjab National Bank	5042.09	18618.04	15723.40	-184.11	5239.45	4729.63	5783.08	4552.04	4167.68	-1001.30	6267.00
State Bank of Bikaner & Jaipur	-1345.63	-252.81	-149.15	-1065.72	785.79	20.29	676.52	-117.68	-293.84	-643.45	-238.57
State Bank of India	56632.68	110775.33	66042.89	9765.45	51929.98	20957.66	23304.28	10503.07	11646.65	-2998.58	35855.94
State Bank of Mysore	-1055.42	-43.44	219.80	-479.15	1322.19	710.24	1342.41	-20.43	61.71	-276.52	178.14
State Bank of Travancore	-960.66	259.70	222.42	-1188.15	669.86	-95.26	744.32	-117.41	-149.31	-515.30	-112.98
Syndicate Bank	-1351.09	334.28	-731.32	-2089.62	52.20	149.45	2026.23	536.98	165.26	-585.51	-149.31
UCO Bank	-2884.71	-247.73	-1657.60	-2176.61	469.11	-500.61	135.17	633.71	265.60	-909.70	-687.34
Union Bank of India	-169.59	7027.25	5989.62	383.49	1498.86	514.89	2062.38	2062.20	-177.64	-914.89	1827.66
Vijaya Bank Ltd	-2080.74	-772.56	-1110.77	-1807.98	46.01	-8.88	658.00	1251.36	1385.83	-250.49	-269.0211

Source: Author's computations

REGRESSION ANALYSIS

Regression analysis is a statistical tool for the investigation of relationships between variables. The most commonly performed statistical procedure is multiple regression analysis. Multiple regressions are a technique that allows additional factors to enter the analysis separately so that the effect of each can be estimated. It is valuable for quantifying the impact of various simultaneous influences upon a single dependent variable.

Multiple Regression Analysis has been carried out to explore the extend of relationship existed among dependent variable and independent variables in case of selected banks and also to find out whether a particular independent variable emerges as the most explanatory variable. MVA is taken as the dependent variable and different ratios like YieldonAdvances, Yieldoninvestments, DividendYield, ROCE,

RONW, PATM, CPM, Dividend Pay/Out Ratio, NIM, ROA, ROE, CAR and NetNPAs to Net Advances are taken as the independent variables.

The following are the observations from the Table – 2:

1. The results of Table 2.1 show a positive auto correlation as per the result of Durbin Watson model. It is also evident from the table that the values of correlation co-efficient are coming down and that of the adjusted R-Square are going up. In the 6th model the estimated standard error is also minimum. This shows that NetNPAs to Net Advances, ROCE, RONW, ROA, NIM, Dividend payout, Dividend yield and PATM are the best determinants of MVA. The Durbin-Watson model testifies the positive auto-correlation in the variables as the value is less than 2.

Table: 2.1 MVA and other independent variables: Durbin – Watson Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.858 ^a	.736	.581	6346.28000	1.481
2	.858 ^b	.736	.599	6208.29747	
3	.855 ^c	.732	.609	6129.36273	
4	.852 ^d	.725	.615	6079.62588	
5	.848 ^e	.718	.621	6034.62300	
6	.842^f	.709	.622	6021.48284	

a. Predictors: (Constant), Average_Net_NPAs_to_Net_Advances, Yield_on_investments, ROCE, Yield_on_advances, Average_Dividend_payout, Average_RONW, Average_CAR, Average_ROA, Average_NIM, Average_Dividend_yield, Average_ROE, Average_CPM, Average_PATM

b. Predictors: (Constant), Average_Net_NPAs_to_Net_Advances, Yield_on_investments, ROCE, Yield_on_advances, Average_Dividend_payout, Average_RONW, Average_ROA, Average_NIM, Average_Dividend_yield, Average_ROE, Average_CPM, Average_PATM

c. Predictors: (Constant), Average_Net_NPAs_to_Net_Advances, Yield_on_investments, ROCE, Yield_on_advances, Average_Dividend_payout, Average_RONW, Average_ROA, Average_NIM, Average_Dividend_yield, Average_CPM, Average_PATM

d. Predictors: (Constant), Average_Net_NPAs_to_Net_Advances, Yield_on_investments, ROCE, Average_Dividend_payout, Average_RONW, Average_ROA, Average_NIM, Average_Dividend_yield, Average_CPM, Average_PATM

e. Predictors: (Constant), Average_Net_NPAs_to_Net_Advances, ROCE, Average_Dividend_payout, Average_RONW, Average_ROA, Average_NIM, Average_Dividend_yield, Average_CPM, Average_PATM

f. Predictors: (Constant), Average_Net_NPAs_to_Net_Advances, ROCE, Average_Dividend_payout, Average_RONW, Average_ROA, Average_NIM, Average_Dividend_yield, Average_PATM

g. Dependent Variable: MVA

2. The results of Table 2.2 present the result of ANOVA analysis. The F-statistics shows that the value of the residual is minimum in the 6th model. The P value of model 6th is 0.000, which is less than 0.05. It indicates that the model is significant.

Table: 2.2-MVA and other independent variables: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
6	Regression	2381991347.052	8	297748918.382	8.212	.000 ^f
	Residual	978972901.615	27	36258255.615		
	Total	3360964248.667	35			

a. Predictors: (Constant), Average_Net_NPAs_to_Net_Advances, Yield_on_investments, ROCE, Yield_on_advances, Average_Dividend_payout, Average_RONW, Average_CAR, Average_ROA, Average_NIM, Average_Dividend_yield, Averag_ROE, Average_CPM, Average_PATM

b. Predictors: (Constant), Average_Net_NPAs_to_Net_Advances, Yield_on_investments, ROCE, Yield_on_advances, Average_Dividend_payout, Average_RONW, Average_ROA, Average_NIM, Average_Dividend_yield, Averag_ROE, Average_CPM, Average_PATM

c. Predictors: (Constant), Average_Net_NPAs_to_Net_Advances, Yield_on_investments, ROCE, Yield_on_advances, Average_Dividend_payout, Average_RONW, Average_ROA, Average_NIM, Average_Dividend_yield, Average_CPM, Average_PATM

d. Predictors: (Constant), Average_Net_NPAs_to_Net_Advances, Yield_on_investments, ROCE, Average_Dividend_payout, Average_RONW, Average_ROA, Average_NIM, Average_Dividend_yield, Average_CPM, Average_PATM

e. Predictors: (Constant), Average_Net_NPAs_to_Net_Advances, ROCE, Average_Dividend_payout, Average_RONW, Average_ROA, Average_NIM, Average_Dividend_yield, Average_CPM, Average_PATM

f. Predictors: (Constant), Average_Net_NPAs_to_Net_Advances, ROCE, Average_Dividend_payout, Average_RONW, Average_ROA, Average_NIM, Average_Dividend_yield, Average_PATM

g. Dependent Variable: MVA

3. Table 2.3 is used to find the most explanatory independent variable or set of variables of MVA. Tested with t-statistics, the Table 2.3 brings out that RONW is found significant if tested at 7.6 per cent level, ROCE is found significant if tested at 6.3 per cent level, NetNPAToNetAdvances is found significant if tested at 4.1 per cent level. Whereas NIM and ROA are quite significant if tested at 1 percent level of significant but PATM, Dividend Yield and Dividend Payout Ratio are observed to be significant even at 0.5 percent level of significant.

Table: 2.3MVA and other independent variables: Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
6 (Constant)	-39376.146	12824.906		-3.070	.005
ROCE	357.325	184.554	.209	1.936	.063
Average_RONW	-2935.262	1591.073	SS-.224	-1.845	.076
Average_PATM	4586.388	1447.089	2.317	3.169	.004
Average_Dividend_yield	-4839.395	1183.951	-.637	-4.087	.000
Average_Dividend_payout	1114.574	268.716	.624	4.148	.000
Average_NIM	9046.768	3321.824	.451	2.723	.011
Average_ROA	-50402.643	18255.020	-2.064	-2.761	.010
Average_Net_NPAs_to_Net_Advances	4196.519	1953.941	.333	2.148	.041

a. Dependent Variable: MVA

Source: Author's computations

a. Dependent Variable: MVA

Source: Author's computations

- The overall observation shows that out of the eight important variables NIM, ROA, PATM, Dividend Yield and Dividend Payout Ratio are the very important variables. Moreover, among these very important variables, PATM, Dividend Yield and Dividend Payout Ratio are the most important variables wherein PATM stands on second position and Dividend Yield and Dividend Payout Ratio are the best one.
- As PATM, Dividend Yield and Dividend Payout Ratio are the most important variables to determine the Market Value Added, it is concluded that wealth creation in banking industry is strongly influenced by the amount of dividends paid by the company or by the ability to pay the dividend.

Regression Model:

Using the multiple regression model the Market Value Added for the Indian Banks will be as follows:

$$\begin{aligned}
 Y &= a + (b_1x_1) + (b_2x_2) + (b_3x_3) + (b_4x_4) + (b_5x_5) + (b_6x_6) + (b_7x_7) + (b_8x_8) \\
 &= -39376.15 + (-2935.26*x_1) + (357.33*x_2) + (4196.52*x_3) + (9046.77*x_4) + (-50402.64*x_5) + \\
 &\quad (4586.39*x_6) + (-4839.40*x_7) + (1114.57*x_8)
 \end{aligned}$$

Where: x_1 is RONW, x_2 is ROCE, x_3 is Net NPA to Net Advances, x_4 is NIM, x_5 is ROA, x_6 is PATM, x_7 is D

CONCLUSION

An attempt has been made in this study to compute MVA for the Indian banks and also to find out the relationship between MVA and other independent variables like Yield on Advances, Yield on investments, Net Income Margin, CAR, Dividend Pay/Out Ratio, PATM, Cash Profit Margin, ROA, ROE, ROCE, RONW, Dividend Yield and Net NPAs to Net Advances. **MVA analysis** shows that in most of the years under study, wealth reduction has been observed mainly in case

of public sector banks. **Multiple regression analysis** using backward method has been adopted in order to explore the extent of relationship between dependent and independent variables. The Durbin-Watson model exhibits a positive auto-correlation among the variables. Three most important variables namely, PATM, Dividend Yield and Dividend Pay/Out Ratio remained after the least predictors got eliminated. **Dividend Yield and Dividend Pay/Out Ratio** stands in high merit as per the overall analysis. This implies that wealth creation is strongly

influenced by the returns provided to the shareholders. If a company fails to give returns i.e. dividends to the shareholders, it causes wealth deterioration. Finally, it can be concluded that MVA, the best indicator of wealth is influenced by Dividend paid by the Indian banks to the shareholders.

SUMMARY

The Indian banking system is different from other global peers because of the country's unique geographic, social, and economic characteristics. Undoubtedly the banking industry went through a tough phase with bad loans expanding, the health of the economy deteriorating amidst subdued credit growth. While, the Indian banking system has managed to remain relatively unaffected from global economic conditions until now, it will be difficult to project that the sector will be unscathed in the long run too, despite the support of a robust financial system. The economic recovery in Europe and the US is sluggish, which is a major concern for the rest of the world, including India. Besides, the rise in borrowings by the Indian government might drain funds from the private credit market.

Banks will need to increase their capital to achieve growth and comply with Basel III norms. In a scenario where the cost of borrowing is high and government support is limited due to tighter economic conditions, banks will have to be very effective in operations in order to provide high returns to shareholders.

Currently, there are many challenges before Indian Banks such as improving capital adequacy requirement, managing non-performing assets, enhancing branch sales & services, improving organization design, using innovative technology through new channels and working on lean operations. Apart from this, frequent changes in policy rates to maintain economic stability, various regulatory requirements, etc. are additional key concerns. Despite these concerns, the Indian banking industry is expected to grow with a consistent pace, looking at the huge growth potential of Indian economy, high population base of India, mobile banking - offering banking operations through mobile phones, financial inclusion, rising disposable income, etc. will drive the growth in the Indian banking industry in the long run.

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